Board of Commissioners
Agenda Packet

June 22, 2020

4:00 Call to Order

A) Approval of Agenda

Old Business

A) **Consideration and Possible Adoption of the Annual Budget for Fiscal Year Ending June 30, 2021.**

New Business

A) **Lottery Funds Request for Schools-Griggs HVAC & Central Elementary Roof Replacement**

B) **Board Appointments**

1. Commissioner Nominee to College of the Albemarle Board of Trustees

C) **Consent Agenda**

1. Resolution to Approve Modular Unit Lease-Purchase Agreement for Currituck County Schools
2. Budget Amendments
3. IT Surplus Resolution
4. JCPC Funding Plan Certification
5. Dominion Power ROW Agreement-Maritime Museum

Recess

Special Meeting-Tourism Development Authority

Consideration and Possible Adoption of the Annual Budget for Fiscal Year Ending June 30, 2021.

Pitney Bowes Lease-Mail Processing Equipment, Tourism Department

Adjourn TDA Meeting

Special Meeting-Ocean Sands Water & Sewer District

Consideration and Possible Adoption of the Ocean Sands Water & Sewer District Annual Budget for Fiscal Year Ending June 30, 2021.

Adjourn OSWSD Meeting

Closed Session

Amended Item-Closed Session pursuant to G.S. 143-318.11(a)(3) to consult with the County Attorney and to preserve the attorney-client privilege.

6:00 PM Reconvene

Public Hearings-Text Amendments

PB 20-05 Currituck County Nonconforming Campgrounds Text Amendment: Request to amend the Unified Development Ordinance, Chapter 8 Nonconformities and Chapter 10 Definitions and Measurement to revise the nonconforming campground ordinance and amend definitions.

PB 20-06 Currituck County Remove Planned Development-Residential Text Amendment: Request to amend the Unified Development Ordinance, Chapter 3 Zoning Districts to remove PD-R zoning district for new rezoning requests and retain existing PD-R standards to preserve the administrative review process and development standards for amendments to existing PD-R zoning districts and master plans.

New Business

A) **School Construction Funds Request-Board of Education**

Public Hearings-Text Amendments-Continued

PB 20-08 Currituck County Subdivision Access Standards Text Amendment: Request to amend the Unified Development Ordinance, Chapter 2 Administration to clarify that Family Subdivisions may front NCDOT-maintained streets and that private access streets shall connect to an NCDOT-maintained street.

PB 20-03 Currituck County Miscellaneous Text Amendment: Request to amend the Unified Development Ordinance to change Planning Board quorum; require surveyed site plans (<20,000 sf lots) and as-built surveys (<40,000 sf lots); clarify allowable use of metal siding in Business and Industrial Zoning Districts; remove redundant parking language for Bed and Breakfast Inns; correct Single Family-Residential Remote accessory parking language; allow accessory keeping of specific livestock (goats) subject to additional standards; amend bio solid/sludge language for consistency with recent court decisions; clarify home occupation language; revise accessory dwelling unit standards; update private residence terminology; remove reserve utility open space requirement; and update financial terminology.

Public Hearings-Rezonings

PB 20-02 Hurley Conditional Rezoning: Request to rezone 0.46 acres at 1202 Ocean Trail from SFO to C-GB for proposed retail and office use.

PB 20-10 The Cotton Gin, Inc: The applicant is requesting a zoning map amendment to rezone 2.17 acres from Agriculture (AG) to General Business (GB) for property located at 6957 Caratoke Highway, Jarvisburg, Poplar Branch Township

PB 19-20 Flora Farm: Rezone 224.44 acres from Agricultural (AG) to Planned Development-Residential (PD-R) for property located in Moyock immediately south of Eagle Creek subdivision and Moyock Middle School. The request includes 285 single-family dwelling lots, up to 100,000 sf commercial, 125 upper story dwelling units, and a 22 acre school site

Adjourn

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2844)

Agenda Item Title: Consideration and Possible Adoption of the Annual Budget for Fiscal Year Ending June 30, 2021.

Submitted By: Leeann Walton – County Manager

Presenter of Item: Ben Stikeleather

Board Action: Action

Brief Description of Agenda Item:

Following the Public Hearing held June 15, 2020, Commissioners moved to delay taking action on adoption of the budget and bring the item back for further consideration at the June 22, 2020 special meeting of the Board of Commissioners.

Is this item regulated by plan, regulation or statute? Yes

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2838)

Agenda Item Title: Lottery Funds Request for Schools-Griggs HVAC & Central Elementary Roof Replacement

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request: Request for transfer of funds from other lottery projects to increase funds for Griggs Elementary HVAC, Phase 3-$38,000 and to increase funds for Central Elementary roof replacement, Phase I-$25,000.

Potential Budget Affect: Transfer of funds, no net budget effects.

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

APPLICATION
PUBLIC SCHOOL BUILDING CAPITAL FUND
NORTH CAROLINA EDUCATION LOTTERY

Approved: _____

Date: _____

County: Currituck
LEA: Currituck County Schools
Address: 2958 Caratoke Highway

Contact Person: Larissa York
Title: Finance Officer
Phone: 252-232-2222- ext. 1010

Project Title: GES HVAC Phase III (7 Units)
Location: Griggs Elementary School
Type of Facility: Public School (K-5)

North Carolina General Statutes, Chapter 18C, provides that a portion of the proceeds of the North Carolina State Lottery Fund be transferred to the Public School Building Capital Fund in accordance with G.S. 115C-546.2. Further, G.S. 115C-546.2 (d) has been amended to include the following:
(3) No county shall have to provide matching funds…
(4) A county may use monies in this Fund to pay for school construction projects in local school administrative units and to retire indebtedness incurred for school construction projects.
(5) A county may not use monies in this Fund to pay for school technology needs.

As used in this section, "Public School Buildings" shall include only facilities for individual schools that are used for instructional and related purposes, and does not include central administration, maintenance, or other facilities. ***Applications must be submitted within one year following the date of final payment to the Contractor or Vendor.***

Short description of Construction Project: Transfer of funds from Griggs ES A-Wing South Wing project to GES HVAC Phase III (7 Units) project.

Estimated Costs:

Purchase of Land	$	
Planning and Design Services		
New Construction		
Additions / Renovations		38,000.00
Repair		
Debt Payment / Bond Payment		
TOTAL	$	38,000.00

Estimated Project Beginning Date: June 2020 Est. Project Completion Date: August 2020

We, the undersigned, agree to submit a statement of state monies expended for this project within 60 days following completion of the project.

The County Commissioners and the Board of Education do hereby jointly request approval of the above project, and request release of $ 38,000.00 from the Public School Building Capital Fund (Lottery Distribution). We certify that the project herein described is within the parameters of G.S. 115C-546.

(Signature — Chair, County Commissioners) (Date)

(Signature — Chair, Board of Education) 5/7/2020 (Date)

Form Date: July 01, 2011

APPLICATION
PUBLIC SCHOOL BUILDING CAPITAL FUND
NORTH CAROLINA EDUCATION LOTTERY

Approved: _____

Date: _____

County: Currituck
LEA: Currituck County Schools
Address: 2958 Caratoke Highway

Contact Person: Larissa York
Title: Finance Officer
Phone: 252-232-2222- ext. 1010

Project Title: Central ES-Phase I Roof Replacement
Location: Central Elementary School
Type of Facility: Public School (K-5)

North Carolina General Statutes, Chapter 18C, provides that a portion of the proceeds of the North Carolina State Lottery Fund be transferred to the Public School Building Capital Fund in accordance with G.S. 115C-546.2. Further, G.S. 115C-546.2 (d) has been amended to include the following:

(3) No county shall have to provide matching funds…

(4) A county may use monies in this Fund to pay for school construction projects in local school administrative units and to retire indebtedness incurred for school construction projects.

(5) A county may not use monies in this Fund to pay for school technology needs.

As used in this section, "Public School Buildings" shall include only facilities for individual schools that are used for instructional and related purposes, and does not include central administration, maintenance, or other facilities. ***Applications must be submitted within one year following the date of final payment to the Contractor or Vendor.***

Short description of Construction Project: Transfer of funds from Griggs ES A-Wing North project to Central ES-Phase I Roof Replacement.

Estimated Costs:

Purchase of Land	$	
Planning and Design Services		
New Construction		
Additions / Renovations		25,000.00
Repair		
Debt Payment / Bond Payment		
TOTAL	$	25,000.00

Estimated Project Beginning Date: June 2020
Est. Project Completion Date: August 2020

We, the undersigned, agree to submit a statement of state monies expended for this project within 60 days following completion of the project.

The County Commissioners and the Board of Education do hereby jointly request approval of the above project, and request release of $ 25,000.00 from the Public School Building Capital Fund (Lottery Distribution). We certify that the project herein described is within the parameters of G.S. 115C-546.

(Signature — Chair, County Commissioners) (Date)

Karen E Trudge 5/7/2020

(Signature — Chair, Board of Education) (Date)

Form Date: July 01, 2011

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2842)

Agenda Item Title: Commissioner Nominee to College of the Albemarle Board of Trustees

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request:

Commissioners will submit a member to be considered for appointment to the College of the Albemarle Board of Trustees. The current member's term is due to expire on June 30, 2020, creating a vacancy on the COA Board. The member appointed will sit on the Board of Trustees and the COA Buildings and Grounds Committee.

Potential Budget Affect: N/A

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2839)

Agenda Item Title: Resolution to Approve Modular Unit Lease-Purchase Agreement for Currituck County Schools

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request: Board of Commissioners resolution to authorize funding of temporary mobile classrooms.

Potential Budget Affect: Funds budgeted for appropriation in Capital Outlay

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

CURRITUCK COUNTY BOARD OF COMMISSIONERS
CURRITUCK COUNTY, NORTH CAROLINA

RESOLUTION TO APPROVE
MODULAR UNIT LEASE-PURCHASE AGREEMENT
FOR CURRITUCK COUNTY SCHOOLS

WHEREAS, the Currituck County Board of Education wishes to enter into a lease-purchase agreement to acquire modular units to be used for public school purposes; and

WHEREAS, the proposed agreement will require the Board of Education to pay lease-purchase or installment payments to Modular Technologies, Inc. over a 6-year term as described in the attached contract documents, marked "Exhibit A"; and

WHEREAS, the proposed agreement is a continuing contract for capital outlay subject to the requirements of N.C. Gen. Stat. §§ 115C-441(c1) and 115C-528, including approval of the Currituck County Board of Commissioners; and

WHEREAS, the Currituck County Board of Commissioners supports the Currituck County Board of Education's acquisition of said modular units with capital outlay funds appropriated to the Currituck County Board of Education in the ordinary course of business.

NOW, THEREFORE, BE IT HEREBY RESOLVED, that in accordance with N.C. Gen. Stat. §§ 115C-441(c1) and 115C-528, the Currituck County Board of Commissioners agrees to appropriate sufficient funds to the Currituck County Schools Board of Education in ensuing fiscal years to meet the Currituck County Board of Education's fiscal obligations under the proposed agreement. Said funds shall be a part of, and not in addition to, any regular appropriations made to the Currituck County Board of Education by the Currituck County Board of Commissioners in each fiscal year, and the Currituck County Board of Commissioners shall not, by virtue of adopting this resolution, be obligated to increase its annual appropriations to the Currituck County Board of Education.

Adopted and resolved, this the ____day of _____, 2020, by the Currituck County Board of Commissioners.

_____
Bob White, Chairman
Currituck County Board of Commissioners

_____
Leeann Walton, Clerk
Currituck County Board of Commissioners

Exhibit A

STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

FINANCING AGREEMENT

This Financing Agreement is made this 23rd day of March 2020 ("Agreement") by and between Modular Technologies, Inc., a duly organized corporation in good standing in the State of North Carolina, with the authority to do business in North Carolina and with its principal office at 101 N Heritage Street, Suite J, Kinston, North Carolina 28501("Lender"), and Currituck County Board of Education ("Borrower" or "Board"), with its principal office at 2958 Caratoke Highway, Currituck, North Carolina 27929.

RECITALS

WHEREAS, the Borrower has the power, pursuant to Section 115C-528 of the General Statutes of North Carolina to purchase and finance the purchase of photocopiers and other items and to grant a security interest in such items to secure payment as set forth in the statute;

WHEREAS, in order to finance the purchase(s) contemplated herein, the Borrower has determined that it is in the best interests of the Borrower to enter into this Agreement with the Lender under which the Lender will accept Installment Payments (as such term is defined herein) from the Borrower in consideration thereof;

WHEREAS, the obligation of the Borrower to make Installment Payments under this Agreement shall constitute a limited obligation of the Borrower, payable solely from then currently budgeted appropriations of the Borrower, and shall not constitute a direct or indirect pledge of the faith and credit or taxing power, if any, direct or indirect, of the Borrower within the meaning of the Constitution of the State;

WHEREAS, the execution, delivery and performance of this Agreement have been authorized, approved and directed by the Board; and

WHEREAS, the execution, delivery, and performance of this Agreement by Lender has been authorized, approved and directed by all necessary and appropriate action of the Lender;

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants contained in this Agreement, the parties hereto agree as follows:

1. LENDER'S OBLIGATION. Lender acknowledges that Borrower may purchase specified items in installments pursuant to N.C. Gen. Stat. 115C-528(c). Lender shall deliver all equipment and services identified in the attached Exhibit A (hereinafter referred to as the Property) on or before August 1, 2020. Lender shall provide and does provide warranties of the Property and services provided to Borrower, including without limitation warranties of the Property's merchantability, fitness for ordinary purposes, fitness for the Borrower's intended uses, suitability, design, condition, durability, operation, quality of materials and workmanship and compliance with all specifications and applicable laws.

2. TERM. The term of this Agreement shall commence on the date this Agreement is executed by Lender and Borrower and shall continue through the due date of final payment or until otherwise terminated as provided herein.

3. BORROWER'S INSTALLMENT PAYMENTS. After Lender delivers the Property to the Borrower according to the terms set forth in this Agreement and its Exhibits, the Borrower shall make Installment Payments on that Property as set forth below. The Borrower shall make or cause to be made the Installment Payments described in the attached Payment Schedules, identified as Exhibit B (hereinafter referred to as Installment Payments). In addition, Borrower agrees that its primary business official will use his or her best efforts to obtain and maintain funds from which such payments under this Agreement may be made. Installment Payments shall be made to the Lender at the address set forth in Section 19 below or as otherwise directed in writing by Lender.

4. TITLE/OWNERSHIP OF PURCHASED ITEMS. Title and ownership of the Property shall be in the Borrower from and after delivery of, the receipt and acceptance of all Property, and Borrower's payment of the first Installment Payment so long as Borrower shall not be in default hereunder, subject to the anticipated security interest of the Lender. Title and ownership of the Property shall vest fully and permanently in the Borrower upon the fourth Installment Payment, free and clear of any lien or security interest of the Lender. Upon repayment of the Advance Payment, the Lender, at the Borrower's request, shall release and cancel any lien or security interest.

5. LATE CHARGES. If any payment is not received within seven (7) business days of receipt of notice that a payment is late, Borrower agrees to pay a late charge (calculated from the due date) equal to 1.0% per month on the overdue amount. All payments due and payable under this Agreement shall be due and payable whether or not Borrower has received any notice that such payment is due; however, no late charges shall be assessed or due until seven (7) business days after Borrower receives notice from Lender that such payment was not received on its due date.

6. SECURITY INTEREST. Lender may obtain a security interest in the Property until all payments required under Paragraph 3 of this Agreement are made. Lender shall be solely responsible for securing its security interest and Borrower shall provide its reasonable cooperation in Lender's efforts to obtain such interest.

7. MAINTENANCE. Borrower, at its expense, shall keep the Property in good condition and be responsible for ordinary maintenance.

8. INSURANCE. Borrower shall, at its expense, maintain property insurance for the Term of this Agreement in an amount sufficient to cover the value of the Property. Borrower shall further, at its expense, maintain in effect throughout the term of this Agreement a policy of liability insurance in the following amounts and for the following coverage: $250,000 per person and $500,000 aggregate bodily injury liability, except the Borrower may satisfy this obligation by participating in the risk management program administered by the North Carolina School Boards

Association. All insurance shall name Lender as an additional insured. The policies required hereby shall provide that they may not be canceled or materially altered without at least 30 days prior written notice to Lender. At Lender's request, Borrower shall deliver to Lender copies or other evidence satisfactory to Lender of each insurance policy and each renewal thereof. However, if Borrower is self-insured with respect to equipment such as the Property, Borrower shall maintain during the term of this Agreement an actuarially sound self-insurance program in form satisfactory to Lender and shall provide evidence thereof in form and substance to Lender at Lender's request.

9. REPRESENTATIONS OF PARTIES. Borrower and Lender represent and warrant that (a) this Agreement has been duly authorized, executed and delivered by Borrower and Lender; (b) each signatory of this Agreement has the authority to bind the Borrower and Lender to such Agreement; and (c) Borrower is a political subdivision of the State of North Carolina.

10. BORROWER STATEMENT. Borrower makes the following representations: (a) Borrower is a body corporate of the State of North Carolina with the authority to hold school property and to purchase and hold real and personal property pursuant to Chapter 115C of the North Carolina General Statutes; (b) Borrower has been duly authorized by the Constitution and laws of the applicable jurisdiction and by a resolution of its governing body (which resolution, if requested by Lender, is attached hereto), to enter into this Agreement; (c) Best efforts have been made to ensure the enforceability of this Financing Agreement, and Borrower has substantially complied with such public bidding requirements, if any, as may be applicable to the transactions contemplated by this Financing Agreement; (d) Borrower will use its best efforts to ensure that the Property being purchased by Borrower will be used by Borrower for the purpose of performing one or more governmental or proprietary functions of Borrower consistent with the permissible scope of Borrower's authority and will not be used in a trade or business of any person or entity or for any personal, family or household use; (e) the Property being purchased by Borrower will serve an essential function for the Borrower; (f) Borrower's need for the Property is not expected to diminish during the term of the Financing Agreement; and (g) Borrower shall cooperate with Lender's reasonable efforts to render this Agreement tax exempt to the extent permissible under the Internal Revenue Code, and Borrower shall not change its use or sell the Property during the term of this Agreement, except in accordance with paragraph 3 of this Agreement.

11. BORROWER DEFAULT. Borrower shall be in default under this Financing Agreement upon the happening of any of the following events or conditions ("Events of Default"), unless such Event of Default shall have been specifically waived by Lender in writing: (a) Default by Borrower in payment of an Installment Payment under this Agreement or in the performance of any obligation, covenant or liability contained in this Agreement and the continuance of such default for 10 consecutive business days after written notice thereof by Lender to Borrower, or (b) any warranty, representation or statement made or furnished to Lender by or on behalf of Borrower proves to have been false in any material respect when made or furnished, or (c) actual or attempted sale, lease or encumbrance of any of the Property , or the making of any levy, seizure or attachment thereof or thereon without Lender's written consent, or (d) dissolution, termination of existence, discontinuance of the Borrower, insolvency, failure to pay debts as they mature, or appointment of a receiver of any part of the property of, or assignment for the benefit of creditors by the Borrower, or the commencement of any proceedings under any bankruptcy, reorganization or arrangement laws by or against the Borrower.

12. LENDER DEFAULT. Lender shall be in default under this Financing Agreement upon the happening of any of the following events or conditions ("Events of Default"), unless such Event of Default shall have been specifically waived by Borrower in writing: (a) Default by Lender in delivery and provision of the Property under this Agreement or in the performance of any obligation, covenant or liability contained in this Agreement and the continuance of such default for 10 consecutive business days after written notice thereof by Borrower to Lender, or (b) any warranty, representation or statement made or furnished to Borrower by or on behalf of Lender proves to have been false in any material respect when made or furnished, or (c) dissolution, termination of existence, discontinuance of the Lender, insolvency, failure to pay debts as they mature, or appointment of a receiver of any part of the property of, or assignment for the benefit of creditors by the Lender, or the commencement of any proceedings under any bankruptcy, reorganization or arrangement laws by or against the Lender.

13. LENDER'S REMEDIES: Upon the occurrence of an Event of Default, Lender may, after reasonable written notice to Borrower of its intentions, proceed by appropriate court action or upon written consent from Borrower to personally, or by its agents, take possession from Borrower of any or all items of Property wherever found and for this purpose enter upon Borrower's premises at a reasonable time upon reasonable notice where any item of Property is located and remove such item of Property free from all claims of any nature whatsoever by Borrower and the parties rights and obligations under this Agreement shall be terminated. In the event of any such repossession, Borrower shall execute and deliver such documents as may reasonably be required to transfer title to the Property under the Agreement to Lender. Exercise of this repossession remedy by the Lender immediately terminates this Agreement. Upon repossession, if the Property under this Agreement is damaged due to the fault of the Borrower such that it is not useable for the purposes for which it was manufactured (reasonable wear and tear excepted), Borrower agrees, at its option, to: (a) repair and restore such Property to a useable condition (reasonable wear and tear excepted) or (b) pay to Lender the reasonable costs of such repair. In the event that the repossession remedy described above is rendered impossible due solely to the conduct of the Borrower, the Lender may exercise any or all remedies available to a secured party under the applicable Uniform Commercial Code.

14. BORROWER'S REMEDIES. Upon the occurrence of an Event of Default, Borrower may, after reasonable written notice to Lender of its intentions, surrender possession of the Property to Lender, terminate this Agreement, extinguish any further obligation to make Installment Payments hereunder, seek reimbursement or refund of any Installment Payments made, and/or claim an abatement or reduction of the Installment Payments. No right or remedy herein conferred upon or reserved to Borrower is exclusive of any right or remedy herein or at law or in equity or otherwise provided or permitted, but each shall be cumulative of every other right or remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise, and may be enforced concurrently therewith or from time to time.

15. COMPLIANCE WITH LAW. All provisions of this Agreement shall be construed so as to conform with North Carolina law, including but not limited to the provisions of North Carolina General Statute Section 115C-528 and other statutory provisions referred to therein. The requirements of N.C. Gen. Stat. §115C-528 are incorporated by reference into this

Agreement and to the extent of any conflict between this section of this Agreement and any other provision of this Agreement this section shall take priority.

16. TAX TREATMENT. The parties will cooperate with one another to enable interest payable under this Agreement to be excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code The Borrower shall cooperate with Lender's efforts to ensure that the interest payable under this Agreement will be excluded from gross income for federal income tax purposes under Section 103 of the Code, and Borrower shall not change its use or sell the equipment identified on Exhibit A during the term of this Agreement, except in accordance with Paragraph 3 of this Agreement. Borrower agrees to cooperate with Lender to execute, upon Lender's request, a tax certificate relating to this Agreement that is acceptable to the Lender and Borrower in form and content, if such a certificate is provided to the Borrower by the Lender. Borrower further agrees to cooperate with Lender to execute, upon Lender's request, either an I.R.S. Form 8038-G or an I.R.S. From 8038-GC if either is applicable with respect to this Agreement if such a form is provided to the Borrower by the Lender.

17. PREPAYMENT. Provided Borrower is not in default, Borrower will have the option and right, upon providing Lender with thirty (30) days prior written notice, to prepay its obligation under this Agreement without the payment of any unaccrued interest. Upon Borrower's exercise of its right of prepayment or satisfaction of its monetary obligations hereunder, Lender will release any security interest in the Property.

18. WAIVER AND SURVIVAL OF RIGHTS. No failure or delay by Lender or Borrower in exercising any right, power or remedy under this Agreement shall constitute a waiver, and any waiver by Lender or Borrower on any one occasion or for any one purpose shall not be construed a waiver on any future occasion or for any other purpose.

19. MISCELLANEOUS. This Agreement shall be governed by, and construed in accordance with, the laws of the State of North Carolina. If any portion of this Agreement is determined to be invalid under any applicable law, such provision shall be deemed void and the remainder of this Agreement shall continue in full force and effect. All notices to be given hereunder shall be in writing and shall become effective when delivered and received by the intended recipient, or if mailed, when received via certified mail, addressed to such other party at the address set forth herein or at such other address as such party shall from time to time designate in writing:

If to the Lender:

Tony Andrews, Vice President
Modular Technologies, Inc.
PO Box 6026
Kinston, NC 28501

Telephone: (252) 522-5770

If to the Borrower:

Mark Stefanik, Superintendent
CURRITUCK COUNTY SCHOOLS
2958 Caratoke Highway
Currituck, N.C. 27929

Telephone: (252) 232-2223
Fax: (252) 232-3655

If the date for making payment, or the last date for performance of any act or the exercising of any right is not a business day, such payment may be made or act performed or right exercised on the next succeeding business day, with the same force and effect as if done on the nominal date provided in this Agreement, and no interest shall accrue for the period after such nominal date. This Agreement constitutes the complete agreement of the parties and supersedes all prior oral or written understandings. Headings of this Agreement and each Exhibit are for convenience only. No terms or provision hereof may be amended, waived, discharged, or terminated except by a written instrument signed by the parties hereto.

20. TAXES. Borrower shall timely pay all taxes assessed against the Borrower that arise out of or are due to Borrower's ownership and title to the Property so long as the Borrower is in possession of the Property and retains title to it. The foregoing shall not include any federal, state or local income or franchise taxes of Lender or any other taxes assessed against the Lender.

21. ASSIGNMENT. This agreement may not be assigned without the written agreement of all parties, but if the same is assigned by agreement, it shall be binding on the assignee and its heirs.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their authorized representatives.

Lender: MODULAR TECHNOLOGIES, INC.

By: _____ (Seal)
Deborah C. Andrews - President

MODULAR TECHNOLOGIES, INC. CORPORATE SEAL NORTH CAROLINA 1992

Attest: _____ (Seal)
Corporate Secretary - Tony Andrews

Borrower: CURRITUCK COUNTY BOARD OF EDUCATION

By: _____ (Seal)
Karen Etheridge, Board Chair

Attest: _____ (Seal)
Mark Stefanik, Superintendent

OWNER-CONTRACTOR AGREEMENT

THIS MOBILE CLASSROOM PROJECT AGREEMENT ("Agreement") is made this 23rd day of March 2020, by and between the Currituck County Board of Education (herein referred to as the "Owner"), whose mailing address is 2958 Caratoke Highway, Currituck, NC 27929 and Modular Technologies, Inc. (herein referred to as the "Contractor"), whose mailing address is PO Box 6026, Kinston, North Carolina 28501. Correspondence, submittals, and notices relating to or required under this Agreement shall be sent in writing to the above addresses unless either party is notified in writing by the other of a change in address.

WITNESSETH

WHEREAS, it is the intent of the Owner to obtain the services of the Contractor in connection with the design, construction and delivery of a mobile classroom unit; and

WHEREAS, the Contractor desires to perform such construction in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the promises made herein and other good and valuable consideration, the following terms and conditions are hereby mutually agreed to, by and between the Owner and Contractor:

1 Scope of Services The Contractor shall perform the Work in accordance with the terms of this Agreement, any plans and specifications prepared for this Project, and the description of services attached to this Agreement as Exhibit A, all of which are incorporated into and made a part of this Agreement. At the time of delivery of the modular unit, the Contractor shall provide signed and sealed architect/engineering drawings The Contractor shall also adhere to the following:

a. The Contractor shall provide and pay for all materials, tools, equipment, and labor, and shall perform all other acts and supply all other services and things necessary to fully and properly perform and complete the Work as required by this Agreement.

b. The Contractor shall perform the Work in compliance with all governmental laws and regulations, including all applicable local, state and federal rules and regulations.

c. The Contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, fuel, sanitary facilities, and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the Agreement documents.

d. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications

e. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the Contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make,

manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable Substitution of materials, items or equipment of equal or equivalent design shall be submitted to the architect or engineer for approval or disapproval; such approval or disapproval shall be made by the architect or engineer prior to the opening of bids

f. The Contractor shall designate a foreman/superintendent who shall direct the work.

g. If at any time during the construction and completion of the work covered by this Agreement, the conduct of any workman be adjudged a nuisance to the Owner or considered detrimental to the work, the Contractor shall order such parties removed immediately from the Owner's property.

h. The Contractor shall keep the sites and surrounding area reasonably free from rubbish at all times and shall remove debris from the site from time to time or when directed to do so by the Owner Before final inspection and acceptance of the Project, the Contractor shall thoroughly clean the sites, and completely prepare the Project and site for use by the Owner

i Temporary electricity and water shall be arranged by the Contractor at the Contractor's expense.

j. Contractor represents and warrants that it is and will remain properly licensed at all times in the performance of Work. Contractor shall obtain and pay for all licenses and permits that are required for it to perform Work.

k The risk of loss of and damage to the Work which is the subject of this Agreement shall be and remain with the Contractor until final completion.

2. Compensation. Provided that the Contractor shall strictly and completely perform all of its obligations under this Agreement, the Owner shall pay the Contractor the amount specified in Exhibit B (herein referred to as the "Contract Sum") beginning fifteen (15) days after final acceptance of the work by the Owner. No compensation shall be paid for any additional work that is not approved in advance by the Owner. Payment may be withheld until the Contractor's North Carolina sales and use tax report is received. The report shall accurately list any and all sales and use tax paid on materials for the entire Project.

3. Time. The Contractor shall commence the Work promptly upon the execution of this Agreement. The classroom units shall be constructed, delivered and fully and completely installed as specified in this Agreement by August 1, 2020. Time is of the essence The Contractor shall perform work in a timely manner.

4. Codes, Permits and Inspections.

a The Contractor shall obtain the required permits, give all notice and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this Agreement. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the architect or engineer in writing. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the Owner, he shall bear all cost arising therefrom

b. All work under this Agreement shall conform to the North Carolina State Building Codes and other state and national codes as are applicable.

5. Safety Requirements.

a. The Contractor shall be responsible for the entire site and the construction of the same and provide all the necessary protections as required by laws or ordinances governing such conditions and as required by the Owner, architect or engineer He shall be responsible for any damage to the Owner's property or that of others on the job, by himself, his personnel or his subcontractors, and shall make good such damages He shall be responsible for and pay for any claims against the Owner arising from such damages.

b The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926 Construction and Part 1910 General Industry)

c. The Contractor shall provide all necessary safety measures for the protection of all persons on the work, including the requirements of the AGC Accident Prevention Manual in Construction as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work He shall clearly mark or post signs warning of hazards existing and shall barricade excavations and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work

d Contractor shall be solely responsible for safety with respect to the Work of this Agreement and shall establish and enforce safe working procedures at all times during its performance of Work in accordance with all federal, state and local laws, ordinances, rules and regulations pertaining to safety.

6 Warranties. The Contractor guarantees and warrants to the Owner all Work as follows: that all materials and equipment furnished under this Agreement will be new and the best of its respective kind unless otherwise specified; that all Work will be of good quality in accordance with the industry standards for reputable contractors; that the Work will be free of omissions and faulty, poor quality, imperfect and defective material or workmanship; that the Work, including but not limited to, mechanical and electrical machines, devices and equipment, shall be fit and fully usable for its intended and specified purpose and shall operate satisfactorily with ordinary care; that the products or materials incorporated in the Work will not contain asbestos; and that all agents or employees of Contractor who will provide services under this Agreement will be fully qualified, possess any requisite licenses, and otherwise be legally entitled to perform the services provided; and that the person(s) executing this Agreement on behalf of Contractor have authority to do so as an official, binding act of Contractor.

If, within one year after the Date of Substantial Completion of the Work or designated portion thereof or within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by this Agreement, any of the Work is found to be defective, not in accordance with this Agreement, or not in accordance with the guarantees and warranties specified in this Agreement, the Contractor shall correct it within five (5) working days or such other period as mutually agreed, after receipt of a written notice from the Owner to do so. For items which remain incomplete or uncorrected on the date of Substantial Completion, the one year warranty shall begin on the date of Final Completion of the Work.

7 Contractor-Subcontractor Relationships The Contractor agrees that the terms of these Agreement documents shall apply equally to a subcontractor as to the Contractor, and that the subcontractor is bound by those terms as an agent of the Contractor.

8 Hold Harmless. The Contractor shall indemnify and hold the Owner harmless from and against any and all losses, liabilities, claims, lawsuits, judgments, and demands whatsoever, including costs of investigation (including reimbursement of reasonable legal fees and all costs) caused solely by any negligent act or omission or intentional wrongdoing of the Contractor or its agents, employees or subcontractors, or caused solely by the maintenance, presence, use, location or removal of any equipment or other property owned or operated by the Contractor or its agents,

employees or subcontractors The parties agree that this indemnification clause is an "evidence of indebtedness" for purpose of N C Gen Stat. § 6-21 2 The Owner shall not be responsible for any damage to the Contractor's property, business, agents or employees, unless said damage is due solely to the negligence of Owner

9. Insurance. The Contractor shall provide to Owner certificates of insurance evidencing the following insurance. (a) commercial general liability with limits of not less than $2,000,000 per occurrence and in the aggregate; (b) automobile liability with coverage for owned, hired, and non-owned automobiles, with limits of not less than $1,000,000, (c) workers' compensation as required by statute, including employer's liability coverage; (d) umbrella liability insurance with limits of not less than $5,000,000; and (e) professional liability coverage with policy limits the greater of the full amount maintained under the Contractor's practice policy, or Two Million Dollars ($2,000,000) per claim and in aggregate, to be maintained for three (3) years after final payment to the Contractor Owner shall be named as an additional insured under Contractor's commercial general, umbrella and automobile liability insurance

   The Contractor shall promptly furnish to the Owner certificates of insurance evidencing such insurance coverage. Insurance required hereunder shall be maintained by insurance companies properly licensed by the Insurance Department of the State of North Carolina and rated "A" or better by "Best's Insurance Guide."7

10. Termination for Convenience. The Board may terminate this Agreement at any time in its complete discretion upon twenty (20) days written notice. In the event of a termination for convenience, all finished or unfinished work and materials pursuant to this Agreement shall be turned over to the Board and become its property. If the Agreement is terminated by the Board in accordance with this section, the Board shall only be responsible for paying Contractor for all Work performed and accepted and all materials delivered to the site as of the date of termination.

11 Termination by the Owner for Cause The Owner may terminate the Agreement upon five (5) days written notice if the Board is dissatisfied with the quality or timeliness of the Work performed. If the Owner becomes dissatisfied with the Work, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor five days' written notice, terminate employment of the Contractor and may:

   1. Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

   2. Accept assignment of any subcontracts; and

   3. Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

   If the Owner terminates the whole or any part of the Work, the Owner may procure, upon such terms and in such manner as the Owner may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the Owner for any excess costs for such similar supplies or services The Contractor shall continue the performance of the Agreement to the extent not terminated hereunder.

   When the Owner terminates the Agreement, the Contractor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's and legal services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect and this obligation for payment shall

survive this Agreement

12 Lunsford Act/Criminal Background Checks The Contractor shall conduct or arrange to have conducted at its own expense sexual offender registry checks on each of its owners, employees, agents, or subcontractors ("contractual personnel") who will engage in any service on or delivery of goods to school system property or at a school-system sponsored event, except checks shall not be required for individuals who are solely delivering or picking up equipment, materials, or supplies at: (1) the administrative office or loading dock of a school, (2) non-school sites; (3) schools closed for renovation; or (4) school construction sites. The checks shall include at a minimum checks of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry ("the Registries"). For the Contractor's convenience only, all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at http://www.nsopw.gov/ The Contractor shall provide certification that the registry checks were conducted on each of its contractual personnel providing services or delivering goods under this Agreement prior to the commencement of such services or the delivery of such goods (Registry Check Certification Form – Exhibit C). The Contractor shall conduct a current initial check of the registries (a check done more than 30 days prior to the date of this Agreement shall not satisfy this contractual obligation). In addition, Contractor agrees to conduct the registry checks and provide a supplemental certification before any additional contractual personnel are used to deliver goods or provide services pursuant to this Agreement. Contractor further agrees to conduct annual registry checks of all contractual personnel and provide annual certifications at each anniversary date of this Agreement. Contractor shall not assign any individual to deliver goods or provide services pursuant to this Agreement if said individual appears on any of the listed registries Contractor agrees that it will maintain all records and documents necessary to demonstrate that it has conducted a thorough check of the registries as to each contractual personnel, and agrees to provide such records and documents to the school system upon request. Contractor specifically acknowledges that the school system retains the right to audit these records to ensure compliance with this section at any time in the school system's sole discretion Failure to comply with the terms of this provision shall be grounds for immediate termination of the Agreement. In addition, the Owner may conduct additional criminal records checks at the Owner's expense If the school system exercises this right to conduct additional criminal records checks, Contractor agrees to provide within seven (7) days of request the full name, date of birth, state of residency for the past ten years, and any additional information requested by the school system for all contractual personnel who may deliver goods or perform services under this Agreement Contractor further agrees that it has an ongoing obligation to provide the school system with the name of any new contractual personnel who may deliver goods or provide services under the Agreement. The Owner reserves the right to prohibit any contractual personnel of Contractor from delivering goods or providing services under this Agreement if the Owner determines, in its sole discretion, that such contractual personnel may pose a threat to the safety or well-being of students, school personnel or others

13. Governing Law. This Agreement and the relationship of the parties shall be governed by the laws of the state of North Carolina

14 Entire Agreement All of the representations and obligations of the parties are contained herein, and no modification, waiver or amendment of this Agreement or of any of its conditions or provisions shall be binding upon a party unless in writing signed by that party The waiver by any party of a breach of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach of that provision by the same party, or of any other provision or condition of the Agreement.

15 Severability. If any section, subsection, term or provision of this Agreement or the application

thereof to any party or circumstance shall, to any extent, be invalid or unenforceable, the remainder of said section, subsection, term or provision of the Agreement or the application of the same to parties or circumstances other than those to which it was held invalid or unenforceable, shall not be affected thereby and each remaining section, subsection, term or provision of this Agreement shall be valid or enforceable to the fullest extent permitted by law.

16 Compliance with Applicable Laws. Contractor shall comply with all applicable laws and regulations in providing services under this Agreement. In particular, Contractor shall not employ any individuals to provide services to the Owner who are not authorized by federal law to work in the United States Contractor represents and warrants that it is aware of and in compliance with the Immigration Reform and Control Act and North Carolina law (Article 2 of Chapter 64 of the North Carolina General Statutes) requiring use of the E-Verify system for employers who employ twenty-five (25) or more employees and that it is and will remain in compliance with these laws at all times while providing services pursuant to this Agreement. Contractor shall also ensure that any of its subcontractors (of any tier) will remain in compliance with these laws at all times while providing subcontracted services in connection with this Agreement. Contractor is responsible for providing affordable health care coverage to all of its full-time employees providing services to the School System The definitions of "affordable coverage" and "full-time employee" are governed by the Affordable Care Act and accompanying IRS and Treasury Department regulations.

17. Restricted Companies Lists. Contractor represents that as of the date of this Agreement, Contractor is not included on the Final Divestment List created by the North Carolina State Treasurer pursuant to N C Gen Stat. § 147-86 58. Contractor also represents that as of the date of this Agreement, Contractor is not included on the list of restricted companies determined to be engaged in a boycott of Israel created by the North Carolina State Treasurer pursuant to N.C. Gen. Stat § 147-86.81

18 Anti-Nepotism Contractor warrants that, to the best of its knowledge and in the exercise of due diligence, none of its corporate officers, directors, or trustees and none of its employees who will directly provide services under this Agreement are immediate family members of any member of the Currituck County Board of Education or of any principal or central office staff administrator employed by the Board For purposes of this provision, "immediate family" means spouse, parent, child, brother, sister, grandparent, or grandchild, and includes step, half, and in-law relationships. Should Contractor become aware of any family relationship covered by this provision or should such a family relationship arise at any time during the term of this Agreement, Contractor shall immediately disclose the family relationship in writing to the Superintendent of the Schools Unless formally waived by the Board, the existence of a family relationship covered by this Agreement is grounds for immediate termination by Owner without further financial liability to Contractor

19. Applicable School Board of Education Policies. Contractor acknowledges that the Currituck County Board of Education has adopted policies governing conduct on School System property and agrees to abide by any and all relevant Board policies while on School System property The Contractor acknowledges that Board's policies are available on the School System's website

20. Dispute Resolution Any disputes arising in connection with the Agreement shall first be submitted to mediation. At the sole option of the Owner, disputes not settled in mediation shall be resolved by private adjudication conducted pursuant to the Construction Industry Arbitration Rules issued by the American Arbitration Association then in effect, and shall be held in Currituck County, NC.

21. Assignment. Neither this Agreement, nor any payments to be earned pursuant to this Agreement, may be assigned by Contractor without the prior written consent of the Owner.

22 Patents and Copyright. In any event any article, service, or process sold, delivered and/or

performed hereunder shall be covered by any patent, copyright, or application for either Contractor will indemnify and save harmless the Owner from any and all loss, cost or expenses on account of any and all claims, suits, or judgments on account of the sale of such article or the use of service or process in violation of copyright, or application for either rights under such patent, copyright or application for either

23 Strict Compliance Owner may at any time insist upon strict compliance with this Agreement, the Specifications and Bid Documents notwithstanding any previous custom, practice or course of dealing to the contrary

24 Exhibits
Exhibit A – Plans and Specifications
Exhibit B – Payment Schedule
Exhibit C – Sexual Registry Form

IN WITNESS WHEREOF, the Owner has caused these presents to be signed and the Contractor has caused these presents to be signed by a person with the authority to enter this Agreement, as hereinafter attested, all as of the day and year first above written

CURRITUCK COUNTY BOARD OF EDUCATION

By: _____ (Seal)
Karen Etheridge, Board Chair

Attest: _____ (Seal)
Mark Stefanik, Superintendent

MODULAR TECHNOLOGIES, INC.

By (Sign): _____ (Seal)
(Print): Deborah C. Andrews - President

Attest (Sign): _____
(Print): Tony Andrews, Corporate Secretary

MODULAR TECHNOLOGIES, INC. CORPORATE SEAL NORTH CAROLINA 1992 (Seal)

This instrument has been pre-audited in the manner required by the School Budget and Fiscal Control Act

_____
(Signature of Finance Officer)

4/23/2020
(Date)

Exhibit A

Building Specifications

To meet 2018 NC Building Code and the following specifications:

PROJECT:

TWO NEW CLASSROOM UNITS TO MATCH FLOOR PLAN IN DIAGRAM A

BUILDING:	
UNITS:	DEPENDENT ON BUILDING SIZE
SQUARE FEET:	EACH FLOOR APPROXIMATELY 875 SQ FT
CONSTRUCTION:	VB
OCCUPANCY:	E-EDUCATIONAL: 1 OCCUPANT PER 20 SQ FT
STATE(S) CODED FOR	NORTH CAROLINA
DESIGN WIND SPEED:	140 MPH
GROUND SNOW LOAD:	20 OR 40 PSF

FRAME:

TYPE:	OUTRIGGER W/12" BEAM AT 95.5" SPACING
AXLES AND TIRES	UNDERSLUNG AXLES / STANDARD TIRES
HITCHES:	DETACHABLE

FLOOR:

BTM BOARD:	NYLON IMPREGNATED BOTTOM BOARD
INSULATION:	R-30 KRAFT
JOISTS:	2x8 WOOD, DOUBLE RIM JOIST FULL PERIMETER
DECKING:	3/4" SINGLE LAYER PLYWOOD OR EQUAL
FLOOR FINISH:	1/8" VINYL COMPOSITION TILE ARMSTRONG – COOL WHITE
FLOOR FINISH:	RESTROOMS: ARMSTRONG CORLON – WHITE CLIFFS
FLOOR FINISH:	CARPET BAR UNLESS HOLDBACKS ARE REQUESTED
BASE TRIM:	COVE BASE 67-2 GRAY

EXTERIOR WALLS:

WALLS	2x6 WOOD W/DOUBLE TOP PLATES
EXTERIOR WALL FINISH	26 GA. HI-RIB STEEL – MOCHA TAN
SHEATHING:	7/16" OSB 100% COVERAGE
VAPOR BARRIER:	HOUSE WRAP
INSULATION:	R-19 KRAFT
MANSARD:	26 GA. HI-RIB STEEL – BLACK
EXTERIOR TRIM:	HI-RIB STEEL TRIM – BLACK
SKIRTING	METAL TO MATCH EXTERIOR WALL FINISH

INTERIOR WALLS:

WALLS:	2x4 WOOD
WALLS:	2x4 WOOD: DOUBLE AT THE MATE LINE
WALLS:	PLENUM AND PLUMBING WALLS PER PRINT
INSULATION:	R-11 SOUND REDUCTION BATTS
INTERIOR FINISH	5/8" VINYL COVERED GYPSUM TYPE "X" RUFF STUFF WHITE
INTERIOR FINISH:	BATTENS AT SEAMS
INTERIOR FINISH	RESTROOMS AND JANITOR CLOSET – FRP OVER 5/8"GYPSUM BACKER, FULL HEIGHT – WHITE
INTERIOR FINISH.	4" VINYL BASE COVE – 67-2 GRAY

ROOF:

TRUSS:	TRANSVERSE, 1/4". 12" PITCH, 24" O.C
DECKING:	7/16" SHEATHING, EPDM UNDERLAYMENT
MATE BEAM:	4L 3/4" PLYWOOD 24" H
OVERHANG:	2" SIDES, 6" ENDS
FINISHED CEILING	8'-0"
CEILING FINISH:	T-GRID 2x2 ACOUSTICAL TILES
CEILING HEIGHT:	8'-0" A.F.F.
INSULATION:	R-49 TO R-60 KRAFT DEPENDING ON CODE
ROOFING:	45 MIL EPDM – WHITE OR BLACK
MANSARD:	2" OVERHANG SIDES FLAT: BLACK
MANSARD:	6" OVERHANG ENDS FLAT: BLACK
ROOF ACCESS:	12" PEEL AND STICK
ROOF ACCESS:	(2) HOLES BORED IN EACH MATE BEAM FOR CROSSOVERS

DOORS:

EXTERIOR DOOR.	72x80 COMMERCIAL STEEL DOOR/STEEL JAMB – BLACK
EXT DOOR LITE:	APPROX 6"x30" WINDOW
EXT. DOOR HARDWARE	GRADE 2 LEVERSET
EXT. DOOR HARDWARE.	CLOSER GRADE 2
INTERIOR DOOR	36x80 20 MIN RATED FLUSH DOOR
INTERIOR DOOR:	BRONZE FRAME/IMPERIAL OAK FINISH
INT DOOR LITE:	APPROX 6"x30" WINDOW
INT DOOR HARDWARE:	GRADE 2 CLASSROOM FUNCTION: CLASSROOM DOORS
INT DOOR HARDWARE:	GRADE 2 PRIVACY LOCKS: RESTROOMS
INT. DOOR HARDWARE:	GRADE 2 PASSAGE LOCKS: OFFICES
INT. DOOR HARDWARE:	GRADE 2 PUSH/PULL: RESTROOMS
INT DOOR HARDWARE:	SELF CLOSING HINGES

WINDOWS:

EXTERIOR WINDOWS	
WINDOW SIZE:	30x60 VERTICAL SLIDER BRONZE FRAME
WINDOW GLAZING.	LOW E, TINTED GLASS
WINDOW:	VINYL MINI-BLINDS

ELECTRICAL:

SERVICE:	120/240 V SINGLE-PHASE SERVICE
LOADCENTER:	125A NEMA-3 OUTDOOR LOAD CENTERS W/24 BREAKERS
WIRING:	12-2 ROMEX AND MC CABLE
INTERIOR LIGHTS:	TUBE FLUORESCENT (LAY-IN GRID)
EMERGENCY LIGHTS.	DUAL HEAD EMERGENCY LIGHT/EXIT SIGNS
REMOTE HEADS:	DUAL EXTERIOR REMOTE HEADS
EXTERIOR LIGHTS:	60 WATT PHOTOCELL PORCH LIGHT OR LED EQUAL
RECEPTACLES	110 VOLT TYPE RECEPTACLES, GFI, WP, HEATTAPE AS REQ
EMPTY J-BOX:	W/1/2" CONDUIT STUBBED UP ABOVE T-GRID
EXHAUST FANS.	EXHAUST FANS IN RESTROOMS
SWITCHES:	CEILING MOUNTED OCCUPANCY SENSORS

PLUMBING:

PLUMBING	CPVC SUPPLY AND PVC DWV HANDICAP ACCESSIBLE RESTROOMS, STEEL PARTITIONS
FLUSH FIXTURES:	TANK TOILETS AND WALL MOUNT URINALS GRAB BARS, TOILET PAPER HOLDERS, MIRRORS
SINKS:	WALL MOUNTED W/METAL FIXTURES
SERVICE SINK:	24"x24" MOUNTED ON LEGS WITH METAL FAUCET
WATER COOLER	ADA COMPLIANT HI-LOW
WATER HEATER:	10 GALLON TANK

H.V.A.C.:

HVAC.	3.5T WALL HUNG W/10KW OR 15KW HEAT STRIP AND CRV
DUCTWORK:	DUCTED SUPPLY AND RETURN
AIR GRILLS:	2'x2' FIXED BLADE
THERMOSTAT	7 DAY PROGRAMMABLE

SHIP LOOSE:

FLOOR FINISH:	CARPET BAR
ROOF ACCESS:	12" PEEL AND STICK
CEILING:	MATE BEAM COVER
SKIRTING:	METAL TO MATCH EXTERIOR WALLS
RAMPS AND STEPS:	ALUMINUM, AS REQUIRED

DELIVERY, SETUP AND TIE-DOWN TO BE INCLUDED

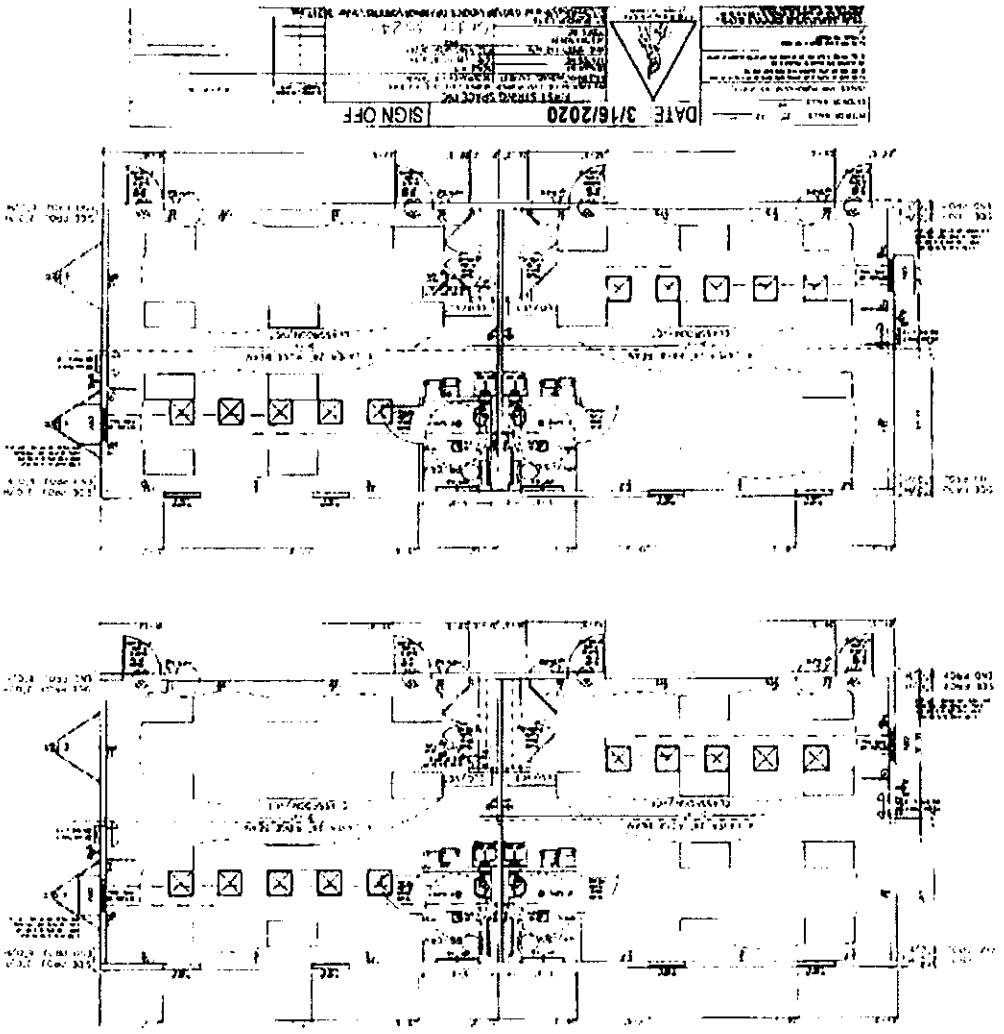
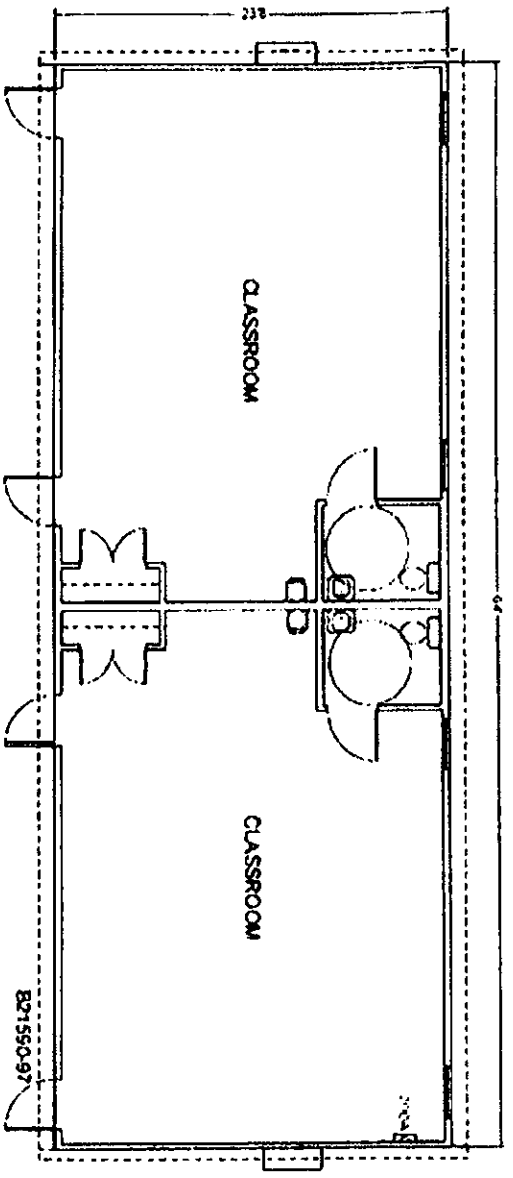

DATE 3/16/2020
SIGN OFF

Diagram A
Not to
Scale



Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2825)

Agenda Item Title: Budget Amendments

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request: Budget amendment to close out lottery funds projects for schools and to transfer funds for associated Lottery Funds requests on agenda for Griggs HVAC and Central Roofing projects.

Potential Budget Affect: See transfers on attached budget amendment.

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

Number 20200164

BUDGET AMENDMENT

The Currituck County Board of Commissioners, at a meeting on the 22nd day of June 2020, passed the following amendment to the budget resolution for the fiscal year ending June 30, 2020.

Account Number	Account Description	Debit Decrease Revenue or Increase Expense	Credit Increase Revenue or Decrease Expense
51848-592010	Griggs - HVAC Ph III (7 Units)	$ 38,000	
51848-598004	Central Ctr Wing Roof 2020	$ 25,000	
51848-594003	Moyock MS Energy Mgmt Phase III		$ 1,881
51848-595007	CCHS AC Repl at front office		$ 501
51848-595008	CCHS Energy Mgmt Phase III		$ 3,128
51848-593005	Knotts Island A/C Replacement		$ 2,776
51848-592006	Griggs A Wing South HVAC replace		$ 30,813
51848-592008	Griggs A Wing South roof replace		$ 50,024
51848-592007	Griggs Ctr Wing roof replace		$ 56,915
51848-592009	Griggs A Wing North roof replace		$ 52,337
51848-590001	Jarvisburg Upgrade HVAC controls		$ 2,909
51848-596001	Shawboro Upgrade HVAC controls		$ 1,674
51380-425001	State Lottery Proceeds	$ 139,958	
		$ 202,958	$ 202,958

Explanation: School Construction (51848) - To close out completed school construction projects that are funded through lottery proceeds and to increase appropriations for the Griggs HVAC Phase III project and Central Center roof replacement project. Unspent funds will revert back to the lottery unallocated balance to be available for future projects.

Net Budget Effect: School Construction Fund (51) - Decreased by $139,958.

Minute Book # _____, Page # _____

Journal # _____

_____
Clerk to the Board

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2843)

Agenda Item Title: IT Surplus Resolution

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request: Surplus of old electronics/computers

Potential Budget Affect:

Is this item regulated by plan, regulation or statute? No

Planning Board Recommendation:

<IF NOT A PLANNING BOARD ITEM PLEASE ERASE COMPLETELY AND LEAVE BLANK>

Manager Recommendation:

RESOLUTION

WHEREAS, THE Board of Commissioners of the County of Currituck, North Carolina during its regularly scheduled meeting authorized the following, pursuant to G.S. 160A and 270(b) that the property listed below will be sent to a certified electronics recycler for disposal.

County Asset Tag	Description	Serial Number
7852	Dell Latitude E6330	DKLQZW1
7811	Dell Optiplex 3010 (SFF)	C0RFPW1
8576	Dell Latitude E5540	352CD12
8829c	Laptop	
8829a	Laptop	
N/A	Laptop	d211xc42
8829b	Laptop	
N/A	Laptop	241wc42
N/A	Laptop	257yc42
N/A	Laptop	26kwc42
N/A	Laptop	21s1d42
N/A	Laptop	23syc42
8831a	Laptop	
7854	Laptop	
N/A	Laptop	1wgdfx1
7853b	Laptop	
7854a	Laptop	
7853a	Laptop	
N/A	Laptop	4wb58v1
N/A	Laptop	f3z2dx1
N/A	Laptop	4wb48v1
N/A	Laptop	4wcx7v1
N/A	Laptop	9gqfdx1
7375	Laptop	
N/A	Laptop	f44cd12
8594	Laptop	
N/A	Laptop	gr2cd12
7376	Laptop	
7862b	Laptop	
7451	Laptop	
8583	Laptop	
7450	Laptop	
8584	Laptop	
8577	Laptop	
8582	Laptop	
8575	Laptop	
8580	Laptop	

7335	Laptop	CQ9DHN1
7333	Laptop	bq9dhn1
7334	Laptop	9q9dhn1
8586	Laptop	f41cd12
7705e	Laptop	4wc18v1
N/A	Laptop	3hd3yv1
6072	Laptop	2630n81
	Laptop	1whcfx1
6578	Laptop	2vpjhd1
6150	Laptop	btrlk91
N/A	Laptop	9xqzdx1
N/A	Sheriff MCTs	RE139S0404
N/A	Sheriff MCTs	RE139S0415
N/A	Sheriff MCTs	RE139S0418
N/A	Sheriff MCTs	RE139S0420
N/A	Sheriff MCTs	RE139S0424
N/A	Sheriff MCTs	RE139S0428
N/A	Sheriff MCTs	RE139S0429
N/A	Sheriff MCTs	RE139S0431
N/A	Sheriff MCTs	RE139S0433
N/A	Sheriff MCTs	RE139S0435
N/A	Sheriff MCTs	RE139S0436
N/A	Sheriff MCTs	RE139S0439
N/A	Sheriff MCTs	RE139S0444
N/A	Sheriff MCTs	RE139S0447
N/A	Sheriff MCTs	RE139S0455
N/A	Sheriff MCTs	RE139S0466
N/A	Sheriff MCTs	RE139S0467
N/A	Sheriff MCTs	RE139S0469
N/A	Sheriff MCTs	RE139S0470
N/A	Sheriff MCTs	RE139S0471
N/A	Sheriff MCTs	REA39S0032
N/A	Sheriff MCTs	REA39S0037
N/A	Sheriff MCTs	REA39S0038
N/A	Sheriff MCTs	REA39S0040
N/A	Sheriff MCTs	REA39S0041
N/A	Sheriff MCTs	REA39S0044
N/A	Sheriff MCTs	REA39S0048
N/A	Sheriff MCTs	REA39S0053
N/A	Sheriff MCTs	REA39S0058
N/A	Sheriff MCTs	REA39S0059
N/A	Sheriff MCTs	REA39S0075
N/A	Sheriff MCTs	REA39S0078
N/A	Sheriff MCTs	REA39S0083
N/A	Sheriff MCTs	REA39S0092
N/A	Sheriff MCTs	REA39S0093
N/A	Sheriff MCTs	REA39S0103

N/A	Sheriff MCTs	REA39S0114
N/A	Sheriff MCTs	REA39S0117
N/A	Sheriff MCTs	REA39S0123
N/A	Sheriff MCTs	REA39S0125
N/A	Sheriff MCTs	REA39S0127
N/A	Sheriff MCTs	RF639S0001
N/A	Sheriff MCTs	RF639S0004
N/A	Sheriff MCTs	RF639S0005
N/A	Sheriff MCTs	RF639S0010
N/A	Sheriff MCTs	RF639S0012
N/A	Sheriff MCTs	RF639S0013
N/A	Sheriff MCTs	RF639S0015
N/A	Sheriff MCTs	RF639S0026
N/A	Sheriff MCTs	RF639S0035
N/A	Sheriff MCTs	RF639S0041
N/A	Sheriff MCTs	RF639S0044
N/A	Sheriff MCTs	RF639S0058
N/A	Sheriff MCTs	RF639S0074
N/A	Sheriff MCTs	RG839S1146
N/A	Sheriff MCTs	RG839S1148
N/A	Sheriff MCTs	RG839S1149
N/A	Sheriff MCTs	RG839S1151
N/A	Sheriff MCTs	RG839S1152
N/A	Sheriff MCTs	RG839S1155
N/A	Sheriff MCTs	RG939S0297
N/A	Sheriff MCTs	RG939S0298
N/A	Sheriff MCTs	RG939S0299
N/A	Sheriff MCTs	RG939S0303
N/A	Sheriff MCTs	RG939S0307
N/A	Sheriff MCTs	RG939S0308
N/A	Sheriff MCTs	RG939S0309
N/A	Sheriff MCTs	ZZGEG7031ZZ0638
N/A	Sheriff MCTs	ZZGEG7212ZZ8118
N/A	Sheriff MCTs	ZZGEG7212ZZ8122
N/A	Sheriff MCTs	ZZSJC1336ZZ0006
N/A	Sheriff MCTs	ZZSJC1336ZZ0007
N/A	Sheriff MCTs	ZZSJC1336ZZ0008
N/A	Sheriff MCTs	ZZSJC2114ZZ0033
N/A	Sheriff MCTs	ZZSJC2115ZZ0005
N/A	Sheriff MCTs	ZZSJC2115ZZ0008
N/A	Sheriff MCTs	ZZSJC2115ZZ0021
N/A	Sheriff MCTs	ZZSJC2115ZZ0022
N/A	Sheriff MCTs	ZZSJC2115ZZ0027
N/A	Sheriff MCTs	ZZSJC2115ZZ0031
N/A	Sheriff MCTs	ZZSJC2115ZZ0038
N/A	Sheriff MCTs	ZZSJC2115ZZ0039
8565	Dell Precision M6800	HM2CD12

7574	Dell Optiplex 390	97X3YR1
8828	Dell Optiplex 3020 SFF	37D1F32
7845	Dell Latitude E6330	1KMCJX1
7862	Dell Optiplex 3010 Tower	1WJCFX1
7864	Dell Optiplex 3010 Tower	9GVDDX1
8828	Dell Optiplex 3020 SFF	BKD1F32
7574	Dell Optiplex 390	97WYXR1
7865	Dell Optiplex 3010 Tower	1WFDFX1
7852	Dell Latitude E6330	DKLQZW1
7811	Dell Optiplex 3010 (SFF)	C0RFPW1
8568	Dell Latitude E5540	952CD12
7573	Dell Optiplex 390	97X0YR1
n/a	Dell Optiplex 3010	9GTDDX1
8570	Dell Latitude E5540	D72CD12
8591	Dell Latitude E5540	G37CD12
7870	Dell Optiplex 3010 Tower	9GSFDX1
8564	Dell Precision M6800	BD1CD12
7811	Dell Optiplex 3010 (SFF)	C0RHPW1
7290	Dell Latitude E6500	523CBM1
8605	Dell Latitude E5540	CQ3CD12
8610	Dell Latitude E5540	661CD12
7776	Dell Latitude E5530	DM3TKV1
8578	Dell Latitude E5540	H31CD12
8573	Dell Latitude E5540	FB1CD12
8576	Dell Latitude E5540	352CD12
7394	Dell Optiplex 380 Desktop FF	JF5D9P1
6356	Dell Dimension 320	BXBDDC1
7317	Dell OptiPlex 780	B67FFN1
8391	Dell Optiplex 7010 Tower	BZCRCZ1
N/A	Dell 2335 MFP Printer	4ZPQ2P1
N/A	APC 2200 UPS	IN-0UD385-18740-7AN-0649
N/A	APC 2200 UPS ?? Model not confirmed	JS1112048984
N/A	APC 650-es	SB0719U15760
N/A	Panasonic BOC DVD - DMR-EZ28	VN8FQ004743
N/A	Audiovox BOC Monitor - FPE1508	JA280HD090280
N/A	Dell 2007FPb monitor	MX-0G324H-74262-95K-1TJL
N/A	Dell 2007FPb monitor	MX-0G324H-74262-069-4E4L
N/A	Dell 1908FPc monitor	CN-0G438H-64180-85T-5BDH
N/A	Dell 2001FP monitor	CN-0C0646-46633-43N-1VYL
N/A	Sony FWD-50PX2 TV	6702717
N/A	Sony FWD-50PX2 TV	6702594
N/A	Dell 1905FP monitor	CN-0T6116-71618-54M-ADB8
N/A	Cisco 7960 Phone	FCH11308T0U
N/A	Cisco 7960 Phone	INM08031B20
N/A	Cisco Catalyst 3560	CAT0948N39C
7040	Netgear ReadyNAS NVX	22M193RY00114
N/A	External SCSI Case - HD68F LVD U320	124111105700089

N/A	Belkin SMB KVM - F1DP108A - PO# 117309	341
N/A	7 Dell Docks	
N/A	9 Sonicwall Firewalls	
N/A	Fujitsu fi-7160 Scanner	A36D109564
N/A	Powerware UPS	RY242A0923
N/A	Dell Monitor P2210	100305H0300978
NONE	Dell Latitude E6320 (Refurbished)	7X9G4R1
NONE	Dell Latitude E6320 (Refurbished)	6Z9G4R1
8609	Dell Latitude E5540	951CD12
8603	Dell Latitude E5540	7G1CD12
8600	Dell Latitude E5540	831CD12
NONE	Dell Optiplex 3010 Tower	9GSGDX1
6356	Dell Dimension 320	BXBDDC1
6916	Dell Latitude D830	2VHBTG1
7634	Dell Latitude E5520	4BR8CT1
7718	Dell Latitude E5520	JYWWKQ1
7776	Dell Latitude E5530	DM3TKV1
7775	Dell Latitude E5530	C63TKV1
7777	Dell Latitude E5530 **out of warranty**	313TKV1
8591	Dell Latitude E5540	G37CD12
8573	Dell Latitude E5540	FB1CD12
8594	Dell Latitude E5540	222CD12
8593	Dell Latitude E5540	842CD12
9741	Dell Latitude E5580	CP388H2
9742	Dell Latitude E5580	J0PN8H2
NONE	Dell Latitude E6320 (Refurbished)	7X9G4R1
NONE	Dell Latitude E6320 (Refurbished)	6Z9G4R1
NONE	Dell Latitude E6320 (Refurbished)	HKVKFS1
NONE	Dell Latitude E6320 (Refurbished)	66LG4R1
NONE	Dell Latitude E6320 (Refurbished)	*cannot read sticker*
7845	Dell Latitude E6330	1KMCJX1
7852	Dell Latitude E6330	DKLQZW1
7290	Dell Latitude E6500	523CBM1
7362	Dell Latitude E6500	1QWHPM1
7402	Dell Latitude E6510	HGB1YN1
7375	Dell Latitude E6510	9HQQWN1
9497	Dell Latitude E7270	7CF6BG2
n/a	Dell Optiplex 3010	9GTDDX1
7811	Dell Optiplex 3010 (SFF)	C0RFPW1
7811	Dell Optiplex 3010 (SFF)	C0RHPW1
7811	Dell Optiplex 3010 (SFF)	C0SGPW1
7811	Dell Optiplex 3010 (SFF)	C0QHPW1
7811	Dell Optiplex 3010 (SFF)	C0RGPW1
7862	Dell Optiplex 3010 Tower	1WJCFX1
7864	Dell Optiplex 3010 Tower	9GVDDX1
7865	Dell Optiplex 3010 Tower	1WFDFX1
7870	Dell Optiplex 3010 Tower	9GSFDX1

NONE	Dell Optiplex 3010 Tower	9GSGDX1
7871	Dell Optiplex 3010 Tower	1WHBFX1
7871	Dell Optiplex 3010 Tower	9GTGDX1
7863	Dell Optiplex 3010 Tower	9GRGDX1
NONE	Dell Optiplex 3010 Tower	9GTFDX1
7854	Dell Optiplex 3010 Tower	9GQDDX1
7853	Dell Optiplex 3010 Tower	F402DX1
7857	Dell Optiplex 3010 Tower	9XRXDX1
7857	Dell Optiplex 3010 Tower	9XRZDX1
NONE	Dell Optiplex 3010 Tower	1WJBFX1
7870	Dell Optiplex 3010 Tower	1WGCFX1
7856	Dell Optiplex 3010 Tower	9XRVDX1
7865	Dell Optiplex 3010 Tower	F3Z3DX1
7863	Dell Optiplex 3010 Tower	9XRSDX1
7855	Dell Optiplex 3010 Tower	F3X2DX1
7866	Dell Optiplex 3010 Tower	F3Y3DX1
7967	Dell Optiplex 3010 Tower	9XQXDX1
NONE	Dell Optiplex 3010 Tower	9GPGDX1
7867	Dell Optiplex 3010 Tower	9GPFDX1
7868	Dell Optiplex 3010 Tower	9GTCDX1
7868	Dell Optiplex 3010 Tower	1WJDFX1
7864	Dell Optiplex 3010 Tower	9GQGDX1
7866	Dell Optiplex 3010 Tower	F3X3DX1
8828	Dell Optiplex 3020 SFF	37D1F32
8828	Dell Optiplex 3020 SFF	BKD1F32
8831	Dell Optiplex 3020 SFF	23L0D42
8826	Dell Optiplex 3020 SFF	G3D1F32
8834	Dell Optiplex 3020 SFF	23NWC42
8834	Dell Optiplex 3020 SFF	257YC42
8826	Dell Optiplex 3020 SFF	68D1F32
8836	Dell Optiplex 3020 SFF	9VK1F42
8827	Dell Optiplex 3020 SFF	GBD1F32
7573	Dell Optiplex 380	97W3YR1
7394	Dell Optiplex 380 Desktop FF	JF5D9P1
7268	Dell Optiplex 380 Desktop FF	3X03PL1
7574	Dell Optiplex 390	97X3YR1
7574	Dell Optiplex 390	97WYXR1
7573	Dell Optiplex 390	97X0YR1
7705	Dell Optiplex 390	4WCX7V1
7705	Dell Optiplex 390	4WB48V1
7572	Dell Optiplex 390	97X1YR1
7705	Dell Optiplex 390	4WB58V1
7632	Dell Optiplex 390	HKJFPS1
7632	Dell Optiplex 390	HKJDPS1
7631	Dell Optiplex 390	HKJCPS1
7631	Dell Optiplex 390	HKJBPS1
7632	Dell Optiplex 390	HKJGPS1

NONE	Dell Optiplex 390 (SFF)	CWJTVV1
8468	Dell Optiplex 7010 SFF	JP799Z1
8391	Dell Optiplex 7010 Tower	BZCRCZ1
N/A	Dell Optiplex 7010 Ultra SFF	JXJHFX1
6935	Dell Optiplex 755	3YFHTG1
7317	Dell OptiPlex 780	B67FFN1
7333	Dell Optiplex 780	9Q9DHN1
7335	Dell Optiplex 780	BQ9DHN1
7320	Dell Optiplex 780	867FFN1
7321	Dell Optiplex 780	967FFN1
7314	Dell Optiplex 780	267FFN1
7318	Dell Optiplex 780	667FFN1
7316	Dell Optiplex 780	467FFN1
7319	Dell OptiPlex 780	767FFN1
7178	Dell Optiplex 780	476PTL1
7315	Dell Optiplex 780	367FFN1
8565	Dell Precision M6800	HM2CD12
8564	Dell Precision M6800	BD1CD12
9180	Getac S400	RG439S1362
9179	Getac S400	RG439S1361
9178	Getac S400	RG439S1359
7451	Latitude E6520	4F356Q1
7566	Lenovo All-in-one	QS00363853
7566	Lenovo All-in-one	QS00363190
9100	MS Surface Pro 3 (MQ2-00001)	046151450753
8929	MS Surface Pro 3 (MQ2-00001)	036698351453
7040	Netgear ReadyNAS NVX	2M193RY00114

NOW, THEREFORE, BE IT RESOLVED, that the Board of Commissioners of the County of Currituck reserves the right to reject any and all bids.

ADOPTED, this 22nd June 2020.

Bob White
County of Currituck, Board of Commissioners

Leeann Walton
Clerk to the Board (Seal)

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2847)

Agenda Item Title: JCPC Funding Plan Certification

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request:

Funding Plan and JCPC Certification documents for the Juvenile Crime Prevention Council, required to be adopted by the BOC by July 1, 2020, for the 2020-2021 Fiscal Year.

Potential Budget Affect: Budgeted matching funds, see attached documents

Is this item regulated by plan, regulation or statute? Yes

Manager Recommendation:

Currituck County

NC DPS - Community Programs - County Funding Plan

Available Funds: $ $103,985 Local Match: $ $26,696 Rate: 30%

DPS JCPC funds must be committed with a Program Agreement submitted in NC Allies and electronically signed by authorized officials.

#	Program Provider	DPS JCPC Funding	LOCAL FUNDING			OTHER	OTHER	Total	% Non DPS-JCPC Program Revenues
			County Cash Match	Local Cash Match	Local In-Kind	State/ Federal	Funds		
1	Partnership for Adolescent Support Services & Teen Court	$77,473	$23,242					$100,715	23%
2	Currituck Restitution	$11,512	$3,454					$14,966	23%
3	JCPC Certification	$15,000						$15,000	
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
	TOTALS:	$103,985	$26,696					$130,681	20%

The above plan was derived through a planning process by the Currituck County Juvenile Crime Prevention Council and represents the County's Plan for use of these funds in FY 20-21.

Amount of Unallocated Funds _____

Amount of funds reverted back to DPS _____

Discretionary Funds added _____

check type ☐ initial plan ☐ update ☐ final

-----DPS Use Only-----

Reviewed by _____ Area Consultant _____ Date

Reviewed by _____ Program Assistant _____ Date

Verified by _____ Designated State Office Staff _____ Date

Chairperson, Juvenile Crime Prevention Council (Date)

Chairperson, Board of County Commissioners or County Finance Officer (Date)

ver 03/04/2016

Attachment: JCPC-Currituck Funding Plan 20-21 (JCPC Funding Plan Certification)

NC Department of Public Safety

Juvenile Crime Prevention Council Certification

Fiscal Year: 2020 - 2021

County: **Currituck**	Date: 5/12/2020

CERTIFICATION STANDARDS

STANDARD #1 - Membership

A. Have the members of the Juvenile Crime Prevention Council been appointed by county commissioners? yes

B. Is the membership list attached? yes

C. Are members appointed for two year terms and are those terms staggered? yes

D. Is membership reflective of social-economic and racial diversity of the community? yes

E. Does the membership of the Juvenile Crime Prevention Council reflect the required positions as provided by N.C.G.S. §143B-846? yes

If not, which positions are vacant and why?

Students, non-profit and faith community are vacant; Council continues to seek members to fill these slots.

STANDARD #2 - Organization

A. Does the JCPC have written Bylaws? yes

B. Bylaws are ☐ attached or ☒ on file (Select one.)

C. Bylaws contain Conflict of Interest section per JCPC policy and procedure. yes

D. Does the JCPC have written policies and procedures for funding and review? yes

E. These policies and procedures ☐ attached or ☒ on file. (Select one.)

F. Does the JCPC have officers and are they elected annually? yes

JCPC has: ☒ Chair; ☒ Vice-Chair; ☒ Secretary; ☒ Treasurer.

STANDARD #3 - Meetings

A. JCPC meetings are considered open and public notice of meetings is provided. yes

B. Is a quorum defined as the majority of membership and required to be present in order to conduct business at JCPC meetings? yes

C. Does the JCPC meet bi-monthly at a minimum? yes

D. Are minutes taken at all official meetings? yes

E. Are minutes distributed prior to or during subsequent meetings? yes

STANDARD #4 - Planning

A. Does the JCPC conduct an annual planning process which includes a needs assessment, monitoring of programs and funding allocation process? yes

B. Is this Annual Plan presented to the Board of County Commissioners and to DPS? yes

C. Is the Funding Plan approved by the full council and submitted to Commissioners for their approval? yes

STANDARD #5 - Public Awareness

A. Does the JCPC communicate the availability of funds to all public and private non-profit agencies which serve children or their families and to other interested community members? (☒ RFP, distribution list, and article attached) yes

B. Does the JCPC complete an annual needs assessment and make that information available to agencies which serve children or their families, and to interested community members? yes

STANDARD #6 – No Overdue Tax Debt

A. As recipient of the county DPS JCPC allocation, does the County certify that it has no overdue tax debts, as defined by N.C.G.S. §105-243.1, at the Federal, State, or local level? yes

Briefly outline the plan for correcting any areas of standards non-compliance.

Having complied with the Standards as documented herein, the Juvenile Crime Prevention Council may use up to $15,500 of its annual Juvenile Crime Prevention fund allocation to cover administrative and related costs of the council. *Form JCPC/ OP 002 (b) JCPC Certification Budget Pages* detailing the expenditure budget must be attached to this certification.
The JCPC Certification **must be received by June 30, 2020.**

JCPC Administrative Funds
SOURCES OF REVENUE

DPS JCPC Only list requested funds for JCPC Administrative Budget.	$15,000
Local	
Other	
Total	**$15,000**

JCPC Chairperson Date

Chairman, Board of County Commissioners Date

DPS Designated Official Date

Juvenile Crime Prevention Council Certification (cont'd)

Currituck **County** **FY** 2020-2021

Instructions: N.C.G.S. § 143B-846 specifies suggested members be appointed by county commissioners to serve on local Juvenile Crime Prevention Councils. In certain categories, a designee may be appointed to serve. Please indicate the person appointed to serve in each category and his/her title. Indicate appointed members who are designees for named positions. Indicate race and gender for all appointments.

Specified Members	Name	Title	Designee	Race	Gender
1) School Superintendent or designee	Virginia Arrington	Dir. SecEd & Support Staff	☒	W	F
2) Chief of Police	n/a		☐		
3) Local Sheriff or designee	Matthew Beickert	Sheriff	☐	W	M
4) District Attorney or designee	Zack Beasley	Asst. DA	☒	W	M
5) Chief Court Counselor or designee	Edward Hall	Chief	☐	B	M
6) Director, AMH/DD/SA, or designee	Tracey Webster	System Care Coordinator	☒	B	F
7) Director DSS or designee	Samantha Hurd	Director	☐	W	F
8) County Manager or designee	Sandra Hill	Finance Officer	☒	W	F
9) Substance Abuse Professional			☐		
10) Member of Faith Community	Dan Bergey	New Life Pastor	☐	W	M
11) County Commissioner	Selina Jarvis	Commissioner	☐	W	F
12) Two Persons under age 18 (State Youth Council Representative, if available)			☐		
			☐		
13) Juvenile Defense Attorney	Bill Brumsey	Juv. Defense Attorney	☐	W	M
14) Chief District Judge or designee	Hon. Edgar Barnes	District Court Judge	☐	W	M
15) Member of Business Community	Tonya Johnson	Uplift	☐	B	F
16) Local Health Director or designee	Rebecca Cook	Triple P	☒	W	F
17) Rep. United Way/other non-profit	Heather Scott	YMCA rep	☐	W	F
18) Representative/Parks and Rec.	Jason Weeks	Director	☐	W	M
19) County Commissioner appointee	Paul Pollock	Court Counselor	☐	W	M
20) County Commissioner appointee	Pete Aitken	Court Counselor	☐	W	M
21) County Commissioner appointee	Billy Caudle	Coop. Extension	☐	W	M
22) County Commissioner appointee	Allison Osmon	PASS Prog. Coord	☐	W	M
23) County Commissioner appointee	Ray Matusko	Clerk of Court	☐	W	M
24) County Commissioner appointee			☐		
25) County Commissioner appointee			☐		

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2848)

Agenda Item Title: Dominion Power ROW Agreement-Maritime Museum

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request: Agreement for utilities right-of-way for Maritime Museum.

Potential Budget Affect: N/A

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

Right of Way Agreement

THIS RIGHT OF WAY AGREEMENT, is made and entered into this _____ day of _____, _____, by and between

COUNTY OF CURRITUCK

("**GRANTOR**") and VIRGINIA ELECTRIC AND POWER COMPANY, a Virginia public service corporation, doing business in North Carolina as Dominion Energy North Carolina, with its principal office in Richmond, Virginia ("**GRANTEE**").

W I T N E S S E T H :

1. That for and in consideration of the sum of One Dollar ($1.00) cash in hand paid and other good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **GRANTOR** grants and conveys unto **GRANTEE**, its successors and assigns, the perpetual right, privilege and non-exclusive easement over, under, through, upon and across the property described herein, for the purpose of transmitting and distributing electric power by one or more circuits; for its own internal telephone and other internal communication purposes directly related to or incidental to the generation, distribution, and transmission of electricity, including the wires and facilities of any other public service company in aid of or to effectuate such internal telephone or other internal communication purposes; and for lighting purposes; including but not limited to the right:

Initials: _____ _____ _____

This Document Prepared by Virginia Electric and Power Company and should be returned to:
Dominion Energy North Carolina, 304 NC Highway 11N, Ahoskie, NC 27910.

NCROW No(s). 68-20-0032

Form No. 721043-1 (May 2019)

Right of Way Agreement

1.1 to lay, construct, operate and maintain one or more lines of underground conduits and cables including, without limitation, one or more lighting supports and lighting fixtures as **GRANTEE** may from time to time determine, and all wires, conduits, cables, transformers, transformer enclosures, concrete pads, manholes, handholes, connection boxes, accessories and appurtenances desirable in connection therewith; the width of said easement shall extend FIFTEEN (15) feet in width across the lands of **GRANTOR**; and

2. The easement granted herein shall extend across the lands of **GRANTOR** situated in Currituck County, North Carolina, as more fully described on Plat(s) Numbered 68-20-0032, attached to and made a part of this Right of Way Agreement; the location of the boundaries of said easement being shown in broken lines on said Plat(s), reference being made thereto for a more particular description thereof.

3. All facilities constructed hereunder shall remain the property of **GRANTEE**. **GRANTEE** shall have the right to inspect, reconstruct, remove, repair, improve, relocate on the easement, and make such changes, alterations, substitutions, additions to or extensions of its facilities as **GRANTEE** may from time to time deem advisable.

4. **GRANTEE** shall have the right to keep the easement clear of all buildings, structures, trees, roots, undergrowth and other obstructions which would interfere with its exercise of the rights granted hereunder, including, without limitation, the right to trim, top, retrim, retop, cut and keep clear any trees or brush inside and outside the boundaries of the easement that may endanger the safe and proper operation of its facilities. All trees and limbs cut by **GRANTEE** shall remain the property of **GRANTOR**.

5. For the purpose of exercising the right granted herein, **GRANTEE** shall have the right of ingress to and egress from this easement over such private roads as may now or hereafter exist on the property of **GRANTOR**. The right, however, is reserved to **GRANTOR** to shift, relocate, close or abandon such private roads at any time. If there are no public or private roads reasonably convenient to the easement, **GRANTEE** shall have such right of ingress and egress over the lands of **GRANTOR** adjacent to the easement. **GRANTEE** shall exercise such rights in such manner as shall occasion the least practicable damage and inconvenience to **GRANTOR.**

Initials: _____ _____ _____

Form No. 721043-2 (May 2019)

Right of Way Agreement

6. **GRANTEE** shall repair damage to roads, fences, or other improvements (a) inside the boundaries of the easement (subject, however, to **GRANTEE**'s rights set forth in Paragraph 4 of this Right of Way Agreement) and (b) outside the boundaries of the easement and shall repair or pay **GRANTOR**, at **GRANTEE**'s option, for other damage done to **GRANTOR**'s property inside the boundaries of the easement (subject, however, to **GRANTEE**'s rights set forth in Paragraph 4 of this Right of Way Agreement) and outside the boundaries of the easement caused by **GRANTEE** in the process of the construction, inspection, and maintenance of **GRANTEE**'s facilities, or in the exercise of its right of ingress and egress; provided **GRANTOR** gives written notice thereof to **GRANTEE** within sixty (60) days after such damage occurs.

7. **GRANTOR**, its successors and assigns, may use the easement for any reasonable purpose not inconsistent with the rights hereby granted, provided such use does not interfere with **GRANTEE**'s exercise of any of its rights hereunder. **GRANTOR** shall not have the right to construct any building, structure, or other above ground obstruction on the easement; provided, however, **GRANTOR** may construct on the easement fences, landscaping (subject, however, to **GRANTEE**'s rights in Paragraph 4 of this Right of Way Agreement), paving, sidewalks, curbing, gutters, street signs, and below ground obstructions as long as said fences, landscaping, paving, sidewalks, curbing, gutters, street signs, and below ground obstructions do not interfere with **GRANTEE**'s exercise of any of its rights granted hereunder. In the event such use does interfere with **GRANTEE**'s exercise of any of its rights granted hereunder, **GRANTEE** may, in its reasonable discretion, relocate such of its facilities as may be practicable to a new site designated by **GRANTOR** and acceptable to **GRANTEE**. In the event any such facilities are so relocated, **GRANTOR** shall reimburse **GRANTEE** for the cost thereof and convey to **GRANTEE** an equivalent easement at the new site.

8. **GRANTEE** shall have the right to assign or transfer, without limitation, to any public service company all or any part of the perpetual right, privilege and easement granted herein.

9. If there is an Exhibit A attached hereto, then the easement granted hereby shall additionally be subject to all terms and conditions contained therein provided said Exhibit A is executed by **GRANTOR** contemporaneously herewith and is recorded with and as a part of this Right of Way Agreement.

10. Whenever the context of this Right of Way Agreement so requires, the singular number shall mean the plural and the plural the singular.

Initials: _____ _____ _____

NCROW No(s). 68-20-0032

Form No. 721043-3 (May 2019)

Dominion Energy

Right of Way Agreement

11. **GRANTOR** covenants that it is seised of and has the right to convey this easement and the rights and privileges granted hereunder; that **GRANTEE** shall have quiet and peaceable possession, use and enjoyment of the aforesaid easement, rights and privileges; and that **GRANTOR** shall execute such further assurances thereof as may be reasonably required.

12. The individual executing this Right of Way Agreement on behalf of **GRANTOR** warrants that **GRANTOR** is a corporation duly organized and existing under the laws of the state hereinabove mentioned and that he or she has been duly authorized to execute this easement on behalf of said corporation.

IN WITNESS WHEREOF, GRANTOR has caused its corporate name to be signed hereto by its authorized officer or agent, described below, on the date first above written.

Corporate Name: County of Currituck

By: _____

Its: County Manager
(Title)

State of North Carolina

County of _____

I, _____, a Notary Public for the jurisdiction aforesaid
(Name of Notary)

do hereby certify that _____ personally came
(Name of Signatory)

before me and acknowledged that he (or she) is _____, of
(Title)

County of Currituck, a corporation, and
(Corporation Name)

that he (or she), as County Manager, being authorized to do so,
(Title)

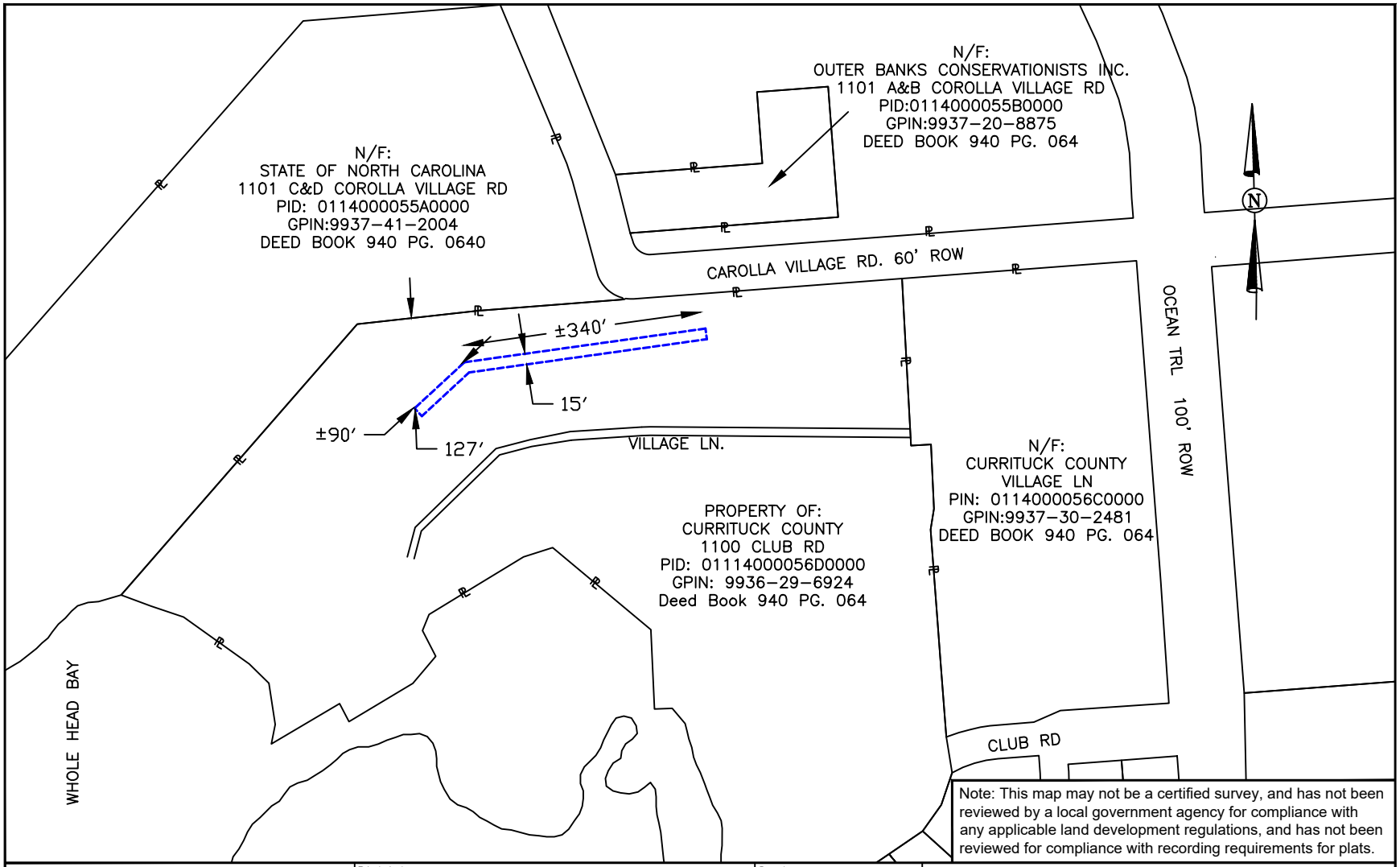
executed the foregoing on behalf of the corporation.

Witness my hand and official seal this _____ day of _____, _____.

_____ _____

Notary Public (Print Name) Notary Public (Signature)

My commission expires: _____



Note: This map may not be a certified survey, and has not been reviewed by a local government agency for compliance with any applicable land development regulations, and has not been reviewed for compliance with recording requirements for plats.

LEGEND

— — Location of Boundary Lines of Right-of-Way 15' in Width.

℄ Indicates Property Line is Right-of-Way Boundary 15' in Width.

District: 68		Scale: NTS
District-Township-Borough: Corolla	County-City: Currituck County	State: NC
Office: Eastern	Plat Number: 68-20-0032	
Work Request Number: 10360236	Grid Number: Q1624BB4400	

PLAT TO ACCOMPANY RIGHT-OF-WAY AGREEMENT — UG

VIRGINIA ELECTRIC AND POWER COMPANY
doing business as
Dominion Energy North Carolina

DATE 06/11/2020 Kate Blanton

OWNER INITIALS _____ Page 05 of 05

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2845)

Agenda Item Title: Consideration and Possible Adoption of the Annual Budget for Fiscal Year Ending June 30, 2021.

Submitted By: Leeann Walton – County Manager

Presenter of Item: Ben Stikeleather

Board Action: Action

Brief Description of Agenda Item:

Following the Public Hearing held June 15, 2020, Commissioners moved to delay taking action on adoption of the TDA annual budget and bring the item back for further consideration at the June 22, 2020 special meeting of the Tourism Development Authority.

Is this item regulated by plan, regulation or statute? Yes

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2840)

Agenda Item Title: Pitney Bowes Lease-Mail Processing Equipment, Tourism Department

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Action

Brief Description of Agenda Item:

Reason for Request:

Multi-year lease agreement for mail processing/bulk mail equipment located at the Moyock Welcome Center. Leases longer than one year must be approved by the Board of Commissioners.

Potential Budget Affect: Budgeted funds

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

pitney bowes

NASPO ValuePoint FMV Lease Agreement (Option C)

Agreement Number

Your Business Information

Full Legal Name of Lessee / DBA Name of Lessee

CURRITUCK COUNTY TOURISM

Tax ID # (FEIN/TIN)

566000292

Sold-To: Address

106 CARATOKE HWY, MOYOCK, NC, 27958-8622, US

Sold-To: Contact Name	Sold-To: Contact Phone #	Sold-To: Account #
Greg Schwarga	(252) 435-2938	0016257580

Bill-To: Address

106 CARATOKE HWY, MOYOCK, NC, 27958-8622, US

Bill-To: Contact Name	Bill-To: Contact Phone #	Bill-To: Account #	Bill-To: Email
Greg Schwarga	(252) 435-2938	0016257580	gschwarga@visitcurrituck.com

Ship-To: Address

106 CARATOKE HWY, MOYOCK, NC, 27958-8622, US

Ship-To: Contact Name	Ship-To: Contact Phone #	Ship-To: Account #
Greg Schwarga	(252) 435-2938	0016257580

PO #

Your Business Needs

Qty	Item	Business Solution Description
1	ARPRINTER	AddressRight Printer
1	AR100	WH51 - AddressRight 100 < 300k cycles/mo
1	CRM7	CRight Mailer Elec Deliv Stand-alone SW
	F90I	Basic Installation and Training
	F90I	Basic Installation and Training
1	SMA_TIER1	SMA Tier 1 - Software Service Agreement
1	STDSLA	Standard SLA-Equipment Service Agreement (for AddressRight Printer)
1	WH4PBMAX3	AddressRight 100 Black Ink Starter Kit
1	SPMAILSTATION	SendPro Mailstation
1	DMMRK	Return Kit for MailStation
	F90I	Basic Installation and Training
1	HZ00	SendPro Mailstation with 5 lb Scale
1	PTJ1	SendPro Online
1	PTJ8	SendPro Mailing Included W/ HW

1	PTJN	Single User Access
1	PTJR	50 User Access with Hardware or Meter
1	PTKQ	SendPro Mailstation Stamps 50 Users
1	STDSLA	Standard SLA-Equipment Service Agreement (for SendPro Mailstation)

Your Payment Plan

Initial Term: 60 months	**Initial Payment Amount:**	
Number of Months	**Monthly Amount**	**Billed Quarterly at***
60	**$ 406.61**	**$ 1,219.83**

**Does not include any applicable sales, use, or property taxes which will be billed separately.*

( ) Tax Exempt Certificate Attached
( ) Tax Exempt Certificate Not Required

( ) Purchase Power® transaction fees included
( ) Purchase Power® transaction fees extra

Your Signature Below

By signing below, you agree to be bound by your State's/Entity's/Cooperative's contract, which is available at http://www.pb.com/states and is incorporated by reference. The terms conditions of this contract will govern this transaction and be binding on us after we have completed our credit and documentation approval process and have signed below.

NASPO VALUEPOINT ADSPO16-169897; STC 600A
State/Entity's Contract#

Lessee Signature

Print Name

Title

Date

Email Address

Roger Donohue
Pitney Bowes Signature

Roger Donohue
Print Name

Operations Manager
Title

June 16. , 2020
Date

Sales Information

Jeffrey Boney	jeff.boney@pb.com	
Account Rep Name	Email Address	PBGFS Acceptance

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2846)

Agenda Item Title: Consideration and Possible Adoption of the Ocean Sands Water & Sewer District Annual Budget for Fiscal Year Ending June 30, 2021.

Submitted By: Leeann Walton – County Manager

Presenter of Item: Ben Stikeleather

Board Action: Action

Brief Description of Agenda Item:

Following the Public Hearing held June 15, 2020, Commissioners moved to delay taking action on adoption of the OSWSD budget and bring the item back for further consideration at the June 22, 2020 special meeting of the Ocean Sands Water & Sewer District Board.

Is this item regulated by plan, regulation or statute? Yes

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2918)

Agenda Item Title: Amended Item-Closed Session pursuant to G.S. 143-318.11(a)(3) to consult with the County Attorney and to preserve the attorney-client privilege.

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Information

Brief Description of Agenda Item:

Reason for Request:

Amended Item-Attorney Client Privilege

Potential Budget Affect:

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2821

Agenda Item Title: PB 20-05 Currituck County Nonconforming Campgrounds Text Amendment: Request to amend the Unified Development Ordinance, Chapter 8 Nonconformities and Chapter 10 Definitions and Measurement to revise the nonconforming campground ordinance and amend definitions.

Submitted By: Jennie Turner – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jennie Turner

Board Action: Action

Brief Description of Agenda Item:

Request to amend the Unified Development Ordinance, Chapter 8 Nonconformities and Chapter 10 Definitions and Measurement to revise the nonconforming campground ordinance and amend definitions.

Planning Board Vote: Approved 4-1

Planning Board Recommendation: Approval

Staff Recommendation: Approval

TRC Recommendation:

Currituck County
Planning and Community Development Department
Planning Division
153 Courthouse Road, Suite 110
Currituck, North Carolina, 27929
252-232-3055 FAX 252-232-3026

To: Board of Commissioners

From: Planning Staff

Date: June 18, 2020

Subject: PB 20-05 Currituck County Text Amendment
Nonconforming Campgrounds

The enclosed text amendment submitted by the Currituck County Planning and Community Development Department is intended to revise the Nonconforming Campgrounds section of the Unified Development Ordinance (UDO) to address concerns of Planning Staff and the County Attorney and to clarify the intent of the Board of Commissioners.

Item 1 Clarify that removal of tents and recreational vehicles (campers) includes moving each from the campground and campground subdivision, revise the term "camper" to "recreational vehicles or tents", remove language that allows modifications of existing campgrounds, clarify that storage areas for unoccupied recreational vehicles or unoccupied tents are prohibited, clarify that recreational vehicles or tents may not be placed on a permanent or temporary foundation and that only recreational vehicles and tents may be placed in a campground. Staff proposes that these changes go into effect upon adoption of the ordinance.

Item 2 Revise allowable timeframe for tents and campers from 90 days to 60 days within a calendar year, add requirement for posting and numbering each campsite and maintaining registration records of all campground occupants. Staff proposes that these changes go into effect 120 days after adoption of the ordinance.

Item 3 Revise existing definitions and add new definitions related to campgrounds. Staff proposes that the definition amendments go into effect upon adoption of the ordinance.

BACKGROUND

The 1982 Currituck County Zoning Ordinance did allow campgrounds but did not permit the expansion of the district which allowed the use.

The 1989 Unified Development Ordinance did not allow for the expansion of the zoning district that allowed campgrounds (RR). This restriction did not permit campgrounds created on property not zoned RR.

In 1992, a text amendment was approved that allowed the expansion of the RR zoning district when a property contained two zoning districts one of which was RR with a maximum overall density of 4.5 units per acre. The density was later increased to 5.5 units per acre.

In early 2011, a request was submitted to the county to allow new RR zoning districts to be created and was later withdrawn.

In 2013, the UDO specified campgrounds were nonconforming uses and could no longer be expanded.

In 2016, Blue Water Development Corp. submitted a request to allow private campgrounds in the Single Family Residential-Mainland (SFM) zoning district. After meeting with staff, the applicant modified the request to only allow the expansion of existing campgrounds subject to specific standards. The Planning Board recommended denial of the request at the March 14, 2017 meeting. The request was withdrawn by the applicant and was not heard by the Board of Commissioners.

Historically, campgrounds have been the source of many enforcement complaints such as recreational vehicles used as permanent dwellings and permanent additions being made to the temporary vehicles rendering many of them non-transportable.

The following campgrounds were considered existing in the county on January 1, 2013:

- Barnes Campground (Knotts Island) — Zoned SFI
- Bells Island Campground (Currituck) — Zoned SFM
- Hampton Lodge Campground (Church's Island) — Zoned SFM
- Sandy Point Resort (Knotts Island) — Zoned SFI

Text Amendment Review Standards

The advisability of amending the text of the UDO is a matter committed to the legislative discretion of the Board of Commissioners and is not controlled by any one factor. In determining whether to adopt or deny the proposed text amendment, the Board of Commissioners may weigh the relevance of and consider whether and the extent to which the proposed text amendment:

1. Is consistent with the goals, objectives, and policies of the Land Use Plan and other applicable county-adopted plans;
2. Is not in conflict with any provision of this Ordinance or the County Code of Ordinances;
3. Is required by changed conditions;
4. Addresses a demonstrated community need;
5. Is consistent with the purpose and intent of the zoning districts in this Ordinance, or would improve compatibility among uses and ensure efficient development within the county;
6. Would result in a logical and orderly development pattern; and
7. Would not result in significantly adverse impacts on the natural environment, including but not limited to water, air, noise, stormwater management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

Staff Recommendation

Staff recommends approval of the request as submitted and suggests the following statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

Land Use and Development Goal # 10 To properly distribute development forms in accordance with the suitability of the land, infrastructure available and the compatibility of surrounding land uses.

The request is reasonable and in the public interest by providing language that will reduce the potential impacts of existing campgrounds in neighborhoods where the campgrounds are located and the proposed language may improve compatibility among uses for efficient development within the county.

STAFF REPORT
PB20-05 CURRITUCK COUNTY NONCONFORMING CAMPGROUNDS
BOARD OF COMMISSIONERS
JUNE 22, 2020

Amendment to the Unified Development Ordinance Chapter 8: Nonconforming Uses and Chapter 10: Definitions and Measurement:

BE IT ORDAINED by the Board of Commissioners of the County of Currituck, North Carolina that the Unified Development Ordinance of the County of Currituck be amended as follows:

Item 1: That Chapter 8. Nonconforming Uses is amended by adding the following non-highlighted underlined language and deleting the non-highlighted struck-through language and
Item 2: That Chapter 8. Nonconforming Uses is amended by adding the following highlighted underlined language and deleting the highlighted struck-through language:

8.2.6. Nonconforming Campgrounds

Private campgrounds are not allowed as a principle use in Currituck County. All existing campgrounds and campground subdivisions are nonconforming uses subject to the following standards:

A. General Standards

(1) Camping is an allowed use of land only in existing campgrounds and campground subdivisions.

(2) ~~Campers~~ Recreational vehicles or tents may not be modified in any manner that would render the recreational vehicle or tent ~~unit~~ non-transportable.

(3) No recreational vehicle or tent ~~or camper may~~ shall ~~be located~~ remain ~~on a campsite~~ in a campground or campground subdivision for a period of more than 60 ~~90~~ days per calendar year.

(4) Additions to recreational vehicles or tents ~~campers~~ are not permitted.

(5) ~~Modifications to existing campgrounds are permitted provided the changes do not increase the nonconformity with respect to number of campsites that existed on January 1, 2013.~~

Each campsite space shall be identified by a permanent number which shall not be changed. The appropriate number of each campsite space shall be permanent and visibly displayed on each space. Each number shall be placed on a concrete, wood,

metal or any permanent post or object and conspicuously located on the lot.

(6) Every campground owner or operator shall maintain an accurate register containing a record of all occupants in the campground. The register shall be available for inspection at all times by authorized county representatives. The register shall contain the following information:

(a) Name and address of the occupants of each space;

(b) Campsite space number; and

(c) Date when occupancy within the campground begins and date when occupancy within the campground ceases.

(7) Storage areas for unoccupied recreational vehicles or unoccupied tents are prohibited.

B. **Existing Campgrounds**

(1) Existing campgrounds may not be expanded to cover additional land area or exceed the total number of campsites that existed on January 1, 2013.

(2) ~~Campers~~ Recreational vehicles or tents may not be placed on a permanent or temporary foundation.

(3) Campsite~~s~~ spaces may have a wooden platform not to exceed 100 square feet. Platforms must be 12 inches or less in height from existing grade. Handicap ramps are not subject to the maximum height requirement and square footage provided the ramp does not exceed five feet in width.

(4) Campgrounds shall not include permanent residences, excluding one dwelling unit to be occupied by the park caretaker or manager.

(5) Only recreational vehicles or tents may be placed in a campground.

Item 3: That Chapter 10. Definitions and Measurement is amended by adding the following underlined language and deleting the struck-through language:

CAMPER

See "Recreational Vehicle"

~~A portable dwelling (as a special equipped trailer or automobile vehicle) for use during casual travel and camping.~~

CAMPGROUND

Any area, place, parcel or tract of land on which two or more campsites are occupied or intended for occupancy or facilities established or maintained, wholly or in part, for the accommodation of recreational vehicles or tents ~~camping units~~ for periods of overnight

or longer, whether the use of campsites and facilities is granted gratuitously, or by rental fee, lease or conditional sale, or by covenants, restrictions and easements. Campground includes but not limited to, a travel camp, recreational camp, family campground, camping resort, recreational vehicles park and camping community. Campground does not include a summer camp, migrant labor camp or park for manufactured homes, or a construction camp, or storage area for unoccupied recreational vehicles or unoccupied tents ~~camping units~~.

CAMPSITE SPACE

A space designed and promoted for the purpose of locating a recreational vehicle or tent.

LIGHT DUTY TRUCK

~~For the purposes of Section 7.4., Flood Damage Prevention, any~~ Any motor vehicle rated at 8,500 lbs. Gross Vehicular Weight Rating or less which has a vehicular curb rate of 6,000 lbs. or less and which has a basic vehicle frontal area of 45 square feet or less as defined in Title 40 US Code of Federal Regulations at Subpart 86.082-2 and is:

(a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle; or,

(b) Designed primarily for transportation of persons and has a capacity of more than 12 persons; or,

(c) Available with special features enabling off-street or off-highway operation and use.

TRAVEL TRAILER

See “Recreational Vehicle”

~~A structure that is: a. Intended to be transported over the streets and highways (either as a motor vehicle or attached to or hauled by a motor vehicle), and b. Is for temporary use as sleeping quarters, but that does not satisfy one or more of the definitional criteria of a manufactured home.~~

RECREATIONAL VEHICLE

A vehicle built on a single chassis; 400 square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a light duty truck; designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational, camping, travel, or seasonal use; fully licensed and ready for highway use; that does not exceed 8.5 feet in width in the transport mode; and of a size and weight that does not require a special highway movement permit when towed by a motorized vehicle. Recreational vehicles shall not have any permanent (hard) wiring, plumbing, or mechanical connections. The term “recreational vehicle” does not include a “manufactured home”.

~~For the purposes of Section 7.4., Flood Damage Prevention, a vehicle, which is:~~

~~a. built on a single chassis;~~

~~b. 400 square feet or less when measured at the largest horizontal projection;~~

~~c. designed to be self-propelled or permanently towable by a light duty truck;~~

~~d. designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use; and,~~

~~e. is fully licensed and ready for highway use.~~

Item 4: Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

Land Use and Development Goal # 10 To properly distribute development forms in accordance with the suitability of the land, infrastructure available and the compatibility of surrounding land uses.

The request is reasonable and in the public interest by providing language that will reduce the potential impacts of existing campgrounds in neighborhoods where the campgrounds exist and the proposed language may improve compatibility among uses for efficient development within the county.

Item 5: The provisions of this Ordinance are severable and if any of its provisions or any sentence, clause, or paragraph or the application thereof to any person or circumstance shall be held unconstitutional or violative of the Laws of the State of North Carolina by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions which can be given effect without the invalid provision or application.

Item 6: Item 1 and Item 3 of this ordinance amendment shall be in effect from and after the ____ _____ day of _____, 2020.

Item 7: Item 2 of this ordinance amendment shall be in effect 120 days after the _____ day of _____, 2020.

_____
Board of Commissioners' Chairman
Attest:

_____
Leeann Walton
Clerk to the Board

DATE ADOPTED: _____

MOTION TO ADOPT BY COMMISSIONER: _____
SECONDED BY COMMISSIONER: _____
VOTE: _____AYES_____NAYS

PLANNING BOARD DATE: _____
PLANNING BOARD RECOMMENDATION:_____
VOTE: _____AYES _____NAYS
ADVERTISEMENT DATE OF PUBLIC HEARING: _____
BOARD OF COMMISSIONERS PUBLIC HEARING: _____
BOARD OF COMMISSIONERS ACTION: _____
POSTED IN UNIFIED DEVELOPMENT ORDINANCE: _____
AMENDMENT NUMBER: _____

Text Amendment
Application

OFFICIAL USE ONLY:
Case Number: PB 20-05
Date Filed: 2/27/20
Gate Keeper: C. Edwards
Amount Paid:

Contact Information

APPLICANT:

Name: County of Currituck

Address: 153 Courthouse Road Suite 204
Currituck, NC 27929

Telephone: 252-232-2075

E-Mail Address: ben.stikeleather@currituckcountync.gov

Request

I, the undersigned, do hereby make application to change the Currituck County UDO as herein requested.

Amend Chapter(s) 8 & 10 Section(s) 8.2.6 & 10.5 as follows:

Change allowable timeframe for tents and campers from 90 days to 60 days within a calendar year.

Clarify that removal of tents and campers includes moving each from the campground and campground subdivision.

Add requirement for designation and numbering of campsite spaces.

Add requirement for maintaining registration records of all occupants.

Remove language that allows modifications of existing campgrounds.

Revise existing and add new definitions related to campgrounds and campground uses.

*Request may be attached on separate paper if needed.

Petitioner

3-2-2020
Date

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2822

Agenda Item Title: PB 20-06 Currituck County Remove Planned Development-Residential Text Amendment: Request to amend the Unified Development Ordinance, Chapter 3 Zoning Districts to remove PD-R zoning district for new rezoning requests and retain existing PD-R standards to preserve the administrative review process and development standards for amendments to existing PD-R zoning districts and master plans.

Submitted By: Jennie Turner – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jennie Turner

Board Action: Action

Brief Description of Agenda Item:

Request to amend the Unified Development Ordinance, Chapter 3 Zoning Districts to remove PD-R zoning district for new rezoning requests and retain existing PD-R standards to preserve the administrative review process and development standards for amendments to existing PD-R zoning districts and master plans.

Planning Board Vote: Approved 5-0

Planning Board Recommendation: Approval

Staff Recommendation: Approval

TRC Recommendation:

Currituck County
Planning and Community Development Department
Planning Division
153 Courthouse Road, Suite 110
Currituck, North Carolina, 27929
252-232-3055 FAX 252-232-3026

To: Board of Commissioners

From: Planning Staff

Date: June 18, 2020

Subject: PB 20-06 Currituck County Text Amendment
Planned Development –Residential (PD-R) Zoning District

At the February 7, 2020 retreat the Board of Commissioners directed staff to prepare a text amendment to remove the Planned Development-Residential (PD-R) Zoning District.

Since there are existing PD-R zoning districts and pending PD-R zoning district applications, staff suggests designating the PD-R Zoning District as a Legacy District. The Legacy designation indicates that no new lands in the county shall be zoned PD-R but allows for existing PD-R standards to remain in place to preserve the administrative review process and development standards for amendments to existing PD-R Zoning Districts and Master Plans.

Text Amendment Review Standards

The advisability of amending the text of the UDO is a matter committed to the legislative discretion of the Board of Commissioners and is not controlled by any one factor. In determining whether to adopt or deny the proposed text amendment, the Board of Commissioners may weigh the relevance of and consider whether and the extent to which the proposed text amendment:

1. Is consistent with the goals, objectives, and policies of the Land Use Plan and other applicable county-adopted plans;
2. Is not in conflict with any provision of this Ordinance or the County Code of Ordinances;
3. Is required by changed conditions;
4. Addresses a demonstrated community need;
5. Is consistent with the purpose and intent of the zoning districts in this Ordinance, or would improve compatibility among uses and ensure efficient development within the county;
6. Would result in a logical and orderly development pattern; and
7. Would not result in significantly adverse impacts on the natural environment, including but not limited to water, air, noise, stormwater management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

Staff Recommendation

Staff recommends approval of the request as submitted and suggests the following Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. ***Land Use and Development Goal # 10*** To property distribute development forms in accordance with the suitability of the land, infrastructure available and the compatibility of surrounding land uses.

2. **POLICY AG6:** For areas experiencing intense development pressure, new residential development may be allowed to locate in COMPACT, VILLAGE-LIKE CLUSTERS, PREFERABLY NEAR EXISTING, NON-AGRICULTURAL ACTIVITIES AND SERVICES, or in other locations that will not interfere with resource production activities. Overall density shall remain very low, with permanent open space, dedicated during the development review process, surrounding such clusters of homes.
3. **POLICY HN3:** Currituck County shall especially encourage two forms of residential development, each with the objective of avoiding traditional suburban sprawl:
    1. OPEN SPACE DEVELOPMENTS that cluster homes on less land, preserving permanently dedicated open space and often employ on-site or community sewage treatment. These types of developments are likely to occur primarily in the Conservation, Rural, and to a certain extent the Limited Service areas identified on the Future Land Use Map.
    2. COMPACT, MIXED USE DEVELOPMENTS or DEVELOPMENTS NEAR A MIXTURE OF USES that promote a return to balanced, self-supporting community centers generally served by centralized water and sewer. The types of development are contemplated for the Full Service Areas identified on the Future Land Use Map.
4. **POLICY WS4:** Currituck County endorses utilities extension policies that avoid those parts of the county best suited for agriculture and to PROTECT FARMLAND FROM DEVELOPMENT PRESSURES brought about by such utilities. Exceptions to this policy may include extensions for major economic development initiatives, and extensions to address imminent public health problems or related environmental hazards.

The request is reasonable and in the public interest because:

1. The proposed text amendment allows for the continuance of existing PD-R districts and amendments thereto but does not permit new rezoning applications for PD-R.
2. There are zoning districts within the county that allow for similar development density and patterns.

STAFF REPORT
PB20-06 CURRITUCK COUNTY
PLANNED DEVELOPMENT-RESIDENTIAL (PD-R) ZONING DISTRICT
BOARD OF COMMISSIONERS
JUNE 22, 2020

Amendment to the Unified Development Ordinance Chapter 3. Zoning Districts to designate the PD-R District as a Legacy District and to maintain the process and standards for amending existing PD-R Districts.

BE IT ORDAINED by the Board of Commissioners of the County of Currituck, North Carolina that the Unified Development Ordinance of the County of Currituck be amended as follows:

Item 1: That Chapter 3. Zoning Districts is amended by deleting the struck-through language and adding the underlined language:

3.2. BASE ZONING DISTRICTS ESTABLISHED

3.2.1. General

Table 3.2.1, Base Zoning Districts Established, sets out the base zoning districts established by this Ordinance. Base zoning districts are grouped into Special, Residential, Business and Mixed-Use, and Planned Development districts.

TABLE 3.2.1: BASE ZONING DISTRICTS ESTABLISHED

District Name	Abbreviation
Special Districts	
Resource Conservation	RC
Agriculture	AG
Residential Districts	
Single-Family Residential – Mainland	SFM
Single-Family Residential – Outer Banks	SFO
Single-Family Residential – Outer Banks, Remote	SFR
Single-Family Residential – Isolated	SFI
Mixed Residential	MXR
Business and Mixed-Use Districts	
General Business	GB
Limited Business	LB
Community Center	CC
Village Center	VC

TABLE 3.2.1: BASE ZONING DISTRICTS ESTABLISHED	
DISTRICT NAME	**ABBREVIATION**
Light Industrial	LI
Heavy Industrial	HI
PLANNED DEVELOPMENT DISTRICTS	
Planned Development – Residential Legacy	PD-R
Planned Development – Mixed	PD-M
Planned Development – Outer Banks	PD-O

3.7.3. Planned Development – Residential (PD-R) Legacy District

PD-R
PLANNED DEVELOPMENT – RESIDENTIAL LEGACY

A. DISTRICT PURPOSE

The Planned Development – Residential (PD-R) District is a Legacy District previously established and intended to encourage the use of innovative and creative design to provide a mix of different residential uses in close proximity to one another on mainland Currituck County, while at the same time providing an efficient use of open space. Limited, small-scale commercial uses may be allowed in the PD-R district, primarily to serve the needs of residents in the development.

No new lands in the County shall be zoned Planned Development-Residential (PD-R) nor shall any boundary of an existing PD-R be modified.

The standards in this section apply to individually-designated PD-R districts established prior to Date set by BOC. Modifications to existing PD-R Districts shall be subject to the review procedures of Section 2.4.5 and the standards of Section 3.7.

B. DIMENSIONAL STANDARDS

District area, minimum (acres)	50
Gross residential density, maximum (dwelling units/acre) [1]	To be established in the master plan
Lot area, minimum (sq ft)	
Lot width, minimum (ft)	
Nonresidential land area, maximum (% of district total)	40
Single housing type, maximum (% of units)	85
Lot coverage, maximum (% of lot area)	To be established in the master plan
Nonresidential FAR, maximum (%)	
Individual building size, maximum (sq ft)	

C. DEVELOPMENT STANDARDS

The standards in Chapter 5: Development Standards, shall apply to all development in PD-R districts, but some of those standards may be modified as part of the master plan if consistent with the general purposes of the PD-R district and the procedures noted below.

Development Standard	Means of Modifying
Off-street parking & loading	Specify in Alternative Parking Plan (see Section 5.1.6)
Landscaping [2]	Specify in Alternative Landscaping Plan (see Section 5.2.9)
Tree protection	
Open space set-aside [3]	30%
Fences and walls	Specify in Security Plan (see Sections5.3.5. and 5.4.4)
Exterior lighting	

Building height, maximum (ft)		Community form	Specify in master plan
Setbacks, minimum or maximum (ft)		Nonresidential design	
Setback from abutting residential zoning district or existing residential use (ft)		Multi-family design	
Setback from agriculture (ft)		Community compatibility [4]	Modifications prohibited
Setback from major arterial streets (ft)		Signage	Modifications prohibited
Min. Wetland/Riparian Buffer (ft)	30	Adequate public facilities	Modifications prohibited

NOTES:
[1] May not exceed three units per acre in Full Service areas ~~or one-and-one-half units per acre in Limited Service areas~~
[2] Uses internal to the development shall not be required to provide perimeter buffers
[3] The required percentage of open space set-aside shall be calculated based on the total district

D. ENVIRONMENTAL PROTECTION STANDARDS

The environmental protection standards in Chapter 7 of the UDO may not be modified by a planned development

[4] Community compatibility standards shall not apply to uses internal to the development

Item 3: Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. ***Land Use and Development Goal # 10*** To property distribute development forms in accordance with the suitability of the land, infrastructure available and the compatibility of surrounding land uses.
2. **POLICY AG6:** For areas experiencing intense development pressure, new residential development may be allowed to locate in COMPACT, VILLAGE-LIKE CLUSTERS, PREFERABLY NEAR EXISTING, NON-AGRICULTURAL ACTIVITIES AND SERVICES, or in other locations that will not interfere with resource production activities. Overall density shall remain very low, with permanent open space, dedicated during the development review process, surrounding such clusters of homes.
3. **POLICY HN3:** Currituck County shall especially encourage two forms of residential development, each with the objective of avoiding traditional suburban sprawl:
    1. OPEN SPACE DEVELOPMENTS that cluster homes on less land, preserving permanently dedicated open space and often employ on-site or community sewage treatment. These types of developments are likely to occur primarily in the Conservation, Rural, and to a certain extent the Limited Service areas identified on the Future Land Use Map.
    2. COMPACT, MIXED USE DEVELOPMENTS or DEVELOPMENTS NEAR A MIXTURE OF USES that promote a return to balanced, self-supporting community centers generally served by centralized water and sewer. The types of development are contemplated for the Full Service Areas identified on the Future Land Use Map.
4. **POLICY WS4:** Currituck County endorses utilities extension policies that avoid those parts of the county best suited for agriculture and to PROTECT FARMLAND FROM DEVELOPMENT PRESSURES brought about by such utilities. Exceptions to this policy may include extensions for major economic development initiatives, and

extensions to address imminent public health problems or related environmental hazards.

The request is reasonable and in the public interest because:

1. The proposed text amendment allows for the continuance of existing PD-R districts and amendments thereto but does not permit new rezoning applications for PD-R.
2. There are zoning districts within the county that allow for similar development density and patterns.

Item 4: The provisions of this Ordinance are severable and if any of its provisions or any sentence, clause, or paragraph or the application thereof to any person or circumstance shall be held unconstitutional or violative of the Laws of the State of North Carolina by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions which can be given effect without the invalid provision or application.

Item 5: This ordinance amendment shall be in effect from and after the _____ day of _____ _____, 2020.

_____
Board of Commissioners' Chairman
Attest:

_____
Leeann Walton
Clerk to the Board

DATE ADOPTED: _____
MOTION TO ADOPT BY COMMISSIONER: _____
SECONDED BY COMMISSIONER: _____
VOTE: _____AYES_____NAYS

PLANNING BOARD DATE: _____
PLANNING BOARD RECOMMENDATION:_____
VOTE: _____AYES _____NAYS
ADVERTISEMENT DATE OF PUBLIC HEARING: _____
BOARD OF COMMISSIONERS PUBLIC HEARING: _____
BOARD OF COMMISSIONERS ACTION: _____
POSTED IN UNIFIED DEVELOPMENT ORDINANCE: _____
AMENDMENT NUMBER: _____

Currituck County
Planning and Community Development Department
Planning Division
153 Courthouse Road, Suite 110
Currituck, North Carolina, 27929
252-232-3055 FAX 252-232-3026

To: Board of Commissioners

From: Planning Staff

Date: June 19, 2020

Subject: PB 20-06 Currituck County Text Amendment
Planned Development –Residential (PD-R) Zoning District

On June 15, 2020 the Board of Commissioners approved PB19-25 Currituck County PD-Currituck Station Text Amendment. The following is a revision to **Item 1** that incorporates the text amendment revisions approved on June 15, 2020.

Revised Item 1: That Chapter 3. Zoning Districts is amended by deleting the struck-through language and adding the underlined language:

3.2. BASE ZONING DISTRICTS ESTABLISHED

3.2.1. General

Table 3.2.1, Base Zoning Districts Established, sets out the base zoning districts established by this Ordinance. Base zoning districts are grouped into Special, Residential, Business and Mixed-Use, and Planned Development districts.

TABLE 3.2.1: BASE ZONING DISTRICTS ESTABLISHED

DISTRICT NAME	ABBREVIATION
SPECIAL DISTRICTS	
Resource Conservation	RC
Agriculture	AG
RESIDENTIAL DISTRICTS	
Single-Family Residential – Mainland	SFM
Single-Family Residential – Outer Banks	SFO
Single-Family Residential – Outer Banks, Remote	SFR
Single-Family Residential – Isolated	SFI
Mixed Residential	MXR
BUSINESS AND MIXED-USE DISTRICTS	
General Business	GB
Limited Business	LB
Community Center	CC
Village Center	VC
Light Industrial	LI
Heavy Industrial	HI

TABLE 3.2.1: BASE ZONING DISTRICTS ESTABLISHED	
DISTRICT NAME	**ABBREVIATION**
PLANNED DEVELOPMENT DISTRICTS	
Planned Development – Residential Legacy	PD-R
Planned Development – Mixed	PD-M
Planned Development – Outer Banks	PD-O
Planned Development – Currituck Station	PD-CS

3.7.3. Planned Development – Residential (PD-R) Legacy District

PD-R
PLANNED DEVELOPMENT – RESIDENTIAL LEGACY

A. DISTRICT PURPOSE

The Planned Development – Residential (PD-R) District is a Legacy District previously established and intended to encourage the use of innovative and creative design to provide a mix of different residential uses in close proximity to one another on mainland Currituck County, while at the same time providing an efficient use of open space. Limited, small-scale commercial uses may be allowed in the PD-R district, primarily to serve the needs of residents in the development.

No new lands in the County shall be zoned Planned Development-Residential (PD-R) nor shall any boundary of an existing PD-R be modified.

The standards in this section apply to individually-designated PD-R districts established prior to Date set by BOC. Modifications to existing PD-R Districts shall be subject to the review procedures of Section 2.4.5 and the standards of Section 3.7.

B. DIMENSIONAL STANDARDS

District area, minimum (acres)	50
Gross residential density, maximum (dwelling units/acre)	3 - Full Service Areas
Lot area, minimum (sq ft)	To be established in the master plan
Lot width, minimum (ft)	
Nonresidential land area, maximum (% of district total)	40
Single housing type, maximum (% of units)	85
Lot coverage, maximum (% of lot area)	To be established in the master plan
Nonresidential FAR, maximum (%)	
Individual building size, maximum (sq ft)	
Building height, maximum (ft)	

C. DEVELOPMENT STANDARDS

The standards in Chapter 5: Development Standards, shall apply to all development in PD-R districts, but some of those standards may be modified as part of the master plan if consistent with the general purposes of the PD-R district and the procedures noted below.

Development Standard	Means of Modifying
Off-street parking & loading	Specify in Alternative Parking Plan (see Section 5.1.6)
Landscaping [1]	Specify in Alternative Landscaping Plan (see Section 5.2.9)
Tree protection	
Open space set-aside [2]	30%
Fences and walls	Specify in Security Plan (see Sections5.3.5. and 5.4.4)
Exterior lighting	
Community form	Specify in master plan

Setbacks, minimum or maximum (ft)		Nonresidential design	
Setback from abutting residential zoning district or existing residential use (ft)		Multi-family design	
Setback from agriculture (ft)		Community compatibility [3]	Modifications prohibited
Setback from major arterial streets (ft)		Signage	Modifications prohibited
Min. Wetland/Riparian Buffer (ft)	30	Adequate public facilities	Modifications prohibited

NOTES:
[1] Uses internal to the development shall not be required to provide perimeter buffers
[2] The required percentage of open space set-aside shall be calculated based on the total district

D. Environmental Protection Standards

The environmental protection standards in Chapter 7 of the UDO may not be modified by a planned development

[3] Community compatibility standards shall not apply to uses internal to the development

Text Amendment
Application

OFFICIAL USE ONLY
Case Number: PB 20-06
Date Filed: 2/27/20
Gate Keeper: C. Ellis
Amount Paid: $0

Contact Information

APPLICANT:

Name: County of Currituck

Address: 153 Courthouse Road Suite 204
Currituck, NC 27929

Telephone: 252-232-2075

E-Mail Address: ben.stikeleather@currituckcountync.gov

Request

I, the undersigned, do hereby make application to change the Currituck County UDO as herein requested.

Amend Chapter(s) 3,4 Section(s) 3.7.3 & 4.1.2 as follows:

Remove Planned Development-Residential (PDR) District

Remove references to PDR District

*Request may be attached on separate paper if needed.

Petitioner

3-2-2020
Date

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – (ID # 2841)

Agenda Item Title: School Construction Funds Request-Board of Education

Submitted By: Leeann Walton – County Manager

Presenter of Item:

Board Action: Discussion

Brief Description of Agenda Item:

Reason for Request:

Potential Budget Affect:

Is this item regulated by plan, regulation or statute? No

Manager Recommendation:

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2823

Agenda Item Title: PB 20-08 Currituck County Subdivision Access Standards Text Amendment: Request to amend the Unified Development Ordinance, Chapter 2 Administration to clarify that Family Subdivisions may front NCDOT-maintained streets and that private access streets shall connect to an NCDOT-maintained street.

Submitted By: Jennie Turner – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jennie Turner

Board Action: Action

Brief Description of Agenda Item:

Request to amend the Unified Development Ordinance, Chapter 2 Administration to clarify that Family Subdivisions may front NCDOT-maintained streets and that private access streets shall connect to an NCDOT-maintained street.

Planning Board Vote: Approved 5-0

Planning Board Recommendation: Approval

Staff Recommendation: Approval

TRC Recommendation:

Currituck County
Planning and Community Development Department
Planning Division
153 Courthouse Road, Suite 110
Currituck, North Carolina, 27929
252-232-3055 FAX 252-232-3026

To: Board of Commissioners

From: Planning Staff

Date: June 18, 2020

Subject: PB 20-08 Currituck County – Text Amendment
Clarify Family Subdivision access and private access street requirements

The enclosed text amendment submitted by the Currituck County Planning and Community Development Department will revise the Specific Review Standards for Minor Subdivisions and Family Subdivisions to clarify that Family Subdivisions may front an existing NCDOT-maintained public street and to clarify that a private access street is required to connect to an NCDOT-maintained public street.

Text Amendment Review Standards

The advisability of amending the text of the UDO is a matter committed to the legislative discretion of the Board of Commissioners and is not controlled by any one factor. In determining whether to adopt or deny the proposed text amendment, the Board of Commissioners may weigh the relevance of and consider whether and the extent to which the proposed text amendment:

1. Is consistent with the goals, objectives, and policies of the Land Use Plan and other applicable county-adopted plans;
2. Is not in conflict with any provision of this Ordinance or the County Code of Ordinances;
3. Is required by changed conditions;
4. Addresses a demonstrated community need;
5. Is consistent with the purpose and intent of the zoning districts in this Ordinance, or would improve compatibility among uses and ensure efficient development within the county;
6. Would result in a logical and orderly development pattern; and
7. Would not result in significantly adverse impacts on the natural environment, including but not limited to water, air, noise, stormwater management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

Staff Recommendation
Staff recommends approval of the request as submitted and suggests the following Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. POLICY HN8: To protect the County's tax base and to ensure the long-term viability of the County's neighborhoods and housing stock, the County will continue to enforce appropriate CONSTRUCTION AND SITE DEVELOPMENT STANDARDS for residential developments. Such standards may include, for example, that all homes have a permanent masonry foundation (except where flood levels require elevation) and a pitched roof and overhang, and that local roads must be built to meet NCDOT acceptance standards. (See Transportation Policies for details concerning requirements for paved roads.)
2. POLICY TR5: So as to preserve the traffic moving function of the County's primary roads, minimize traffic accidents, and avoid land locking interior land parcels, Currituck County shall discourage residential and commercial strip development along the county's primary roads.

The request is reasonable and in the public interest because:

1. It clarifies the access standards of the UDO for Minor and Family Subdivisions for more consistent interpretation and implementation.

STAFF REPORT
PB20-08 CURRITUCK COUNTY SUBDIVISION ACCESS STANDARDS TEXT AMENDMENT
BOARD OF COMMISSIONERS
JUNE 22, 2020

Amendment to the Unified Development Ordinance Chapter 2 Administration to clarify that Family Subdivisions may front an NCDOT-maintained public street and that private access streets shall connect to an NCDOT-maintained street.

BE IT ORDAINED by the Board of Commissioners of the County of Currituck, North Carolina that the Unified Development Ordinance of the County of Currituck be amended as follows:

Item 1: That Chapter 2. Administration is amended by adding the following underlined language and deleting the struck-through language:

2.4. SPECIFIC REVIEW PROCEDURES

2.4.8. Subdivision

D. Minor Subdivision

(1) Minor Subdivision Review Standards

(a) General Standards

A minor subdivision shall be approved on a finding that:

(i) It complies with all applicable standards in Chapter 6: Subdivision and Infrastructure Standards, the standards for a final plat in Section 2.4.8.E.5.B; and all other applicable standards in this Ordinance;

(ii) It complies with the dimensional standards of Chapter 3;

(iii) It will result in no more than three lots created from the parent parcel or tract (including the residual parcel or tract of less than ten acres in area), as it existed on April 2, 1989 (except as allowed in Section 2.4.8.D.2.B, Additional Standards for Family Subdivisions);

(iv) It does not front an existing NCDOT-maintained public street <u>(except for Family Subdivisions)</u>;

(v) The parent parcel and new parcel(s) shall front a private access street. The existing driveway to the parent parcel shall be removed if that driveway is

not converted into the private access street to service the resultant parcels.

(vi) There is no public right-of-way dedication;

(vii) It does not create a private access street serving more than two lots unless it is a family subdivision;

(viii) Any private access street created shall connect to an NCDOT-maintained public street and shall comply ~~complies~~ with Section 6.2.1.B.1 Private Access Street Standards; and,

(ix) It does not require significant infrastructure improvements. For the purpose of this section significant infrastructure includes, but is not limited to: a road installed to NCDOT standards, fire hydrant, and/or a fire pond.

(b) **Additional Standards for Family Subdivisions**

Family subdivisions shall follow the review procedure for minor subdivisions and shall comply with the general standards in (a) above as well as the following:

(i) Lots shall be conveyed solely to family members within two degrees of kinship (e.g., child, grandchild). A maximum of one lot shall be conveyed to the individual family member, including family subdivisions on different parent parcels.

(ii) No more than five lots are created from the parent parcel or tract (including the residual parcel or tract of less than ten acres in area) as it existed ten years prior to application submittal.

(iii) Ingress and egress to a lot shall not be from a major arterial street.

(iv) Private access streets created shall connect to an NCDOT-maintained public street and shall not serve more than five lots.

(v) Principal uses shall be limited to single-family detached dwellings and customary accessory uses.

Item 2: Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. POLICY HN8: To protect the County's tax base and to ensure the long-term viability of the County's neighborhoods and housing stock, the County will continue to enforce appropriate CONSTRUCTION AND SITE DEVELOPMENT STANDARDS for residential developments. Such standards may include, for example, that all homes have a

permanent masonry foundation (except where flood levels require elevation) and a pitched roof and overhang, and that local roads must be built to meet NCDOT acceptance standards. (See Transportation Policies for details concerning requirements for paved roads.)

2. POLICY TR5: So as to preserve the traffic moving function of the County's primary roads, minimize traffic accidents, and avoid land locking interior land parcels, Currituck County shall discourage residential and commercial strip development along the county's primary roads.

The request is reasonable and in the public interest because:

1. It clarifies the access standards of the UDO for Minor Subdivisions and Family Subdivisions for more consistent interpretation and implementation.

Item 3: The provisions of this Ordinance are severable and if any of its provisions or any sentence, clause, or paragraph or the application thereof to any person or circumstance shall be held unconstitutional or violative of the Laws of the State of North Carolina by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions which can be given effect without the invalid provision or application.

Item 4: This ordinance amendment shall be in effect from and after the _____ day of _____ _____, 2020.

_____
Board of Commissioners' Chairman
Attest:

_____
Leeann Walton
Clerk to the Board

DATE ADOPTED: _____
MOTION TO ADOPT BY COMMISSIONER: _____
SECONDED BY COMMISSIONER: _____
VOTE: _____AYES_____NAYS

PLANNING BOARD DATE: _____
PLANNING BOARD RECOMMENDATION:_____
VOTE: _____AYES _____NAYS
ADVERTISEMENT DATE OF PUBLIC HEARING: _____
BOARD OF COMMISSIONERS PUBLIC HEARING: _____
BOARD OF COMMISSIONERS ACTION: _____
POSTED IN UNIFIED DEVELOPMENT ORDINANCE: _____
AMENDMENT NUMBER: _____

Text Amendment
Application

OFFICIAL USE ONLY:
Case Number: PB 20-08
Date Filed: 4-7-20
Gate Keeper: J. T.
Amount Paid: N/A

Contact Information

APPLICANT:

Name: County of Currituck

Address: 153 Courthouse Road Suite 204
Currituck, NC 27929

Telephone: 252-232-2075

E-Mail Address: ben.stikeleather@currituckcountync.gov

Request

I, the undersigned, do hereby make application to change the Currituck County UDO as herein requested.

Amend Chapter(s) 2 Section(s) 2.4.8 Subdivision as follows:

Clarify the family subdivision access and private access road requirements.

*Request may be attached on separate paper if needed.

Petitioner

4-7-20
Date

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2820

Agenda Item Title: PB 20-03 Currituck County Miscellaneous Text Amendment: Request to amend the Unified Development Ordinance to change Planning Board quorum; require surveyed site plans (<20,000 sf lots) and as-built surveys (<40,000 sf lots); clarify allowable use of metal siding in Business and Industrial Zoning Districts; remove redundant parking language for Bed and Breakfast Inns; correct Single Family-Residential Remote accessory parking language; allow accessory keeping of specific livestock (goats) subject to additional standards; amend bio solid/sludge language for consistency with recent court decisions; clarify home occupation language; revise accessory dwelling unit standards; update private residence terminology; remove reserve utility open space requirement; and update financial terminology.

Submitted By: Jennie Turner – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jennie Turner

Board Action: Action

Brief Description of Agenda Item:

Request to amend the Unified Development Ordinance, Chapter 2 Administration, Chapter 3 Zoning Districts, Chapter 4 Use Standards, Chapter 5 Development Standards, and Chapter 6 Subdivision and Infrastructure Standards to change Planning Board quorum, require surveyed site plans (<20,000 sf lots) and as-built surveys (<40,000 sf lots), clarify allowable use of metal siding in Business Districts and Industrial Zoning Districts, remove redundant parking language for Bed and Breakfast Inns, correct Single Family-Residential Remote accessory parking language, allow accessory keeping of specific livestock (goats) subject to additional standards, amend bio solid/sludge language for consistency with recent court decisions, clarify home occupation language, revise accessory dwelling unit standards, update private residence terminology, remove reserve utility open space requirement, and update financial terminology.

Planning Board Recommendation: Approval

Staff Recommendation: Approval

TRC Recommendation:

Currituck County
Planning and Community Development Department
Planning Division
153 Courthouse Road, Suite 110
Currituck, North Carolina, 27929
252-232-3055 FAX 252-232-3026

To: Board of Commissioners

From: Planning Staff

Date: June 18, 2020

Subject: PB 20-03 Currituck County –Text Amendment

The enclosed text amendment submitted by the Currituck County Planning and Community Development Department is intended to clarify and revise miscellaneous sections of the Unified Development Ordinance (UDO) and to amend certain sections at the direction of the Board of Commissioners:

Item 1 Change Planning Board quorum requirement from 5 members to 4 members to bring consistency with reduction of planning board members previously approved by the BOC. (P&CD)

Item 2 Codify Administrative Manual requirement that a NC licensed surveyor, engineer, or architect must prepare a site plan for lots 20,000 square feet or smaller. (P&CD) Require an As-Built Survey for development of principal structures on lots 40,000 square feet or smaller. (BOC)

Item 3 Clarify metal siding prohibition in Business Districts in order to clarify the intent of prohibition of use of metal siding on facades facing major arterial streets in Industrial Zoning Districts. (BOC and P&CD)

Item 4 Remove redundant parking language for Bed and Breakfast Inns. Parking is regulated in Chapter 5. (P&CD)

Item 5 Correct language regarding allowable accessory uses prior to principal uses in the SFR zoning district to be consistent with the motion approved at the December 4, 2017 BOC meeting. (P&CD)

Item 6 Allow the keeping of specific livestock as an accessory use in AG, SFM and SFI zoning districts subject to specific standards. (BOC)

Item 7 Revise the term Sludge to Biosolids and amend the permit requirements for Land application of Biosolids and Septage as permitted by right subject to a permit from the appropriate agency. This revision will bring consistency with recent court decisions. (P&CD)

Item 8 Include the Home Occupation definition in the specific standards for better consistency in communicating the requirements and allowable Home Occupation uses. (P&CD)

Item 9 Remove the minimum square footage for Accessory Dwelling Units to be consistent with State Law Session 2019-174 that prohibits a minimum square footage designation. (P&CD)

Item 10 Change the reference from “Private Residence” to “Single Family Dwelling” for Certain Temporary Uses. (P&CD)

Item 11 Clarify the intent that Non-Residential Design Features are required on front building facades and facades facing or visible from streets and clarify the intent that use of metal siding is prohibited on front building facades and facades facing or visible from streets in Business Districts. (BOC and P&CD)

Item 12 Remove the Reserve Utility Open Space requirement. (BOC)

Item 13 Revise the term certified check to cashier’s check to be consistent with current financial terminology. (P&CD)

Text Amendment Review Standards

The advisability of amending the text of the UDO is a matter committed to the legislative discretion of the Board of Commissioners and is not controlled by any one factor. In determining whether to adopt or deny the proposed text amendment, the Board of Commissioners may weigh the relevance of and consider whether and the extent to which the proposed text amendment:

1. Is consistent with the goals, objectives, and policies of the Land Use Plan and other applicable county-adopted plans;
2. Is not in conflict with any provision of this Ordinance or the County Code of Ordinances;
3. Is required by changed conditions;
4. Addresses a demonstrated community need;
5. Is consistent with the purpose and intent of the zoning districts in this Ordinance, or would improve compatibility among uses and ensure efficient development within the county;
6. Would result in a logical and orderly development pattern; and
7. Would not result in significantly adverse impacts on the natural environment, including but not limited to water, air, noise, stormwater management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

Staff Recommendation
Staff recommends approval of the request as submitted and suggests the following Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. *Land Use and Development Goal* #1 To protect and conserve the area's natural beauty and coastal resources as the County's greatest asset for economic development and a high quality of life.

2. POLICY HN8: To protect the County's tax base and to ensure the long-term viability of the County's neighborhoods and housing stock, the County will continue to enforce appropriate CONSTRUCTION AND SITE DEVELOPMENT STANDARDS for residential developments. Such standards may include, for example, that all homes have a permanent masonry foundation (except where flood levels require elevation) and a pitched roof and overhang, and that local roads must be built to meet NCDOT acceptance standards. (See Transportation Policies for details concerning requirements for paved roads.)
3. POLICY CD4: HIGHWAY ORIENTED COMMERCIAL USES should be clustered along segments of highways and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points, and to prevent unsightly, dysfunctional STRIP DEVELOPMENT. (See esp., Policy CD9 below concerning connected parking areas.)
4. POLICY ID1: To diversify the local economy and broaden the local tax base, the County shall encourage a public service and regulatory environment conducive to COMPATIBLE INDUSTRIAL DEVELOPMENT. "Compatible" shall be defined as, among other things, industries that do not adversely impact the environmental quality of the area, or overburden the local infrastructure.
5. POLICY CA1: The important economic, tourism, and community image benefits of attractive, functional MAJOR HIGHWAY CORRIDORS through Currituck County shall be recognized. Such highway corridors, beginning with US 158 and NC 168, shall receive priority attention for improved appearance and development standards, including driveway access, landscaping, buffering, signage, lighting and tree preservation.
6. POLICY WS6: Currituck County endorses the proper use and maintenance of APPROVED SEPTIC SYSTEMS in suitable soils as an environmentally acceptable means of treating and dispersing waste from low-density development.

The request is reasonable and in the public interest because:

1. It clarifies portions of the UDO for more consistent interpretation and enforcement.
2. It amends the UDO for consistency with recent court decisions and current financial terminology.
3. It allows accessory keeping of certain livestock in agricultural and residential zoning districts subject to specific standards intended to address compatibility issues.
4. It removes utility open space requirements for new subdivisions that have been deemed unnecessary.

STAFF REPORT
PB20-03 CURRITUCK COUNTY
TEXT AMENDMENT
BOARD OF COMMISSIONERS
JUNE 22, 2020

Amendment to the Unified Development Ordinance Chapter 2 Administration, Chapter 3 Zoning Districts, Chapter 4 Use Standards, Chapter 5 Development Standards, Chapter 6 Subdivision & Infrastructure Standards and Chapter 10 Definitions and Measurement.

BE IT ORDAINED by the Board of Commissioners of the County of Currituck, North Carolina that the Unified Development Ordinance of the County of Currituck be amended as follows:

Item 1: That Chapter 2. Administration is amended by adding the following underlined language and deleting the struck-through language:

2.2.3 Planning Board

E. Quorum and Necessary Vote

(1) Quorum

Four ~~Five~~ members of the Planning Board shall constitute a quorum. No official business of the Planning Board shall be conducted without a quorum present.

Item 2: That Chapter 2. Administration is amended by adding the following underlined language and deleting the struck-through language and renumber accordingly:

2.4.7 Site Plan

A. Purpose

Site plan review is intended to ensure that the layout and general design of proposed development is compatible with surrounding uses and complies with all applicable standards in this Ordinance and all other county regulations. The purpose of this section is to establish the procedure and standards for review of site plans.

B. Applicability

(1) General

All development, unless exempted in accordance with sub-section (2) below shall be required to have a site plan approved in accordance with this section prior to issuance of a zoning compliance permit or building permit.

(2) Exemptions

The following development is exempted from the requirements of this section:

(a) Internal construction that does not increase building height, increase the density or intensity of use, or affect parking or landscaping requirements;

(b) Change in use that does not result in the need for additional parking or landscaping;

(c) Detached accessory structures associated with a single-family detached residential use that involve construction of less than 144 gross square feet of floor area; and

(d) Temporary uses, subject to a temporary use permit (see Section 2.4.11).

C. Site Plans Distinguished

There are two different types of site plans under this section: minor site plans and major site plans.

(1) Minor Site Plans

The following development shall be reviewed as a minor site plan:

(a) New single-family detached dwellings, including individual manufactured homes and duplexes;

(b) Additions or expansions of a single-family detached dwelling;

(c) Accessory uses or structures serving an existing principal use; or

(d) Development or expansion of a nonresidential, multi-family, or mixed-use building's gross floor area, impervious surface, disturbed land area, and other use area, by less than 5,000 square feet.

(2) Major Site Plans

All other development shall be reviewed as a major site plan.

D. Major Site Plan Review Procedure

(1) Pre-Application Conference

Applicable (see Section 2.3.2).

(2) Community Meeting

Optional (see Section 2.3.3).

(3) Application Submittal and Acceptance

(a) Applicable (see Section 2.3.4).

(b) A NC licensed surveyor, architect, or engineer shall prepare site plans for principal structures on lots 20,000 square feet in area or smaller.

(4) Staff Review and Action

Applicable (see Section 2.3.5). The Technical Review Committee shall review and decide the application in accordance with Section 2.3.5.D, Applications Subject to Decision by Planning Director or Technical Review Committee, and Section 2.4.7.F, Site Plan Review Standards.

(5) Public Hearing Scheduling and Public Notification

Not applicable.

(6) Public Hearing Procedures

Not applicable.

(7) Advisory Body Review and Recommendation

Not applicable.

(8) Decision-Making Body Review and Decision

Not applicable.

E. Minor Site Plan Review Procedure

(1) Pre-Application Conference

Not applicable.

(2) Community Meeting

Not applicable.

(3) Application Submittal and Acceptance

(a) Applicable (see Section 2.3.4).

(b) A NC licensed surveyor, architect, or engineer shall prepare site plans for principal structures on lots 20,000 square feet in area or smaller.

(4) Staff Review and Action

Applicable (see Section 2.3.5). The Planning Director shall review and decide the application in accordance with Section 2.3.5.D, Applications Subject to Decision by Planning Director or Technical Review Committee, and Section 2.4.7.F, Site Plan Review Standards.

(5) Public Hearing Scheduling and Public Notification

Not applicable.

(6) Public Hearing Procedures

Not applicable.

(7) Advisory Body Review and Recommendation

Not applicable.

(8) Decision-Making Body Review and Decision

Not applicable.

F. Site Plan Review Standards

An application for a site plan shall be approved on a finding the applicant has demonstrated the proposed development:

(1) Is consistent with the Land Use Plan or other officially adopted plan;

(2) Complies with the applicable district, use-specific, development, environmental, and infrastructure design standards of this Ordinance;

(3) Complies with the Currituck County Stormwater Manual and all other applicable standards of this Ordinance and the County Code of Ordinances; and

(4) Complies with all standards or conditions of any prior applicable development permits or approvals.

G. As-Built Survey Required

Prior to scheduling final inspection for principal structures on lots 40,000 square feet or less in area, an as-built survey prepared by a NC licensed surveyor shall be submitted for review and approval.

H. Effect of Development Approval

Approval of a site plan authorizes the submittal of an application for a zoning compliance permit and any other development application that may be required before construction or other development authorized by this Ordinance. Applicants may submit applications for a site plan, zoning compliance permit, and building permit concurrently.

I. Amendment of Development Approval

Applicable (see Section 2.3.14).

J. Expiration of Development Approval

Site plan approval shall automatically expire at the end of two years following the date of approval if a building permit for at least one building in the site plan is not approved. A change in the ownership in land does not affect this time period.

Item 3: That Chapter 3. Zoning Districts is amended by adding the following underlined language and deleting the struck-through language and renumbering accordingly:

3.5.2 General Business (GB) District

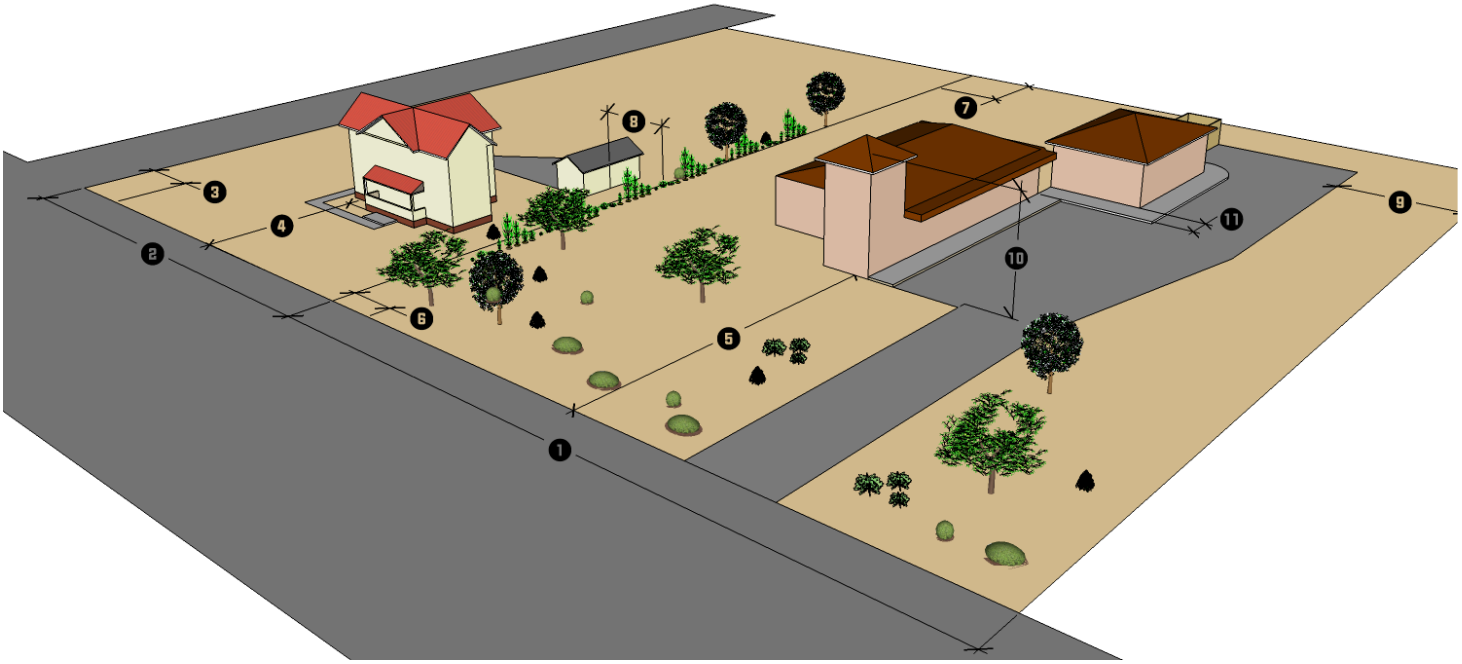
A. District Purpose

The General Business (GB) district is established to accommodate a wide variety of residential and nonresidential uses on lots bounding major roadways outside of community and village center areas. The district is intended to accommodate small to medium-sized commercial, office, personal service, and institutional uses that provide goods and services to county residents and visitors in ways that protect the county's scenic corridors as well as maintain the traffic carrying capacity of major roadways. The district also accommodates low density single-family detached dwellings, accessory dwelling units, and manufactured homes on individual lots (on the mainland). New commercial development is subject to commercial design standards to ensure development quality and consistency with surrounding development patterns. New commercial development of 5,000 square feet or more proposed on lots located outside of areas designated as Full Service areas in the Land Use Plan is required to obtain use permit approval. New development on lots along major arterials (like Caratoke Highway) outside designated Full Service areas are subject to increased minimum front setbacks and increased landscaping requirements to help protect the scenic character of these areas. New industrial, multi-family, and institutional residential uses are prohibited in the GB district.

B. Lot Patterns

C. Typical Building Forms

D. Building Configuration



E. Dimensional Standards

Max. Gross Density (du/ac)	N/A		Min. Major Arterial Street Setback (ft) [3]		
Max. Nonresidential FAR (%) [2]	0.40		Within Full Service Areas (ft)	30	4
Min. Lot Area (sf ft)	40,000		Outside Full Service Areas (ft)	100	5
Max. Lot Area (acres)	N/A		Min. Side Setback (ft)	15	6
Min. Lot Width, Interior Lot (ft)	125	1	Min. Rear Setback (ft)	25	7
Min. Lot Width, Corner Lot (ft)	125	2	Min. Agricultural Setback (ft) [4]	50	
Max. Lot Depth (ft)	[1]		Min. Accessory Use Setback (ft)	10	8
Max. Lot Coverage (%)	65		Min. Driveway/Parking Setback (ft)	10	9
Min. Front Setback (ft)	20		Min. Fill Setback from all Lot Lines (ft)	10	
Min. Corner Side Setback (ft)	20	3	Min. Wetland/Riparian Buffer (ft) [4]	30	
			Max. Building Height (ft)	35	10
			Min. Spacing Between Principal Buildings (ft)	10	11

[1] Lot depth shall not exceed four times the lot width
[2] Commercial structures exceeding 5,000 square feet must obtain use permit approval if proposed outside a Full Service area
[3] Metal siding is prohibited on building facades facing or visible from major arterial streets
[4] Applied to major subdivisions platted after January 1, 2013 and site plans on lots 10 acres in area and greater

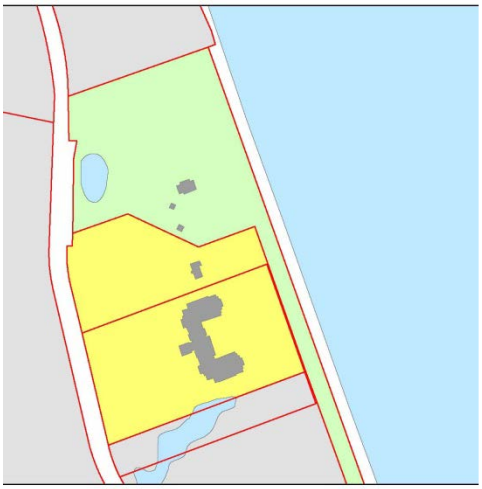
3.5.3 Limited Business (LB) District

LB
LIMITED BUSINESS

A. District Purpose

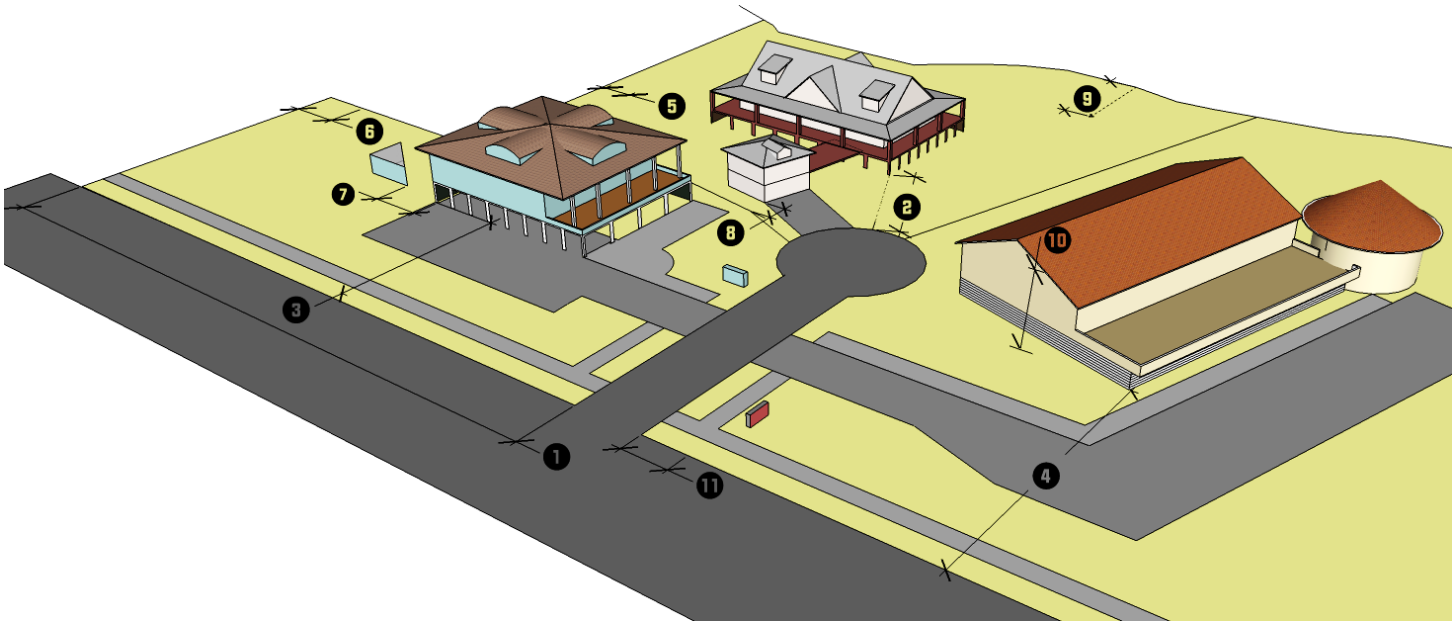
The Limited Business (LB) district is established to accommodate various residential and nonresidential uses on lots bounding major roadways outside of community and village center areas. The district is intended to accommodate low intensity commercial, office, personal service, and institutional uses that provide goods and services to county residents and visitors in ways that protect the county's scenic corridors as well as maintain the traffic carrying capacity of major roadways. The district also accommodates low density single-family detached dwellings, accessory dwelling units, and manufactured homes on individual lots (on the mainland only). New commercial development is subject to commercial design standards to ensure development quality and consistency with surrounding development patterns. New commercial development of 5,000 square feet or more proposed on lots located outside of areas designated as Full Service areas in the Land Use Plan is required to obtain use permit approval. New development on lots along major arterials (like Highway 12) outside designated Full Service areas are subject to increased minimum front setbacks and increased landscaping requirements to help protect the scenic character of these areas. New industrial, multi-family, and institutional residential uses are prohibited in the LB district.

B. Lot Patterns



C. Typical Building Forms

D. Building Configuration



E. Dimensional Standards

Max. Gross Density (du/ac)	N/A		Min. Major Arterial Street Setback (ft) [3]		
Max. Nonresidential FAR (%) [2]	0.40		Within Full Service Areas (ft)	30	3
Min. Lot Area (sf ft)	40,000		Outside Full Service Areas (ft)	100	4
Max. Lot Area (acres)	N/A		Min. Side Setback (ft)	15	6
Min. Lot Width, Interior Lot (ft)	125		Min. Rear Setback (ft)	25	5
Min. Lot Width, Corner Lot (ft)	125	1	Min. Agricultural Setback (ft) [4]	50	
Max. Lot Depth	[1]		Min. Accessory Use Setback (ft)	10	
Max. Lot Coverage (%)	65		Min. Driveway/Parking Setback (ft)	10	8
Min. Front Setback (ft)	20	2	Min. Fill Setback from all Lot Lines	10	
Min. Corner Side Setback (ft)	20	11	Min. Wetland/Riparian Buffer (ft) [4]	30	9
			Max. Building Height (ft)	35	10
			Min. Spacing Between Principal Buildings (ft)	10	7

[1] Lot depth shall not exceed four times the lot width
[2] Commercial structures exceeding 5,000 square feet must obtain use permit approval if proposed outside a full service area
[3] Metal siding is prohibited on building facades facing or visible from major arterial streets
[4]Applied to major subdivisions platted after January 1, 2013 and site plans on lots 10 acres in area and greater

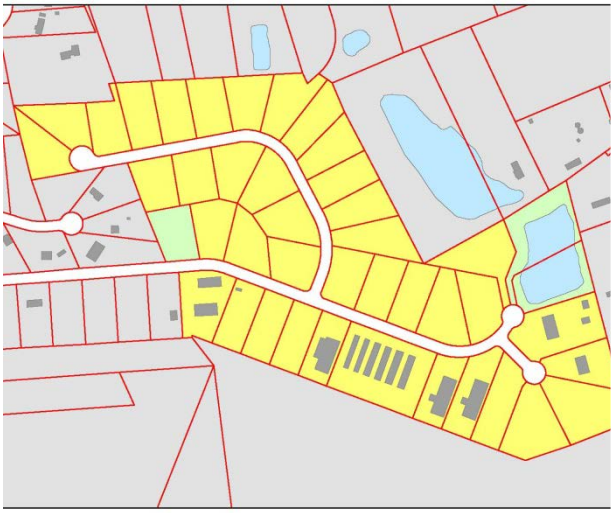
3.5.8 Light Industrial (LI) District

LI
LIGHT INDUSTRIAL

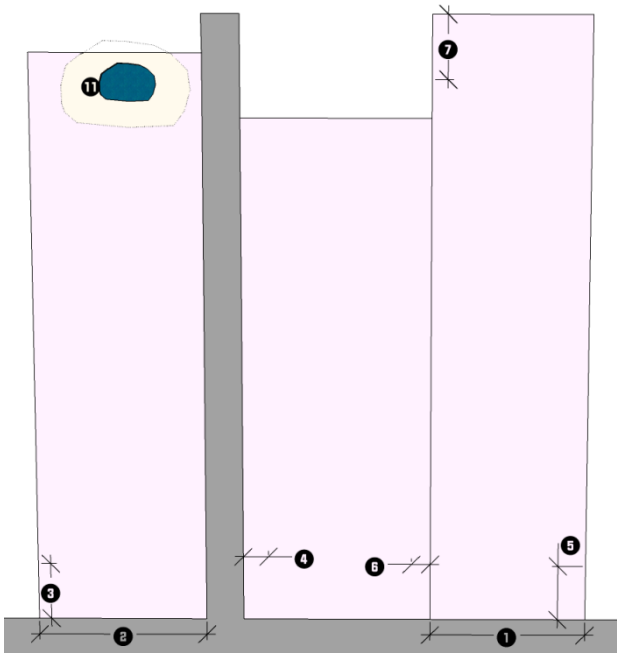
A. District Purpose

The Light Industrial (LI) district is established to accommodate low intensity light manufacturing and industrial uses engaged in assembly, fabrication, processing, distribution, storage, and research and development activities within portions of the county removed from residential and environmentally sensitive areas. The district is intended for small-scale development that has a minimum of exterior vehicular movements, limited outdoor storage of raw materials, minimal visual impacts on adjacent residential lands, and avoidance of excessive noise, odor, glare, dust, or vibration impacts on off-site areas. In addition to light industrial uses, the district allows supporting office, commercial, and warehousing functions. Residential uses are not permitted in the district, but some institutional and commercial uses are permitted, provided they will not negatively impact the range of allowed uses in the district. Development in the district is subject to development standards that seek to minimize nuisances and address the visual quality of development, as seen from adjacent residential development and public streets.

B. Lot Patterns



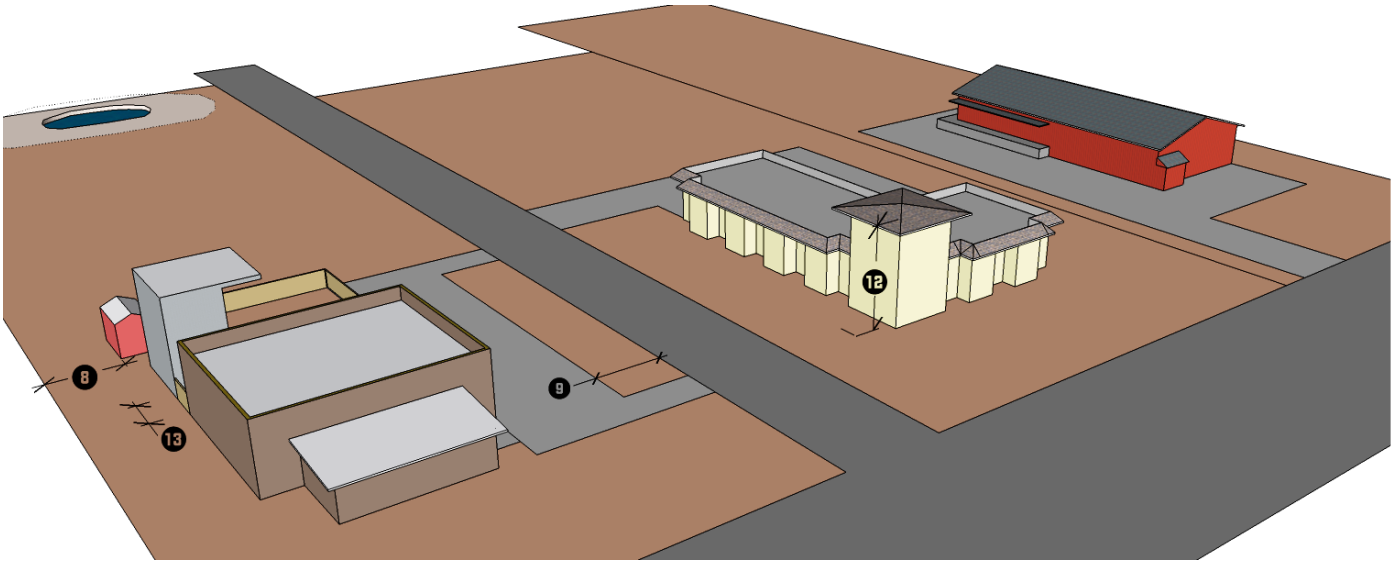
C. Lot Configuration



D. Typical Building Forms



E. Building Configuration



F. Dimensional Standards

Max. Gross Density (du/ac)	N/A		Min. Major Arterial Street Setback (ft) [4]	50	5
Max. FAR (%)	0.40		Min. Side Setback (ft)	15	6
Min. Lot Area (sf ft)	60,000		Min. Rear Setback (ft)	25	7
Max. Lot Area (acres)	N/A		Min. Agricultural Setback (ft) [5]	50	
Min. Lot Width, Interior Lot (ft)	125 [1]	1	Min. Accessory Use Setback (ft)	20	8
Min. Lot Width, Corner Lot (ft)	135	2	Min. Driveway/Parking Setback (ft)	10	9
Max. Lot Depth (ft)	[2]		Min. Fill Setback from all Lot Lines (ft)	10	
Max. Lot Coverage (%)	65		Min. Wetland/Riparian Buffer (ft) [5]	30	11
Min. Front Setback (ft)	20	3	Max. Building Height (ft) [6]	35	12
Min. Corner Side Setback (ft) [3]	20	4	Min. Spacing Between Principal Buildings (ft)	10	13

[1] All lots shall maintain a minimum street frontage of 35 feet
[2] Lot depth shall not exceed four times the lot width
[3] Driveways shall provide access from street with less traffic
[4] Metal siding is prohibited on building facades facing major arterial streets
[5] Applied to major subdivisions platted after January 1, 2013 and site plans on lots 10 acres in area and greater
[6] Some site features are exempted from height limits

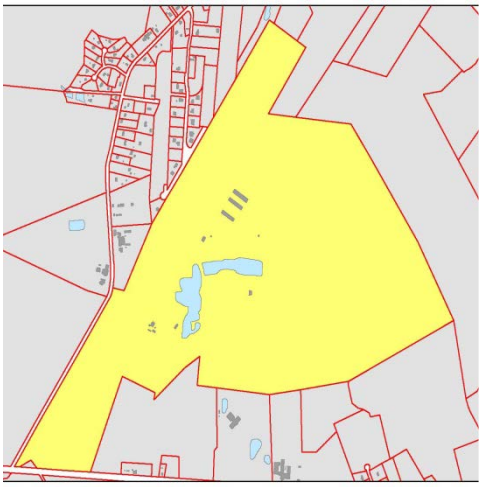
3.5.9 Heavy Industrial (HI) District

HI
HEAVY INDUSTRIAL

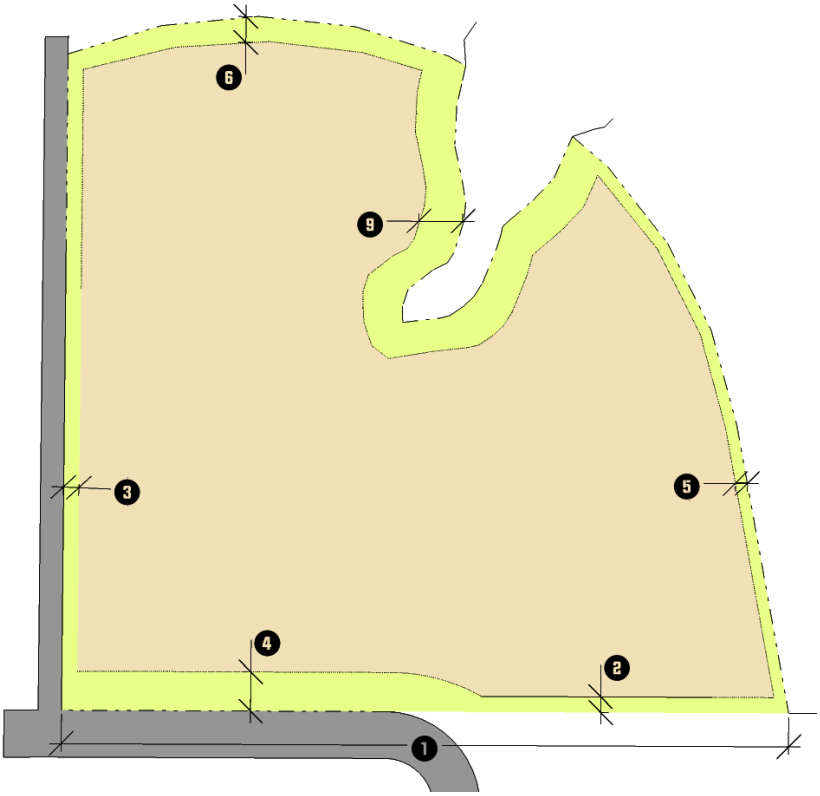
A. District Purpose

The Heavy Industrial (HI) district is established to accommodate intense or heavy manufacturing and industrial uses engaged in assembly, fabrication, processing, distribution, storage, and research and development activities within portions of the county removed from residential and environmentally sensitive areas. The district is intended for large-scale development that includes extensive exterior vehicular movements, outdoor storage of raw materials and finished products, stockpiling of wastes, and the potential for noise, odor, glare, dust, vibration, or negative visual impacts on adjacent uses. In addition to industrial uses, the district allows supporting office and warehousing functions. Residential uses are not permitted in the district, but some institutional, commercial, and office uses are permitted, provided they will not negatively impact the range of allowed uses in the district. Development in the district is subject to development standards that seek to minimize nuisances and address the visual quality of development, as seen from adjacent residential development and public streets.

B. Lot Patterns



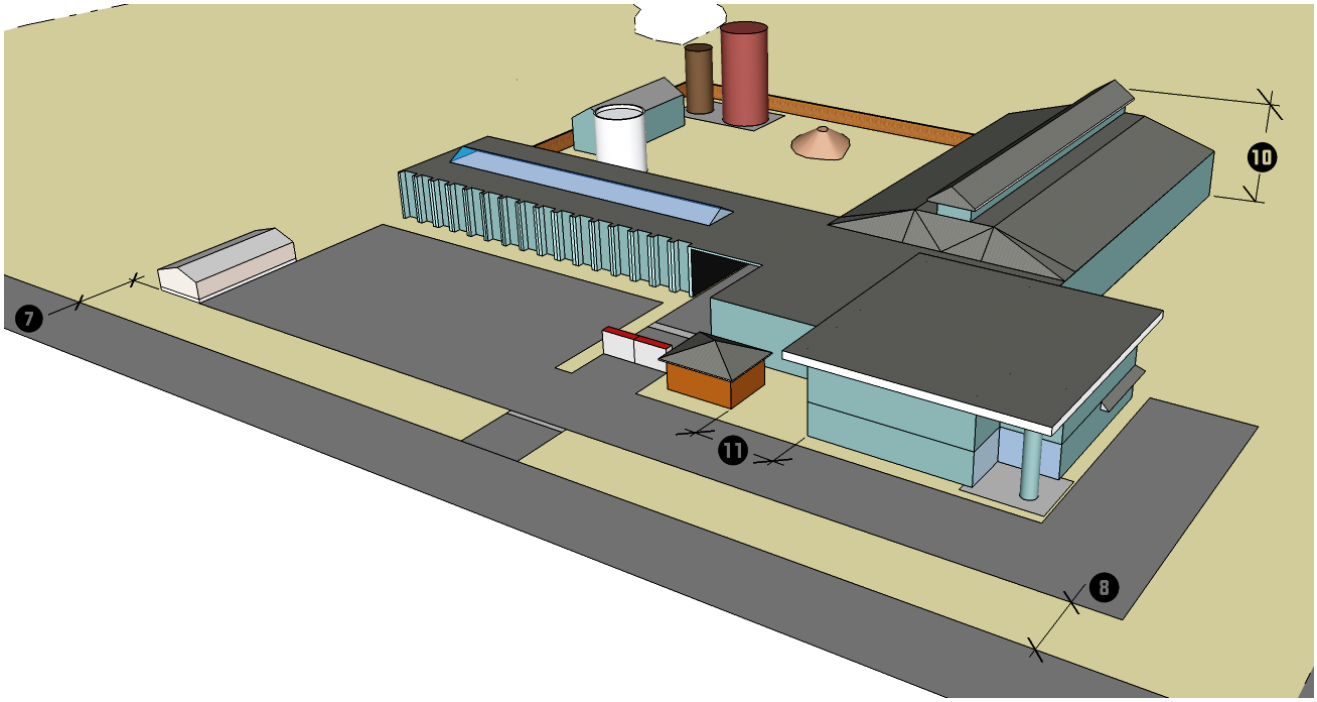
C. Lot Configuration



D. Typical Building Forms



E. Building Configuration



F. Dimensional Standards

Max Gross Density (du/ac)	N/A		Min. Major Arterial Street Setback (ft) [4][7]	50	4
Max. FAR (%)	0.40		Min. Side Setback (ft) [7]	15	5
Min. Lot Area (sf ft)	80,000		Min. Rear Setback (ft) [7]	25	6
Max. Lot Area (acres)	N/A		Min. Agricultural Setback (ft) [5]	50	
Min. Lot Width, Interior Lot (ft)	125 [1]		Min. Accessory Use Setback (ft)	20	7
Min. Lot Width, Corner Lot (ft)	135	1	Min. Driveway/Parking Setback (ft)	10	8
Max. Lot Depth (ft)	[2]		Min Fill Setback from all Lot Lines (ft)	10	
Max. Lot Coverage (%)	65		Min. Wetland/Riparian Buffer (ft) [5]	30	9
Min. Front Setback (ft) [7]	20	2	Max. Building Height (ft) [6]	65	10
Min. Corner Side Setback (ft) [3][7]	20	3	Min. Spacing Between Buildings (ft)	10	11

[1] All lots shall maintain a minimum street frontage of 35 feet
[2] Lot depth shall not exceed four times the lot width
[3] Driveways shall provide access from street with less traffic
[4] Metal siding is prohibited on building facades facing major arterial streets
[5] Applied to major subdivisions plated after January 1, 2013 and site plans on lots 10 acres in area and greater

[6] Some site features are exempted from height limits
[7] Additional 1 foot setback for every 1 foot the structure exceeds 35 feet. (Example: A 50 foot structure shall be a minimum of 35 feet from the front property line or 65 feet if located on a major arterial, 30 feet from the side property line, and 40 feet from the rear property line).

Item 4: That Chapter 4. Use Standards is amended by deleting the struck-through language and renumbering accordingly:

4.2.4 Commercial Uses

J. Visitor Accommodations

(1) Bed and Breakfast Inns

(a) Bed and breakfast inn uses shall comply with the following standards:

(b) A bed and breakfast inn shall take place within a building that was designed and used as a single-family detached dwelling.

(c) A bed and breakfast inn shall be operated primarily by persons who reside within the dwelling unit, with the assistance of not more than the equivalent of one, full-time employee.

(d) The building that houses the dwelling unit may not be expanded by more than ten percent of its original floor area, nor may rooms for rent be added onto or created within accessory buildings.

~~**(e)** There shall be at least one parking space per sleeping room.~~

(f) There shall only be one kitchen and all meals served on the premises shall be for overnight quests.

(g) Not more than one sign may be erected on the lot where such a use is located. The sign may not exceed six square feet in surface area nor be internally illuminated.

Item 5: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language and renumbering accordingly:

4.3.2 General Standards and Limitations

C. Approval of Accessory Uses and Structures

(1) Except for the following, no accessory use shall be located on a lot prior to development of an associated principal use:

(a) Piers, docks, boathouses, boat lifts, dune decks, or beach accessways;

(b) A single storage shed (for upkeep of a lot);

(c) Ponds or borrow pits;

(d) Community agriculture; or,

(e) Parking or storage of ~~up to two~~ licensed and registered vehicles and one boat trailer or utility trailer of up to 16 feet in length in the SFR zoning district, provided the use does not constitute Parking of Heavy Trucks, or Trailers as regulated in Section 4.3.3.T.

Item 6: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language and renumbering accordingly:

4.3.2 General Standards and Limitations

E. Table of Common Accessory Uses

Table 4.3.2.E, Table of Common Accessory Uses, specifies common types of accessory use and the zoning district where each type may be permitted.

TABLE 4.3.2.E: TABLE OF COMMON ACCESSORY USES

P = Permitted by-right Z= Zoning Compliance Permit U = Use Permit MP = Allowed with master plan blank cell = Prohibited

Accessory Use Type	Zoning District																Additional Req. (4.3.___)
	RC	AG	SFM	SFO	SFR	SFI	MXR	GB	LB	CC	VC	LI	HI	PD-R	PD-M	PD-O	
Keeping of specific livestock		P	P			P											3.P

P. Keeping of Specific Livestock

Accessory keeping of goats is permitted subject to the following standards:

(1) General

(a) Manure stockpiles shall not be permitted.

(b) On-site slaughter of livestock is prohibited.

(2) Minimum Site Size

(a) In AG Zoning District the use shall be located on a lot with an area of 20,000 square feet or more and one animal may be kept per every 10,000 square feet of lot area.

(b) In SFM and SFI Zoning Districts the use shall be located on a lot with an area of 40,000 square feet or more and one animal may be kept per every 20,000 square feet of lot area.

(3) Minimum Setbacks

(a) Pens, shelters, and animal quarters shall be located to the side or rear of a principal residential structure.

(b) In AG Zoning District pens, shelters, and animal quarters shall be located at least 50 feet from any adjacent dwelling, 100 feet from any well, and 10 feet from all abutting lot lines.

(c) In SFM and SFI Zoning Districts pens, shelters, and animal quarters shall be located at least 75 from any adjacent dwelling, 100 feet from any well, and 25 feet from all abutting lot lines.

(4) Fencing or Pens Required

(a) Animals shall be maintained within pens, shelters, fenced areas, or other suitable enclosures.

(5) Maintenance Required

(a) Pens, shelters, and grazing areas shall be maintained in a sanitary manner that does not result in noxious odors.

(b) Pens, shelters, and animal quarters shall be maintained in a healthy and safe manner. Healthy and safe is defined as, but not limited to, fences kept in good repair, potable water available, and protection from wind or rain.

Item 7: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language and renumbering accordingly:

4.3.2 General Standards and Limitations

E. Table of Common Accessory Uses

Table 4.3.2.E, Table of Common Accessory Uses, specifies common types of accessory use and the zoning district where each type may be permitted.

TABLE 4.3.2.E: TABLE OF COMMON ACCESSORY USES

P = Permitted by-right Z= Zoning Compliance Permit U = Use Permit MP = Allowed with master plan blank cell = Prohibited

Accessory Use Type	Zoning District																Additional Req. (4.3.___)
	RC	AG	SFM	SFO	SFR	SFI	MXR	GB	LB	CC	VC	LI	HI	PD-R	PD-M	PD-O	
Land Application of ~~Sludge~~ Biosolids or Septage		~~U~~ P				~~U~~ P							~~U~~ P				3.~~P~~Q

~~P~~Q. Land Application of ~~Sludge~~ Biosolids or Septage

A permit must be obtained by the applicant from the appropriate regional, or State agency which has authority to issue required permits prior to land

application of biosolids or septage. All conditions stated in the appropriate regional, or State permit shall be strictly adhered to.

~~Land application of commercial sludge or septage shall comply with all the following requirements:~~

~~(1) Setbacks~~

~~Table 4.3.3.P, Land Application Setbacks, establishes the setback requirements for land application of commercial sludge and septage.~~

~~TABLE 4.3.3.P: LAND APPLICATION SETBACKS~~

~~USE OR FEATURE~~	~~MIN. SETBACK FOR COMMERCIAL SLUDGE APPLICATION (FEET)~~	~~MIN. SETBACK FOR SEPTAGE APPLICATION (FEET)~~
~~Existing residential or commercial structure~~	~~1,000 [1]~~	~~500 [2]~~
~~Private or public potable water well~~	~~1,000~~	~~500~~
~~Wells, other than monitoring~~	~~N/A~~	~~200~~
~~Abandoned wells~~	~~N/A~~	~~50~~
~~Ground water lowering ditches or devices~~	~~N/A~~	~~100~~
~~All lot lines~~	~~100~~	~~100~~

~~NOTES:~~
~~[1] Vegetated buffers shall also be required for applications within 2,000 feet of an existing residential or commercial structure~~
~~[2] Setback may be increased to 1,000 feet, or lime stabilization may be required upon receipt of complaints from adjacent land owners~~

~~(2) General Requirements~~

~~**(a)** A permit must be obtained by the applicant from the appropriate county, regional, or State agency which has authority to issue required permits prior to land application of biosolids sludge or septage. All conditions stated in the appropriate county, regional, or State permit shall be strictly adhered to.~~

~~**(b)** "No Trespassing" signs shall be posted at access roads or paths crossing or leading to the disposal area and a legible sign of at least four square feet in area stating, "'Septage" or "Sludge Disposal Area"' shall be posted at the entrance to the disposal area.~~

~~**(c)** Land application of sludge shall occur only during daylight hours. Septage shall be applied so as to have no standing surface collection of liquid within 24 hours after application.~~

~~**(d)** Upon issuance of the use permit, the property owner shall record the use permit in the Currituck County Register of~~

~~Deeds and have it indexed under the record owner's name as grantor.~~

Item 8: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language:

4.3.3 Specific Standards for Certain Accessory Uses

L. Home Occupations

A home occupation shall be permitted as accessory to any principal dwelling unit, provided that the accessory use will not change the character of the residential neighborhood in terms of appearance, noise, odors, traffic, or other impacts. Home occupation includes but is not limited to: offices; electronic and offsite retail; personal services such as physical therapy by licensed individuals, beauty parlors, pet grooming, and the like. Home occupation does not include such businesses as: automotive repair and the like; dentists or physician's offices and the like; any licensed or unlicensed practitioner who performs invasive procedures (acupuncture, tattooing, body piercing, and the like); restaurants, bars, social clubs and the like; animal kennels or hospitals and the like; or any other business which is clearly inappropriate or out of character for a residential area such that its location constitutes an adverse impact on neighboring residential properties. Home occupations shall be subject to the following standards:

(1) The business or service is located within the dwelling or an associated accessory building, and does not exceed 25 percent of the heated floor area of the principal structure or 1,000 square feet, whichever is less.

(2) The principal person or persons providing the business or service resides in the dwelling on the premises.

(3) The home occupation employs no more than one person on the premises who do not reside on the premises.

(4) The home occupation causes no change in the external appearance of the existing dwelling and structures on the property.

(5) Retail sales of products produced on site shall be limited to lots with street frontage on a major arterial street.

(6) All vehicles used in connection with the home occupation are of a size, and located on the premises in such a manner, so as to not disrupt the quiet nature and visual quality of the neighborhood, and there are no more than one vehicle per home occupation. In no instance shall any vehicle larger than eight feet by 32 feet be parked, stored, or otherwise maintained at the site of a home occupation.

(7) Home occupations shall not result in regular and on-going vehicular traffic to the home where located.

(8) There is sufficient off-street parking for patrons of the home occupation, with the number of off-street parking spaces required for the home occupation to be provided and maintained in addition to the space or spaces required for the dwelling itself.

(9) Up to one advertising sign shall be allowed, provided the sign does not exceed six square feet in area per side, or more than four feet in height. No signage shall be illuminated or moving.

(10) The property contains no outdoor display or storage of goods, equipment, or services that are associated with the home occupation.

(11) The home occupation does not create traffic or parking congestion, noise, vibration, odor, glare, fumes, or electrical or communications interference which can be detected by the normal senses off the premises, including visual or audible interference with radio or television reception.

Item 9: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language:

4.3.3 Specific Standards for Certain Accessory Uses

A. Accessory Dwelling Units

Accessory dwelling units shall comply with the following standards:

(1) Where Permitted

(a) Accessory dwelling units may be located within a principal structure (e.g., a downstairs apartment) or as a freestanding building or above a detached outbuilding.

(b) The use of manufactured homes, travel trailers, campers, tractor trailers, or similar vehicles as an accessory dwelling unit is prohibited.

(2) Additional Standards

(a) Not more than one accessory dwelling unit per lot is permitted.

(b) <u>The floor area of</u> an accessory dwelling unit shall ~~have a floor area of at least 300 square feet, but shall~~ not exceed 1,000 square feet in size.

(c) At least one, but no more than two, off-street parking spaces shall be provided for an accessory dwelling unit (in addition to the required off-street parking serving the principal use).

(d) Accessory dwelling units shall not be sold apart from the principal structure.

(e) Accessory dwelling units may be used for home occupation uses but in no instance shall more than one home occupation use be conducted on a single lot.

Item 10: That Chapter 4. Use Standards is amended by adding the following underlined language and deleting the struck-through language:

4.4.6 Specific Regulations for Certain Temporary Uses and Structures

I. Special Events

(1) Applicability

(a) General

The procedures and standards of this subsection shall apply to all special events (including but not limited to sporting events, cultural events, musical events, charitable events, celebrations, festivals, fairs, carnivals, circuses, and communal camping) held on private property within the county, unless exempted in accordance with Section 4.4.6.I.1.C, Exemptions.

(b) Temporary Use Permit for Special Event Required

(i) All special events subject to this subsection shall have a temporary use permit for a special event reviewed and approved or approved with conditions by the Planning Director in accordance with Section 2.4.11, Temporary Use Permit, before conducting the special event.

(ii) The Planning Director may require review and approval from other county officials, such as the sheriff or fire marshal, as appropriate.

(c) Exemptions

The following events or activities are exempt from the standards of this subsection (i.e., may occur without a temporary use permit for a special event). Such activities are subject to all other applicable procedures and standards of this Ordinance.

(i) On Grounds of Private Residence

Special events or activities occurring within, or on the grounds of, a single-family dwelling ~~private residence~~ or on the common areas of a townhouse or multi-family residential development.

(ii) Event Sponsored by County or State

Any event sponsored in whole or in part by the county or State.

(iii) Event or Activity at Site Intended for Such Event or Activity

Any organized activities conducted at sites or facilities typically intended and used for such activities. Examples of such exempt activities include, but are not limited to, sporting events such as golf, soccer, softball, and baseball tournaments conducted on courses or fields intended and used for such activities; fairs and carnivals at fairgrounds; wedding services conducted at reception halls, or similar facilities; funeral services conducted at funeral homes or cemeteries; religious services, wedding services, and funeral services conducted at religious institutions.

Item 11: That Chapter 5. Development Standards is amended by adding the following underlined language:

5.8.3 Nonresidential Design Standards

All development subject to this section shall comply with the following standards:

C. Building Design

(1) Design Features

Front building facades and facades facing <u>or visible from</u> streets shall provide a minimum of three of the following six design features (see Figure 5.8.3.C.1, Required Building Design Features):

(a) Facades of 60 feet in width or wider shall incorporate wall offsets of at least one-foot in depth a minimum of every 40 feet. Each offset shall have a minimum width of ten feet;

(b) Façade color changes following the same dimensional standards as the offset standards in (a) above;

(c) A series of four or more pilasters having a minimum depth of eight inches, a minimum width of eight inches, and a minimum height of 80 percent of the façade's height;

(d) Roofline changes, coupled with correspondingly aligned wall offset facade material changes, including changes in the roof planes or changes in the height of a parapet wall (such as extending the top of pilasters above the top of the parapet wall);

(e) A covered front porch occupying at least 25 percent of the front façade (counted as two features); or

(f) Glazing of at least 30 percent of the width of street level frontage with visibly permeable windows or doorways.

(2) Outbuildings

Outbuildings located in front of other buildings within the same development shall include a consistent level of architectural detail on all four sides of the building as well as exterior materials and colors that are compatible with the primary building in the development.

Figure 5.8.3.C.2, Roof Form

(3) Roofs

(a) Structures with a flat roof shall include parapet walls with a decorative three-dimensional cornice (see Figure 5.8.3.C.2, Roof Form).

(b) All rooftop equipment shall be screened from view from all streets.

(c) Buildings in the Outer Banks shall use a pitched roof.

(4) Prohibited Materials

Metal siding shall not be used on front building facades and facades facing or visible from streets.

Item 12: That Chapter 6 Subdivision & Infrastructure Standards is amended by deleting the struck-through language and renumbering accordingly:

6.2.3 Utility Standards

E. Sewage Disposal Standards

~~**(3) Reserve Area Required**~~

~~**(a)** Subdivisions of 20 or more lots or dwelling units served by on-site wastewater systems shall reserve an area, suitable in terms of size, location, soil type, topography, and other relevant factors to accommodate a clustered or centralized wastewater system if one becomes necessary in the future due to septic tank failure or other health or safety reasons.~~

~~**(b)** This area is referred to as reserve utility open space, and shall be encumbered by a reserve area easement.~~

~~**(c)** Lots classified by Albemarle Regional Health Services as suitable for an on-site wastewater system are not required to be included in the reserve area calculation.~~

~~**(d)** The developer shall provide plans and specifications, prepared by a qualified professional, including a soil analysis and an analysis of loading rate, depending on the disposal method for an adequate reserve utility open space to the satisfaction of the County Engineer and Board of Commissioners.~~

Item 13: That Chapter 6 Subdivision & Infrastructure Standards is amended by adding the following underlined language and deleting the struck-through language:

6.3.1 Performance Guarantees

C. Form of Performance Guarantee

(1) Where required, the owner or developer shall furnish a performance guarantee in any of the following acceptable forms:

(a) Cash deposit with the county;

(b) ~~Certified~~ Cashier's check from a North Carolina lender ~~based upon a cash deposit,~~ in a form acceptable to the County Attorney; or

(c) Irrevocable letter of credit, valid for at least three years, from a North Carolina banking institution in a form acceptable to the County Attorney.

Item 14: Statement of Consistency and Reasonableness:

The requested zoning text amendment is consistent with the goals, objectives, and policies of the 2006 Land Use Plan including:

1. *Land Use and Development Goal* #1 To protect and conserve the area's natural beauty and coastal resources as the County's greatest asset for economic development and a high quality of life.

2. POLICY HN8: To protect the County's tax base and to ensure the long-term viability of the County's neighborhoods and housing stock, the County will continue to enforce appropriate CONSTRUCTION AND SITE DEVELOPMENT STANDARDS for residential developments. Such standards may include, for example, that all homes have a permanent masonry foundation (except where flood levels require elevation) and a pitched roof and overhang, and that local roads must be built to meet NCDOT acceptance standards. (See Transportation Policies for details concerning requirements for paved roads.)
3. POLICY CD4: HIGHWAY ORIENTED COMMERCIAL USES should be clustered along segments of highways and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points, and to prevent unsightly, dysfunctional STRIP DEVELOPMENT. (See esp., Policy CD9 below concerning connected parking areas.)
4. POLICY ID1: To diversify the local economy and broaden the local tax base, the County shall encourage a public service and regulatory environment conducive to COMPATIBLE INDUSTRIAL DEVELOPMENT. "Compatible" shall be defined as, among other things, industries that do not adversely impact the environmental quality of the area, or overburden the local infrastructure.
5. POLICY CA1: The important economic, tourism, and community image benefits of attractive, functional MAJOR HIGHWAY CORRIDORS through Currituck County shall be recognized. Such highway corridors, beginning with US 158 and NC 168, shall receive

priority attention for improved appearance and development standards, including driveway access, landscaping, buffering, signage, lighting and tree preservation.

6. POLICY WS6: Currituck County endorses the proper use and maintenance of APPROVED SEPTIC SYSTEMS in suitable soils as an environmentally acceptable means of treating and dispersing waste from low-density development.

The request is reasonable and in the public interest because:

1. It clarifies portions of the UDO for more consistent interpretation and enforcement.
2. It amends the UDO for consistency with recent court decisions and current financial terminology.
3. It allows accessory keeping of specific livestock in agricultural and residential zoning districts subject to specific standards intended to address compatibility issues.
4. It removes utility open space requirements for new subdivisions that have been deemed unnecessary.

Item 15: The provisions of this Ordinance are severable and if any of its provisions or any sentence, clause, or paragraph or the application thereof to any person or circumstance shall be held unconstitutional or violative of the Laws of the State of North Carolina by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions which can be given effect without the invalid provision or application.

Item 16: This ordinance amendment shall be in effect from and after the _____ day of _____ _____, 2020.

_____
Board of Commissioners' Chairman
Attest:

_____
Leeann Walton
Clerk to the Board

DATE ADOPTED: _____
MOTION TO ADOPT BY COMMISSIONER: _____
SECONDED BY COMMISSIONER: _____
VOTE: _____AYES_____NAYS

PLANNING BOARD DATE: _____
PLANNING BOARD RECOMMENDATION:_____
VOTE: _____AYES _____NAYS
ADVERTISEMENT DATE OF PUBLIC HEARING: _____
BOARD OF COMMISSIONERS PUBLIC HEARING: _____
BOARD OF COMMISSIONERS ACTION: _____
POSTED IN UNIFIED DEVELOPMENT ORDINANCE: _____
AMENDMENT NUMBER: _____

Text Amendment
Application

OFFICIAL USE ONLY:
Case Number: PB 20-03
Date Filed: 2/27/20
Gate Keeper: S-Ellis
Amount Paid:

Contact Information

APPLICANT:

Name: County of Currituck

Address: 153 Courthouse Road Suite 204
Currituck, NC 27929

Telephone: 252-232-2075

E-Mail Address: ben.stikeleather@currituckcountync.gov

Request

I, the undersigned, do hereby make application to change the Currituck County UDO as herein requested.

Amend Chapter(s) see attached Section(s) see attached as follows:

*Request may be attached on separate paper if needed.

Petitioner

3-2-2020
Date

Currituck County
Proposed Text Amendments

1. Amend Chapter 2, Section 2.2.3. Planning Board to change quorum requirement from 5 to 4 members to bring consistency with reduction of planning board members approved by the BOC.
2. Amend Chapter 2, Section 2.4.7 Site Plan to codify Administrative Manual requirement that a licensed surveyor, engineer, or architect must prepare a site plan for lots 20,000 square feet or smaller. Add As-Built Survey requirement for lots 40,000 square feet or smaller.
3. Amend Chapter 3, Section 3.5.2 General Business District, Section 3.5.3 Limited Business District, Section 3.5.8 Light Industrial (LI) District and Section 3.5.9 Heavy Industrial (HI) to avoid redundancy of metal siding prohibition in Business Districts and to clarify the prohibition of use of metal siding on facades facing major arterial streets in Industrial Zoning Districts.
4. Amend Chapter 4, Section 4.2.4 Commercial Uses regarding Visitor Accommodations to remove parking language for Bed and Breakfast Inns to avoid redundancy in the ordinance. Parking is regulated in Chapter 5.
5. Amend Chapter 4, Section 4.3.2 General Standards and Limitations for Accessory Uses to correct the language regarding allowable accessory uses prior to principal uses in the SFR zoning district to be consistent with the motion approved by BOC at the December 4, 2017 meeting.
6. Amend Chapter 4, Section 4.3.3 Specific Standards for Certain Accessory Uses to clarify that uses listed in the definition of Home Occupation are not permitted as Home Occupations. Language from the definition in Chapter 10 will be added to the specific standards for consistency in communication of requirements.
7. Amend Chapter 4, Section 4.3.3 Specific Standards for Certain Accessory Uses to remove the minimum square footage designation of Accessory Dwelling Units to be consistent with State Law Session 2019-174 that does not allow a minimum square footage designation.
8. Amend Chapter 4, Section 4.3. Accessory Use Standards to allow keeping of certain livestock in SFM and SFI zoning districts subject to specific standards.
9. Amend Chapter 4, Section 4.3.2 to change Sludge to Biosolids and to allow Land application of Biosolids and Septage as permitted by right subject to a permit from the appropriate agency. This revision will bring consistency with recent court decisions.
10. Amend Chapter 4, Section 4.4.6 Specific Regulations for Certain Temporary Uses and Structures to change reference to "Private Residence" to "Single Family Dwelling".
11. Amend Chapter 5, Section 5.8.3 Nonresidential Design Standards to clarify that Design Features are required on front building facades and facades facing or visible from streets and to clarify that use of metal siding is prohibited on front building facades and facades facing or visible from streets.
12. Amend Chapter 6, Section 6.2.3 Utility Standards to remove the Reserve Utility Open Space requirement.
13. Amend Chapter 6, Section 6.3.1 Form of Performance Guarantees to remove reference to certified checks and correct to cashier's check to be consistent with current financial terminology.

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2817

Agenda Item Title: PB 20-02 Hurley Conditional Rezoning: Request to rezone 0.46 acres at 1202 Ocean Trail from SFO to C-GB for proposed retail and office use.

Submitted By: Jennie Turner – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jennie Turner

Board Action: Action

Brief Description of Agenda Item:

Request to rezone 0.46 acres at 1202 Ocean Trail from SFO to C-GB for proposed retail and office use.

Planning Board Vote: Approved 5-0

Planning Board Recommendation: Approval with Conditions

Staff Recommendation: Approval with Conditions

TRC Recommendation: Approval with Conditions

STAFF REPORT
PB 20-02 HURLEY
CONDITIONAL ZONING
BOARD OF COMMISSIONERS
JUNE 22, 2020

APPLICATION SUMMARY	
Property Owner: Brock North Carolina LLC 7700 Ocean Front Avenue Virginia Beach, VA 23451	**Applicant:** Thomas & Lisa Hurley 1650 Sandfiddler Road Corolla, NC 27927
Case Number: 20-02	**Application Type:** Conditional Rezoning
Parcel Identification Number: 114C-000-0112-0001 **Property Address:** 1202 Ocean Trail	**Existing Use:** Undeveloped/Vacant Lot in Ocean Hill 1 Subdivision
Land Use Plan Classification: Full Service	**Parcel Size (Acres):** 0.46 ac
Zoning History: Property has been zoned residential since 1970	
Current Zoning: SFO	**Proposed Zoning:** Conditional GB

REQUEST

NARRATIVE

The applicant is requesting a conditional rezoning from SFO (Single Family Residential-Outer Banks) to C-GB (Conditional-General Business). The subject property is located on Ocean Trail in Corolla, it is approximately 0.46 acres, undeveloped, and was platted as part of Ocean Hill Section 1 Subdivision.

On December 6, 2004, the BOC heard a request for a straight commercial rezoning of the subject property (Lot 112) and the property to the south (Lot 113). At the time, staff was supportive of the rezoning request but had reservations about a conflict between the proposed rezoning and the Ocean Hill 1 Property Owners Association (OH1POA) Restrictive Covenants. The OH1POA Restrictive Covenants restricted all lots for residential purposes only. In 2004, the BOC continued the request and directed the applicants and the opposing parties to work on a mutual solution. The request was continued and was not reheard by the BOC.

On April 17, 2012, a Declaration of Withdrawal was recorded for lots 112 (the subject property) and 113 to remove them from Ocean Hill 1 Subdivision. A Declaration of Restrictive Covenants was also recorded to restrict uses of the withdrawn lots. The uses proposed for this Conditional GB zoning designation are consistent with uses listed in the Declaration of Restrictive Covenants.

The proposed use is *Retail Sales* and *Professional Offices.* In addition, the applicant is requesting approval for the following uses of the property (these uses are consistent with the Declaration of Restrictive Covenants recorded on April 17, 2012):

- Animal grooming
- Animal Shelter
- Vet Clinic
- Fitness Center
- Indoor Recreation
- Convenience Store
- Adult Day Care Center
- Child Care Center
- Museum
- Library
- Retail Sales Establishments (Art Gallery, Art Center, Retail Sales of goods & services)
- Nursery, production
- Business and sales
- Professional services
- Restaurant (No-Drive Thru) with indoor or outdoor seating
- Specialty eating establishment
- Vocational or trade school
- Dwelling, single-family detached
- Family Care Home

COMMUNITY MEETING

A community meeting was held on February 24, 2020. Subjects of discussion included stormwater, drainage and access. A meeting summary provided by the applicant is included in the agenda packet.

CONDITIONS OF APPROVAL

Prior to land disturbance or construction on the property, the applicant will be required to submit an application for site plan approval.

Staff suggests that the Board carefully consider each proposed use and potential impacts to determine which uses should be included in the conditional zoning.

The recorded plat states that the subject property shall not have an entrance on Ocean Trail. There are existing wetlands within the Coral Lane stub; the Board may consider a condition regarding required access.

The applicant proposed hours of operation consistent with normal retail (surf shop) and professional office hours. The Board may consider setting hours of operation if necessary for compatibility or to mitigate potential off-site impacts.

Staff requested that the applicant consider design elements similar to Corolla Village architecture. The Board may consider specific architectural standards in addition to the Non-Residential and Community Compatibility Standards of the UDO. For example, the Board may request a covered front porch entry along the facade that faces NC12.

SURROUNDING PARCELS		
	Land Use	**Zoning**
North	Commercial (Landscaping Contractor, Horse Tours, Restaurant)	SFO w/ PUD Overlay and Commercial Allocation
South	Residential	SFO
East	Residential	SFO
West	Utilities	SFO w/ PUD Overlay

LAND USE PLAN	
The 2006 Land Use Plan classifies this site as Full service within the Corolla subarea. The proposed plan is consistent with the policies of the plan, including:	
Policy CD4	HIGHWAY ORIENTED COMMERCIAL USES should be clustered along segments of highways and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points, and to prevent unsightly, dysfunctional STRIP DEVELOPMENT.
Policy CD5	Incompatible or poorly planned COMMERCIAL ENCROACHMENT within or immediately adjoining existing residential areas shall be prohibited. Such incompatible encroachments often include, but are not limited to, large-scale commercial uses or automobile-oriented commercial uses such as service stations, car lots, car washes, drive through restaurants, and the like.
Policy CD6	Appropriate OFFICE AND INSTITUTIONAL DEVELOPMENT, such as professional offices, small churches, individual medical offices, and the like, shall be encouraged to locate as a transitional land use between residential areas and commercial or industrial activities of higher intensity.
Policy CD7	Attractive, environmentally beneficial LANDSCAPING shall be provided by new commercial or office developments, and in the rehabilitation and upgrading of existing developments. Appropriate BUFFERING or other effective DESIGN FEATURES may be employed to allow less intensive forms of commercial and office development to adjoin existing or planned residential uses.
Policy CA1	The important economic, tourism, and community image benefits of attractive, functional MAJOR HIGHWAY CORRIDORS through Currituck County shall be recognized. Such highway corridors, beginning with US 158 and NC 168, shall receive priority attention for improved appearance and development standards, including driveway access, landscaping, buffering, signage, lighting and tree preservation.
Policy ED1	NEW AND EXPANDING INDUSTRIES AND BUSINESSES should be especially encouraged that: 1) diversify the local economy, 2) train and utilize a more highly skilled labor force, and (3) are compatible with the environmental quality and natural amenity-based economy of Currituck County.
Policy OB2	So as to minimize COMMERCIAL STRIP DEVELOPMENT and maximize the traffic moving capability of NC 12, Currituck County shall encourage commercial development to cluster at appropriate locations rather than dispersing along NC 12.

RECOMMENDATION

Technical Review Committee

The Technical Review Committee recommends approval of the conditional rezoning subject to the following conditions:

1. Prior to land disturbance or construction, the applicant shall submit for site plan approval.

2. Access shall be provided from Coral Lane.
3. Non-Residential Design Standards and Community Compatibility Standards of the UDO apply to future development.

CONSISTENCY AND REASONABLENESS STATEMENT

A conditional zoning is a legislative decision of the Board of Commissioners. In determining whether to approve or deny a conditional rezoning the Board of Commissioners shall adopt a written statement of consistency and reasonableness.

This conditional zoning request is consistent with the 2006 Land Use Plan because it is consistent with the above referenced policies of the plan including Commercial Development, Economic Development, Community Appearance and Special Policies applicable to the Outer Banks. The request will allow commercial development adjacent to existing commercial development near the Corolla Village commercial area. The proposed uses are compatible with surrounding residential development and landscaping and buffering will be provided. The request recognizes the important economic, tourism and community image benefits of NC12, the major highway corridor in Corolla.

It is reasonable and in the public interest because it allows commercial development to occur in a centralized area and future development will comply with the Unified Development Ordinance to achieve an improved appearance.

CONDITIONS OF APPROVAL

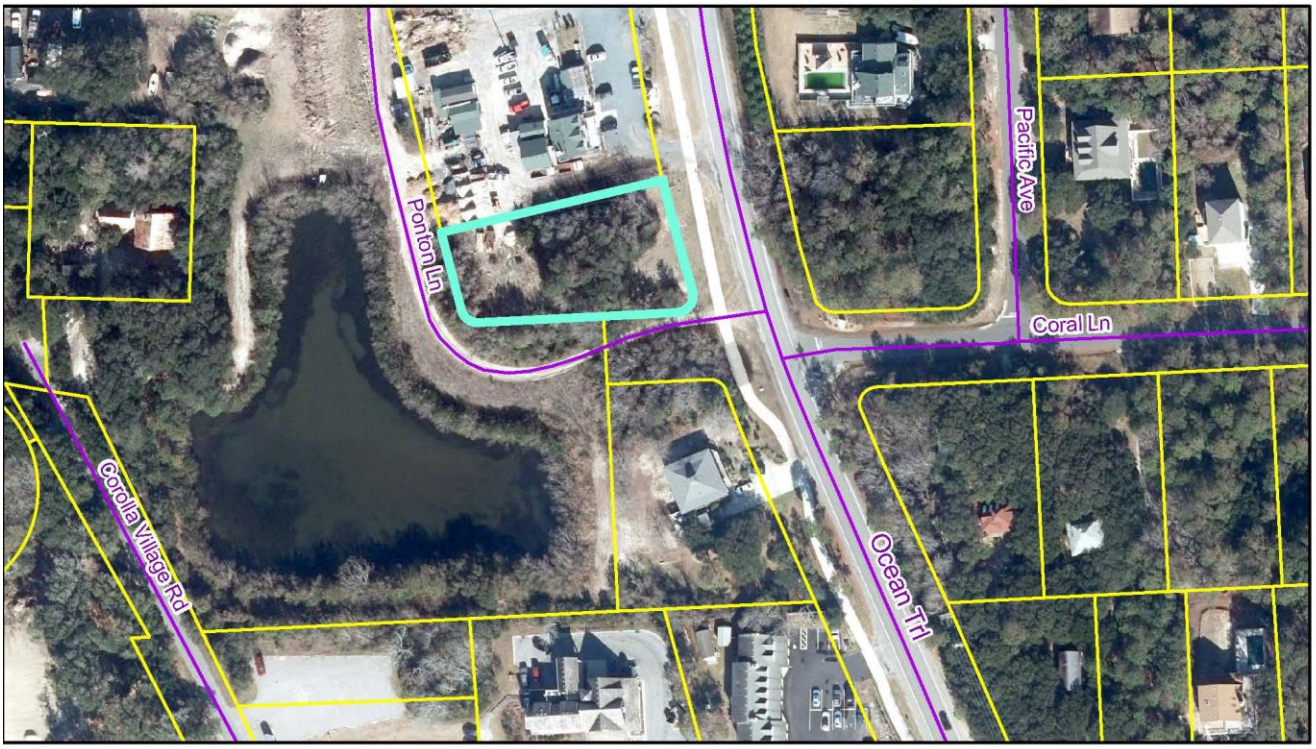
Only conditions mutually agreed to by the owner(s) may be approved as part of a conditional zoning district. Conditions shall be limited to those that address conformance of development and use of the site with county regulations and adopted plans and that address the impacts reasonably expected to be generated by the development or use. No condition shall be less restrictive than the standards of the parallel general use zoning district.

Agreed upon conditions of approval:

1. Allowable uses of the property shall be limited to the following Use Types:
    - Animal grooming
    - Animal Shelter
    - Vet Clinic
    - Fitness Center
    - Indoor Recreation
    - Convenience Store
    - Adult Day Care Center
    - Child Care Center
    - Museum
    - Library
    - Retail Sales Establishments (Art Gallery, Art Center, Retail Sales of goods & services)
    - Nursery, production
    - Business and sales
    - Professional services
    - Restaurant (No-Drive Thru) with indoor or outdoor seating
    - Specialty eating establishment
    - Vocational or trade school
    - Dwelling, single-family detached
    - Family Care Home
2. Prior to land disturbance or construction the applicant shall submit for site plan approval.

3. Access shall be provided from Coral Lane.
4. Non-Residential Design Standards and Community Compatibility Standards of the UDO apply to future development.
5. Hours of operation shall be consistent with normal retail (surf shop) and professional office hours.

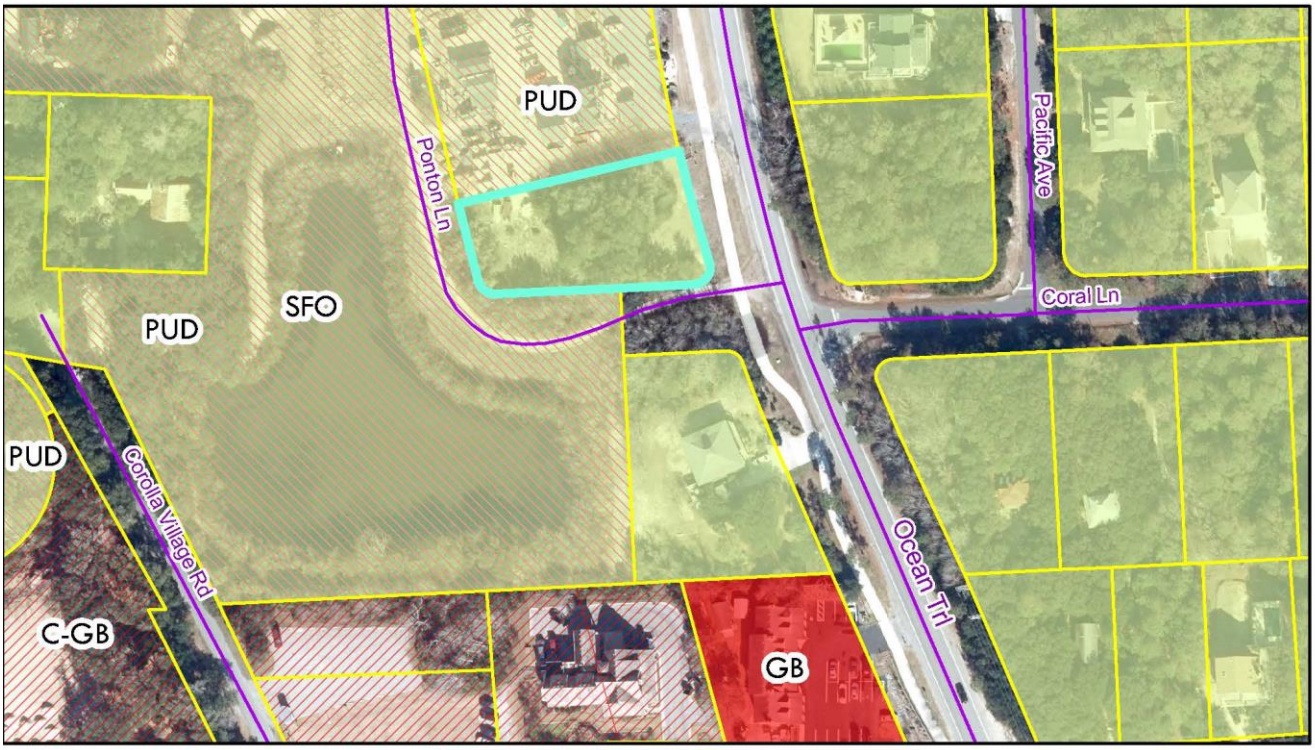
THE APPLICATION AND RELATED MATERIALS ARE AVAILABLE ON THE COUNTY'S WEBSITE
Board of Commissioners: www.co.currituck.nc.us/board-of-commissioners-minutes-current.cfm



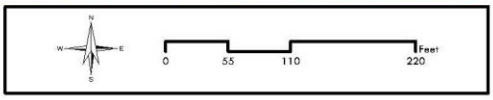
PB20-02 Hurley Conditional Zoning
1202 Ocean Trail
Aerial

0 55 110 220 Feet

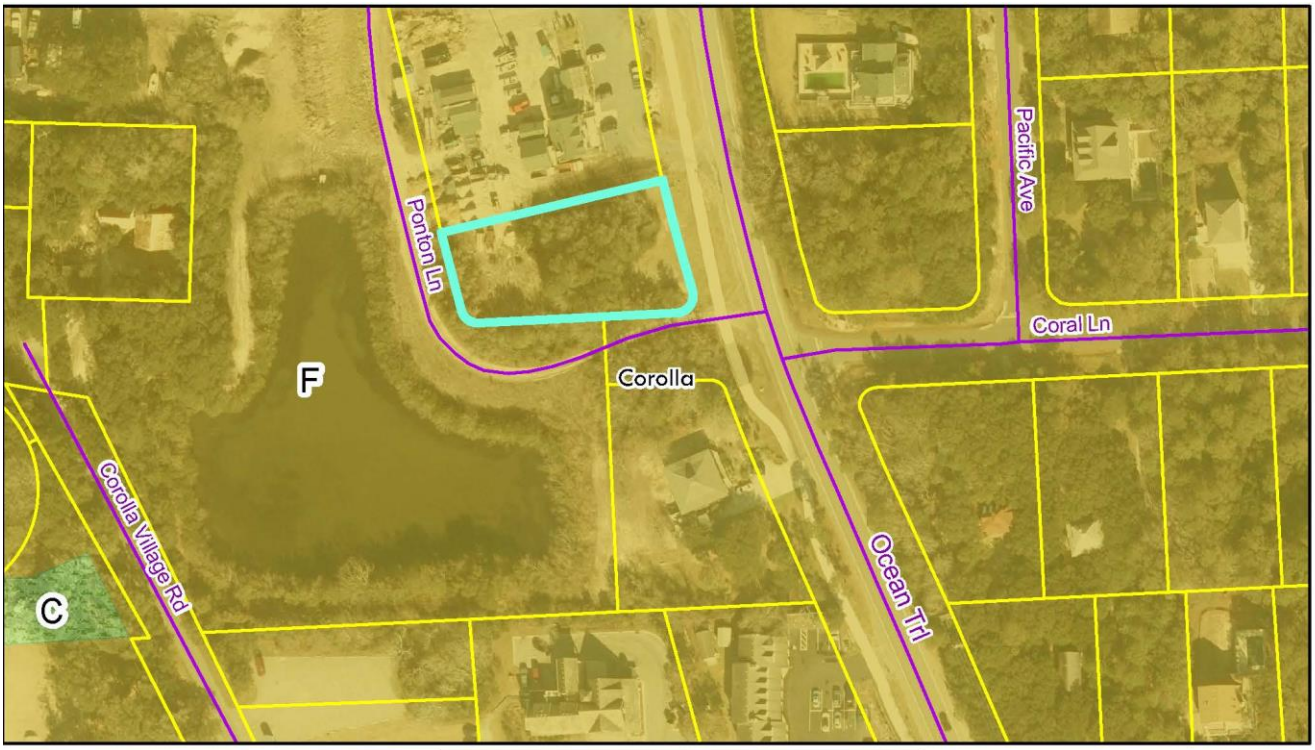
Currituck County
Planning and Community
Development



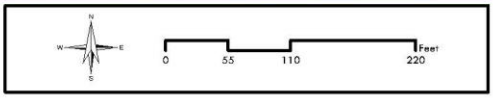
PB20-02 Hurley Conditional Zoning
1202 Ocean Trail
Official Zoning Map



Currituck County
Planning and Community
Development



PB20-02 Hurley Conditional Zoning
1202 Ocean Trail
LUP Classification



Currituck County
Planning and Community
Development

Conditional Rezoning
Application

OFFICIAL USE ONLY:
Case Number:
Date Filed:
Gate Keeper:
Amount Paid:

Contact Information

APPLICANT:
Name: Tom and Lisa Hurley
Address: 1650 Sandfiddler Road
Corolla, NC 27927
Telephone:
E-Mail Address: lisa@corollasurfshop.com

PROPERTY OWNER:
Name: Brock North Carolina, LLC
Address: 7700 Ocean Front Ave
Virginia Beach, VA 23451
Telephone:
E-Mail Address:

LEGAL RELATIONSHIP OF APPLICANT TO PROPERTY OWNER: Purchaser

Property Information

Physical Street Address: 1202 Ocean Trail Corolla, NC
Location: At the intersection of Coral Ln. and Ocean Trail
Parcel Identification Number(s): 114C00001120001
Total Parcel(s) Acreage: 0.46 (per GIS)
Existing Land Use of Property: Vacant

Request

Current Zoning of Property: SFO
Proposed Zoning District: C-GB

Community Meeting

Date Meeting Held: 2/24/2020 at 4pm
Meeting Location: Corolla Library

Attachment: 2 Application (PB 20-02 Hurley Conditional Rezoning)

Conditional Rezoning Request

To Chairman, Currituck County Board of Commissioners:

The undersigned respectfully requests that, pursuant to the Unified Development Ordinance, a conditional zoning district be approved for the following use(s) and subject to the following condition(s):

Proposed Use(s):

Retail

Proposed Zoning Condition(s):

The property use will be limited to those allowed within the Ocean Hill Section 1 Subdivision Covenants: Animal services (no outdoor kenels); athletic and exercise facilities (indoor); convenience store; daycare services; dry cleaning and laundromat; funeral home; museums; libraries; art galleries; art centers' greenhouses or similar nurseries; professional offices; residential care institutions; restaurant (without drive thru); retail sales of goods and services; schools (elementary and secondary) and associated uses; private and instructional schools (trade or vocational); residential use with one single family detached unit per lot.

An application has been duly filed requesting that the property involved with this application be rezoned from: SFO to: C-GB

It is understood and acknowledged that if the property is rezoned as requested, the property involved in this request will be perpetually bound to the conceptual development plan, use(s) authorized, and subject to such condition(s) as imposed, unless subsequently changed or amended as provided for in the Currituck County Unified Development Ordinance. It is further understood and acknowledged that final plans for any development be made pursuant to any such conditional zoning district so authorized and shall be submitted to the Technical Review Committee.

DocuSigned by:
Joan Perry Brock
A59E774F2101428...
Property Owner (s)

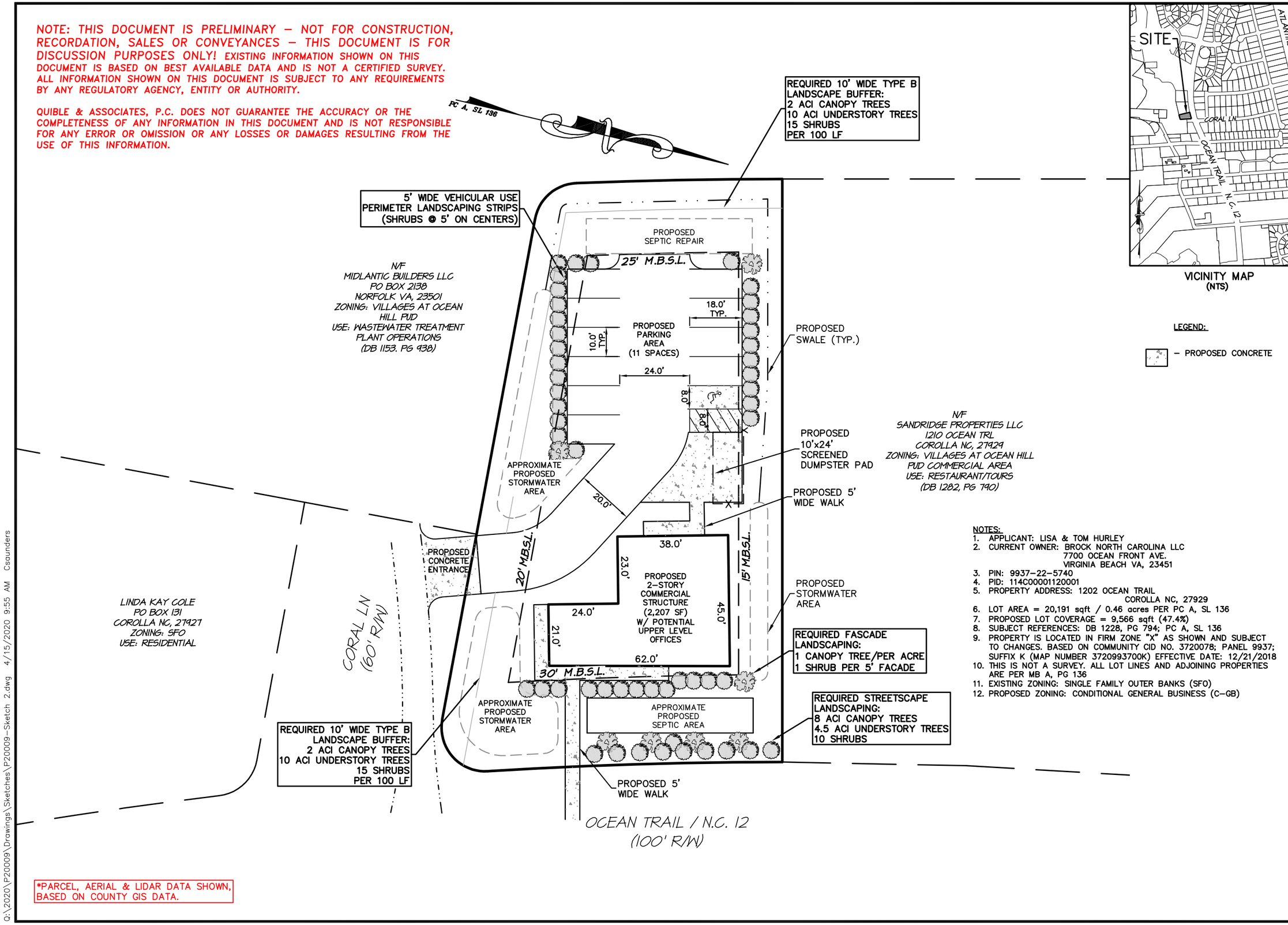
Brock North Carolina, LLC Manager

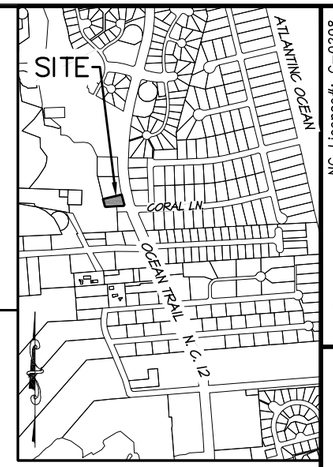
3/2/2020
Date

NOTE: Form must be signed by the owner(s) of record. If there are multiple property owners a signature is required for each owner of record.

NOTE: THIS DOCUMENT IS PRELIMINARY – NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES – THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

QUIBLE & ASSOCIATES, P.C. DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF ANY INFORMATION IN THIS DOCUMENT AND IS NOT RESPONSIBLE FOR ANY ERROR OR OMISSION OR ANY LOSSES OR DAMAGES RESULTING FROM THE USE OF THIS INFORMATION.





VICINITY MAP
(NTS)

LEGEND:

– PROPOSED CONCRETE

NOTES:
1. APPLICANT: LISA & TOM HURLEY
2. CURRENT OWNER: BROCK NORTH CAROLINA LLC
   7700 OCEAN FRONT AVE.
   VIRGINIA BEACH VA, 23451
3. PIN: 9937-22-5740
4. PID: 114C00001120001
5. PROPERTY ADDRESS: 1202 OCEAN TRAIL
   COROLLA NC, 27929
6. LOT AREA = 20,191 sqft / 0.46 acres PER PC A, SL 136
7. PROPOSED LOT COVERAGE = 9,566 sqft (47.4%)
8. SUBJECT REFERENCES: DB 1228, PG 794; PC A, SL 136
9. PROPERTY IS LOCATED IN FIRM ZONE "X" AS SHOWN AND SUBJECT TO CHANGES. BASED ON COMMUNITY CID NO. 3720078; PANEL 9937; SUFFIX K (MAP NUMBER 3720993700K) EFFECTIVE DATE: 12/21/2018
10. THIS IS NOT A SURVEY. ALL LOT LINES AND ADJOINING PROPERTIES ARE PER MB A, PG 136
11. EXISTING ZONING: SINGLE FAMILY OUTER BANKS (SFO)
12. PROPOSED ZONING: CONDITIONAL GENERAL BUSINESS (C-GB)

*PARCEL, AERIAL & LIDAR DATA SHOWN, BASED ON COUNTY GIS DATA.

Quible & Associates, P.C.
SINCE 1959
NC License#: C-0208
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
**ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
8466 Caratoke Hwy, Powells Point, NC 27966
Phone: (252) 491-8147 Fax: (252) 491-8146
90 Church St., Ste. B, Black Mountain, NC 28711

THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.

CONCEPTUAL DEVELOPMENT PLAN

LISA & TOM HURLEY
LOT 112 SECTION 1 OCEAN HILL

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY
NORTH CAROLINA

0 30 60

PROJECT	DRAWN BY	CHECKED BY	DATE
P20009	RJ/CMS	MWS	/15/

Q:\2020\P20009\Drawings\Sketches\P20009-Sketch 2.dwg 4/15/2020 9:55 AM Csaunders

(PB 20-02 Hurley Conditional Rezoning)

Attachment: 3 Conceptual Development Plan

Attachment: 4 Photo of Desired Building Concept (PB 20-02 Hurley Conditional Rezoning)

Currituck County
Department of Planning and Community Development
153 Courthouse Road, Suite 110
Currituck, North Carolina 27929
252-232-3055
FAX 252-232-3026

MEMORANDUM

To: Tom & Lisa Hurley
Warren Eadus, Quible & Associates, P.C.
Cathleen Saunders, Quible & Associates, P.C.

From: Jennie Turner, Planner II

Date: March 12, 2020

Re: PB 20-02 Hurley Conditional Rezoning
1202 Ocean Trail, Corolla, NC 27927

The following comments were received at the March 10, 2020 TRC meeting. TRC comments are valid for six months from the date of the TRC meeting.

In order to be scheduled for the April 14, 2020 Planning Board meeting, please address all comments and resubmit a corrected plan by 3:00 p.m. on March 23, 2020.

Planning, Jennie Turner 252-232-6031
Reviewed

1. The proposed use and the proposed zoning conditions are all uses. Please clarify which uses are proposed for this conditional rezoning. Staff suggests narrowing down the list.
2. Provide a detailed written description of the proposed use(s), types of improvements, buildings, activities, and hours of operation.
3. Please provide any zoning conditions proposed. Staff's suggested zoning conditions:
    a. Community Compatibility Standards apply to future development.
    b. Access shall be provided from Ponton Lane (Coral Lane stub).
4. Conceptual Development Plan:
    a. Show all required landscaping including Type B perimeter buffer along the rear and south property line.
    b. Provide adjacent use types.
    c. Identify easements.
5. On zoning map amendment exhibit:
    a. Revise zoning reference on Villages at Ocean Hill Properties to VOH PUD or Villages at Ocean Hill PUD instead of Ocean Hill PUD.
6. Architectural Elevations:
    a. Provide an architectural elevation for the building facade that faces NC12.
    b. Flat roofs are not permitted on the Outer Banks.
    c. What style of roof is proposed?
    d. What style of siding is proposed?
    e. What roof material is proposed?
    f. Describe design features that will be incorporated into the building design.

g. Consider using building design elements similar to existing Corolla Village architecture.

7. Provide best available information on potential phasing of project (ex: less than 2 years, 3-5 years, 5-10 years, etc.).

Currituck County Building Inspections and Fire, Bill Newns 252-232-6023
No comments received

Albemarle Regional Health Services, Joe Hobbs 252-232-6603
REVIEWED
OWNER WILL NEED TO SUBMIT APPLICATION TO HEALTH DEPARTMENT FOR SITE EVALUATION TO DETERMINE SOIL SUITABILITY FOR SEPTIC SYSTEM. CONSULT WITH JOE HOBBS R.S. 252-232-6603
EXPLORE POSSIBILTY OF SEWER CONNECTION IN LIEU OF ON-SITE WASTEWATER.

Currituck County Soil and Stormwater, Dylan Lloyd, 757-515-0201
Approved
1) Existing pipe identified running under west and southern portions of property toward water impoundment area to the south under Coral Drive. Warren Eadus from Quible alerted staff to the existence of a historic drainage tile that serves property to the north; have requested pictures and rough delineation of feature; at the moment the recommendation is to remove and fill excavated areas.

Currituck County Public Utilities, Will Rumsey & Dave Spence 252-232-6065
Reviewed
No comment

Currituck County GIS, Harry Lee 252-232-2034
Reviewed
When developed, the address of the property will change from Ocean Trl to Ponton Ln (driveway access).
The lane should be Ponton Ln not Coral Ln as shown on the site plan.

NC DEQ- Division of Coastal Management, Charlan Owens 252-264-3901
No Comment

Currituck County Parks & Recreation, Jason Weeks, 252-232-3007
No Comment

The following items are necessary for resubmittal:

- 3 - full size copies of revised plans
- 1 – 8.5 x 11” reduced copy
- 1- PDF digital copy of all revised or new documents and plans.

Quible

Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

P.O. Drawer 870
Kitty Hawk, NC 27949
Phone: 252-491-8147
Fax: 252-491-8146
web: quible.com

March 20, 2020

Ms. Jennie Turner
Currituck County Planning and Community Development
P.O. Box 73
Currituck, NC 27927

Re: **Conditional Rezoning Application for 1202 Ocean Trail**
Corolla, Currituck County, North Carolina

Dear Ms. Turner,

On behalf of Tom & Lisa Hurley, Quible & Associates, P.C. (Quible) hereby submit for your review the enclosed revised application package for a Conditional Zoning Permit, in response to the review comments provided by the Technical Review Committee. Please find our responses to the review comments listed below. Responses have been provided in red italics for ease of review.

Quible and the Applicants understand that public gatherings have been cancelled in Currituck County due to concerns over transmission of COVID19. This cancellation includes the Planning Board Meeting that was scheduled for April 14, 2020. On behalf of the applicants, Quible proposes that we prepare all materials for this Conditional Rezoning Request (including the attached materials and your staff report) and hold a virtual meeting. We understand that the Planning Board is an advisory committee and that presenting our application is a requirement in order to move on to the Board of Commissioners Meeting. We are confident that we can present our application and associated materials in a virtual meeting on the platform of your choosing (e.g. YouTube—which allows live comments, Zoom, Free Conference Call.com etc.) if County gatherings are prohibited. We understand that public participation in these meetings is required and in addition to setting up the meeting for County Staff, we will assist with notification of all interested parties of our intention to conduct a virtual meeting.

Please notify us at your earliest convenience that you have received the below and attached revisions to the TRC Comments and whether we should proceed with a virtual meeting.

The following documents are included and shall be considered part of this submittal package:

1. One (1) digital copy of the revised Conceptual Plan;
2. One (1) 8.5”x11” copy of the revised Conceptual Plan;

Please note Hardcopies of all plans can be made available once the County’s submittal process returns to normal.

Planning, Jennie Turner 252-252-6031

Reviewed

1. The proposed use and the proposed zoning conditions are all uses. Please clarify which uses are proposed for this conditional rezoning. Staff suggests narrowing down the list.
   Please note, the restrictive covenants set forth in the Declaration of Withdrawal (DB 1196 PG0864-0865) from Ocean Hill Section 1 are more restrictive than the allowed uses within the County Base GB Zoning. The applicant intends to use the property for Retail Sale of Goods and Services and Professional Offices. However, the applicant wishes to leave open additional opportunities for development. To further refine allowable uses the applicant has narrowed down the list further as indicated below:

   a. *Animal Services (no outdoor kennels)*
   b. *Athletic and Exercise Facilities*
   c. *Convenience Store*
   d. *Daycare Services*
   ~~e. *Dry Cleaning and Laundromat*~~
   ~~f. *Funeral Home*~~
   g. *Museums*
   h. *Libraries*
   i. *Art Galleries*
   j. *Art Centers*
   k. *Greenhouses or Similar Nurseries*
   l. *Professional Offices*
   m. *Residential Care Institutions*
   n. *Restaurant (without drive thru)*
   o. *Retail Sales of Goods and Services*
   p. *Schools (elementary and secondary) and associated uses*
   q. *Private and Instructional Schools (trade or vocational)*
   r. *Residential Use with one single family detached unit per lot*

2. Provide a detailed written description of the proposed use(s), types of improvements, buildings, activities, and hours of operation.
   The proposed use is Retail and Professional Offices. A building or buildings that conform to Community Standards and all appropriate building codes will be erected along with all required and permitted infrastructure. Hours of operation will be consistent with normal retail (surf shop) and professional office hours.
3. Please provide any zoning conditions proposed. Staff's suggested zoning conditions:
   a. Community Compatibility Standards apply to future development. *Acknowledged. The building and site will be designed to meet UDO requirements during Major Site Plan application. This zoning condition is agreed to.*
   b. Access shall be provided from Ponton Lane (Coral Lane stub).
   The applicant proposes to access the property from Ponton Lane. However, we would like to preserve the right to access the property via a shared driveway access and/or NC 12 in the event that access from Ponton Lane is not available

or if access from a shared drive or NC 12 becomes a preferred option and is available in the future.

4. Conceptual Development Plan:
   a. Show all required landscaping including Type B perimeter buffer along the rear and south property line. *A Type B buffer has been provided on the conceptual sketch. However, the adjacent rear use is a wastewater upset pond which is commercial and/or light industrial. The applicant will provide those buffers necessary and required according to the UDO at the time of development.*
   b. Provide adjacent use types. *Use types have been provided on the conceptual sketch.*
   c. Identify easements. *Easements are not proposed at this time. Any applicable easements will be shown and recorded with a Major Site Plan application.*
5. On zoning map amendment exhibit:
   a. Revise zoning reference on Villages at Ocean Hill Properties to VOH PUD or Villages at Ocean Hill PUD instead of Ocean Hill PUD. *Acknowledged. This has been updated on the conceptual sketch.*
6. Architectural Elevations:
   a. Provide an architectural elevation for the building facade that faces NC12. *During our pre-application meeting the applicants explained that the structure has not been designed and there are no conceptual sketches prepared for any planned building(s). Photographs of the style that may be used are provided and staff indicated during our pre-application meeting that photographs have been accepted in the past to fulfill this requirement of providing an Architectural Elevation.*
   b. Flat roofs are not permitted on the Outer Banks.
   This is a rezoning request and not a Major Site Plan. Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements.
   c. What style of roof is proposed?
   Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements.
   d. What style of siding is proposed?
   Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements.
   e. What roof material is proposed?
   Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements.
   f. Describe design features that will be incorporated into the building design.
   Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements.
   g. Consider using building design elements similar to existing Corolla Village architecture.

Design and architectural details will be provided at the appropriate time. Any structure that is built will need to conform with all appropriate County UDO requirements. The structure will also conform to local community standards and architecture as required.

7. Provide best available information on potential phasing of project (ex: less than 2 years, 3-5 years, 5-10 years, etc.). *The project, if feasible, would not take place for another 2-5 years.*

Currituck County Building Inspections and Fire, Bill Newns 252-232-6023
No comments received

Albemarle Regional Health Services, Joe Hobbs 252-232-6603
REVIEWED
OWNER WILL NEED TO SUBMIT APPLICATION TO HEALTH DEPARTMENT FOR SITE EVALUATION TO DETERMINE SOIL SUITABILITY FOR SEPTIC SYSTEM. CONSULT WITH JOE HOBBS R.S. 252-232-6603
EXPLORE POSSIBILTY OF SEWER CONNECTION IN LIEU OF ON-SITE WASTEWATER.
Acknowledged.

Currituck County Soil and Stormwater, Dylan Lloyd, 757-515-0201
Approved
1) Existing pipe identified running under west and southern portions of property toward water impoundment area to the south under Coral Drive. Warren Eadus from Quible alerted staff to the existence of a historic drainage tile that serves property to the north; have requested pictures and rough delineation of feature; at the moment the recommendation is to remove and fill excavated areas. *The location of this feature is unknown and Quible merely relayed information that was presented during a Community Meeting to County Staff to inquire whether or not there was any documentation as to the existence of a drainage pipe running west to east along the northern boundary of the property. The absence or existence of any subsurface utilities on this property are not known at this time. Existing ditches and drainage pipes that cross Ponton Lane have been located on previous surveys.*

Currituck County Public Utilities, Will Rumsey & Dave Spence 252-232-6065
Reviewed
No comment

Currituck County GIS, Harry Lee 252-232-2034
Reviewed
When developed, the address of the property will change from Ocean Trl to Ponton Ln (driveway access). *Acknowledged.*
The lane should be Ponton Ln not Coral Ln as shown on the site plan. Acknowledged. *The conceptual plan has been updated to indicate Ponton Ln. Please note PC F, Pg 137 and PC D, Pg 153 both indicate that this right-of-way is Coral Ln.*

NC DEQ- Division of Coastal Management, Charlan Owens 252-264-3901

No Comment

Currituck County Parks & Recreation, Jason Weeks, 252-232-3007
No Comment

Please do not hesitate to contact Warren D. Eadus, P.G., or myself at 252.491.8147 should you have any questions and/or concerns.

Sincerely,
Quible & Associates, P.C.

Warren D. Eadus, P.G.
Encl.: as stated
Cc: Tom & Lisa Hurley
File

From: Jennie Turner
To: "Cathleen Saunders"; Warren Eadus
Subject: RE: Conditional Rezoning Lot 112 Ocean Hill S/D
Date: Thursday, March 26, 2020 12:20:00 PM
Attachments: image003.png
image004.png

Good afternoon,
Thank you for the response to the TRC memo.

Here are my comments on the resubmittal:

- According to the most recently approved VOH sketch plan, the area owned by Midlantic Builders that abuts the subject property is designated as open space and right of way area, any designated commercial areas are to the rear of the property. Please remove "commercial area" from the zoning description.
- The perimeter buffers are required between zoning districts and not uses, a type B buffer is required between GB zoning and SFO w/PUD overlay zoning unless the adjacent property is designated commercial.
- Regarding the architectural elevations, it is correct that we have accepted photographs in the past and we will for this application. The conceptual development plan section of the ordinance requires elevations of proposed buildings as seen from public streets and adjacent lands containing SFDs. The photos submitted each show different styles, the questions were intended to clarify which elements in the submitted photos are proposed. Please submit one elevation, you may describe proposed design elements. The elevation is part of the conceptual development plan and may be part of the conditional rezoning approval.

If you'd like to discuss this further, please feel free to call me on my cell at 252-202-3320 as I am working from home today.

Thanks,
Jennie

Jennie Turner
Planner II
County of Currituck
Planning & Community Development
Phone: 252-232-6031
Fax: 252-453-8300
Email: jennie.turner@currituckcountync.gov
Website: www.currituckgovernment.com

From: Cathleen Saunders [mailto:csaunders@quible.com]
Sent: Monday, March 23, 2020 9:55 AM
To: Jennie Turner; Warren Eadus

From: Cathleen Saunders
To: Jennie Turner; Warren Eadus
Cc: Thomas Hurley; Lisa
Subject: RE: Conditional Rezoning Lot 112 Ocean Hill S/D
Date: Wednesday, April 15, 2020 11:41:44 AM
Attachments: image004.png
image005.png
image006.png
image007.png
Photo of Desired Building Concept.jpg
P20009-Sketch 2 11x17-2020-04-15.pdf

Jennie –
We have attached an updated version of the sketch that addresses the following:

- Change Ponton Ln. to Coral Ln. *This has been updated on the sketch.*
- According to the most recently approved VOH sketch plan, the area owned by Midlantic Builders that abuts the subject property is designated as open space and right of way area, any designated commercial areas are to the rear of the property. Please remove "commercial area" from the zoning description. *The commercial designation has been removed from the wastewater treatment plant property.*
- The perimeter buffers are required between zoning districts and not uses, a type B buffer is required between GB zoning and SFO w/PUD overlay zoning unless the adjacent property is designated commercial. *Type B buffers are provided on the sketch adjacent to SFO zoned properties (including adjacent to the PUD overlay/WWTP lagoon).*
- Regarding the architectural elevations, it is correct that we have accepted photographs in the past and we will for this application. The conceptual development plan section of the ordinance requires elevations of proposed buildings as seen from public streets and adjacent lands containing SFDs. The photos submitted each show different styles, the questions were intended to clarify which elements in the submitted photos are proposed. Please submit one elevation, you may describe proposed design elements. The elevation is part of the conceptual development plan and may be part of the conditional rezoning approval. *See attached photo of the desired building design. This photo supersedes those previously provided. Please note that the developer acknowledges that the building will need to meet all requirements of the UDO at the time of development (including roof pitch, materials, design elements, etc.)*

Please let us know if the County decides to start holding advisory Board Meetings and if we can anticipate being on the next planning board agenda. If you need additional information, please do not hesitate to reach out.

Thank you,
Cathleen M. Saunders, P.E.
Project Manager
Quible & Associates, P.C.
8466 Caratoke Highway, Bldg 400
Powells Point, NC 27966
P.O. Drawer 870
Kitty Hawk, NC 27949
t 252.491.8147

Quible

Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

P.O. Drawer 870
Kitty Hawk, NC 27949
Phone: 252-491-8147
Fax: 252-491-8146
web: quible.com

February 27, 2020

Jennie Turner
Currituck County Planning and Community Development
P.O. Box 73
Currituck, NC 27927

RE: **Community Meeting Report**
Conditional Zoning
For Parcel 9837-22-5740,
1202 Ocean Trail
Corolla, Currituck County, NC

Ms. Turner,

A community meeting for the proposed Conditional Rezoning of the above referenced parcel at 1202 Ocean Trail was held on Monday, February 24th, 2020 at 4:00 p.m. in the Corolla Library located in Corolla, NC. The meeting was conducted by Quible & Associates, P.C. (Quible) on behalf of Tom and Lisa Hurley with representatives from Quible & Associates, P.C. and Currituck County in attendance.

Purpose

The purpose of the meeting was to inform the community in the vicinity of the subject parcel of the intent to apply for conditional zoning to allow for a potential retail. The existing site consists of a vacant lot without existing improvements. The current zoning is Single Family Outer Banks (SFO) and the applicant is proposing to change the zoning of the site to Conditional General Business (C-GB).

Meeting synopsis

The library was opened to the public prior to the meeting and attendees began arriving prior to 4:00 pm. The rezoning map and an aerial of the associated area were available to attendees prior to the meeting on an easel. The proposed Preliminary Site Plan was available in 11”x17” on the conference table. Other items including agendas, blank application including the County process, and comment cards were provided on the table for attendees.

As attendees arrived, they were asked to provide their contact information on the sign-in sheet. Attendees were also advised that comments could be received by Quible & Associates, P.C. either by email or telephone.

Around 4:00 pm a presentation of the project desires was provided by Warren Eadus along with a summary of the required conditional rezoning process. A copy of the agenda was distributed to everyone in attendance and the sign-in sheet was routed throughout the room. The

presentation generally followed the Agenda (Exhibit 1) that was provided to the attendees and is summarized in the following sections.

The parcel proposed for conditional rezoning was described and identified on the exhibits. The Preliminary Site Plan and conditional rezoning permit application were described as being in compliance with the current Currituck County UDO requirements. The attendees were told that the proposed site plan will be submitted and reviewed through the Currituck County Technical Review Committee.

Questions were allowed from the audience during the presentation. Discussions centered around use of Coral Lane Stub and stormwater. These discussions are summarized as follows:

1. Locations of old pipes and ditches were discussed.
2. Kay Cole indicated that the "wetlands" started out as a ditch but somehow became jurisdictional.
3. Rex Patterson indicated that there is a stormwater pipe running through the property somewhere.
4. An attendee indicated that Hwy 12 floods and Mr. Eadus explained that this development would be held to County stormwater rules.
5. Ocean Hill resident Ed Cornet confirmed that Coral Stub was privately owned but public right of way.
6. Buddy Ponton said he was good with the project as long as he can continue to gain access to his property.
7. Kay Cole provided a lot of history about the area and the former rezoning request.
8. Additional questions/comments about issues within the Corolla area outside of the project area were also discussed.

Attendees were again reminded that any further questions or comments not addressed at the meeting can be forwarded to Quible & Associates and the meeting was adjourned.

Copies of all handouts, exhibits, and other documents available at the meeting are provided in attachments to this document.

Please do not hesitate to contact Warren D. Eadus or myself at (252) 491-8147 or csaunders@quible.com should you have any questions and/or concerns.

Sincerely,
Quible & Associates, P.C.

Cathleen M. Saunders, P.E.

cc:

Quible & Associates, P.C. SINCE 1959
ENGINEERING * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING
Phone: (252) 491-8147
Fax: (252) 491-8146
Web: www.quible.com

Community Meeting for Conditional Rezoning – Parcel Identification Numbers 9837-22-5740 Corolla Currituck County, NC

February 24, 2020

AGENDA

1. **General Introduction**
   a. Quible & Associates, P.C.
   b. Currituck County

2. **Existing Information**
   a. Location:
      i. 1202 Ocean Trail
      ii. 9837-22-5740
   b. Current Land Use: Vacant
   c. Existing Site Zoning: SFO
   d. Site Zoning: C-GB; Conditional - General Business
   e. The existing site consists of a vacant lot without existing improvements.

3. **Discussion**
   a. Apply for a Conditional Rezoning within property zoned as SFO (Single Family Outer Banks) as required by The Currituck County Unified Development Ordinance for retail use.

4. **Site Development**
   a. All site development will be in conformance with the County's Unified Development Ordinance.
   b. The site development will be in general conformance with the County's Future Land Use Plan.

5. **Questions & Comments**
   a. Quible & Associates and representatives are available to answer questions and comments.
   b. Comments can be provided in writing on Comment Forms provided or they can be sent to Cathleen Saunders. P.E. of Quible & Associates, P.C. by email at csaunders@quible.com or by phone at 252-491-8147.

Quible *SINCE 1959*

Quible & Associates, P.C.
ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING

8466 Caratoke Highway • Powells Point, NC 27966
Phone 252-491-8147 • FAX 252-491-8146

JOB SIGN IN

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

9.1.i

LOT 112 OCEAN HILL

* PLEASE SIGN YOUR NAME:

Tom Lutton
Beth Lutton
Rex Patterson
MATT KIRKENDALL - CURRITUCK COUNTY
Jennie Turner Planner Currituck County
KYLE KUERTH & KAREN BELL
Kay Cole ~ Lot 113 Oceanhill
[illegible]

Sid Hosler - VOH Resident
Fran Hamilton - VOH

Ocean Hill Section 1 – Declaration of Withdrawal Lots 112 & 113

BOOK 1196 PAGE 0863

Doc ID: 002403580070 Type: CRP
Recorded: 04/17/2012 at 11:49:24 AM
Fee Amt: $246.00 Page 1 of 70
Currituck County, NC
Charlene Y Dowdy Register of Deeds
BK 1196 PG 863-932

376

STATE OF NORTH CAROLINA

COUNTY OF CURRITUCK

Prepared by and return to:
Thomas P. Nash, IB
200 N. Water St. #2A
Elizabeth City, NC 27909

DECLARATION OF WITHDRAWAL

THIS DECLARATION OF WITHDRAWAL made this 1ST day of November, 2011 is made by OCEAN HILL 1 PROPERTY OWNERS ASSOCIATION, INC. ("Association") and a majority of the LOT OWNERS in Section 1, Ocean Hill Subdivision ("Owners") and LINDA KAY COLE, Unmarried, MACON F. BROCK, JR. and wife, JOAN P. BROCK (collectively "Withdrawing Lot Owners")

W I T N E S S E T H :

WHEREAS, Association is a non-profit corporation organized to collect association dues and perform other responsibilities for those lots shown on plat of Ocean Hill, Section 1 recorded in Plat Cabinet A, Slides 136 through 140, Currituck County Registry and is the Successor in Interest to the Developer of said lots and the owner of the roads and streets shown on said plat; and

WHEREAS, Owners are the owners of a majority of the lots within Section 1 of Ocean Hill Subdivision as shown on the aforesaid plat; and

WHEREAS, Linda Kay Cole is the owner of Lot 113 on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County; and

WHEREAS, Macon F. Brock, Jr. and wife, Joan P. Brock are the owners of Lot 112 on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County; and

WHEREAS, the Developers of Ocean Hill Section 1 previously established for the aforesaid lots certain Restrictive Covenants, same being of record in Deed Book 157, Page 143 as amended by Amendment and Modification of Restrictive Covenants recorded in Book 211, Page 705; Amended Declaration of Restrictive Covenants recorded in Book 559, Page 880; Amendment & Modification of Restrictive Covenant recorded in Book 575, Page 170; Amended Declaration of Restrictive Covenants recorded in Book 776, Page 520, and Amendment to Declaration of Restrictive Covenants for Section 1 of Ocean Hill Subdivision

recorded in Book 992, Page 334, all in the Currituck County Registry (hereinafter collectively "Declaration").

WHEREAS, pursuant to said covenants, an instrument signed by a majority of the Owners within said Section 1 of said Subdivision may change said covenants in whole or in part; and

WHEREAS, WITHDRAWING LOT OWNERS, being the owners of Lots 112 and 113 of Section 1, Ocean Hill Subdivision have requested that said lots be withdrawn from the coverage of the Declaration in order to allow for said lots to be rezoned and the Association and a majority of the current Owners in Section 1 Ocean Hill Subdivision have agreed to such withdrawal under the express condition that Withdrawing Lot Owners record new covenants limiting the uses for and access utilized by said lots, which covenants would be enforceable by Association, all as hereinafter set out.

NOW, THEREFORE, for and in consideration of the premises, and other good and valuable consideration cited herein, Association and the undersigned Owners do hereby covenant and agree that the Declaration is hereby amended for the purpose of withdrawing from the coverage of the Declaration those lots in Section 1 Ocean Hill Subdivision which are more particularly described as follows and that said Declaration shall no longer be of any force or effect as to said lots:

Being all those certain lots or parcels of land located in Currituck County, North Carolina, more particularly described as follows:

Lots 112 and 113 as delineated on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County; and

Parties hereto further acknowledge that henceforth, the Owners of said lots and their heirs, successors and/or assigns shall have no interest in nor right of access to or in those roads and streets shown on the aforementioned plat except as to the stub of Coral Lane lying to the west of Ocean Trail and those rights or access, if any, held by the general public in and to said roads and streets.

Except as amended herein, the Declaration shall remain in full force and effect as to all of the remaining property in Section 1 Ocean Hill Subdivision.

As further consideration for this withdrawal, parties hereto acknowledge and agree that Withdrawing Lot Owners shall record a new Declaration of Restrictive Covenants restricting said Lots 112 and 113 to the following uses regardless of the zoning classification given to said lots and that the Association shall be given the right and authority to enforce said new Declaration:

1. Animal Services (no outdoor kennels);
2. Athletic and Exercise Facilities (indoor)
3. Convenience Store;
4. Daycare Services;
5. Dry Cleaning and Laundromat;
6. Funeral Home;
7. Museums;

8. Libraries;
9. Art Galleries;
10. Art Centers;
11. Greenhouses or Similar Nurseries;
12. Professional Offices;
13. Residential Care Institutions;
14. Restaurant (without drive thru);
15. Retail Sales of Goods and Services;
16. Schools (elementary and secondary) and associated uses;
17. Private and Instructional Schools (trade or vocational);
18. Residential use with one single family detached unit per lot.

Other than the above uses, any other commercial or residential use of the lots will be specifically prohibited including, but not limited to, using the lots as parking for an adjacent business or, as a stand alone parking lot.

IN WITNESS WHEREOF, this Declaration of Withdrawal is executed by Association, Withdrawing Lot Owners and Majority of Lot Owners the day and year first above written.

r\Ocean Hill-Brock withdrawal 10-3-11

Ocean Hill Section 1 – Declaration of Withdrawal Lots 112 & 113

OCEAN HILL 1 PROPERTY OWNERS ASSOCIATION, INC.

By: Edward Cornet (SEAL)
President

STATE OF NORTH CAROLINA
COUNTY OF DARE

I, a Notary Public of the County and State aforesaid, certify that Edward Cornet personally came before me this day and acknowledged that he/she is President of Ocean Hill 1 Property Owners Association, Inc., a North Carolina nonprofit corporation, and that he/she as President, being authorized to do so, executed the foregoing on behalf of the corporation.

Witness my hand and official stamp or seal, this 6th day of March, 2012.

My Commission Expires:
4/18/15

Maureen A Snyder
Notary Public
Printed Name of Notary Public:
MAUREEN A SNYDER

Maureen A Snyder
Notary Public.
Dare County
North Carolina
My Commission Expires 4/18/15

BOOK 1196 PAGE 0933

Final 10/4/11

Doc ID: 002403590008 Type: CRP
Recorded: 04/17/2012 at 11:50:51 AM
Fee Amt: $26.00 Page 1 of 8
Currituck County, NC
Charlene Y Dowdy Register of Deeds
BK 1196 PG 933-940

377

STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

Prepared by and return to
Thomas P. Nash, IV
200 N. Water St. #2A
Elizabeth City, NC 27909

THIS DECLARATION OF RESTRICTIVE COVENANTS made and entered into this 1st day of November, 2011, by LINDA KAY COLE, Unmarried, and MACON F. BROCK, JR. and wife, JOAN P. BROCK, hereinafter referred to as "Withdrawing Lot Owners" to and with and on behalf of all persons hereafter owning or acquiring either of those lots known as Lots 112 and 113 on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County, and OCEAN HILL 1 PROPERTY OWNERS ASSOCIATION, INC., hereinafter referred to as "Association";

W I T N E S S E T H :

WHEREAS, Linda Kay Cole is the owner of Lot 113 on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County; and

WHEREAS, Macon F. Brock, Jr. and wife, Joan P. Brock are the owners of Lot 112 on the plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County; and

WHEREAS, pursuant to Declaration of Withdrawal recorded in Book 1196, Page 863, Currituck County Registry, Withdrawing Lot Owners were allowed to withdraw said lots from the Restrictive Covenants pertaining to Section 1 of Ocean Hill Subdivision in

return for subjecting said lots to new covenants enforceable by Association; and

WHEREAS, Withdrawing Lot Owners desire to subject said lots to certain new restrictive covenants in order to limit the development and use of said lots with said restrictive covenants to be enforceable by the Association; and

WHEREAS, it is the intent of this Declaration to restrict the uses and access for said lots and provide for the enforcement thereof as hereinafter set out.

NOW, THEREFORE, the Withdrawing Lot Owners do hereby declare that the following restrictive covenants shall apply to Lots 112 and 113 as shown and delineated on plat of Section 1, Subdivision of Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140 in the Office of the Register of Deeds of Currituck County and said covenants shall run with the land and be binding upon all subsequent owners of any of said lots:

Use of Lots: The zoning of said lots may be changed from residential contingent upon the uses of said lots being limited to the following despite other uses being allowed by any other zoning classification obtained for said lots:

1. Animal Services (no outdoor kennels);
2. Athletic and Exercise Facilities (indoor)
3. Convenience Store;
4. Daycare Services;
5. Dry Cleaning and Laundromat;
6. Funeral Home;
7. Museums;
8. Libraries;
9. Art Galleries;
10. Art Centers;
11. Greenhouses or Similar Nurseries;
12. Professional Offices;
13. Residential Care Institutions;
14. Restaurant (without drive thru);
15. Retail Sales of Goods and Services;
16. Schools (elementary and secondary) and associated uses;
17. Private and Instructional Schools (trade or vocational);
18. Residential use with one single family detached unit per lot.

Other than the above uses, any other commercial or residential use of the property is hereby specifically prohibited including, but not limited to, using the lots as parking for an adjacent business or, as a stand alone parking lot.

Access by Owners of Lots: Withdrawing Lot Owners, on behalf of themselves and their successors and/or assigns, covenant and agree that with the exception of the stub of Coral Lane located to the west of Ocean Trail, the Owners of said Lots 112 and 113 shall have no interest in nor right of access to or over those roads and streets shown on plat of Section I, Ocean Hill recorded in Plat Cabinet A, Sheets 136 through 140, Currituck Registry except for those rights of access, if any, held by the general public in and to said roads and streets.

Enforcement of Covenants: The Association shall have the right to enforce by any proceeding at law or in equity, all restrictions, conditions, covenants, reservations, liens and charges now or hereafter imposed by the provisions of this Declaration. Failure by the Association to enforce any covenants or restrictions herein shall in no event be deemed a waiver of the right to do so thereafter.

Upon written notice to an Owner of a violation hereunder and failure of the Owner to take action to correct said violation within 30 days, the Association may undertake the enforcement of the provisions of this Declaration by injunction or other action at law and Association shall be entitled to reasonable attorney fees incurred by the Association as a result of its bringing an action at law or in equity to enforce these provisions.

Amendment or Rescission. Except as provided herein, this Declaration may only be amended or rescinded by a written instrument executed and expressly agreed to by the Association and authorized by the affirmative vote of the Withdrawing Lot Owners. Any amendment or rescission must be recorded at the Currituck County Registry to be effective.

Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall not affect any of the other provisions of this Declaration, which shall remain in full force and effect.

Law Controlling. This Declaration shall be construed and governed pursuant to the laws of North Carolina.

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2818

Agenda Item Title: PB 20-10 The Cotton Gin, Inc: The applicant is requesting a zoning map amendment to rezone 2.17 acres from Agriculture (AG) to General Business (GB) for property located at 6957 Caratoke Highway, Jarvisburg, Poplar Branch Township

Submitted By: Cheri Elliott – Planning & Community Development

Item Type: Legislative

Presenter of Item: Jason Litteral

Board Action: Action

Brief Description of Agenda Item:

The applicant is requesting a zoning map amendment to rezone 2.17 acres from Agriculture (AG) to General Business (GB) for property located at 6957 Caratoke Highway, Jarvisburg, Parcel Identification Number 010900001330000, Poplar Branch Township. The subject parcel is currently 3.25 acres. The 2.17 acres is to be recombined with the original parcel resulting in 5.42 acres GB.

Planning Board Vote: Approved 5-0

Planning Board Recommendation: Approval

Staff Recommendation:

TRC Recommendation: Approval

STAFF REPORT
PB 20-10 COTTON GIN INC.
BOARD OF COMMISSIONERS
JUNE 22, 2020

APPLICATION SUMMARY	
Property Owner: The Cotton Gin Inc. 6957 Caratoke Hwy Jarvisburg, NC 27947	**Applicant:** Same as Owner
Case Number: PB 20-10	**Application Type:** Zoning Map Amendment
Parcel Identification Number: 010900001330000	**Existing Use:** Retail/Restaurant
Land Use Plan Classification: Limited Service	**Parcel Size (Acres):** 3.25 (5.45 after recombine)
Current Zoning: General Business/Agriculture	**Proposed Zoning:** General Business
Zoning History: GB/A(1989)	
Request: Rezone 2.17 acres from AG to GB to be recombined with the original 3.25 acre GB zoned parcel resulting in a 5.42 acre GB zoned parcel	

REQUEST

NARRATIVE

The applicant is requesting a conventional zoning map amendment to change 2.17 acres of Agriculture (AG) property to General Business (GB). The subject parcel is currently 3.25 acres in size. The 2.17 acres is to be recombined with the original parcel resulting in a 5.42 acre GB zoned property. Historically the property has been used as a retail establishment and a restaurant. Due to a fire last fall, the property owner wishes to rebuild the structures in a different configuration. To better accommodate current and potential future uses of the property, some structures will need to be relocated. The new structure will also need to adhere to a 100' setback from Caratoke Highway. For GB zoning district outside of a Full Service Area, the setback from roads designated as major arterials is 100'. The applicant would like to construct a building that will be used as an office and storage for the existing Kitty Hawk Kites hang gliding business. A portion of this building will also be used as accessory warehousing and distribution for the Cotton Gin retail stores. In the future, the building may be used for events held on the property. The ideal location for this new building is further from the highway in an area currently zoned AG. This is the reason for the requested zoning map amendment.

Community Meeting

The community meeting was held on April 10, 2020 at 4:00 pm. The applicant provided a virtual meeting option as well. A list of attendees can be found in the community meeting summary submitted by the applicant. There were no concerns from the public.

SURROUNDING PARCELS		
	Land Use	**Zoning**
North	Agriculture (vineyard)	General Business/Agriculture
South	Agriculture (vineyard)	General Business/Agriculture
East	Agriculture	Agriculture
West	Commercial (Tarheel Produce)	General Business

LAND USE PLAN	
The 2006 Land Use Plan classifies this site as Limited Service within the Jarvisburg subarea. The proposed plan is consistent with the policies of the plan, some of which are:	
Policy CD4	HIGHWAY ORIENTED COMMERCIAL USES should be clustered along segments of highways and contain land uses which are mutually compatible and reinforcing in use and design; they should be designed in such a way as to minimize signage, access points, and to prevent unsightly, dysfunctional STRIP DEVELOPMENT.
Policy ED4	In addition to the recruitment and expansion of major new industries, the considerable value of SMALL BUSINESS START-UPS, EXPANSIONS AND SPIN-OFFS shall also be recognized.

RECOMMENDATION

Planning Staff

The applicant is requesting an expansion of the General Business zoning district to comply with the current major arterial street setback requirement of 100 feet. This request to GB will accommodate current and future uses in an ever-changing brick and mortar retail landscape. The applicant is currently working on a boundary line correction of the existing parcel and a recombination plat to include the area being rezoned. If the zoning map amendment is approved, the GB area will be used for a new building. The new building will include office area for Kitty Hawk Kites, storage, and accessory warehousing uses. Staff recommends approval of the request as submitted.

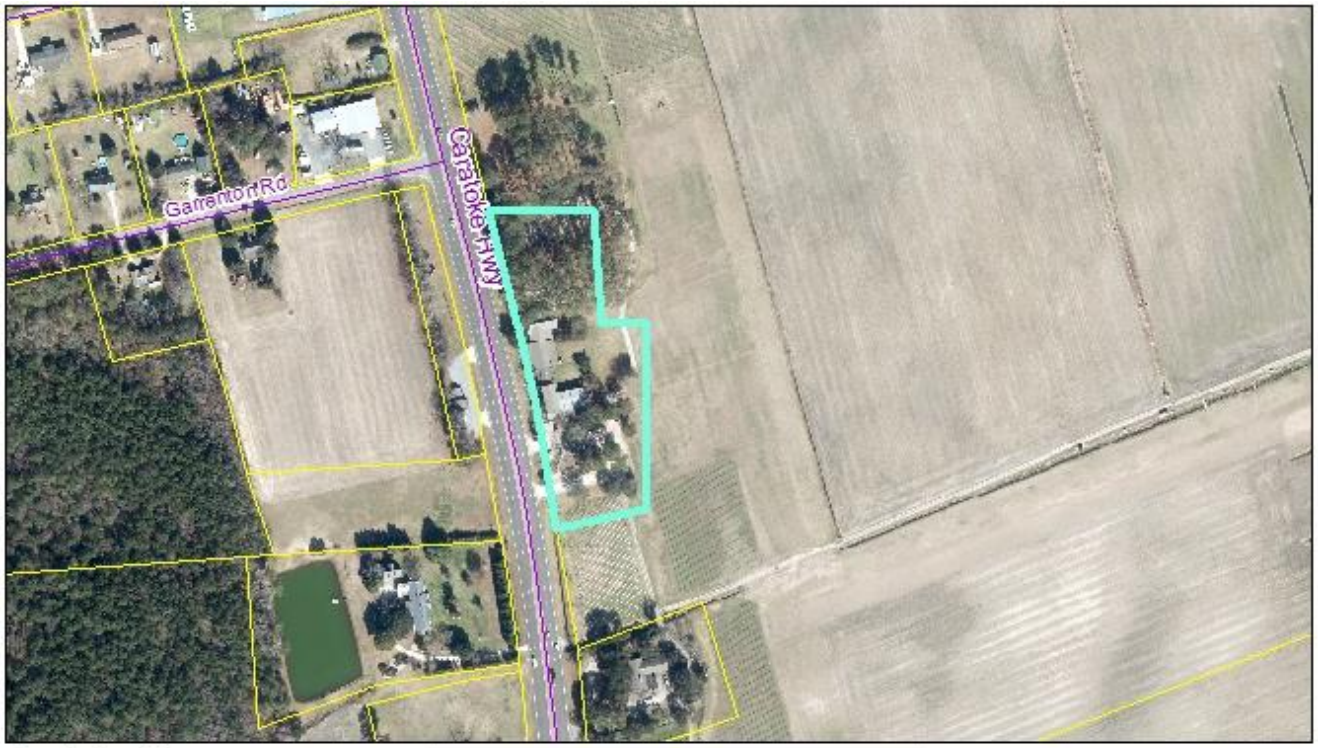
CONSISTENCY AND REASONABLENESS STATEMENT

A zoning map amendment is a legislative decision of the Board of Commissioners. In determining whether to approve or deny a zoning map amendment the Board of Commissioners shall adopt a written statement of consistency and reasonableness.

This zoning map amendment request is consistent with the goals, objectives, and policies of the Land Use Plan, is compatible with existing and proposed uses surrounding the land subject to the application, and is an appropriate zoning district and use for the land.

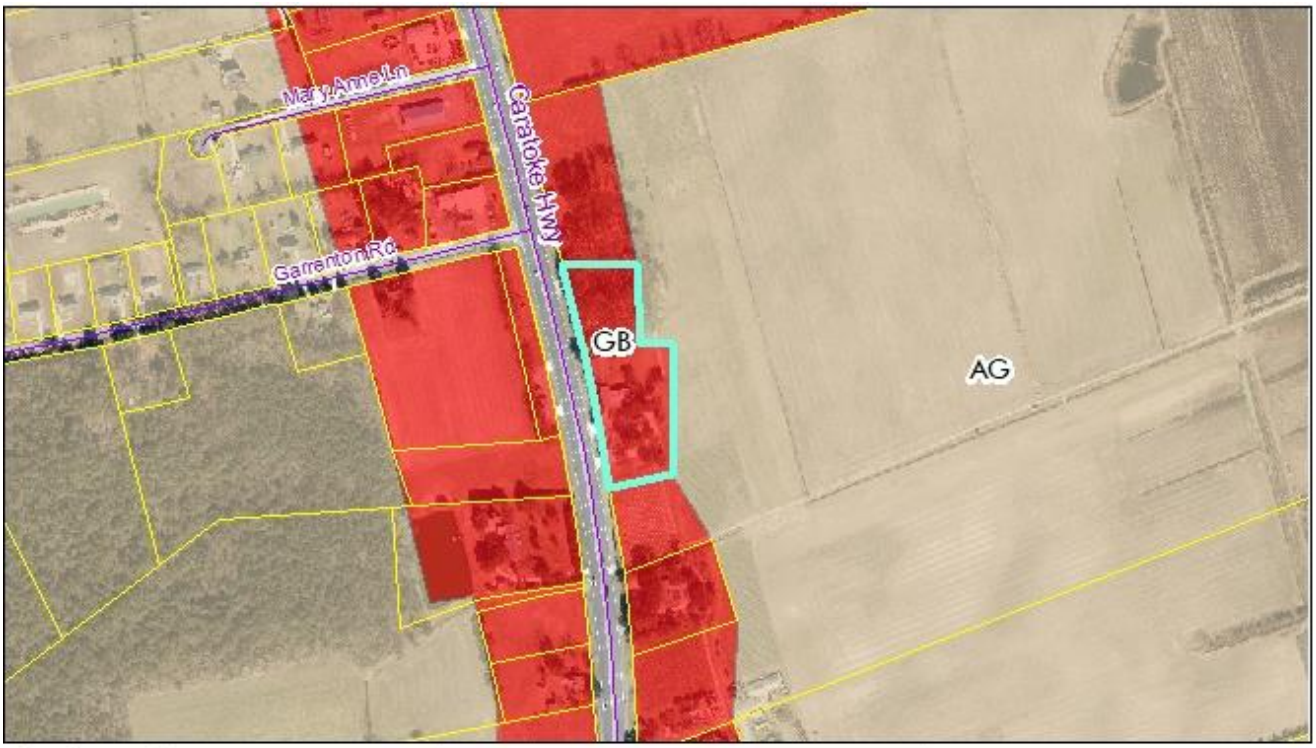
It is reasonable and in the public interest because it would result in a logical and orderly development pattern and addresses a demonstrated community need.

THE APPLICATION AND RELATED MATERIALS ARE AVAILABLE ON THE COUNTY'S WEBSITE
Planning Board: www.co.currituck.nc.us/planning-board-minutes-current.cfm



The Cotton Gin
6957 Caratoke Hwy
Aerial

Currituck County
Planning and Community
Development



The Cotton Gin
6957 Caratoke Hwy
Zoning Map

Currituck County
Planning and Community
Development

The Cotton Gin
6957 Caratoke Hwy
LUP Map - Limited Service

Currituck County
Planning and Community
Development

NOTES:
1. CURRENT OWNER: THE COTTON GIN INC.
2. PIN: 9921-40-7024
3. PID: 010900001330000
4. PROPERTY ADDRESS: P.O. BOX 24
   JARVISBURG NC, 27947
5. LOT AREA = 186,855 sqft / 4.29 acres
   (AREAS BY COORDINATE METHOD.)
6. SUBJECT REFERENCES: DB 150, PG 113

N.C. GRID NAD (2011)

N/F
JERRY W. WRIGHT &
THOMAS C. WRIGHT
DB 2001; PG E/114

PROPOSED
PROPERTY
BOUNDARY

EXISTING BOUNDARY SHOWN PER FIELD
SURVEY PERFORMED BY QUIBLE &
ASSOCIATES, P.C. 04/04/2020

DITCH

5/8"EIR
(1.5'BG)

5/8"EIR
(1.5'BG)

25' M.B.S.L.

APPROX. GB/AG
ZONING BOUNDARY
(SHOWN PER
COUNTY GIS)

15' M.B.S.L.

5/8"EIR
(1.5'BG)

15' M.B.S.L.

APPROX. GB/AG
ZONING BOUNDARY
(SHOWN PER
COUNTY GIS)

N/F
JERRY W. WRIGHT &
THOMAS C. WRIGHT
DB 2001; PG E/114

5/8"EIR
(0.7'BG)

15' M.B.S.L.

15' M.B.S.L.

N/F
JERRY W. WRIGHT &
THOMAS C. WRIGHT
DB 2001; PG E/114

100' M.B.S.L.

424.34'
N 13° 17' 37" W

NCGS MON GIN
N 910,850.26 sFT
E 2,924,423.01 sFT
NAD83(2011)

5/8"EIR
(0.3'BG)
N 910,437.29 sFT
E 2,924,520.58 sFT

5/8"EIR
(1.2'BG)

CARATOKE HIGHWAY
(110' R/W)

NOTE: THIS DOCUMENT IS PRELIMINARY – NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES – THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

QUIBLE & ASSOCIATES, P.C. DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF ANY INFORMATION IN THIS DOCUMENT AND IS NOT RESPONSIBLE FOR ANY ERROR OR OMISSION OR ANY LOSSES OR DAMAGES RESULTING FROM THE USE OF THIS INFORMATION.

NC License#: C-0208
SINCE 1959
Quible & Associates, P.C.
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
**ENG./SUR. NOT OFFERED AT BLACK MTN. OFFICE
8466 Caratoke Hwy, Powells Point, NC 27966
Phone: (252) 491-8147 Fax: (252) 491-8146
90 Church St., Ste. B, Black Mountain, NC 28711

THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.

BOUNDARY EXHIBIT

THE COTTON GIN
6957 CARATOKE HIGHWAY

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY
NORTH CAROLINA

0 60 120

PROJECT	DRAWN BY	CHECKED BY	DATE
P19121	MS/JMH	MWS	/31,

Q:\2019\P19121\Drawings\P19121-BOUNDARY EXHIBIT.dwg 4/1/2020 8:02 AM Csaunders

Attachment: Boundary Exibit (PB 20-10 The Cotton Gin, Inc.)

Zoning Map Amendment
Application

OFFICIAL USE ONLY:
Case Number: _____
Date Filed: _____
Gate Keeper: _____
Amount Paid: _____

Contact Information

APPLICANT:
Name: The Cotton Gin Inc.
Address: 6957 Caratoke Hwy
Jarvisburg, NC 27947
Telephone: 252.207.2387
E-Mail Address: tom@cottongin.com

PROPERTY OWNER:
Name: The Cotton Gin Inc.
Address: PO Box 24
Jarvisburg, NC 27947
Telephone: 252.207.2387
E-Mail Address: tom@cottongin.com

LEGAL RELATIONSHIP OF APPLICANT TO PROPERTY OWNER: Self

Property Information

Physical Street Address: 6957 Caratoke Highway Jarvisburg, NC 27947
Location: The Cotton Gin
Parcel Identification Number(s): 010900001330000
Total Parcel(s) Acreage: 5.45 (Recombined Acreage) Original Parcel acreage 3.25 (GIS)
Existing Land Use of Property: Cotton Gin Retail Store

Request

Current Zoning of Property: Split GB and AG
Proposed Zoning District: GB
Total Acreage for Rezoning: 2.2
Are you rezoning the entire parcel(s): Yes/No
Metes and Bounds Description Provided: Yes/No

Community Meeting, if Applicable

Date Meeting Held: April 10, 2020
Meeting Location: Sanctuary Vineyards

I, the undersigned, do certify that all of the information presented in this application is accurate to the best of my knowledge, information, and belief.

Further, I hereby authorize county officials to enter my property for purposes of determining zoning compliance. All information submitted and required as part of this application process shall become public record.

Thomas C Wright
Property Owner(s)/Applicant*

4/21/20
Date

***NOTE: Form must be signed by the owner(s) of record, contract purchaser(s), or other person(s) having a recognized property interest. If there are multiple property owners/applicants a signature is required for each.**

Zoning Map Amendment Design Standards and Submittal Checklist

The table below depicts the design standards of the site plan or map for a zoning map amendment application. Please make sure to include all applicable listed items to ensure all appropriate standards are reviewed.

Zoning Map Amendment

Site Plan Design Standards and Submittal Checklist

Date Received: _____

Project Name: _____

Applicant/Property Owner: _____

Site Plan or Map Design Standards Checklist		
1	Lot/parcel dimensions. REZONING SQ FT SHOWN	✓
2	Zoning designation.	✓
3	All existing physical features (structures, buildings, streets, roads, etc.). (AERIAL)	✓
4	Location and dimensions of any proposed construction. (UNKNOWN @ THIS TIME)	N/A

Zoning Map Amendment Submittal Checklist

Staff will use the following checklist to determine the completeness of your application within ten business days of submittal. Please make sure all of the listed items are included. Staff shall not process an application for further review until it is determined to be complete.

Zoning Map Amendment Submittal Checklist		
1	Complete zoning map amendment application	✓
2	Application fee ($200 plus $5 for each acre or part thereof) 2.17 ACRES TO BE REZONED ($215)	✓
3	Community meeting written summary, if applicable	✓
4	Site plan or map REZONING MAP PROVIDED IN COMMUNITY	✓
5	Metes and bounds survey, if applicable MTG. SUMMARY	N/A
6	2 copies of plans or maps	✓
7	2 hard copies of ALL documents	✓
8	1 PDF digital copy of all plans AND documents (ex. Compact Disk – e-mail not acceptable)	✓

For Staff Only

Pre-application Conference

Pre-application Conference was held on _____ and the following people were present:

_____

_____

Comments

_____

_____

_____

Currituck County
Agenda Item Summary Sheet

Agenda ID Number – 2819

Agenda Item Title: PB 19-20 Flora Farm: Rezone 224.44 acres from Agricultural (AG) to Planned Development-Residential (PD-R) for property located in Moyock immediately south of Eagle Creek subdivision and Moyock Middle School. The request includes 285 single-family dwelling lots, up to 100,000 sf commercial, 125 upper story dwelling units, and a 22 acre school site

Submitted By: Tammy Glave – Planning & Community Development

Item Type: Legislative

Presenter of Item: Laurie LoCicero

Board Action: Action

Brief Description of Agenda Item:

Rezone 224.44 acres from Agricultural (AG) to Planned Development-Residential (PD-R) for property located in Moyock immediately south of Eagle Creek subdivision and Moyock Middle School. The request includes 285 single-family dwelling lots, up to 100,000 sf commercial, 125 upper story dwelling units, and a 22 acre school site. PINs 0015000085B0000, 00150000085C, 0015000085A0000, Moyock Township.

Planning Board Vote: Approved 3-2

Planning Board Recommendation: Approval

Staff Recommendation: Denial

TRC Recommendation: Denial

STAFF REPORT
PB 19-20 FLORA FARM REZONING
PLANNED DEVELOPMENT-RESIDENTIAL
BOARD OF COMMISSIONERS
JUNE 22, 2020

APPLICATION SUMMARY	
Property Owner: John J. Flora III PO Box 369 Moyock NC 27958 Mary Nell Flora Brumsey 117 Puddin Ridge Rd Moyock NC 27958	**Applicants:** John J. Flora III Mary Nell Brumsey **Developer:** Justin Old North-South Development Group LLC 417D Caratoke Hwy Moyock NC 27958
Case Number: 19-20	**Application Type:** Rezoning to PD-R
Parcel Identification Number: 0015-000-085B-0000; 0015-000-085C-0000, 0015-000-085A-0000	**Existing Use:** Single-family dwelling and Farmland
Land Use Plan Classification: Full Service	**Parcel Size (Acres):** 224.44
Moyock Small Area Plan Classification: Full and Limited Service	**Zoning History:** A (1989); A-40 (1975)
Current Zoning: AG (Agricultural)	**Proposed Zoning:** PD-R (Planned Development – Residential)
Request: The developer is requesting to rezone the property from AG to PD-R. The request includes 285 single-family dwelling lots, up to 100,000 sf commercial, 125 upper story dwelling units, and a 22 acre school site.	

ZONING DISTRICT COMPARISON

ZONING	APPROX MAX # UNITS	OPEN SPACE (%)	GROSS DENSITY* (Units/Acre)	NET DENSITY "FEELS LIKE" (Units/Acre)
PD-R (PROPOSED)	410 + Commercial + School	30.1	1.83	2.93
AG (EXISTING)	74	50	.33	.66
SFM	224	40	1	1.66
MXR** (Single-Family)	448	30	2	2.86
(Multi-Family)	673	40	3	5.0

*Assumes 10% area for infrastructure.
**These numbers are assuming the Full Service designation in the *Land Use Plan* would supersede the split Full Service/Limited Service designation in the Moyock Small Area Plan as in an adjoining development.

REQUEST

Chapter 3 Zoning Districts of the UDO defines a Planned Development – Residential as a development with a purpose to "encourage the use of innovative and creative design to provide a mix of different residential uses in close proximity to one another on mainland Currituck County, while at the same time providing an efficient use of open space. Limited, small-scale commercial uses may be allowed in the PD-R district, primarily to serve the needs of residents in the development." A planned development zoning district classification is defined by a master plan and a terms and conditions document. The applicant's objective is "to build a community that has a creative design, providing a mix of different residential uses in close proximity to one another, while at the same time providing an efficient use of open space that promotes an active lifestyle and strong sense of community. True Mixed Use/Commercial development is also proposed to serve the needs of both the residents in this development and the surrounding community." The proposal includes a total of 410 dwelling units with a mix of upper story dwelling units and conventional single-family dwelling units. The proposed development includes up to 100,000 sf of commercial designation with out-parcels and larger commercial buildings with commercial uses located on street level and upper story residential apartments. The proposal contains 67.55 acres of open space, not counting the school site. Recreational amenities include a clubhouse, swimming pool, nature overlook, a dog park, and amenities related to a school. The plans also show an independent WWTP proposed for the development.

SURROUNDING PARCELS		
	Land Use	**Zoning**
North	Low Density Residential/ Cultivated Farmland	AG/GB
South	Low Density Residential/ Cultivated Farmland	SFM/AG
East	Fost Planned Development	PD-R
West	Residential (Eagle Creek and Ranchland)	SFM/AG

COMMUNITY MEETING

The developer held a community meeting on January 22, 2020 at the Moyock Library at 6:00 p.m. There were approximately 12 people in attendance. The primary concerns addressed were regarding traffic on Survey Road, lack of connectivity to Ranchland, and drainage. There were also discussions regarding site design, school site size, and commercial tenants. A community meeting summary prepared by the applicant is attached to this staff report.

TRANSPORTATION

The internal transportation network includes a divided boulevard within an 80' minimum right-of-way, a typical local roadway with a 40' minimum right-of-way, 4 interconnections with Fost Planned Development, and 5' sidewalks along all streets. The external transportation network includes the main boulevard connection on the south side of Survey Road, a driveway connection on the north side of Survey Road, and an 8' multi-modal path along Caratoke Highway. The residential units, school, and commercial area are expected to generate the below trips per day at full build-out in 2026.

ZONING	**TRIPS PER DAY**
PD-R (PROPOSED)	8,380* *(Fost – 5,978*)*
AG (EXISTING)	708
SFM	2144
MXR** (Single-Family) (Multi-Family)	 4,287 4,475
*VHB Phasing Memorandum **These numbers are assuming the Full Service designation in the Land Use Plan would supersede the split Full Service/Limited Service designation in the Moyock Small Area Plan as in an adjoining development.	

May 5, 2020 TIA: This TIA has been approved by NCDOT (See attached letter from David Otts, District Engineer.) Since the school site is not included in the TIA, it is not possible to determine the adequacy and safety of travelling public within and surrounding this site at this time. It is understandable that driveway location for the school is not determined yet, but the volume of

traffic based upon the size of the school can be determined. An elementary school generates a large volume of traffic. While Fost is included as a background development, Moyock Farms is not. Moyock Farms is submitting revised plans that show 100% of its traffic to access through Fost. The list of improvements suggested or referenced by the final TIA is compiled after descriptions of the older TIA submitted to staff. At the June 9, 2020 Planning Board meeting, the applicant's attorney stated a TIA would be completed for the school site in the future.

March 4, 2020 staff received the attached **"Flora Farm Subdivision – Phasing Memorandum" from VHB Engineering NC**. The memorandum states "The TIA analyzed the Fost Tract Development as a background project which would be completed prior to the Flora Farm Subdivision. Since the submittal of the TIA, the construction schedules for both projects have shifted, and it is expected that construction for both developments will overlap with each other. The recommended offsite improvements within the TIA for the building of both developments are still valid; however, this memorandum provides clarification for how those improvements should be phased as both developments are being constructed." The county has not received approval from NCDOT regarding the recommendations. It is also unclear if NCDOT commented on the first TIA or the second TIA. NCDOT had not seen or commented on the Phasing Memorandum as of March 25, 2020.

The Phasing Memorandum contains roadway improvements for Fost Boulevard not included in either TIA previously submitted. While the Phasing Memorandum states that recommended offsite improvements are still valid, there appears to be conflict in some areas. For example at Caratoke Highway and Survey Road (Unsignalized), the TIA recommends striping out at least 150 feet of storage within the existing two-way left-turn lane along Caratoke Highway for the northbound left-turn. The memorandum indicates striping out at least 200 feet of full storage within the existing northbound two-way left-turn lane along Caratoke Highway at Survey Road. It is recommended that the TIA be amended to include the memorandum suggestions and any discrepancies be rectified before resubmittal of another TIA. The TIA must be approved by NCDOT prior to resubmission.

J**anuary 20, 2020 TIA and January 31, 2020 TIA:** Routes all residential traffic through the future Fost Boulevard to Caratoke Highway in the adjoining development. The developer indicates that this is not correct, but a revised TIA has not been submitted. The TIA indicates that the future signalized intersection as part of the Fost Development can accommodate the additional traffic generated during the residential phase, and no signalizations or offsite lane geometric improvements are recommended. On March 25, 2020 the developer submitted a revised phasing plan indicating subdivision access to Survey Road as part of Phase 1.

Once the development is fully constructed (not including school) in 2026, the TIA recommends the following improvements:

Caratoke Highway and Survey Road (unsignalized)
The Survey Road eastbound stop-controlled approach is expected to operate at a Level of Service (LOS) E during the PM peak hour under Build (2026) conditions if no additional improvements are made. After the build-out of the development, vehicles will be able to access full movement traffic signals at Survey Road to north of the development, and Fost Boulevard south. Therefore the following improvements are recommended for the intersection:

- Provide a southbound right-turn lane with at least 100 feet of full storage and appropriate taper.

- Restrict access at the intersection to not allow left-turns off of Survey Road. This restriction of access should be completed when approximately 30% of the total estimated trips for the site are observed, likely in conjunction with the southbound right-turn lane installation.
- Stripe out at least 200 feet of storage within the existing two-way left-turn lane along Caratoke Highway for the northbound left turn.
- Monitor the intersection for potential signalization in the future.

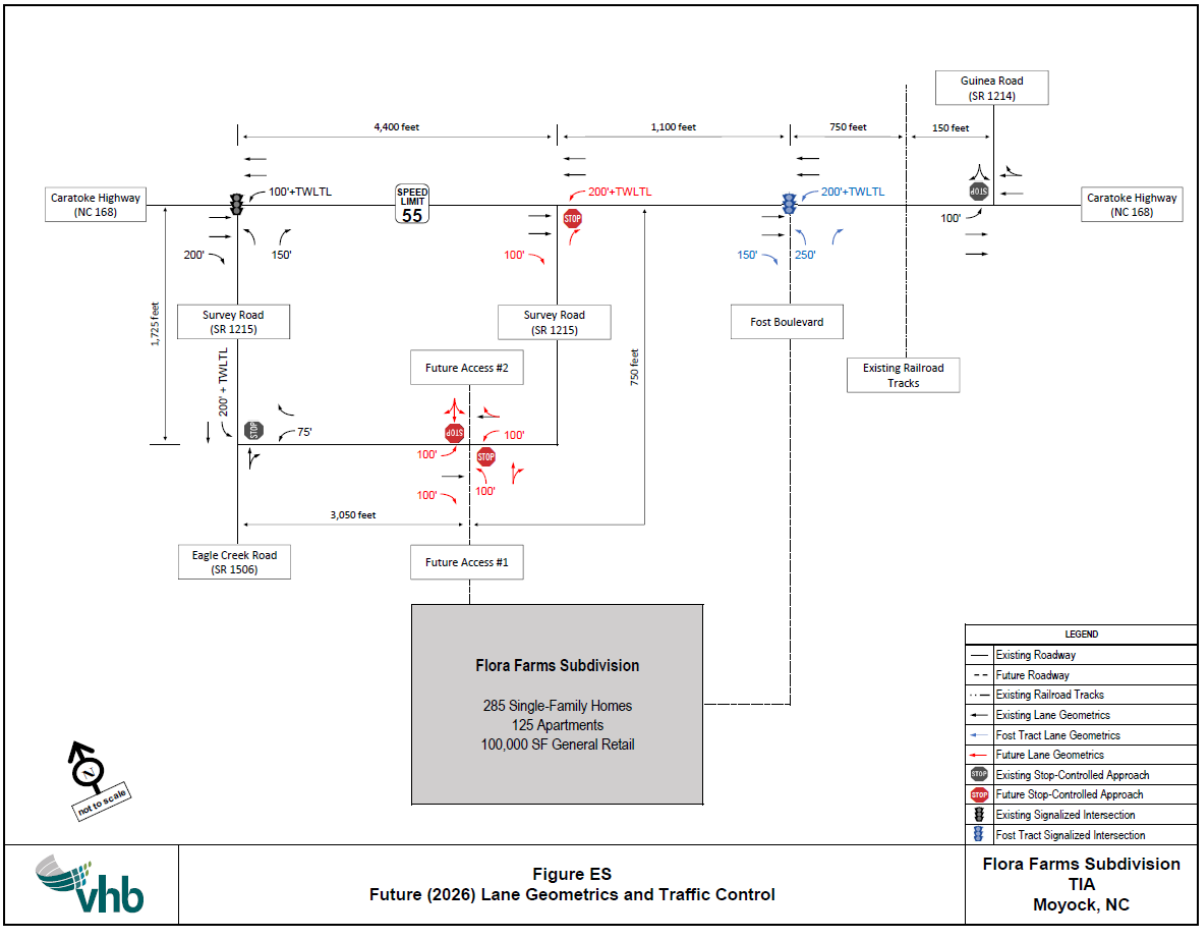
Survey Road and Future Access #1/Future Access #2

The proposed stop-controlled driveways are projected to operate at acceptable levels of service during peak hours under Build (2026) conditions. The following driveway configuration for both access driveways should be considered to enhance traffic operations and safety:

- Connect both driveways to Survey Road with stop-controlled approaches as a full movement four-leg intersection.
- Construct Future Access #1 with one ingress lane and two egress lanes. Provide northbound left-turn lane with a minimum of 100 feet of full storage and appropriate taper and a through/right-turn lane. Lydia Street intersects with Future Access #1 approximately 300 feet from Survey Road, which provides the proper internal protected stem to accommodate projected queues. Typically, NCDOT requires a 100 foot minimum internal protected stem for this type of facility.
- Construct Future Access # 2 with one ingress lane and one egress lane.
- Provide an eastbound left-turn lane and right-turn lane along Survey Road, both with a minimum of 100 feet of full storage and appropriate taper.
- Provide a westbound left turn lane along Survey Road with at least 100 feet of full storage and appropriate taper.

The other intersections within the study area are projected to remain at an acceptable LOS once the development is completed; therefore, no additional offsite lane geometric improvements are recommended.

The illustration below depicts the TIA's recommended improvements noted above including an additional stoplight on Caratoke Highway (Survey Road and Fost Boulevard):



The following table depicts the Summary Level of Service Table. NCDOT defines the relationship of travel demand compared to the roadway capacity as the level of service (LOS) of a roadway. Please also reference the attached NCDOT LOS Definitions. The last column of the table indicates LOS at full build-out with road improvements. These counts do not consider the proposed school that is a part of this request; therefore, the LOS projections are not an accurate reflection all proposed uses in the PD-R request.

TRAFFIC IMPACT ANALYSIS

Table ES-1 Summary Level of Service Table

Intersection and Approach	Traffic Control	Existing (2019)		No-Build (2026)		Build (2026)		Build (2026) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (12.3)**	**A (7.8)**	**B (13.5)**	**B (12.2)**	**B (16.0)**	**B (18.1)**	**B (15.7)**	**B (18.0)**
Eastbound		D-44.8	D-46.3	D-43.7	D-50.0	D-41.5	E-61.2	D-41.5	E-61.2
Northbound		A-6.7	A-3.5	A-7.2	A-3.6	A-9.8	A-5.1	A-9.2	A-4.8
Southbound		A-5.9	A-5.8	B-11.2	B-12.2	B-12.0	B-16.2	B-12.0	B-16.2
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		A-9.7	C-15.1	B-10.5	C-21.2	C-23.3	F-844.9	B-11.4	E-37.9
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		C-15.0	C-15.5	C-20.6	C-21.2	C-22.6	C-23.7	C-22.6	C-23.7
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		A-9.6	A-9.8	B-10.2	B-10.4	B-11.2	B-12.1	B-11.2	B-12.1
Caratoke Highway (NC 168) and Fost Boulevard	Signalized	**N/A**	**N/A**	**B (11.1)**	**B (11.3)**	**B (11.9)**	**B (11.3)**	**B (13.9)**	**B (14.1)**
Eastbound		N/A	N/A	C-30.5	D-38.2	C-30.1	D-41.1	C-30.2	D-43.7
Northbound		N/A	N/A	A-9.5	B-11.1	A-9.9	B-11.6	B-11.6	B-13.3
Southbound		N/A	N/A	A-4.6	A-8.0	A-7.2	A-7.2	A-9.4	A-9.9
Survey Road and Future Access #1/Future Access #2	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Northbound		N/A	N/A	N/A	N/A	B-13.3	C-23.5	B-11.7	C-15.4
Southbound		N/A	N/A	N/A	N/A	B-12.4	C-17.7	B-11.7	C-16.2

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay

It should also be noted that the School Transportation Director has expressed concern regarding street widths for school bus maneuverability and parking concerns for homes located so close to front property line which has been resulting in insufficient off-street parking causing cars to park on-street making school bus maneuverability very difficult. The applicant has increased the front setback to 35' to alleviate part of the School Transportation Director's concerns.

Utilities

At the pre-application meeting, the developer said that this development would share a waste water treatment plant (WWTP) with the Fost Development. The plant would be on one property with the spray field on the other. This is allowed, but only with the issuance of a use permit for a major utility unless the two developments are combined into one development. The UDO defines a major utility as "infrastructure services providing regional or *community-wide* service that normally entail the construction of new buildings or structures such as water towers, *waste treatment plants*, potable water treatment plants, solid waste facilities, and electrical substations." The Planning Director interprets a community-wide service facility, such as a waste treatment plant, as a major utility.

The developer did not wish to pursue a use permit for a major utility, and indicated he would provide a separate, independent WWTP for each development. It should be noted that TRC encourages sharing a WWTP between Fost and Flora; however, staff cannot support the developer's interpretation that a shared WWTP is a minor utility that does not require a use permit. While minor utilities are located in or near the neighborhood they service, they are a much less intense use, such as sewage pump station as called out in the UDO, and not the entire WWTP and disposal system.

County water is available to service the request. The Utilities Director has asked the developer to make a main connection off of Survey Road instead of through Fost since Fost is not

developed yet and this would make a complete loop for the water line. The loop is important because if there is a water main break at one development, the Water Department could then shut off water to one development instead of to both developments, commercial uses, and a school. The loop would be a more efficient service to the customers and provide a better level of service. The developer has agreed to this request.

Drainage

There is an emphasis on downstream maintenance at this time. There are portions of Rowland Creek and the ditches on Guinea Road and Survey Road with brush and debris that need to be cleaned up. The conceptual plan provides limited drainage details.

On-site stormwater will be managed by construction a series of stormwater management ponds that will be interconnected and will retain and slow-release stormwater primarily to Rowland Creek both directly and indirectly. Stormwater shall be conveyed to on-site retention ponds through a combination of curbs with inlets, stormwater pipes and open, vegetated swales. With designated wetlands on the property, major drainage features traversing the site, high ground water table, low elevation, soils with slow permeability and the known drainage issues in the area, extra precaution must be made to ensure compliance with drainage regulations.

The mitigate drainage concerns, the developer offers the following:

1. The following improvements to stormwater drainage ("Improvements") shall be completed by the Developer prior to recording the final plat for the first phase of development on the Property:
    i. Continue the Rowland Creek improvements to the northwest to Eagle Creek pump station as authorized by the Eagle Creek Homeowners Association.
    ii. Improve the existing property line ditch or install a new ditch along a portion of the Property's northwestern common boundary line with Eagle Creek and Ranchland where shown on the Preliminary Drainage Plan on a positive grade with 3:1 side slopes and sized for a 100 year storm event from the drainage basin In which the Property and a portion of Eagle Creek and Ranchland Subdivision are located.
    iii. The Improvements set forth in this section shall be maintained by the Developer, or a management association created by the Developer.
    iv. Establish permanent easements along Rowland Creek and the property line ditch described in paragraph iii above for ongoing maintenance of these drainage facilities.
    v. Improvements will be generally as shown on sheet 5 of the Master Plan drawing.

2. General Stormwater Conditions
    i. The Developer shall construct berms along ditch outlets against Eagle Creek and Ranchland to reduce the potential of the proposed development's runoff from flooding Eagle Creek and Ranchland during a 100 year storm.
    ii. On-site stormwater will be managed by construction a series of stormwater management ponds that will be interconnected and will retain and slow-release stormwater to Rowland Creek and other drainage outlets both directly and indirectly.
    iii. In addition to modeling and retaining stormwater to the UDO and Stormwater Manual standard for the difference between runoff from the 10-year developed

condition and runoff from a 2-year wooded condition site, stormwater will be modeled for the 100-year storm event and property line berms constructed as necessary to manage the 100-year storm without adversely impacting neighboring properties.

iv. Stormwater will be conveyed to on-site retention ponds through a combination of curbs with inlets, stormwater pipes and open, vegetated swales.

Schools

This development is split by the Moyock and Shawboro school districts (see attached map). On June 9, 2020 the former Superintendent attended the Planning Board meeting and shared a letter (attached) that stated the school site shown on the plan has officially been selected for school construction. The former Superintendent said additional capacity was being added through mobile classrooms at Moyock Elementary; however, the Board of Education has not taken official action by vote on this change in policy as of the writing of this staff report. Section 3.7.2.E of the UDO requires that the PD zoning district designation, the master plan, and the terms and conditions document be consistent with the 2006 Land Use Plan and any applicable functional plans and small area plans adopted by the county. According to Land Use Plan Policy PP2 (see below), it is necessary to consider adequate public facilities when considering a Planned Development rezoning because of the intensity and residential density of this type of development.

Without official action by the Board of Education changing their capacity numbers to include mobile facilities, adequate school capacity or school capacity programmed to be in place within two years from approval, the inability to meet the adequate public facilities ordinance (UDO Section 6.6) should be considered at the rezoning request. The proposed phasing schedule claims that dwelling units will not be built until school capacity is available in August 2023. The developer is asking for zoning approval of lots in the Moyock Elementary School district *now* that according to Currituck County School System, there is not adequate facilities to service.

Staff is concerned that approving a phasing schedule based on a conceptual timeframe for elementary school construction could create an unmanageable situation. If there is a delay and the school does not open in August 2023, dwellings could be occupied which will send more students to a school that is over capacity. Considering our recent growth along with the number of lots available for home construction, there is also concern that middle school and high school populations will be near or over capacities in the next three to five years. Other public facilities, such as law enforcement, emergency medical services, firefighting services, county water, will need to be evaluated for adequacy as well.

The below tables lists the proposed number of students this development is projected to generate. While Moyock Elementary has been the primary concern, it should be noted that the middle schools and high schools are at or over committed capacity.

ADEQUATE PUBLIC FACILITIES – SCHOOLS[1]				
School	2019-2020 2020-2021 Actual Capacity[2]	2021-2022 Actual Capacity[3]	Committed Capacity[3]	Proposed Capacity Changes
				Number of Students
Moyock Elementary	109%	115%%	122%	71
Shawboro Elementary	87%	90%		31
Central Elementary	77%	85%		0
Moyock Middle	94%	83%	96%	32
Currituck Middle	70%			
Currituck High JP Knapp Early College	85%		103%	57

[1]Does not include minor subdivisions, exempt subdivisions, and subdivisions approved prior to the adoption of the adequate public facilities ordinance (October 1994)

[2]Capacity percentages are based on 2019-2020 and 2020-2021 school year classroom standards and January 2020 ADM

[3]Capacity percentages are based on the 2021-2022 school year classroom standards and January 2020 ADM

On June 11, 2020 the former Superintended provided the below adjusted Moyock Elementary School capacity numbers based on the addition of four mobile classrooms. Official action by the Board of Education has not been taken to adopt the new capacity numbers. Based on the chart below, the 2021-22 capacity of MES will be 609, The **January 2020 ADM** (average daily membership) for MES provided by school system staff is **609**.

1	***Adequate School Capacity Chart (based on K-3 Implementation Schedule)***		
2			
3	***School***	***2019-20***	***2021-22***
4		***2020-21***	
5	***MES***	560 (640*)	529 (609*)
6	***SES***	641	622
7	***CES***	313	282
8	***KIES***	236	228
9	***GES***	431	413
10	***JES***	309	288
11			
12	***CCMS***	540	540
13	***MMS***	640	640
14			
15	***CCHS***	1200	1200
16	***JPK***	300	300
17			
18		K-3 Full Implementation Year	
19			
20	*MES Adjusted Capacities in ( ) were based on the addition of 4 Mobile Classrooms.		
21	MES adjusted capacities expire upon removal/relocation of the Mobile Classrooms.		
22	*adjustments confirmed (6/5/20)		
23			

STAFF'S CONCERNS REGARDING PROJECT CONSIDERATION AT THIS TIME:

- The Traffic Impact Analysis (TIA):
  - Includes "one background development, Fost Tract Development." Moyock Farms must now be included in the TIA as its only access will be through the Fost Tract, assuming the amended Moyock Farms plan is approved. This will be 31 additional lots. Will the additional estimated 300 trips per day trigger an alternate transportation improvement plan?
  - Since the school site is not included in the TIA, it is not possible to determine the adequacy and safety of travelling public within and surrounding this site at this time. The primary purpose of the UDO is to protect the public health, safety, and general welfare of the citizens and landowners of Currituck County. It would be irresponsible of the county to approve a PDR and not anticipate traffic impacts of all of its uses, including an elementary school. Will the additional trips per day cause an even lower Level of Service on Caratoke Highway intersection? Trigger alternate/additional transportation improvements? It is understood that driveway location for the school is not determined yet, but the volume of traffic based upon the size of the school can be determined. An elementary school generates a large volume of traffic and the traffic impacts must be considered to determine the adequacy of proposed improvements and safety of the travelling public, including pedestrians (school children). It is understood that a school requires it's on TIA as part of project approval from NCDOT.
  - Even though NCDOT is not requiring that school site traffic be considered as part of the development, that does not mean the county cannot ask for an accurate reflection of the total traffic usage of the PDR and examine those traffic impacts on the safety of the travelling public, motorist and pedestrian.
- Without official action by the Board of Education that adequate school capacity or school capacity programmed to be in place within two years from approval, the inability to meet the adequate public facilities ordinance (UDO Section 6.6) can and should be considered at the rezoning request. The proposed phasing schedule claims that dwelling units will not be built until school capacity is available in August 2023. The developer is asking for zoning approval of lots in the Moyock Elementary School district now when an increase in school capacity due to the use of mobile classrooms has not received official action. The phasing schedule received March 9, 2020 does not include the school. Since the school is a part of the PD-R, it must be included in the phasing schedule.
  - The developer must address how the school will open if it is finished before the PD-R's WWTP is operational to service it. The developer claims that the WWTP will be in place before the school opens. A legal document notating the provision of WWTP to service the school prior to school opening is sufficient.
  - The developer must address how the school will be accessed if the subdivision roads will not be installed prior to the school opening. The developer claims that the roads will be installed prior to the school opening. A legal document notating the provision of roads to service the school prior to school opening is sufficient.
  - Another option is to remove the school parcel from the PD-R. Since the school parcel is over 10 acres, an exempt subdivision plat can be recorded.
- The BOC directed staff at its February 7, 2020 retreat to remove PD-R zoning from the UDO since it allows development densities and intensities beyond what the board finds acceptable, except in Currituck Station where services and infrastructure and planned for that level of development.

- Soils in the project location are concerning. Roanoke fine sandy loam and Cape Fear Silt are found in the area containing the commercial and upper story dwelling units. According to the Currituck County Soils survey, these soils are "poorly suited to most urban and recreation uses because of flooding, wetness, slow permeability and low strength."

LAND USE PLAN	
The 2006 Land Use Plan classifies this site as Full Service within the Moyock subarea. The policy emphasis for the Moyock subarea is to properly manage the increased urban level of growth that this area is sure to experience over the next decade and beyond. Section 3.7.2.E of the UDO requires that the PD zoning district designation, the master plan, and the terms and conditions document be consistent with the 2006 Land Use Plan and any applicable functional plans and small area plans adopted by the county. While the proposal is consistent with some policies in the Land Use Plan (see attached list from developer for more detail), it is inconsistent with other policies of the plan, some of which are:	
Policy HN1	Currituck County shall encourage development to occur at densities appropriate for the location. LOCATION AND DENSITY FACTORS shall include whether the development is within an environmentally suitable area, the type and capacity of sewage treatment available to the site, the adequacy of transportation facilities providing access to the site, and the proximity to existing and planned urban services. *Comments:* • With the approval of Fost PD-R on a neighboring parcel, it was established that higher residential density was acceptable in this area of Moyock. • The BOC unanimously directed staff at its February 7, 2020 retreat to remove PD-R zoning from the UDO since it allows development densities and intensities beyond what the board finds acceptable, except in Currituck Station where public services and infrastructure and planned for that level of development. The text amendment is forthcoming. • Without an updated TIA approved by NCDOT including Moyock Farms traffic as noted above, it is not possible to determine the adequacy of transportation facilities providing access to this site at this time. Will the additional estimated 300 trips per day generated by Moyock Farms trigger additional transportation improvements? • The BOC must determine if lessening the Level of Service along Caratoke Highway during peak traffic times without inclusion of the school is adequate and acceptable. • Since the school site is not included in the TIA, it is not possible to determine the adequacy and safety of travelling public within and surrounding this site at this time.

Policy TR2	Transportation planning shall be employed to promote a hierarchical functional transportation system and to promote the proper arrangement of land patterns by controlling the location and appropriate use of streets, highways, trails, and other modes of transportation. Generally, the design of major roads should give first priority to moving traffic, while smaller roads may give greater emphasis to serving adjoining land uses. *Comments:* • Without the school being a part of the TIA, it is not possible to determine if streets are being appropriately designed and controlled. • Currituck County Schools has expressed a concern over street widths for school bus maneuverability and parking concerns for homes located so close to front property line which has been resulting in insufficient off-street parking causing cars to park on-street making school bus maneuverability very difficult. ***Note: The developer has increased from setbacks from 20' to 35' addressing part of the School's concern.*** • A revised TIA including Moyock Farms traffic, approved by NCDOT, is necessary to determine the appropriate improvements and timing of improvements.
Policy SF3	Site planning for traffic management and safety in the vicinity of public schools shall be a priority. *Comments:* • Without the school being a part of the TIA, staff has concerns that traffic is not (vehicle, bicycle, pedestrian) being appropriately managed with a priority on the safety of the travelling public including school children, school buses, etc. • Currituck County Schools has expressed a concern over street widths for school bus maneuverability.
Policy SF4	Currituck County shall continue to support a service level policy for schools that calls for the construction and maintenance of classroom space sufficient to avoid the use of mobile classroom units. *Comments:* • Approximately 286 dwelling units are proposed in the Moyock Elementary School district where no school capacity exists until official action is taken by the the Currituck County Board of Education.
Policy PP2	Currituck County shall continue to implement a policy of ADEQUATE PUBLIC FACILITIES, sufficient to support associated growth and development. Such facilities may include but not limited to water supply, school capacity, park and open space needs, firefighting capability, and law enforcement. *Comments:* • Approximately 286 dwelling units are proposed in the Moyock Elementary School district where no school capacity exists until official action is taken by the Currituck County Board of Education. • Until official action is taken by the Currituck County Board of Education, the additional students (71) this development is projected to generate that will attend the Moyock Elementary School district will increase the over capacity issue. Approving a PD-R rezoning to increase density may also burden the middle schools and high schools that are near actual capacity and near or over committed capacity. (See table above.)

MOYOCK SMALL AREA PLAN	
The Moyock Small Area Plan classifies this site as Full Service and Limited Service. The policy emphasis for Full Service in Moyock is to provide focal points in the community where high amounts of activity occur. Both residential and commercial components will be present in Full Service areas. Cluster or planned commercial and residential areas with diversity in housing types is preferred. The policy emphasis for Limited Service designations are less intensely developed than Full Service. Emphasis is more on residential development and densities. Limited Service designation has reduced public services such as fire protection, emergency service, recreation, and public water. While the proposal is consistent with some policies in the Moyock Small Area Plan (see attached list from developer for more detail), it is inconsistent with other policies of the plan, some of which are:	
Policy TR1	Design future transportation improvements that are consistent with Complete Streets Policy. Complete Streets policy encourages design of transportation networks and facilities that safely accommodate pedestrians, bicyclists, rail, and vehicles. Comments: • A revised TIA including Moyock Farms traffic, approved by NCDOT, is necessary to determine the appropriate improvements and timing of improvements. • Without the school being a part of the TIA, it is not possible to determine if streets safely accommodate pedestrians, bicyclists, and vehicles. • Currituck County Schools has expressed a concern over street widths for school bus maneuverability.
Policy FLU 1	Promote compatibility between new development and existing development to avoid adverse impacts to the existing community. This is achieved through design and includes larger setbacks, landscaped or forested strips, transition zones, fencing, screening, density and or bulk step downs or other architectural and site planning measures that encourage harmony. Comments: • The area of the project neighboring Ranchland has single family dwelling lots that typically average 15,000 sq ft. The Ranchland lots range from 1.5 -5 acre lots. • The area of the project neighboring Eagle Creek has single family dwelling lots that typically average 15,000 sq ft. The Eagle Creek lots range from 0.69 -1.11 acre lots • The 25' buffer may not be sufficient transition between lot sizes.

RECOMMENDATION

Technical Review Committee

The Technical Review Committee recommends denial of this request based upon the following:

Planning

1. Traffic Impact Analysis (TIA):
    a. While the TIA includes Fost as a background development, it does not include Moyock Farms which is proposing 100% access through Fost.
    b. Staff has concerns that the TIA does not include the school site and may not accurately reflect the proposed conditions. Since the school site is a part of this PD-R request, it must be included in the TIA.

i. In looking at Table ES-1 Summary Level of Service Table, even without the inclusion of elementary school traffic, it appears that the LOS will drop from an A to a D at east bound Caratoke Highway and Survey Road at peak travel times. There are other drops in LOS for Caratoke Highway (reference table), a major arterial street, at peak travel times. Is NCDOT agreeable to the drop in LOS for Caratoke Highway? Is the Board of Commissioners agreeable to the drop in the level of service? The LOS and drops in the LOS do not include traffic from the school, which will significantly impact LOS. Are there other traffic improvements that may be required to maintain an equal LOS?

2. On June 9, 2020 the Superintendent attended the Planning Board meeting and shared a letter (attached) that stated the school site shown on the plan has officially been selected for school construction and on June 11, 2020 he provided a new capacity number for Moyock Elementary School based on the addition of four mobile classroom units. As of the writing of this staff report, the Board of Education has not officially acted on the new capacity number. Without Board of Education approval of the new capacity at Moyock Elementary School based on mobile classrooms, there is not school capacity available now or planned to be in place within two years of the development approval for the elementary school children in the Moyock District that this development will generate. Section 3.7.2.E of the UDO requires that the PD zoning district designation, the master plan, and the terms and conditions document be consistent with the 2006 Land Use Plan and any applicable functional plans and small area plans adopted by the county. According to Land Use Plan Policy PP2 (see below), it is necessary to consider adequate public facilities when considering a Planned Development rezoning because of the intensity and residential density of this type of development. Per Superintendent on 1/15/2020, a portion of the development is districted to Moyock Elementary School and at the time of the writing of this comment, the BOE has not made a change to the district boundary. It is necessary to consider adequate public facilities when considering a Planned Development because of the intensity of development. For a legislative decision like a rezoning, all impacts to the community can and should be considered. The developer is proposing a phasing schedule that claims no dwelling units will be built until school capacity is available. The important thing to note is that according to Currituck County Schools, school capacity is not available *now* nor voted by the Board of Education to be programmed to be in place in *two years* for the portion of the development districted to Moyock Elementary School. The developer is asking for zoning approval of lots in the Moyock Elementary School district *now* that according to Currituck County School System, there is not adequate facilities to service. If the elementary school capacity is addressed, there is no guarantee that all other public facilities will be adequate (i.e. law enforcement, emergency medical services, firefighting services, county water).
3. The timing of the phasing scheduled must include the school since it is a part of the development. (UDO Section 3.7.2.G)
4. Since the school site is a part of the PD-R, the developer must address how the school will open if it is finished before the PD-R's WWTP is operational to service it.
5. Terms and Conditions document:
    a. It does not appear that the county can regulate or enforce the workforce housing condition. This condition may need to be removed from the document.
    b. The school must be included in the phasing schedule since it is a part of the master plan. (UDO Section 3.7.2.G

Currituck County School Facilities, Maintenance, and Transportation Director

6. There is a concern over street widths for school bus.

CONSISTENCY AND REASONABLENESS STATEMENT

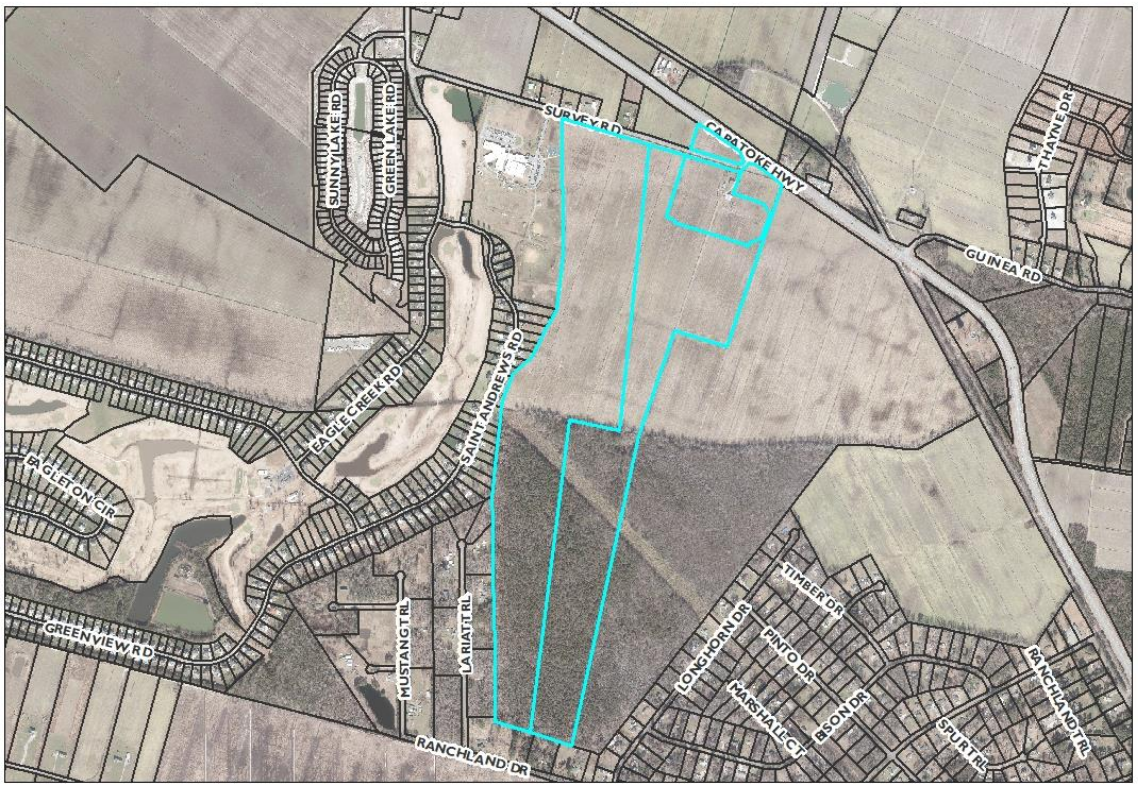
A planned development rezoning is a legislative decision of the Board of Commissioners. In determining whether to approve or deny a rezoning the Board of Commissioners shall adopt a written statement of consistency and reasonableness.

This planned development rezoning request is inconsistent with the below applicable review standards from 2.4.3.C:

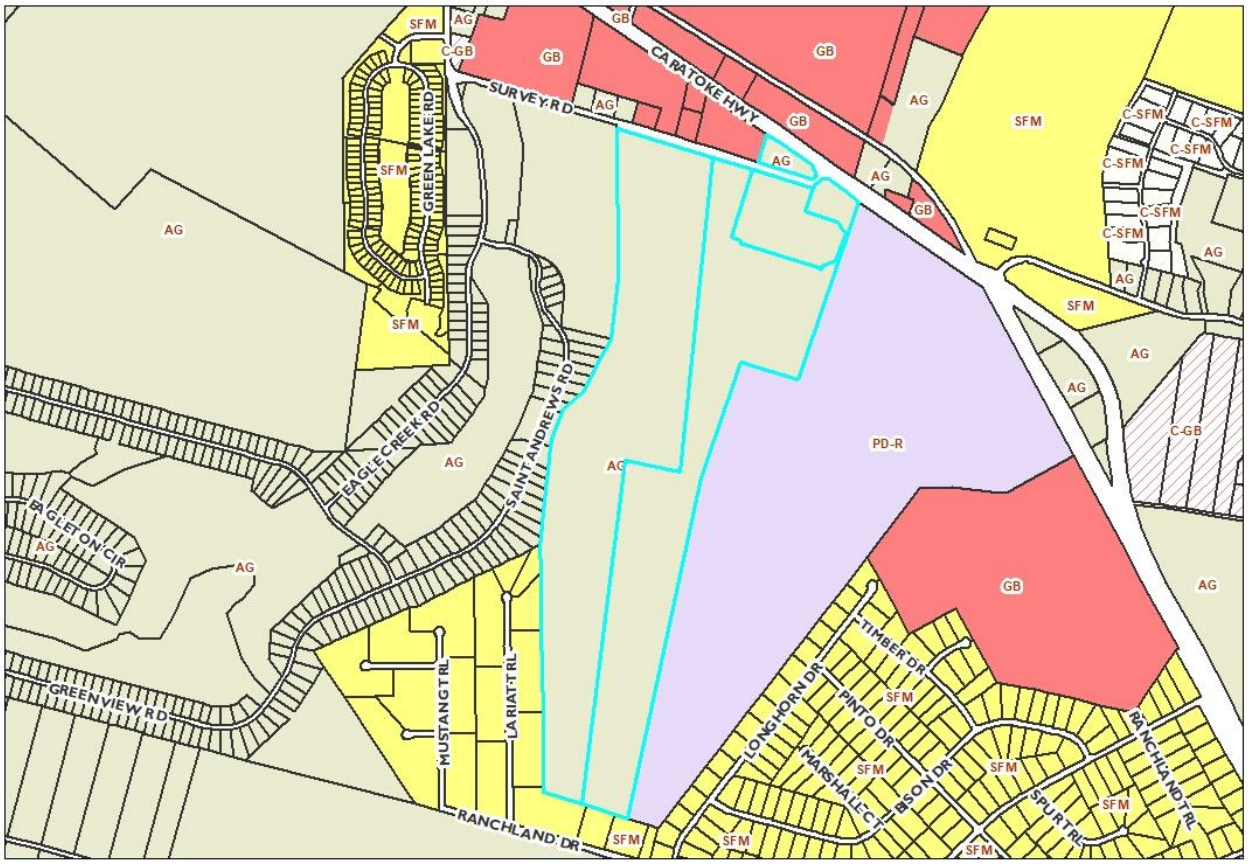
1. It is not consistent with the goals, objectives, and policies of the Land Use Plan, other applicable county-adopted plans, and the purpose of the UDO.
    - See above where the development is determined to inconsistent with LUP Policies HN1, TR2, SF3, SF4, PP2, and Moyock Small Area Plan TR1.
        - One of the purposes of the UDO is to facilitate the adequate provision of transportation, utilities, parks, recreation, emergency services, and other public facilities. This proposal is insufficient in determining the safety of the transportation service and offers dwelling units in a school district where zero school capacity exists.

It is not reasonable and not in the public interest because of the inconsistences with the Land Use Plan, Moyock Small Area Plan, and the purpose of the UDO. There are not adequate public facilities (schools) to service this development now or programed to be in place within two years as required by the Adequate Public Facilities Standards in the UDO. The UDO requires that the conditional zoning (legislative) be consistent with the Land Use Plan. As stated above, the Land Use Plan requires adequate public facilities be in place at time of approval – See Policy PP2 above.

THE APPLICATION AND RELATED MATERIALS ARE AVAILABLE ON THE COUNTY'S WEBSITE
Board of Commissioners: www.co.currituck.nc.us/planning-board-minutes-current.cfm

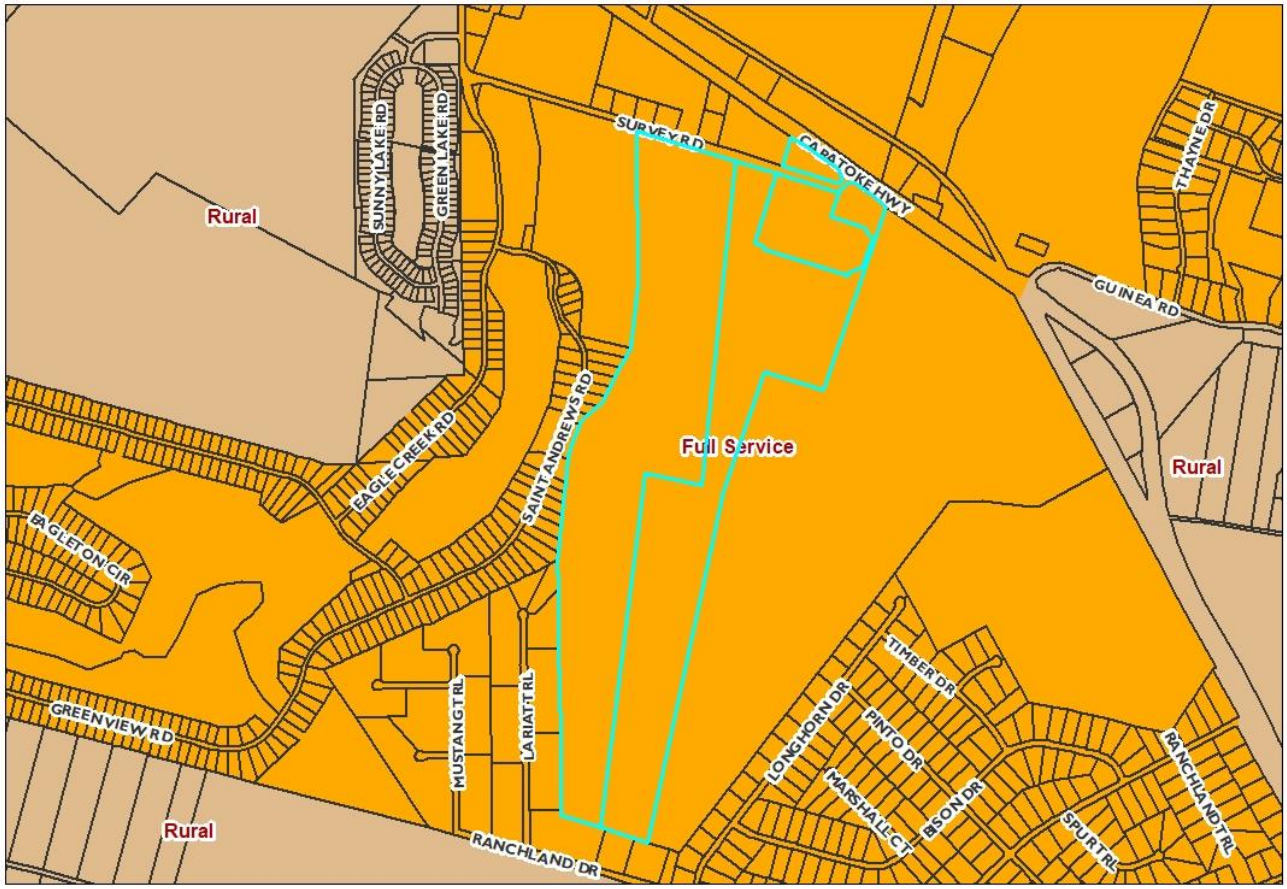


PB 19-20 Flora Farm
Aerial Photography (2016)



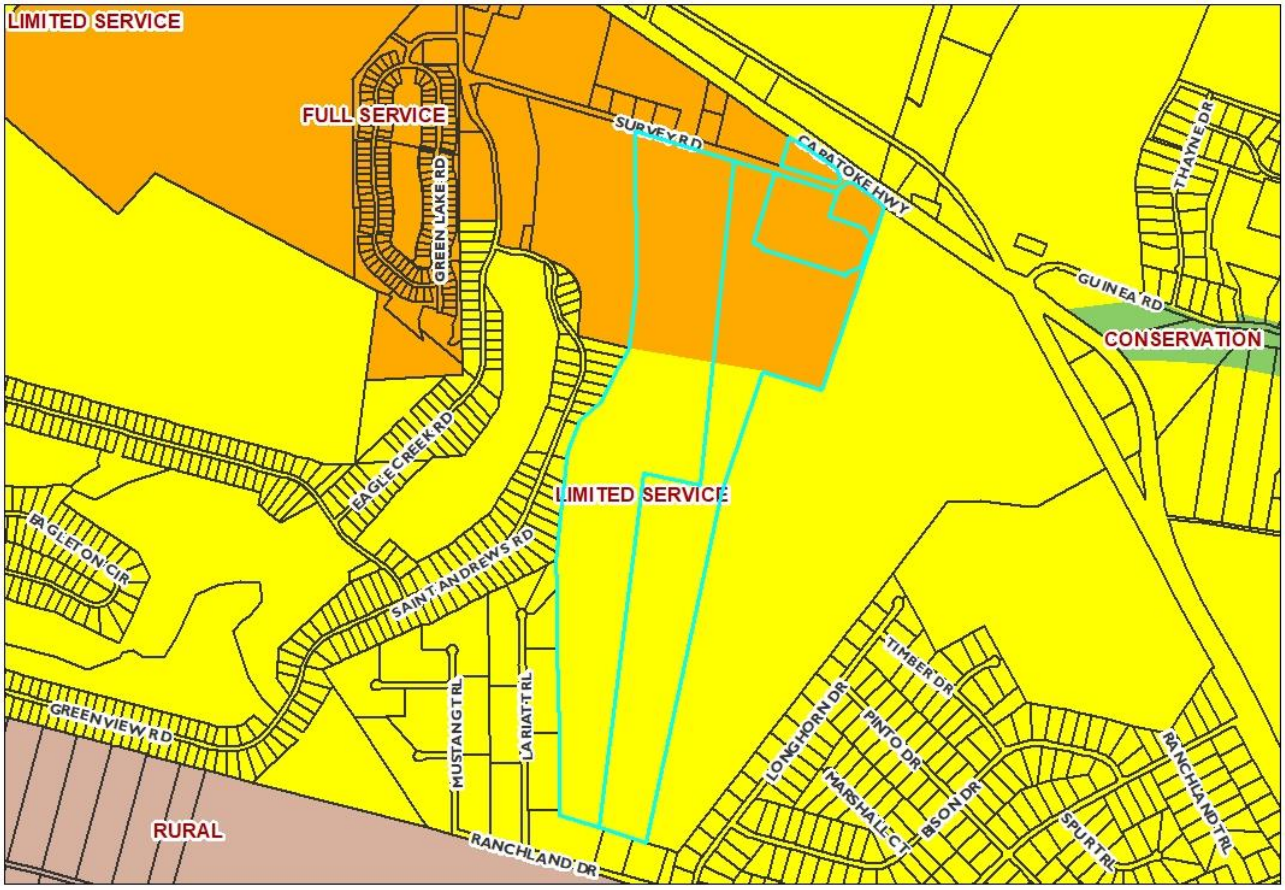
PB 19-20 Flora Farm
Zoning Base Districts

N



PB 19-20 Flora Farm
2006 Land Use Plan Classifications

N



PB 19-20 Flora Farm
Moyock Small Area Plan Classifications

N

Flora Farm Rezoning PB 19-20
Planning Board Staff Report
June 9, 2020
RED TEXT = STAFF RESPONSES 6/10/2020

STAFF CLAIM	**ACTUAL STATUS**
"Since the school site is not included in the TIA, it is not possible to determine the adequacy and safety of travelling public within and surrounding this site at this time." p. 51	Per NCDOT District Engineer Otts, Packet p. 257, NCDOT has approved the updated TIA based on March 26 comments. NCDOT engineers are competent to determine the adequacy and safety of the travelling public. ***IT WOULD BE IRRESPONSIBLE OF THE COUNTY TO APPROVE A SCHOOL AS A PART OF A PDR AND NOT ANTICIPATE TRAFFIC/PEDESTRIAN IMPACTS. WILL TRIPS PER DAY AND AN EVEN LOWER SERVICE LEVEL ON CARATOKE HIGHWAY PROVE THAT THIS IS NOT AN ACCEPTABLE SCHOOL SITE? EVEN THOUGH NCDOT IS NOT REQUIRING THE SCHOOL SITE BE APPROVED AS PART OF THE DEVELOPMENT, THAT DOES NOT MEAN THE COUNTY CANNOT ASK FOR AN ACCURATE REFLECTION OF THE TOTAL USAGE OF THE PDR. IT IS UNDERSTOOD THAT A SCHOOL REQUIRES IT'S ON TIA AS PART OF PROJEC APPROVAL.***
"These [TIA] counts do not consider the proposed school that is a part of this request; therefore, the LOS projections are not an accurate reflection all proposed uses in the PD-R request" p. 54	The school site will be required to have its own TIA at site plan, as directed by NCDOT and advised by VHB. ***AGREED. SCHOOL WILL NEED A MUCH MORE DETAILED TIA ONCE ALL ELEMENTS OF THE SCHOOL ARE KNOWN (DRIVEWAY LOCATION, STACKING, ETC.)***
School Transportation Director expressed concerns over street widths and applicant has increased the front setback to 35' to relieve part of these concerns. Packet p. 54	Developer also updated master plan to allow for on-street parking in designated areas to reduce concerns over bus maneuvering**.** ***AGREED. ADDRESSED OFF-STREET PARKING BY INCREASING FRONT SETBACKS ON RESIDENTIAL LOTS, BUT DID NOT ADDRESS THE SCHOOL TRANSPORTATION DIRECTOR'S CONCERN OVER STREET WIDTHS.***
"Moyock Farms must now be included in the TIA" p. 57	Per NCDOT, the Flora request has adequately mitigated its traffic, and any changes from Moyock Farms' approved plans should be addressed by that developer as it is unrelated to the Flora development. ***IF THE FLORA TIA INCLUDES FOST, WHICH IT DOES, THEN IT SHOULD ACCOUNT FOR ALL OF FOST TRAFFIC, WHICH NOW INCLUDES ALL OF MOYOCK FARMS TRAFFIC, ESTIMATED TO BE 300 ADDITIONAL TRIPS PER DAY.***
"Staff has concerns that the TIA does not include the school site and may not	NCDOT MSTA guidance dictates that a separate traffic study must be performed for any future school development, whether

Flora Farm Rezoning PB 19-20
Planning Board Staff Report
June 9, 2020
RED TEXT = STAFF RESPONSES 6/10/2020

accurately reflect the proposed conditions. Since the school site is a part of this PD-R request, it must be included in the TIA." P.	it is a new school or an expansion of an existing school. This traffic study would have to provide expected queues and delays based on daily loading and unloading operations at the school. Since a site plan for the new school site has not yet been developed, it is recommended to perform the school study at a future date when plans for the school are more solidified. The future school site would have its own external driveways that would allow traffic to enter and exit the site whether Flora driveways were constructed or not. If traffic needs to have access to internal streets to avoid having too many external driveways, the development can construct the driveways for Flora Farms when the school will need them. ***THE COUNTY CANNOT APPROVE A SCHOOL AS A PART OF A PDR AND NOT ANTICIPATE TRAFFIC/PEDESTRIAN IMPACTS. WILL TRIPS PER DAY AND AN EVEN LOWER SERVICE LEVEL PROVE THAT THIS IS NOT AN ACCEPTABLE SCHOOL SITE? JUST BECAUSE NCDOT IS NOT REQUIRING THE SCHOOL SITE TO BE APPROVED AS PART OF THE DEVELOPMENT, THAT DOES NOT MEAN THE COUNTY CANNOT ASK FOR AN ACCURATE REFLECTION OF THE TOTAL USAGE OF THE PDR.***
Planning Director determined Wastewater Treatment Plant to serve two developments is a "regional or community-wide service facility" which is a major utility. Told we can remove it or appeal interpretation to Board of Adjustment p. 54	We are not aware of any other WWTP serving two neighborhoods being treated as a "community-wide" or "regional" facility needing its own permit. ***NEW FACILITIES MUST MEET CURRENT UDO REQUIREMENTS.***
Drainage discussion focuses entirely on problems of drainage in the area and minimal details of what will be done p. 55	Actual conditions commit to extensive drainage improvements that relate directly to LUP Policies WS7, WQ3, WQ4; staff report ignores these policies and that concerns are addressed by Flora and Fost developments ***STAFF REPORT SAYS THERE ARE THE LISTED DRAINAGE CONCERNS, SO 'EXTRA PRECAUTION MUST BE MADE TO ENSURE COMPLIANCE WITH DRAINAGE REGULATIONS.' DRAINAGE IMPROVEMENTS WILL BE DETAILED IN UPDATED STAFF REPORT. THE PURPOSE OF A STAFF REPORT IS TO INFORM THE BOARD AND BRING ANY INCONSISTENCIES TO THE BOARD'S ATTENTION. THE APPLICANT ALSO HAS RESPONSIBILITY TO PROVIDE ADDITIONAL***

Flora Farm Rezoning PB 19-20
Planning Board Staff Report
June 9, 2020
RED TEXT = STAFF RESPONSES 6/10/2020

	INFORMATION AND ANY OTHER LUP POLICIES ITS SEES FIT TO HIGHLIGHT WHEN PRESENTING THEIR CASE. ONE CAN ASSUME THAT IF STAFF HAS NOT CALLED OUT THE POLICY AS INCONSISTENT, IT IS CONSISTENT OR NOT RELEVANT.
Schools: Superintendent stated a portion of the development is districted to Moyock Elementary p. 55	120 lots are currently slated for Shawboro district, with actual capacity today; report ignores portion of 2/18/2020 letter from Superintendent confirming this ***STAFF REPORT ACKNOWLEDGES THE SUBDIVISION IS SPLIT BY SCHOOL DISTRIC BOUNDARY LINES. SEE MAP IN STAFF REPORT SHOWING SCHOOL DISTRICT LINES. SEE CHART ON PAGE 10 OF STAFF REPORT THAT SPLITS THE CHILDREN UP BETWEEN SHAWBORO AND MOYOCK SCHOOL DISTIRCTS. A SENTENCE WILL BE ADDED TO THE STAFF REPORT NOTING SPLIT SCHOOL DISTRICT.***
"3.7.2.E of UDO <u>requires</u> that the PD zoning district designation, the master plan, and the terms and conditions document be consistent with the 2006 LUP… " p. 55	State law calls for a weighing of various policies within the 2006 LUP and evaluation of consistent and inconsistent statements. Staff ignored each of the consistent policies raised in the applicant's presentation. Staff should accurately inform the decision-making Boards of all policies and allow the Boards to make an informed decision. ***THE PURPOSE OF A STAFF REPORT IS TO INFORM THE BOARD AND BRING ANY INCONSISTENCIES TO THE BOARD'S ATTENTION. THE APPLICANT IS RESPONSIBLE FOR PROVIDING ADDITIONAL INFORMATION AND ANY OTHER LUP POLICIES ITS SEES FIT TO HIGHLIGHT WHEN PRESENTING THEIR CASE. ONE CAN ASSUME THAT IF STAFF HAS NOT CALLED OUT THE POLICY AS INCONSISTENT, IT IS CONSISTENT OR NOT RELEVANT.***
"Adequate Public Facilities Standards Section of the UDO has been upheld by the court decision in Tate Terrace" p. 57	That case was an appeal of a denied special use permit, not a rezoning. The ordinance itself was not at issue so it was not "upheld" by Tate. The ONLY relevance that case has is whether the evidence in that case supported the Board's decision. Not instructive at zoning, and no bearing on this Board's decision. ***AGREED, THE CASE WAS CITED TO REMIND THE BOARD OF THE IMPORTANCE OF THE ADEQUATE PUBLIC FACILITIES ORDINANCE. THE REFERENCE HAS BEEN REMOVED FROM THE STAFF REPORT.***
Developer must address school in phasing schedule p. 57	Applicant included school in the phasing schedule submitted May 19 based on multiple public statements by staff and County Manager Stikeleather that an elementary school was

Flora Farm Rezoning PB 19-20
Planning Board Staff Report
June 9, 2020
RED TEXT = STAFF RESPONSES 6/10/2020

	slated to open by August 2023 in the Moyock area. To adjust to more recent information, applicant will instead work with the Board of Education to record and convey the school site to the County with adequate time for construction. ***THE PHASING SCHEDULE THAT STAFF RECEIVED ON MAY 19TH DID NOT INCLUDE A SCHOOL. PERHAPS STAFF DID NOT RECEIVE THE CORRECT SCHEDULE?***
BOC directed staff to remove PD-R zoning from the UDO except in Currituck Station p. 58	Going through a separate text amendment to change the UDO for future applications. It does not, and cannot, apply to this zoning application under the NC Permit Choice Act § 143-755: (a) If a permit applicant submits a permit application for any type of development and a rule or ordinance changes between the time the permit application was submitted and a permit decision is made, the permit applicant may choose which version of the rule or ordinance will apply to the permit. (b) This section applies to all development permits issued by the State and by local governments. ***FOR A LEGISLATIVE REZONING HEARING, THE BOARD MAY CONSIDER ANY AND ALL FACTUAL EVIDENCE. IF IS A FACTUAL STATEMENT THAT THE BOC HAS DIRECTED THAT PD-R ZONING BE REMOVED FROM THE UDO. IT IS AGREED THAT THE TEXT AMENDMENT WILL APPLY TO DEVELOPMENT SUBMITTED AFTER THE EFFECTIVE DATE OF THE NEW ORDINANCE.***
Policy PP2 "The additional 71 students this development is projected to generate that will attend the Moyock Elementary School district cannot be approved since Currituck County schools indicate NO additional capacity for that district now or planned to be in place within two years." P. 59	This is inaccurate. At full build-out, the project will generate 71 elementary students over 5 years. However, 30 of those students would be generated in the current Shawboro school district, which has actual capacity today. Staff's statement ignores the actual text of Policy PP2 which simply requires the County to implement a APF policy, which they have at Special Use stage; ignores Policy AG3 to direct development near Full Service Areas, Ignores Policy SF2 to encourage offers of land for new schools in conjunction with related community development; ignores Appendix Policy which requires Board to consider not all students will arrive at once; Ignores phasing schedule B; Ignores Policy for Board of Commissioners to work towards a long-term plan for schools. ***BASED ON THE DATA PROVIDED, IT APPEARS THE DEVELOPMENT WILL GENERATE 71 STUDENTS IN THE MOYOCK SCHOOL DISTRICT AND 31 IN THE SHAWBORO SCHOOL DISTRICT. CAPACITY IS NOT AVIALABLE NOW OR PROGRAMED TO BE IN PLACE WITHIN 2 YEARS OF APPROVAL FOR A SIGNLE STUDENT IN***

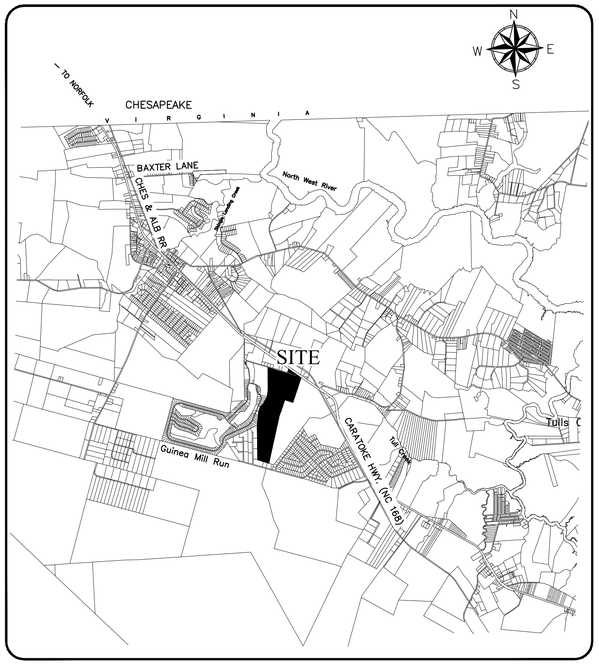
Flora Farm Rezoning PB 19-20
Planning Board Staff Report
June 9, 2020
RED TEXT = STAFF RESPONSES 6/10/2020

	THE MOYOCK SCHOOL DISTRICT AS REQUIRED BY THE UDO AND LAND USE PLAN.

FLORA FARM PD-R

PLANNED DEVELOPMENT - RESIDENTIAL

MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA



VICINITY MAP
SCALE: 1" = 5000'

OBJECTIVE:

To build a community that has a creative design, providing a mix of different residential uses in close proximity to one another, while at the same time providing an efficient use of open space that promotes an active lifestyle and strong sense of community. True Mixed Used/Commercial development is also proposed to serve the needs of both the residents in this development and the surrounding community.

GENERAL DEVELOPMENT NOTES

1. PROPERTY OWNERS: JOHN J. FLORA III, P.O. BOX 369, MOYOCK, NC 27958 — MARY NELL FLORA BRUMSEY, 117 PUDDIN RIDGE ROAD, MOYOCK, NC 27958

2. APPLICANT: JOHN J. FLORA III, P.O. BOX 369, MOYOCK, NC 27958

3. PROPERTY DATA: ADDRESS: CARATOKE HIGHWAY, MOYOCK, NC 27958

PIN: 0015-000-085C-0000,
D.B. 1230, PG. 402
P.C. "Q". SL. 149
2.58-ACRES (PER PLAT)

PIN: 0015-000-085C-0000
D.B. 1230, PG. 402
P.C. "Q". SL. 149
14.80-ACRES (PER PLAT)

PIN: 0015-000-0085B-0000
D.B. 1230, PG. 398 & 402
P.C. "D", SL. 315
94.53-ACRES (PER GIS)

PIN: 0015-000-085A-0000
D.B. 1230, PG. 398 & 402
P.C. "D", SL. 315
111.78-ACRES (PER GIS)

SUBDIVISION TOTAL ACREAGE: 224.44-ACRES
(DOES NOT INCLUDE 1.47-ACRE R/W DEDICATION OF A 30' STRIP ALONG SURVEY ROAD)

4. ZONING: EXISTING: AGRICULTURAL (AG)
PROPOSED: PD-R (PLANNED DEVELOPMENT-RESIDENTIAL)

Sheet Number	*Sheet Title*
1	COVER SHEET, DEVELOPMENT NOTES & SITE LOCATION
2	EXISTING CONDITIONS & SITE FEATURES
3	PRELIMINARY MASTER PLAN - OVERALL
4	PRELIMINARY MASTER PLAN - COMMERCIAL
5	PRELIMINARY STORMWATER MANAGEMENT PLAN
6	PRELIMINARY UTILITIES PLAN
7	PRELIMINARY PHASING PLAN

Bissell Professional Group
Engineering & Surveying
3512 North Croatan Highway
P.O. Box 1666
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

COVER SHEET, DEVELOPMENT NOTES & SITE LOCATION

PROJECT: FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY:
1	03/20/20	Address NCDOT Comments	WGY
2	05/19/20	Address Additional staff Comments	WGY

PRELIMINARY
FOR REVIEW
PURPOSES ONLY

DATE: 01/23/20	SCALE: N/A
DESIGNED: MSB	CHECKED: MSB
DRAWN: KFW,WGY	APPROVED: BPG
SHEET: 1 OF 7	
CAD FILE: 468000MP4	
PROJECT NO: 4680	

S:\projects\4680 Flora Tract (Post 0)\dwg\MasterPlans\4680OMP4.dwg 5/19/2020 Plotted: 5/19/2020 1:41 PM by BP Designjet 12600 PS.stb#2.pc3

SOILS LEGEND	
	SOILS LINE
Ca	CAPE FEAR SILT LOAM
Ds	DRAGSTON LOAMY FINE SAND
No	NIMMO LOAMY SAND
Ro	ROANOKE FINE SANDY LOAM
To	TOMOTLEY FINE SANDY LOAM
Ws	WASDA MUCK
SCS – SOIL SURVEY OF CURRITUCK COUNTY	

EAGLE CREEK SUBDIVISION
(429 UNITS)

SEE INSET BELOW FOR ADDITIONAL BOUNDARY

GOLF COURSE

ST. ANDREWS ROAD

SR 1215 SURVEY ROAD

U.S. 168 - CARATOKE HWY.

DEVELOPMENT SITE

LUP FULL SERVICE AREA

MSAP FULL SERVICE AREA

MSAP LIMITED SERVICE AREA

ROWAND CREEK CANAL

N.C. POWER 150' UTILITY EASEMENT

SOIL TYPE DELINEATION LINE (TYP.)

WETLANDS (TYP.)

30' WETLAND BUFFER (TYP.)

150.00'

EXISTING PROPERTY LINES TO BE ABANDONED

EX. 8" WATER MAIN

EX. 12" WATER MAIN

RANCHLAND SUBDIVISION
(275 UNITS)

FOST PD-R DEVELOPMENT
(479 UNITS)

RANCHLAND SUBDIVISION
(275 UNITS)

MSAP CALCULATIONS		LUP CALCULATIONS
FULL SERVICE AREA	LIMITED SERICE AREA	FULL SERVICE AREA
94.7-Acres	129.7 Acres	224.44 Acres
213-Units	197-Units	673 Units Allowed (3.0/Ac.)
2.25 Units/Ac.	1.52 Units/Ac.	410 Units Proposes (1.83/Ac.)

200 0 100 200 400 800
1"=200'
GRAPHIC SCALE

MOYOCK MIDDLE SCHOOL

INSET

Bissell Professional Group
Engineering & Surveying
3512 North Croatan Highway
Kitty Hawk, North Carolina 27949
PH. (252) 261-3300
FAX (252) 261-1760

BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

EXISTING CONDITIONS & SITE FEATURES PLAN

PROJECT:
FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

REVISIONS				
NO.	DATE	DESCRIPTION	BY	
1	04/16/20	Address Additional staff Comments	WGY	
2	05/19/20	Address Additional staff Comments	WGY	

PRELIMINARY
FOR REVIEW
PURPOSES ONLY

DATE: 01/23/20	SCALE: 1" = 200'
DESIGNED: MSB	CHECKED: MSB
DRAWN: KFW,WGY	APPROVED: BPG
SHEET: 2 OF 7	
CAD FILE: 468000MP4	
PROJECT NO: 4680	

S:\projects\4680_Flora Trust (Fost I)\dwg\MasterPlans\468000MP4.dwg 5/19/2020 Plotted: 5/19/2020 1:41 PM by BP Designjet T2500 PS (ePS 2 pc3

Attachment: 2 05-19-2020 REVISED Flora Revised Master Plan #3 (PB 19-20 Flora Farm)

DEVELOPMENT STANDARDS AND SETBACKS		
STYLE:	**COMMERCIAL/MIXED USE**	**SINGLE-FAMILY LOT**
Min Lot Size:	40,000 SF	12,000 SF
Min. Lot Width (@20' at Setback):	100'	40'
Front Setback:	10'(PARKING)/50'(BUILDING)	35'
Side Setback:	10' (PARKING)	10'
Rear Setback:	10' (PARKING)	25'
Corner Side Setback:	10' (PARKING)	10'
Maximum Front Setback:	N/A	100'
Maximum Height:	42'	35'
Maximum Bldg. Size:	110,220 SF	4,800 SF
Maximum Lot Coverage:	95%	40%
Maximum Comm. Floor Area Ratio:	0.40	N/A
Min. Set Back to Adj. Residential Development:	50'	25'

LEGEND

- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING WETLANDS
- OPEN SPACE
- RESIDENTIAL LOT
- EXISTING 404 BOUNDARY
- 30' WETLAND BUFFER
- PROPOSED SIDEWALK

Flora Farm

Preliminary Development Data:	
Gross Area:	224.44 Acres
285 Lots @ 15,000 sq. ft.	(Average)
22 Acre School Site	202.2 AC. DEVELOPABLE REMNANT
Other Open Space & Amenity Areas:	67.55 Acres (30.1%)
Commercial Development:	up to 100,000 s.f.
Upper Story Dwellings:	125
Single Family Density:	1.38 DU/AC.
Overall Density:	1.72 DU/AC.

MSAP CALCULATIONS

FULL SERVICE AREA	LIMITED SERICE AREA
72.5-ACRES	129.7 Acres
213-UNITS	197-UNITS
2.94 UNITS/ACRE	1.52 UNITS/ACRE

EAGLE CREEK SUBDIVISION
(429 UNITS)

22 ACRES
(RESERVED FOR SCHOOL)

ZONING:
AG - AGRICULTURAL

ZONING:
AG - AGRICULTURAL

ZONING:
AG - AGRICULTURAL
PROPOSED ZONING:
PD-R
PLANNED DEVELOPMENT - RESIDENTIAL

UP TO 100,000 S.F. COMMERCIAL, UP TO 125 UPPER STORY DWELLINGS (SEE SHEET 4)

RANCHLAND SUBDIVISION
(275 UNITS)

FOST PD-R DEVELOPMENT
(479 UNITS)

ST. ANDREWS ROAD

SR 2175 - SURVEY ROAD

U.S. 168 - CARATOKE HWY.

PLUM ST.
EUNICE ST.
ORCHID ST.
FLORA BLVD.
ARDEN ST.
EAGLE ST.
CANE ST.
JASMINE ST.
CANE LANE
MOSSY ST.
LYDIA STREET
POE ST.
SUGAR CANE DRIVE
SUGAR FARMS ROAD
SUGAR CANE AVENUE
SUGAR CANE COURT
SUGAR CANE CIRCLE
SUGAR CANE CLOSE
SUGAR FARMS CIRCLE
SUGAR FARMS COURT
SUGAR FARMS CLOSE
SUGAR FARMS LANE
SUGAR CANE LANE
SUGAR CANE WAY
SUGAR FARMS WAY
SUGAR CANE PLACE
SUGAR FARMS PLACE
SUGAR CANE ROAD
SUGAR FARMS ROAD

POND
25' BUFFER
MIN. 100' BUFFER
50' CANAL MAINTENANCE EASEMENT DR. EASE SIDE OF RONALD CREEK MEASURED FROM TOP OF CANAL BANK
IMPROVE RONALD CREEK CANAL FROM PUMP STATION TO FLORA PROPERTY LINE
IMPROVE EXISTING DITCH OR CONSTRUCT A NEW DRAINAGE DITCH; PROVIDE EARTHEN BERM
RESIDENTIAL CBU KIOSK
WASTEWATER DISPOSAL
WWTP (APPROX. LOCATION)
RETENTION OVERFLOW
RV & BOAT TRAILER PARKING (20'X40' SPACES)
10' MULTI-USE PATH EASEMENT
30' R/W TO BE DEDICATED
8' MULTI-USE PATH (TYP.)
TO PROVIDE STACKING & TURNING LANE IMPROVEMENTS PER TIA & NCDOT APPROVAL
CENTER TURN LANE
RESERVATION FOR CBU KIOSK
GLEN FOREST CLOSE
DOG PARK & RECREATIONAL AREA
COMMUNITY GARDEN
PLAYGROUND
PAVILION
OUTDOOR AMPHITHEATER

200 0 100 200 400 800
1"=200'
GRAPHIC SCALE

STREET TREES (SPECIES AND SPACING PER UDO)
18.00' PEDESTRIAN, STREET TREE, UTILITY & DRAINAGE EASEMENT
40.00' MIN. RIGHT-OF-WAY
12.00'± 3.50'± 5.00' 4.00' 2.50' 13.50' TO BACK OF CURB 11.00' PAVEMENT 13.50' TO BACK OF CURB 11.00' PAVEMENT 2.50' 4.00' 5.00' 3.50'± 12.00'±
20' FRONT MIN. SINGLE FAMILY LOT
2% 1/4"/FT.
TYP. SEWER SERVICE CLEAN OUT
TYP. SEWER SERVICE FROM DWELLING
TYP. SANITARY MANHOLE (SEE UTILITY PLANS FOR LOCATIONS)
TYP. CROSS CULVERT (SEE DRAINAGE PLANS)
2"ASPHALT SURFACE
6" BASE COURSE
COMPACT SUBGRADE PER GEOTECHNICAL
TYP. CATCH BASIN
TYP. CURB INLET OR CURB & GUTTER (SEE DRAINAGE PLANS FOR TYPE AND LOCATION)
36" MIN.
TYP. SDR 21 WATER MAIN CENTERED IN SHOULDER (SEE UTILITY PLANS FOR LOCATIONS)
TYP. WATER SERVICE TO DWELLING
TYP. SIDEWALK (SEE PLANS FOR LOCATIONS AND ROAD SIDE)

TYPICAL LOCAL ROADWAY
SCALE: 1" = 5' SECTION VIEW

STREET TREES CENTERED IN ISLAND (SPECIES AND SPACING PER UDO)
8' FOR MULTI-USE PATH WHERE INDICATED
80.00' MIN. RIGHT-OF-WAY
16.33' 3.50'± 5.00' 4.00' 2.50' 16.17' TO BACK OF CURB 13.00' PAVEMENT 15.00' TRAVEL LANE 26.00' MEDIAN TO BACK OF CURB MEDIAN CURB (SEE TYP. DETAIL) 16.17' TO BACK OF CURB 13.00' PAVEMENT 15.00' TRAVEL LANE 2.50' 4.00' 5.00' 3.50'± 16.33'
TYP. SEWER SERVICE CLEAN OUT
TYP. SEWER SERVICE FROM DWELLING
TYP. SANITARY MANHOLE (SEE UTILITY PLANS FOR LOCATIONS)
TYP. CROSS CULVERT (SEE DRAINAGE PLANS)
TYP. CATCH BASIN
TYP. CURB INLET OR CURB & GUTTER (SEE DRAINAGE PLANS FOR TYPE AND LOCATION)

TYPICAL DIVIDED BOULEVARD
SCALE: 1" = 5' SECTION VIEW

Bissell Professional Group
Bissell Professional Group
3512 North Croatan Highway
Suite 2 Kitty Hawk, NC 27949
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY MASTER PLAN - OVERALL

PROJECT: FLORA FARM PD-R SUBDIVISION
NORTH CAROLINA
CURRITUCK COUNTY
MOYOCK TOWNSHIP

PRELIMINARY MASTER PLAN

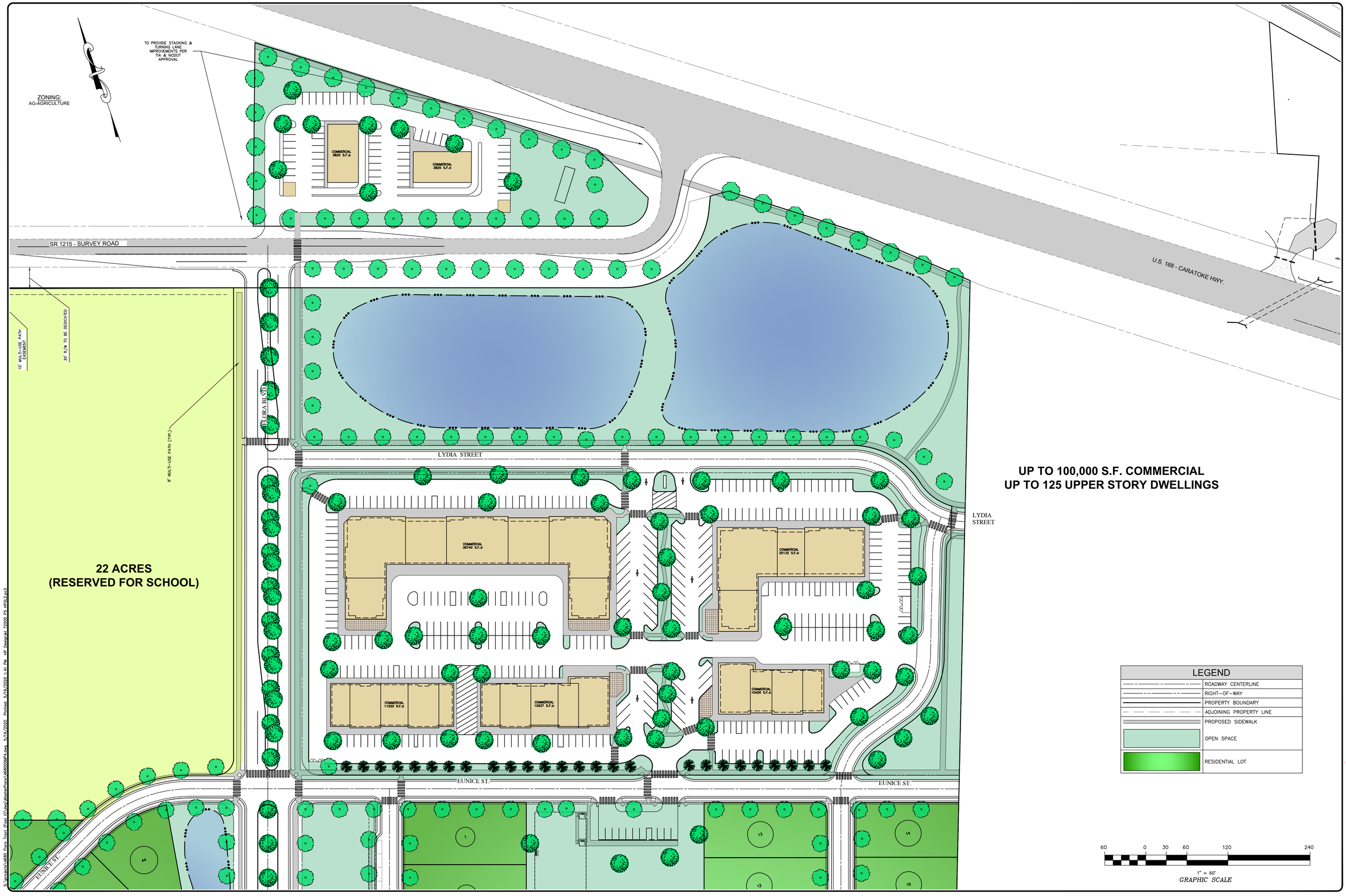
REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	02/24/20	Address Additional staff Comments	WGY
2	05/19/20	Address Additional staff Comments	WGY

PRELIMINARY
FOR REVIEW PURPOSES ONLY

DATE: 01/23/20
SCALE: 1" = 200'
DESIGNED: MSB
CHECKED: MSB
DRAWN: KFW, WGY
APPROVED: BPG
SHEET: 3 OF 7
CAD FILE: 468000MP4
PROJECT NO: 4680

Attachment: 2 05-19-2020 REVISED Flora Revised Master Plan #3 (PB 19-20 Flora Farm)

S:\projects\4680 Flora Tract (Fast Lyle)\dwg\Masterplans\468000MP4.dwg 5/19/2020 Plotted: 5/19/2020 1:41 PM HP DesignJet T2500 PS #PS3.pc3



Bissell Professional Group
Fletcher L. Bissell, III
3512 North Croatan Highway
P.O. Box 1566
Kitty Hawk, North Carolina 27949
PH. (252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY
PLAN - COMMERCIAL

PROJECT:
FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	04/07/20	Address NCDOT comments	WGY
2	05/19/20	Address Additional staff Comments	WGY

PRELIMINARY
FOR REVIEW
PURPOSES ONLY

DATE: 01/23/20
SCALE: 1" = 60'
DESIGNED: MSB
CHECKED: MSB
DRAWN: KFW,WGY
APPROVED: BPG
SHEET: 4 OF 7
CAD FILE: 468000MP4
PROJECT NO: 4680

s:\projects\4680 Flora Tract (Fost II)\dwg\MasterPlans\4680000MP4.dwg 5/19/2020 Plotted: 5/19/2020 1:41 PM HP Design Jet T2500 PS inPS 3 pc3

EAGLE CREEK SUBDIVISION
(429 UNITS)

22 ACRES
(RESERVED FOR SCHOOL)

UP TO 100,000 S.F. COMMERCIAL, UP TO 125 UPPER STORY DWELLINGS
(SEE SHEET 4)

ZONING:
AG - AGRICULTURAL
PROPOSED ZONING:
PD-R
PLANNED DEVELOPMENT - RESIDENTIAL

RANCHLAND SUBDIVISION
(275 UNITS)

FOST PD-R DEVELOPMENT
(479 UNITS)

RANCHLAND SUBDIVISION
(275 UNITS)

ST. ANDREWS ROAD
PLUM ST.
EUNICE ST.
SAGE ST.
ORCHID ST.
FLORA BLVD.
MIRIAM DRIVE WEST
ARDEN ST.
LYDIA STREET
SR 1215 SURVEY ROAD
U.S. 168 - CARATOKE HWY.
CALLA ST.
JAGUAR ST.
CANE ST.
LYNNE LANE
POE ST.
MOSS ST.
ROLAND CREEK CANAL
POND
COMMERCIAL SITE
RESTAURANT WITH DRIVE-THRU
CLUB HOUSE & SWIMMING AREA
DOG PARK & RECREATIONAL AREA
10' MULTI-USE PATH EASEMENT
30' R/W TO BE DEDICATED
8' MULTI-USE PATH (TYP.)
TO PROVIDE STACKING & TURNING LANE IMPROVEMENTS PER TIA & NCDOT APPROVAL
IMPROVE ROLAND CREEK CANAL FROM SURVEY STA. TO THE FLORA PROPERTY LINE
IMPROVE EXISTING DITCH OR CONSTRUCT A NEW DRAINAGE DITCH; PROVIDE EARTHEN BERM
PROPOSED EARTHEN BERM
PROPOSED OUTLET STRUCTURE (TYP.)
50' CANAL EASEMENT
50' CANAL MAINTENANCE EASEMENT ON SOUTH SIDE OF ROLAND CREEK CANAL, UNDISTURBED FROM TOP OF CANAL BANK
RESIDENTIAL CBU RV WORK
WASTEWATER DISPOSAL
RV & BOAT TRAILER PARKING (20'X40' SPACES)
BAYLINE OPEN SPACE
PROPOSED EARTHEN BERM

LEGEND	
	EXISTING DITCH
	PROPOSED PRIMARY DITCH
	PROPOSED STORM SEWER PIPE
	PROPOSED CATCH BASIN
	EXISTING WETLANDS
	EXISTING 404 WETLANDS LIMITS
	30' WETLANDS BUFFER

200 0 100 200 400 800
1"=200'
GRAPHIC SCALE

PRIMARY SWALE (TYP.)
25' REAR MBL
THIS DETAIL PROVIDES A TYPICAL LOT DEVELOPMENT PLAN AND IS INTENDED FOR GUIDANCE. ALTERNATE PLANS MAY BE POSSIBLE SUBJECT MEETING REQUIRED DESIGN CONDITIONS
APPROX. SWALE TOB
LOTS SHALL BE CROWNED TO DRAIN AWAY FROM BPE & WME TO THE P/L SWALE (MIN. SLOPE 0.5%)
TYP. P/L SWALE AVG. DEPTH: 1.0' SIDE SLOPE: 6:1 LONG. SLOPE: 0.005 FT/FT
PATIO
80.00'± BUILDING PAD
50.00' BUILDING PAD
PROPOSED DWELLING (MAX. LOT COVERAGE 30%)
GARAGE
BUILDING PAD SHALL ACHIEVE MIN. BPE ELEV.
STREET TREES 50' O.C. 26'± FROM C/L
30' FRONT MBL
20' FRONT MBL
8' SIDEWALK
40' R/W
BPE
EOP
TYPICAL LOT DEVELOPMENT EXHIBIT
SCALE: N.T.S. AVERAGE LOT SIZE = 15,000 SF

Bissell Professional Group
Fuquay-Varina Office
3512 North Goodwin Highway
Post Office Box 1888
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY STORMWATER MANAGEMENT PLAN

PROJECT:
FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1.	05/19/20	Address additional staff comments	WGY
2.	05/20/20	Address Additional staff Comments	WGY

PRELIMINARY
FOR REVIEW PURPOSES ONLY

DATE: 01/23/20	SCALE: 1" = 200'
DESIGNED: MSB	CHECKED: MSB
DRAWN: KFW,WGY	APPROVED: BPG
SHEET: 5 OF 7	
CAD FILE: 468000MP4	
PROJECT NO: 4680	

Attachment: 2 05-19-2020 REVISED Flora Revised Master Plan #3 (PB 19-20 Flora Farm)

S:\projects\4680_Flora Tract (Fost I)\dwg\MasterPlans\468000MP4.dwg 5/19/2020 Plotted: 5/19/2020 11:41 PM HP Designjet T2500 PS (ePS).pc3

EAGLE CREEK SUBDIVISION
(429 UNITS)

22 ACRES
(RESERVED FOR SCHOOL)

UP TO 100,000 S.F. COMMERCIAL, UP TO 125 UPPER STORY DWELLINGS
(SEE SHEET 4)

ZONING:
AG - AGRICULTURAL
PROPOSED ZONING:
PD-R
PLANNED DEVELOPMENT - RESIDENTIAL

RANCHLAND SUBDIVISION
(275 UNITS)

FOST PD-R DEVELOPMENT
(479 UNITS)

RANCHLAND SUBDIVISION
(275 UNITS)

ST. ANDREWS ROAD
SR 1215 - SURVEY ROAD
U.S. 158 - CARATOKE HWY.
PLUM ST.
SAGE ST.
EUNICE ST.
MIRIAM DRIVE WEST
ORCHID ST.
FLORA BLVD.
ARDEN ST.
LYDIA STREET
CALLA ST.
JASMINE ST.
CANE ST.
LYNNE LANE
MOSS ST.
POE ST.
ROAD CREEK CANAL
50' CANAL EASEMENT
10' MULTI-USE PATH EASEMENT
30' R/W TO BE DEDICATED
POTENTIAL WATERLINE EXTENSION TO EX. 16" MAIN EAST OF NC-168
8' MULTI-USE PATH (TYP.)
TO PROVIDE STACKING & TURNING LANE IMPROVEMENTS PER TIA & NCDOT APPROVAL
EX. 8" WATER MAIN
EX. 16" WATER MAIN
COMMERCIAL SITE
RESTAURANT WITH DRIVE-THRU
CLUB HOUSE & RECREATIONAL AREA
DOG PARK & RECREATIONAL AREA
POND
PROPOSED EARTHEN BERM
PROPOSED OUTLET STRUCTURE (TYP.)
RESIDENTIAL GRU W/ BASIN
WASTEWATER DISPOSAL
WWTP (APPROX. LOCATION)
NATURE OVERLOOK
RV & BOAT TRAILER PARKING (29 20'X40' SPACES)

200 0 100 200 400 800
1"=200'
GRAPHIC SCALE

LEGEND	
EWL EWL	EXISTING WATER LINE
WL WL	PROPOSED TRUNK WATER LINE
SS SS	PROPOSED SANITARY SEWER
FM FM	PROPOSED FORCE MAIN
	PROPOSED STORM SEWER PIPE
	PROPOSED FIRE HYDRANT
S	PROPOSED SEWER MANHOLE
	PROPOSED LIFT STATION

DOMINION POWER
FULL CUTOFF LUMINAIRE
LED W/ TYPE III DISTRIBUTION
W/ A TYPE III DISTRIBUTION
100–150 WATTS HID EQUIVALENT
12'–15' MOUNTING HEIGHT

ROUND TAPERED COMPOSITE POLE
PULL BOX AS NECESSARY
DIRECT EMBEDED FOR USE WITH UNDERGROUND SUPPLY CONDUCTORS ONLY. EMBEDMENT DEPTH PER MOUNTING HEIGHT REQUIREMENTS PER MANUFACTURER

TYP. STREET LIGHT DETAIL
NOT TO SCALE LOCATION AS NOTED ON PLAN
LOCATED @ 200'–300' INTERVALS AND AT CROSSWALKS (BOTH SIDES OF DIVIDED BOULEVARDS; AT LEAST ON ONE SIDE OF STANDARD STREETS.)

Bissell Professional Group
Kitty Hawk Office
3512 North Croatan Highway
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760

BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY
UTILITIES PLAN

PROJECT:
FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY:
1	05/19/20	Address Additional #1off Comments	WGY
2			

PRELIMINARY
FOR REVIEW
PURPOSES ONLY

DATE: 01/23/20	SCALE: 1" = 200'
DESIGNED: MSB	CHECKED: MSB
DRAWN: KFW;WGY	APPROVED: BPG
SHEET: 6 OF 7	
CAD FILE: 468000MP4	
PROJECT NO: 4680	

Attachment: 2 05-19-2020 REVISED Flora Revised Master Plan #3 (PB 19-20 Flora Farm)

S:\projects\4680 Flora Trust (Frst II)\dwg\MasterPlans\468000MP4.dwg 5/19/2020 Plotted: 5/19/2020 1:41 PM by Designjet T2500 PS (ePS).pc3

LEGEND

	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	ADJOINING PROPERTY LINE
XX	PROPOSED PHASE
	EXISTING WETLANDS
	OPEN SPACE
	RESIDENTIAL LOT
	EXISTING 404 BOUNDARY
	30' WETLAND BUFFER
	PROPOSED SIDEWALK

SCHEDULE B
PHASING SCHEDULE

RESIDENTIAL

PHASE	OPEN SPACE (AC.)	UNITS	ESTIMATED FINAL PLAT RECORDING DATE	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	OTHER IMPROVEMENTS
1	16.4	58	AUG. 2021	46.2	1.26	MAIL KIOSK & RV/BOAT PARKING
2	24.1	62	FEB. 2022	53.8	1.15	NATURE OVERLOOK & CLUBHOUSE
3	9.1	53	AUG. 2022	28.8	1.84	DOG PARK, REC. AREA & POOL
4	8.3	66	FEB. 2023	37.7	1.75	MULTI-USE PATH
5	7.0	46	AUG. 2023	23.1	1.99	-
SUBTOTAL	64.9	285	-	189.6	1.50	-

COMMERCIAL

PHASE	OPEN SPACE (AC.)	UNITS	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	COMM. S.F.	MAXIMUM COMMERCIAL FLOOR AREA RATIO
A	0.3	7	2.1	3.33	10426	0.15
B	0.4	30	3.5	8.57	20132	0.15
C	0.4	0	1.1	0.00	3825	0.10
D	0.4	70	2.8	25.00	36740	0.35
E	0.7	0	1.1	0.00	3825	0.10
F	0.2	9	1.2	7.50	12637	0.30
G	0.2	9	0.8	11.25	11520	0.35
SUBTOTAL	2.6	125	12.6	9.92	99105	0.20
SCHOOL SITE			22.2 AC. (AUG. 2023)		TBD	
TOTAL	**67.5**	**410**	**224.4**	**1.83**		**0.40**

Bissell Professional Group
Bissell Professional Group
3512 North Croatan Highway
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY
PHASING PLAN

PROJECT:
FLORA FARM PD-R SUBDIVISION
MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PRELIMINARY MASTER PLAN

NO.	DATE	DESCRIPTION	BY:
1	05/19/20	Address Additional staff Comments	WGY
2	05/19/20	Address Additional staff Comments	WGY

REVISIONS

PRELIMINARY
FOR REVIEW PURPOSES ONLY

DATE: 01/23/20
SCALE: 1" = 200'
DESIGNED: MSB
CHECKED: MSB
DRAWN: KFW,WGY
APPROVED: BPG
SHEET: 7 OF 7
CAD FILE: 468000MP4
PROJECT NO: 4680

S:\projects\4680_Flora Trust (Frst II)\dwg\MasterPlans\468000MP4.dwg 5/19/2020 Plotted: 5/19/2020 1:42 PM HP DesignJet T2500 PS.ctb#25.3.pc3

Attachment: 2 05-19-2020 REVISED Flora Revised Master Plan #3 (PB 19-20 Flora Farm)

SCHEDULE B
PHASING SCHEDULE

RESIDENTIAL

PHASE	OPEN SPACE (AC.)	UNITS	ESTIMATED FINAL PLAT RECORDING DATE	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	OTHER IMPROVEMENTS
1	16.4	58	AUG. 2021	46.2	1.26	MAIL KIOSK & RV/BOAT PARKING
2	24.1	62	FEB. 2022	53.8	1.15	NATURE OVERLOOK & CLUBHOUSE
3	9.1	53	AUG. 2022	28.8	1.84	DOG PARK, REC. AREA & POOL
4	8.3	66	FEB. 2023	37.7	1.75	MULTI-USE PATH
5	7.0	46	AUG. 2023	23.1	1.99	-
SUBTOTAL	64.9	285	-	189.6	1.50	-

COMMERCIAL

PHASE	OPEN SPACE (AC.)	UNITS	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	COMM. S.F.	MAXIMUM COMMERCIAL FLOOR AREA RATIO
A	0.3	7	2.1	3.33	10426	0.15
B	0.4	30	3.5	8.57	20132	0.15
C	0.4	0	1.1	0.00	3825	0.10
D	0.4	70	2.8	25.00	36740	0.35
E	0.7	0	1.1	0.00	3825	0.10
F	0.2	9	1.2	7.50	12637	0.30
G	0.2	9	0.8	11.25	11520	0.35
SUBTOTAL	2.6	125	12.6	9.92	UP TO 100,000	0.20
SCHOOL SITE	-	-	22.2 AC. (AUG. 2023)	-	TBD	-
TOTAL	**67.5**	**410**	**224.4**	**1.83**		**0.40**

SCHEDULE A

DEVELOPMENT STANDARDS & SETBACKS

STYLE:	COMMERCIAL/MIXED USE	SINGLE-FAMILY LOT
Min. Lot Size:	40,000 SF	12,000 SF
Min. Lot Width (@20' setback):	100'	40'
Front Setback:	10' (Parking)/50' (Building)	35'
Side Setback:	10' (Parking)	10'
Rear Setback:	10' (Parking)	25'
Corner Side Setback:	10' (Parking)	15'
Maximum Front Setback:	N/A	100'
Maximum Height:	42'	35'
Maximum Bldg. Size:	110,220 SF	4,800 SF
Maximum Lot Coverage:	95%	40%
Max. Comm. Floor Area Ration:	0.40	
Min. Setback to Adj. Residential Development:	50'	25'

SCHEDULE C

ROADWAY

STANDARDS

TYPE	R/W WIDTH	MIN. ROADWAY WIDTH(Back to Back of Curb)
Boulevard	80' min	16' each way
Local Road	40' min	27'

a. The Phasing Plan attached to this ordinance and incorporated herein by reference as Schedule B (attached) shall be adhered to except that the Developer may determine the sequence in which phases are developed. The Developer shall provide an annual report updating the Phasing Plan for the development.

b. Development on the Property shall be connected to a North Carolina Department of Environmental Quality ("NCDEQ") permitted and approved central wastewater treatment and disposal system, and to the Currituck County water system. Fire protection shall be provided in accordance with the UDO Standards and the N.C. Fire Code.

c. The density/intensity standards, dimensional standards and development standards for development of the Property shall be In accordance with the Master Plan and Schedule A (attached), subject to the degree of flexibility provided in these conditions.

d. Community form and design for development of the Property shall conform to the sample building elevations attached in Appendix A. Variations may be provided and shall be permitted in colors, materials, and architectural detailing that are compatible with the design concept.

e. Transportation: The main subdivision entrance will be connected to Survey Road and interconnected with the Fost tract roadway system in accordance with recommendations made in the Traffic Impact Analysis (TIA) for this development as approved by NCDOT. Improvements to Survey Road shall be made in accordance with the TIA, as approved by and in accordance with North Carolina Department of Transportation, ("NCDOT"), standards and shall be approved by NCDOT prior to construction. Roadways shall be laid out generally as shown on the Master Plan and in accordance with Schedule C.

f. Potable Water: Water shall be supplied by Currituck County via the interconnections with the Fost tract water distribution system, and a connection to the existing water main on Caratoke Highway. Fire Protection shall be provided in accordance with UDO standards and the applicable Insurance Service Office standards. Individual lots and dwellings shall be metered. The Developer shall model the county's water system to demonstrate adequate water flow and pressure for fighting fires while meeting the maximum day domestic demand.

g. Wastewater: Land has been set aside for the construction of a centralized wastewater disposal facility that will be constructed in accordance with NCDEQ Standards and approved by NCDEQ. A wastewater collection system will be constructed by the Developer and managed by a wastewater utility. The wastewater system will be regulated by the North Carolina Utilities Commission and will apply for a Certificate of Public Necessity and Convenience.

h. Stormwater: The following improvements to stormwater drainage ("Improvements") shall be completed by the Developer prior to recording the final plat for the first phase of development on the Property:

i. Continue the Rowland Creek improvements to the northwest to the Eagle Creek pump station as authorized by the Eagle. Creek Homeowners Association.

ii. Improve the existing property line ditch or install a new ditch along a portion of the Property's northwestern common boundary line with Eagle Creek and Ranchland where shown on the Preliminary Drainage Plan on a positive grade with 3:1 side slopes and sized for a 100 year storm event from the drainage basin In which the Property and a portion of Eagle Creek and Ranchland Subdivision are located.

iii. The Improvements set forth in this section shall be maintained by the Developer, or a management association created by the Developer.

iv. Establish permanent easements along Rowland Creek and the property line ditch described in paragraph iii above for ongoing maintenance of these drainage facilities.

Improvements will be generally as shown on sheet 5 of the Master Plan drawings

i. General stormwater conditions:

i. The Developer shall construct berms along ditch outlets against Eagle Creek and Ranchland to reduce the potential of the proposed development's runoff from flooding Eagle Creek and Ranchland during a 100 year storm.

ii. On-site stormwater will be managed by construction a series of stormwater management ponds that will be interconnected and will retain and slow-release stormwater to Rowland Creek and other drainage outlets both directly and indirectly.

In addition to modeling and retaining stormwater to the UDO and Stormwater Manual standard for the difference between runoff from the 10-year developed condition and runoff from a 2-year wooded condition site, stormwater will be modeled for the 100-year storm event and property line berms constructed as necessary to manage the 100-year storm without adversely impacting neighboring properties.

Stormwater will be conveyed to on-site retention ponds through a combination of curbs with inlets, stormwater pipes and open, vegetated swales.

j. Up to 100,000 square feet of commercial development will be constructed in the area set aside for commercial development on the Master Plan, along with up to 125 upper story apartments generally as shown on the Master Plan drawings. A minimum of 10% of the apartments will be reserved for workforce housing for public service personnel, such as teachers, firefighters, and police, for a period of at least 5 years from the Certificate of Occupancy on the first apartment

building. The owner of the apartment facility will provide an annual certification of renter eligibility to the Planning Department.

k. Perimeter compatibility shall be addressed as follows:
   i. To the west a 25 foot vegetated buffer and berm shall be provided to existing residential development along upland areas.
   ii. To the south: A minimum 100 foot open space buffer is shown to the property line. The southern buffer may include a pond. A berm will also be installed.
   iii. Commercial development is located away from existing development and adjacent to the Fost tract.
   iv. Architectural Features: Building placement, design features, orientation and entryways promote compatibility with adjacent properties.

l. Environmental Protection and Monitoring: Wetlands subject to the jurisdiction of the US Army Corps of Engineers have been delineated and confirmed by the Corps of Engineers. Wetland buffers have been shown on the Master Plan and the Development plan honors those buffers. The Association documents (Declaration} will include provisions that prohibit the filling of wetlands and prohibit the clearing of the buffer areas other than incidental tree cutting and vegetation removal, and for stormwater management.

   The Association, either itself or via a management entity, will assume responsibility for ongoing operation and maintenance of all stormwater management facilities in accordance with the Currituck County UDO requirements and all NCDEQ permit requirements. The Association dues will be structured in a way that funds are provided for the upkeep of these facilities, as well as periodic improvements to Rowland Creek both through the development, as well as a contribution to off-site maintenance.

m. School site: A 22 acre portion of the tract is reserved for use as a public school site, as shown on the Master Plan.

n. Developer general responsibilities:

   The developer is responsible to design and construct or install the required and proposed on site public utilities in compliance with applicable county, state and federal regulations.

   The developer shall dedicate to the public the right-of-way and easements necessary to construct or install the required and proposed on site public facilities in compliance with applicable county, state and federal regulations.

SCHEDULE A

DEVELOPMENT STANDARDS & SETBACKS

STYLE:	COMMERCIAL/MIXED USE	SINGLE-FAMILY LOT
Min. Lot Size:	40,000 SF	12,000 SF
Min. Lot Width (@20' setback):	100'	40'
Front Setback:	10' (Parking)/50' (Building)	35'
Side Setback:	10' (Parking)	10'
Rear Setback:	10' (Parking)	25'
Corner Side Setback:	10' (Parking)	15'
Maximum Front Setback:	N/A	100'
Maximum Height:	42'	35'
Maximum Bldg. Size:	110,220 SF	4,800 SF
Maximum Lot Coverage:	95%	40%
Max. Comm. Floor Area Ration:	0.40	
Min. Setback to Adj. Residential Development:	50'	25'

SHEDULE B

PHASING SCHEDULE

RESIDENTIAL

PHASE	OPEN SPACE (AC.)	UNITS	ESTIMATED FINAL PLAT RECORDING DATE	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	OTHER IMPROVEMENTS
1	8.9	58	AUG. 2021	43.8	1.32	MAIL KIOSK & RV/BOAT PARKING
2	28.6	62	APR. 2022	53.8	1.15	NATURE OVERLOOK & CLUBHOUSE
3	9.3	53	FEB. 2023	30.3	1.75	DOG PARK, REC. AREA & POOL
4	10.1	66	AUG. 2023	37.7	1.75	MULTI-USE PATH
5	8.0	46	JAN. 2024	24.0	1.92	-
SUBTOTAL	64.9	285	-	189.6	1.50	-

COMMERCIAL

PHASE	OPEN SPACE (AC.)	UNITS	AREA (AC.)	DEVELOPMENT INTENSITY (D.U./AC.)	COMM. S.F.	MAXIMUM COMMERCIAL FLOOR AREA RATIO
A	0.3	7	2.1	3.33	10426	0.15
B	0.4	30	3.5	8.57	20132	0.15
C	0.4	0	1.1	0.00	3825	0.10
D	0.4	70	2.8	25.00	36740	0.35
E	0.7	0	1.1	0.00	3825	0.10
F	0.2	9	1.2	7.50	12637	0.30
G	0.2	9	0.8	11.25	11520	0.35
SUBTOTAL	2.6	125	12.6	9.92	UP TO 100,000	0.20
SCHOOL SITE			22.2ac.		TBD	0.40
			(AUG. 2023)			
TOTAL	**67.5**	**410**	**224.4**	**1.83**		

SCHEDULE C

ROADWAY

STANDARDS

TYPE	R/W WIDTH	MIN. ROADWAY WIDTH (Back to Back of Curb)
Boulevard	80' min	16' each way
Local Road	40' min	27'

TRAFFIC IMPACT ANALYSIS

Flora Farms Subdivision

Moyock, NC

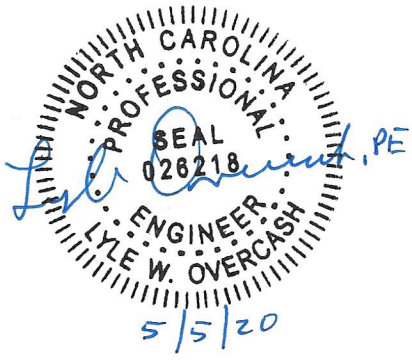
PREPARED FOR

Mark S. Bissell, PE
Bissell Professional Group
3512 N. Croatan Highway
PO Box 1068
Kitty Hawk, NC 27949

PREPARED BY

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

May 5th, 2020



Executive Summary

Bissell Professional Group plans to construct a new mixed-use development south of Caratoke Highway (NC 168) and Survey Road (SR 1215) in Moyock, North Carolina (Figure 1). The site is bordered by undeveloped land and existing single-family residential developments. When fully completed, the site will consist of 285 single-family homes, 125 apartments, and 100,000 square feet (SF) of general retail space, with an expected full build-out year of 2026.

Project Background

Based on the conceptual site plan (Figure 2), access to the development is proposed via two (2) vehicular access points:

- Future Access #1: full movement access along and south of Survey Road (SR 1215), approximately 750 feet southwest of Caratoke Highway (NC 168).
- Future Access #2: full movement access along and north of Survey Road (SR 1215), approximately 750 feet southwest of Caratoke Highway (NC 168).

A total of four (4) cross-connections are currently planned between the proposed Flora Farms Subdivision and the future Fost Tract Development.

The following intersections are included in the study area and were analyzed, where applicable, for existing and future conditions:

- Caratoke Highway (NC 168) at Guinea Road (SR 1214) (unsignalized)
- Caratoke Highway (NC 168) at Survey Road (SR 1215) (unsignalized)
- Caratoke Highway (NC 168) at Survey Road (SR 1215) (signalized)
- Survey Road (SR 1215) at Eagle Creek Road (SR 1506) (unsignalized)

- Caratoke Highway (NC 168) and Fost Boulevard (future signalized)
- Survey Road (SR 1215) and Future Access #1/Future Access #2 (future unsignalized)

The analysis was performed under four (4) scenarios: Existing (2019), No-Build (2026), Build (2026), and Build (2026) with Improvements. The Existing (2019) scenario includes typical weekday AM and PM peak hour analysis based on turning movement count data collected in December 2019. The No-Build (2026) scenario includes existing traffic with a 3% annual growth rate applied between the base year (2019) and the build-out year (2026). The No-Build (2026) scenario includes site trips generated from the proposed Fost Tract Development. The Build (2026) scenario includes No-Build (2026) volumes with the addition of site trips generated by the proposed development. Future conditions with the recommended improvements in place were analyzed in the Build (2026) with Improvements scenario.

Existing (2019) Conditions

Existing analyses were conducted based on current roadway geometrics and intersection turning movement counts collected in December 2019. The existing through volumes along Caratoke Highway (NC 168) were grown by 10% to account for an increase in volumes that is experienced during summer months.

Crash data was obtained from the NCDOT's Traffic Engineering Accident Analysis System (TEAAS) along Caratoke Highway (NC 168). A five-year period (11/1/2014 – 10/31/2019) was analyzed from 500 feet south of Guinea Road to 500 feet north of the signalized intersection with Survey Road. During this period, there were 37 crashes reported with the predominant crash types being rear ends (43.2%) and fixed object (run off the road) crashes (24.3%). No fatal or suspected serious injury crashes (Type A) occurred within the study area during the five-year period.

As reported in the Summary Level of Service (LOS) table on page vi, all stop-controlled and signalized approaches operate at an acceptable level of service (i.e., LOS D or better) during both peak hours.

No-Build (2026) Conditions

The historical average annual daily traffic (AADT) along Caratoke Highway (NC 168) shows little to no growth over the previous ten years; however, to account for potential development growth in the area, an annual growth rate of three percent (3%) was applied to the existing traffic to account for traffic increases between the base year (2019) and the build-out year (2026). In addition, one background development, Fost Tract Development, was included specifically in the No-Build traffic volumes.

As reported in the Summary Level of Service (LOS) table on page vi, all stop-controlled and signalized approaches continue to operate acceptably during both peak hours. The proposed signalized intersection of Caratoke Highway (NC 168) and Fost Boulevard operates at LOS B during both peak hours.

Trip Generation and Assignment

Trip generation was conducted based on the most appropriate corresponding trip generation codes included in the *ITE Trip Generation Manual, 10th Edition* and the suggested method of calculation in the NCDOT's *"Rate vs. Equation" Spreadsheet*. Trips captured internally were calculated based on the *NCHRP 684* method and the *NCDOT Internal Capture Spreadsheet*. ITE LUC 210 (Single-Family Detached Housing), LUC 220 (Multifamily Housing (Low Rise)), and LUC 820 (General Retail) were used based on the NCDOT guidance. The full build-out of the site is anticipated to be completed by 2026 and to consist of the following:

- 285 single-family homes
- 125 apartment units
- 100,000 SF of general retail space

As a result, the proposed development is projected to generate 8,380 daily external site trips, with 463 trips (189 entering, 274 exiting) occurring in the AM peak hour and 717 trips (393 entering, 324 exiting) occurring in the PM peak hour. The generated site trips were distributed in accordance with the existing turning movement counts and land uses.

Build (2026) Conditions

The Build (2026) conditions account for both the No-Build (2026) traffic and the site traffic generated by the proposed development after completion of the full build-out of the development.

As shown on the Summary LOS table on page vi, with the addition of site trips, all stop-controlled approaches, except for one, operate at acceptable levels of service during both peak hours. The eastbound Survey Road stop-controlled approach at Caratoke Highway (NC 168) is projected to operate at LOS F during the PM peak hour. All signalized intersections operate acceptably under Build (2026) conditions.

Roadway Improvement Recommendations

Based on the traffic operations analyses, the proposed development is projected to impact the traffic operations of the surrounding roadway network and intersections after the full build-out of the development. The following improvements are recommended by the time the development is fully constructed in 2026:

Caratoke Highway (NC 168) and Survey Road (SR 1215) (unsignalized)

The Survey Road (SR 1215) eastbound stop-controlled approach is expected to operate at LOS F during the PM peak hour under Build (2026) conditions. After the build-out of the development, vehicles will be able to access full movement traffic signals at Survey Road to north of the development, and Fost Boulevard to the south. Therefore, the following improvements are recommended for the intersection:

- Provide a southbound right-turn lane with at least 100 feet of full storage and appropriate taper.
- Restrict access at the intersection to not allow left turns off of Survey Road. This restriction of access should be completed when approximately 30% of the total estimated trips for the site are observed, likely in conjunction with the southbound right-turn lane installation.
- Stripe out at least 200 feet of storage within the existing two-way left-turn lane along Caratoke Highway (NC 168) for the northbound left-turn.
- Monitor the intersection for protentional signalization in the future.

Survey Road (SR 1215) and Future Access #1/Future Access #2

The proposed stop-controlled driveways are projected to operate at acceptable levels of service during peak hours under Build (2026) conditions. The following driveway configuration for both access driveways should be considered to enhance traffic operations and safety:

- Connect both driveways to Survey Road with stop-controlled approaches as a full movement four-leg intersection.
- Construct Future Access #1 with one ingress lane and two egress lanes. Provide a northbound left-turn lane with a minimum of 100 feet of full storage and appropriate taper and a through/right-turn lane. Lydia Street intersects with Future Access #1 approximately 300 feet from Survey Road, which provides the proper internal protected stem to accommodate projected queues. Typically, NCDOT requires a 100-foot minimum internal protected stem for this type of facility.
- Construct Future Access #2 with one ingress lane and one egress lane.
- Provide an eastbound left-turn lane and right-turn lane along Survey Road, both with a minimum of 100 feet of full storage and appropriate taper.
- Provide a westbound left-turn lane along Survey Road with at least 100 feet of full storage and appropriate taper.

The other intersections within the study area are projected to remain acceptably once the development is completed, therefore no additional offsite lane geometric improvements are recommended.

Table ES-1 Summary Level of Service Table

Intersection and Approach	Traffic Control	Existing (2019)		No-Build (2026)		Build (2026)		Build (2026) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (12.3)**	**A (7.8)**	**B (13.5)**	**B (12.2)**	**B (16.0)**	**B (18.1)**	**B (15.7)**	**B (18.0)**
Eastbound		D-44.8	D-46.3	D-43.7	D-50.0	D-41.5	E-61.2	D-41.5	E-61.2
Northbound		A-6.7	A-3.5	A-7.2	A-3.6	A-9.8	A-5.1	A-9.2	A-4.8
Southbound		A-5.9	A-5.8	B-11.2	B-12.2	B-12.0	B-16.2	B-12.0	B-16.2
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		A-9.7	C-15.1	B-10.5	C-21.2	C-23.3	F-844.9	B-11.4	E-37.9
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		C-15.0	C-15.5	C-20.6	C-21.2	C-22.6	C-23.7	C-22.6	C-23.7
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		A-9.6	A-9.8	B-10.2	B-10.4	B-11.2	B-12.1	B-11.2	B-12.1
Caratoke Highway (NC 168) and Fost Boulevard	Signalized	**N/A**	**N/A**	**B (11.1)**	**B (11.3)**	**B (11.9)**	**B (11.3)**	**B (13.9)**	**B (14.1)**
Eastbound		N/A	N/A	C-30.5	D-38.2	C-30.1	D-41.1	C-30.2	D-43.7
Northbound		N/A	N/A	A-9.5	B-11.1	A-9.9	B-11.6	B-11.6	B-13.3
Southbound		N/A	N/A	A-4.6	A-8.0	A-7.2	A-7.2	A-9.4	A-9.9
Survey Road and Future Access #1/Future Access #2	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Northbound		N/A	N/A	N/A	N/A	B-13.3	C-23.5	B-11.7	C-15.4
Southbound		N/A	N/A	N/A	N/A	B-12.4	C-17.7	B-11.7	C-16.2

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay

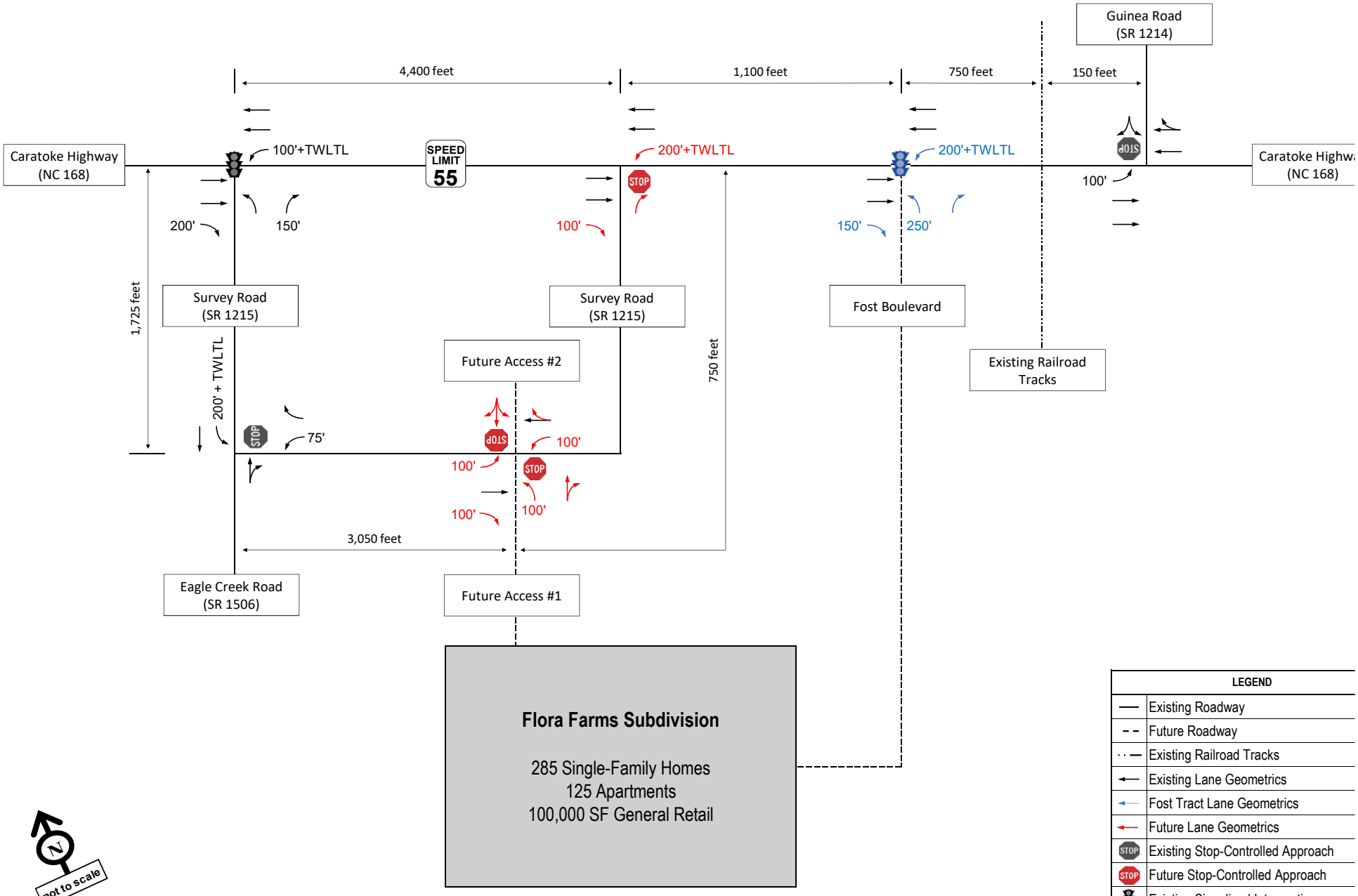


Figure ES
Future (2026) Lane Geometrics and Traffic Control

Flora Farms Subdivision TIA
Mo

Table of Contents

Appendices

List of Tables

List of Figures

1

Introduction

Bissell Professional Group plans to construct a new mixed-use development south of Caratoke Highway (NC 168) and Survey Road (SR 1215) in Moyock, North Carolina (Figure 1). The site is bordered by undeveloped land and existing single-family residential developments. When fully completed, the site will consist of 285 single-family homes, 125 apartments, and 100,000 square feet (SF) of general retail space, with an expected full build-out year of 2026.

Based on the conceptual site plan (Figure 2), access to the development is proposed via two (2) vehicular access points:

- Future Access #1: full movement access along and south of Survey Road (SR 1215), approximately 750 feet southwest of Caratoke Highway (NC 168).
- Future Access #2: full movement access along and north of Survey Road (SR 1215), approximately 750 feet southwest of Caratoke Highway (NC 168).

A total of four (4) cross-connections are currently planned between the proposed Flora Farms Subdivision and the future Fost Tract Development.

The following intersections are included in the study area and were analyzed, where applicable, for existing and future conditions:

- Caratoke Highway (NC 168) at Guinea Road (SR 1214) (unsignalized)
- Caratoke Highway (NC 168) at Survey Road (SR 1215) (unsignalized)
- Caratoke Highway (NC 168) at Survey Road (SR 1215) (signalized)
- Survey Road (SR 1215) at Eagle Creek Road (SR 1506) (unsignalized)
- Caratoke Highway (NC 168) and Fost Boulevard (future signalized)
- Survey Road (SR 1215) and Future Access #1/Future Access #2 (future unsignalized)

VHB Engineering NC, P.C. was retained by Bissell Professional Group to analyze the potential traffic impacts of the proposed development and to identify any necessary roadway improvements. This Traffic Impact Analysis (TIA) summarizes trip generation, distribution, traffic assignment, and traffic analyses for the proposed development. The scope of this TIA was based on previous studies in the area and parameters NCDOT had specified in the review of the Fost Tract Development site plan.

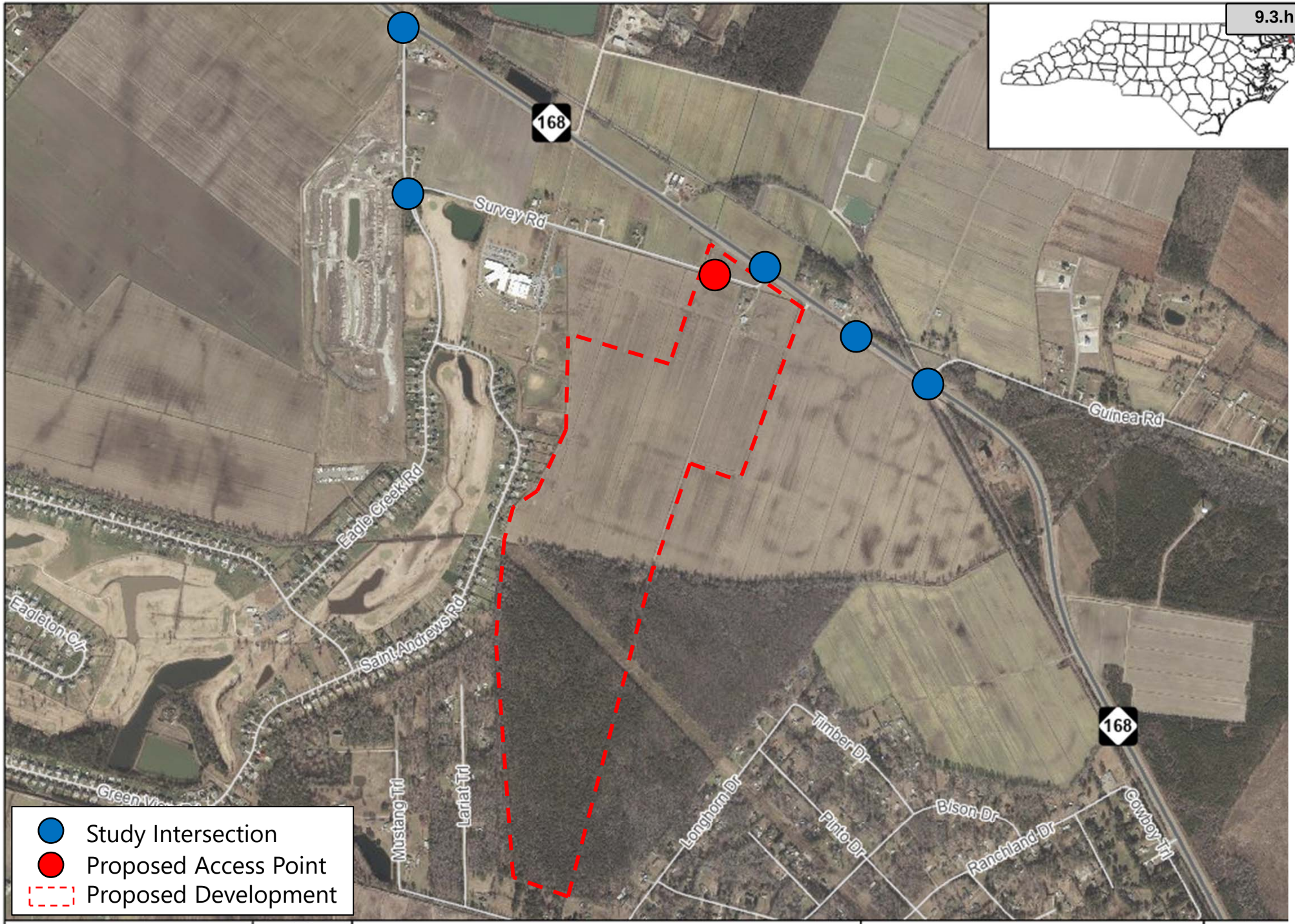


Figure 1:
Vicinity Map

Flora Farms Subdivision TIA
Currituck County
Moyock, NC

DEVELOPMENT STANDARDS AND SETBACKS		
STYLE:	**COMMERCIAL/MIXED USE**	**SINGLE-FAMILY LOT**
Min Lot Size:	40,000 SF	12,000 SF
Min. Lot Width (@20' at Setback):	100'	40'
Front Setback:	10'(PARKING)/50'(BUILDING)	20'
Side Setback:	10' (PARKING)	10'
Rear Setback:	10' (PARKING)	25'
Corner Side Setback:	10' (PARKING)	15'
Maximum Front Setback:	N/A	100'
Maximum Height:	42'	35'
Maximum Bldg. Size:	110,220 SF	4,800 SF
Maximum Lot Coverage:	95%	40%
Maximum Comm. Floor Area Ratio:	0.40	N/A
Min. Set Back to Adj. Residential Development:	50'	25'

LEGEND

- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- PROPERTY BOUNDARY
- ADJOINING PROPERTY LINE
- EXISTING WETLANDS
- COMMON AREAS
- RESIDENTIAL LOT
- EXISTING 404 BOUNDARY
- 30' WETLAND BUFFER
- PROPOSED SIDEWALK

Flora Farm

Preliminary Development Data:	
Gross Area:	224.44 Acres
285 Lots @ 15,000 sq. ft.	(Average)
22 Acre School Site	202.2 AC. DEVELOPABLE REMNANT
Other Open Space & Amenity Areas:	67.55 Acres (30.1%)
Commercial Development:	up to 95,000 s.f.
Upper Story Dwellings:	125
Single Family Density:	1.38 DU/AC.
Overall Density:	1.72 DU/AC.

MSAP CALCULATIONS

FULL SERVICE AREA	LIMITED SERICE AREA
72.5-ACRES	129.7 Acres
213-UNITS	197-UNITS
2.94 UNITS/ACRE	1.52 UNITS/ACRE

EAGLE CREEK SUBDIVISION
(429 UNITS)

22 ACRES
(RESERVED FOR SCHOOL)

ZONING:
AG - AGRICULTURAL

ZONING:
AG - AGRICULTURAL

ZONING:
AG - AGRICULTURAL
PROPOSED ZONING:
PD-R
PLANNED DEVELOPMENT - RESIDENTIAL

99,105 S.F. COMMERCIAL
UP TO 125 UPPER STORY DWELLINGS
(SEE SHEET 4)

RANCHLAND SUBDIVISION
(275 UNITS)

FOST PD-R DEVELOPMENT
(479 UNITS)

ST. ANDREWS ROAD

SR 2175 - SURVEY ROAD

U.S. 168 - CARATOKE HWY.

IMPROVE ROLAND CREEK CANAL FROM SR 2175 TO FLORA PROPERTY LINE

IMPROVE EXISTING DITCH OR CONSTRUCT A NEW DRAINAGE DITCH; PROVIDE EARTHEN BERM

IMPROVE EXISTING DITCH OR CONSTRUCT A NEW DRAINAGE DITCH; PROVIDE EARTHEN BERM

10' MULTI-USE PATH EASEMENT

30' R/W TO BE DEDICATED

8' MULTI-USE PATH (TYP.)

TO PROVIDE STACKING & TURNING LANE IMPROVEMENTS PER TIA & NCDOT APPROVAL

CENTRAL ACCESS - GLEN OAKS DRIVE

RESIDENTIAL ACCESS - GLEN OAKS DRIVE

COMMERCIAL SITE

DOG PARK & RECREATIONAL AREA

POND

25' BUFFER

50' CANAL MAINTENANCE EASEMENT, DR. EASE SIDE OF ROLAND CREEK MIN. 30' MEASURED FROM TOP OF CANAL BANK

RESIDENTIAL CBU KIOSK

WASTEWATER DISPOSAL

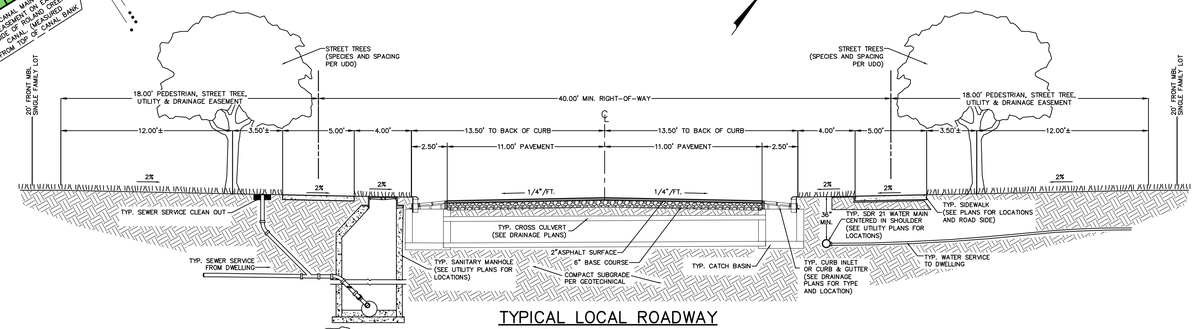
RETURN OVER ON

RV & BOAT TRAILER PARKING (20'X40' SPACES)

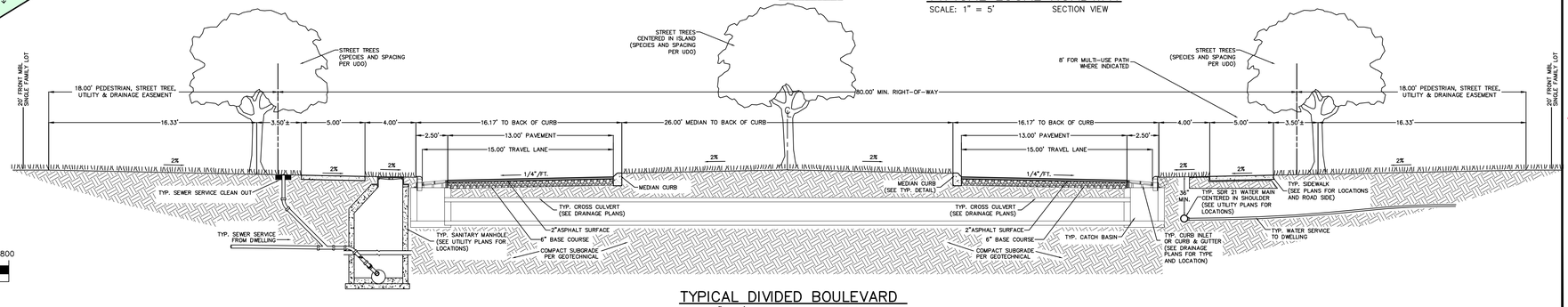
MIN. 100' BUFFER

200 0 100 200 400 800

1"=200'
GRAPHIC SCALE



TYPICAL LOCAL ROADWAY
SCALE: 1" = 5' SECTION VIEW



TYPICAL DIVIDED BOULEVARD
SCALE: 1" = 5' SECTION VIEW

Bissell Professional Group
Bissell Professional Group
3512 North Croatan Highway
Suite 101
Kitty Hawk, North Carolina 27949
PHONE (252) 261-3300
FAX (252) 261-1760

BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PRELIMINARY MASTER PLAN - OVERALL

PROJECT: FLORA FARM PD-R SUBDIVISION
NORTH CAROLINA
MOYOCK TOWNSHIP CURRITUCK COUNTY
PRELIMINARY MASTER PLAN

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PRELIMINARY
FOR REVIEW PURPOSES ONLY

DATE: 01/23/20	SCALE: 1" = 200'
DESIGNED: MSB	CHECKED: MSB
DRAWN: KFW,WGY	APPROVED: BPG
SHEET: 3 OF 7	
CAD FILE: 468000MP4	
PROJECT NO: 4680	

S:\projects\4680 Flora Tract (Fost)\Dwg\Masterplans\468000MP4.dwg 1/23/2020 Postes 1/23/2020 1:24 PM HP Designjet T2500 PS (4PO3.2.pc3)

Attachment: 7 Flora Farms TIA - 5-5-2020 #3 (PB 19-20 Flora Farm)

2

Existing (2019) Conditions

This section describes the existing roadways in the vicinity of the proposed development. Average Annual Daily Traffic (AADT) data for the surrounding network of roadway were obtained from the North Carolina Department of Transportation (NCDOT). The most recent AADT counts from the NCDOT are for 2018 on the study area roadways.

Caratoke Highway (NC 168)

- Within the study area limits, Caratoke Highway (NC 168) is a four-lane roadway divided by a center two-way left-turn lane. The roadway has a posted speed limit of 55 miles per hour (mph).
- The land uses along Caratoke Highway (NC 168) are primarily commercial and agriculture within the study area limits.
- According to the NCDOT, the 2018 AADT along Caratoke Highway (NC 168) was 19,000 vehicles per day (vpd) south of Survey Road (SR 1215).

Guinea Road (SR 1214)

- Within the study area limits, Guinea Road (SR 1214) is a two-lane undivided roadway with no posted speed limit.
- The land uses along Guinea Road (SR 1214) are primarily residential and agriculture within the study area limits.
- According to the NCDOT, the 2016 AADT along Guinea Road (SR 1214) was 800 vpd.

Survey Road (SR 1215)

- Within the study area limits, Survey Road (SR 1215) is a two-lane undivided roadway with no posted speed limit.
- The land uses along Survey Road (SR 1215) are primarily residential and commercial within the study area limits. Survey Road (SR 1215) provides direct access to Moyock Middle School.
- No AADT data was available for Survey Road (SR 1215).

Eagle Creek Road (SR 1206)

- Within the study area limits, Eagle Creek Road (SR 1206) is a two-lane undivided roadway with no posted speed limit.
- The land use along Eagle Creek Road (SR 1206) is primarily residential within the study area limits.
- No AADT data was available for Eagle Creek Road (SR 1206).

Figure 3 provides a schematic diagram of the existing roadways near the proposed development, including the intersection geometrics.

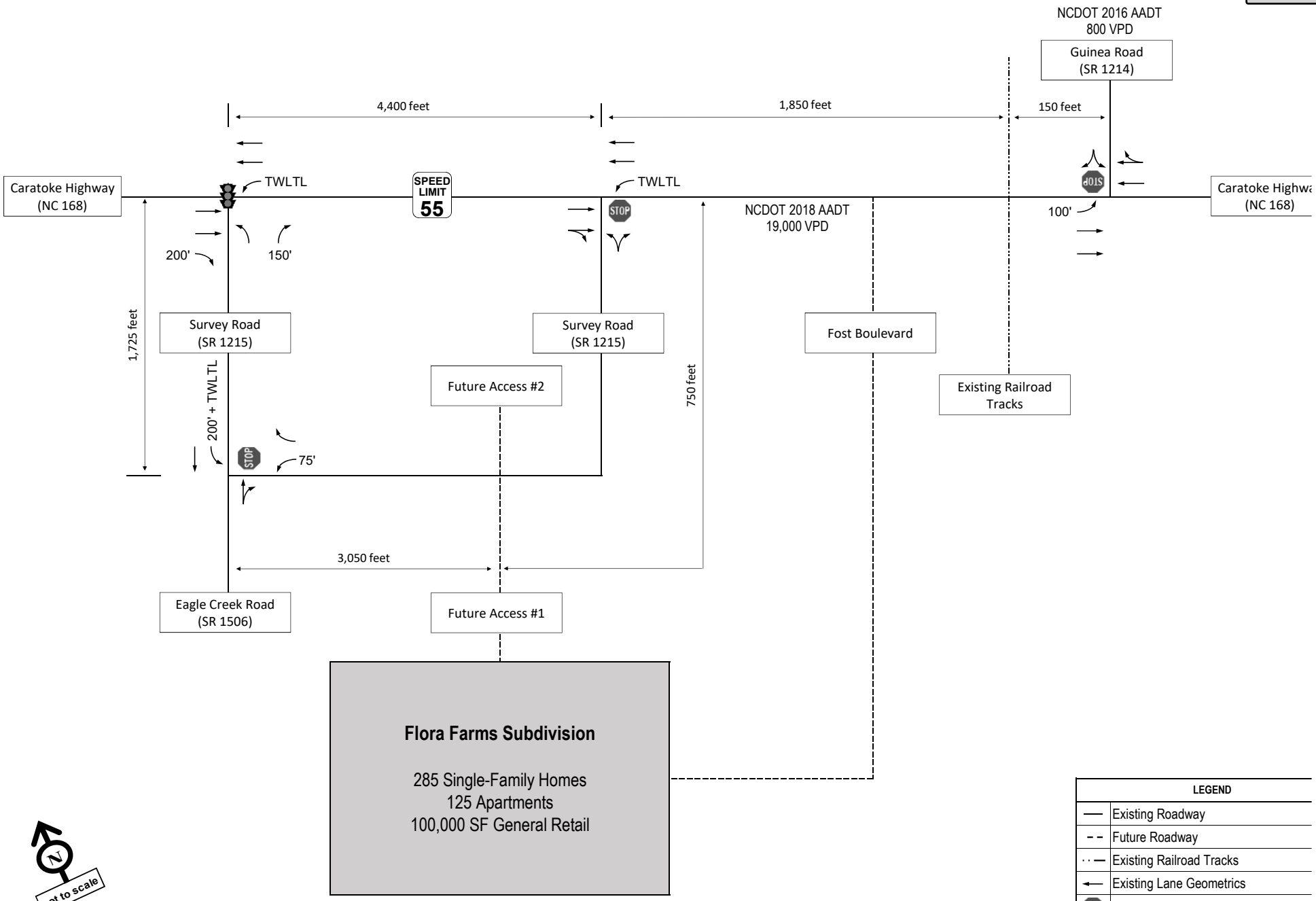


Figure 3
Existing (2019) Lane Geometrics and Traffic Control

Flora Farms Subdivision
TIA
Mo

Existing Turning Movement Data

VHB Engineering NC, P.C. collected the weekday AM and PM peak hour intersection turning movement counts in December 2019. Table 1 summarizes the schedule used to obtain the turning movement data. Because the project lies in a coastal area of North Carolina, volumes along Caratoke Highway (NC 168) were grown to simulate traffic during the peak summer months. All through movements along Caratoke Highway (NC 168) were grown by 10% to account for this increase in traffic during the summer. A detailed summary of the traffic counts can be found in Appendix A. The existing peak hour turning movement volumes are shown in Figure 4.

Table 1 Weekday Peak Hour Turning Movement Count Schedule

Intersection	Time Period	Data Collection Date
Caratoke Highway (NC 168) and Guinea Road (unsignalized)	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Tuesday December 10, 2019
Caratoke Highway (NC 168) and Survey Road (unsignalized)	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Tuesday December 10, 2019
Caratoke Highway (NC 168) and Survey Road (signalized)	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Tuesday December 10, 2019
Survey Road and Eagle Creek Road (unsignalized)	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Tuesday December 10, 2019

Crash Analysis

Crash data was obtained from the NCDOT's Traffic Engineering Accident Analysis System (TEAAS) along Caratoke Highway (NC 168). A five-year period (11/1/2014 – 10/31/2019) was analyzed from 500 feet south of Guinea Road to 500 feet north of the signalized intersection with Survey Road. During this period, there were 37 crashes reported with the predominant crash types being rear ends (43.2%) and fixed object (run off the road) crashes (24.3%).

No fatal or suspected serious injury crashes (Type A) occurred within the study area during the five-year period. The NCDOT crash summary memorandum and 5-year strip analysis can be found in Appendix B. A visual representation of the crashes by location is depicted in Exhibit A.

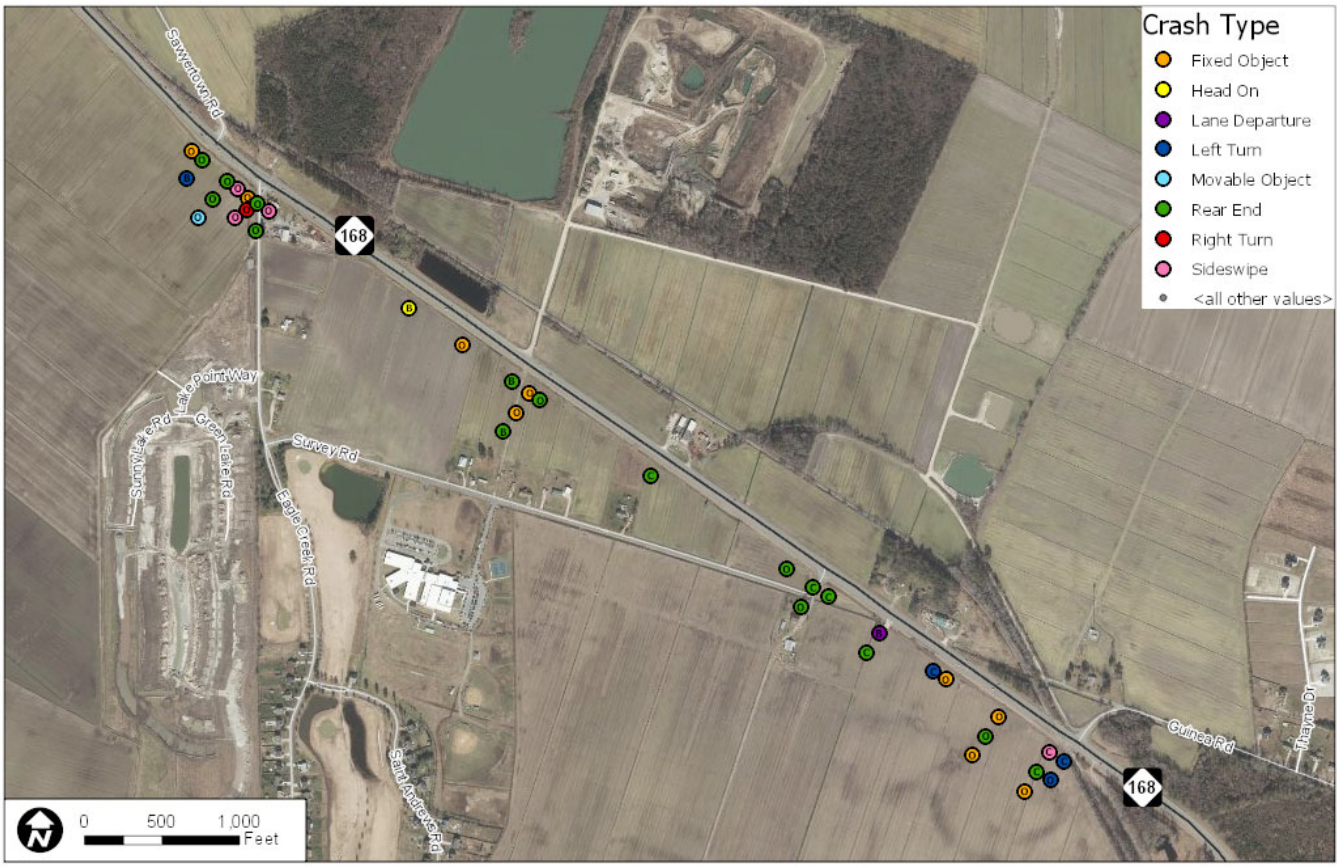


Exhibit A: Crashes by Location along Caratoke Highway (NC 168)

Level of Service Criteria

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

At unsignalized intersections, LOS E is generally considered acceptable only if the side street encounters the delay. Nevertheless, side streets sometimes function at LOS F during peak traffic periods; however, the traffic volume often does not warrant a traffic signal to assist side street traffic. Table 2 provides a general description of various levels of service categories and delay ranges.

Table 2 Level of Service Description for Intersections

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

Level of Service Analysis

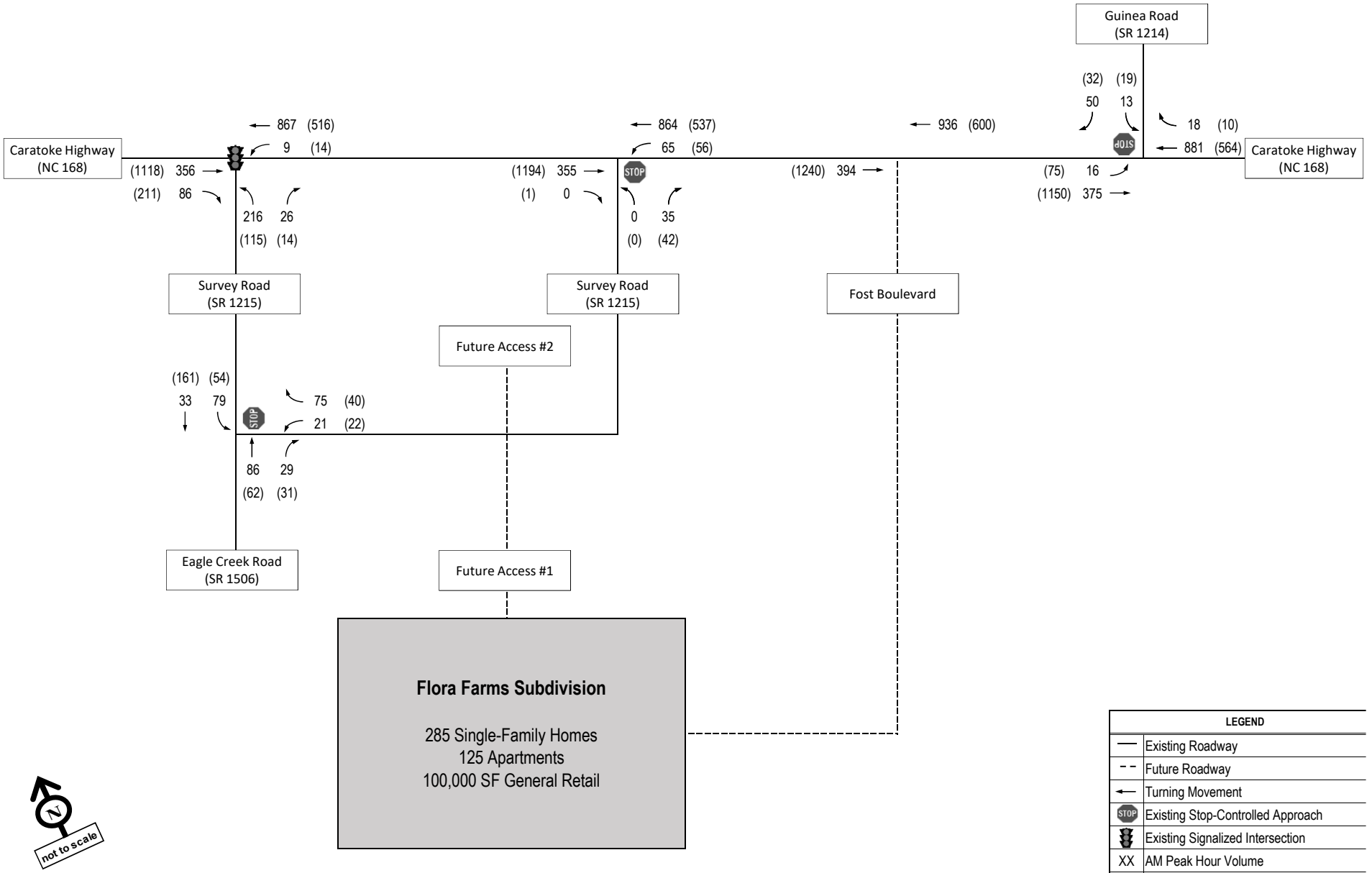
Intersection levels of service analyses were performed for the typical weekday AM and PM peak hour using *Synchro/SimTraffic Professional Version 10*. A summary of the findings for the Existing (2019) scenario LOS analysis can be found in Table 3 and the full *Synchro* output can be found in Appendix C.

As reported in Table 3, all stop-controlled and signalized approaches operate at an acceptable level of service (i.e., LOS D or better) during both peak hours.

Table 3 Existing (2019) LOS Results

Intersection and Approach	Traffic Control	Existing (2019)	
		AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (12.3)**	**A (7.8)**
Eastbound		D-44.8	D-46.3
Northbound		A-6.7	A-3.5
Southbound		A-5.9	A-5.8
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**
Eastbound		A-9.7	C-15.1
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**
Westbound		C-15.0	C-15.5
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**
Westbound		A-9.6	A-9.8

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay



LEGEND	
—	Existing Roadway
- -	Future Roadway
←	Turning Movement
STOP	Existing Stop-Controlled Approach
	Existing Signalized Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

Figure 4
Existing (2019) AM and PM Peak Hour Turning Movement Volumes

Flora Farms Subdivision
TIA
Moyock, NC

3

No-Build (2026) Conditions

Background Growth and Development

The historical average annual daily traffic (AADT) along Caratoke Highway (NC 168) shows little to no growth over the previous ten years; however, to account for potential development growth in the area, an annual growth rate of three percent (3%) was applied to the existing traffic to account for traffic increases between the base year (2019) and the build-out year (2026). In addition, one background development, Fost Tract Development, was included specifically in the No-Build traffic volumes.

Fost Tract Development – The proposed development is located adjacent to the proposed Flora Farms Subdivision, south of Caratoke Highway (NC 168). The development is expected to consist of 353 single-family homes, 126 townhomes, and up to 22,000 SF of general retail space. The site trips that are expected to be generated by the development were distributed based on existing traffic patterns in the area, and the calculated site trips are depicted in Appendix D.

The resulting No-Build (2026) AM and PM peak hour volumes are shown in Figure 5, and the proposed lane geometrics and traffic control are depicted in Figure 6. A table showing the historical background growth along Caratoke Highway (NC 168) is provided along with the existing turning movement counts in Appendix A.

Level of Service Analysis

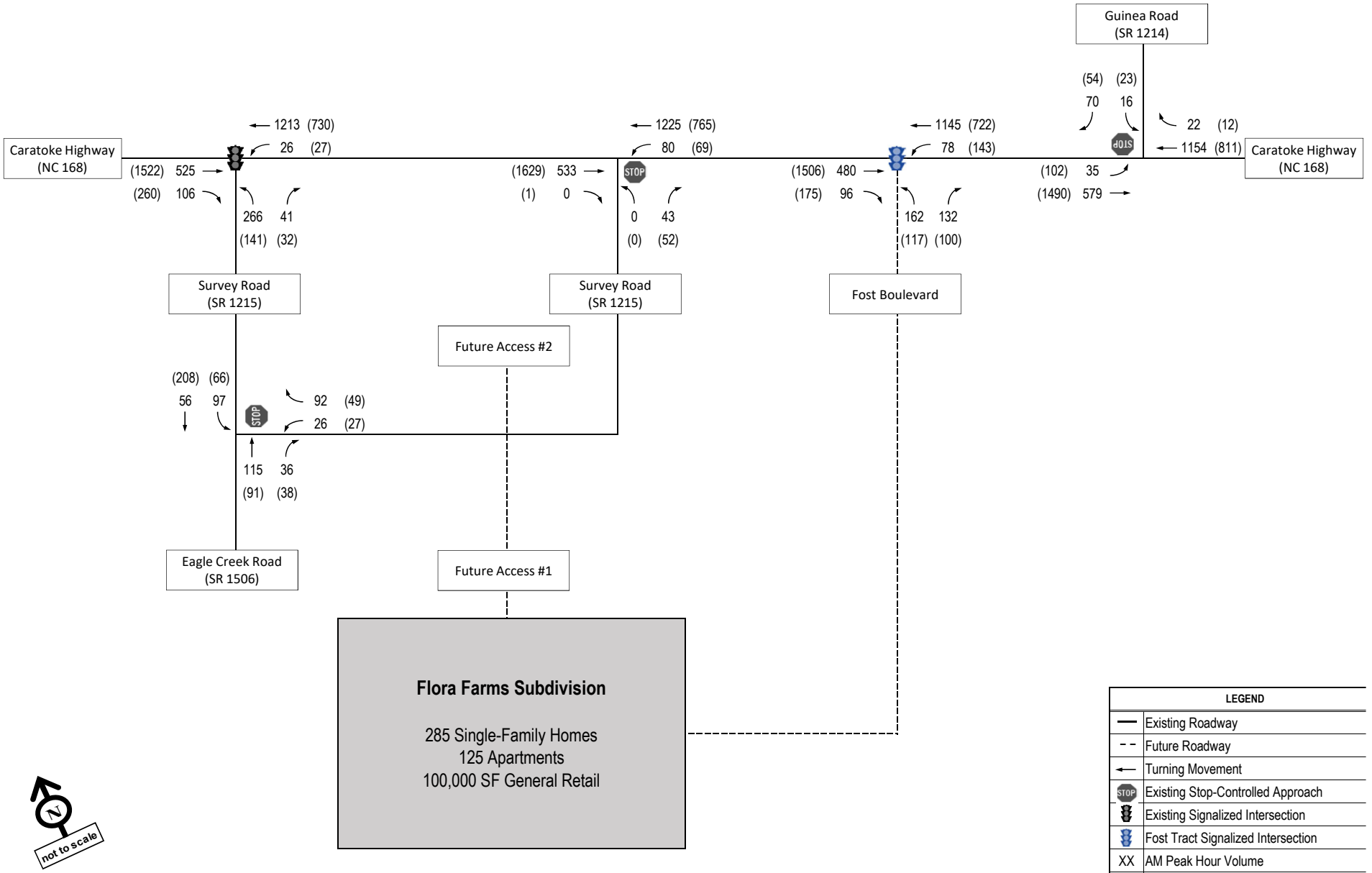
Intersection levels of service analyses were performed for the typical weekday AM and PM peak hours using *Synchro/SimTraffic Professional Version 10*. A summary of the findings for the No-Build (2026) scenario LOS analysis can be found in Table 4 and the full *Synchro* output can be found in Appendix C.

As reported in Table 4, all stop-controlled and signalized approaches continue to operate acceptably during both peak hours. The proposed signalized intersection of Caratoke Highway (NC 168) and Fost Boulevard operates at LOS B during both peak hours.

Table 4 No-Build (2026) LOS Results

Intersection and Approach	Traffic Control	No-Build (2026)	
		AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (13.5)**	**B (12.2)**
Eastbound		D-43.7	D-50.0
Northbound		A-7.2	A-3.6
Southbound		B-11.2	B-12.2
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**
Eastbound		B-10.5	C-21.2
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**
Westbound		C-20.6	C-21.2
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**
Westbound		B-10.2	B-10.4
Caratoke Highway (NC 168) and Fost Boulevard	Signalized	**B (11.1)**	**B (11.3)**
Eastbound		C-30.5	D-38.2
Northbound		A-9.5	B-11.1
Southbound		A-4.6	A-8.0

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay



LEGEND	
—	Existing Roadway
- -	Future Roadway
←	Turning Movement
STOP	Existing Stop-Controlled Approach
	Existing Signalized Intersection
	Fost Tract Signalized Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

Figure 5
No-Build (2026) AM and PM Peak Hour Turning Movement Volumes

Flora Farms Subdivision
TIA
Moyock, NC

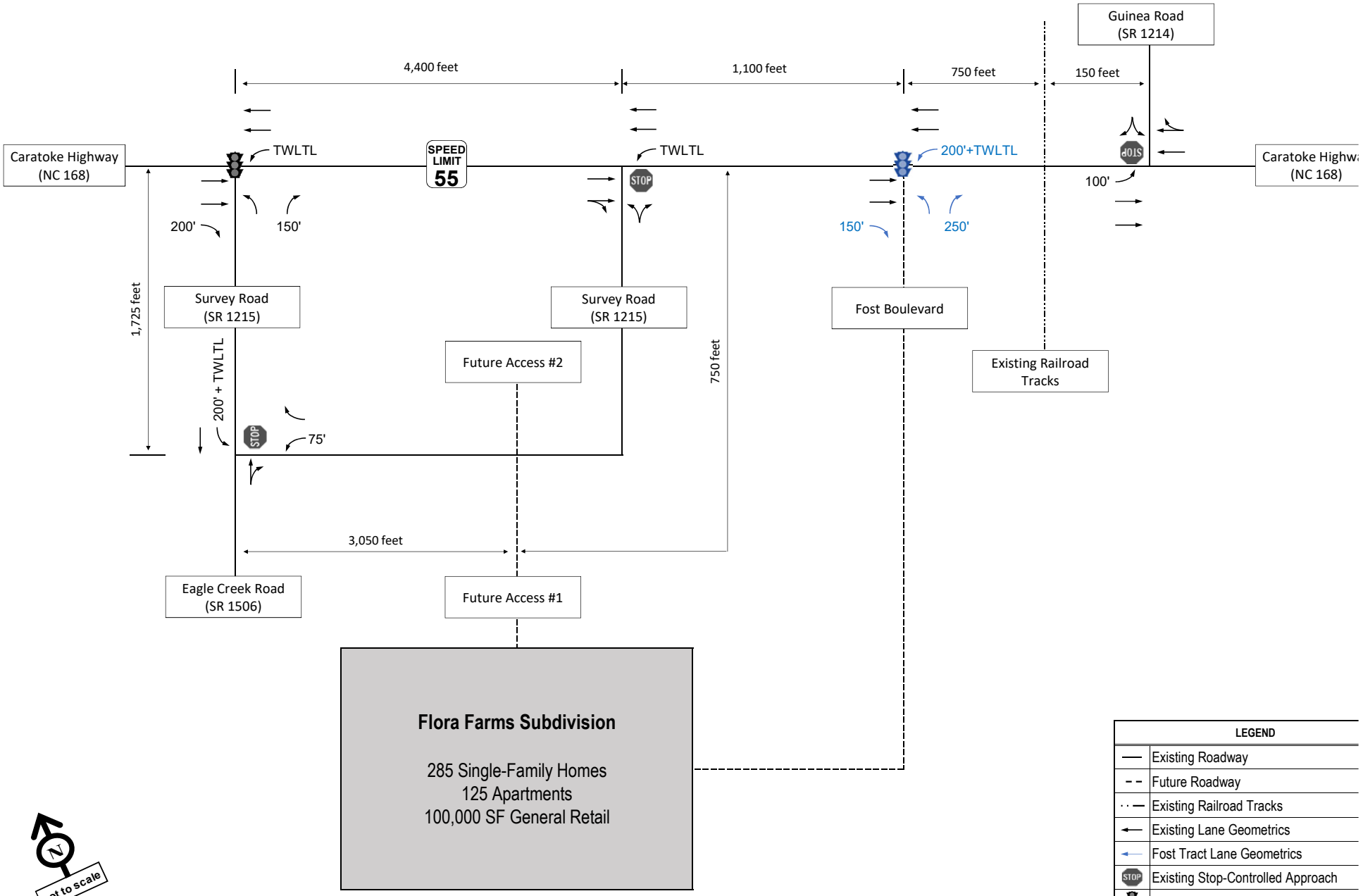


Figure 6
No-Build (2026) Lane Geometrics and Traffic Control

Flora Farms Subdivision
TIA
Mo

4

Build (2026) Conditions

Bissell Professional Group plans to construct a new mixed-use development south of Caratoke Highway (NC 168) and Survey Road (SR 1215) in Moyock, North Carolina (Figure 1). The site is bordered by undeveloped land and existing single-family residential developments. When fully completed, the site will consist of 285 single-family homes, 125 apartments, and 100,000 square feet (SF) of general retail space, with an expected full build-out year of 2026.

Trip Generation

Trip generation was conducted based on the most appropriate corresponding trip generation codes included in the *ITE Trip Generation Manual, 10th Edition* and the suggested method of calculation in the NCDOT's *"Rate vs. Equation" Spreadsheet*. Trips captured internally were calculated based on the *NCHRP 684* method and the *NCDOT Internal Capture Spreadsheet*. ITE LUC 210 (Single-Family Detached Housing), LUC 220 (Multifamily Housing (Low Rise)), and LUC 820 (General Retail) were used based on the NCDOT guidance. The full build-out of the site is anticipated to be completed by 2026 and to consist of the following:

- 285 single-family homes
- 125 apartment units
- 100,000 SF of general retail space

As a result, the proposed development is projected to generate 8,380 daily external site trips, with 463 trips (189 entering, 274 exiting) occurring in the AM peak hour and 717 trips (393

entering, 324 exiting) occurring in the PM peak hour. The generated site trips were distributed in accordance with the existing turning movement counts and land uses.

Table 5 summarizes the assumed trip generation for the proposed development for typical weekday AM and PM peak hours.

Table 5 Trip Generation Rates (Vehicle Trips)

Land Use Code[1]	Land Use	Unit	ADT	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Total Site Trips[2]									
210	Single-Family Detached Housing	285 du	2,725	52	155	207	175	103	278
220	Multifamily Housing (Low-Rise)	125 du	904	14	45	59	45	27	72
820	General Retail	100,000 sf	6,012	125	77	202	261	282	543
Development Total			*9,641*	*191*	*277*	*468*	*481*	*412*	*893*
Trip Reduction Due to Internal Capture[3]									
210	Single-Family Detached Housing	285 du	406	1	2	2	54	16	70
220	Multifamily Housing (Low-Rise)	125 du	129	0	0	1	14	4	18
820	General Retail	100,000 sf	726	1	1	2	20	68	88
Development Total			*1,262*	*2*	*3*	*5*	*88*	*88*	*176*
Total External Site Trips									
210	Single-Family Detached Housing	285 du	2,319	51	153	204	121	87	208
220	Multifamily Housing (Low-Rise)	125 du	775	14	45	59	31	23	54
820	General Retail	100,000 sf	5,286	124	76	200	241	214	455
Development Total			*8,380*	*189*	*274*	*463*	*393*	*324*	*717*
Pass-by Site Trips[4]									
210	Single-Family Detached Housing	285 du		0	0	0	0	0	0
220	Multifamily Housing (Low-Rise)	125 du		0	0	0	0	0	0
820	General Retail	100,000 sf		0	0	0	77	78	155
Development Total				*0*	*0*	*0*	*77*	*78*	*155*
No-Pass-by Site Trips									
210	Single-Family Detached Housing	285 du		51	153	204	121	87	208
220	Multifamily Housing (Low-Rise)	125 du		14	45	59	31	23	54
820	General Retail	100,000 sf		124	76	200	164	136	300
Development Total				*189*	*274*	*463*	*316*	*246*	*562*

Notes:

1. Land Use Code and trip generation rates are determined based on *ITE Trip Generation, 10th Edition*
2. Total site trips are determined based on the suggested method in the NCDOT Rate Vs Equation Spreadsheet
3. Internal capture was based on NCHRP 684 method and NCDOT IC calculation spreadsheet
4. Unconstrained pass-by trips are calculated based on *ITE Trip Generation Handbook, 3rd Edition.* The final projections are not expected to exceed 10% of adjacent street volumes.

Trip Distribution and Assignment

The proposed development will construct two access driveways as a four-leg intersection along Survey Road. A total of four (4) cross-connections are also planned between the proposed Flora Farms Subdivision and the future Fost Tract Development. The generated site trips were distributed in accordance with the existing traffic patterns and land uses in the vicinity of the study area as follows:

› Caratoke Highway (NC 168) to/from the south – 30%

- Caratoke Highway (NC 168) to/from the north – 60%
- Guinea Road to/from the east – 5%
- Eagle Creek Road to/from the southwest – 5%

Pass-by trips were distributed based on existing traffic flow in the area. The proposed non-pass-by and pass-by trip assignment percentages are depicted in Figure 7 and Figure 8, and the resulting non-pass-by and pass-by trips are depicted in Figure 9 and Figure 10, respectively. The combined full build-out site generated trips are shown in Figure 11.

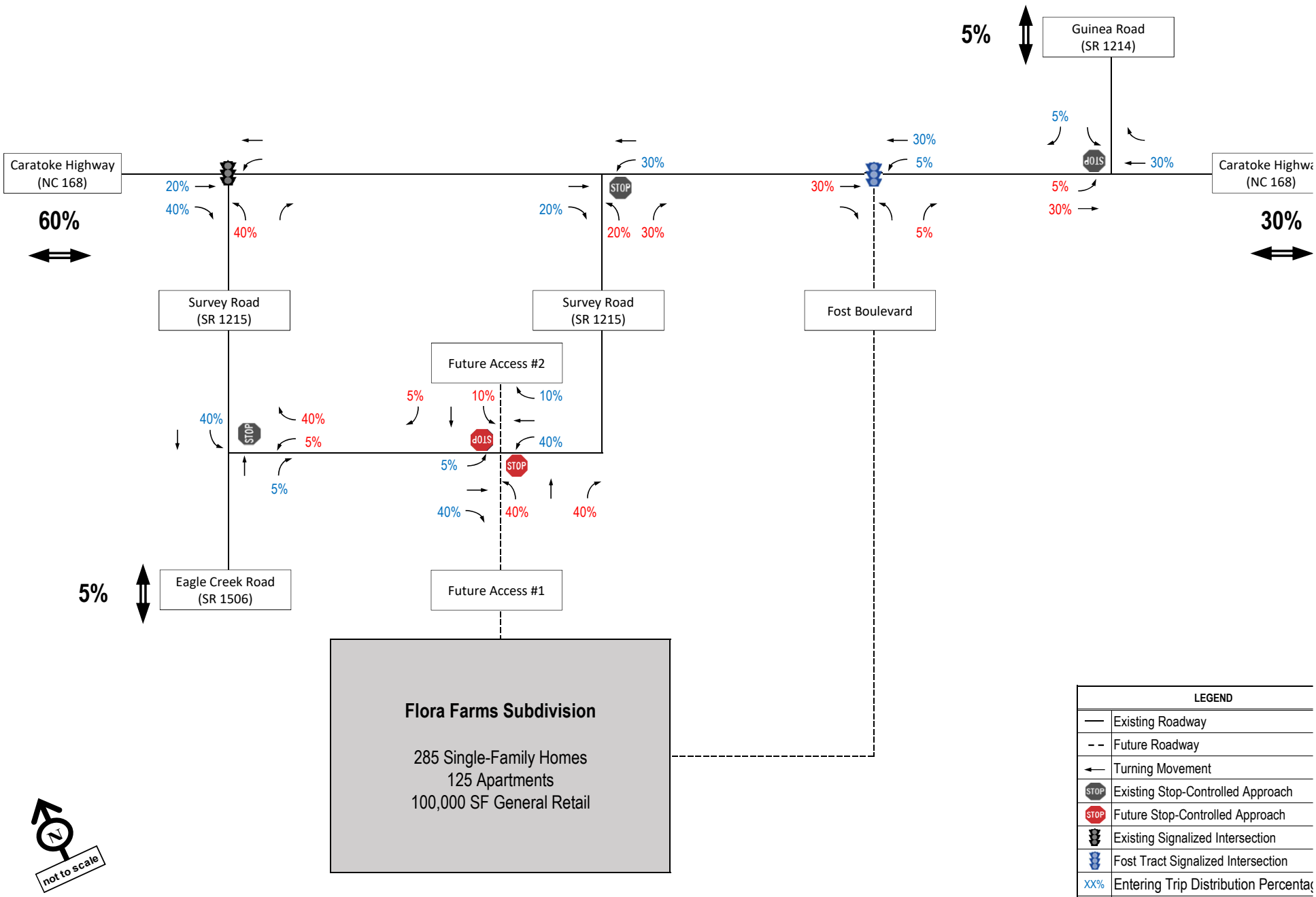


Figure 7
Non-Pass-By Peak Hour Trip Distribution Percentages

Flora Farms Subdivision
TIA
Mo

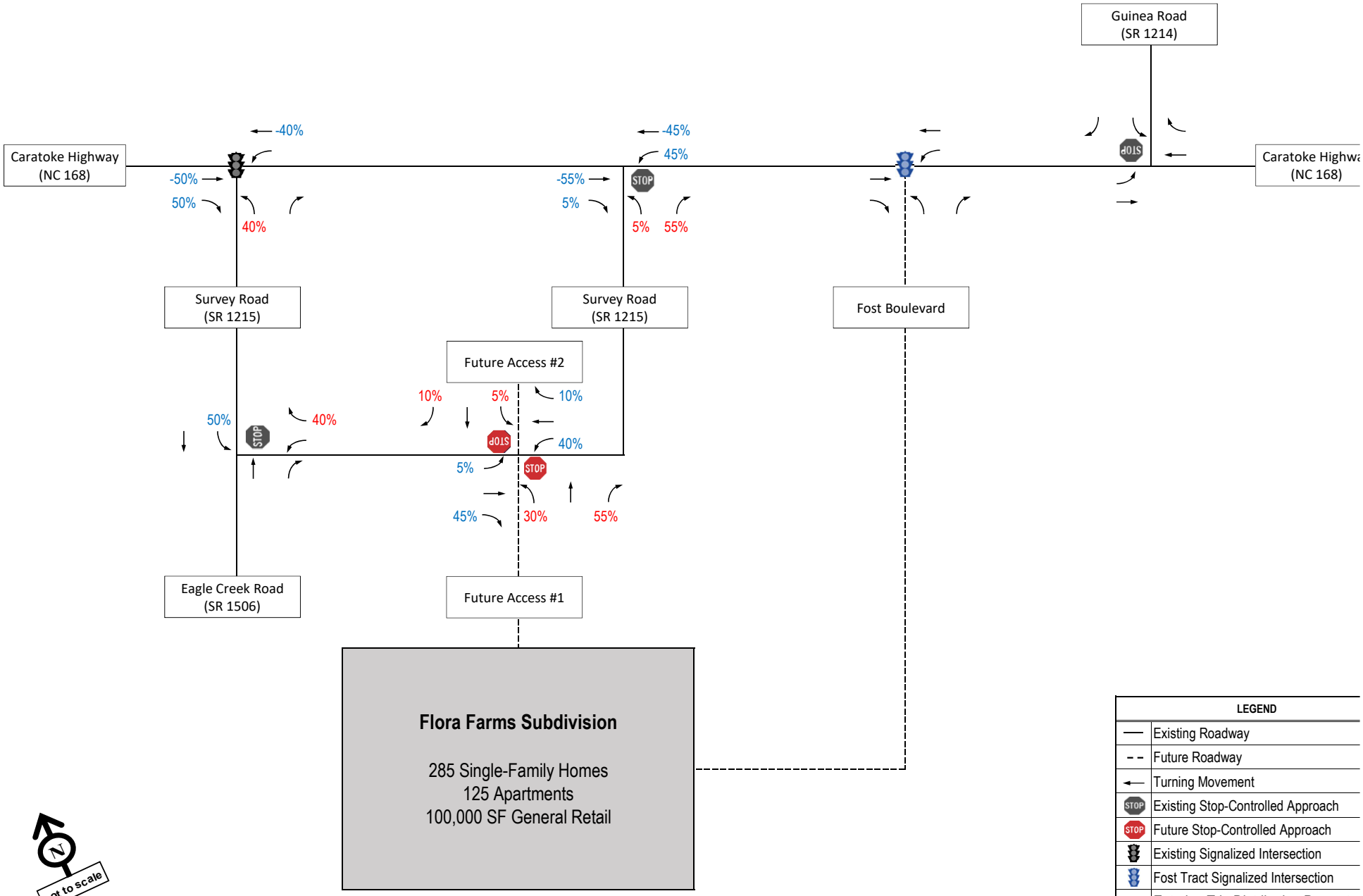


Figure 8
Pass-By Peak Hour Trip Distribution Percentages

Flora Farms Subdivision
TIA
Mo

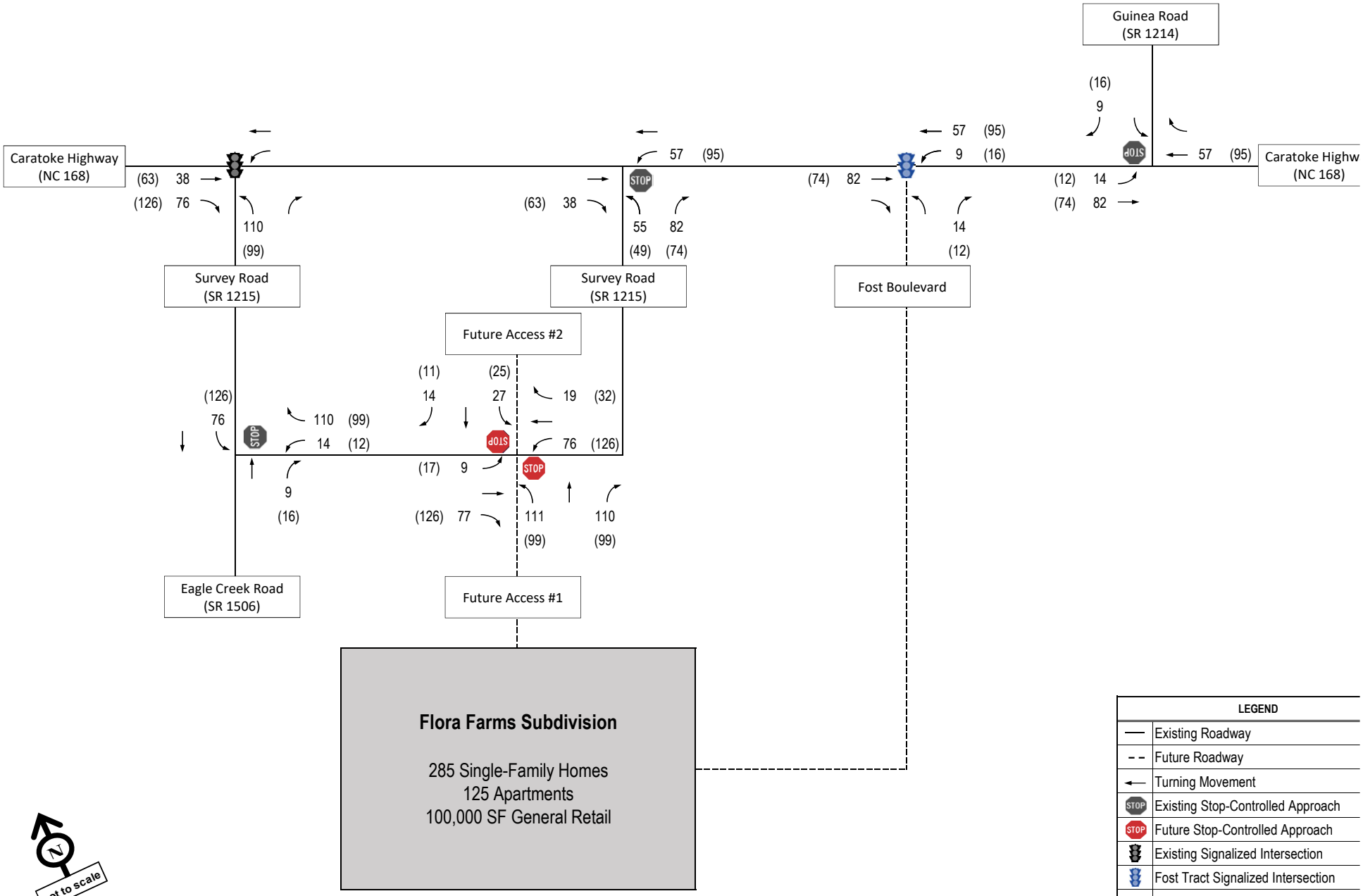


Figure 9
Non-Pass-By AM and PM Peak Hour Site Trips

Flora Farms Subdivision
TIA
Mo

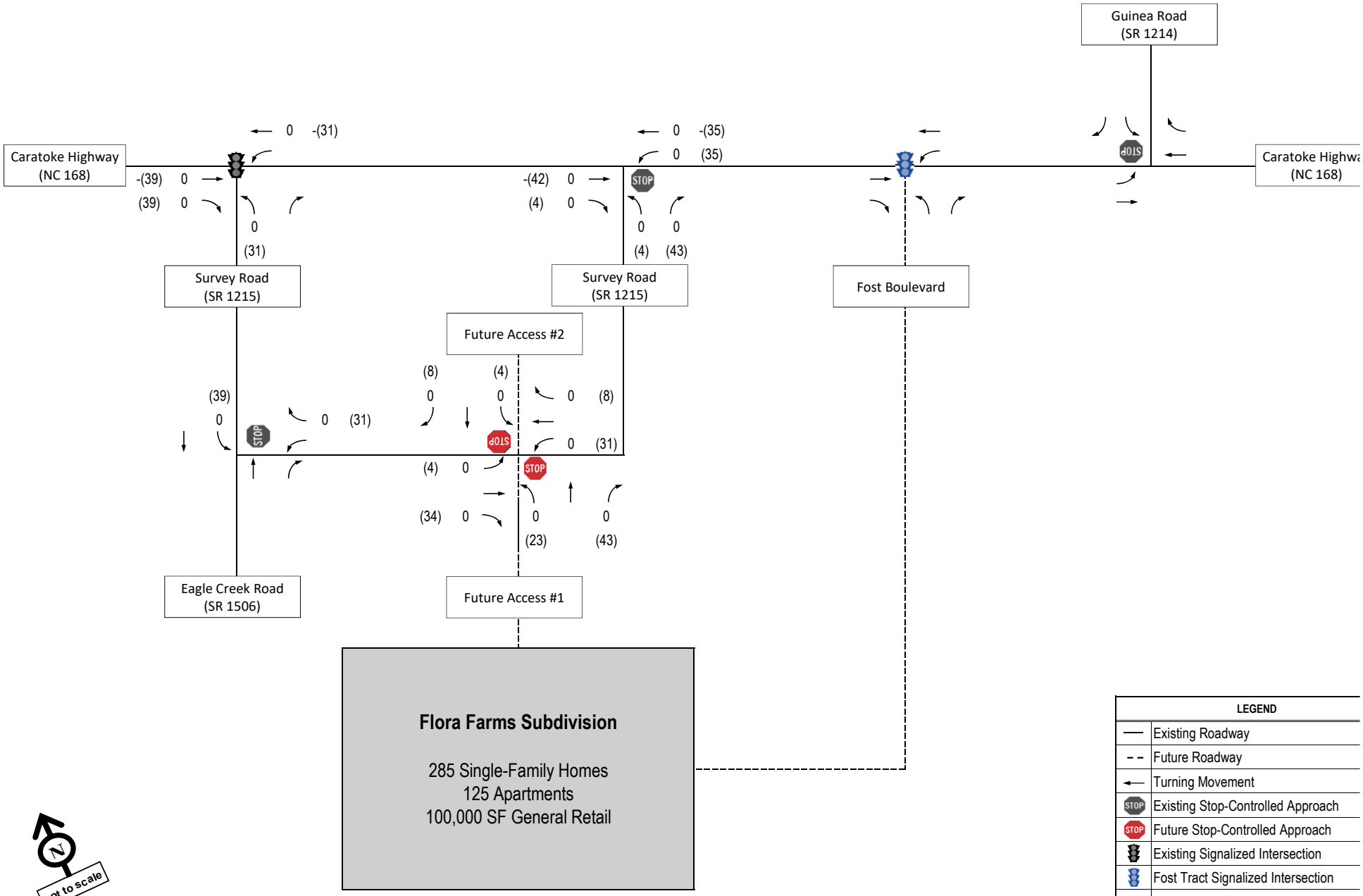


Figure 10
Pass-By AM and PM Peak Hour Site Trips

Flora Farms Subdivision
TIA
Mo

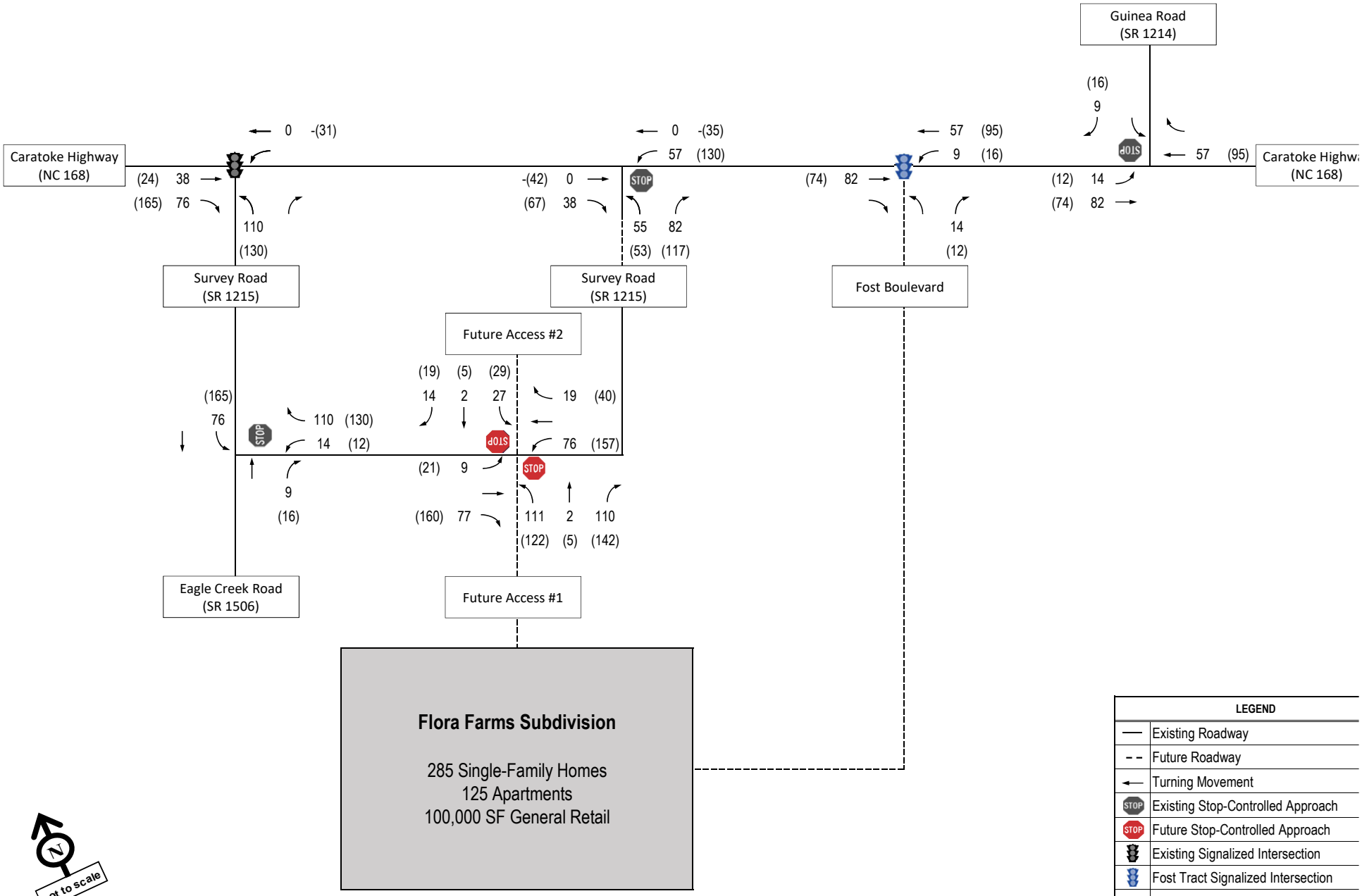


Figure 11
Total AM and PM Peak Hour Site Trips

Flora Farms Subdivision
TIA
Mo

Level of Service Analysis

The Build (2026) analysis scenario includes the No-Build (2026) traffic and site-generated trips from the proposed development. Figure 12 depicts the turning movement volumes used in the Build (2026) scenario analysis. Intersection levels of service analyses were performed for the typical weekday AM and PM peak hours using *Synchro/SimTraffic Professional Version 10*. Table 6 summarizes the findings of the LOS analysis, and Appendix C contains the full *Synchro* reports of the analyses.

As reported in Table 6, with the addition of site trips, all stop-controlled approaches, except for one, operate at acceptable levels of service during both peak hours. The eastbound Survey Road stop-controlled approach at Caratoke Highway (NC 168) is projected to operate at LOS F during the PM peak hour. All signalized intersections operate acceptably under Build (2026) conditions.

Table 6 Build (2026) LOS Results

Intersection and Approach	Traffic Control	Build (2026)	
		AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (16.0)**	**B (18.1)**
Eastbound		D-41.5	E-61.2
Northbound		A-9.8	A-5.1
Southbound		B-12.0	B-16.2
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**
Eastbound		C-23.3	F-844.9
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**
Westbound		C-22.6	C-23.7
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**
Westbound		B-11.2	B-12.1
Caratoke Highway (NC 168) and Fost Boulevard	Signalized	**B (11.9)**	**B (11.3)**
Eastbound		C-30.1	D-41.1
Northbound		A-9.9	B-11.6
Southbound		A-7.2	A-7.2
Survey Road and Future Access #1/Future Access #2	Unsignalized	**N/A**	**N/A**
Northbound		B-13.3	C-23.5
Southbound		B-12.4	C-17.7

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay

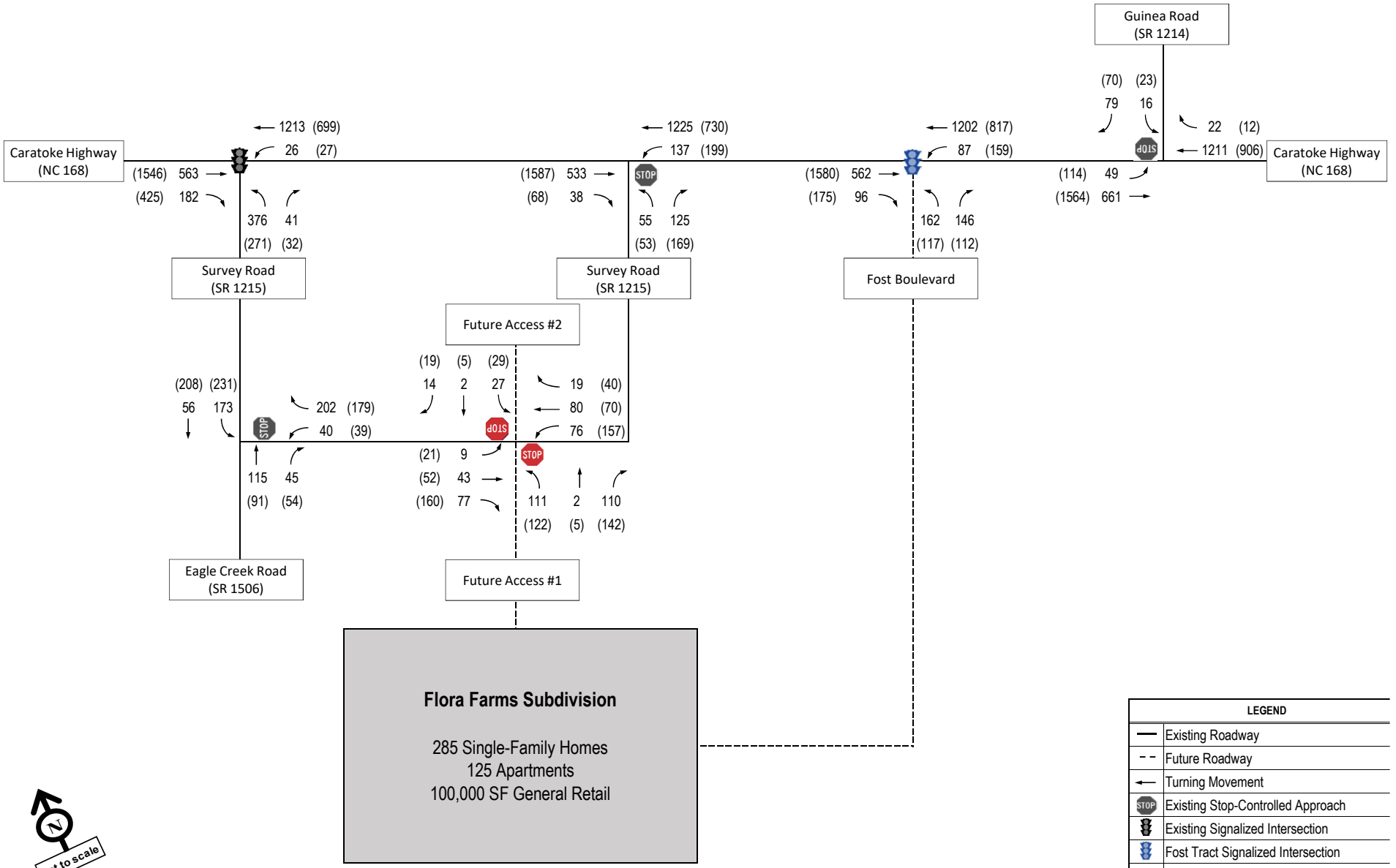


Figure 12
Build (2026) AM and PM Peak Hour Turning Movement Volumes

Flora Farms Subdivision
TIA
Moyock, NC

5

Findings and Conclusions

Based on the traffic operations analyses, the proposed development is projected to impact the traffic operations of the surrounding roadway network and intersections after the full build-out of the development. The following improvements are recommended by the time the development is fully constructed in 2026:

Caratoke Highway (NC 168) and Survey Road (SR 1215) (unsignalized)

The Survey Road (SR 1215) eastbound stop-controlled approach is expected to operate at LOS F during the PM peak hour under Build (2026) conditions. After the build-out of the development, vehicles will be able to access full movement traffic signals at Survey Road to north of the development, and Fost Boulevard to the south. Therefore, the following improvements are recommended for the intersection:

- Provide a southbound right-turn lane with at least 100 feet of full storage and appropriate taper.
- Restrict access at the intersection to not allow left turns off of Survey Road. This restriction of access should be completed when approximately 30% of the total estimated trips for the site are observed, likely in conjunction with the southbound right-turn lane installation.
- Stripe out at least 200 feet of storage within the existing two-way left-turn lane along Caratoke Highway (NC 168) for the northbound left-turn.
- Monitor the intersection for protentional signalization in the future.

Survey Road (SR 1215) and Future Access #1/Future Access #2

The proposed stop-controlled driveways are projected to operate at acceptable levels of service during peak hours under Build (2026) conditions. The following driveway configuration for both access driveways should be considered to enhance traffic operations and safety:

- Connect both driveways to Survey Road with stop-controlled approaches as a full movement four-leg intersection.
- Construct Future Access #1 with one ingress lane and two egress lanes. Provide a northbound left-turn lane with a minimum of 100 feet of full storage and appropriate taper and a through/right-turn lane. Lydia Street intersects with Future Access #1 approximately 300 feet from Survey Road, which provides the proper internal protected stem to accommodate projected queues. Typically, NCDOT requires a 100-foot minimum internal protected stem for this type of facility.
- Construct Future Access #2 with one ingress lane and one egress lane.
- Provide an eastbound left-turn lane and right-turn lane along Survey Road, both with a minimum of 100 feet of full storage and appropriate taper.
- Provide a westbound left-turn lane along Survey Road with at least 100 feet of full storage and appropriate taper.

The summary of level of service results is displayed in Table 7, and the proposed Future (2026) lane geometrics and traffic control is displayed in Figure 13. Since the proposed improvements after the full build-out of the site will affect existing traffic patterns in the area, the proposed Build (2026) turning movement volumes after the improvements are in place are depicted in Figure 14.

Table 7 Summary of LOS Results

Intersection and Approach	Traffic Control	Existing (2019)		No-Build (2026)		Build (2026)		Build (2026) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Caratoke Highway (NC 168) and Survey Road	Signalized	**B (12.3)**	**A (7.8)**	**B (13.5)**	**B (12.2)**	**B (16.0)**	**B (18.1)**	**B (15.7)**	**B (18.0)**
Eastbound		D-44.8	D-46.3	D-43.7	D-50.0	D-41.5	E-61.2	D-41.5	E-61.2
Northbound		A-6.7	A-3.5	A-7.2	A-3.6	A-9.8	A-5.1	A-9.2	A-4.8
Southbound		A-5.9	A-5.8	B-11.2	B-12.2	B-12.0	B-16.2	B-12.0	B-16.2
Caratoke Highway (NC 168) and Survey Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		A-9.7	C-15.1	B-10.5	C-21.2	C-23.3	F-844.9	B-11.4	E-37.9
Caratoke Highway (NC 168) and Guinea Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		C-15.0	C-15.5	C-20.6	C-21.2	C-22.6	C-23.7	C-22.6	C-23.7
Survey Road and Eagle Creek Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		A-9.6	A-9.8	B-10.2	B-10.4	B-11.2	B-12.1	B-11.2	B-12.1
Caratoke Highway (NC 168) and Fost Boulevard	Signalized	**N/A**	**N/A**	**B (11.1)**	**B (11.3)**	**B (11.9)**	**B (11.3)**	**B (13.9)**	**B (14.1)**
Eastbound		N/A	N/A	C-30.5	D-38.2	C-30.1	D-41.1	C-30.2	D-43.7
Northbound		N/A	N/A	A-9.5	B-11.1	A-9.9	B-11.6	B-11.6	B-13.3
Southbound		N/A	N/A	A-4.6	A-8.0	A-7.2	A-7.2	A-9.4	A-9.9
Survey Road and Future Access #1/Future Access #2	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Northbound		N/A	N/A	N/A	N/A	B-13.3	C-23.5	B-11.7	C-15.4
Southbound		N/A	N/A	N/A	N/A	B-12.4	C-17.7	B-11.7	C-16.2

X (XX.X) = Overall intersection LOS (average delay), X-XX = Approach LOS and average delay

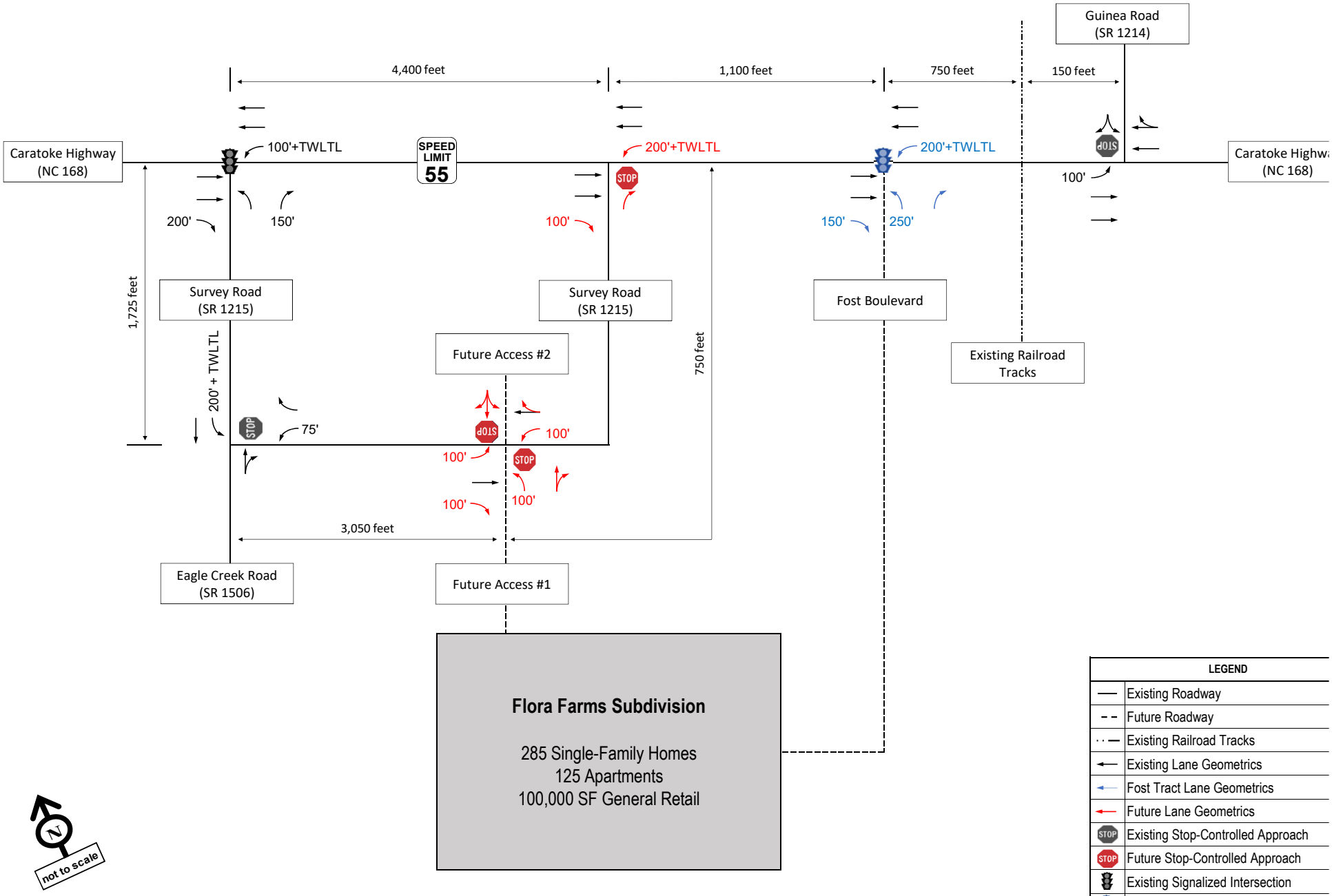
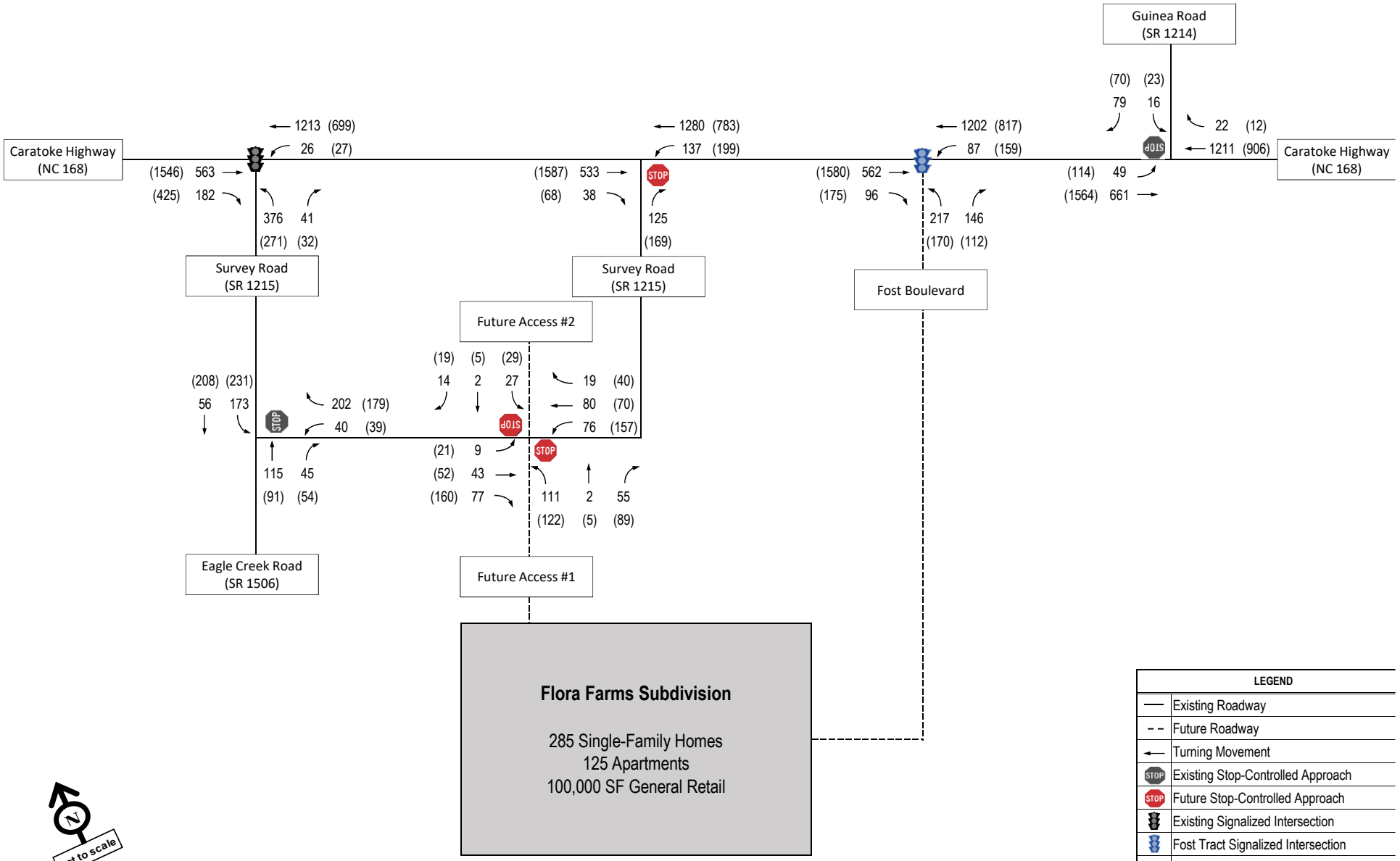


Figure 13
Future (2026) Lane Geometrics and Traffic Control

Flora Farms Subdivision
TIA
Mo



LEGEND	
—	Existing Roadway
- -	Future Roadway
←	Turning Movement
STOP	Existing Stop-Controlled Approach
STOP	Future Stop-Controlled Approach
	Existing Signalized Intersection
	Fost Tract Signalized Intersection
XX	AM Peak Hour Volume
(XX)	PM Peak Hour Volume

Figure 14
Build (2026) AM and PM Peak Hour Turning Movement Volumes - After Improvements

Flora Farms Subdivision
TIA
Moyock, NC

Appendices

Appendix A:

Turning Movement Counts

VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@(ea
Site Code :
Start Date : 12/10/201
Page No : 1

Groups Printed- Passenger Vehicles - Single Unit - TTST - Bicycles on Crosswalk - Pedestrians

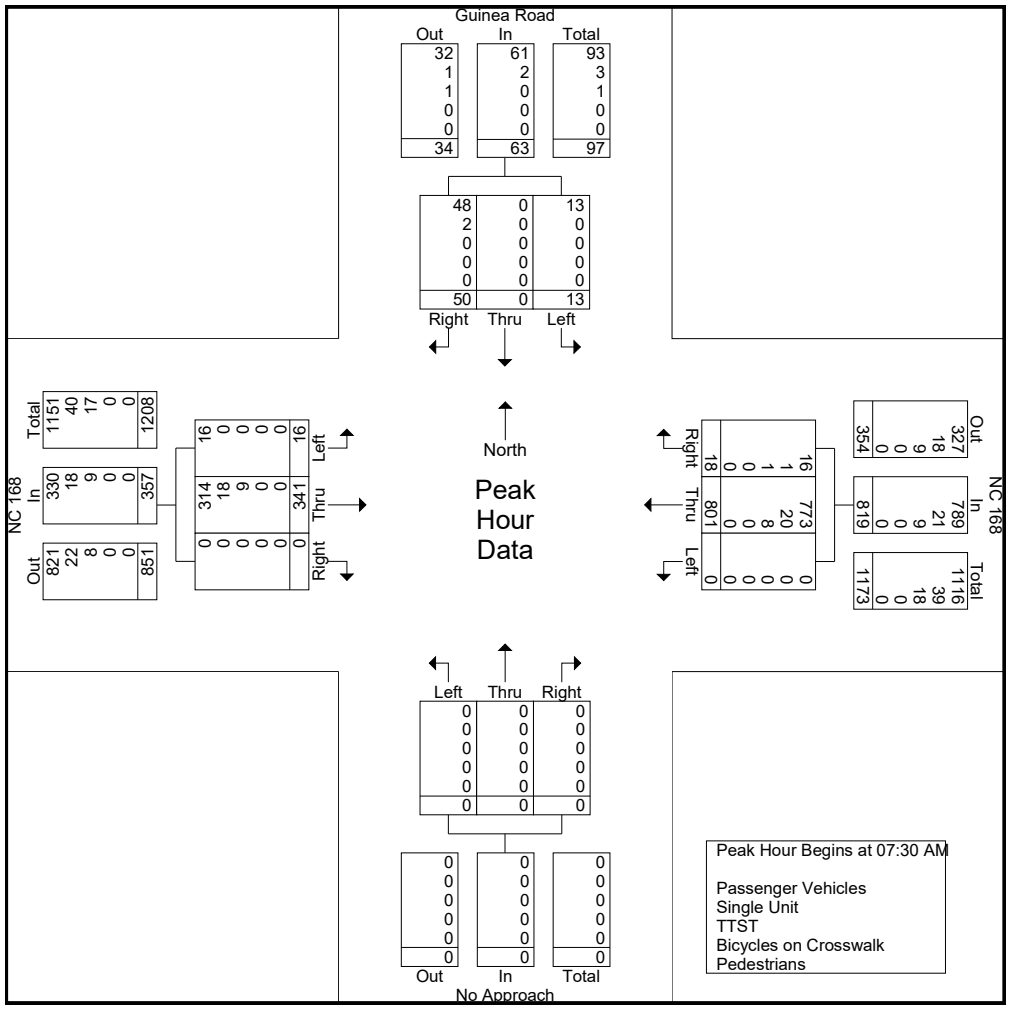
	Guinea Road Southbound				NC 168 Westbound				No Approach Northbound				NC 168 Eastbound						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int.
07:00 AM	3	0	8	0	0	203	3	0	0	0	0	0	4	76	0	0	0	297	
07:15 AM	3	0	9	0	0	186	1	0	0	0	0	6	2	85	0	0	6	286	
07:30 AM	5	0	8	0	0	166	2	0	0	0	0	5	2	123	0	0	5	306	
07:45 AM	3	0	13	0	0	223	6	0	0	0	0	1	5	86	0	0	1	336	
Total	14	0	38	0	0	778	12	0	0	0	0	12	13	370	0	0	12	1225	
08:00 AM	2	0	13	0	0	212	4	0	0	0	0	0	1	70	0	0	0	302	
08:15 AM	3	0	16	0	0	200	6	0	0	0	0	0	8	62	0	0	0	295	
08:30 AM	5	0	15	0	0	152	2	0	0	0	0	0	4	100	0	0	0	278	
08:45 AM	3	0	9	0	0	164	5	0	0	0	0	0	2	77	0	0	0	260	
Total	13	0	53	0	0	728	17	0	0	0	0	0	15	309	0	0	0	1135	
*** BREAK ***																			
04:00 PM	4	0	4	0	0	142	2	0	0	0	0	0	13	215	0	0	0	380	
04:15 PM	6	0	7	0	0	141	0	0	0	0	0	0	10	231	0	0	0	395	
04:30 PM	3	0	4	0	0	122	4	0	0	0	0	0	13	290	0	0	0	436	
04:45 PM	1	0	15	0	0	122	2	0	0	0	0	0	18	253	0	0	0	411	
Total	14	0	30	0	0	527	8	0	0	0	0	0	54	989	0	0	0	1622	
05:00 PM	10	0	6	0	0	129	1	0	0	0	0	0	35	242	0	0	0	423	
05:15 PM	5	0	7	0	0	140	3	0	0	0	0	0	9	260	0	0	0	424	
05:30 PM	1	0	13	0	0	100	4	0	0	0	0	0	25	226	0	0	0	369	
05:45 PM	0	0	8	0	0	102	0	0	0	0	0	0	15	190	0	0	0	315	
Total	16	0	34	0	0	471	8	0	0	0	0	0	84	918	0	0	0	1531	
Grand Total	57	0	155	0	0	2504	45	0	0	0	0	12	166	2586	0	0	12	5513	
Apprch %	26.9	0	73.1		0	98.2	1.8		0	0	0		6	94	0				
Total %	1	0	2.8		0	45.4	0.8		0	0	0		3	46.9	0		0.2	99.8	
Passenger Vehicles	52	0	151		0	2411	40		0	0	0		165	2486	0		0	0	
% Passenger Vehicles	91.2	0	97.4	0	0	96.3	88.9	0	0	0	0	0	99.4	96.1	0	0	0	0	
Single Unit	5	0	4		0	68	3		0	0	0		1	76	0		0	0	
% Single Unit	8.8	0	2.6	0	0	2.7	6.7	0	0	0	0	0	0.6	2.9	0	0	0	0	
TTST	0	0	0		0	25	2		0	0	0		0	24	0		0	0	
% TTST	0	0	0	0	0	1	4.4	0	0	0	0	0	0	0.9	0	0	0	0	
Bicycles on Crosswalk	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	

VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@(ea
Site Code :
Start Date : 12/10/201
Page No : 2

	Guinea Road Southbound				NC 168 Westbound				No Approach Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	0	8	13	0	166	2	168	0	0	0	0	2	123	0	125	
07:45 AM	3	0	13	16	0	223	6	229	0	0	0	0	5	86	0	91	
08:00 AM	2	0	13	15	0	212	4	216	0	0	0	0	1	70	0	71	
08:15 AM	3	0	16	19	0	200	6	206	0	0	0	0	8	62	0	70	
Total Volume	13	0	50	63	0	801	18	819	0	0	0	0	16	341	0	357	
% App. Total	20.6	0	79.4		0	97.8	2.2		0	0	0		4.5	95.5	0		
PHF	.650	.000	.781	.829	.000	.898	.750	.894	.000	.000	.000	.000	.500	.693	.000	.714	
Passenger Vehicles	13	0	48	61	0	773	16	789	0	0	0	0	16	314	0	330	
% Passenger Vehicles	100	0	96.0	96.8	0	96.5	88.9	96.3	0	0	0	0	100	92.1	0	92.4	
Single Unit	0	0	2	2	0	20	1	21	0	0	0	0	0	18	0	18	
% Single Unit	0	0	4.0	3.2	0	2.5	5.6	2.6	0	0	0	0	0	5.3	0	5.0	
TTST	0	0	0	0	0	8	1	9	0	0	0	0	0	9	0	9	
% TTST	0	0	0	0	0	1.0	5.6	1.1	0	0	0	0	0	2.6	0	2.5	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

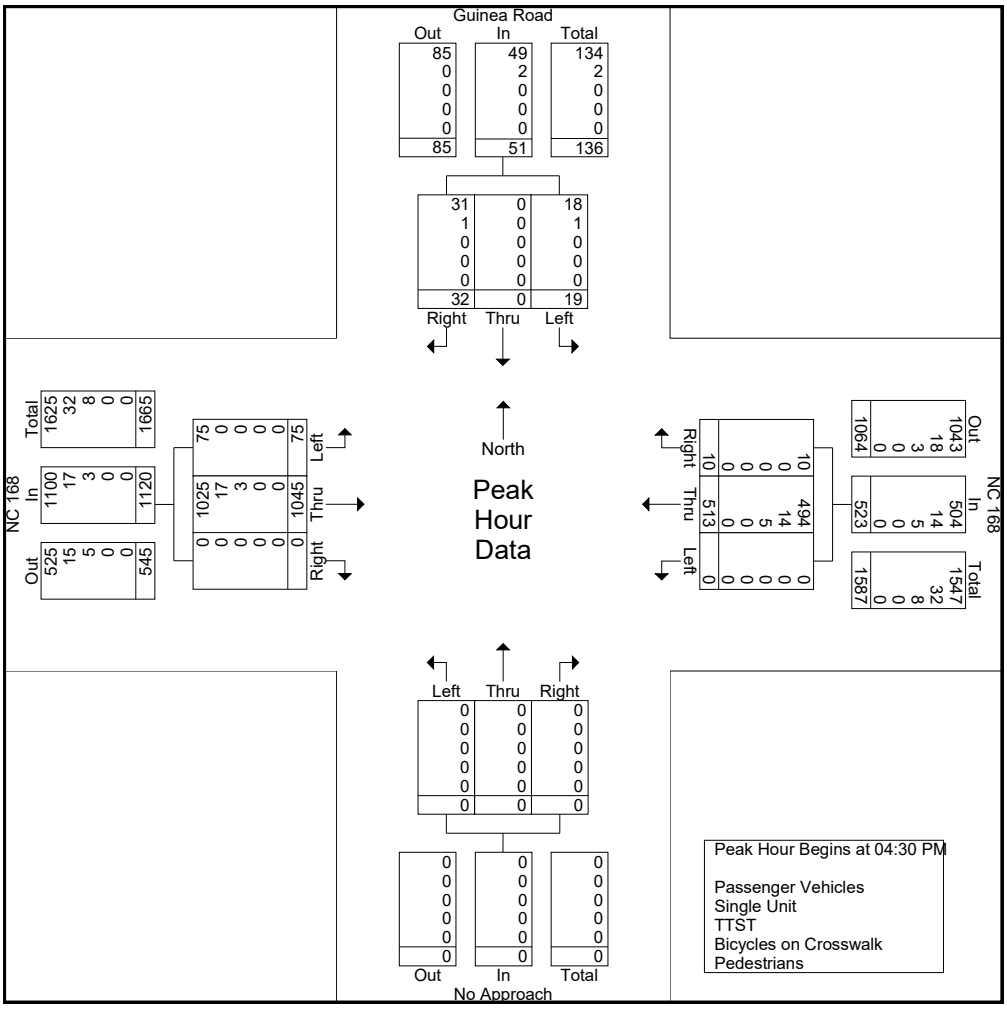


VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@(ea
Site Code :
Start Date : 12/10/201
Page No : 3

	Guinea Road Southbound				NC 168 Westbound				No Approach Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	0	4	7	0	122	4	126	0	0	0	0	13	290	0	303	
04:45 PM	1	0	15	16	0	122	2	124	0	0	0	0	18	253	0	271	
05:00 PM	10	0	6	16	0	129	1	130	0	0	0	0	35	242	0	277	
05:15 PM	5	0	7	12	0	140	3	143	0	0	0	0	9	260	0	269	
Total Volume	19	0	32	51	0	513	10	523	0	0	0	0	75	1045	0	1120	
% App. Total	37.3	0	62.7		0	98.1	1.9		0	0	0		6.7	93.3	0		
PHF	.475	.000	.533	.797	.000	.916	.625	.914	.000	.000	.000	.000	.536	.901	.000	.924	
Passenger Vehicles	18	0	31	49	0	494	10	504	0	0	0	0	75	1025	0	1100	
% Passenger Vehicles	94.7	0	96.9	96.1	0	96.3	100	96.4	0	0	0	0	100	98.1	0	98.2	
Single Unit	1	0	1	2	0	14	0	14	0	0	0	0	0	17	0	17	
% Single Unit	5.3	0	3.1	3.9	0	2.7	0	2.7	0	0	0	0	0	1.6	0	1.5	
TTST	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	
% TTST	0	0	0	0	0	1.0	0	1.0	0	0	0	0	0	0.3	0	0.3	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@Survey(sign d)
Site Code :
Start Date : 12/10/2019
Page No : 1

Groups Printed- Passenger Vehicles - Single Unit - TTST - Bicycles on Crosswalk - Pedestrians

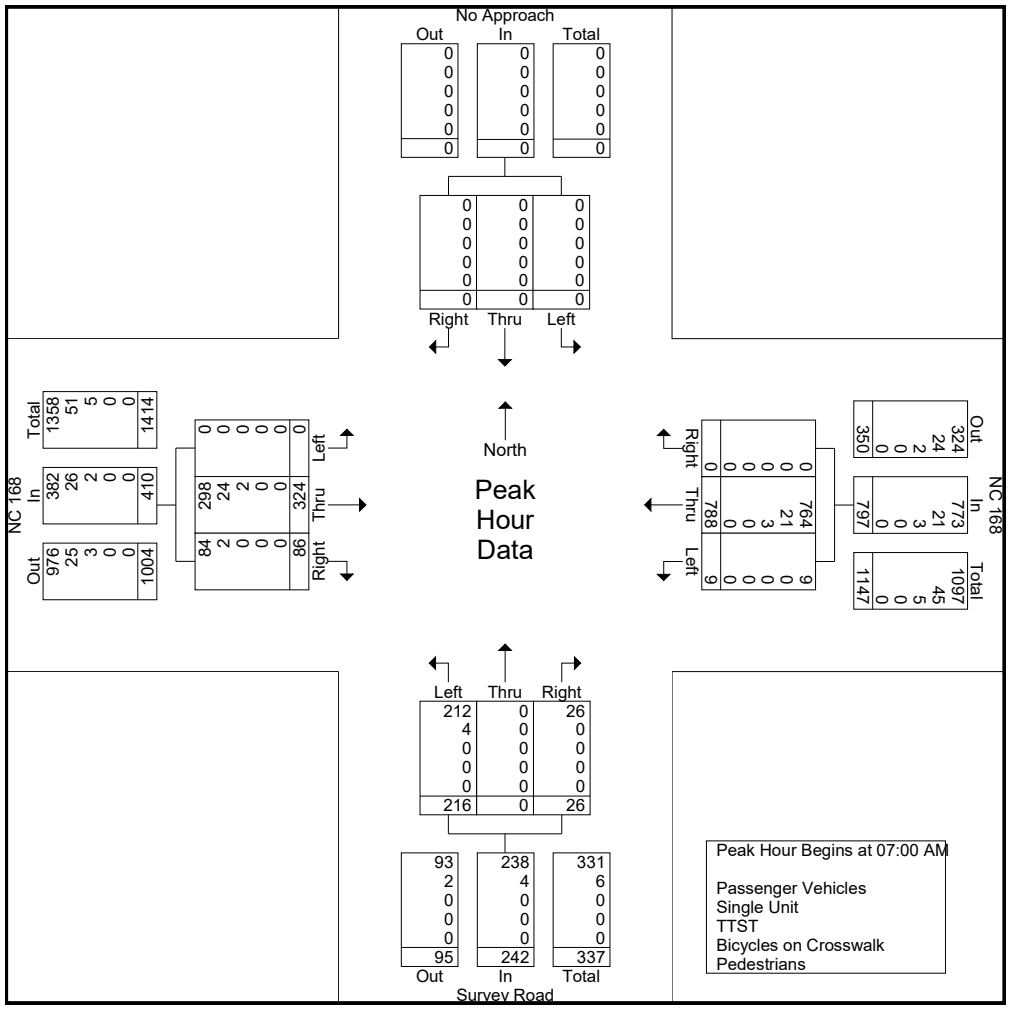
	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int.
07:00 AM	0	0	0	0	1	204	0	0	48	0	7	0	0	67	9	0	0	336	
07:15 AM	0	0	0	0	3	195	0	0	60	0	2	0	0	71	21	0	0	352	
07:30 AM	0	0	0	0	2	183	0	0	63	0	14	0	0	103	24	0	0	389	
07:45 AM	0	0	0	0	3	206	0	0	45	0	3	0	0	83	32	0	0	372	
Total	0	0	0	0	9	788	0	0	216	0	26	0	0	324	86	0	0	1449	
08:00 AM	0	0	0	0	6	201	0	0	35	0	2	0	0	68	17	0	0	329	
08:15 AM	0	0	0	0	5	188	0	0	43	0	1	0	0	61	33	0	0	331	
08:30 AM	0	0	0	0	3	151	0	0	57	0	3	0	0	63	33	0	0	310	
08:45 AM	0	0	0	0	1	145	0	0	30	0	0	0	0	72	10	0	0	258	
Total	0	0	0	0	15	685	0	0	165	0	6	0	0	264	93	0	0	1228	
*** BREAK ***																			
04:00 PM	0	0	0	0	4	133	0	0	33	0	2	0	0	218	43	0	0	433	
04:15 PM	0	0	0	0	3	144	0	0	23	0	3	0	0	263	44	0	0	480	
04:30 PM	0	0	0	0	2	101	0	0	14	0	4	0	0	265	59	0	0	445	
04:45 PM	0	0	0	0	7	110	0	0	31	0	5	0	0	260	59	0	0	472	
Total	0	0	0	0	16	488	0	0	101	0	14	0	0	1006	205	0	0	1830	
05:00 PM	0	0	0	0	2	114	0	0	47	0	2	0	0	228	49	0	0	442	
05:15 PM	0	0	0	0	2	130	0	0	20	0	1	0	0	271	51	0	0	475	
05:30 PM	0	0	0	0	5	103	0	0	27	0	3	0	1	238	46	0	0	423	
05:45 PM	0	0	0	0	3	108	0	0	14	0	2	0	0	210	39	0	0	376	
Total	0	0	0	0	12	455	0	0	108	0	8	0	1	947	185	0	0	1716	
Grand Total	0	0	0	0	52	2416	0	0	590	0	54	0	1	2541	569	0	0	6223	
Apprch %	0	0	0		2.1	97.9	0		91.6	0	8.4		0	81.7	18.3				
Total %	0	0	0		0.8	38.8	0		9.5	0	0.9		0	40.8	9.1		0	100	
Passenger Vehicles	0	0	0		51	2333	0		573	0	52		1	2452	555		0	0	
% Passenger Vehicles	0	0	0	0	98.1	96.6	0	0	97.1	0	96.3	0	100	96.5	97.5	0	0	0	
Single Unit	0	0	0		1	60	0		17	0	2		0	76	14		0	0	
% Single Unit	0	0	0	0	1.9	2.5	0	0	2.9	0	3.7	0	0	3	2.5	0	0	0	
TTST	0	0	0		0	23	0		0	0	0		0	13	0		0	0	
% TTST	0	0	0	0	0	1	0	0	0	0	0	0	0	0.5	0	0	0	0	
Bicycles on Crosswalk	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@Survey(sign d)
Site Code :
Start Date : 12/10/2019
Page No : 2

	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	1	204	0	205	48	0	7	55	0	67	9	76	
07:15 AM	0	0	0	0	3	195	0	198	60	0	2	62	0	71	21	92	
07:30 AM	0	0	0	0	2	183	0	185	63	0	14	77	0	103	24	127	
07:45 AM	0	0	0	0	3	206	0	209	45	0	3	48	0	83	32	115	
Total Volume	0	0	0	0	9	788	0	797	216	0	26	242	0	324	86	410	
% App. Total	0	0	0		1.1	98.9	0		89.3	0	10.7		0	79	21		
PHF	.000	.000	.000	.000	.750	.956	.000	.953	.857	.000	.464	.786	.000	.786	.672	.807	
Passenger Vehicles	0	0	0	0	9	764	0	773	212	0	26	238	0	298	84	382	
% Passenger Vehicles	0	0	0	0	100	97.0	0	97.0	98.1	0	100	98.3	0	92.0	97.7	93.2	
Single Unit	0	0	0	0	0	21	0	21	4	0	0	4	0	24	2	26	
% Single Unit	0	0	0	0	0	2.7	0	2.6	1.9	0	0	1.7	0	7.4	2.3	6.3	
TTST	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	
% TTST	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0	0.6	0	0.5	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

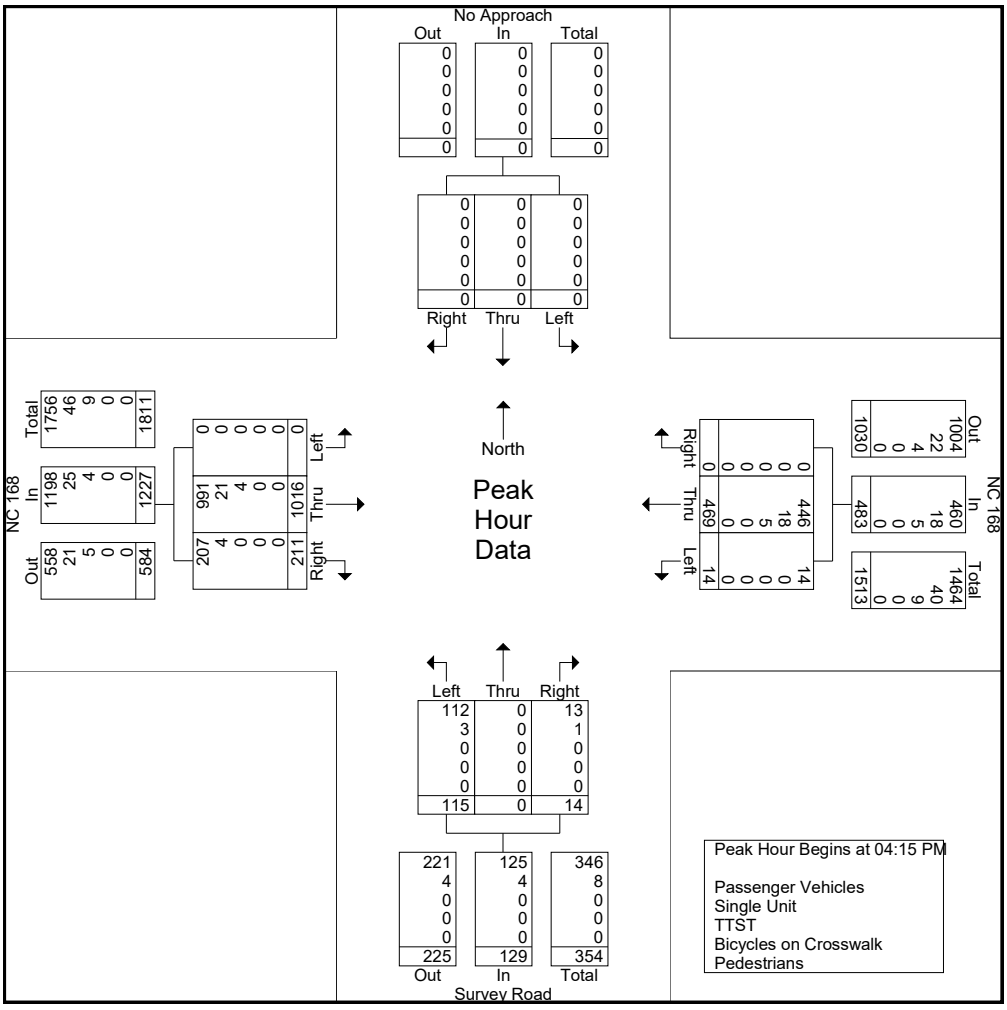


VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@Survey(sign d)
Site Code :
Start Date : 12/10/2019
Page No : 3

	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	3	144	0	147	23	0	3	26	0	263	44	307	
04:30 PM	0	0	0	0	2	101	0	103	14	0	4	18	0	265	59	324	
04:45 PM	0	0	0	0	7	110	0	117	31	0	5	36	0	260	59	319	
05:00 PM	0	0	0	0	2	114	0	116	47	0	2	49	0	228	49	277	
Total Volume	0	0	0	0	14	469	0	483	115	0	14	129	0	1016	211	1227	
% App. Total	0	0	0		2.9	97.1	0		89.1	0	10.9		0	82.8	17.2		
PHF	.000	.000	.000	.000	.500	.814	.000	.821	.612	.000	.700	.658	.000	.958	.894	.947	
Passenger Vehicles	0	0	0	0	14	446	0	460	112	0	13	125	0	991	207	1198	
% Passenger Vehicles	0	0	0	0	100	95.1	0	95.2	97.4	0	92.9	96.9	0	97.5	98.1	97.6	
Single Unit	0	0	0	0	0	18	0	18	3	0	1	4	0	21	4	25	
% Single Unit	0	0	0	0	0	3.8	0	3.7	2.6	0	7.1	3.1	0	2.1	1.9	2.0	
TTST	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	
% TTST	0	0	0	0	0	1.1	0	1.0	0	0	0	0	0	0.4	0	0.3	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@ ey
Site Code :
Start Date : 12/10/201
Page No : 1

Groups Printed- Passenger Vehicles - Single Unit - TTST - Bicycles on Crosswalk - Pedestrians

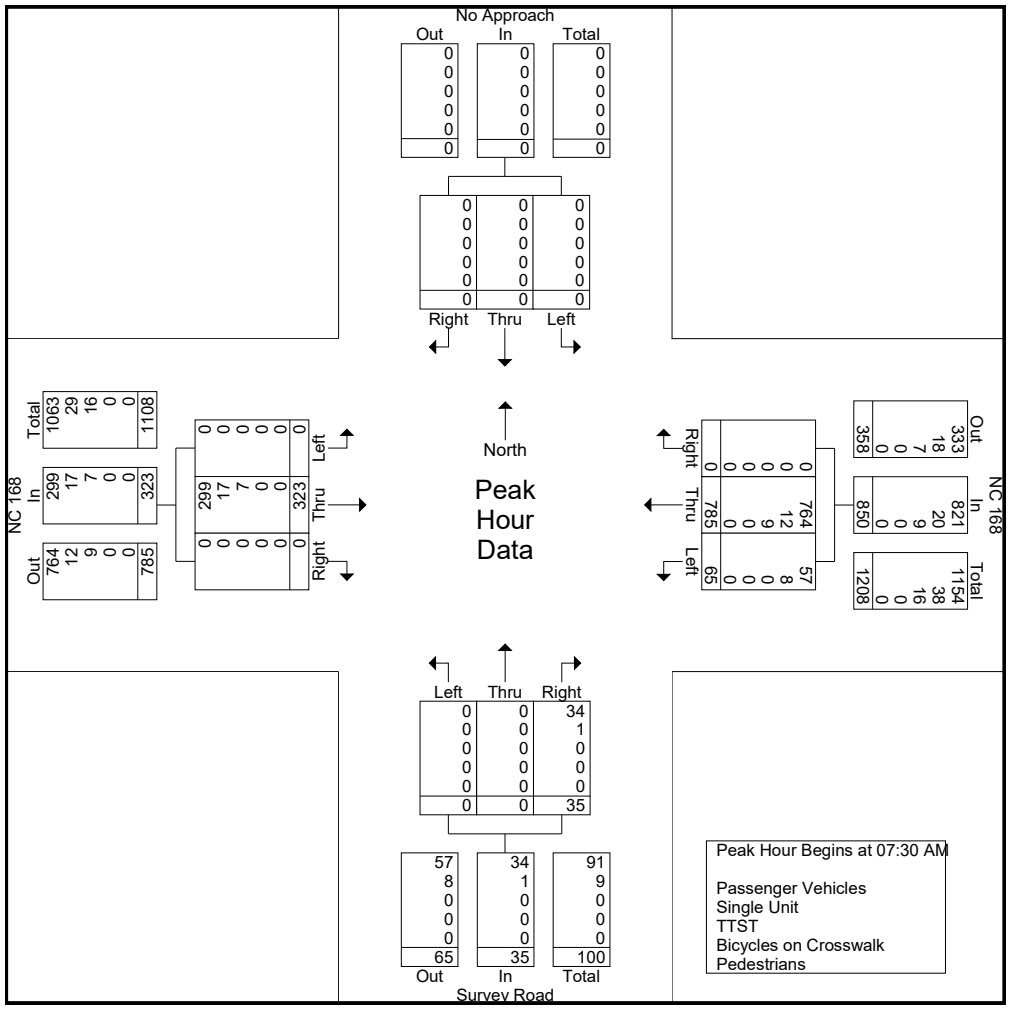
	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int.
07:00 AM	0	0	0	0	4	202	0	0	0	0	5	0	0	76	0	0	0	287	
07:15 AM	0	0	0	0	3	196	0	0	0	0	13	0	0	73	0	0	0	285	
07:30 AM	0	0	0	0	2	173	0	0	0	0	14	0	0	112	0	0	0	301	
07:45 AM	0	0	0	0	9	218	0	0	0	0	2	0	0	89	0	0	0	318	
Total	0	0	0	0	18	789	0	0	0	0	34	0	0	350	0	0	0	1191	
08:00 AM	0	0	0	0	26	197	0	0	0	0	2	0	0	69	0	0	0	294	
08:15 AM	0	0	0	0	28	197	0	0	0	0	17	0	0	53	0	0	0	295	
08:30 AM	0	0	0	0	28	146	0	0	1	0	28	0	0	74	0	0	0	277	
08:45 AM	0	0	0	0	8	152	0	0	0	0	7	0	0	73	0	0	0	240	
Total	0	0	0	0	90	692	0	0	1	0	54	0	0	269	0	0	0	1106	
*** BREAK ***																			
04:00 PM	0	0	0	0	11	137	0	0	0	0	6	0	0	229	0	0	0	383	
04:15 PM	0	0	0	0	12	144	0	0	0	0	7	0	0	236	2	0	0	401	
04:30 PM	0	0	0	0	10	112	0	0	0	0	9	0	0	299	1	0	0	431	
04:45 PM	0	0	0	0	25	115	0	0	0	0	10	0	0	268	0	0	0	418	
Total	0	0	0	0	58	508	0	0	0	0	32	0	0	1032	3	0	0	1633	
05:00 PM	0	0	0	0	13	122	0	0	0	0	19	0	0	255	0	0	0	409	
05:15 PM	0	0	0	0	8	139	0	0	0	0	4	0	0	263	0	0	0	414	
05:30 PM	0	0	0	0	6	106	0	0	0	0	8	0	0	248	0	0	0	368	
05:45 PM	0	0	0	0	5	110	0	0	0	0	0	0	0	209	0	0	0	324	
Total	0	0	0	0	32	477	0	0	0	0	31	0	0	975	0	0	0	1515	
Grand Total	0	0	0	0	198	2466	0	0	1	0	151	0	0	2626	3	0	0	5445	
Apprch %	0	0	0		7.4	92.6	0		0.7	0	99.3		0	99.9	0.1				
Total %	0	0	0		3.6	45.3	0		0	0	2.8		0	48.2	0.1		0	100	
Passenger Vehicles	0	0	0		177	2393	0		1	0	140		0	2537	3		0	0	
% Passenger Vehicles	0	0	0	0	89.4	97	0	0	100	0	92.7	0	0	96.6	100	0	0	0	
Single Unit	0	0	0		21	43	0		0	0	11		0	69	0		0	0	
% Single Unit	0	0	0	0	10.6	1.7	0	0	0	0	7.3	0	0	2.6	0	0	0	0	
TTST	0	0	0		0	30	0		0	0	0		0	20	0		0	0	
% TTST	0	0	0	0	0	1.2	0	0	0	0	0	0	0	0.8	0	0	0	0	
Bicycles on Crosswalk	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@ ey
Site Code :
Start Date : 12/10/201
Page No : 2

	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	2	173	0	175	0	0	14	14	0	112	0	112	
07:45 AM	0	0	0	0	9	218	0	227	0	0	2	2	0	89	0	89	
08:00 AM	0	0	0	0	26	197	0	223	0	0	2	2	0	69	0	69	
08:15 AM	0	0	0	0	28	197	0	225	0	0	17	17	0	53	0	53	
Total Volume	0	0	0	0	65	785	0	850	0	0	35	35	0	323	0	323	
% App. Total	0	0	0		7.6	92.4	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.580	.900	.000	.936	.000	.000	.515	.515	.000	.721	.000	.721	
Passenger Vehicles	0	0	0	0	57	764	0	821	0	0	34	34	0	299	0	299	
% Passenger Vehicles	0	0	0	0	87.7	97.3	0	96.6	0	0	97.1	97.1	0	92.6	0	92.6	
Single Unit	0	0	0	0	8	12	0	20	0	0	1	1	0	17	0	17	
% Single Unit	0	0	0	0	12.3	1.5	0	2.4	0	0	2.9	2.9	0	5.3	0	5.3	
TTST	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7	
% TTST	0	0	0	0	0	1.1	0	1.1	0	0	0	0	0	2.2	0	2.2	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

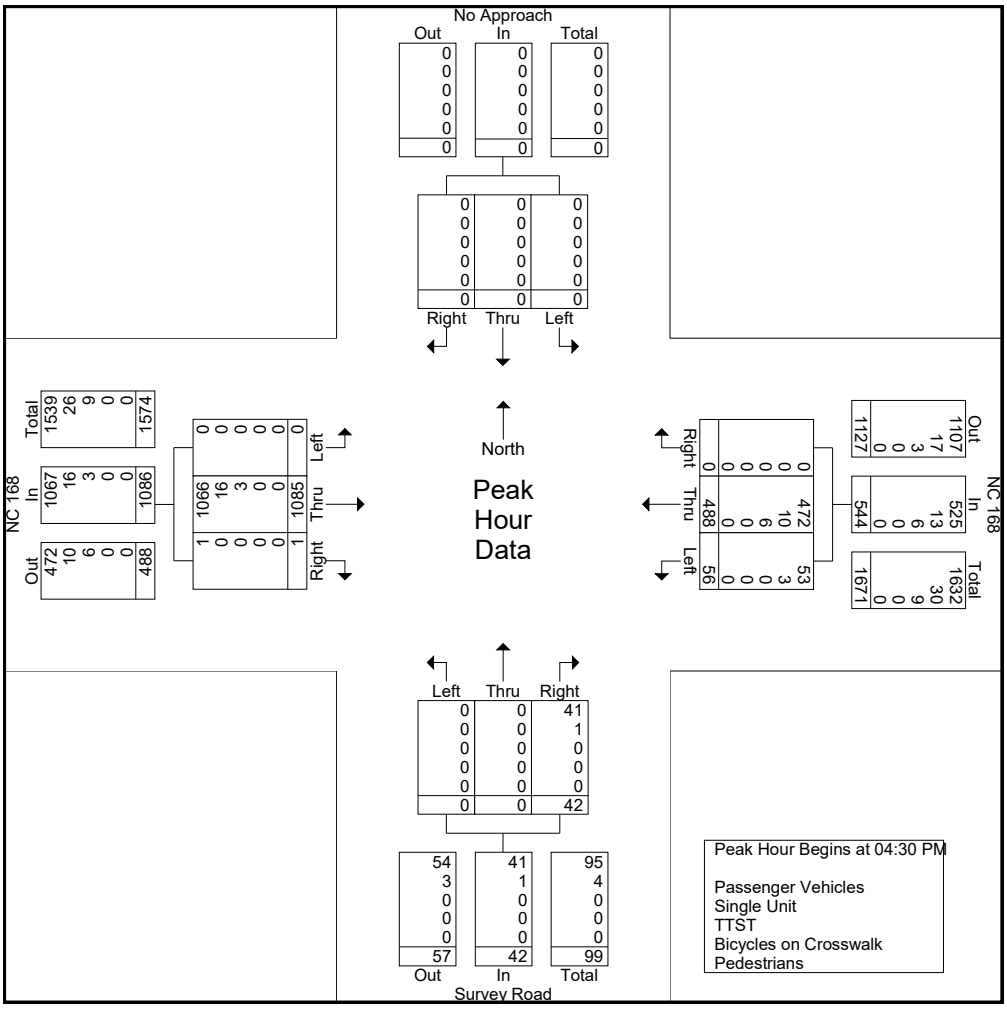


VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : NC168@ ey
Site Code :
Start Date : 12/10/201
Page No : 3

	No Approach Southbound				NC 168 Westbound				Survey Road Northbound				NC 168 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	10	112	0	122	0	0	9	9	0	299	1	300	
04:45 PM	0	0	0	0	25	115	0	140	0	0	10	10	0	268	0	268	
05:00 PM	0	0	0	0	13	122	0	135	0	0	19	19	0	255	0	255	
05:15 PM	0	0	0	0	8	139	0	147	0	0	4	4	0	263	0	263	
Total Volume	0	0	0	0	56	488	0	544	0	0	42	42	0	1085	1	1086	
% App. Total	0	0	0		10.3	89.7	0		0	0	100		0	99.9	0.1		
PHF	.000	.000	.000	.000	.560	.878	.000	.925	.000	.000	.553	.553	.000	.907	.250	.905	
Passenger Vehicles	0	0	0	0	53	472	0	525	0	0	41	41	0	1066	1	1067	
% Passenger Vehicles	0	0	0	0	94.6	96.7	0	96.5	0	0	97.6	97.6	0	98.2	100	98.3	
Single Unit	0	0	0	0	3	10	0	13	0	0	1	1	0	16	0	16	
% Single Unit	0	0	0	0	5.4	2.0	0	2.4	0	0	2.4	2.4	0	1.5	0	1.5	
TTST	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	
% TTST	0	0	0	0	0	1.2	0	1.1	0	0	0	0	0	0.3	0	0.3	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : Survey@Eagl ek
Site Code :
Start Date : 12/10/2019
Page No : 1

Groups Printed- Passenger Vehicles - Single Unit - TTST - Bicycles on Crosswalk - Pedestrians

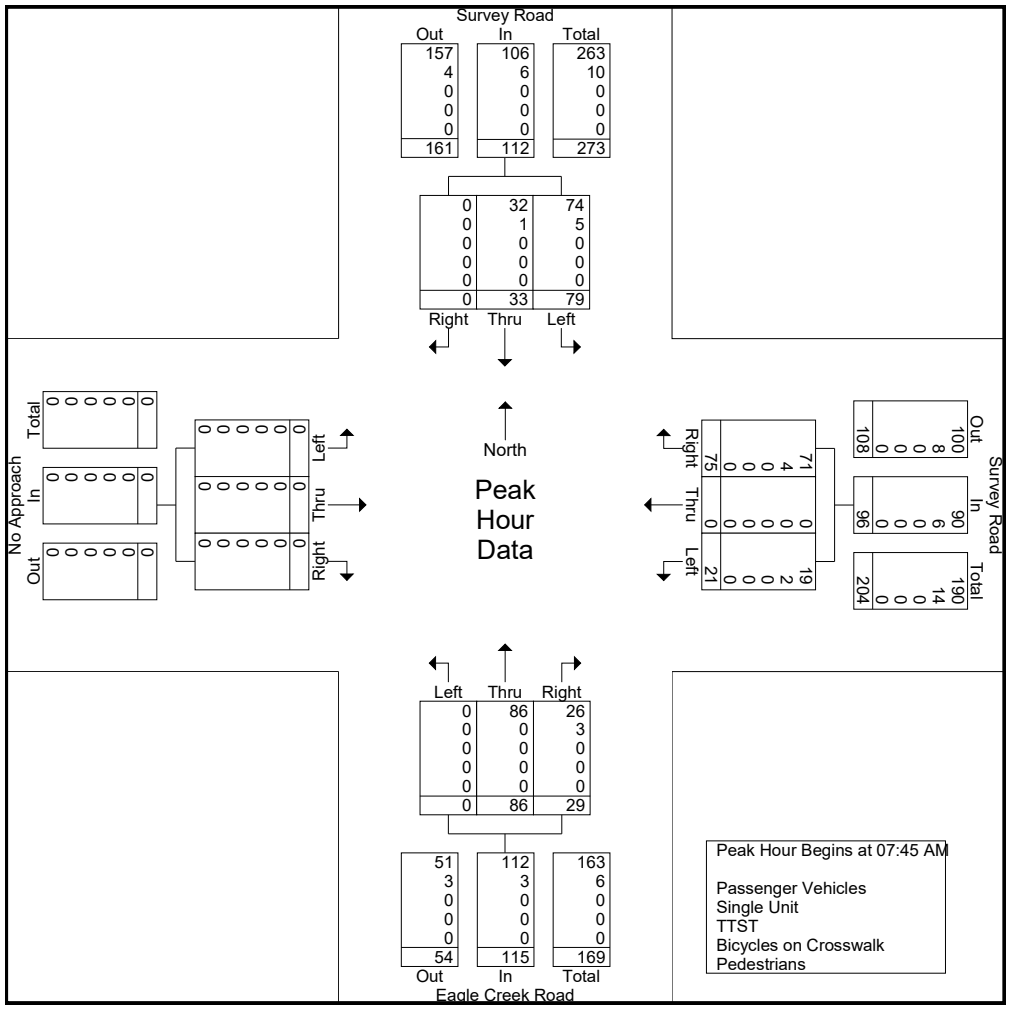
	Survey Road Southbound				Survey Road Westbound				Eagle Creek Road Northbound				No Approach Eastbound						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int.
07:00 AM	1	7	0	0	2	0	0	0	0	42	5	0	0	0	0	0	0	57	
07:15 AM	4	11	0	0	3	0	2	0	0	48	11	0	0	0	0	0	0	79	
07:30 AM	6	11	0	0	0	0	4	0	0	55	13	0	0	0	0	0	0	89	
07:45 AM	11	13	0	0	2	0	3	0	0	30	3	0	0	0	0	0	0	62	
Total	22	42	0	0	7	0	9	0	0	175	32	0	0	0	0	0	0	287	
08:00 AM	8	5	0	0	7	0	5	0	0	22	3	0	0	0	0	0	0	50	
08:15 AM	30	8	0	0	4	0	26	0	0	20	10	0	0	0	0	0	0	98	
08:30 AM	30	7	0	0	8	0	41	0	0	14	13	0	0	0	0	0	0	113	
08:45 AM	4	8	0	0	1	0	11	0	1	11	3	0	0	0	0	0	0	39	
Total	72	28	0	0	20	0	83	0	1	67	29	0	0	0	0	0	0	300	
*** BREAK ***																			
04:00 PM	9	26	0	0	10	0	12	0	0	19	4	0	0	0	0	0	0	80	
04:15 PM	8	34	0	0	4	0	4	0	0	19	0	0	0	0	0	0	0	69	
04:30 PM	11	45	0	0	4	0	7	0	0	12	8	0	0	0	0	0	0	87	
04:45 PM	21	41	0	0	4	0	3	0	0	19	13	0	0	0	0	0	0	101	
Total	49	146	0	0	22	0	26	0	0	69	25	0	0	0	0	0	0	337	
05:00 PM	11	37	0	0	9	0	24	0	0	19	5	0	0	0	0	4	4	105	
05:15 PM	11	38	0	0	5	0	6	0	0	12	5	0	0	0	0	0	0	77	
05:30 PM	3	39	0	0	7	0	12	0	0	17	4	0	0	0	0	2	2	82	
05:45 PM	2	35	0	0	4	0	4	0	0	12	1	0	0	0	0	0	0	58	
Total	27	149	0	0	25	0	46	0	0	60	15	0	0	0	0	6	6	322	
Grand Total	170	365	0	0	74	0	164	0	1	371	101	0	0	0	0	6	6	1246	
Apprch %	31.8	68.2	0		31.1	0	68.9		0.2	78.4	21.4		0	0	0				
Total %	13.6	29.3	0		5.9	0	13.2		0.1	29.8	8.1		0	0	0		0.5	99.5	
Passenger Vehicles	160	362	0		70	0	157		1	363	93		0	0	0		0	0	
% Passenger Vehicles	94.1	99.2	0	0	94.6	0	95.7	0	100	97.8	92.1	0	0	0	0	0	0	0	
Single Unit	10	3	0		4	0	7		0	8	8		0	0	0		0	0	
% Single Unit	5.9	0.8	0	0	5.4	0	4.3	0	0	2.2	7.9	0	0	0	0	0	0	0	
TTST	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles on Crosswalk	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.7	0	0	
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83.3	0	0	

VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : Survey@Eagl ek
Site Code :
Start Date : 12/10/2019
Page No : 2

	Survey Road Southbound				Survey Road Westbound				Eagle Creek Road Northbound				No Approach Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	11	13	0	24	2	0	3	5	0	30	3	33	0	0	0	0	
08:00 AM	8	5	0	13	7	0	5	12	0	22	3	25	0	0	0	0	
08:15 AM	30	8	0	38	4	0	26	30	0	20	10	30	0	0	0	0	
08:30 AM	30	7	0	37	8	0	41	49	0	14	13	27	0	0	0	0	
Total Volume	79	33	0	112	21	0	75	96	0	86	29	115	0	0	0	0	
% App. Total	70.5	29.5	0		21.9	0	78.1		0	74.8	25.2		0	0	0		
PHF	.658	.635	.000	.737	.656	.000	.457	.490	.000	.717	.558	.871	.000	.000	.000	.000	
Passenger Vehicles	74	32	0	106	19	0	71	90	0	86	26	112	0	0	0	0	
% Passenger Vehicles	93.7	97.0	0	94.6	90.5	0	94.7	93.8	0	100	89.7	97.4	0	0	0	0	
Single Unit	5	1	0	6	2	0	4	6	0	0	3	3	0	0	0	0	
% Single Unit	6.3	3.0	0	5.4	9.5	0	5.3	6.3	0	0	10.3	2.6	0	0	0	0	
TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

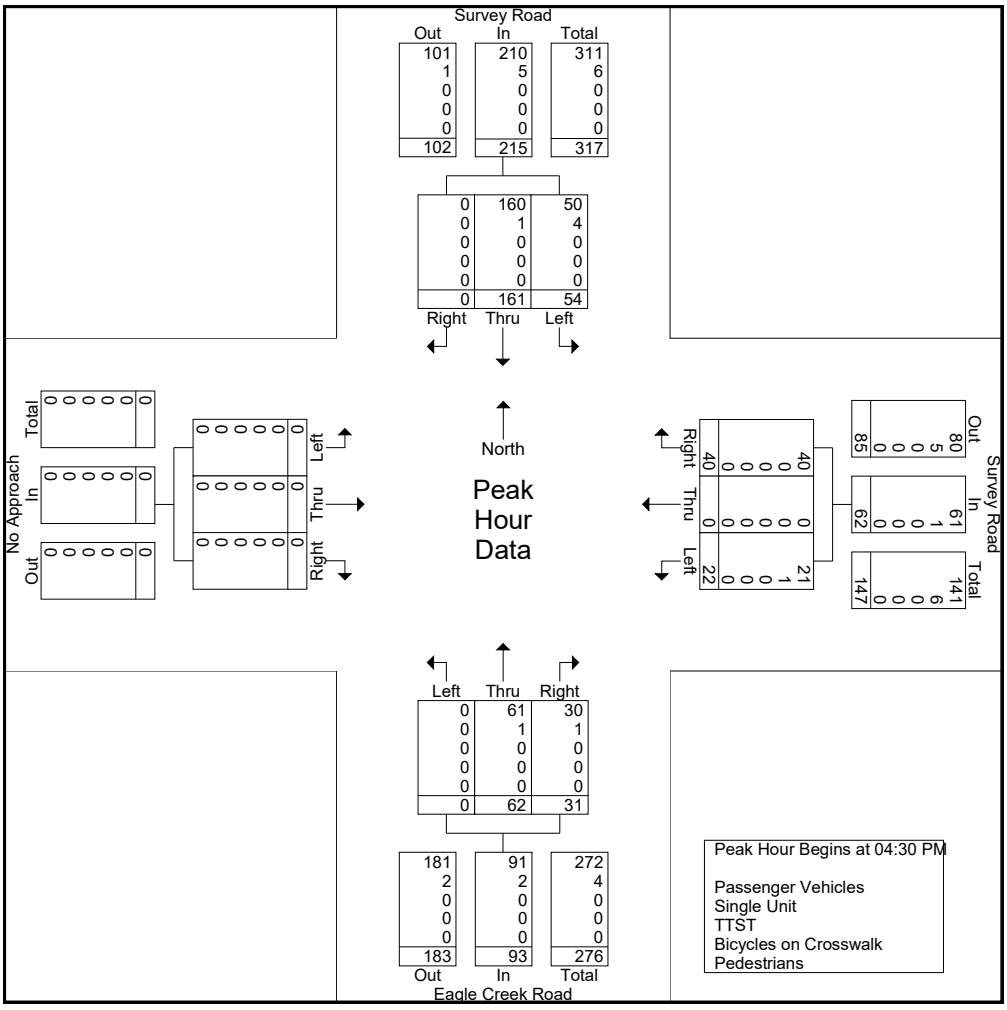


VHB Engineering NC, P.C.

Venture I
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
p: 919.829.0328 f: 919.833.0034

File Name : Survey@Eagl ek
Site Code :
Start Date : 12/10/2019
Page No : 3

	Survey Road Southbound				Survey Road Westbound				Eagle Creek Road Northbound				No Approach Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int.
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	11	45	0	56	4	0	7	11	0	12	8	20	0	0	0	0	
04:45 PM	21	41	0	62	4	0	3	7	0	19	13	32	0	0	0	0	
05:00 PM	11	37	0	48	9	0	24	33	0	19	5	24	0	0	0	0	
05:15 PM	11	38	0	49	5	0	6	11	0	12	5	17	0	0	0	0	
Total Volume	54	161	0	215	22	0	40	62	0	62	31	93	0	0	0	0	
% App. Total	25.1	74.9	0		35.5	0	64.5		0	66.7	33.3		0	0	0		
PHF	.643	.894	.000	.867	.611	.000	.417	.470	.000	.816	.596	.727	.000	.000	.000	.000	
Passenger Vehicles	50	160	0	210	21	0	40	61	0	61	30	91	0	0	0	0	
% Passenger Vehicles	92.6	99.4	0	97.7	95.5	0	100	98.4	0	98.4	96.8	97.8	0	0	0	0	
Single Unit	4	1	0	5	1	0	0	1	0	1	1	2	0	0	0	0	
% Single Unit	7.4	0.6	0	2.3	4.5	0	0	1.6	0	1.6	3.2	2.2	0	0	0	0	
TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% TTST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



Appendix B:

NCDOT TEAAS Strip Analysis Report

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Study Criteria Summary

County: CURRITUCK **City:** All and Rural

Date: 11/1/2014 **to** 10/31/2019 **Study:** NC168FLORATIA

Location: Caratoke Highway (NC 168) from 500 ft south of Guinea Road (SR 1214) to 500 ft north of the northern intersection with Survey Road (SR 1215)

Report Details

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	**104207433**	13.651	11/06/2014 17:22	LEFT TURN, DIFFERENT ROADWAYS	$ 9000	0	0	0	1	2	2	1	1	0	1	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 15 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 8	**Obj Strk:**											
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
2	**105142493**	13.651	06/22/2017 20:10	LEFT TURN, SAME ROADWAY	$ 9200	0	0	0	0	1	5	1	1	0	1	1
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 42											
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 8	**Obj Strk:**											
3	**105631785**	13.678	10/10/2018 08:56	SIDESWIPE, SAME DIRECTION	$ 4500	0	0	0	1	1	1	1	1	0	0	
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 5	**Obj Strk:**											
Unit 2 : 3	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
4	**105686457**	13.678	11/22/2018 20:47	REAR END, SLOW OR STOP	$ 11000	0	0	0	1	1	5	1	1	0	0	
Unit 1 : 14	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
Unit 2 : 1	**Alchl/Drgs:** 1	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 58											
5	**105861765**	13.678	05/08/2019 11:13	FIXED OBJECT	$ 550	0	0	0	0	1	1	1	1	0	6	1
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 64											
6	**104323831**	13.751	03/15/2015 03:54	FIXED OBJECT	$ 900	0	0	0	0	1	5	1	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 7	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 58											
7	**104484328**	13.751	08/29/2015 11:21	REAR END, SLOW OR STOP	$ 1500	0	0	0	0	1	1	1	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 11	**Obj Strk:**											
Unit 2 : 32	**Alchl/Drgs:** 7	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
8	**105270822**	13.751	10/29/2017 16:04	FIXED OBJECT	$ 10000	0	0	0	0	2	1	2	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 65 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 58											

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
9	**105016975**	13.831	02/22/2017 20:43	FIXED OBJECT	$ 6000	0	0	0	0	1	5	1	1	0	0	
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 58											
10	**105512685**	13.840	06/15/2018 12:03	LEFT TURN, SAME ROADWAY	$ 17000	0	0	0	1	1	1	1	1	0	0	
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 8	**Obj Strk:**											
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
11	**104320283**	13.931	03/12/2015 12:39	OVERTURN/ROLLOVER	$ 10000	0	0	1	0	1	1	1	1	0	0	
Unit 1 : 2	**Alchl/Drgs:** 1	**Speed:** 60 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
12	**104575709**	13.931	12/05/2015 11:27	REAR END, SLOW OR STOP	$ 2000	0	0	0	1	1	1	1	1	0	0	
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 62 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
13	**105554832**	14.009	07/28/2018 11:11	REAR END, SLOW OR STOP	$ 11600	0	0	0	3	1	1	2	1	0	3	1
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
Unit 3 : 4	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 11	**Obj Strk:**											
14	**104530442**	14.031	10/23/2015 16:26	REAR END, SLOW OR STOP	$ 10700	0	0	0	1	1	1	1	1	0	3	1
Unit 1 : 1	**Alchl/Drgs:** 3	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 42											
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
15	**105401525**	14.031	03/03/2018 17:11	REAR END, SLOW OR STOP	$ 5000	0	0	0	0	1	1	1	1	0	3	1
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
16	**105189939**	14.069	08/13/2017 12:39	REAR END, SLOW OR STOP	$ 4700	0	0	0	0	2	1	2	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 60 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:** 58											
17	**104824244**	14.271	08/20/2016 10:33	REAR END, SLOW OR STOP	$ 500	0	0	0	3	1	1	2	1	0	0	
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 4	**Obj Strk:**											
Unit 2 : 5	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:** 1	**Obj Strk:**											

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
18	**104405564**	14.441	06/06/2015 10:35	REAR END, SLOW OR STOP	$ 5400	0	0	0	0	1	1	1	1	0	0	
Unit	**1 :** 4	**Alchl/Drgs:**	0	**Speed:** 10 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	1		**Obj Strk:**							
Unit	**2 :** 2	**Alchl/Drgs:**	0	**Speed:** 30 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
19	**105347081**	14.450	01/09/2018 21:13	FIXED OBJECT	$ 1800	0	0	0	0	1	5	1	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**	64						
20	**105528507**	14.450	06/30/2018 07:42	FIXED OBJECT	$ 800	0	0	0	0	1	1	1	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**	58						
21	**105980782**	14.450	09/04/2019 13:07	REAR END, SLOW OR STOP	$ 19500	0	0	1	2	1	1	2	1	0	0	
Unit	**1 :** 4	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** NW	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
Unit	**2 :** 4	**Alchl/Drgs:**	0	**Speed:** 45 MPH	**Dir:** NW	**Veh Mnvr/Ped Actn:**	11		**Obj Strk:**							
Unit	**3 :** 2	**Alchl/Drgs:**	0	**Speed:** 5 MPH	**Dir:** NW	**Veh Mnvr/Ped Actn:**	5		**Obj Strk:**							
22	**104416972**	14.476	06/24/2015 15:08	REAR END, SLOW OR STOP	$ 6000	0	0	1	0	1	1	1	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	11		**Obj Strk:**							
23	**104348464**	14.551	04/11/2015 16:48	FIXED OBJECT	$ 3500	0	0	0	0	1	1	1	1	0	0	
Unit	**1 :** 4	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**	7		**Obj Strk:**	58						
24	**104866820**	14.631	09/20/2016 17:43	HEAD ON	$ 5000	0	0	1	0	2	1	3	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 60 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
25	**104631044**	14.841	02/01/2016 07:34	SIDESWIPE, SAME DIRECTION	$ 1500	0	0	0	0	1	3	1	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	7	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	5		**Obj Strk:**							
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
26	**105188595**	14.841	08/12/2017 10:14	REAR END, SLOW OR STOP	$ 6600	0	0	0	0	2	1	2	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 0 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	1		**Obj Strk:**							
Unit	**2 :** 5	**Alchl/Drgs:**	0	**Speed:** 40 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							
27	**104916873**	14.855	11/08/2016 07:59	RIGHT TURN, SAME ROADWAY	$ 10000	0	0	0	0	1	1	2	1	0	0	
Unit	**1 :** 2	**Alchl/Drgs:**	0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**	4		**Obj Strk:**							

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
Unit	**2 :** 2	**Alchl/Drgs:**	0	**Speed:** 5 MPH	**Dir:** E	**Veh Mnvr/Ped Actn:**				7			**Obj Strk:**		64	
28	**105171027**	14.857	07/24/2017 13:51	REAR END, SLOW OR STOP	$ 800	0	0	0	0	1	1	1	1	0	3	1
Unit	**1 :** 2	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				5			**Obj Strk:**			
Unit	**2 :** 2	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				11			**Obj Strk:**			
29	**104375705**	14.871	05/11/2015 14:14	FIXED OBJECT	$ 1200	0	0	0	0	8	1	2	1	1	3	1
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				8			**Obj Strk:**		58	
30	**105484704**	14.871	05/10/2018 15:41	SIDESWIPE, SAME DIRECTION	$ 4000	0	0	0	0	1	1	1	1	0	3	1
Unit	**1 :** 11	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 15 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**				5			**Obj Strk:**			
31	**104392762**	14.874	05/28/2015 22:08	SIDESWIPE, SAME DIRECTION	$ 5000	0	0	0	0	1	5	1	5	0	3	1
Unit	**1 :** 4	**Alchl/Drgs:**	1	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**				1			**Obj Strk:**			
32	**104767263**	14.900	06/17/2016 16:31	REAR END, SLOW OR STOP	$ 3000	0	0	0	0	2	1	3	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				5			**Obj Strk:**			
Unit	**2 :** 2	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
33	**104853356**	14.900	09/10/2016 12:25	REAR END, SLOW OR STOP	$ 1000	0	0	0	0	1	1	1	1	0	0	
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
Unit	**2 :** 5	**Alchl/Drgs:**	0	**Speed:** 5 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				11			**Obj Strk:**			
34	**104959464**	14.900	12/27/2016 10:42	MOVABLE OBJECT	$ 1000	0	0	0	0	1	1	1	1	0	0	
Unit	**1 :** 2	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**		18	
35	**104481066**	14.941	09/07/2015 15:53	REAR END, SLOW OR STOP	$ 3500	0	0	0	0	1	1	1	1	0	1	1
Unit	**1 :** 2	**Alchl/Drgs:**	0	**Speed:** 25 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
Unit	**2 :** 2	**Alchl/Drgs:**	0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**			
36	**105554475**	14.941	07/26/2018 12:56	LEFT TURN, DIFFERENT ROADWAYS	$ 12700	0	0	1	0	1	1	1	1	0	1	1
Unit	**1 :** 1	**Alchl/Drgs:**	0	**Speed:** 55 MPH	**Dir:** N	**Veh Mnvr/Ped Actn:**				4			**Obj Strk:**		58	
Unit	**2 :** 1	**Alchl/Drgs:**	0	**Speed:** 10 MPH	**Dir:** S	**Veh Mnvr/Ped Actn:**				8			**Obj Strk:**			

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
37	**104641198**	14.946	02/11/2016 14:10	FIXED OBJECT	$ 250	0	0	0	0	1	1	1	1	0	0	

Unit 1 : 4 **Alchl/Drgs:** 7 **Speed:** 55 MPH **Dir:** N **Veh Mnvr/Ped Actn:** 4 **Obj Strk:** 58

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	37	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	13	35.14
Total Injury Crashes	13	35.14
Property Damage Only Crashes	24	64.86
Night Crashes	6	16.22
Wet Crashes	6	16.22
Alcohol/Drugs Involvement Crashes	3	8.11

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	37	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	5	13.51
Class C Crashes	8	21.62
Property Damage Only Crashes	24	64.86

Vehicle Exposure Statistics

Annual ADT = 19100

Total Length = 1.41 (Miles) **2.269 (Kilometers)**

Total Vehicle Exposure = 49.18 (MVMT) **79.14 (MVKMT)**

Crash Rate	Crashes Per 100 Million Vehicle Miles	Crashes Per 100 Million Vehicle Kilometers
Total Crash Rate	75.24	46.75
Fatal Crash Rate	0.00	0.00
Non Fatal Crash Rate	26.44	16.43
Night Crash Rate	12.20	7.58
Wet Crash Rate	12.20	7.58
EPDO Rate	270.86	168.31

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Miscellaneous Statistics

Severity Index =	3.60
EPDO Crash Index =	133.20
Estimated Property Damage Total = $	206700.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
FIXED OBJECT	9	24.32
HEAD ON	1	2.70
LEFT TURN, DIFFERENT ROADWAYS	2	5.41
LEFT TURN, SAME ROADWAY	2	5.41
MOVABLE OBJECT	1	2.70
OVERTURN/ROLLOVER	1	2.70
REAR END, SLOW OR STOP	16	43.24
RIGHT TURN, SAME ROADWAY	1	2.70
SIDESWIPE, SAME DIRECTION	4	10.81

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	5	26.32
Class C Injuries	14	73.68
Total Non-Fatal Injuries	19	100.00
Total Injuries	19	100.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	1	2.70
Feb	3	8.11
Mar	3	8.11
Apr	1	2.70
May	4	10.81
Jun	6	16.22
Jul	3	8.11
Aug	4	10.81
Sep	4	10.81
Oct	3	8.11
Nov	3	8.11
Dec	2	5.41

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	4	10.81
Tue	4	10.81
Wed	5	13.51
Thu	8	21.62
Fri	3	8.11
Sat	10	27.03
Sun	3	8.11

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	1	2.70
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	3	8.11
0800-0859	1	2.70
0900-0959	0	0.00
1000-1059	4	10.81
1100-1159	4	10.81
1200-1259	5	13.51
1300-1359	2	5.41
1400-1459	2	5.41
1500-1559	3	8.11
1600-1659	4	10.81
1700-1759	3	8.11
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	3	8.11
2100-2159	1	2.70
2200-2259	1	2.70
2300-2359	0	0.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	23	5	1	29
Dark	6	0	0	6
Other	1	1	0	2
Total	30	6	1	37

Object Struck Summary

Object Type	Times Struck	Percent of Total
DITCH	10	62.50
GUARDRAIL FACE ON SHOULDER	2	12.50
MOVABLE OBJECT	1	6.25
OTHER FIXED OBJECT	3	18.75

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	1	1.52
PASSENGER CAR	24	36.36
PICKUP	17	25.76
SINGLE UNIT TRUCK (3 OR MORE AXLES)	1	1.52
SPORT UTILITY	15	22.73
TRACTOR/SEMI-TRAILER	1	1.52
UNKNOWN	1	1.52
VAN	6	9.09

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2014	1	0	1	0
2015	11	0	4	7
2016	8	0	2	6
2017	6	0	0	6
2018	9	0	5	4
2019	2	0	1	1
Total	37	0	13	24

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2014	0	1
2015	0	4
2016	0	4
2017	0	0
2018	0	7
2019	0	3
Total	0	19

Miscellaneous Totals

Year	Property Damage	EPDO Index
2014	$ 9000	8.40
2015	$ 49700	40.60
2016	$ 22250	22.80
2017	$ 37300	6.00
2018	$ 68400	46.00
2019	$ 20050	9.40
Total	$ 206700	133.20

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2014	1	0	0	0	0	0	0
2015	0	0	6	3	0	1	1

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2016	0	1	3	1	0	1	2
2017	1	0	3	2	0	0	0
2018	2	0	3	2	0	2	0
2019	0	0	1	1	0	0	0
Total	4	1	16	9	0	4	3

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Strip Diagram

Features	Milepost	Crash IDs
	13.56	
	13.57	
	13.58	
	13.59	
	13.60	
	13.61	
	13.62	
	13.63	
	13.64	
SR 1214 | GUINEA	13.65	104207433 | 105142493
Railroad Crossing:465405M	13.66	
	13.67	
	13.68	105631785 | 105686457 | 105861765
	13.69	
	13.70	
	13.71	
	13.72	
	13.73	
	13.74	
	13.75	104323831 | 104484328 | 105270822
	13.76	
	13.77	
	13.78	
	13.79	
	13.80	
	13.81	
	13.82	
	13.83	105016975
	13.84	105512685
	13.85	
	13.86	
	13.87	
	13.88	
	13.89	
	13.90	
	13.91	
	13.92	
	13.93	104320283 | 104575709
	13.94	
	13.95	
	13.96	
	13.97	
	13.98	

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Features	Milepost	Crash IDs
	13.99	
	14.00	
	14.01	105554832
	14.02	
SR 1215 | SURVEY | SOUTHEAST	14.03	104530442 | 105401525
INTERSECTION		
	14.04	
	14.05	
	14.06	
	14.07	105189939
	14.08	
	14.09	
	14.10	
	14.11	
	14.12	
	14.13	
	14.14	
	14.15	
	14.16	
	14.17	
	14.18	
	14.19	
	14.20	
	14.21	
	14.22	
	14.23	
	14.24	
	14.25	
	14.26	
	14.27	104824244
	14.28	
	14.29	
	14.30	
	14.31	
	14.32	
	14.33	
	14.34	
	14.35	
	14.36	
	14.37	
	14.38	
	14.39	
	14.40	
	14.41	
	14.42	

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Features	Milepost	Crash IDs
	14.43	
	14.44	104405564
	14.45	105347081 | 105528507 | 105980782
	14.46	
	14.47	
	14.48	104416972
	14.49	
	14.50	
	14.51	
	14.52	
	14.53	
	14.54	
	14.55	104348464
	14.56	
	14.57	
	14.58	
	14.59	
	14.60	
	14.61	
	14.62	
	14.63	104866820
	14.64	
	14.65	
	14.66	
	14.67	
	14.68	
	14.69	
	14.70	
	14.71	
	14.72	
	14.73	
	14.74	
	14.75	
	14.76	
	14.77	
	14.78	
	14.79	
	14.80	
	14.81	
	14.82	
	14.83	
	14.84	104631044 | 105188595
	14.85	104916873
	14.86	105171027
SR 1215 | SURVEY | NORTHWEST	14.87	104375705 | 105484704 | 104392762

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Features	Milepost	Crash IDs
INTERSECTION		
	14.88	
	14.89	
	14.90	104767263 | 104853356 | 104959464
	14.91	
	14.92	
	14.93	
SR 1221 | SAWYER TOWN	14.94	104481066 | 105554475
	14.95	104641198
	14.96	
	14.97	

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
NC168FLORATIA				76.8	8.4	19100	30000168

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
CURRITUCK	27	1	All and Rural		0	11/1/2014	10/31/2019	5.00

Location Text

Caratoke Highway (NC 168) from 500 ft south of Guinea Road (SR 1214) to 500 ft north of the northern intersection with Survey Road (SR 1215)

Requestor

Included Accidents	Old MP	New MP	Type
105861765		13.678	I
105512685		13.84	I
105484704		14.871	I
105171027		14.857	I
104916873		14.855	I
105401525		14.031	I
105686457		13.678	I
104959464		14.9	I
104853356		14.9	I
104767263		14.9	I
104866820		14.631	I
104416972		14.476	I
105528507		14.45	I
105347081		14.45	I
105980782		14.45	I
104375705		14.871	I
104824244		14.271	I

Fiche Roads

Name	Code
NC 168	30000168
CARATOKE	50037599

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
NC 168	30000168	13.556	14.966	1.410	2.269

Appendix C:

Intersection Capacity Analysis

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

Existing (2019) AM
04/10/2020

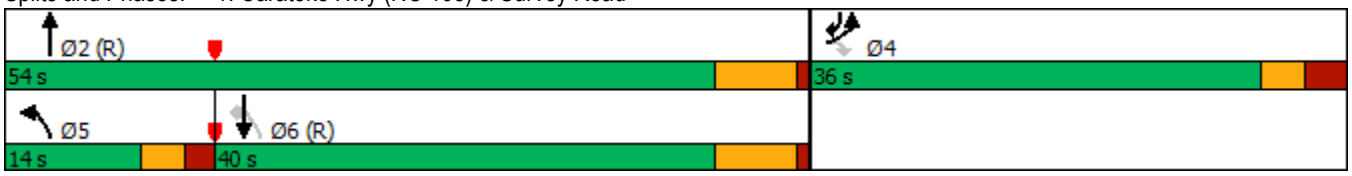
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	216	26	9	867	356	86
Future Volume (vph)	216	26	9	867	356	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3505	3343	1583
Flt Permitted	0.950		0.518			
Satd. Flow (perm)	1770	1583	965	3505	3343	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	8%	2%
Adj. Flow (vph)	240	29	10	963	396	96
Shared Lane Traffic (%)						
Lane Group Flow (vph)	240	29	10	963	396	96
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	36.0	36.0	14.0	54.0	40.0	36.0
Total Split (%)	40.0%	40.0%	15.6%	60.0%	44.4%	40.0%
Maximum Green (s)	30.1	30.1	9.1	47.6	33.6	30.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	-1.4	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	16.8	16.8	62.2	63.2	60.8	86.6
Actuated g/C Ratio	0.19	0.19	0.69	0.70	0.68	0.96
v/c Ratio	0.73	0.10	0.01	0.39	0.18	0.06
Control Delay	46.8	28.5	5.7	6.7	7.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	46.8	28.5	5.7	6.7	7.1	0.7
LOS	D	C	A	A	A	A
Approach Delay	44.8			6.7	5.9	
Approach LOS	D			A	A	
Queue Length 50th (ft)	130	14	2	101	34	0
Queue Length 95th (ft)	191	34	8	172	93	15
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	609	545	752	2462	2259	1551
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	0.39	0.05	0.01	0.39	0.18	0.06

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 44.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	216	26	9	867	356	86
Future Volume (veh/h)	216	26	9	867	356	86
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1781	1870
Adj Flow Rate, veh/h	240	29	10	963	396	96
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	8	2
Cap, veh/h	291	259	644	2558	2213	1287
Arrive On Green	0.16	0.16	0.02	0.73	0.65	0.65
Sat Flow, veh/h	1781	1585	1781	3618	3474	1585
Grp Volume(v), veh/h	240	29	10	963	396	96
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1763	1692	1585
Q Serve(g_s), s	11.7	1.4	0.2	9.3	4.1	1.1
Cycle Q Clear(g_c), s	11.7	1.4	0.2	9.3	4.1	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	291	259	644	2558	2213	1287
V/C Ratio(X)	0.82	0.11	0.02	0.38	0.18	0.07
Avail Cap(c_a), veh/h	614	546	793	2558	2213	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	32.1	5.5	4.7	6.1	1.7
Incr Delay (d2), s/veh	2.3	0.1	0.0	0.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	1.3	0.0	2.1	1.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.7	32.1	5.5	5.1	6.3	1.8
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	269			973	492	
Approach Delay, s/veh	38.0			5.1	5.4	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.3		19.7	6.4	63.8
Change Period (Y+Rc), s		6.4		5.9	* 4.9	6.4
Max Green Setting (Gmax), s		47.6		30.1	* 9.1	33.6
Max Q Clear Time (g_c+I1), s		11.3		13.7	2.2	6.1
Green Ext Time (p_c), s		17.6		0.1	0.0	6.7

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	35	65	864	355	0
Future Volume (vph)	0	35	65	864	355	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1596	0	1612	3505	3343	0
Flt Permitted			0.950			
Satd. Flow (perm)	1596	0	1612	3505	3343	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	12%	3%	8%	2%
Adj. Flow (vph)	0	39	72	960	394	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	72	960	394	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.9% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	35	65	864	355	0
Future Vol, veh/h	0	35	65	864	355	0
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	12	3	8	2
Mvmt Flow	0	39	72	960	394	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1018	197	394	0	-	0
Stage 1	394	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6.84	6.96	4.34	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.33	2.32	-	-	-
Pot Cap-1 Maneuver	233	808	1093	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	808	1093	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1093	-	808	-	-
HCM Lane V/C Ratio	0.066	-	0.048	-	-
HCM Control Delay (s)	8.5	-	9.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	50	881	18	16	375
Future Volume (vph)	13	50	881	18	16	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.892		0.997			
Flt Protected	0.990				0.950	
Satd. Flow (prot)	1620	0	3456	0	1770	3343
Flt Permitted	0.990				0.950	
Satd. Flow (perm)	1620	0	3456	0	1770	3343
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	11%	2%	8%
Adj. Flow (vph)	14	56	979	20	18	417
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	999	0	18	417
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 35.4% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	50	881	18	16	375
Future Vol, veh/h	13	50	881	18	16	375
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	4	11	2	8
Mvmt Flow	14	56	979	20	18	417

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1234	500	0	0	999	0
Stage 1	989	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.84	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	169	511	-	-	689	-
Stage 1	321	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	165	511	-	-	689	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	321	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	428	689	-
HCM Lane V/C Ratio	-	-	0.164	0.026	-
HCM Control Delay (s)	-	-	15	10.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	75	86	29	79	33
Future Volume (vph)	21	75	86	29	79	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.966			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1641	1538	1765	0	1703	1845
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1641	1538	1765	0	1703	1845
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	10%	6%	3%
Adj. Flow (vph)	23	83	96	32	88	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	83	128	0	88	37
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 21.0% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	75	86	29	79	33
Future Vol, veh/h	21	75	86	29	79	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	5	2	10	6	3
Mvmt Flow	23	83	96	32	88	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	325	112	0	0	128	0
Stage 1	112	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.5	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	653	933	-	-	1434	-
Stage 1	893	-	-	-	-	-
Stage 2	804	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	613	933	-	-	1434	-
Mov Cap-2 Maneuver	613	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	755	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	613	933	1434	-
HCM Lane V/C Ratio	-	-	0.038	0.089	0.061	-
HCM Control Delay (s)	-	-	11.1	9.2	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.2	-

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

Existing (2019) PM
04/10/2020

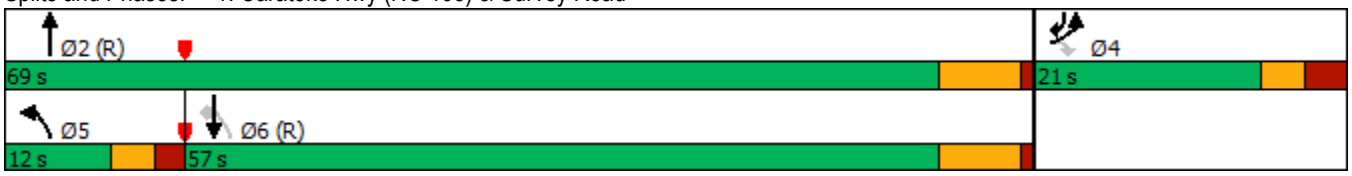
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	14	14	516	1118	211
Future Volume (vph)	115	14	14	516	1118	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1509	1770	3438	3505	1583
Flt Permitted	0.950		0.186			
Satd. Flow (perm)	1752	1509	346	3438	3505	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	7%	2%	5%	3%	2%
Adj. Flow (vph)	128	16	16	573	1242	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	16	16	573	1242	234
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	21.0	21.0	12.0	69.0	57.0	21.0
Total Split (%)	23.3%	23.3%	13.3%	76.7%	63.3%	23.3%
Maximum Green (s)	15.1	15.1	7.1	62.6	50.6	15.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	-1.4	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	11.2	11.2	67.8	68.8	66.4	86.6
Actuated g/C Ratio	0.12	0.12	0.75	0.76	0.74	0.96
v/c Ratio	0.59	0.09	0.04	0.22	0.48	0.15
Control Delay	47.8	34.0	3.5	3.5	6.7	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	47.8	34.0	3.5	3.5	6.7	0.8
LOS	D	C	A	A	A	A
Approach Delay	46.3			3.5	5.8	
Approach LOS	D			A	A	
Queue Length 50th (ft)	70	8	2	37	105	0
Queue Length 95th (ft)	120	26	7	67	283	35
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	311	268	371	2628	2586	1519
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	0.41	0.06	0.04	0.22	0.48	0.15

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	14	14	516	1118	211
Future Volume (veh/h)	115	14	14	516	1118	211
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1796	1870	1826	1856	1870
Adj Flow Rate, veh/h	128	16	16	573	1242	234
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	7	2	5	3	2
Cap, veh/h	177	153	315	2736	2498	1273
Arrive On Green	0.10	0.10	0.02	0.79	0.71	0.70
Sat Flow, veh/h	1767	1522	1781	3561	3618	1585
Grp Volume(v), veh/h	128	16	16	573	1242	234
Grp Sat Flow(s),veh/h/ln	1767	1522	1781	1735	1763	1585
Q Serve(g_s), s	6.3	0.9	0.2	3.8	14.3	3.1
Cycle Q Clear(g_c), s	6.3	0.9	0.2	3.8	14.3	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	177	153	315	2736	2498	1273
V/C Ratio(X)	0.72	0.10	0.05	0.21	0.50	0.18
Avail Cap(c_a), veh/h	314	271	410	2736	2498	1273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	36.8	4.8	2.4	5.9	2.0
Incr Delay (d2), s/veh	2.1	0.1	0.0	0.2	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.8	0.1	0.5	3.4	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.3	36.9	4.9	2.6	6.6	2.4
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	144			589	1476	
Approach Delay, s/veh	40.9			2.6	5.9	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		76.0		14.0	7.2	68.8
Change Period (Y+Rc), s		6.4		5.9	* 4.9	6.4
Max Green Setting (Gmax), s		62.6		15.1	* 7.1	50.6
Max Q Clear Time (g_c+I1), s		5.8		8.3	2.2	16.3
Green Ext Time (p_c), s		10.5		0.0	0.0	25.0

Intersection Summary

HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	42	56	537	1194	1
Future Volume (vph)	0	42	56	537	1194	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1611	0	1719	3505	3539	0
Flt Permitted			0.950			
Satd. Flow (perm)	1611	0	1719	3505	3539	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	5%	3%	2%	2%
Adj. Flow (vph)	0	47	62	597	1327	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	62	597	1328	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	42	56	537	1194	1
Future Vol, veh/h	0	42	56	537	1194	1
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	3	2	2
Mvmt Flow	0	47	62	597	1327	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1751	664	1328	0	-	0
Stage 1	1328	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	77	403	500	-	-	-
Stage 1	212	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	67	403	500	-	-	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	186	-	-	-	-	-
Stage 2	629	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	500	-	403	-	-
HCM Lane V/C Ratio	0.124	-	0.116	-	-
HCM Control Delay (s)	13.2	-	15.1	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	32	564	10	75	1150
Future Volume (vph)	19	32	564	10	75	1150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.915		0.997			
Flt Protected	0.982				0.950	
Satd. Flow (prot)	1646	0	3462	0	1770	3539
Flt Permitted	0.982				0.950	
Satd. Flow (perm)	1646	0	3462	0	1770	3539
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	4%	2%	2%	2%
Adj. Flow (vph)	21	36	627	11	83	1278
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	0	638	0	83	1278
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 41.8% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	32	564	10	75	1150
Future Vol, veh/h	19	32	564	10	75	1150
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	4	2	2	2
Mvmt Flow	21	36	627	11	83	1278

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1438	319	0	0	638	0
Stage 1	633	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Critical Hdwy	6.9	6.96	-	-	4.14	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.33	-	-	2.22	-
Pot Cap-1 Maneuver	121	674	-	-	942	-
Stage 1	483	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	110	674	-	-	942	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	358	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	398	942	-
HCM Lane V/C Ratio	-	-	0.142	0.088	-
HCM Control Delay (s)	-	-	15.5	9.2	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	40	62	31	54	161
Future Volume (vph)	22	40	62	31	54	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.955			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1583	1773	0	1687	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1719	1583	1773	0	1687	1863
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	2%	3%	7%	2%
Adj. Flow (vph)	24	44	69	34	60	179
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	44	103	0	60	179
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	40	62	31	54	161
Future Vol, veh/h	22	40	62	31	54	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	3	7	2
Mvmt Flow	24	44	69	34	60	179

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	385	86	0	0	103	0
Stage 1	86	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	612	973	-	-	1458	-
Stage 1	930	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	587	973	-	-	1458	-
Mov Cap-2 Maneuver	587	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	587	973	1458	-
HCM Lane V/C Ratio	-	-	0.042	0.046	0.041	-
HCM Control Delay (s)	-	-	11.4	8.9	7.6	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.1	-

Lanes, Volumes, Timings
1: Caratoke Hwy (NC 168) & Survey Road

No-Build (2026) AM
04/10/2020

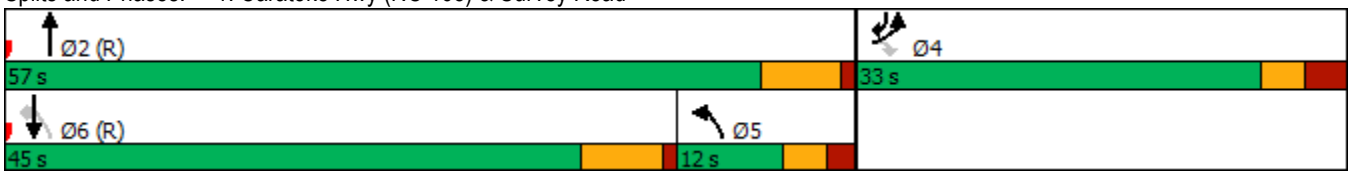
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	266	41	26	1213	525	106
Future Volume (vph)	266	41	26	1213	525	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3505	3343	1583
Flt Permitted	0.950		0.404			
Satd. Flow (perm)	1770	1583	753	3505	3343	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	8%	2%
Adj. Flow (vph)	296	46	29	1348	583	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	296	46	29	1348	583	118
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	33.0	33.0	12.0	57.0	45.0	33.0
Total Split (%)	36.7%	36.7%	13.3%	63.3%	50.0%	36.7%
Maximum Green (s)	27.1	27.1	7.1	50.6	38.6	27.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	-1.4	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	19.5	19.5	58.5	60.5	52.9	80.4
Actuated g/C Ratio	0.22	0.22	0.65	0.67	0.59	0.89
v/c Ratio	0.77	0.13	0.05	0.57	0.30	0.08
Control Delay	46.4	27.0	6.0	7.3	12.9	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	46.4	27.0	6.0	7.3	12.9	2.3
LOS	D	C	A	A	B	A
Approach Delay	43.7			7.2	11.2	
Approach LOS	D			A	B	
Queue Length 50th (ft)	159	21	4	124	61	0
Queue Length 95th (ft)	226	45	m10	194	177	31
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	550	492	599	2355	2015	1402
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.09	0.05	0.57	0.29	0.08

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 13 (14%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 56.6% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



HCM 6th Signalized Intersection Summary
1: Caratoke Hwy (NC 168) & Survey Road

No-Build (2026) AM
04/10/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	266	41	26	1213	525	106
Future Volume (veh/h)	266	41	26	1213	525	106
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1781	1870
Adj Flow Rate, veh/h	296	46	29	1348	583	118
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	8	2
Cap, veh/h	346	308	767	2449	977	756
Arrive On Green	0.19	0.19	0.33	0.69	0.29	0.28
Sat Flow, veh/h	1781	1585	1781	3618	3474	1585
Grp Volume(v), veh/h	296	46	29	1348	583	118
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1763	1692	1585
Q Serve(g_s), s	14.5	2.2	0.0	17.0	13.3	3.8
Cycle Q Clear(g_c), s	14.5	2.2	0.0	17.0	13.3	3.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	346	308	767	2449	977	756
V/C Ratio(X)	0.86	0.15	0.04	0.55	0.60	0.16
Avail Cap(c_a), veh/h	554	493	767	2449	1504	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	30.1	13.8	6.8	27.5	13.3
Incr Delay (d2), s/veh	4.1	0.1	0.0	0.9	2.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	2.1	0.3	4.3	5.2	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.2	30.2	13.8	7.7	30.2	13.7
LnGrp LOS	D	C	B	A	C	B
Approach Vol, veh/h	342			1377	701	
Approach Delay, s/veh	38.0			7.8	27.4	
Approach LOS	D			A	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.5		22.5	36.5	31.0
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		50.6		27.1	7.1	* 39
Max Q Clear Time (g_c+I1), s		19.0		16.5	2.0	15.3
Green Ext Time (p_c), s		22.9		0.1	0.0	9.3

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	43	80	1225	533	0
Future Volume (vph)	0	43	80	1225	533	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1596	0	1612	3505	3343	0
Flt Permitted			0.950			
Satd. Flow (perm)	1596	0	1612	3505	3343	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	12%	3%	8%	2%
Adj. Flow (vph)	0	48	89	1361	592	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	89	1361	592	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 43.9% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	43	80	1225	533	0
Future Vol, veh/h	0	43	80	1225	533	0
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	12	3	8	2
Mvmt Flow	0	48	89	1361	592	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1451	296	592	0	-	0
Stage 1	592	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Critical Hdwy	6.84	6.96	4.34	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.33	2.32	-	-	-
Pot Cap-1 Maneuver	122	697	914	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	110	697	914	-	-	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	914	-	697	-	-
HCM Lane V/C Ratio	0.097	-	0.069	-	-
HCM Control Delay (s)	9.4	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	70	1154	22	35	579
Future Volume (vph)	16	70	1154	22	35	579
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.890		0.997			
Flt Protected	0.991				0.950	
Satd. Flow (prot)	1617	0	3456	0	1770	3343
Flt Permitted	0.991				0.950	
Satd. Flow (perm)	1617	0	3456	0	1770	3343
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	11%	2%	8%
Adj. Flow (vph)	18	78	1282	24	39	643
Shared Lane Traffic (%)						
Lane Group Flow (vph)	96	0	1306	0	39	643
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 44.5% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	70	1154	22	35	579
Future Vol, veh/h	16	70	1154	22	35	579
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	4	11	2	8
Mvmt Flow	18	78	1282	24	39	643

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1694	653	0	0	1306	0
Stage 1	1294	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Critical Hdwy	6.84	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	84	405	-	-	526	-
Stage 1	221	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	78	405	-	-	526	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	221	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.6	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	325	526	-
HCM Lane V/C Ratio	-	-	0.294	0.074	-
HCM Control Delay (s)	-	-	20.6	12.4	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	26	92	115	36	97	56
Future Volume (vph)	26	92	115	36	97	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.968			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1641	1538	1770	0	1703	1845
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1641	1538	1770	0	1703	1845
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	10%	6%	3%
Adj. Flow (vph)	29	102	128	40	108	62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	102	168	0	108	62
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 26.9% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	92	115	36	97	56
Future Vol, veh/h	26	92	115	36	97	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	5	2	10	6	3
Mvmt Flow	29	102	128	40	108	62

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	426	148	0	0	168	0
Stage 1	148	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Critical Hdwy	6.5	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	570	891	-	-	1386	-
Stage 1	860	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	526	891	-	-	1386	-
Mov Cap-2 Maneuver	526	-	-	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	526	891	1386	-
HCM Lane V/C Ratio	-	-	0.055	0.115	0.078	-
HCM Control Delay (s)	-	-	12.2	9.6	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	0.3	-

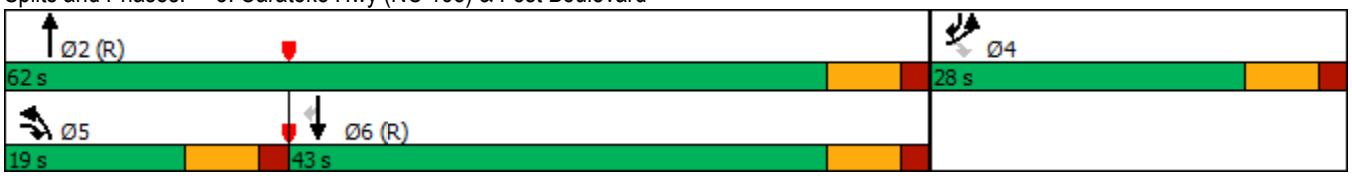
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	162	132	78	1145	480	96
Future Volume (vph)	162	132	78	1145	480	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	557			859	1116	
Travel Time (s)	15.2			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	180	147	87	1272	533	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	147	87	1272	533	107
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	28.0	19.0	19.0	62.0	43.0	28.0
Total Split (%)	31.1%	21.1%	21.1%	68.9%	47.8%	31.1%
Maximum Green (s)	21.0	12.0	12.0	55.0	36.0	21.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	16.4	33.3	11.9	63.6	46.7	68.1
Actuated g/C Ratio	0.18	0.37	0.13	0.71	0.52	0.76
v/c Ratio	0.56	0.25	0.37	0.51	0.29	0.09
Control Delay	39.7	19.3	39.5	7.4	5.2	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	19.3	39.5	7.4	5.2	1.4
LOS	D	B	D	A	A	A
Approach Delay	30.5			9.5	4.6	
Approach LOS	C			A	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	94	57	46	148	51	5
Queue Length 95th (ft)	149	84	87	238	24	7
Internal Link Dist (ft)	477			779	1036	
Turn Bay Length (ft)		250	200			150
Base Capacity (vph)	452	627	281	2502	1839	1314
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	0.40	0.23	0.31	0.51	0.29	0.08

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 49.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard



HCM 6th Signalized Intersection Summary
5: Caratoke Hwy (NC 168) & Fost Boulevard

No-Build (2026) AM
04/10/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	162	132	78	1145	480	96
Future Volume (veh/h)	162	132	78	1145	480	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	147	87	1272	533	107
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	265	380	162	2631	2109	1176
Arrive On Green	0.15	0.15	0.09	0.74	0.59	0.59
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	180	147	87	1272	533	107
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	8.6	7.0	4.2	13.0	6.5	1.7
Cycle Q Clear(g_c), s	8.6	7.0	4.2	13.0	6.5	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	265	380	162	2631	2109	1176
V/C Ratio(X)	0.68	0.39	0.54	0.48	0.25	0.09
Avail Cap(c_a), veh/h	455	550	277	2631	2109	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	28.7	39.1	4.7	8.7	3.2
Incr Delay (d2), s/veh	3.1	0.6	2.7	0.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.5	1.8	2.7	2.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.3	29.3	41.8	5.4	9.0	3.4
LnGrp LOS	D	C	D	A	A	A
Approach Vol, veh/h	327			1359	640	
Approach Delay, s/veh	34.8			7.7	8.1	
Approach LOS	C			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.6		18.4	13.2	58.4
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		55.0		21.0	12.0	36.0
Max Q Clear Time (g_c+I1), s		15.0		10.6	6.2	8.5
Green Ext Time (p_c), s		10.4		0.8	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

No-Build (2026) PM
04/10/2020

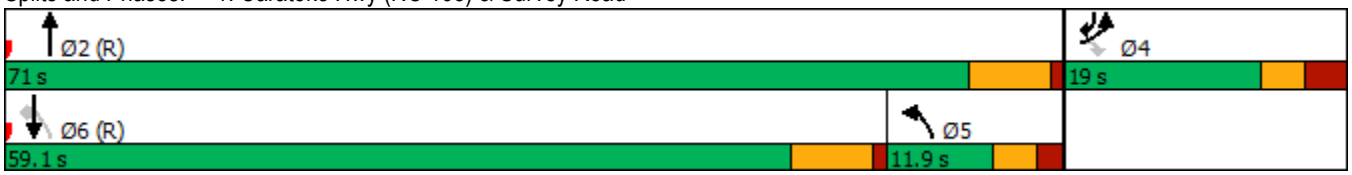
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	141	32	27	730	1522	260
Future Volume (vph)	141	32	27	730	1522	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1509	1770	3438	3505	1583
Flt Permitted	0.950		0.081			
Satd. Flow (perm)	1752	1509	151	3438	3505	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	7%	2%	5%	3%	2%
Adj. Flow (vph)	157	36	30	811	1691	289
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	36	30	811	1691	289
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			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	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	19.0	19.0	11.9	71.0	59.1	19.0
Total Split (%)	21.1%	21.1%	13.2%	78.9%	65.7%	21.1%
Maximum Green (s)	13.1	13.1	7.0	64.6	52.7	13.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	0.0	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.4	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	11.7	11.7	68.1	68.3	59.8	79.9
Actuated g/C Ratio	0.13	0.13	0.76	0.76	0.66	0.89
v/c Ratio	0.69	0.18	0.13	0.31	0.73	0.21
Control Delay	53.2	36.1	5.5	3.6	14.0	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	36.1	5.5	3.6	14.0	1.8
LOS	D	D	A	A	B	A
Approach Delay	50.0			3.6	12.2	
Approach LOS	D			A	B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 12.2 Intersection LOS: B
Intersection Capacity Utilization 59.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	32	27	730	1522	260
Future Volume (veh/h)	141	32	27	730	1522	260
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1796	1870	1826	1856	1870
Adj Flow Rate, veh/h	157	36	30	811	1691	289
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	7	2	5	3	2
Cap, veh/h	208	179	312	2675	2030	1115
Arrive On Green	0.12	0.12	0.11	0.77	0.58	0.59
Sat Flow, veh/h	1767	1522	1781	3561	3618	1585
Grp Volume(v), veh/h	157	36	30	811	1691	289
Grp Sat Flow(s),veh/h/ln	1767	1522	1781	1735	1763	1585
Q Serve(g_s), s	7.7	1.9	0.0	6.3	35.2	5.9
Cycle Q Clear(g_c), s	7.7	1.9	0.0	6.3	35.2	5.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	208	179	312	2675	2030	1115
V/C Ratio(X)	0.75	0.20	0.10	0.30	0.83	0.26
Avail Cap(c_a), veh/h	275	237	312	2675	2064	1131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	35.9	26.2	3.1	15.6	4.8
Incr Delay (d2), s/veh	5.4	0.2	0.0	0.3	4.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.7	0.5	1.0	11.9	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.8	36.1	26.2	3.4	19.8	5.4
LnGrp LOS	D	D	C	A	B	A
Approach Vol, veh/h	193			841	1980	
Approach Delay, s/veh	42.4			4.2	17.7	
Approach LOS	D			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		74.4		15.6	16.2	58.2
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		64.6		13.1	7.0	* 53
Max Q Clear Time (g_c+I1), s		8.3		9.7	2.0	37.2
Green Ext Time (p_c), s		16.7		0.0	0.0	14.6

Intersection Summary

HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	52	69	765	1629	1
Future Volume (vph)	0	52	69	765	1629	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.865					
Flt Protected			0.950			
Satd. Flow (prot)	1611	0	1719	3505	3539	0
Flt Permitted			0.950			
Satd. Flow (perm)	1611	0	1719	3505	3539	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	5%	3%	2%	2%
Adj. Flow (vph)	0	58	77	850	1810	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	77	850	1811	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	52	69	765	1629	1
Future Vol, veh/h	0	52	69	765	1629	1
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	3	2	2
Mvmt Flow	0	58	77	850	1810	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2390	906	1811	0	-	0
Stage 1	1811	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	28	279	323	-	-	-
Stage 1	116	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	21	279	323	-	-	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	88	-	-	-	-	-
Stage 2	524	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.2	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	323	-	279	-	-
HCM Lane V/C Ratio	0.237	-	0.207	-	-
HCM Control Delay (s)	19.6	-	21.2	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.9	-	0.8	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	54	811	12	102	1490
Future Volume (vph)	23	54	811	12	102	1490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.906		0.998			
Flt Protected	0.985				0.950	
Satd. Flow (prot)	1637	0	3465	0	1770	3539
Flt Permitted	0.985				0.950	
Satd. Flow (perm)	1637	0	3465	0	1770	3539
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	4%	2%	2%	2%
Adj. Flow (vph)	26	60	901	13	113	1656
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	914	0	113	1656
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	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 52.5% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	54	811	12	102	1490
Future Vol, veh/h	23	54	811	12	102	1490
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	4	2	2	2
Mvmt Flow	26	60	901	13	113	1656

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1962	457	0	0	914	0
Stage 1	908	-	-	-	-	-
Stage 2	1054	-	-	-	-	-
Critical Hdwy	6.9	6.96	-	-	4.14	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.33	-	-	2.22	-
Pot Cap-1 Maneuver	53	548	-	-	742	-
Stage 1	347	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	45	548	-	-	742	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	347	-	-	-	-	-
Stage 2	246	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.2	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	307	742	-
HCM Lane V/C Ratio	-	-	0.279	0.153	-
HCM Control Delay (s)	-	-	21.2	10.7	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.5	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	27	49	91	38	66	208
Future Volume (vph)	27	49	91	38	66	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.960			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1583	1783	0	1687	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1719	1583	1783	0	1687	1863
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	2%	3%	7%	2%
Adj. Flow (vph)	30	54	101	42	73	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	54	143	0	73	231
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						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 24.1% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	49	91	38	66	208
Future Vol, veh/h	27	49	91	38	66	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	3	7	2
Mvmt Flow	30	54	101	42	73	231

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	499	122	0	0	143	0
Stage 1	122	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	526	929	-	-	1409	-
Stage 1	896	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	499	929	-	-	1409	-
Mov Cap-2 Maneuver	499	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	499	929	1409	-
HCM Lane V/C Ratio	-	-	0.06	0.059	0.052	-
HCM Control Delay (s)	-	-	12.7	9.1	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.2	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	117	100	143	722	1506	175
Future Volume (vph)	117	100	143	722	1506	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	586			859	1116	
Travel Time (s)	16.0			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	111	159	802	1673	194
Shared Lane Traffic (%)						
Lane Group Flow (vph)	130	111	159	802	1673	194
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
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	15			9
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	16.0	18.0	18.0	74.0	56.0	16.0
Total Split (%)	17.8%	20.0%	20.0%	82.2%	62.2%	17.8%
Maximum Green (s)	9.0	11.0	11.0	67.0	49.0	9.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lag	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	10.9	28.4	12.5	69.1	51.6	67.5
Actuated g/C Ratio	0.12	0.32	0.14	0.77	0.57	0.75
v/c Ratio	0.61	0.22	0.65	0.30	0.82	0.16
Control Delay	50.5	23.8	49.6	3.5	8.9	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	23.8	49.6	3.5	8.9	0.7
LOS	D	C	D	A	A	A
Approach Delay	38.2			11.1	8.0	
Approach LOS	D			B	A	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 4 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 11.3 Intersection LOS: B
Intersection Capacity Utilization 68.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	117	100	143	722	1506	175
Future Volume (veh/h)	117	100	143	722	1506	175
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	111	159	802	1673	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	204	470	324	2752	1908	1033
Arrive On Green	0.11	0.11	0.18	0.77	0.54	0.54
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	130	111	159	802	1673	194
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.3	0.0	7.2	5.9	37.1	4.4
Cycle Q Clear(g_c), s	6.3	0.0	7.2	5.9	37.1	4.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	204	470	324	2752	1908	1033
V/C Ratio(X)	0.64	0.24	0.49	0.29	0.88	0.19
Avail Cap(c_a), veh/h	218	482	324	2752	2014	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	24.0	33.1	3.0	18.2	6.2
Incr Delay (d2), s/veh	5.5	0.3	1.2	0.3	6.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.8	3.0	1.0	13.5	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.6	24.2	34.2	3.2	24.3	6.6
LnGrp LOS	D	C	C	A	C	A
Approach Vol, veh/h	241			961	1867	
Approach Delay, s/veh	34.7			8.4	22.5	
Approach LOS	C			A	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		74.7		15.3	21.4	53.3
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		67.0		9.0	11.0	49.0
Max Q Clear Time (g_c+I1), s		7.9		8.3	9.2	39.1
Green Ext Time (p_c), s		5.5		0.1	0.1	7.2
Intersection Summary						
HCM 6th Ctrl Delay			19.0			
HCM 6th LOS			B			

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

Build (2026) AM
04/10/2020

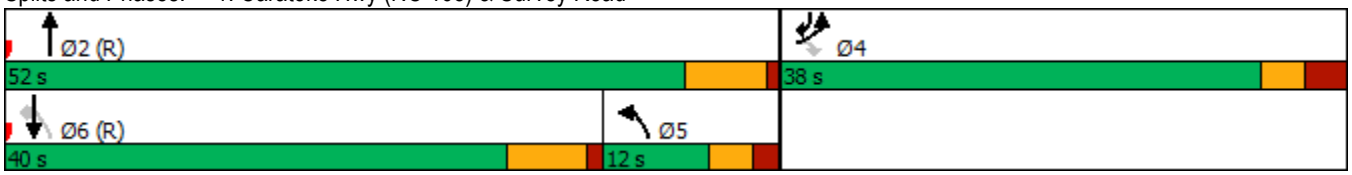
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	376	41	26	1213	563	182
Future Volume (vph)	376	41	26	1213	563	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3505	3343	1583
Flt Permitted	0.950		0.367			
Satd. Flow (perm)	1770	1583	684	3505	3343	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	8%	2%
Adj. Flow (vph)	418	46	29	1348	626	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	418	46	29	1348	626	202
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	38.0	38.0	12.0	52.0	40.0	38.0
Total Split (%)	42.2%	42.2%	13.3%	57.8%	44.4%	42.2%
Maximum Green (s)	32.1	32.1	7.1	45.6	33.6	32.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	-1.4	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	25.7	25.7	52.3	54.3	48.3	82.0
Actuated g/C Ratio	0.29	0.29	0.58	0.60	0.54	0.91
v/c Ratio	0.83	0.10	0.06	0.64	0.35	0.14
Control Delay	43.7	21.7	8.2	9.8	15.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	43.7	21.7	8.2	9.8	15.4	1.7
LOS	D	C	A	A	B	A
Approach Delay	41.5			9.8	12.0	
Approach LOS	D			A	B	
Queue Length 50th (ft)	220	19	5	151	84	0
Queue Length 95th (ft)	296	40	m11	203	189	31
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	649	580	496	2114	1811	1438
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	0.64	0.08	0.06	0.64	0.35	0.14

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 21 (23%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 62.7% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	376	41	26	1213	563	182
Future Volume (veh/h)	376	41	26	1213	563	182
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1781	1870
Adj Flow Rate, veh/h	418	46	29	1348	626	202
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	8	2
Cap, veh/h	465	413	621	2214	1004	875
Arrive On Green	0.26	0.26	0.26	0.63	0.30	0.29
Sat Flow, veh/h	1781	1585	1781	3618	3474	1585
Grp Volume(v), veh/h	418	46	29	1348	626	202
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1763	1692	1585
Q Serve(g_s), s	20.4	2.0	0.0	20.7	14.4	5.9
Cycle Q Clear(g_c), s	20.4	2.0	0.0	20.7	14.4	5.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	465	413	621	2214	1004	875
V/C Ratio(X)	0.90	0.11	0.05	0.61	0.62	0.23
Avail Cap(c_a), veh/h	653	581	621	2214	1316	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	25.3	18.1	10.1	27.3	10.4
Incr Delay (d2), s/veh	9.7	0.0	0.0	1.3	2.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	2.0	0.4	6.2	5.6	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	25.4	18.1	11.3	30.2	11.0
LnGrp LOS	D	C	B	B	C	B
Approach Vol, veh/h	464			1377	828	
Approach Delay, s/veh	40.2			11.5	25.5	
Approach LOS	D			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.5		28.5	29.8	31.7
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		45.6		32.1	7.1	* 34
Max Q Clear Time (g_c+I1), s		22.7		22.4	2.0	16.4
Green Ext Time (p_c), s		17.8		0.2	0.0	8.9

Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	125	137	1225	533	38
Future Volume (vph)	55	125	137	1225	533	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.906				0.990	
Flt Protected	0.985		0.950			
Satd. Flow (prot)	1651	0	1612	3505	3321	0
Flt Permitted	0.985		0.950			
Satd. Flow (perm)	1651	0	1612	3505	3321	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	12%	3%	8%	2%
Adj. Flow (vph)	61	139	152	1361	592	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	0	152	1361	634	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 51.3% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	125	137	1225	533	38
Future Vol, veh/h	55	125	137	1225	533	38
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	12	3	8	2
Mvmt Flow	61	139	152	1361	592	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1598	317	634	0	-	0
Stage 1	613	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Critical Hdwy	6.84	6.96	4.34	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.33	2.32	-	-	-
Pot Cap-1 Maneuver	97	676	880	-	-	-
Stage 1	503	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	676	880	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	322	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.3	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	393	-	-
HCM Lane V/C Ratio	0.173	-	0.509	-	-
HCM Control Delay (s)	9.9	-	23.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.6	-	2.8	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	79	1211	22	49	661
Future Volume (vph)	16	79	1211	22	49	661
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.888		0.997			
Flt Protected	0.992				0.950	
Satd. Flow (prot)	1615	0	3457	0	1770	3343
Flt Permitted	0.992				0.950	
Satd. Flow (perm)	1615	0	3457	0	1770	3343
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	11%	2%	8%
Adj. Flow (vph)	18	88	1346	24	54	734
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	0	1370	0	54	734
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.1% ICU Level of Service A
Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.4					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	79	1211	22	49	661
Future Vol, veh/h	16	79	1211	22	49	661
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	4	11	2	8
Mvmt Flow	18	88	1346	24	54	734

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1833	685	0	0	1370	0
Stage 1	1358	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.84	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	68	386	-	-	497	-
Stage 1	204	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	386	-	-	497	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	309	497	-
HCM Lane V/C Ratio	-	-	0.342	0.11	-
HCM Control Delay (s)	-	-	22.6	13.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.4	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	202	115	45	173	56
Future Volume (vph)	40	202	115	45	173	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1641	1538	1753	0	1703	1845
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1641	1538	1753	0	1703	1845
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	10%	6%	3%
Adj. Flow (vph)	44	224	128	50	192	62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	224	178	0	192	62
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 31.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	202	115	45	173	56
Future Vol, veh/h	40	202	115	45	173	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	5	2	10	6	3
Mvmt Flow	44	224	128	50	192	62

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	599	153	0	0	178	0
Stage 1	153	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.5	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	452	885	-	-	1374	-
Stage 1	856	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	885	-	-	1374	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	6.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	389	885	1374	-
HCM Lane V/C Ratio	-	-	0.114	0.254	0.14	-
HCM Control Delay (s)	-	-	15.4	10.4	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	1	0.5	-

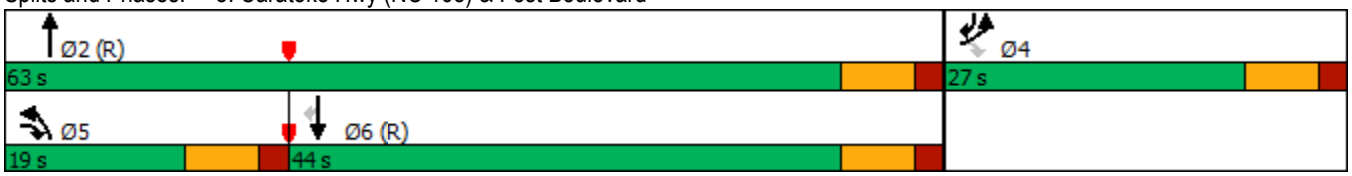
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	162	146	87	1202	562	96
Future Volume (vph)	162	146	87	1202	562	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	557			859	1116	
Travel Time (s)	15.2			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	180	162	97	1336	624	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	180	162	97	1336	624	107
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	27.0	19.0	19.0	63.0	44.0	27.0
Total Split (%)	30.0%	21.1%	21.1%	70.0%	48.9%	30.0%
Maximum Green (s)	20.0	12.0	12.0	56.0	37.0	20.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	16.4	33.7	12.3	63.6	46.3	67.7
Actuated g/C Ratio	0.18	0.37	0.14	0.71	0.51	0.75
v/c Ratio	0.56	0.27	0.40	0.53	0.34	0.09
Control Delay	39.7	19.4	39.7	7.7	8.2	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	19.4	39.7	7.7	8.2	1.6
LOS	D	B	D	A	A	A
Approach Delay	30.1			9.9	7.2	
Approach LOS	C			A	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	94	63	51	160	71	7
Queue Length 95th (ft)	149	91	94	257	56	8
Internal Link Dist (ft)	477			779	1036	
Turn Bay Length (ft)		250	200			150
Base Capacity (vph)	432	629	283	2502	1835	1289
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	0.42	0.26	0.34	0.53	0.34	0.08

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 50.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	162	146	87	1202	562	96
Future Volume (veh/h)	162	146	87	1202	562	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	162	97	1336	624	107
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	265	383	166	2630	2102	1173
Arrive On Green	0.15	0.15	0.09	0.74	0.59	0.59
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	180	162	97	1336	624	107
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	8.6	7.8	4.7	14.1	7.8	1.7
Cycle Q Clear(g_c), s	8.6	7.8	4.7	14.1	7.8	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	265	383	166	2630	2102	1173
V/C Ratio(X)	0.68	0.42	0.58	0.51	0.30	0.09
Avail Cap(c_a), veh/h	435	535	277	2630	2102	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	28.8	39.1	4.9	9.1	3.3
Incr Delay (d2), s/veh	3.0	0.7	3.2	0.7	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	7.2	2.1	2.9	2.4	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.3	29.6	42.4	5.6	9.5	3.4
LnGrp LOS	D	C	D	A	A	A
Approach Vol, veh/h	342			1433	731	
Approach Delay, s/veh	34.7			8.1	8.6	
Approach LOS	C			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		71.6		18.4	13.4	58.2
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		56.0		20.0	12.0	37.0
Max Q Clear Time (g_c+I1), s		16.1		10.6	6.7	9.8
Green Ext Time (p_c), s		11.2		0.8	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	43	77	76	80	19	111	2	110	27	2	14
Future Volume (vph)	9	43	77	76	80	19	111	2	110	27	2	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919			0.985			0.933			0.955	
Flt Protected		0.997			0.979			0.976			0.970	
Satd. Flow (prot)	0	1707	0	0	1796	0	0	1696	0	0	1726	0
Flt Permitted		0.997			0.979			0.976			0.970	
Satd. Flow (perm)	0	1707	0	0	1796	0	0	1696	0	0	1726	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2903			390			327			235	
Travel Time (s)		56.6			7.6			8.9			6.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	48	86	84	89	21	123	2	122	30	2	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	0	0	194	0	0	247	0	0	48	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 37.3% ICU Level of Service A
Analysis Period (min) 15

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	43	77	76	80	19	111	2	110	27	2	14
Future Vol, veh/h	9	43	77	76	80	19	111	2	110	27	2	14
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	48	86	84	89	21	123	2	122	30	2	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	134	0	0	388	389	91	441	422	100
Stage 1	-	-	-	-	-	-	111	111	-	268	268	-
Stage 2	-	-	-	-	-	-	277	278	-	173	154	-
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	1480	-	-	1451	-	-	571	546	967	527	523	956
Stage 1	-	-	-	-	-	-	894	804	-	738	687	-
Stage 2	-	-	-	-	-	-	729	680	-	829	770	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1451	-	-	530	508	967	435	487	956
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	508	-	435	487	-
Stage 1	-	-	-	-	-	-	888	798	-	733	644	-
Stage 2	-	-	-	-	-	-	670	638	-	717	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	3.3	13.3	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	682	1480	-	-	1451	-	-	532
HCM Lane V/C Ratio	0.363	0.007	-	-	0.058	-	-	0.09
HCM Control Delay (s)	13.3	7.4	0	-	7.6	0	-	12.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.7	0	-	-	0.2	-	-	0.3

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

Build (2026) PM
04/10/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	271	32	27	699	1546	425
Future Volume (vph)	271	32	27	699	1546	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1509	1770	3438	3505	1583
Flt Permitted	0.950		0.077			
Satd. Flow (perm)	1752	1509	143	3438	3505	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	7%	2%	5%	3%	2%
Adj. Flow (vph)	301	36	30	777	1718	472
Shared Lane Traffic (%)						
Lane Group Flow (vph)	301	36	30	777	1718	472
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	23.0	23.0	11.9	67.0	55.1	23.0
Total Split (%)	25.6%	25.6%	13.2%	74.4%	61.2%	25.6%
Maximum Green (s)	17.1	17.1	7.0	60.6	48.7	17.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	0.0	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.4	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	17.3	17.3	62.4	62.7	54.1	79.9
Actuated g/C Ratio	0.19	0.19	0.69	0.70	0.60	0.89
v/c Ratio	0.89	0.12	0.13	0.32	0.82	0.34
Control Delay	64.8	30.8	7.1	5.1	20.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	64.8	30.8	7.1	5.1	20.0	2.4
LOS	E	C	A	A	B	A
Approach Delay	61.2			5.1	16.2	
Approach LOS	E			A	B	
Queue Length 50th (ft)	167	17	4	68	435	51
Queue Length 95th (ft)	#309	43	m10	90	#582	79
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	352	302	224	2396	2107	1400
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	0.86	0.12	0.13	0.32	0.82	0.34

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 29 (32%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 18.1 Intersection LOS: B
Intersection Capacity Utilization 67.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	271	32	27	699	1546	425
Future Volume (veh/h)	271	32	27	699	1546	425
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1796	1870	1826	1856	1870
Adj Flow Rate, veh/h	301	36	30	777	1718	472
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	7	2	5	3	2
Cap, veh/h	348	300	213	2400	1901	1183
Arrive On Green	0.20	0.20	0.06	0.69	0.54	0.55
Sat Flow, veh/h	1767	1522	1781	3561	3618	1585
Grp Volume(v), veh/h	301	36	30	777	1718	472
Grp Sat Flow(s),veh/h/ln	1767	1522	1781	1735	1763	1585
Q Serve(g_s), s	14.8	1.8	0.0	8.0	39.4	9.7
Cycle Q Clear(g_c), s	14.8	1.8	0.0	8.0	39.4	9.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	348	300	213	2400	1901	1183
V/C Ratio(X)	0.86	0.12	0.14	0.32	0.90	0.40
Avail Cap(c_a), veh/h	353	304	234	2400	1908	1186
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	29.7	36.7	5.5	18.6	4.1
Incr Delay (d2), s/veh	18.4	0.1	0.1	0.4	7.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	1.6	0.6	2.0	14.6	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.3	29.8	36.8	5.9	26.2	5.1
LnGrp LOS	D	C	D	A	C	A
Approach Vol, veh/h	337			807	2190	
Approach Delay, s/veh	50.8			7.0	21.7	
Approach LOS	D			A	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.3		22.7	12.3	54.9
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		60.6		17.1	7.0	* 49
Max Q Clear Time (g_c+I1), s		10.0		16.8	2.0	41.4
Green Ext Time (p_c), s		15.3		0.0	0.0	7.1

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	169	199	730	1587	68
Future Volume (vph)	53	169	199	730	1587	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.897				0.994	
Flt Protected	0.988		0.950			
Satd. Flow (prot)	1651	0	1719	3505	3518	0
Flt Permitted	0.988		0.950			
Satd. Flow (perm)	1651	0	1719	3505	3518	0
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	5%	3%	2%	2%
Adj. Flow (vph)	59	188	221	811	1763	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	0	221	811	1839	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 80.4% ICU Level of Service D
Analysis Period (min) 15

Intersection						
Int Delay, s/veh	69.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	169	199	730	1587	68
Future Vol, veh/h	53	169	199	730	1587	68
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	3	2	2
Mvmt Flow	59	188	221	811	1763	76

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2649	920	1839	0	-	0
Stage 1	1801	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.2	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	~ 19	273	315	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 6	273	315	-	-	-
Mov Cap-2 Maneuver	~ 30	-	-	-	-	-
Stage 1	~ 35	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 844.9	8.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	315	-	93	-	-
HCM Lane V/C Ratio	0.702	-	2.652	-	-
HCM Control Delay (s)	39.4	-	$ 844.9	-	-
HCM Lane LOS	E	-	F	-	-
HCM 95th %tile Q(veh)	5	-	23.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	70	906	12	114	1564
Future Volume (vph)	23	70	906	12	114	1564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.899		0.998			
Flt Protected	0.988				0.950	
Satd. Flow (prot)	1631	0	3465	0	1770	3539
Flt Permitted	0.988				0.950	
Satd. Flow (perm)	1631	0	3465	0	1770	3539
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	4%	2%	2%	2%
Adj. Flow (vph)	26	78	1007	13	127	1738
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	0	1020	0	127	1738
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 55.5% ICU Level of Service B
Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	70	906	12	114	1564
Future Vol, veh/h	23	70	906	12	114	1564
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	4	2	2	2
Mvmt Flow	26	78	1007	13	127	1738

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2137	510	0	0	1020	0
Stage 1	1014	-	-	-	-	-
Stage 2	1123	-	-	-	-	-
Critical Hdwy	6.9	6.96	-	-	4.14	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.33	-	-	2.22	-
Pot Cap-1 Maneuver	40	506	-	-	676	-
Stage 1	304	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	32	506	-	-	676	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	304	-	-	-	-	-
Stage 2	216	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.7	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	294	676	-
HCM Lane V/C Ratio	-	-	0.351	0.187	-
HCM Control Delay (s)	-	-	23.7	11.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.7	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	179	91	54	231	208
Future Volume (vph)	39	179	91	54	231	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.950			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1583	1763	0	1687	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1719	1583	1763	0	1687	1863
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	2%	3%	7%	2%
Adj. Flow (vph)	43	199	101	60	257	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	199	161	0	257	231
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 34.2% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	179	91	54	231	208
Future Vol, veh/h	39	179	91	54	231	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	3	7	2
Mvmt Flow	43	199	101	60	257	231

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	876	131	0	0	161	0
Stage 1	131	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	315	919	-	-	1388	-
Stage 1	888	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	257	919	-	-	1388	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	257	919	1388	-
HCM Lane V/C Ratio	-	-	0.169	0.216	0.185	-
HCM Control Delay (s)	-	-	21.8	10	8.2	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.8	0.7	-

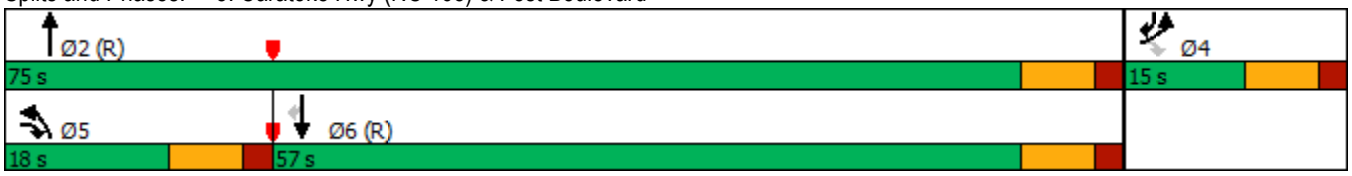
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	117	112	159	817	1580	175
Future Volume (vph)	117	112	159	817	1580	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	586			859	1116	
Travel Time (s)	16.0			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	124	177	908	1756	194
Shared Lane Traffic (%)						
Lane Group Flow (vph)	130	124	177	908	1756	194
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	15.0	18.0	18.0	75.0	57.0	15.0
Total Split (%)	16.7%	20.0%	20.0%	83.3%	63.3%	16.7%
Maximum Green (s)	8.0	11.0	11.0	68.0	50.0	8.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	9.9	27.6	12.6	70.1	52.4	67.4
Actuated g/C Ratio	0.11	0.31	0.14	0.78	0.58	0.75
v/c Ratio	0.67	0.26	0.71	0.33	0.85	0.16
Control Delay	56.4	25.0	54.1	3.3	7.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	25.0	54.1	3.3	7.8	1.1
LOS	E	C	D	A	A	A
Approach Delay	41.1			11.6	7.2	
Approach LOS	D			B	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	72	52	97	63	42	5
Queue Length 95th (ft)	#150	97	#187	81	49	m7
Internal Link Dist (ft)	506			779	1036	
Turn Bay Length (ft)		250	200			150
Base Capacity (vph)	196	491	255	2754	2061	1185
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	0.66	0.25	0.69	0.33	0.85	0.16

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 4 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 11.3 Intersection LOS: B
Intersection Capacity Utilization 71.5% 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	117	112	159	817	1580	175
Future Volume (veh/h)	117	112	159	817	1580	175
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	124	177	908	1756	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	198	395	246	2764	2075	1102
Arrive On Green	0.11	0.11	0.14	0.78	0.58	0.58
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	130	124	177	908	1756	194
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.3	5.7	8.6	6.9	36.6	3.8
Cycle Q Clear(g_c), s	6.3	5.7	8.6	6.9	36.6	3.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	198	395	246	2764	2075	1102
V/C Ratio(X)	0.66	0.31	0.72	0.33	0.85	0.18
Avail Cap(c_a), veh/h	198	395	257	2764	2075	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	27.5	37.1	3.0	15.4	4.8
Incr Delay (d2), s/veh	7.7	0.4	8.9	0.3	4.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	5.5	4.1	1.1	12.4	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.0	28.0	46.0	3.3	19.9	5.1
LnGrp LOS	D	C	D	A	B	A
Approach Vol, veh/h	254			1085	1950	
Approach Delay, s/veh	37.2			10.3	18.4	
Approach LOS	D			B	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		75.0		15.0	17.4	57.6
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		68.0		8.0	11.0	50.0
Max Q Clear Time (g_c+I1), s		8.9		8.3	10.6	38.6
Green Ext Time (p_c), s		6.5		0.0	0.0	8.4

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	52	160	157	70	40	122	5	142	29	5	19
Future Volume (vph)	21	52	160	157	70	40	122	5	142	29	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.907			0.980			0.929			0.952	
Flt Protected		0.996			0.971			0.978			0.974	
Satd. Flow (prot)	0	1683	0	0	1773	0	0	1692	0	0	1727	0
Flt Permitted		0.996			0.971			0.978			0.974	
Satd. Flow (perm)	0	1683	0	0	1773	0	0	1692	0	0	1727	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2916			377			351			255	
Travel Time (s)		56.8			7.3			9.6			7.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	58	178	174	78	44	136	6	158	32	6	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	259	0	0	296	0	0	300	0	0	59	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15

Intersection												
Int Delay, s/veh	10.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	52	160	157	70	40	122	5	142	29	5	19
Future Vol, veh/h	21	52	160	157	70	40	122	5	142	29	5	19
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	23	58	178	174	78	44	136	6	158	32	6	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	236	0	0	655	663	147	723	730	100
Stage 1	-	-	-	-	-	-	193	193	-	448	448	-
Stage 2	-	-	-	-	-	-	462	470	-	275	282	-
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	1465	-	-	1331	-	-	379	382	900	342	349	956
Stage 1	-	-	-	-	-	-	809	741	-	590	573	-
Stage 2	-	-	-	-	-	-	580	560	-	731	678	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1465	-	-	1331	-	-	321	322	900	245	295	956
Mov Cap-2 Maneuver	-	-	-	-	-	-	321	322	-	245	295	-
Stage 1	-	-	-	-	-	-	794	728	-	579	492	-
Stage 2	-	-	-	-	-	-	482	481	-	587	666	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	4.8	23.5	17.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	486	1465	-	-	1331	-	-	342
HCM Lane V/C Ratio	0.615	0.016	-	-	0.131	-	-	0.172
HCM Control Delay (s)	23.5	7.5	0	-	8.1	0	-	17.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	4.1	0	-	-	0.5	-	-	0.6

Flora Farms TIA
Build (2026) AM with Improvements
1: Caratoke Hwy (NC 168) & Survey Road
04/10/2020

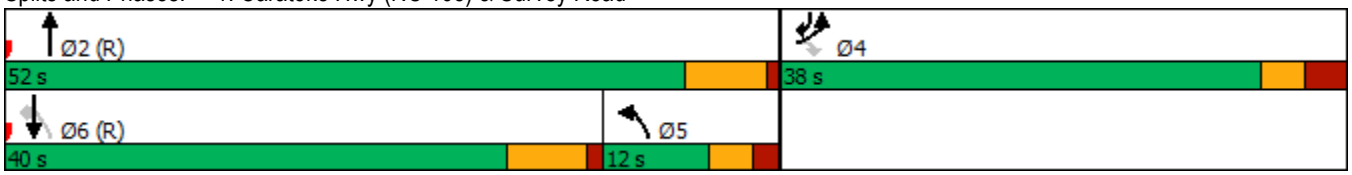
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	376	41	26	1213	563	182
Future Volume (vph)	376	41	26	1213	563	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3505	3343	1583
Flt Permitted	0.950		0.367			
Satd. Flow (perm)	1770	1583	684	3505	3343	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	8%	2%
Adj. Flow (vph)	418	46	29	1348	626	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	418	46	29	1348	626	202
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	38.0	38.0	12.0	52.0	40.0	38.0
Total Split (%)	42.2%	42.2%	13.3%	57.8%	44.4%	42.2%
Maximum Green (s)	32.1	32.1	7.1	45.6	33.6	32.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	-1.4	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	25.7	25.7	52.3	54.3	48.3	82.0
Actuated g/C Ratio	0.29	0.29	0.58	0.60	0.54	0.91
v/c Ratio	0.83	0.10	0.06	0.64	0.35	0.14
Control Delay	43.7	21.7	7.6	9.2	15.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	43.7	21.7	7.6	9.2	15.4	1.7
LOS	D	C	A	A	B	A
Approach Delay	41.5			9.2	12.0	
Approach LOS	D			A	B	
Queue Length 50th (ft)	220	19	5	125	84	0
Queue Length 95th (ft)	296	40	m10	194	189	31
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	649	580	496	2114	1811	1438
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	0.64	0.08	0.06	0.64	0.35	0.14

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 62.7% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	376	41	26	1213	563	182
Future Volume (veh/h)	376	41	26	1213	563	182
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1781	1870
Adj Flow Rate, veh/h	418	46	29	1348	626	202
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	3	8	2
Cap, veh/h	465	413	621	2214	1004	875
Arrive On Green	0.26	0.26	0.26	0.63	0.30	0.29
Sat Flow, veh/h	1781	1585	1781	3618	3474	1585
Grp Volume(v), veh/h	418	46	29	1348	626	202
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1763	1692	1585
Q Serve(g_s), s	20.4	2.0	0.0	20.7	14.4	5.9
Cycle Q Clear(g_c), s	20.4	2.0	0.0	20.7	14.4	5.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	465	413	621	2214	1004	875
V/C Ratio(X)	0.90	0.11	0.05	0.61	0.62	0.23
Avail Cap(c_a), veh/h	653	581	621	2214	1316	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	25.3	18.1	10.1	27.3	10.4
Incr Delay (d2), s/veh	9.7	0.0	0.0	1.3	2.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	2.0	0.4	6.2	5.6	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	25.4	18.1	11.3	30.2	11.0
LnGrp LOS	D	C	B	B	C	B
Approach Vol, veh/h	464			1377	828	
Approach Delay, s/veh	40.2			11.5	25.5	
Approach LOS	D			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.5		28.5	29.8	31.7
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		45.6		32.1	7.1	* 34
Max Q Clear Time (g_c+I1), s		22.7		22.4	2.0	16.4
Green Ext Time (p_c), s		17.8		0.2	0.0	8.9

Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	125	137	1280	533	38
Future Volume (vph)	0	125	137	1280	533	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			100
Storage Lanes	0	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1596	1612	3505	3343	1583
Flt Permitted			0.950			
Satd. Flow (perm)	0	1596	1612	3505	3343	1583
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	12%	3%	8%	2%
Adj. Flow (vph)	0	139	152	1422	592	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	139	152	1422	592	42
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 38.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	125	137	1280	533	38
Future Vol, veh/h	0	125	137	1280	533	38
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	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	12	3	8	2
Mvmt Flow	0	139	152	1422	592	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	296	634	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	4.34	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	2.32	-	-	-
Pot Cap-1 Maneuver	0	697	880	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	697	880	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	697	-	-
HCM Lane V/C Ratio	0.173	-	0.199	-	-
HCM Control Delay (s)	9.9	-	11.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	0.7	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	79	1211	22	49	661
Future Volume (vph)	16	79	1211	22	49	661
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.888		0.997			
Flt Protected	0.992				0.950	
Satd. Flow (prot)	1615	0	3457	0	1770	3343
Flt Permitted	0.992				0.950	
Satd. Flow (perm)	1615	0	3457	0	1770	3343
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	11%	2%	8%
Adj. Flow (vph)	18	88	1346	24	54	734
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	0	1370	0	54	734
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 53.1% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	79	1211	22	49	661
Future Vol, veh/h	16	79	1211	22	49	661
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	4	4	11	2	8
Mvmt Flow	18	88	1346	24	54	734

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1833	685	0	0	1370	0
Stage 1	1358	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.84	6.98	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.34	-	-	2.22	-
Pot Cap-1 Maneuver	68	386	-	-	497	-
Stage 1	204	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	386	-	-	497	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.6	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	309	497	-
HCM Lane V/C Ratio	-	-	0.342	0.11	-
HCM Control Delay (s)	-	-	22.6	13.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.4	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	40	202	115	45	173	56
Future Volume (vph)	40	202	115	45	173	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1641	1538	1753	0	1703	1845
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1641	1538	1753	0	1703	1845
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	10%	6%	3%
Adj. Flow (vph)	44	224	128	50	192	62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	224	178	0	192	62
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 31.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	202	115	45	173	56
Future Vol, veh/h	40	202	115	45	173	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	5	2	10	6	3
Mvmt Flow	44	224	128	50	192	62

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	599	153	0	0	178	0
Stage 1	153	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.5	6.25	-	-	4.16	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.345	-	-	2.254	-
Pot Cap-1 Maneuver	452	885	-	-	1374	-
Stage 1	856	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	885	-	-	1374	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	6.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	389	885	1374	-
HCM Lane V/C Ratio	-	-	0.114	0.254	0.14	-
HCM Control Delay (s)	-	-	15.4	10.4	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	1	0.5	-

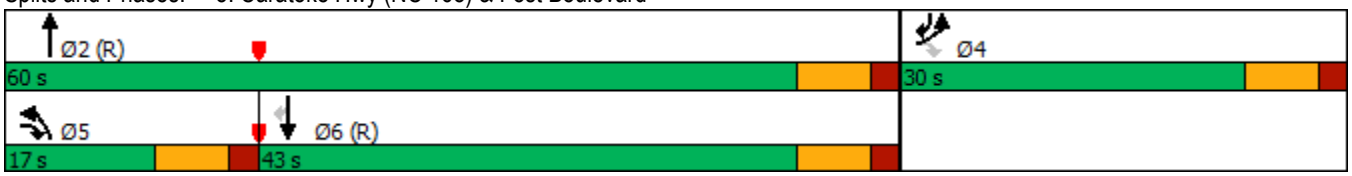
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	217	146	87	1202	562	96
Future Volume (vph)	217	146	87	1202	562	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	557			859	1116	
Travel Time (s)	15.2			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	241	162	97	1336	624	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	162	97	1336	624	107
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	30.0	17.0	17.0	60.0	43.0	30.0
Total Split (%)	33.3%	18.9%	18.9%	66.7%	47.8%	33.3%
Maximum Green (s)	23.0	10.0	10.0	53.0	36.0	23.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	19.4	36.7	12.3	60.6	43.3	67.7
Actuated g/C Ratio	0.22	0.41	0.14	0.67	0.48	0.75
v/c Ratio	0.63	0.25	0.40	0.56	0.37	0.09
Control Delay	39.1	17.1	39.7	9.5	10.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	17.1	39.7	9.5	10.7	1.7
LOS	D	B	D	A	B	A
Approach Delay	30.2			11.6	9.4	
Approach LOS	C			B	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	125	59	51	183	87	10
Queue Length 95th (ft)	186	83	94	295	66	8
Internal Link Dist (ft)	477			779	1036	
Turn Bay Length (ft)		250	200			150
Base Capacity (vph)	493	661	260	2386	1738	1290
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	0.49	0.25	0.37	0.56	0.36	0.08

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 72 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 13.9 Intersection LOS: B
Intersection Capacity Utilization 53.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	217	146	87	1202	562	96
Future Volume (veh/h)	217	146	87	1202	562	96
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	162	97	1336	624	107
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	326	437	166	2509	1981	1173
Arrive On Green	0.18	0.18	0.09	0.71	0.56	0.56
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	241	162	97	1336	624	107
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	11.5	7.4	4.7	15.9	8.5	1.7
Cycle Q Clear(g_c), s	11.5	7.4	4.7	15.9	8.5	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	326	437	166	2509	1981	1173
V/C Ratio(X)	0.74	0.37	0.58	0.53	0.32	0.09
Avail Cap(c_a), veh/h	495	588	238	2509	1981	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	26.3	39.1	6.2	10.7	3.3
Incr Delay (d2), s/veh	3.3	0.5	3.2	0.8	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	7.0	2.1	3.9	2.8	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.1	26.8	42.4	7.0	11.1	3.4
LnGrp LOS	D	C	D	A	B	A
Approach Vol, veh/h	403			1433	731	
Approach Delay, s/veh	33.5			9.4	10.0	
Approach LOS	C			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.5		21.5	13.4	55.2
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		53.0		23.0	10.0	36.0
Max Q Clear Time (g_c+I1), s		17.9		13.5	6.7	10.5
Green Ext Time (p_c), s		10.8		0.9	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	43	77	76	80	19	111	2	55	27	2	14
Future Volume (vph)	9	43	77	76	80	19	111	2	55	27	2	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.971			0.855			0.955	
Flt Protected	0.950			0.950			0.950				0.970	
Satd. Flow (prot)	1770	1863	1583	1770	1809	0	1770	1593	0	0	1726	0
Flt Permitted	0.950			0.950			0.950				0.970	
Satd. Flow (perm)	1770	1863	1583	1770	1809	0	1770	1593	0	0	1726	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2903			390			327			235	
Travel Time (s)		56.6			7.6			8.9			6.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	48	86	84	89	21	123	2	61	30	2	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	48	86	84	110	0	123	63	0	0	48	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 26.7% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	43	77	76	80	19	111	2	55	27	2	14
Future Vol, veh/h	9	43	77	76	80	19	111	2	55	27	2	14
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	100	-	100	100	-	-	100	-	-	-	-	-
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	48	86	84	89	21	123	2	61	30	2	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	134	0	0	345	346	48	411	422	100
Stage 1	-	-	-	-	-	-	68	68	-	268	268	-
Stage 2	-	-	-	-	-	-	277	278	-	143	154	-
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	1480	-	-	1451	-	-	609	577	1021	551	523	956
Stage 1	-	-	-	-	-	-	942	838	-	738	687	-
Stage 2	-	-	-	-	-	-	729	680	-	860	770	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1451	-	-	568	539	1021	491	489	956
Mov Cap-2 Maneuver	-	-	-	-	-	-	568	539	-	491	489	-
Stage 1	-	-	-	-	-	-	935	832	-	733	647	-
Stage 2	-	-	-	-	-	-	673	641	-	801	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	3.3	11.7	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	568	990	1480	-	-	1451	-	-	583
HCM Lane V/C Ratio	0.217	0.064	0.007	-	-	0.058	-	-	0.082
HCM Control Delay (s)	13.1	8.9	7.4	-	-	7.6	-	-	11.7
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.2	0	-	-	0.2	-	-	0.3

Flora Farms TIA
1: Caratoke Hwy (NC 168) & Survey Road

Build (2026) PM with Improvements
04/10/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	271	32	27	699	1546	425
Future Volume (vph)	271	32	27	699	1546	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	200			200
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1509	1770	3438	3505	1583
Flt Permitted	0.950		0.077			
Satd. Flow (perm)	1752	1509	143	3438	3505	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	35			55	55	
Link Distance (ft)	1728			4412	2769	
Travel Time (s)	33.7			54.7	34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	7%	2%	5%	3%	2%
Adj. Flow (vph)	301	36	30	777	1718	472
Shared Lane Traffic (%)						
Lane Group Flow (vph)	301	36	30	777	1718	472
Turn Type	Prot	Perm	D.P+P	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	6			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.9	12.9	11.9	20.4	20.4	12.9
Total Split (s)	23.0	23.0	11.9	67.0	55.1	23.0
Total Split (%)	25.6%	25.6%	13.2%	74.4%	61.2%	25.6%
Maximum Green (s)	17.1	17.1	7.0	60.6	48.7	17.1
Yellow Time (s)	3.0	3.0	3.0	5.4	5.4	3.0
All-Red Time (s)	2.9	2.9	1.9	1.0	1.0	2.9
Lost Time Adjust (s)	-0.9	-0.9	0.1	-1.4	0.0	-0.9
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.4	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	1.0	1.0	1.0	6.0	6.0	1.0
Minimum Gap (s)	0.2	0.2	0.2	3.4	3.4	0.2
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	17.3	17.3	62.4	62.7	54.1	79.9
Actuated g/C Ratio	0.19	0.19	0.69	0.70	0.60	0.89
v/c Ratio	0.89	0.12	0.13	0.32	0.82	0.34
Control Delay	64.8	30.8	6.6	4.7	20.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Delay	64.8	30.8	6.6	4.7	20.0	2.4
LOS	E	C	A	A	B	A
Approach Delay	61.2			4.8	16.2	
Approach LOS	E			A	B	
Queue Length 50th (ft)	167	17	4	63	435	51
Queue Length 95th (ft)	#309	43	m10	83	#582	79
Internal Link Dist (ft)	1648			4332	2689	
Turn Bay Length (ft)		150	200			200
Base Capacity (vph)	352	302	224	2396	2107	1400
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	0.86	0.12	0.13	0.32	0.82	0.34

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 31 (34%), Referenced to phase 2:NBT and 6:NBSB, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 67.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Caratoke Hwy (NC 168) & Survey Road

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	271	32	27	699	1546	425
Future Volume (veh/h)	271	32	27	699	1546	425
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1796	1870	1826	1856	1870
Adj Flow Rate, veh/h	301	36	30	777	1718	472
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	7	2	5	3	2
Cap, veh/h	348	300	213	2400	1901	1183
Arrive On Green	0.20	0.20	0.06	0.69	0.54	0.55
Sat Flow, veh/h	1767	1522	1781	3561	3618	1585
Grp Volume(v), veh/h	301	36	30	777	1718	472
Grp Sat Flow(s),veh/h/ln	1767	1522	1781	1735	1763	1585
Q Serve(g_s), s	14.8	1.8	0.0	8.0	39.4	9.7
Cycle Q Clear(g_c), s	14.8	1.8	0.0	8.0	39.4	9.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	348	300	213	2400	1901	1183
V/C Ratio(X)	0.86	0.12	0.14	0.32	0.90	0.40
Avail Cap(c_a), veh/h	353	304	234	2400	1908	1186
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	29.7	36.7	5.5	18.6	4.1
Incr Delay (d2), s/veh	18.4	0.1	0.1	0.4	7.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	1.6	0.6	2.0	14.6	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.3	29.8	36.8	5.9	26.2	5.1
LnGrp LOS	D	C	D	A	C	A
Approach Vol, veh/h	337			807	2190	
Approach Delay, s/veh	50.8			7.0	21.7	
Approach LOS	D			A	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		67.3		22.7	12.3	54.9
Change Period (Y+Rc), s		6.4		5.9	6.4	* 6.4
Max Green Setting (Gmax), s		60.6		17.1	7.0	* 49
Max Q Clear Time (g_c+I1), s		10.0		16.8	2.0	41.4
Green Ext Time (p_c), s		15.3		0.0	0.0	7.1

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	169	199	783	1587	68
Future Volume (vph)	0	169	199	783	1587	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	200			100
Storage Lanes	0	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.865				0.850
Flt Protected			0.950			
Satd. Flow (prot)	0	1611	1719	3505	3539	1583
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1719	3505	3539	1583
Link Speed (mph)	35			55	55	
Link Distance (ft)	328			1116	4412	
Travel Time (s)	6.4			13.8	54.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	5%	3%	2%	2%
Adj. Flow (vph)	0	188	221	870	1763	76
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	188	221	870	1763	76
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 61.6% ICU Level of Service B
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	169	199	783	1587	68
Future Vol, veh/h	0	169	199	783	1587	68
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	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	3	2	2
Mvmt Flow	0	188	221	870	1763	76

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	882	1839	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.25	-	-	-
Pot Cap-1 Maneuver	0	289	315	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	289	315	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.9	8	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	315	-	289	-	-
HCM Lane V/C Ratio	0.702	-	0.65	-	-
HCM Control Delay (s)	39.4	-	37.9	-	-
HCM Lane LOS	E	-	E	-	-
HCM 95th %tile Q(veh)	5	-	4.2	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	23	70	906	12	114	1564
Future Volume (vph)	23	70	906	12	114	1564
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.899		0.998			
Flt Protected	0.988				0.950	
Satd. Flow (prot)	1631	0	3465	0	1770	3539
Flt Permitted	0.988				0.950	
Satd. Flow (perm)	1631	0	3465	0	1770	3539
Link Speed (mph)	55		55			55
Link Distance (ft)	1144		980			859
Travel Time (s)	14.2		12.1			10.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	4%	2%	2%	2%
Adj. Flow (vph)	26	78	1007	13	127	1738
Shared Lane Traffic (%)						
Lane Group Flow (vph)	104	0	1020	0	127	1738
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 55.5% ICU Level of Service B
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	70	906	12	114	1564
Future Vol, veh/h	23	70	906	12	114	1564
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	4	2	2	2
Mvmt Flow	26	78	1007	13	127	1738

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2137	510	0	0	1020	0
Stage 1	1014	-	-	-	-	-
Stage 2	1123	-	-	-	-	-
Critical Hdwy	6.9	6.96	-	-	4.14	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.33	-	-	2.22	-
Pot Cap-1 Maneuver	40	506	-	-	676	-
Stage 1	304	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	32	506	-	-	676	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	304	-	-	-	-	-
Stage 2	216	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.7	0	0.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	294	676	-
HCM Lane V/C Ratio	-	-	0.351	0.187	-
HCM Control Delay (s)	-	-	23.7	11.5	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	1.5	0.7	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	179	91	54	231	208
Future Volume (vph)	39	179	91	54	231	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	45				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.950			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1583	1763	0	1687	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1719	1583	1763	0	1687	1863
Link Speed (mph)	35		25			35
Link Distance (ft)	198		1362			1728
Travel Time (s)	3.9		37.1			33.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	2%	3%	7%	2%
Adj. Flow (vph)	43	199	101	60	257	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	199	161	0	257	231
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 34.2% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	5.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	179	91	54	231	208
Future Vol, veh/h	39	179	91	54	231	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	2	2	3	7	2
Mvmt Flow	43	199	101	60	257	231

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	876	131	0	0	161	0
Stage 1	131	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.45	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	315	919	-	-	1388	-
Stage 1	888	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	257	919	-	-	1388	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	4.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	257	919	1388	-
HCM Lane V/C Ratio	-	-	0.169	0.216	0.185	-
HCM Control Delay (s)	-	-	21.8	10	8.2	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.8	0.7	-

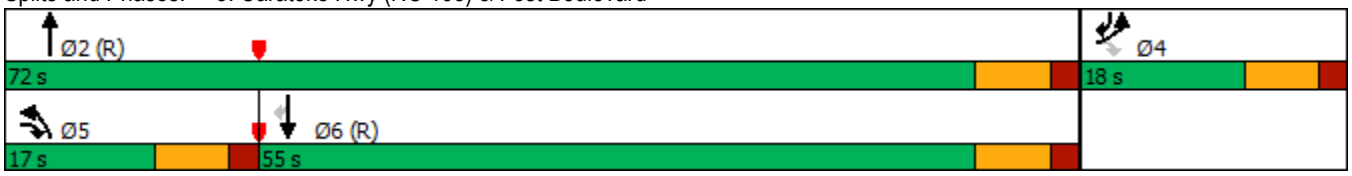
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	112	159	817	1580	175
Future Volume (vph)	170	112	159	817	1580	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	250	200			150
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	586			859	1116	
Travel Time (s)	16.0			10.6	13.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	189	124	177	908	1756	194
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	124	177	908	1756	194
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	18.0	17.0	17.0	72.0	55.0	18.0
Total Split (%)	20.0%	18.9%	18.9%	80.0%	61.1%	20.0%
Maximum Green (s)	11.0	10.0	10.0	65.0	48.0	11.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	12.8	29.7	11.9	67.2	50.3	68.1
Actuated g/C Ratio	0.14	0.33	0.13	0.75	0.56	0.76
v/c Ratio	0.75	0.24	0.76	0.34	0.89	0.16
Control Delay	57.2	23.3	59.3	4.3	10.8	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.2	23.3	59.3	4.3	10.8	1.3
LOS	E	C	E	A	B	A
Approach Delay	43.7			13.3	9.9	
Approach LOS	D			B	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	104	50	98	76	44	5
Queue Length 95th (ft)	#205	94	#198	98	#54	m7
Internal Link Dist (ft)	506			779	1036	
Turn Bay Length (ft)		250	200			150
Base Capacity (vph)	255	523	236	2643	1979	1202
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	0.74	0.24	0.75	0.34	0.89	0.16

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 74.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Caratoke Hwy (NC 168) & Fost Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	112	159	817	1580	175
Future Volume (veh/h)	170	112	159	817	1580	175
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	124	177	908	1756	194
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	257	440	238	2646	1974	1110
Arrive On Green	0.14	0.14	0.13	0.74	0.56	0.56
Sat Flow, veh/h	1781	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	189	124	177	908	1756	194
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	9.1	5.5	8.6	7.9	39.1	3.8
Cycle Q Clear(g_c), s	9.1	5.5	8.6	7.9	39.1	3.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	257	440	238	2646	1974	1110
V/C Ratio(X)	0.73	0.28	0.75	0.34	0.89	0.17
Avail Cap(c_a), veh/h	257	440	238	2646	1974	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	25.5	37.5	3.9	17.6	4.6
Incr Delay (d2), s/veh	10.4	0.3	12.0	0.4	6.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	5.4	4.3	1.6	14.1	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.2	25.8	49.6	4.3	24.1	5.0
LnGrp LOS	D	C	D	A	C	A
Approach Vol, veh/h	313			1085	1950	
Approach Delay, s/veh	38.8			11.7	22.2	
Approach LOS	D			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		72.0		18.0	17.0	55.0
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0
Max Green Setting (Gmax), s		65.0		11.0	10.0	48.0
Max Q Clear Time (g_c+I1), s		9.9		11.1	10.6	41.1
Green Ext Time (p_c), s		6.5		0.0	0.0	5.5
Intersection Summary						
HCM 6th Ctrl Delay			20.3			
HCM 6th LOS			C			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	52	160	157	70	40	122	5	89	29	5	19
Future Volume (vph)	21	52	160	157	70	40	122	5	89	29	5	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.946			0.859			0.952	
Flt Protected	0.950			0.950			0.950				0.974	
Satd. Flow (prot)	1770	1863	1583	1770	1762	0	1770	1600	0	0	1727	0
Flt Permitted	0.950			0.950			0.950				0.974	
Satd. Flow (perm)	1770	1863	1583	1770	1762	0	1770	1600	0	0	1727	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2916			377			351			255	
Travel Time (s)		56.8			7.3			9.6			7.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	58	178	174	78	44	136	6	99	32	6	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	58	178	174	122	0	136	105	0	0	59	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.0% ICU Level of Service A
Analysis Period (min) 15

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	52	160	157	70	40	122	5	89	29	5	19
Future Vol, veh/h	21	52	160	157	70	40	122	5	89	29	5	19
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	100	-	100	100	-	-	100	-	-	-	-	-
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	58	178	174	78	44	136	6	99	32	6	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	122	0	0	236	0	0	566	574	58	694	730	100
Stage 1	-	-	-	-	-	-	104	104	-	448	448	-
Stage 2	-	-	-	-	-	-	462	470	-	246	282	-
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	1465	-	-	1331	-	-	435	429	1008	357	349	956
Stage 1	-	-	-	-	-	-	902	809	-	590	573	-
Stage 2	-	-	-	-	-	-	580	560	-	758	678	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1465	-	-	1331	-	-	373	367	1008	283	298	956
Mov Cap-2 Maneuver	-	-	-	-	-	-	373	367	-	283	298	-
Stage 1	-	-	-	-	-	-	888	796	-	581	498	-
Stage 2	-	-	-	-	-	-	488	487	-	668	667	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	4.8	15.4	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	922	1465	-	-	1331	-	-	381
HCM Lane V/C Ratio	0.363	0.113	0.016	-	-	0.131	-	-	0.155
HCM Control Delay (s)	20.1	9.4	7.5	-	-	8.1	-	-	16.2
HCM Lane LOS	C	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.6	0.4	0	-	-	0.5	-	-	0.5

Appendix D:

Background Development

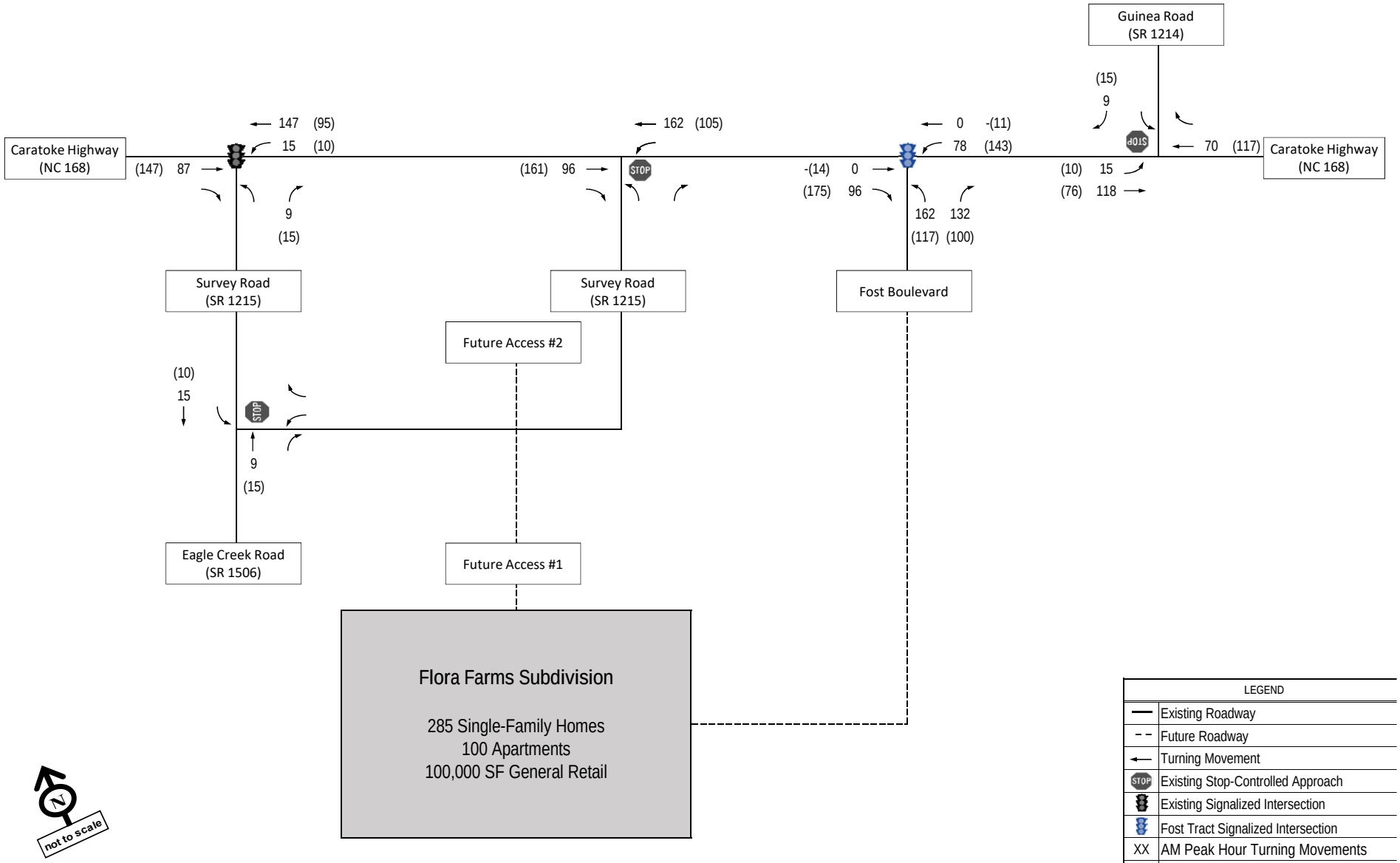


Figure D-1
Fost Tract Development Site Trips

Flora Farms Subdivision
TIA
Moyock, NC

www.vhb.com

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

5/11/2020

Justin Old
QHOC Homes
417 Caratoke Highway, Unit D
Moyock, NC 27958

Dear Mr. Old,

I have reviewed the submitted Flora Farms Subdivision Traffic Impact Analysis (TIA) prepared by VHB Engineering NC, and submitted by the Developer. This document was revised on May 5th, 2020, based upon the Department's comments submitted via email on March 26th, 2020. As all concerns are adequately addressed by the "Executive Summary" of this TIA, the Department is now in agreeance with the required improvements and their associated implementation time frames.

If you have any additional questions or comments, please don't hesitate to contact me at any time.

Sincerely,

David B. Otts, P.E.
District Engineer

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DISTRICT ENGINEER'S OFFICE
DIVISION ONE – DISTRICT ONE
MAIL SERVICE CENTER 10-31-04

Telephone: (252) 331-4737
Fax: (252) 331-4739
Customer Service: 1-877-368-4968

Website: ncdot.gov

Location:
1929 NORTH ROAD STREET
ELIZABETH CITY, NC 27909

Currituck County
Department of Planning and Community Development
153 Courthouse Road, Suite 110
Currituck, North Carolina 27929
252-232-3055
FAX 252-232-3026

MEMORANDUM

To: Mark Bissell, Bissell Professional Group
Justin Old, Allied Properties LLC

From: Tammy D. Glave, CZO, Senior Planner

Date: February 13, 2020

Re: PB 19-20 Flora Farm, Planned Development - Residential

The following comments have been received for Flora Farm, Planned Development – Residential, rezoning request. In order to be placed on the March 10, 2020 Planning Board agenda, all outstanding TRC comments must addressed and amended plans and documents received before 3:00 p.m. on February 24, 2020. TRC comments are valid for six months.

Planning (Tammy Glave, 252-232-6025)
Reviewed with comment/Resubmit:

1. Per Superintendent on 1/15/2020, a portion of the development is districted to Moyock Elementary School and at the time of the writing of this comment, the BOE has not made a change to the district boundary. Without adequate school capacity or school capacity programmed to be in place within two years from approval, this project is recommended for denial.
2. A planned development application provides in depth details of the proposed development along with terms and conditions, and staff recommends a work session with the developer, design engineer, planning staff, planning board, and board of commissioners to discuss and review the proposed development prior to consideration of this project.
3. Since the development will be sharing the Fost WWTP facilities, a use permit is required for a major utility. The use permit for the major utility must be granted prior to rezoning the property to PD-R with a shared utility.
4. The plans and documents submitted for the pre-application meeting indicated 100 upper story dwelling units. The plans and application submitted indicate 125 upper story dwelling units. Which number is correct?
5. It is recommended that the school site be subdivided out and not be a part of the Planned Development rezoning.
6. There is a concern that front yard setbacks on these smaller lots are not adequate to support the intended dwelling sizes and driveway/parking area. There have been many conflicts lately caused by non-compliant on-street parking due to inadequate driveway parking (see School comment), driveway widths at property line, etc.
7. Traffic impact analysis:
    a. Must be approved by NCDOT. Staff has requested a work session with NCDOT to discuss the TIA recommendations.

b. County staff defers to NCDOT recommendations for the type, timing, and placement of any traffic improvements. Staff has concerns regarding the recommendation in the TIA that improvements are made after full build-out of the development in 2026.
c. Staff has concerns that the TIA does not include the school site and may not accurately reflect the proposed conditions.
d. The TIA indicates 100 apartment units. The master plan indicates 125 apartment units. Please correct.
e. States "The land uses along Harvey Point Road are primarily residential and agriculture within the study area limits." Where is Harvey Point Road?

8. It appears that the "common areas" called out on the plan are open space. Please label as "open space" in the legend and differentiate any common areas that are not open space.
9. List the proposed timing of the phasing scheduled. (UDO Section 3.7.2.G)
10. Terms and Conditions document:
    a. It does not appear that the county can regulate or enforce the workforce housing condition. This condition may need to be removed from the document. The county attorney needs additional time to investigate this topic.
    b. Add timing to phasing schedule. (UDO Section 3.7.2.G)
11. Please verify that the minimum Connectivity Index Score of 1.6 is being met. Perhaps supply a sheet that shows what you are counting as links and nodes. It appears the connectivity score is not being met which may require a street connection/potential lot layout redesign of the subdivision. (UDO Section 5.6.4).
12. How are Nonresidential Design Standards, Building Placement (UDO Section 5.8.3.B) being met?
13. If any of the proposed earthen berms cross into wetlands, the US Army Corp of Engineers must approve the activity before any ground disturbing activity occurs.
14. The waterlines do not extend to all lots.

Suggestion

1. Since you indicate in your application package that you cannot add timing to the phasing schedule, which is required as part of the application submittal, until additional information becomes available regarding adequate public facilities, allow time for the BOE to workout school capacity issues before bringing this project forward.

Currituck County Building Inspector (Ron , 252-232-6023)

Reviewed with comments:

1. Fire hydrant locations not on drawings
2. Phase 6 water line doesn't extend to all lots
3. provide CBU kiosk, parking details

Currituck County Chief Building Inspector (Bill Newns, 252-232-6023)

Reviewed with comments:

Fire comments for commercial portions

1. Needed Fire Flow for construction is determined by the ISO method.
2. No new construction can occur that creates a Needed Fire Flow greater than the available fire flow on site.

3. A fire hydrant must be within 400’ of all exterior portions of the structure. 600’ if the structure has NFPA 13 sprinkler system installed.
4. Fences/barriers must not impede the fire hydrant access to site.
5. Gates/entrances to sites must be 20’ clear width.
6. The fire apparatus must be able to come within 150’ of all exterior portions of the structures. 200' if the structure has NFPA 13 sprinkler system installed.
7. Fire apparatus must not have to back up on an access road greater than 150’ without a turnaround as indicated in appendix D of the NC Fire Code. The backing of 150’ should be measured in a straight line.
8. Fire apparatus access must be at least 20’ wide 13’ 6” in height. Maximum slope shall not exceed 10%.
9. All portions of the fire apparatus access must be capable of 75,000lbs under all weather conditions.
10. By general statue parking is not allowed within 15’ of a fire hydrant. (FDC)
11. FDC connection must be a minimum of 25’ away from structure and within 50’ of fire hydrant.
12. FDC’s must have signage in 4” letters (red sign with white letters)
13. FDC”s 4” minimum Stortz connection.
14. Knox Box provided on buildings (Coordinate location with the local VFD)
15. Mark fire hydrants locations in the center of road/street with blue reflectors.

Building Inspections Commercial Buildings

1. Appendix B Building Code summary for all structures
2. ADA accessible routes, connectivity of exits to a public way.

Residential Comments – Fire

1. Fire hydrants must be within 500’ of all road frontages.
2. Cul de sacs must be 96’ in width curb to curb at the center of the cul de sac.
3. Dwellings greater than 4800 sq. ft. and/or greater than 2 stories will be calculated using the ISO commercial method.
4. Dwellings 4800 sq. ft. and no greater than 2 stories may use set-backs as indicated in the ISO method to determine Needed Fire Flow.

Inspection Comments

1. Cluster mail box units must be accessible (accessible route, reach ranges)
2. Accessible routes must be provided to all amenities such as pools, boardwalks, piers, docks and other amenities within the development. Plans must be designed to the 2018 NC Building Code design loads and structures must meet ADA requirements.
3. Curb cuts at vehicular traffic areas and pedestrian crossings must be ADA compliant and have detectable warning devices installed.
4. Soil engineering reports for footings will be required for lots that have fill placed on them where the footings do not rest at a minimum of 12" below grade on undisturbed natural soil. Site preparation, the area within the foundation walls shall have all vegetation, top soil and foreign material removed.
5. Compaction testing will be required for slabs and thickened footing areas that exceed 24" of fill. Fill material shall be free of vegetation and foreign material. The fill shall be compacted to ensure uniform support of the slab, and except where approved, the fill depths shall not exceed 24 inches for clean sand or gravel and 8 inches (203 mm) for earth.
6. Mark fire hydrants locations in the center of road/street with blue reflectors.

Currituck County GIS (Harry Lee, 252-232-4039)
Reviewed with comment:
1. Please propose street names.

Currituck County Parks and Recreation (Jason Weeks, 252-232-3007)
Reviewed without comment.

Currituck County Schools Facilities, Maintenance and Transportation Director (Matt Mullins, 252-232-2223, ext. 1022)
Reviewed with comment:
1. There is a concern over street widths for school bus maneuverability and parking concerns for homes located so close to front property line which has been resulting in insufficient off-street parking causing cars to park on-street making school bus maneuverability very difficult.

Currituck County Soil and Stormwater (Dylan Lloyd, 252-232-3360)
Reviewed
1. There is an emphasis on downstream maintenance at this time. There are portions (Rowland Creek and the ditch on Guinea Road and Survey Road) with brush and debris that need to be cleaned up.
2. The conceptual plan provides limited drainage details.

Currituck County Utilities Director (Will Rumsey, 252-232-2769)
Currituck County Water Department – Distribution Supervisor (Dave Spence, 252-232-2769)
Reviewed
1. The preliminary utilities plan (page 6 of 7) indicates a potential waterline extension based on modeling. Provide additional information on the purpose of this statement. The pre-application meeting recommended connection to the existing line.
2. Provide road bore details.

Albemarle Regional Health Services (Joe Hobbs, 252-232-6603)
Reviewed with comment:
1. DEVELOPER NEEDS TO CONSULT WITH NC DEPT. OF ENVIRONMENTAL QUALITY (WASHINGTON REGIONAL OFFICE) CONCERNING LARGE WASTEWATER TREATMENT PLANT APPROVAL FOR THIS PROPOSED DEVELOPMENT.
2. DEVELOPER NEEDS TO CONSULT WITH HEALTH DEPT. AT 252-232-6603 CONCERNING PROPOSED COMMERCIAL POOL TO BE BUILT FOR PROPOSED DEVELOPMENT.
3. DEVELOPER NEEDS TO CONSULT WITH HEALTH DEPT. AT 252-232-6603 CONCERNING FUTURE RESTAURANTS (FOOD ESTABLISHMENTS) PROPOSED WITHIN THE COMMERCIAL BUSINESS AREAS OF DEVELOPMENT.

NC Department of Transportation, District Engineer (David Otts, 252-331-4860)
Reviewed
1. No additional comments until the TIA results are received from NCDOT office in Raleigh.

NC Division of Coastal Management (Charlan Owens, 252-264-3901)
Reviewed without comment.

US Post Office (Local)
Please contact the post office regarding method of mail delivery.

The following items are necessary for resubmittal:

- 3 - full size copies of revised plans
- 1 – 8.5 x 11" reduced copy
- 1- PDF digital copy of all revised or new documents and plans.

BISSELL PROFESSIONAL GROUP
The Coastal Experts

May 19, 2020

Ms. Laurie LoCicero, AICP, Director
Currituck County Department of Planning
and Community Development
153 Courthouse Road, Suite 153
Currituck, NC 27929

RE: 19-20 Flora Farm PD-R Joint Work Session

Dear Laurie:

We are providing an updated submittal package in connection with a request for rescheduling the proposed work session to review the request for rezoning of the Flora Farm property to Planned Development - Residential. Additional information is now available to help with this review. Most importantly, the Traffic Impact Analysis report has been updated in connection with recommendations provided by NCDOT's Congestion Management unit and the District Engineer's office, and has been officially approved by NCDOT. A copy of the final TIA report and the associated approval are attached.

Updated plans are included with this submittal that match the plans that are referenced in the final TIA report as approved by NCDOT, and which also address several comments that were made by the planning staff after the TRC review process had been completed. Since we have now had an opportunity to review and address those comments, and since much of the previous staff report had to do with questions about the TIA that had not yet been approved by NCDOT, we believe it would be appropriate and are asking that a new Staff Report be prepared, based on the additional information that is now available. Also, the master plan drawings that were attached to the staff report were not the updated plans that were sent with the TRC response.

In addition to the NCDOT issues, which now appear to be fully resolved, we would like to address several of the other comments that were made in the staff report that was drafted previously for the work session that was not held due to the new social distancing requirements, as follows:

1. The phasing schedule that has been provided shows that school capacity is not being requested until it is available. The portion of the school capacity that is needed outside of the current Shawboro school district will not be in the current Moyock school district, but will be in a new district when the new elementary school is completed.

2. The question was asked about how the new school will be able to open if it is finished before the wastewater treatment plant is operational to service it. This question was not asked until after the TRC review had been completed, but the phasing schedule that was provided shows that lots are proposed to go to record in August 2021, which requires an operational wastewater treatment facility. The new elementary school is tentatively scheduled to be online

P.O. Box 1068 • 3512 N. Croatan Hwy. • Kitty Hawk, NC 27949
252-261-3266 • Fax: 252-261-1760 • E-mail:bpg@bissellprofessionalgroup.com

two years later, in August 2023, so the wastewater treatment plant will certainly be available to serve the school long before its scheduled opening.

3. An additional question was asked about access to the school from subdivision roads. At the present time, no actual site plan has been developed for the school, but if internal access in needed in addition to the Survey Road access, it will be provided. The latest phasing plan shows that the main access road will be constructed with the first phase of development, well in advance of the school being ready for occupancy.

4. A comment was made about including the school in the phasing schedule. The school site will be its own phase and will conform to the Board of Education's schedule upon selection of the site and formalizing its construction schedule; since we understand that the completion schedule has been tentatively set for August 2023, this is being shown in the updated schedule on Sheet 7 of the master plan drawings.

5. A comment was made about the final square footage of the commercial buildings. While the development plan that has been provided is preliminary and is subject to fine-tuning during actual design of the buildings, the TIA report has used a square footage rounded up to 100,000 sq. ft., which will be the maximum amount of commercial space that will be developed on this site. The buildings with approximate square footages as shown on the preliminary site plan total 99,105 sq. ft., but we are using "up to 100,000 sq. ft." in all of the calculations. Actual development will likely be less than the maximum proposed.

6. Staff has provided a partial summary of the community meeting results. There were many positive comments made at the community meeting that we believe the Planning Board and Board of Commissioners should be made aware of. Can a copy of the meeting minutes be included in the staff report? A copy is attached with this submittal.

7. A comment was made about street widths for school bus maneuverability and parking concerns during the TRC review. For this the reason, on-street parallel parking was added to the plan, but no mention was made of this in the staff report, which made it appear that no attempt had been made to address the issue . In addition to the on-street parking areas, we have now increased the front building setbacks to 35'. Since garages are typically set back 5' or more from the line of the front porch, this increased setback will result in the ability to stack cars two deep in the driveways to further address this issue.

8. The staff report indicated that the overall plan sheet did not show the wastewater treatment plant, but that it was shown on the utilities plan. We customarily show wastewater facilities, along with associated water and sewer lines, not on the overall Master Plan but on the utilities sheet, but for clarity and since staff has raised this as an issue, we have also added the approximate location of the WWTP to the development overview sheet.

9. Staff has recommended denial of the rezoning request based on school capacity not being programmed to be in place within two years for a portion of the development; however, this is

more appropriately addressed at the Use Permit stage upon evaluation of the UDO approval criteria for the specific phase(s) requested, rather than at the rezoning of the overall property. In any event, while we agree that school capacity can be considered as one of many factors at the rezoning stage, denial on this basis is not appropriate. In addition, a phasing commitment has been proposed that will assure that school capacity is available in advance of each development phase that generates additional students in the relevant subdistrict. The County Commissioners have a valid basis to approve the zoning request and this commitment strengthens that basis, allowing them to adopt the accompanying phasing schedule as appropriate. The county is protected, as the phasing schedule prevents final plats from going to record ahead of public facilities being available to support the new dwelling units. Also, a Use Permit application will be considered by the BOC at a future date, prior to approval for construction of this development, which provides the opportunity for the County Commissioners to consider the actual Use Permit review standards and precise student projections at that time.

10. Staff has also mentioned law enforcement, emergency medical services, fire services, county water, etc. needing to be evaluated for adequacy. It is our understanding that this is the reason for having a formal Use Permit process following the rezoning. The water department has already stated that water is available for this development, and we believe that a finding can be made at the appropriate time regarding the adequacy of other public facilities.

11. In the staff report, staff has referenced an anticipated text amendment which has not yet been drafted. We do not believe a rezoning request should be reviewed based upon a possible future UDO text amendment. In any event this request is permitted to proceed under the UDO in place at the time of the zoning application filing.

12. Staff has objected to the school site not being included in the TIA report, but both NCDOT and the traffic consultant agree that it is not appropriate to include the school at this time. Once there is an actual site plan with driveway locations determined and a design capacity for the school, the TIA will need to be updated accordingly. It would not be meaningful to speculate about the school traffic in advance of a specific school plan being developed.

13. Staff has stated that approving this rezoning will burden the middle schools and high schools "that are near or over committed capacity". Again, school capacity should be evaluated against the approval criteria at the Use Permit stage. To the extent it is examined at zoning, there is no indication that the middle or high schools will be overburdened by this development, as the County's capacity study shows that new single-family development does not produce a significant number of upper grade students. Thus to the extent this capacity is an issue, it will be an issue with or without the development based on existing approved development.

14. The staff report mentioned that an 8' multiuse path must be installed along Caratoke Highway. The required MUP was and is shown on the Master Plan drawings.

15. Regarding waterline looping, while there was an agreement at the pre-application conference to delay a decision on the looping until the future modeling was completed, the developer has since agreed to accommodate the water department's request and the actual looping is shown on the updated utility plan. (This was shown on the TRC resubmittal plan, but was still identified as an unresolved issue in the staff report.)

16. The Tate Terrace Realty Investors vs. Currituck County court case that was mentioned in the staff report does not appear to be relevant to a rezoning request. It is our understanding that Tate Terrace's Special Use Permit was denied, not its rezoning request, which was the basis for that court case.

In the previous staff report, it appears that the planning staff had become an advocate for denial of the application rather than presenting a balanced overview of the request. With the provision of an updated, NCDOT-approved TIA report, and an updated plan that addresses the staff comments that were generated after the TRC review had been completed, we believe that a new staff report can now be generated that reflects the resolution of most of the issues that were raised previously, and can present a more balanced overview of the rezoning request. Also, it appears that there are many more consistencies with the Land Use Plan and the Moyock Small Area plan than there are inconsistencies, whereas only the inconsistencies appear to be mentioned in the initial staff report. Please include the consistencies to give the Board a complete view of the entire request.

Two of the attachments to the Terms & Conditions document have been updated (the phasing schedule to include the school and the dimensional standards to update the front setback as discussed above) so that everything should be consistent.

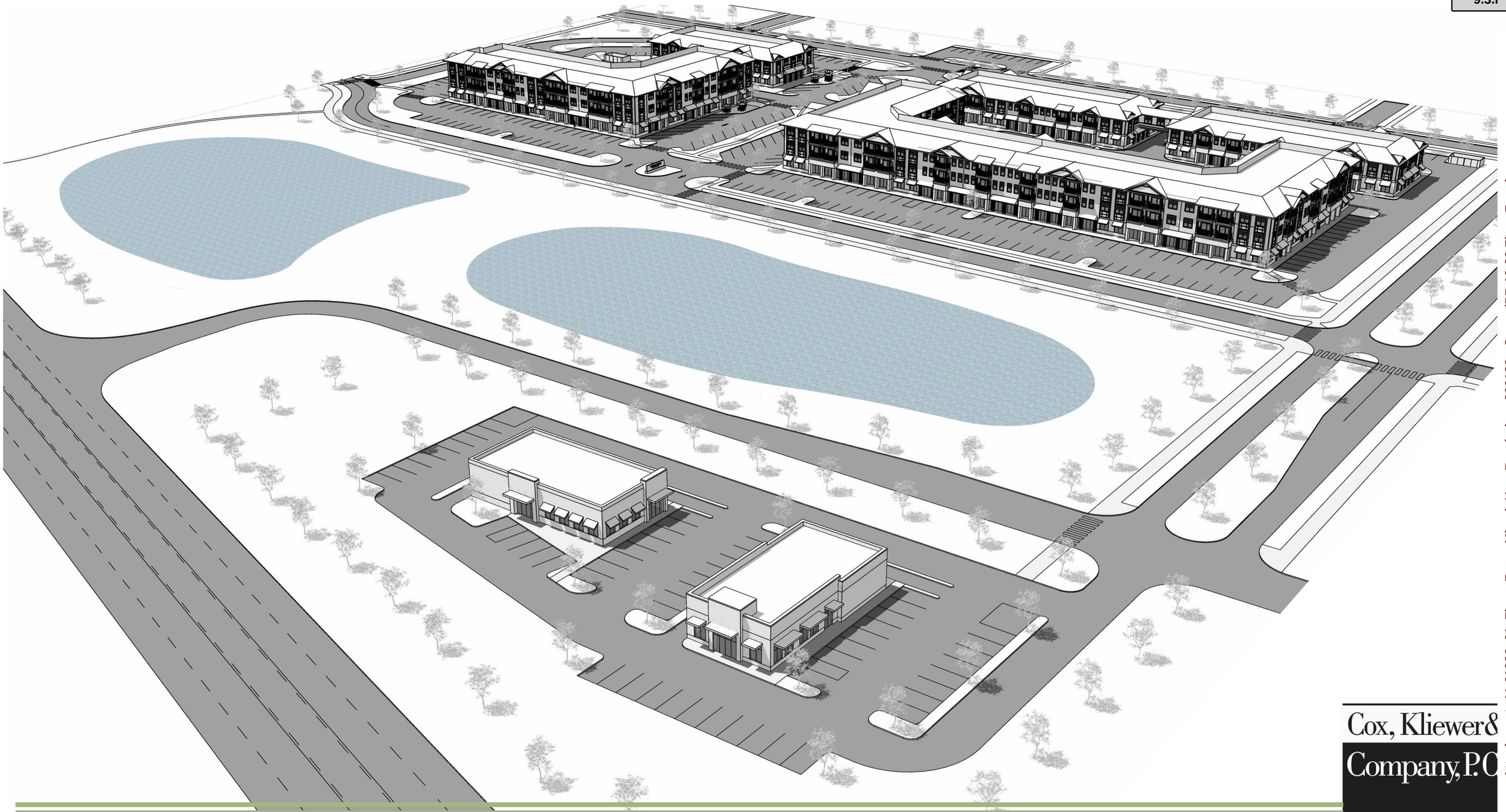
We are including 3 sets of the updated plans, one 8-1/2x11 reduced copy, 2 copies of the TIA report and associated approval, and the updated Terms & Conditions, and a CD with all new plans and documents for your use.

Thank you for consideration of this request. Please let us know if you have any additional questions or comments regarding the updated plans or the approved TIA report. We look forward to the opportunity to meet at a new joint work session at the earliest opportunity.

Sincerely yours,
BISSELL PROFESSIONAL GROUP

Mark S. Bissell, P.E.

cc: Mr. Justin Old
Ms. Jamie Schwedler



FLORA FARMS

ALLIED PROPERTIES, LLC
417 CARATOKE HIGHWAY, UNIT D
MOYOCK, NORTH CAROLINA 27958

JANUARY 23, 2020
21936_01_Flora_Farm

Cox, Kliewer & Company, P.C.
ARCHITECTURE
2533 VIRGINIA BEACH BOULEVARD
VIRGINIA BEACH, VIRGINIA • 23452 - 7600
Voice 757-431-0033 • Facsimile 757-463-0380
www.coxkliewer.com • webmaster@coxkliewer.com

FLORA FARMS

ALLIED PROPERTIES, LLC
417 CARATOKE HIGHWAY, UNIT D
MOYOCK, NORTH CAROLINA 27958

JANUARY 23, 2020
21936_01_Flora_Farm

Cox, Kliewer & Company, P.C.
ARCHITECTURE
2533 VIRGINIA BEACH BOULEVARD
VIRGINIA BEACH, VIRGINIA • 23452 - 7
Voice 757-431-0033 • Facsimile 757-463-0380
www.coxkliewer.com • webmaster@coxkliewer.com

FLORA FARMS

ALLIED PROPERTIES, LLC
417 CARATOKE HIGHWAY, UNIT D
MOYOCK, NORTH CAROLINA 27958

JANUARY 23, 2020
21936_01_Flora_Farm

Cox, Kliewer &
Company, P.C
ARCHITECTUR
2533 VIRGINIA BEACH BOULEVAI
VIRGINIA BEACH, VIRGINIA • 23452 - 76
Voice 757-431-0033 • Facsimile 757-463-0380
www.coxkliewer.com • webmaster@coxkliewer.com

Flora Tract 4rd Community Meeting- Outline of Presentation

January 22, 2020

A. Housekeeping –
   - Please sign-in
   - A record of the Community meeting will be provided to Currituck County. (concerns raised/ attempts to address concerns)

B. What is the Request?
   - First step in the approval process – for zoning approval for PD-R

C. The Process:
   - Initial Master Plan Design
   - Pre-Application conference with staff
   - Community meeting (now)
   - TRC review
   - Planning Board hearing
   - BOC hearing/action

   Then:

   - Preliminary Plat application & approval process
   - Construction drawing preparation
   - Permit applications
   - Construction
   - As-Built certifications
   - Final plat application

The process will take up to 2 years before you see the first building

D. Setting (refer to zoning map)

E. The Plan:

   - Previous plan PDR with 446 dwellings;
   - New Vision: Create a commercial center in front where we have good visibility from Caratoke Hwy; and an upscale residential community behind it. Dropped lot count to 285. Added mixed use. Well designed and attractive commercial

element, well-amenitized with walking trails, good pedestrian connectivity and good connectivity to adjacent Fost evelopment

- Upper story dwellings above commercial buildings to give a "main street" appearance; with the goal of creating a true Mixed Use community.

- Have open spaces with stormwater ponds to hold 6" +/- of rainfall on site; will model for management of 100 year storm event

- Help adjacent drainage (Rowland; Benefits to Ranchland and Eagle Creek

- Neighborhood commercial (such as coffee shop, brew pub, sandwich shop, internet café, etc.) but also larger commercial that will serve neighboring communities (e.g., no need to go onto 168)

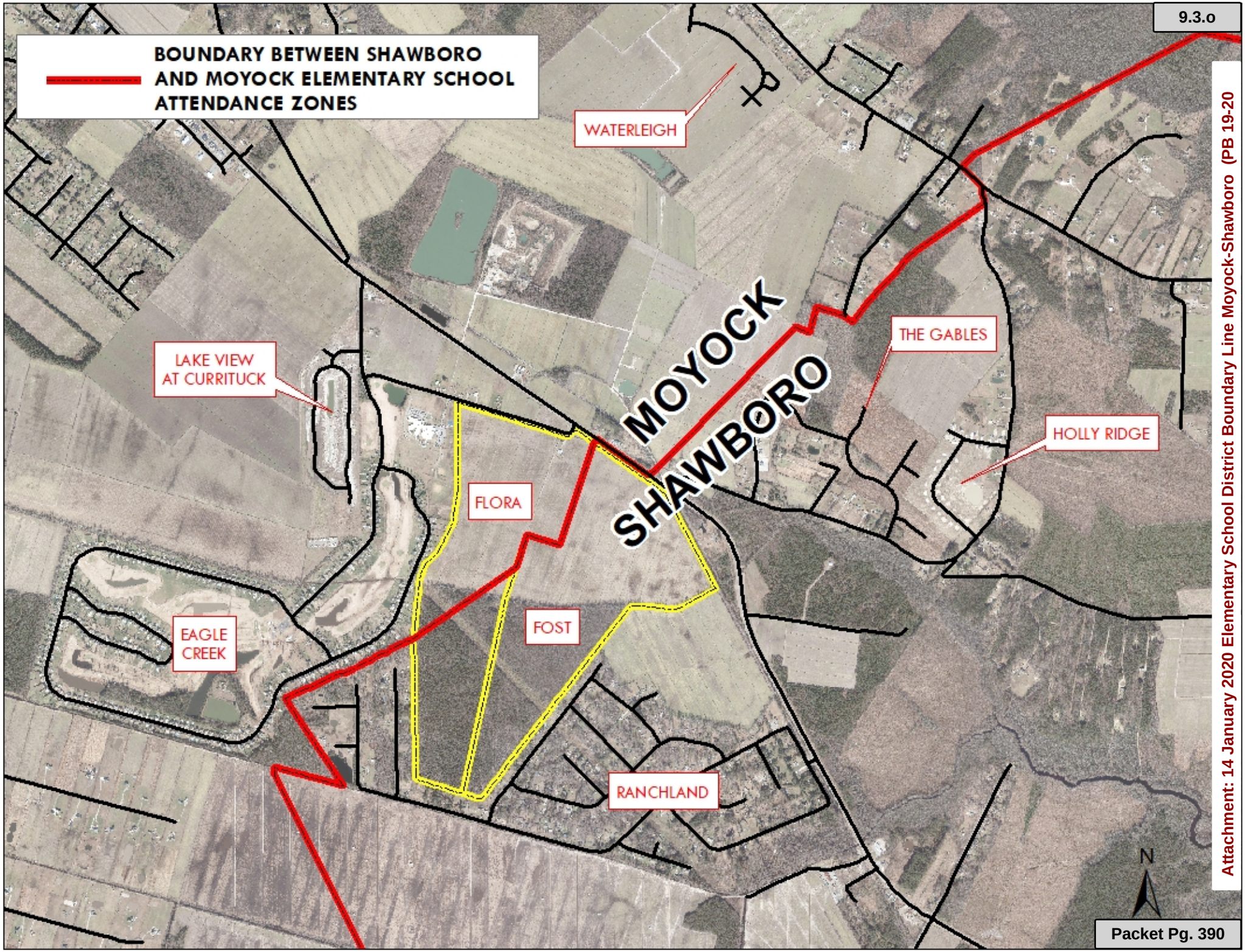
- Highly amenitized; good use of open space areas, park areas, recreation facilities, well-integrated community

- Developing residential in up to 9 phases; commercial in approximately 6 phases

- Finally, Reserving 22 acres for a school site

F. Comments/Concerns
   1.
   2.
   3.
   4.
   5.
   6.

G. Invitation to review plans close-up



Level of Service Definitions

The relationship of travel demand compared to the roadway capacity determines the level of service (LOS) of a roadway. Six levels of service identify the range of possible conditions. Designations range from LOS A, which represents the best operating conditions, to LOS F, which represents the worst operating conditions.

Design requirements for roadways vary according to the desired capacity and level of service. LOS D indicates "practical capacity" of a roadway, or the capacity at which the public begins to express dissatisfaction. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C on new facilities. The six levels of service are described below and illustrated in the following figures.

- **LOS A**: Describes primarily free flow conditions. The motorist experiences a high level of physical and psychological comfort. The effects of minor incidents of breakdown are easily absorbed. Even at the maximum density, the average spacing between vehicles is about 528 ft, or 26 car lengths.

- **LOS B**: Represents reasonably free flow conditions. The ability to maneuver within the traffic stream is only slightly restricted. The lowest average spacing between vehicles is about 330 ft, or 18 car lengths.

- **LOS C**: Provides for stable operations, but flows approach the range in which small increases will cause substantial deterioration in service. Freedom to maneuver is noticeably restricted. Minor incidents may still be absorbed, but the local decline in service will be great. Queues may be expected to form behind any significant blockage. Minimum average spacing is in the range of 220 ft, or 11 car lengths.

- **LOS D**: Borders on unstable flow. Density begins to deteriorate somewhat more quickly with increasing flow. Small increases in flow can cause substantial deterioration in service. Freedom to maneuver is severely limited, and the driver experiences drastically reduced comfort levels. Minor incidents can be expected to create substantial queuing. At the limit, vehicles are spaced at about 165 ft, or 9 car lengths.

- **LOS E**: Describes operation at capacity. Operations at this level are extremely unstable, because there are virtually no usable gaps in the traffic stream. Any disruption to the traffic stream, such as a vehicle entering from a ramp, or changing lanes, requires the following vehicles to give way to admit the vehicle. This can establish a disruption wave that propagates through the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate any disruption. Any incident can be expected to produce a serious breakdown with extensive queuing. Vehicles are spaced at approximately 6 car lengths, leaving little room to maneuver.

- **LOS F**: Describes forced or breakdown flow. Such conditions generally exist within queues forming behind breakdown points.

Level of Service Illustrations

Level of Service A

Driver Comfort: High

Maximum Density:

12 passenger cars per mile per lane

Level of Service B

Driver Comfort: High

Maximum Density:

20 passenger cars per mile per lane

Level of Service C

Driver Comfort: Some Tension

Maximum Density:

30 passenger cars per mile per lane

Level of Service D

Driver Comfort: Poor

Maximum Density:

42 passenger cars per mile per lane

Level of Service E

Driver Comfort: Extremely Poor

Maximum Density:

67 passenger cars per mile per lane

Level of Service F

Driver Comfort: The lowest

Maximum Density:

More than 67 passenger cars per mile per lane

Source: 2000 Highway Capacity Manual

Memorandum

To: Mark Bissell, PE
Bissell Professional Group

Date: March 4, 2020

Project #: 39134.00

From: Lyle Overcash, PE

Re: Flora Farms Subdivision TIA – Phasing Memorandum

VHB Engineering NC, P.C submitted the Flora Farms Subdivision TIA in February 2020 which provided recommendations for area roadways once the Fost Tract Development and Flora Farms Subdivision are constructed. The TIA analyzed the Fost Tract Development as a background project which would be completed prior to the Flora Farms Subdivision. Since the submittal of the TIA, the construction schedules for both projects have shifted, and it is expected that construction for both developments will overlap with each other. The recommended offsite improvements within the TIA for the buildout of both developments are still valid; however, this memorandum provides clarification for how those improvements should be phased as both developments are being constructed.

Trip Generation

The trip generation for both developments was calculated separately so that internal capture could not be used to reduce the total number of trips generated from each respective development. The Fost Tract Development proposed the construction of 353 single-family homes, 126 townhomes, and up to 22,000 square feet (sf) of general retail space. This will generate approximately 5,978 daily external site trips with 468 occurring during the AM peak hour and 534 occurring during the PM peak hour. The Flora Farms Subdivision development plans to construct 285 single-family homes, 125 apartments, and up to 100,000 sf of general retail space. This will generate approximately 8,380 daily external site trips with 463 trips occurring during the AM peak hour and 717 trips occurring during the PM peak hour.

Committed Transportation Improvements

Even though the project schedules for the Fost Tract Development and Flora Farms Subdivision have shifted, the list of offsite transportation improvements within the Flora Farms Subdivision TIA should still be implemented as construction proceeds. The following serves as an estimated timeline for when specific offsite recommendations should be implemented during the construction of both developments.

Fost Tract Development

The Fost Tract Development plans to construct Fost Boulevard, a future driveway that will provide full movement access along NC 168. Initial phases of the Fost Tract Development and Flora Farms Subdivision will utilize this driveway to access NC 168. The following roadway improvements should be implemented with the construction of Fost Boulevard:

NC 168 at Fost Boulevard (future signalized intersection)

- Construct an eastbound right-turn lane along NC 168 with a minimum of 150 feet of full storage with appropriate taper.
- Stripe out 200 feet of full storage within the existing two-way left-turn lane along NC 168 for an exclusive northbound left-turn lane.
- Provide an exclusive left-turn lane along Fost Boulevard with approximately 250 feet of full storage along with a continuous right-turn lane.
- Install a traffic signal when warranted. The intersection should be monitored once the initial phases of the Fost Tract Development and Flora Farms Subdivision are under construction to determine when a signal will be warranted. Once an estimated 180 single-family homes are occupied between the two developments, it is expected that the traffic along Fost Boulevard will warrant a traffic signal. A new turning movement count and a signal warrant analysis should be completed before the traffic signal is installed.

Flora Farms Subdivision

Initial phases of the Flora Farms Subdivision will utilize Fost Boulevard to access NC 168. New site access driveways will be constructed along Survey Road during Phase 3 of construction for the Flora Farms Subdivision. The following roadway improvements should be implemented with the construction of future site driveways along Survey Road:

NC 168 at Survey Road (existing unsignalized)

- Stripe out at least 200 feet of full storage within the existing northbound two-way left-turn lane along NC 168 at Survey Road.

Survey Road at Flora Farms Site Driveways (future unsignalized)

- Construct an exclusive eastbound left-turn along Survey Road at the site driveways with at least 100 feet of full storage and appropriate taper.
- Construct an exclusive eastbound right-turn along Survey Road at the site driveways with at least 100 feet of full storage and appropriate taper.
- Construct an exclusive westbound left-turn along Survey Road at the site driveways with at least 100 feet of full storage and appropriate taper.
- The northbound site driveway should consist of an exclusive northbound right-turn lane with at least 100 feet of full storage with appropriate taper and a continuous thru/right-turn lane.
- The southbound site driveway should consist of a single left/thru/right-turn lane.

As the Flora Farms Subdivision is being developed, it is expected that increasing northbound left-turning traffic entering the site at NC 168 and Survey Road will warrant the installation of a traffic signal.

NC 168 at Survey Road (future signalized)

- Construct a southbound right-turn lane along NC 168 with a minimum of 100 feet of full storage and appropriate taper.
- Restrict access at the intersection so that the left-turning movement from Survey Road onto NC 168 is no longer allowed. Vehicles wanting to make that left-turning movement can do so at the future signal for Fost Boulevard to the south or the existing signal at Survey Road to the north. The traffic signal at Fost Boulevard can operate acceptably with the additional left-turning traffic.
- It is estimated that once the Flora Farms development is at approximately 50% buildout, a traffic signal will be desired, therefore a signal warrant analysis should be undertaken at that time.

Figure 1 (attached) shows the committed improvements that should be implemented with the full buildout of the Fost Tract Development and Flora Farms Subdivision.

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive
Suite 500
Raleigh, NC 27606

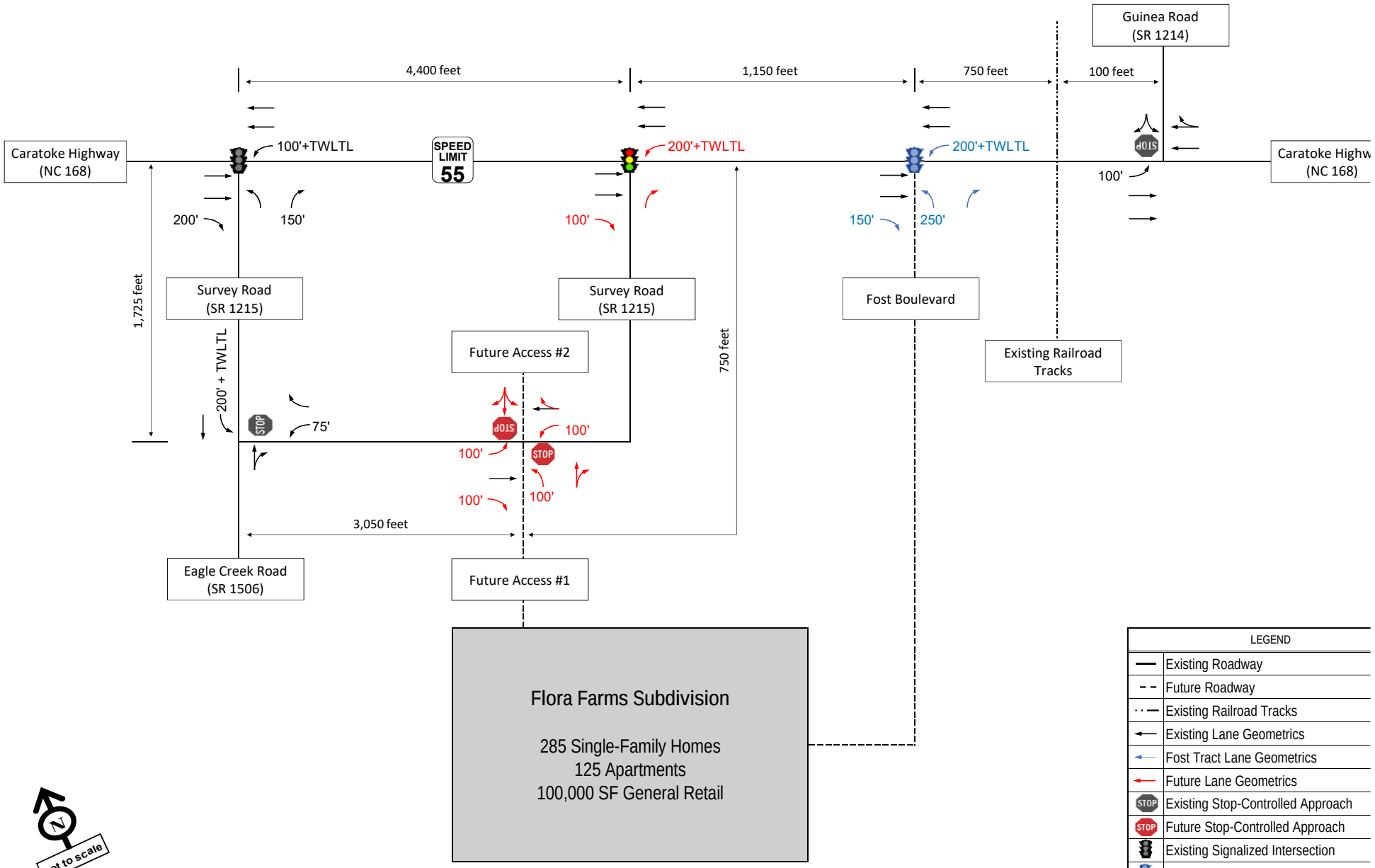


Figure 1
Future (2026) Lane Geometrics and Traffic Control

Flora Farms Subdivisi
TIA
Mo[illegible], NC

Planned Development
Application

OFFICIAL USE ONLY:
Case Number: _____
Date Filed: _____
Gate Keeper: _____
Amount Paid: _____

Contact Information

APPLICANT:
Name: John J. Flora, III/Mary Nell Flora Brumsey
Address: P.O. Box 369/117 Puddin Ridge Rd.
Moyock, NC 27958
Telephone: (252) 232-3005
E-Mail Address: _____

PROPERTY OWNER:
Name: Same
Address: _____
_____
Telephone: _____
E-Mail Address: _____

LEGAL RELATIONSHIP OF APPLICANT TO PROPERTY OWNER: Same

Property Information

Physical Street Address: US Hwy. 168 and Survey Road
Location: Moyock, NC 27958
Parcel Identification Number(s): 0015000085A0000, 0015000085B0000, 0015000085C0000
Total Parcel(s) Acreage: 224.44 +/-
Existing Land Use of Property: Farmland, Woodlands and Residential

Request

Current Zoning of Property: A

Proposed Zoning District
- ☒ Planned Development – Residential (PD-R)
- ☐ Planned Development – Mixed (PD-M)
- ☐ Planned Development – Outer Banks (PD-O)

Amendments
- ☐ Amended Master Plan
- ☐ Amended Terms and Conditions

Community Meeting

Date Meeting Held: 01-22-2020
Meeting Location: Eagle Creek Event Pavilion

Planned Development Request

It is understood and acknowledged that if the property is rezoned as requested, the property involved in this request will be perpetually bound to the master plan, terms and conditions document, use(s) authorized, and subject to such condition(s) as imposed, unless subsequently changed or amended as provided for in the Currituck County Unified Development Ordinance. It is further understood and acknowledged that final plans for any development be made pursuant to any such planned development so authorized and shall be submitted to the Technical Review Committee.

John J. Flora III — Jan 15, 2020

Property Owner (s) — Date

NOTE: Form must be signed by the owner(s) of record. If there are multiple property owners a signature is required for each owner of record.

Planned Development
Application

OFFICIAL USE ONLY:
Case Number: _____
Date Filed: _____
Gate Keeper: _____
Amount Paid: _____

Contact Information

APPLICANT:
Name: John J. Flora, III/~~Mary Nell Flora Brumsey~~
Address: P.O. Box 369/~~117 Puddin Ridge Rd.~~
Moyock, NC 27958
Telephone: (252) 232-3005
E-Mail Address: _____

PROPERTY OWNER:
Name: ~~Same~~ Mary-Nell Flora Brumsey
Address: 117 Puddin Ridge Rd.
Moyock, NC 27958
Telephone: (252) 202-8694
E-Mail Address: mary brumsey@yahoo.com

LEGAL RELATIONSHIP OF APPLICANT TO PROPERTY OWNER: Same

Property Information

Physical Street Address: US Hwy. 168 and Survey Road
Location: Moyock, NC 27958
Parcel Identification Number(s): 0015000085A0000, 0015000085B0000, 0015000085C0000
Total Parcel(s) Acreage: 224.44 +/-
Existing Land Use of Property: Farmland, Woodlands and Residential

Request

Current Zoning of Property: A

Proposed Zoning District
- ☒ Planned Development – Residential (PD-R)
- ☐ Planned Development – Mixed (PD-M)
- ☐ Planned Development – Outer Banks (PD-O)

Amendments
- ☐ Amended Master Plan
- ☐ Amended Terms and Conditions

Community Meeting

Date Meeting Held: 01-22-2020 Meeting Location: Eagle Creek Event Pavilion

Planned Development Request

It is understood and acknowledged that if the property is rezoned as requested, the property involved in this request will be perpetually bound to the master plan, terms and conditions document, use(s) authorized, and subject to such condition(s) as imposed, unless subsequently changed or amended as provided for in the Currituck County Unified Development Ordinance. It is further understood and acknowledged that final plans for any development be made pursuant to any such planned development so authorized and shall be submitted to the Technical Review Committee.

Mary-Nell Flora Brumsey — January 16, 2020

Property Owner (s) — Date

NOTE: Form must be signed by the owner(s) of record. If there are multiple property owners a signature is required for each owner of record.

Currituck County Schools
A Beacon for Excellence in Education

BOARD OF EDUCATION

KAREN ETHERIDGE, CHAIRMAN • DWAN CRAFT, VICE-CHAIRMAN
WILLIAM DOBNEY, EDD • JANET ROSE • WILLIAM CRODICK III

MARK J. STEFANIK
SUPERINTENDENT

June 9, 2020

Currituck County Planning Board
Currituck County Board of Commissioners

Dear Board Members and Commissioners:

As you know, the Currituck County Board of Education has been evaluating sites for a new elementary school in the Moyock/Shawboro area of the County to address capacity issues associated with this area. We have also examined capacity at the schools within our district, and how we plan to deal with growth in the coming years, including whether the development of new homes and a school on a 224 acre property located on Caratoke Highway in Moyock (the Flora site) would impact capacity. I am writing to inform you of two determinations we have made.

First, on May 29, 2020, the Board voted unanimously to select the Flora site as its primary location for the new elementary school. This was based upon several factors, including its proximity to the existing middle school, and safe access to Caratoke Highway. Its location near the Shawboro Elementary and Moyock Elementary boundary lines gives the Board flexibility in being able to redistrict in a manner that minimizes student disruption. Allied Properties has also offered several other concessions included but not limited to, paying for the stormwater design for the school site, and expanding the private pool to a competition-level pool and allowing designated times for CCHS swim team practices. The School Board also supports the concessions Allied has made in the rezoning case (PB 19-12), including the commitment to 10% of apartment units reserved for workforce housing for teachers, traffic improvements and commitments, and drainage improvements near the school site. These concessions offer a significant public benefit to the County, and respond to school needs in a way that reduces County costs.

Second, we have reviewed the phasing schedule associated with the Flora rezoning. The schedule staggers development by phase, and we note that each phase will be staggered by at least 6 months. The Currituck County School District appreciates the staggered development proposal. As we wait for the completion of the new elementary school, the Currituck County School District will use its resources to serve the students generated from all phases of the Flora project. Once completed, the new school will provide expanded capacity to address the needs of students in the northern part of the county.

Please do not hesitate to call me with any questions.

Sincerely,
Mark J. Stefanik

Mark Stefanik

2958 CARATOKE HIGHWAY • CURRITUCK, NC 27929 • 252.232.2223

APPLICANT'S Flora Farm Rezoning
PB 19-20
2006 Land Use Plan Consistent Policies

POLICY AG6	*For areas experiencing intense development pressure, new residential development may be allowed to locate in COMPACT, VILLAGE-LIKE CLUSTERS, PREFERABLY NEAR EXISTING, NON-AGRICULTURAL ACTIVITIES AND SERVICES, or in other locations that will not interfere with resource production activities*
POLICY HN1	*County shall encourage development to occur at densities appropriate for the location. LOCATION AND DENSITY FACTORS shall include whether the development is within an environmentally suitable area, the type and capacity of sewage treatment available to the site, the adequacy of transportation facilities providing access to the site, and the proximity of the site to existing and planned urban services. For example, projects falling within the Full Services areas of the FLUM would be permitted a higher density because of the availability of infrastructure as well as similarity to the existing development pattern. Such projects could be developed at a density of two (2) or more dwelling units per acre*
Moyock Area Policy Emphasis	*"The policy emphasis of this plan is on properly managing the increased urban level of growth that this area is sure to experience over the next decade and beyond. Residential development densities should be medium to high depending upon available services."*
Summary of Area Character	*The Moyock area is the fastest growing part of Currituck County. Development densities currently range from 1 to 3 units per acre depending upon development type. It is coming under increasing development pressure as a "bedroom community" for the Tidewater Area of Virginia. This means that people moving into the Moyock area often work across the state line in Virginia but prefer to have their residence in Currituck County. Heightened development interest in this area has brought with it pressure for more subdivisions, as well as the retail services that follow such development.*
POLICY WS7	*Currituck County allows for the appropriate use of PACKAGE SEWAGE TREATMENT PLANTS as a means of achieving more efficient land use, while properly disposing of waste. Such systems shall have a permanent organizational ownership to guarantee their proper management, including operation, maintenance and replacement needs. Depending on their location in the county, such systems may be required to have a design that allows for assimilation into a centralized system at a future date*
POLICY WQ3	*Currituck County supports policies, plans and actions that help protect the water quality of the county's estuarine system by preventing SOIL EROSION AND SEDIMENTATION, and by controlling the quantity and quality of STORMWATER RUNOFF entering the estuary*
POLICY WQ4	*RUNOFF AND DRAINAGE from development, forestry and agricultural activities shall be of a quality and quantity as near to natural conditions as possible. Post-development runoff shall not exceed pre-development volumes.*
POLICY TR12	*New residential developments shall provide for the installation of PAVED PUBLIC ROADWAY AND DRAINAGE INFRASTRUCTURE at the time of development. This policy is intended to prevent the creation of substandard*

	developments that must later correct for infrastructure problems that could have been avoided, had they been installed properly from the beginning
POLICY CA1	*The important economic, tourism, and community image benefits of attractive, functional MAJOR HIGHWAY CORRIDORS through Currituck County shall be recognized. Such highway corridors, beginning with US 158 and NC 168, shall receive priority attention for improved appearance and development standards, including driveway access, landscaping, buffering, signage, lighting and tree preservation.*
POLICY TR8	*Local streets shall be designed and built to allow for convenient CIRCULATION WITHIN AND BETWEEN NEIGHBORHOODS and to encourage mobility by pedestrians and bicyclists. Care shall be taken to encourage local street "connectivity" without creating opportunities for cut-through traffic from outside the connected areas.*
POLICY AG3	*County ACTIONS CONCERNING INFRASTRUCTURE (e.g. schools, parks, and utilities) and regulations shall serve to direct new development first to targeted growth areas near existing settlements identified as Full Service Areas on the FLUM*
POLICY SF1	*Currituck County shall support and actively engage in ADVANCED PLANNING FOR THE LOCATION OF NEW SCHOOLS. Such locations shall serve to reinforce contiguous growth patterns near existing developments rather than promoting sprawl in more rural locations.*
POLICY SF	*Currituck County encourages OFFERS OF LAND FOR THE SITING OF NEW SCHOOLS, particularly in conjunction with related community development. Acceptance of such properties shall be based on approved location and design criteria.*
LUP Policy 8.3	*To provide residents of Currituck highest level of county services and ensure that adequate facilities are available to meet current and long range needs of the County. Strategy 4: A long range facilities plan shall be prepared for Currituck County schools.* *RESPONSIBLE AGENCY: Board of Commissioners* *TIME FRAME: 1993* *Implementation: Board of Commissioners and Board of Education agreed to approve a 10-year Capital Facilities plan for new school construction and expansion.*
Actions Concerning School Facilities	*Action SF-1: Form an interdepartmental project team whose purpose is to fully implement County objectives for growth management and adequate public facilities as applicable to schools and parks. Bring together top school administrators, planning department personnel, and the parks department, among others, to prepare a plan of action for review by the School Board and County Commissioners.* *Who Leads: County Commissioners, County School Board*
LUP Appx G, Infrastructure Analysis, Schools	*It is essential to remember that all of these students will not be entering the school system at one time*