

## County Council of Beaufort County <br> Planning Commission Meeting

Chairman ED PAPPAS
Vice Chairman RANDOLPH STEWART

Commission Members
KEVIN HENNELLY CAROLINE FERMIN CECILY MCMILLAN DANIEL RIEDEL GLENN MILLER ARMIN WAHL GAIL MURRAY

County Administrator ERIC GREENWAY

Staff Support
ROBERT MERCHANT
Administration Building
Beaufort County Government Robert Smalls Complex 100 Ribaut Road

Contact
Post Office Drawer 1228
Beaufort, South Carolina 29901-1228
(843) 255-2140
www.beaufortcountysc.gov

## Planning Commission Agenda

Monday, December 5, 2022 at 6:00 PM
Council Chambers
County Administration Building, 100 Ribaut Road, Beaufort, SC

ALL OF OUR MEETINGS ARE AVAILABLE FOR VIEWING ONLINE AT WWW.BEAUFORTCOUNTYSC.GOV AND CAN ALSO BE VIEWED ON HARGRAY CHANNELS 9 AND 113, COMCAST CHANNEL 2, AND SPECTRUM CHANNEL 1304.

MEETING LINK:
Meeting number (access code): 1610755027
Passcode: PLANNING

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. FOIA - PUBLIC NOTIFICATION OF THIS MEETING HAS BEEN PUBLISHED, POSTED, AND DISTRIBUTED IN COMPLIANCE WITH THE SOUTH CAROLINA FREEDOM OF INFORMATION ACT
4. APPROVAL OF MINUTES - September 8, 2022
5. APPROVAL OF AGENDA
6. CITIZEN COMMENTS - NON-AGENDA ITEMS
(Comments are limited to 3 minutes.)

## ACTION ITEMS

7. ZONING MAP AMENDMENT/REZONING REQUEST FOR 10.00 ACRES AT 76 MAY RIVER ROAD (R600 0360000013 0000) FROM T2 RURAL (T2R) TO T4 HAMLET CENTER (T4HC), APPLICANT: WALTER J. NESTER, III
8. TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): APPENDIX C. 2 (ROBERT SMALLS PARKWAY (SC 170)) TO UPDATE ACCESS MANAGEMENT STANDARDS
9. TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): SECTION 5.3.20 (ARCHITECTURAL STANDARDS AND GUIDELINES APPLICABILITY) AND APPENDIX, DIVISION A.1.20 (COMMUNITY PRESERVATION DISTRICTS - RELATIONSHIP TO THE COMMUNITY DEVELOPMENT CODE) TO RESTRICT THAT A SHIPPING CONTAINER OR OTHER SIMILAR PORTABLE STORAGE CONTAINER IS NOT CONSIDERED A DWELLING.
10. TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): SECTION 5.11.90.D (PENALTY FOR CLEAR CUTTING PRIOR TO DEVELOPMENT) TO INCREASE THE PENALTIES FOR CLEAR CUTTING PROPERTY AND PROVIDE GUIDANCE ON ACCEPTABLE FORESTRY PRACTICES.
11. APPROVAL OF 2023 PLANNING COMMISSION MEETING SCHEDULE

## DISCUSSION ITEMS

12. CHAIRMAN'S REPORT
13. ADJOURNMENT

COUNTY COUNCIL OF BEAUFORT COUNTY Beaufort County Planning and Zoning Department

Beaufort County Government Robert Smalls Complex Physical: Administration Building, Room 115100 Ribaut Road Mailing: Post Office Drawer 1228, Beaufort, SC 29901-1228

Phone: 843-255-2140 / FAX: 843-255-9432

The regular meeting of the Beaufort County Planning Commission (hereinafter "Commission") was held in Council Chambers on Thursday, September 8, 2022 at 6:00 p.m.

## MEMBERS PRESENT:

Mr. Ed Pappas, Chairman
Mr. Randolph Stewart, Vice Chairman
Dr. Caroline Fermin
Ms. Gail Murray
Mr. Kevin Hennelly
Ms. Cecily McMillan

## MEMBERS ABSENT:

Mr. Dan Riedel
Mr. Armin Wahl

## STAFF PRESENT:

Mr. Robert Merchant, Planning and Zoning Director
Mr. Mark Davis, Planning and Zoning Deputy Director
Mrs. Chris DiJulio-Cook, Senior Administrative Specialist
CALL TO ORDER: Chairman Ed Pappas called the meeting to order at 6:04 p.m.
PLEDGE OF ALLEGIANCE: Chairman Pappas led those assembled in the pledge of allegiance.
REVIEW OF MEETING MINUTES: Ms. Cecily McMillan made a motion to approve the June 6, 2022 minutes. Ms. Gail Murray seconded. The motion passed unanimously.

CITIZEN COMMENTS: There were no citizen comments.

## ACTION ITEMS:

ZONING MAP AMENDMENT/REZONING REQUEST FOR 4.25 ACRES AT 175 FORDING ISLAND ROAD (R600 022000 011A 0000) FROM T2 RURAL TO C5 REGIONAL CENTER MIXED USE DISTRICTS. AGENT: JOSH TILLER/OWNER: LAURA LEWIS
Mr. Robert Merchant showed a power point presentation, with drone footage, demonstrating the area and the proposed map amendment and outlined the request for the zone change.

Mr. Josh Tiller, JK Tiller Associates, Inc., representing the property owners, was in attendance to answer questions. He explained that the dealership wanted to open a service center on the property and that the home located on the property was vacant and the intention was to raze the building.

The Commissioners voiced concerns about the existing driveway, to the house, and more curb cuts onto Fording Island Road (Route 278) that could impede the traffic traveling along 278. They also mentioned parking and signs being a potential issue. Mr. Merchant explained that the plans would have to pass the review of the Staff Review Team (SRT) and those concerns would be addressed before a zoning permit would be issued.

Mr. Kevin Hennelly made a motion to approve the zoning map amendment with the conditions that the existing driveway, for the house, be closed and no new curb cuts be allowed and that the two properties be merged into one parcel. Dr. Caroline Fermin seconded the motion. The vote was unanimous.

TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): SECTION 5.11.60 (RIVER BUFFER) TO CLARIFY PENALTIES FOR REMOVING TREES FROM THE RIVER BUFFER WITHOUT APPROPRIATE PERMITS.

Mr. Mark Davis explained what changes Staff were hoping to make with the proposed amendments. He stated that the proposed changes were specific to river buffers and that much of this language was already contained within the tree ordinances.

Based on the comments and suggestions made by the Commissioners, Mr. Davis said further amendments could be brought forward to change and tighten up the current codes.

Dr. Fermin made a motion to accept the proposed text amendment. Ms. Murray seconded the motion. The motion passed unanimously.

TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): TABLE 3.1.60 (CONSOLIDATED USE TABLE) AND SECTION 3.2.100. H (T4HC, T4VC, AND T4HCO ALLOWED USES) TO AMEND THE MAXIMUM BUILDING SIZE FOR GENERAL RETAIL FOR THE T4 VILLAGE CENTER (T4VC) DISTRICT.

Mr. Merchant gave a background to the text amendment request. The recommendation is specific to the "Corners Community", the only area with the T4VC zoning. Per community feedback, the suggestion is to scale back the maximum building size, for general retail, from 50,000 sq. ft. to $25,000 \mathrm{sq}$. ft., to better fit the scale of the community.

Ms. McMillan made a motion to amend the maximum building size for general retail for the T4VC district. Dr. Fermin seconded. The motion passed unanimously.

## CHAIRMAN'S REPORT:

Chairman Pappas mentioned the workshop discussion about revisiting old business, or even new business, that he be given advanced notice so he can advise staff.

ADJOURNMENT: Chairman Pappas adjourned the meeting at 7:10 p.m.

SUBMITTED BY: Chris DiJulio-Cook
Planning and Zoning Senior Administrative Specialist

Ed Pappas
Beaufort County Planning Commission Chairman
Date: $\qquad$

## MEMORANDUM

TO: Beaufort County Planning Commission
FROM: Robert Merchant, AICP, Beaufort County Planning and Zoning Department
DATE: December 5,2022
SUBJECT: Zoning Map Amendment/Rezoning Request for 10.00 Acres at 76 May River Road (R600 0360000013 0000) from T2 Rural (T2R) to T4 Hamlet Center (T4HC)

## STAFF REPORT:

## A. BACKGROUND:

Case No.
Owner/Applicant: South Carolina Forestry Commission, Walter J. Nester III, agent
Property Location: Located at on the south side of May River Road approximately 1,300 feet east of the SC46/170 Traffic Circle

District/Map/Parcel: R600 03600000130000
Property Size: $\quad 10.00$ acres
Current Future Land Use
Designation: Neighborhood/Mixed-Use with the Village Place Type Overlay
Current Zoning District: T2 Rural
Proposed Zoning District: T4 Hamlet Center
B. SUMMARY OF REQUEST: The applicant seeks to change the zoning of a 10 -acre parcel at 76 May River Road from T2 Rural (T2R) to T4 Hamlet Center (T4HC). The property is currently owned by the SC Forestry Commission who is in the process of selling the parcel to Orange Capital Advisors, LLC. The buyer has expressed an interest in developing a townhouse community
C. EXISTING ZONING: The lot is currently zoned T2R, which is intended to preserve the rural character of Beaufort County. This zone applies to areas that consist of sparsely settled lands in an open or cultivated state. It may include large lot residential, farms where animals are raised or crops are grown, parks, woodland, grasslands, trails, and open space areas. Residential development is permitted at a density of one (1) dwelling unit per three (3) acres. T2R also permits very limited nonresidential uses.
D. PROPOSED ZONING: The proposed T4 Hamlet Center (T4HC) Zone is intended to integrate appropriate, medium-density residential building types, such as duplexes, townhouses, small
courtyard housing, and mansion apartments in an environment conducive to walking and bicycling. The district has design standards requiring a system of streets and blocks with buildings oriented to the streets. Residential buildings must have a first-floor elevation that is 18 inches above grade and must meet the more stringent architectural standards in Section 5.3.40 of the Community Development Code.
E. COMPREHENSIVE PLAN FUTURE LAND USE MAP: This 10 -acre parcel is designated Neighborhood Mixed-Use on the Future Land Use Map of the Comprehensive Plan. The Comprehensive Plan describes this designation as moderate-density residential with some supporting neighborhood retail establishments. New development is encouraged to be pedestrian-friendly, have a mix of housing types, a mix of land uses and interconnected streets. The maximum gross residential density is approximately two dwelling units per acre with some denser pockets of development. The Comprehensive Plan also describes this area as a "Village Place Type" centered around the mixed-use development in New Riverside.
F. TRAFFIC IMPACTS: The applicant hired Kimley Horn to conduct a Traffic Impact Analysis for the proposed rezoning. The TIA assumes a 79-unit townhouse development with two points of egress - one accessing May River Road across from Stardust Lane and the other one connecting to New Riverside Village, which would allow traffic to utilize New Riverside Road and the traffic circle at SC 46 and 170. The only offsite improvements the TIA calls for is a left turn lane on May River Road to allow westbound traffic to turn into the development. The TIA also recommended restriping of Stardust Lane to allow for a right turn lane and a left/straight lane. The TIA did not recommend signalizing the intersection of Stardust Lane and May River Road.
G. ZONING MAP AMENDMENT REVIEW STANDARDS: In determining whether to adopt or deny a proposed Zone Map Amendment, the County Council shall weigh the relevance of and consider whether and the extent to which the proposed amendment:

1. Is consistent with and furthers the goals, and policies of the Comprehensive Plan and the purposes of this Development Code: The current zoning of the property, T2 Rural, is not consistent with the Future Land Use Map of the Comprehensive Plan. As discussed above, the Plan designates this parcel as Neighborhood Mixed-Use with a Village Place Type. The proposed medium-density townhouses at this location are consistent with this land use designation.
2. Is not in conflict with any provision of this Development Code, or the Code of Ordinances: This proposed rezoning is not in conflict with the Community Development Code or Code of Ordinances.
3. Addresses a demonstrated community need: The proposed rezoning would allow for a mix of housing types that has the potential to diversify housing choices in southern Beaufort County.
4. Is required by changed conditions: T2 Rural, which is the current zoning designation of the property, is meant to implement the Comprehensive Plan goals of preserving the rural character of portions of Beaufort County. This property is bounded on three sides by mixed-use development in the Town of Bluffton's Jones Estate and New Riverside PUDs.
5. Is compatible with existing and proposed uses surrounding the land subject to the application, and is the appropriate zone and uses for the land: This parcel is located immediately east of New Riverside Village, a mixed-use commercial and moderate-density
residential community; and across May River Road from May River Place (Publix) and the Palmetto Pointe townhouse community. A moderate density townhouse community is compatible with these developments.
6. Would not adversely affect nearby lands; See 5 above.
7. Would result in a logical and orderly development pattern;

See 4, 5, and 6 above.
8. Would not result in 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: Any future development would be required to adhere to the natural resource protections, tree protections, wetland protections, and stormwater standards in the Community Development Code and Stormwater BMP Manual.
9. Would result in development that is adequately served by public facilities (e..g. streets, potable water, sewerage, stormwater management, solid waste collection and disposal, schools, parks, police, and fire and emergency medical facilities): This property is adequately served by public facilities.
H. STAFF RECOMMENDATION: Staff supports the map amendment to change the zoning of the parcel from T2 Rural to T4 Hamlet Center. The Comprehensive Plan supports this intensity of land use at this location and a townhouse community would complement the existing mixed-use development of New Riverside and implement the Village Place Type. This support is contingent on commitment from the applicant that future development of this site has access through New Riverside Village connecting to New Riverside Road.

## I. ATTACHMENTS

- Location Map
- Zoning Map (existing and proposed)
- Conceptual Site Plan submitted with the Traffic Impact Analysis
- Rezoning Application
- Traffic Impact Analysis



## Existing Zoning

Legen

| $\quad$ R600 3613 |
| :--- |
| Zone Districts |
| FBCode |


| Buckingham Landing Community Preservation[BLCP] |
| :--- |
| C3 Neighborhood Mixed Use [C3NMU] |
| C4 Community Center Mixed Use [C4CCMU] |
| C5 Regional Center Mixed Use [C5RCMU] |
| May River Community Preservation [MRCP] |
| Existing Planned Unit Development [PUD] |
| T1 Natural Preserve [T1NP] |
| T2 Rural [T2R] |
| T2 Rural Center [T2RC] |
| T2 Rural Neighborhood [T2RN] |
| T3 Edge [T3Edge] |
| T3 Hamlet Neighborhood [T3HN] |
| T3 Neighborhood [T3N] |
| T4 Hamlet Center [T4HC] |
| T4 Hamlet Center Open [T4HCO] |
| T4 Neighborhood Center [T4NC] |

unity Preservation[BLCP]


## Proposed Zoning

| Legend |  |
| :---: | :---: |
|  | R600 3613 |
| FBCode |  |
|  | Buckingham Landing Community Preservation[BLCP] |
|  | C3 Neighborhood Mixed Use [C3NMU] |
|  | C4 Community Center Mixed Use [C4CCMU] |
|  | C5 Regional Center Mixed Use [C5RCMU] |
|  | May River Community Preservation [MRCP] |
| P6 | Existing Planned Unit Development [PUD] |
|  | T1 Natural Preserve [T1NP] |
|  | T2 Rural [T2R] |
|  | T2 Rural Center [T2RC] |
|  | T2 Rural Neighborhood [T2RN] |
|  | T3 Edge [T3Edge] |
|  | T3 Hamlet Neighborhood [T3HN] |
|  | T3 Neighborhood [T3N] |
|  | T4 Hamlet Center [ 74 HC ] |
|  | T4 Hamlet Center Open [T4HCO] |
|  | T4 Neighborhood Center [T4NC] |




BURR• $\because$ FORMAN

## RECENED

Shelter Cove Executive Park
23-B Shelter Cove Lane
Suite 400
Hilton Head Island, SC 29928
Mailing Address
Post Office Drawer 3
Hilton Head Island, SC 29938

Offire (843) 785-2171
Fax (843) 686-5991

August 2, 2022

## VIA HAND DELIVERY

Robert Merchant, AICP
Planning and Zoning Director
Beaufort County Community Development
County Administration Building
100 Ribaut Road, Room 115
Beaufort, SC 29902

## Re: Zoning Map Amendment Application - TMP R600 0360000013 Our File Number: 0042948.0000001

Dear Rob:
As you may recall, earlier this year we discussed a proposed rezoning of an approximate ten (10) acre parcel located on SC 46 in Southern Beaufort County in close proximity to the New Riverside Planned Unit Development. The property is currently zoned rural (TR2) and my client, Orange Capital Advisors LLC, is under contract to purchase the parcel. The rezoning proposed would be to T4 Hamlet Center. Enclosed please find the following:

1. Zoning Map Amendment Application;
2. Narrative; and
3. Check in the amount of $\$ 250.00$ as payment of the fee.

If you have any questions, please do not hesitate to contact me.


## BEAUFORT COUNTY, SOUTH CAROLINA COMMUNITY DEVELOPMENT CODE (CDC) ZONING MAP OR TEXT AMENDMENT / PUD MASTER PLAN CHANGE APPLICATION

## TO: Beaufort County Council

The undersigned hereby respectfully requests that the Beaufort County Community Development Code (CDC) be amended as described below:

1. This is a request for a change in the (check as appropriate): ( ) PUD Master Plan Change
(X) Zoning Map Designation/Rezoning ( ) Community Development Code Text
2. Give exact information to locate the property for which you propose a change:

Tax District Number: R600 , Tax Map Number:_036 , Parcel Number(s): 0013
Size of subject property: Ten
S
Square Feet / Acres (circle one)
Location: 76 May River Road, Bluffton
3. How is this property presently zoned? (Check as appropriate)
( ) T4NC Neighborhood Center ( ) T2RC Rural Center ( ) C3 Neighborhood Mixed Use
( ) T4HC Hamlet Center ( ) T2RN Rural Neighborhood ( ) C4 Community Center Mixed Use
( ) T4HCO Hamlet Center ( ) T2RNO Rural Neighborhood Open ( ) C5 Regional Center Mixed Use
( ) T4VC Village Center (X) T2R Rural ( ) S1 Industrial
( ) T3N Neighborhood ( ) T1 Natural Preserve ( ) Planned Unit Development/PUD
( ) T3HN Hamlet Neighborhood ( ) Community Preservation (name)
( ) T3E Edge
(specify)
4. What new zoning do you propose for this property? T4 Hamlet Center (T4HC)
(Under Item 9 explain the reason(s) for your rezoning request.)
5. Do you own all of the property proposed for this zoning change? ( X ) Yes ()No Only property owners or their authorized representative/agent can sign this application. If there are multiple owners, each property owner must sign an individual application and all applications must be submitted simultaneously. If a business entity is the owner, the authorized representative/agent of the business must attach: 1- a copy of the power of attorney that gives him the authority to sign for the business, and 2-a copy of the articles of incorporation that lists the names of all the owners of the business.
6. If this request involves a proposed change in the Community Development Code text, the section(s) affected are:
(Under Item 9 explain the proposed text change and reasons for the change.)
7. Is this property subject to an Overlay District? Check those which may apply:
( ) MCAS-AO Airport Overlay District/MCAS ( ) MD Military Overlay District
( ) BC-AO Airport Overlay District/Beaufort County ( ) RQ River Quality Overlay District
( ) CPO Cultural Protection ( ) TDR Transfer of Development Rights
( ) CFV Commercial Fishing Village
8. The following sections of the Community Development Code (CDC) (see attached sheets) should be addressed by the applicant and attached to this application form:
a. Division 7.3.20 and 7.3.30, Comprehensive Plan Amendments and Text Amendments.
b. Division 7.3.40, Zoning map amendments (rezoning).
c. Division 1.6.60, Planned Unit Developments (PUDs) Approved Prior to Dec. 8, 2014
d. Division 6.3, Traffic Impact Analysis (for PUDs)
9. Explanation (continue on separate sheet if needed): See attached Narrative.

It is understood by the undersigned that while this application will be carefully reviewed and considered, the burden of proof for the proposed amendment rests with the owner.


Address: 5500 Broad River Road, Columbia, South Carolina 29212

Email: www.scfc.gov

Agent (Name/Address/Phone/email): | Walter J. Nester, III |
| :--- |
| 843 Forman LLP, 23-B Shelter Cove Lane, Suite 400, Hilton Head Island, SC 29928 |

Burr \& Forman LLP, 23-B Shelter Cove Lane, Suite 400, Hilton Head Island, SC 29928 843-785-2171,wnester@burr.com

UPON RECEIPT OF APPLICATIONS, THE STAFF HAS THREE (3) WORK DAYS TO REVIEW ALL APPLICATIONS FOR COMPLETENESS. THE COMPLETED APPLICATIONS WLL BE REVIEWED FIRST BY THE BEAUFORT COUNTY PLANNING COMMISSION SUBCOMMITTEE RESPONSIBLE FOR THE AREA WHERE YOUR PROPERTY IS LOCATED. MEETING SCHEDULES ARE LISTED ON THE APPLICATION PROCESS (ATTACHED). COMPLETE APPLICATIONS MUSTBE SUBMITTED BY NOON THREE WORKING DAYS AND FOUR (4) WEEKS PRIOR FOR PLANNED UNIT DEVELOPMENTS (PUDS) OR THREE (3) WEEKS PRIOR FOR NON-PUD APPLICATIONS TO THE APPLICABLE PLANNING COMMISSION MEETING DATE.

SUBMISSION OF APPLICATION. ALL APPLICATIONS SHALL BE SUBMITTED TO THE APPROPRIATE COUNTY DEPARTMENT. NO APPLICATION WILL BE ACCEPTED UNLESS ACCOMPANIED BY THE REQUIRED FEE. APPLICATIONS RECEIVED BEFORE 12:00 P.M. SHALL BE DATED THE SAME WORKING DAY. APPLICATIONS RECEIVED AFTER 12:00 P.M. SHALL BE DATED THE NEXT WORKING DAY.

PLANNED UNIT DEVELOPMENT (PUD) APPLICANTS ARE REQUIRED TO SUBMIT FIFTEEN (15) COPIES TO THE PLANNING DEPARTMENT. CONSULT THE APPLICABLE STAFF PLANNER FOR DETALLS.

FOR MAP AMENDMENT REQUESTS, THE PLANNING OFFICE WILL POST A NOTICE ON THE AFFECTED PROPERTY AS OUTLINED IN DIV. 7.4.50 OF THE COMMUNITY DEVELOPMENT CODE.

CONTACT THE PLANNING DEPARTMENT AT (843) 255-2140 FOR EXACT APPLICATION FEES.
FOR PLANNING DEPARTMENT USE ONLY:

Date Application Received: (place received stamp below)


Date Posting Notice Issued:
Application Fee Amount Received:
Receipt No. for Application Fee:
$\qquad$ // Initiated by: STAFF / OWNER (Circle One)

STATE OF SOUTH CAROLINA )

## BEFORE THE PLANNING COMMISSION OF BEAUFORT COUNTY, SOUTH CAROLINA

## SUPPLEMENT

TO
THE ZONING MAP AMENDMENT APPLICATION
OF
ORANGE CAPITAL ADVISORS, LLC
CONCERNING
TEN ACRES LOCATED AT 76 MAY RIVER ROAD BLUFFTON, SOUTH CAROLINA

This Supplement is submitted with and is intended to be incorporated in and comprise a part of the Application for Zoning Map Amendment (the "Application") of Orange Capital Advisors, LLC, a South Carolina limited liability company authorized to conduct business in South Carolina (the "Applicant")". This narrative is submitted to the Planning Commission of Beaufort County, South Carolina (the "County") to describe how the Application meets the criteria of Section 7.3.40 of the Beaufort County Development Code ("CDC") as required by Section 7.3 of the CDC.

## I. NARRATIVE

## A. INTRODUCTION AND REOUEST.

The Applicant is the contract purchaser of an approximate ten (10) acre parcel of unimproved real property (the "Property") identified by Beaufort County Tax Map Number R600 03600000130000 and located on South Carolina Highway 46 east of the South Carolina Highway 170 traffic circle in Southern Beaufort County. The Property is owned by the South Carolina Commission of Forestry (the "Owner").

The Applicant submits this Application requesting the approval of an amendment to the County's official zoning map, described in Section 3.1.2 of the CDC, by amending the zoning designation for the Property from "Rural T2R" zoning to "T4 Hamlet Center (T4HC) Zone".

[^0]
## B. BACKGROUND.

The Property is currently vacant land. The Property is undeveloped and currently contains no roads or utility infrastructure. The zoning district for the Property is Rural T2R and it is located on May River Road with access to South Carolina Highway 170. ${ }^{2}$ The Property is surrounded by several residential developments which are located in the municipal boundaries of the Town of Bluffton including The Landings at New Riverside, K. Hovnanian Four Seasons at Carolina Oaks, and Palmetto Bluff. The Property is also nearby the May River Crossing commercial shopping center as well as several schools.

The Applicant is in the business of townhouse and multifamily residential development specializing in Class A multifamily communities. The Applicant's development projects include on site management, security and are developed recognizing and to be consistent with local architecture and neighborhood characteristics. The Applicant proposes high quality development of townhouses on the Property with inclusionary levels of pricing (the "Project") as more particularly described herein. The Applicant's townhouse and multifamily development projects are privately funded and typically held for investment once completed.

## C. CURRENT AND PROPOSED DENSITY AND USE.

The Property is zoned Rural (T2R) which allows 0.34 residential density units per acre. This Application seeks to change the approved zoning for the Property from Rural (T2R) to T4 Hamlet Center (T4HC) with residential multifamily ${ }^{3}$ use and density for one hundred (100) residential townhouses. The Property consists of approximately 10.00 acres. The proposed density is ten (10) units per acre which is consistent with the CDC.

The Applicant proposes to develop the Property into a high quality townhouse community consisting of one hundred (100) residential townhouses and associated parking, infrastructure and amenities (the "Project"). The Project proposes development of a townhouses inclusive of two (2) to four (4) bedrooms. Construction of multiple buildings is anticipated but the final site design and layout has yet to be completed pending approval of the Application. Amenities proposed may include a pool, outdoor seating and recreation areas, and walking trails. Ground level parking will be available on the Property.

[^1]The T4 Hamlet Center (T4HC) has a maximum height of two and one half (2.5) stories for main buildings and two (2) stories maximum on ancillary buildings. The Applicant proposes heights consistent with these requirements. There are mostly planted pines on the Property but the Applicant's proposes a design for the Project which will preserve the specimen and significant trees on the Property. The buildings proposed will all be in keeping with the existing setback standards of the CDC. Further, the Project proposes stormwater systems and facilities which will conform to existing stormwater ordinance.

## II. REZONING CRITERIA

A. In Accordance with the Beaufort County 2040 Comprehensive Plan ("Comprehensive Plan").
(1) Natural Environment. The Natural Element of the Comprehensive Plan recognizes that natural elements must be protected for recreation, rejuvenation, hazard mitigation, and environmental health. ${ }^{4}$

The Applicant seeks to amend the County's zoning map to rezone the Property to T4 Hamlet Center (T4HC) zoning. Once the rezoning is approved, the Applicant proposes the development of the Property for a residential townhouse development. The Property is currently undeveloped and there are no stormwater facilities on the Property. The Property is currently not served by sewer. The development of the Property proposed by the Applicant will be compliant with current stormwater standards, landscaping and buffers and setbacks and served by sewer. The Project therefore is consistent with the goals and implementation strategies described in the Natural Element of the Comprehensive Plan.

The Applicant's proposed redevelopment contemplates that it will meet or exceed all of the County's current stormwater and site development requirements of the CDC. No additional variances or requests from applicable development standards are contained in this Application. None are anticipated for the Project.

The Applicant's Project proposes to retain as many of the Specimen and Significant Trees, if any, existing on the Property as possible and its architect and land planning consultants

[^2]propose a site plan which places the buildings and structures on the Property in a manner that respects these trees and will enhance their growth.

Development on the Property will comply with setbacks and buffers contemplated in the CDC and will screen the buildings and improvements from adjacent properties. Further, the development plan will propose generous common and open space areas which will enhance the community and the natural environment. Such effort and redevelopment furthers the goals described in the Natural Element of the Comprehensive Plan.
(2) Culture. The Culture Element of the Comprehensive Plan recognizes that historical, cultural, and scenic resources must be protected for future generations. ${ }^{5}$

The Property is located between several large residential developments and new commercial retail centers and there are no known or identified cultural or historic features existing on the Property. The Project supports the Culture Element of the Comprehensive Plan by providing new quality housing opportunities for those who live and work in the County. Further, development of the Property with an attainable housing element supports the Culture Element by providing a part of the County's goal to provide an inclusive and accessible place for all residents and embracing the development of connected community fabric.
(3) Economy. The Economy Element of the Comprehensive Plan recognizes that a resilient economy is crucial for a sustainable future. ${ }^{6}$

The Comprehensive Plan describes the County's economy as one based largely on natural and cultural resources. Agriculture, forestry, tourism, resort development, and the presence of the military, is the result of the County's unique blend of geography, nature, and culture. The economic element of the Comprehensive Plan advises that the long-term success and viability of the County requires the creation of a larger more diversified tax base and creation of quality jobs. Doing so requires quality housing for all income earners and that

[^3]is what the Project proposes. There is a need for quality housing both attainable and market rate to support the workers who contribute to the success of the economy of the County.

The Project proposes the development of high quality townhomes which will support economic benefits to the County. The current rural zoning of the Property is no longer necessary as the Property is surrounded by several large residential communities as well as commercial and retail business centers. The Applicant's proposed change in use provides the County's residents and workers with an additional mix of housing opportunities for residents seeking a quality affordable townhouse community in the County. The Project when complete will provide a new mix of housing opportunities for County residents which will provide additional incentives for new industries and business to locate to the County, supporting and therefore consistent with the Economy Element of the Comprehensive Plan.
(4) Mobility. The Mobility Element of the Comprehensive Plan recognizes the need for an innovative, multimodal, and cost effective infrastructure that sustains a high quality of life.?

The Applicant's proposed use is consistent with and supports the Mobility Element of the Comprehensive Plan. Under the use proposed, the townhouse use is anticipated to produce a consistent but low volume of traffic. The Property is accessed directly from South Carolina Highway 46 and is supported by the existing roadway and transportation infrastructure. The Property is within walking distance to retail and commercial areas including May River Place and the New Riverside Village shopping center which adds convenience and reduces travel from the Property and surrounds and is consistent with the Mobility Element's goal to prioritize walking and bicycling to connect residents with jobs, schools and other destinations. The Applicant proposes a change in use that will not produce an undue burden on the County's transportation system and is therefore consistent with the Mobility Element of the Comprehensive Plan.

[^4] for quality, affordable housing available and accessible to all residents. ${ }^{8}$

The Applicant's proposed use of the Property implicates the Housing Element of the Comprehensive Plan. The Housing Element of the Comprehensive Plan recognizes the need for housing to meet the growing population of the County. In addition, there is a need for quality housing in a variety of housing types to meet the need of a diverse population with residents of varying income, age and abilities. The Applicant's proposed use provides a townhouse community with a blend of market rate and attainable housing opportunities to address the need for more housing options. Implications for the Comprehensive Plan include the concept that while an increase in the total number of housing units contributes to the economic tax base for the County, both the quantity as well as quality of the housing stock is maintained to sustain the current and future population and overall property values. As the amount of available land declines for new development, a diverse and high quality stock of housing opportunities must be maintained. The availability of various housing types is important for the continued viability of the housing market to accommodate the diverse needs of the County's population. Five percent (5\%) of the townhouses developed on the Property shall be reserved to be rented only to those families living at eighty percent (80\%) of AMI.
(6) Community Facilities. The Community Facilities Element of the Comprehensive Plan recognizes the need for high quality, resilient community facilities and services for all residents.

The approval of this Application supports the County's Community Facilities and the vision of the Comprehensive Plan. The infrastructure for access, namely the major roadways, is already in place. Potable water, electricity, telephone and cable, sanitary sewer, solid waste, and stormwater drainage systems are available to the Property and shall be installed as part of the Project making the Property fully compliant with applicable regulations and laws concerning sewer and stormwater. The Project will be served by Beaufort-Jasper Water and Sewer Authority, Dominion Energy and Hargray Communications. The Applicant intends to utilize efficient and environmentally conscious design to the extent commercially viable in compliance with the Comprehensive Plan. The

[^5]Applicant's proposed change in use supports and is consistent with the Community Facilities Element of the Comprehensive Plan, as by providing additional housing opportunities, which include new sanitary sewer and solid waste disposal, and stormwater treatment and control, the Project contributes to the development of community facilities needed for the continued growth and development of the Island.
(7) Built Environment. The Built Environment Element of the Comprehensive Plan recognizes the need for diverse, quality neighborhoods that support community life, work balance, and synergy with our natural environment, promote health and wellness, enable diversity, and enhance quality of life. ${ }^{9}$

The Applicant's proposed use of the Property implicates the Built Environment Element of the Comprehensive Plan. The Comprehensive Plan states that the County desires "development that supports and expresses our climate, landscape history, character, and lifestyle, and which promotes traditional town and neighborhood planning principles". The Applicant's proposed use of a townhouse community supports the Built Environment Element of the Comprehensive Plan by contributing to traditional town and neighborhood planning principals by providing a residential community in keeping with local character and landscape and by providing a community within close distance to commercial businesses and schools.
(8) Focused Planning Areas. The Focused Planning Areas Element of the Comprehensive Plan recognizes the need for a county comprising diverse, connected neighborhoods, with equitable access to services and amenities where residents have a strong voice in their future. ${ }^{10}$

The Applicant's proposed use of the Property impacts the Focused Planning Element of the Comprehensive Plan by adding to the diver neighborhoods along May River Road with access to services and amenities for all residents. The proposed use allows the County to address the population growth in a manner consistent with existing development while adding to the mix of housing options available in the County.

[^6]
## B. CDC REVIEW CRITERIA.

## (1) The proposed rezoning is not in conflict with any provision of the CDC or Code of Ordinance.

The proposed use of the Property is consistent with the requirements of the CDC and the Code of Ordinance and therefore is not in conflict with the same.

## (2) The proposed rezoning addresses a demonstrated community need.

The Applicant's proposed use provides additional housing opportunities to address the growth in population in the County. As the amount of available land declines for new development, a diverse and high quality stock of housing opportunities must be maintained. The availability of various housing types is important for the viability of the housing market to accommodate the diverse needs of the County's population. Additionally, the proposed rezoning allows for the development of a housing option that supports and provides options for the County's population young and old, which aligns with similar recommendations in the Housing Element of the Comprehensive Plan.

The Applicant submits that the recommendations and goals stated in the Comprehensive Plan indicate a demonstrated community need, which shall be addressed by the proposed redevelopment of the Property once the rezoning is approved.

## (3) The proposed rezoning is required by changed conditions.

The Property is currently rural with no development. There is a need for additional and diverse housing and the Project fulfills that need and is therefore appropriate.

The proposed rezoning is compatible with existing and proposed uses surrounding the land subject to the application, and is the appropriate zone and uses for the land.

The current use of the Property is not compatible with the surrounding residential uses. As described above, the Property is currently rural with no development. The Project's buildings and improvements will be constructed consistent with the surrounding residential
communities. Therefore, the Applicant contends that rezoning of the Property, as proposed in the Application, is compatible with the uses on other property in the immediate vicinity.

## (5) The proposed rezoning would not adversely impact nearby lands.

Applicant's proposed use will not adversely impact nearby lands. The proposed use will include installation of appropriate utility and stormwater infrastructure which will improve both the Property and nearby lands. The proposed use is consistent with uses on nearby lands and will therefore will provide greater neighborhood consistency and feel which will positive impact nearby lands.

## (6) The proposed rezoning would result in a logical and orderly development pattern.

The proposed use is a logical and orderly continuation of existing nearby development. The Townhouse community will add to the diversity of housing options available and will be supported by the existing commercial development located in the May River area.

## (7) <br> The proposed rezoning would not result in adverse impacts on the natural environmental - including, but not limited to, water, air, noise, storm water management, wildlife, vegetation, wetlands, and the natural functioning of the environment.

The Project will require some impact to the natural, rural state of the Property; however, environmental concerns will be addressed consistent with this Application, including the development of sewer, water and stormwater facilities. The Property is accessed by an existing road and careful consideration will be made of the impacts to exiting wildlife during the construction process.

## (8) Would result in development that is adequately served by public facilities (e.g., streets, potable water, sewerage, stormwater management, solid waste collection and disposal, schools, parks, police, and fire and emergency medical facilities).

The Project includes the development of sewer, water and stormwater facilities. Schools, fire and emergency medical are easily accessed from the Property via May River Road and
nearby South Carolina Highway 170. The Property will be served by public facilities as otherwise indicated in this Application.

## III. CONCLUSION.

The Applicant believes the foregoing narrative and analysis demonstrates that this Application is in conformance with the County's Comprehensive Plan, and meets the criteria set forth in Section 7.3.40 of the CDC. The Applicant believes that there is strong demand in the County market for a high quality residential townhouse community. The Applicant's objective is to provide the opportunity for housing for young adults as well as for residents who desire to sell their existing home and downsize into a low maintenance lifestyle while at the same time preserving the rural, natural elements of the Property.

Accordingly, the Applicant respectfully requests that the Planning Commission:
A. Review this Application and the supporting documentation and any testimony which will be entered into the record.
B. Find the following:
(1) That this Application and the supporting testimony and documentation establish that the requested zoning map / text amendment is consistent with the County's Comprehensive Plan.
(2) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment allows an additional use that is compatible with the uses allowed for other property in the immediate vicinity; and
(3) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment is appropriate for the land; and
(4) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment addresses a demonstrated community need; and
(5) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment is consistent with the overall zoning program as expressed in future plans for the County; and
(6) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment avoids the creation of an inappropriately isolated zoning district unrelated to adjacent and surrounding zoning districts; and
(7) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment allows the Property to be put to a reasonably viable economic use; and
(8) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment results in development that may be served by available, adequate and suitable public facilities (e.g. streets, potable water, sewer and stormwater management); and
(9) That the Application and the supporting testimony and documentation establish that the requested zoning map amendment is appropriate due to changed or changing conditions in the affected area; and
(10) That the Planning Commission Recommend the County Council's approval of the Application and the rezoning of the Property to make residential townhouse use as the approved use and authorize the density requested herein.

Respectfully submitted on behalf of the Applicant this $2<2$ day of August, 2022.


## EXHIBIT "A" TO SUPPLEMENT

## South Carolina Secretary of State

 Business Filings Report(please see attached)

## Business Entities Online

File, Search, and Retrieve Documents Electronically

## ORANGE CAPITAL ADVISORS, LLC

## Corporate Information

Entity Type: Limited Liability Company
Status: Good Standing
Domestic/Foreign: Domestic
Incorporated State: South Carolina

## Important Dates

Effective Date:06/26/2014
Expiration Date: N/A
Term End Date: 12/31/2065
Dissolved Date:N/A

## Registered Agent

Agent: JOHN P. EVANS
Address: 125 REGIONAL PARKWAY, SUITE 200 ORANGEBURG, South Carolina 29118

Official Documents On File

| Filing Type | Filing Date |
| :--- | :--- |
| Organization | $06 / 26 / 2014$ |

## EXHIBIT "B" TO SUPPLEMENT

Beaufort County Assessor GIS Map
(please see attached)
ArcGIS Web Map


| 7/7/2022, 10:45:24 AM |
| :--- |
| Search Results: LiveParcels |
| $\quad$ Override 1 |
| Road Classiffcations |

-.-- PRIVATE, PAVED

# May River Townhomes <br> Traffic Impact Analysis 

Bluffton, South Carolina

Prepared for
Orange Capital Advisors

Prepared by
Kimley»Horn

# May River Townhomes Traffic Impact Analysis 

Bluffton, South Carolina

Prepared for
Orange Capital Advisors

## Prepared by <br> Kimley»)Horn



October 2022
© Kimley-Horn and Associates, Inc.
115 Fairchild Street, Suite 250 Charleston, South Carolina, 29492

## Kimley»"Horn

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## Kimley»>Horn

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## 1 Executive Summary

The proposed May River Townhomes Development is located in the southern side of the May River Road at Stardust Lane intersection in Bluffton, South Carolina. This development is planned to consist of 79 townhome units.

It is assumed that the project will access the roadway network via the following two unsignalized, full-movement accesses:

- Site Access \#1 - A full-movement, stop controlled, northbound approach to the May River Road at Stardust Lane intersection
- Site Access \#2 - A full-movement, stop controlled, westbound approach to the New Riverside Village internal interseciton, located approximately 365' south of May River Road.

It is assumed that the completed development will be built and fully occupied by 2025. This study summarizes the results of the traffic analyses at the following study intersections:

1) May River Road at Stardust Lane/Site Access \#1
2) May River Road at New Riverside Village
3) New Riverside Village at Site Access \#2

Based on the results of the traffic analyses, the following improvements are recommended to mitigate the impact of the proposed development's traffic on the study area intersections:

## May River Road at Stardust Lane/Site Access \#1

- Construct the site access with one ingress lane and two egress lanes
- The site access is recommended to be stop-controlled
- Construct a westbound left-turn lane on May River Road into the proposed development
- Restripe the Stardust Lane southbound approach to consist of one exclusive southbound right-turn lane and one shared southbound through-left lane


## May River Road at New Riverside Village

- No improvements are recommended at this interseciton


## New Riverside Village at Site Access \#2

- Construct the site access with one ingress lane and one egress lane
- The site access is recommended to be stop-controlled


## 1 Introduction

The proposed May River Townhomes Development is located in the southern side of the May River Road at Stardust Lane intersection in Bluffton, South Carolina. This development is planned to consist of 79 townhome units.

The location of the proposed development and site plan are illustrated in Figure 1 and Figure 2, respectively. A conceptual site plan is attached in Appendix A.

It was assumed that the development will be built and fully occupied by 2025. This study summarizes the results of the traffic analyses at the following conditions:

- 2022 Existing Conditions
- 2025 No-Build Conditions
- 2025 Build Conditions

The study area consists of the following study intersections:

1) May River Road at Stardust Lane/Site Access \#1
2) May River Road at New Riverside Village
3) New Riverside Village at Site Access \#2

### 1.1 Existing Conditions

May River Road is a two-lane, urban minor arterial with a posted speed limit of 35 miles per hour (mph) in the vicinity of the proposed development. Based upon SCDOT data, 13,800 vehicles per day traveled along May River Road in 2021 at count station 07-0155. Count station 07-0155 is good from SC 170 (Okatie Highway) to Buck Island Road.

New Riverside Village is a local road that will serve the New Riverside Village mixed-use development. SCDOT does not provide daily traffic data for New Riverside Village.

The existing geometry and traffic control for the study area intersections are illustrated in Figure 3.



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## 2 Project Traffic

### 2.1 Trip Generation

The trip generation rates and equations published in the Institute of Transportation Engineers' (ITE) Trip Generation Manual; $11^{\text {th }}$ Edition were used to estimate the trip generation potential for the development. The analysis was performed using the information provided for the land use code (LUC) 220 - Multifamily Low-Rise.

Pass-by trip and internal capture trip reductions do not apply to LUC 220; therefore, they were not considered for this TIA. As shown in Table 1, the development is anticipated to generate 47(11 In/36 Out) AM peak hour trips and 55 ( $35 \mathrm{In} / 20$ Out) PM peak hour net new external trips. The estimated trip generation is summarized in Table 1. Trip generation calculations can be found in Appendix B.

Table 1 - Trip Generation Summary

| Trip Generation |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Intensity | Units | Daily | AM Peak Hour |  |  | PM Peak Hour |  |  |
|  |  |  |  | Total | In | Out | Total | In | Out |
| 220 - Multifamily Housing (Low-Rise) | 79 | DU | 582 | 47 | 11 | 36 | 55 | 35 | 20 |
| Total Net New External Trips |  |  | 582 | 47 | 11 | 36 | 55 | 35 | 20 |

### 2.2 Trip Distribution \& Assignment

New external trips generated by the proposed development were distributed and assigned to the surrounding roadway network based on existing travel patterns, surrounding land uses, proximity to similar land uses, and the proposed site layout. The trip distribution percentages used in this analysis are as follows:

- $45 \%$ to/from the east via May River Road
- $55 \%$ to/from the west via May River Road

The site project trip distributions are illustrated in Figure 4 and the project trip assignments are illustrated in Figure 5.



## 3 Existing and Future Traffic Volume Development

The 2022 Existing traffic volumes were utilized in the analysis and future-year traffic volumes were developed for projected 2025 traffic conditions. The future-year volumes consisted of the existing traffic volumes adjusted by an annual growth rate and the projected traffic volumes of the proposed development. Worksheets documenting the traffic volume development are provided in Appendix C.

### 3.12022 Existing Traffic

Peak-hour intersection turning movement counts were conducted in the AM peak period (7:00 AM to 9:00 AM) and PM peak period (4:00 PM to 6:00 PM) on Tuesday, August 23, 2022, at the following intersections:

1) May River Road at Stardust Lane
2) May River Road at New Riverside Village
3) New Riverside Village Internal Access

The volumes to and from New Riverside Village were very low since the development is under construction. Most movements had either 1 vehicle in and out or 0 vehicles in and out. Thus, the volumes for New Riverside Village were not considered in the existing analysis. Rather New Riverside Village was considered an approved development for this TIA.

Figure 6 illustrates the 2022 Existing peak-hour traffic volumes for the AM and PM peak hours. The raw turning movement count data is included in Appendix $\mathbf{D}$.

### 3.2 Future-Year No-Build Traffic Development

It was assumed that the development will be built and operational by 2025. The future-year traffic volumes consist of the 2022 existing traffic volumes adjusted by a growth rate for the NoBuild scenario.

To determine the historical growth rate in the area, traffic count data was obtained from SCDOT for the nearby count stations along May River Road. Over the past few years, May River Road has experienced an annual growth rate of approximately $2.0 \%$, which was used to develop the No-Build traffic volumes for the 2025 No-Build conditions. SCDOT Count Station 07-0155 along May River Road was used to determine the growth rate.

The New Riverside Village was considered as an approved development within the study area. The site traffic volumes from the New Riverside Village Traffic Impact Analysis (Thomas and Hutton, May 2021) were utilized in the study area for the No-Build conditions.

Figure 7 illustrates the No-Build traffic volumes for the AM and PM peak hours, respectively.

### 3.3 Future-Year Build Traffic Development

The May River Townhomes project traffic volumes were added to the No-Build traffic volumes to develop Build traffic volumes. Figure 8 illustrates the Build traffic volumes for the AM and PM peak hours, respectively.




## 4 Capacity Analysis

Capacity/level-of-Service (LOS) analyses were conducted using the Highway Capacity Manual (HCM), $6^{\text {th }}$ Edition methodologies of the Synchro, Version 11, traffic analysis software. Capacity analyses were conducted for the AM and PM peak hours of the 2022 Existing conditions, 2024 No-Build conditions, and 2024 Build conditions analysis scenarios.

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, gridlocked conditions with high vehicular delays, and are generally considered undesirable. Table 2 lists the LOS control delay thresholds published in the HCM for signalized and unsignalized intersections.

Table 2 - HCM Level of Service Criteria

| LOS | Control Delay per Vehicle (sec/veh) |  |
| :---: | :---: | :---: |
|  | Signalized Intersections | Unsignalized Intersections |
| A | $\leq 10$ | $\leq 10$ |
| B | $>10-20$ | $>10-15$ |
| C | $>20-35$ | $>15-25$ |
| D | $>35-55$ | $>25-35$ |
| E | $>55-80$ | $>35-50$ |
| F | $>80$ | $>50$ |

Existing peak-hour factors (PHF) were utilized for the existing and future scenarios. Existing heavy vehicle percentages were utilized for all scenarios, with a minimum of $2 \%$ considered.

Unsignalized intersections operating at LOS A-LOS C are considered to operate with short delays, unsignalized intersections operate at LOS D-LOS E are considered to operate with moderate delays, and intersections operating at LOS F are considered to operate with long delays.

The following sections outline the results of the capacity analysis for each of the study intersections. The capacity analysis worksheets are included in Appendix E.

### 4.1 May River Road at Stardust Lane/Site Access \#1

The capacity analysis results for the May River Road at Stardust Lane/Site Access \#1 intersection are summarized in Table 3.

Table 3 - May River Road at Stardust Lane/Site Access \#1 Capacity Analysis Results

| May River Road at Stardust Lane/Site Access \#1 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Measure | EB (May River Road) | WB (May River Road) |  |  | NB (Site Access \#1) |  | SB (Stardust Lane) |  |
|  |  | EBL* | WBL | WBT | WBR | NBL | NBR | SBL(T) | SBR |
| AM Peak Hour |  |  |  |  |  |  |  |  |  |
| 2022 Existing | LOS (Delay) | A (9.0) | A (0.0) |  |  | N/A |  | F (85.3) |  |
|  | Synchro 95th Q | 10' | $0^{\prime}$ |  |  |  |  | 198' |  |
| 2025 No-Build | LOS (Delay) | A (9.4) | A (0.0) |  |  |  |  | F (214.3) |  |
|  | Synchro 95th Q | 13' | 0' |  |  |  |  | 323' |  |
| 2025 Build | LOS (Delay) | A (9.5) | A (9.6)* |  |  | F (76.2) |  | F (\$) |  |
|  | Synchro 95th Q | $13^{\prime}$ | $0^{\prime}$ |  |  | 40' |  | 428' |  |
| 2025 Build | LOS (Delay) | A (9.5) | A (9.6)* |  |  | F (69.6) |  | F (196.8) |  |
| Improved | Synchro 95th Q | $13^{\prime}$ | $0^{\prime}$ |  |  | $33^{\prime}$ | $3 '$ | 228' | $20^{\prime}$ |
| PM Peak Hour |  |  |  |  |  |  |  |  |  |
| 2022 Existing | LOS (Delay) | A (9.3) | A (0.0) |  |  | N/A |  | D (28.0) |  |
|  | Synchro 95th Q | 0' | $0^{\prime}$ |  |  |  |  | 28' |  |
| 2025 No-Build | LOS (Delay) | A (9.7) | A (0.0) |  |  |  |  | E (42.0) |  |
|  | Synchro 95th Q | $3{ }^{\prime}$ | $0^{\prime}$ |  |  |  |  | 45' |  |
| 2025 Build | LOS (Delay) | A (9.7) | A (9.2)* |  |  | E (42.3) |  | F (75.3) |  |
|  | Synchro 95th Q | $3^{\prime}$ | 3' |  |  | $15^{\prime}$ |  | 70' |  |
| 2025 Build Improved | LOS (Delay) | A (9.7) | A (9.2)* |  |  | E (40.2) |  | F (61.8) |  |
|  | Synchro 95th Q | $3^{\prime}$ | $3^{\prime}$ |  |  | $13 '$ | 3' | $53^{\prime} 5^{\prime}$ |  |

N/A - Not Applicable

*     - Delay and queue for mainline left movement
\$ - Delay Exceeds 300 Seconds

The unsignalized intersection of May River Road at Stardust Lane/Site Access \#1 currently operates with long delays (LOS F) on the southbound approach during the AM peak hour and moderate delays (LOS D) during the PM peak hours. The southbound approach is anticipated to continue to operate with long delays (LOS F) under the 2025 No-Build Conditions during the AM peak hour. The delay is anticipated to increase during the 2025 No-Build PM peak hour conditions such that the southbound approach is anticipated to operate at LOS E.

With the inclusion of the site traffic, the southbound approach is anticipated to operate with long delays (LOS F) during the AM and PM peak hours.

Long delays are typical for stop-controlled minor street approaches during peak hour conditions. However, the development is anticipated to increase the southbound queue by over 100' during the AM peak hour. To mitigate the anticipated impact of the proposed development the following improvements are recommended:

- Construct the site access with one ingress lane and two egress lanes
- The site access is recommended to be stop-controlled
- Construct a westbound left-turn lane on May River Road into the proposed development
- Restripe the Stardust Lane southbound approach to consist of one exclusive southbound right-turn lane and one shared southbound through-left lane

With these improvements in place the AM Build improved queue is anticipated to be less than the No-Build AM peak hour queue, and the southbound delay is anticipated to decrease by $\sim 18 \%$ from the Build to Build Improved conditions during the PM peak hour.

### 4.2 May River Road at New Riverside Village

The capacity analysis results for the May River Road at New Riverside Village are summarized in Table 4.

Table 4 - May River Road at New Riverside Village Capacity Analysis Results

| May River Road at New Riverside Village |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Measure | EB (May River Road) |  | $\begin{gathered} \text { WB (May River Road) } \\ \hline \text { WBL* } \\ \hline \end{gathered}$ | NB (New Riverside Village |  |
|  |  | EBT | EBR |  | NBL | NBR |
| AM Peak Hour |  |  |  |  |  |  |
| 2025 No-Build | LOS (Delay) |  | A (0.0) | B (10.5) | E (42.6) |  |
|  | Synchro 95th Q |  | $0^{\prime}$ | $5{ }^{\prime}$ | 63' | $15 '$ |
| 2025 Build | LOS (Delay) |  | A (0.0) | B (10.5) | E (47.3) |  |
|  | Synchro 95th Q |  | $0^{\prime}$ | 8' | 73' | $18{ }^{\prime}$ |
| PM Peak Hour |  |  |  |  |  |  |
| 2025 No-Build | LOS (Delay) |  | A (0.0) | A (9.5) | F (75.9) |  |
|  | Synchro 95th Q |  | $0^{\prime}$ | 8' | 143' | 18 |
| 2025 Build | LOS (Delay) |  | A (0.0) | A (9.6) | F (86.7) |  |
|  | Synchro 95th Q |  | $0^{\prime}$ | 8' | 155' | $18{ }^{\prime}$ |

*     - Dealy and queue is for mainline left-turn

The unsignalized intersection of May River Road at New Riverside Village is anticipated to operate with moderate delays (LOS E) during the AM peak hour and long delays (LOS F) during the PM peak hour. With the inclusion of the site traffic, the northbound approach is anticipated to remain at LOS E during the AM peak hour and LOS F during the PM peak hour. The northbound queue is anticipated to increase by less than one vehicle ( 25 feet) during the AM and PM peak hours with the inclusion of the site traffic.

There are left and right-turn lanes from May River Road into New Riverside Village and two egress on New Riverside Village, therefore, no improvements are recommended to mitigate the impact of the proposed development.

### 4.3 New Riverside Village at Site Access \#2

The capacity analysis results for the New Riverside Village at Site Access \#2 intersection are summarized in Table 5.

Table 5 - New Riverside Village at Site Access \#2 Capacity Analysis Results

| New Riverside Village at Site Access \#2 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Condition | Measure | EB (New Riverside Village) | WB (Site Access \#2) | NB (New Riverside Village) | SB (New Riversdie Village) | Intersection |
|  |  | EBLTR | WBLTR | NBLTR | SBLTR |  |
| AM Peak Hour |  |  |  |  |  |  |
| 2025 No-Build | LOS (Delay) | A (7.9) | N/A | A (7.6) | A (7.5) | A (7.6) |
|  | Synchro 95th Q | $8^{\prime}$ |  | $5{ }^{\prime}$ | 13' |  |
| 2025 Build | LOS (Delay) | A (8.0) | A (6.9) | A (7.6) | A (7.5) | A (7.6) |
|  | Synchro 95th Q | $8^{\prime}$ | 0' | 5' | 13' |  |
| PM Peak Hour |  |  |  |  |  |  |
| 2025 No-Build | LOS (Delay) | A (8.5) | N/A | A (8.0) | A (8.0) | A (8.1) |
|  | Synchro 95th Q | $13{ }^{\prime}$ |  | $10^{\prime}$ | 18' |  |
| 2025 Build | LOS (Delay) | A (8.5) | A (7.1) | A (8.0) | A (8.0) | A (8.1) |
|  | Synchro 95th Q | 13' | $0^{\prime}$ | 10' | 18' |  |

The unsignalized, all-way stop-controlled, intersection of New Riverside Village at Site Access \#2 is anticipated to operate at LOS A during the AM and PM peak hours. Since all approaches and the overall interseciton are anticipated to operate acceptably (LOS D or better), no improvements are recommended at this intersection.

## 5 SCDOT Turn Lane Warrants

Additional turn lane improvements for the unsignalized intersections beyond those necessary for capacity were determined based on guidelines in the 2021 SCDOT Roadway Design Manual. The results of the warrants for left- and right-turn lanes are summarized by intersection below and included in Appendix F.

## May River Road at Stardust Lane/Site Access \#1

- A westbound right-turn lane and an eastbound left-turn have been constructed into Stardust Lane from May River Road
- A westbound left-turn should be considered at this intersection
- An eastbound right-turn lane may not be necessary at this interseciton


## 6 Conclusion

The proposed May River Townhomes Development is located in the southern side of the May River Road at Stardust Lane intersection in Bluffton, South Carolina. This development is planned to consist of 79 townhome units.

It is assumed that the project will access the roadway network via the following two unsignalized, full-movement accesses:

- Site Access \#1 - A full-movement, stop controlled, northbound approach to the May River Road at Stardust Lane intersection
- Site Access \#2 - A full-movement, stop controlled, westbound approach to the New Riverside Village internal interseciton, located approximately 365' south of May River Road.

It is assumed that the completed development will be built and fully occupied by 2025 . This study summarizes the results of the traffic analyses at the following study intersections.:
4) May River Road at Stardust Lane/Site Access \#1
5) May River Road at New Riverside Village
6) New Riverside Village at Site Access \#2

Based on the results of the traffic analyses, the following improvements are recommended to mitigate the impact of the proposed development's traffic on the study area intersections:

## May River Road at Stardust Lane/Site Access \#1

- Construct the site access with one ingress lane and two egress lanes
- The site access is recommended to be stop-controlled
- Construct a westbound left-turn lane on May River Road into the proposed development
- Restripe the Stardust Lane southbound approach to consist of one exclusive southbound right-turn lane and one shared southbound through-left lane


## May River Road at New Riverside Village

- No improvements are recommended at this interseciton


## New Riverside Village at Site Access \#2

- Construct the site access with one ingress lane and one egress lane
- The site access is recommended to be stop-controlled

The recommended laneage is shown on Figure 9.


Kimley»"Horn

## Appendix A - Site Plan



## Appendix B - Trip Generation Calculations



## Appendix C - Traffic Volume Development Worksheet

## INTERSECTION TRAFFIC VOLUME DEVELOPMENT

INTERSECTION:
COUNT DATE:
AM PEAK HOUR FACTOR: PM PEAK HOUR FACTOR:

May River Road at Stardust Lane/Site Access \#1
August 23, 2022
0.93 AM FUTURE PEAK HOUR FACTOR: 0.93

| AM Peak Hour |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AM 2022 EXISTING TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| AM Adjusted Turning Movement Counts ${ }^{1}$ | 0 | 121 | 685 | 0 | 0 | 0 | 369 | 112 | 0 | 0 | 0 | 0 | 0 | 94 | 0 | 104 |
| AM Volume Balancing | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2022 EXISTING TRAFFIC | 0 | 121 | 686 | 0 | 0 | 0 | 371 | 112 | 0 | 0 | 0 | 0 | 0 | 94 | 0 | 104 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM Heavy Vehicle Percentage | 2\% | 7\% | 4\% | 2\% | 2\% | 2\% | 4\% | 1\% | 2\% | 2\% | 2\% | 2\% | 2\% | 3\% | 2\% | 7\% |
| AM 2025 NO-BUILD TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| Annual Growth Rate | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% |
| AM 2025 NO-BUILD TRAFFIC GROWTH | 0 | 7 | 42 | 0 | 0 | 0 | 23 | 7 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2025 NO-BUILD TRAFFIC (No AD) | 0 | 128 | 728 | 0 | 0 | 0 | 394 | 119 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 110 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approved Development 1: New Riverside Village |  | 2 | 50 |  |  |  | 50 |  |  |  |  |  |  |  |  | 1 |
| TOTAL AM APPROVED DEVELOPMENT TRAFFIC | 0 | 2 | 50 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2025 NO-BUILD TRAFFIC | 0 | 130 | 778 | 0 | 0 | 0 | 444 | 119 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 111 |


| "SITE TRA LAND USE | UTION" TYPE | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net New Distribution | Entering |  |  |  | 45\% |  | 40\% | 5\% |  |  |  |  |  |  |  |  |  |
|  | Exiting |  |  | 5\% |  |  |  |  |  |  | 45\% |  | 40\% |  |  |  |  |
| "AM PROJECT TRIPS" |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LAND USE | TYPE | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| Project Trip | Net New | 0 | 0 | 2 | 5 | 0 | 4 | 1 | 0 | 0 | 16 | 0 | 14 | 0 | 0 | 0 | 0 |
| AM TOTAL PROJECT TRIPS |  | 0 | 0 | 2 | 5 | 0 | 4 | 1 | 0 | 0 | 16 | 0 | 14 | 0 | 0 | 0 | 0 |
| AM 2025 BUILD-OUT TRAFFIC |  | 0 | 130 | 780 | 5 | 0 | 4 | 445 | 119 | 0 | 16 | 0 | 14 | 0 | 100 | 0 | 111 |



## INTERSECTION TRAFFIC VOLUME DEVELOPMENT

INTERSECTION:
COUNT DATE:
AM PEAK HOUR FACTOR: PM PEAK HOUR FACTOR:

May River Road at New Riverside Village Access
August 23, 2022
0.95 AM FUTURE PEAK HOUR FACTOR: 0.95

| AM Peak Hour |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AM 2022 EXISTING TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| AM Adjusted Turning Movement Counts ${ }^{1}$ | 0 | 0 | 807 | 0 | 0 | 0 | 475 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Volume Balancing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM 2022 EXISTING TRAFFIC | 0 | 0 | 807 | 0 | 0 | 0 | 475 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM Heavy Vehicle Percentage | 2\% | 2\% | 3\% | 2\% | 2\% | 2\% | 4\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% |
| AM 2025 NO-BUILD TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| Annual Growth Rate | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% |
| AM 2025 NO-BUILD TRAFFIC GROWTH | 0 | 0 | 49 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2025 NO-BUILD TRAFFIC (No AD) | 0 | 0 | 856 | 0 | 0 | 0 | 504 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approved Development 1: New Riverside Village |  |  | -7 | 67 |  | 52 | -1 |  |  | 60 |  | 57 |  |  |  |  |
| TOTAL AM APPROVED DEVELOPMENT TRAFFIC | 0 | 0 | -7 | 67 | 0 | 52 | -1 | 0 | 0 | 60 | 0 | 57 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2025 NO-BUILD TRAFFIC | 0 | 0 | 849 | 67 | 0 | 52 | 503 | 0 | 0 | 60 | 0 | 57 | 0 | 0 | 0 | 0 |


| "SITE TR <br> LAND USE | UUTION" TYPE | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net New Distribution | Entering |  |  | 45\% | 10\% |  | 5\% |  |  |  |  |  |  |  |  |  |  |
|  | Exiting |  |  |  |  |  |  | 45\% |  |  | 10\% |  | 5\% |  |  |  |  |
| "AM PROJECT TRIPS" |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LAND USE | TYPE | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| Project Trip | Net New | 0 | 0 | 5 | 1 | 0 | 1 | 16 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 |
| AM TOTAL PROJECT TRIPS |  | 0 | 0 | 5 | 1 | 0 | 1 | 16 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AM 2025 BUILD-OUT TRAFFIC |  | 0 | 0 | 854 | 68 | 0 | 53 | 519 | 0 | 0 | 64 | 0 | 59 | 0 | 0 | 0 | 0 |



## INTERSECTION TRAFFIC VOLUME DEVELOPMENT

INTERSECTION:
COUNT DATE:
AM PEAK HOUR FACTOR: PM PEAK HOUR FACTOR:

New Riverside Village at Site Access \#2
August 23, 2022
$0.90 \quad$ AM FUTURE PEAK HOUR FACTOR: 0.90 PM FUTURE PEAK HOUR FACTOR: 0.90

| AM Peak Hour |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AM 2022 EXISTING TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| AM Adjusted Turning Movement Counts ${ }^{1}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Volume Balancing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM 2022 EXISTING TRAFFIC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM Heavy Vehicle Percentage | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% | 2\% |
| AM 2025 NO-BUILD TRAFFIC | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| Annual Growth Rate | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% | 2.0\% |
| AM 2025 NO-BUILD TRAFFIC GROWTH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AM 2025 NO-BUILD TRAFFIC (No AD) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Approved Development 1: New Riverside Village |  | 59 |  |  |  |  |  |  |  |  | 58 |  |  |  | 60 | 59 |
| TOTAL AM APPROVED DEVELOPMENT TRAFFIC | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 60 | 59 |
| AM 2025 NO-BUILD TRAFFIC | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 60 | 59 |


"AM PROJECT TRIPS"

| LAND USE | TYPE | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR | SBU | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Trip | Net New | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| AM TOTAL PROJECT TRIPS |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| AM 2025 BUILD-OUT TRAFFIC |  | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 58 | 0 | 0 | 2 | 60 | 59 |




Z:\27796\27796.0002\Documents\Reports\Traffic\May 2021 Revision\Supporting Documents \27796-Traffic Figures.dwg - May 13, 2021-3:02:17 PM


Z:\27796\27796.0002\Documents\Reports\Traffic\May 2021 Revision\Supporting Documents \27796-Trafic Figures.dwg - May 17. 2021-1:35:30 PM

## Appendix D - Raw Turning Movement Counts


Peak-Hour: 7:00 AM -- 8:00 AM Peak 15-Min: 7:30 AM -- 7:45 AM


| 15-Min Count Period Beginning At | Stardust Ln (Northbound) |  |  |  | Stardust Ln (Southbound) |  |  |  | May River Rd (Eastbound) |  |  |  | May River Rd (Westbound) |  |  |  | Total | Hourly Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 6 | 0 | 5 | 0 | 45 | 166 | 0 | 0 | 0 | 70 | 34 | 0 | 326 |  |
| 7:15 AM | 0 | 0 | 0 | 0 | 22 | 0 | 39 | 0 | 40 | 164 | 0 | 0 | 0 | 76 | 36 | 0 | 377 |  |
| 7:30 AM | 0 | 0 | 0 | 0 | 28 | 0 | 37 | 0 | 30 | 169 | 0 | 0 | 0 | 102 | 34 | 0 | 400 |  |
| 7:45 AM | 0 | 0 | 0 | 0 | 38 | 0 | 23 | 0 | 5 | 186 | 0 | 1 | 0 | 121 | 8 | 0 | 382 | 1485 |
| 8:00 AM | 0 | 0 | 0 | 0 | 22 | 0 | 7 | 0 | 7 | 145 | 0 | 1 | 0 | 98 | 4 | 0 | 284 | 1443 |
| 8:15 AM | 0 | 0 | 0 | 0 | 11 | 0 | 2 | 0 | 0 | 148 | 0 | 0 | 0 | 104 | 2 | 0 | 267 | 1333 |
| 8:30 AM | 0 | 0 | 0 | 0 | 7 | 0 | 3 | 0 | 7 | 183 | 0 | 1 | 0 | 109 | 4 | 0 | 314 | 1247 |
| 8:45 AM | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 1 | 134 | 0 | 0 | 0 | 112 | 8 | 0 | 269 | 1134 |
| Peak 15-Min Flowrates | Northbound |  |  |  | Southbound |  |  |  | Eastbound |  |  |  | Westbound |  |  |  | Total |  |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |  |
| All Vehicles | 0 | 0 | 0 | 0 | 112 | 0 | 148 | 0 | 120 | 676 | 0 | 0 | 0 | 408 | 136 | 0 |  | 00 |
| Heavy Trucks Buses | 0 | 0 | 0 |  | 4 | 0 | 16 |  | 16 | 8 | 0 |  | 0 | 20 | 0 |  |  | 4 |
| Pedestrians |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  |  |
| Bicycles Scooters | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  |  |

Comments:



Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:45 PM -- 6:00 PM


| 15-Min Count Period Beginning At | Unpaved Rd (Northbound) |  |  |  | Unpaved Rd (Southbound) |  |  |  | May River Rd (Eastbound) |  |  |  | May River Rd (Westbound) |  |  |  | Total | Hourly Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 131 | 0 | 0 | 0 | 127 | 0 | 0 | 258 |  |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 116 | 0 | 0 | 0 | 179 | 0 | 0 | 295 |  |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 | 0 | 0 | 0 | 171 | 0 | 0 | 315 |  |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 0 | 0 | 153 | 0 | 0 | 262 | 1130 |
| 5:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 0 | 170 | 0 | 0 | 313 | 1185 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 0 | 0 | 0 | 165 | 0 | 0 | 288 | 1178 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 137 | 1 | 0 | 0 | 151 | 0 | 0 | 289 | 1152 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156 | 0 | 0 | 0 | 173 | 0 | 0 | 329 | 1219 |
| Peak 15-Min Flowrates | Northbound |  |  |  | Southbound |  |  |  | Eastbound |  |  |  | Westbound |  |  |  | Total |  |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |  |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 624 | 0 | 0 | 0 | 692 | 0 | 0 |  | 16 |
| Heavy Trucks Buses | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 8 | 0 |  | 0 | 8 | 0 |  |  | 6 |
| Pedestrians |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |
| Bicycles Scooters | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 4 | 0 |  | 0 | 0 | 0 |  |  | 4 |

Comments:


Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:15 AM -- 7:30 AM


| 15-Min Count Period Beginning At | Unpaved Rd (Northbound) |  |  |  | Unpaved Rd (Southbound) |  |  |  | Future Townhouses (Eastbound) |  |  |  | Future Townhouses (Westbound) |  |  |  | Total | Hourly Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 7:15 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |  |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Peak 15-Min Flowrates | Northbound |  |  |  | Southbound |  |  |  | Eastbound |  |  |  | Westbound |  |  |  | Total |  |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |  |
| All Vehicles | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |  | 8 |
| Heavy Trucks Buses | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 0 |
| Pedestrians |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |
| Bicycles Scyoters | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 0 |
| Comments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM


| 15-Min Count Period Beginning At | Unpaved Rd (Northbound) |  |  |  | Unpaved Rd (Southbound) |  |  |  | Future Townhouses (Eastbound) |  |  |  | Future Townhouses (Westbound) |  |  |  | Total | Hourly Totals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  |  |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |  |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 5:15 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 5:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Peak 15-Min |  | North | ound |  |  | South | ound |  |  | East | und |  |  | West | ound |  |  |  |
| Flowrates | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U |  | tal |
| All Vehicles | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 8 |
| Heavy Trucks Buses | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 0 |
| Pedestrians |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |  |  |  | 0 |
| Bicycles Scooters | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 0 |

Comments:

## Appendix E-Capacity Analysis Worksheets

## 2022 EXISTING CONDITIONS

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh 12.1 |  |  |  |  |  |  |
| Movement E | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ${ }^{1}$ | 4 | 4 | 「 | M |  |
| Traffic Vol, veh/h | 121 | 686 | 371 | 112 | 94 | 104 |
| Future Vol, veh/h | 121 | 686 | 371 | 112 | 94 | 104 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control F | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None |  | None | - | None |
| Storage Length | 200 | - | - | 125 | 0 | - |
| Veh in Median Storage, \# | \# | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 7 | 4 | 4 | 1 | 3 | 7 |
| Mvmt Flow | 130 | 738 | 399 | 120 | 101 | 112 |


HCM LOS F

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR SBLn1 |
| :--- | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 1022 | - | - | -231 |
| HCM Lane V/C Ratio | 0.127 | - | - | -0.922 |
| HCM Control Delay (s) | 9 | - | - | -85.3 |
| HCM Lane LOS | A | - | - | - |
| HCM 95th \%tile Q(veh) | 0.4 | - | - | - |
| H.9 |  |  |  |  |



| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 751 | 0 | - | 0 | 1338 | 711 |
| Stage 1 | - | - | - | - | 711 | - |
| Stage 2 | - | - | - | - | 627 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 858 | - | - | - | 169 | 433 |
| Stage 1 | - | - | - | - | 487 | - |
| Stage 2 | - | - | - | - | 532 | - |
| Platoon blocked, \% |  | - | - | - |  |  |
| Mov Cap-1 Maneuver | 858 | - | - | - | 166 | 433 |
| Mov Cap-2 Maneuver | - | - | - | - | 166 | - |
| Stage 1 | - | - | - | - | 480 | - |
| Stage 2 | - | - | - - | - | 532 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 0.2 |  | 0 |  | 28 |  |
| HCM LOS |  |  |  |  | D |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT WBR SBLn1 |  |  |
| Capacity (veh/h) |  | 858 | - | - | - | 215 |
| HCM Lane V/C Ratio |  | 0.015 | - | - | - | 0.276 |
| HCM Control Delay (s) |  | 9.3 | - | - | - | 28 |
| HCM Lane LOS |  | A | - | - | - | D |
| HCM 95th \%tile Q(veh) |  | 0 | - | - | - | 1.1 |

## 2025 No-Build

| Intersection |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh 27.6 | 27.6 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL |  |
| Lane Configurations | ${ }^{7}$ | + | + | 「 | * |  |
| Traffic Vol, veh/h | 130 | 778 | 444 | 119 | 100 | 111 |
| Future Vol, veh/h | 130 | 778 | 444 | 119 | 100 | 111 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control F | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 200 | - | - | 125 | 0 | - |
| Veh in Median Storage, \# | \# | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 7 | 4 | 4 | 1 | 3 | 7 |
| Mvmt Flow | 140 | 837 | 477 | 128 | 108 | 119 |


HCM LOS F

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR SBLn1 |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 949 | - | - | -177 |  |
| HCM Lane V/C Ratio | 0.147 | - | - | -1.282 |  |
| HCM Control Delay (s) | 9.4 | - | - | -214.3 |  |
| HCM Lane LOS | A | - | - | - | F |
| HCM 95th \%tile Q(veh) | 0.5 | - | - | -12.9 |  |
| Notes |  |  |  |  |  |
| $\because$ Volume exceeds capacity | $\$:$ Delay exceeds 300s | $+:$ Computation Not Defined | *: All major volume in platoon |  |  |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 3.5 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | 个 | $\mathbf{7}$ |  | 4 | d | $\mathbf{7}$ |
| Traffic Vol, veh/h | 849 | 67 | 52 | 503 | 60 | 57 |
| Future Vol, veh/h | 849 | 67 | 52 | 503 | 60 | 57 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 100 | 200 | - | 0 | 0 |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, \% | 3 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 894 | 71 | 55 | 529 | 63 | 60 |




| Lane | NBLn1 | EBLn1 | SBLn1 |
| :--- | ---: | ---: | ---: |
| Vol Left, \% | $0 \%$ | $100 \%$ | $0 \%$ |
| Vol Thru, \% | $100 \%$ | $0 \%$ | $50 \%$ |
| Vol Right, \% | $0 \%$ | $0 \%$ | $50 \%$ |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 58 | 59 | 119 |
| LT Vol | 0 | 59 | 0 |
| Through Vol | 58 | 0 | 60 |
| RT Vol | 0 | 0 | 59 |
| Lane Flow Rate | 64 | 66 | 132 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.074 | 0.081 | 0.14 |
| Departure Headway (Hd) | 4.15 | 4.472 | 3.799 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 855 | 793 | 935 |
| Service Time | 2.215 | 2.546 | 1.86 |
| HCM Lane V/C Ratio | 0.075 | 0.083 | 0.141 |
| HCM Control Delay | 7.6 | 7.9 | 7.5 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.2 | 0.3 | 0.5 |



| Major/Minor M | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 864 | 0 | - | 0 | 1582 | 822 |
| Stage 1 | - | - | - | - | 822 | - |
| Stage 2 | - | - | - | - | 760 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - |  | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 779 | - | - | - | 120 | 374 |
| Stage 1 | - | - | - | - | 432 | - |
| Stage 2 | - | - | - | - | 462 | - |
| Platoon blocked, \% |  | - | - | - |  |  |
| Mov Cap-1 Maneuver | 779 | - | - | - | 117 | 374 |
| Mov Cap-2 Maneuver | - | - | - | - | 117 | - |
| Stage 1 | - | - | - | - | 422 |  |
| Stage 2 | - | - | - | - | 462 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 0.2 |  | 0 |  | 42 |  |
| HCM LOS |  |  |  |  | E |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR | BLn1 |
| Capacity (veh/h) |  | 779 | - | - | - | 160 |
| HCM Lane V/C Ratio |  | 0.023 | - | - | - | 0.405 |
| HCM Control Delay (s) |  | 9.7 | - |  | - | 42 |
| HCM Lane LOS |  | A | - | - | - | E |
| HCM 95th \%tile Q(veh) |  | 0.1 | - | - | - | 1.8 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 9.1 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | $\mathbf{4}$ | $\mathbf{7}$ |  | $\mathbf{4}$ | $\mathbf{1}$ | $\mathbf{7}$ |
| Traffic Vol, veh/h | 583 | 87 | 71 | 700 | 99 | 86 |
| Future Vol, veh/h | 583 | 87 | 71 | 700 | 99 | 86 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 100 | 200 | - | 0 | 0 |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 627 | 94 | 76 | 753 | 106 | 92 |




| Lane | NBLn1 | EBLn1 | SBLn1 |
| :--- | ---: | ---: | ---: |
| Vol Left, \% | $0 \%$ | $100 \%$ | $0 \%$ |
| Vol Thru, \% | $100 \%$ | $0 \%$ | $50 \%$ |
| Vol Right, \% | $0 \%$ | $0 \%$ | $50 \%$ |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 92 | 93 | 157 |
| LT Vol | 0 | 93 | 0 |
| Through Vol | 92 | 0 | 79 |
| RT Vol | 0 | 0 | 78 |
| Lane Flow Rate | 102 | 103 | 174 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.124 | 0.136 | 0.194 |
| Departure Headway (Hd) | 4.362 | 4.725 | 4.003 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 824 | 761 | 900 |
| Service Time | 2.375 | 2.74 | 2.014 |
| HCM Lane V/C Ratio | 0.124 | 0.135 | 0.193 |
| HCM Control Delay | 8 | 8.5 | 8 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.5 | 0.7 |

Kimley»Horn

## 2025 Build




|  | EB | WB | NB | SB |
| :--- | :---: | :---: | :---: | :---: |
| Approach | CM |  |  |  |
| HCM LOS | 0.1 | 76.2 | $\$ 423.7$ |  |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 4 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | 个 | $\mathbf{7}$ |  | 4 | $\mathbf{1}$ | $\mathbf{7}$ |
| Traffic Vol, veh/h | 854 | 68 | 53 | 519 | 64 | 59 |
| Future Vol, veh/h | 854 | 68 | 53 | 519 | 64 | 59 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 100 | 200 | - | 0 | 0 |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, \% | 3 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 899 | 72 | 56 | 546 | 67 | 62 |


| Major/Minor | Major1 |  | Major2 | Minor1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 0 | 0 | 971 | 0 | 1557 | 899 |
| Stage 1 | - | . |  |  | 899 |  |
| Stage 2 |  | - | - |  | 658 |  |
| Critical Hdwy | - | - | 4.12 |  | 6.42 | 6.22 |
| Critical Hdwy Stg 1 |  | - |  |  | 5.42 |  |
| Critical Hdwy Stg 2 |  | - |  |  | 5.42 |  |
| Follow-up Hdwy |  |  | 2.218 |  | 3.518 | 3.318 |
| Pot Cap-1 Maneuver |  | - | 710 |  | 124 | 338 |
| Stage 1 | - | - | - | - | 397 |  |
| Stage 2 | - | - |  |  | 515 |  |
| Platoon blocked, \% | - | - |  |  |  |  |
| Mov Cap-1 Maneuver | - | - | 710 |  | 114 | 338 |
| Mov Cap-2 Maneuver |  | - |  |  | 114 |  |
| Stage 1 |  | - | - |  |  |  |
| Stage 2 | - | - | - | - | 474 |  |


| Approach | EB | WB | NB |
| :--- | ---: | ---: | ---: |
| HCM Control Delay, s | 0 | 1 | 47.3 |
| HCM LOS |  |  | E |


| Minor Lane/Major Mvmt | NBLn1 NBLn2 | EBT | EBR | WBL | WBT |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 114 | 338 | - | -710 | - |  |
| HCM Lane V/C Ratio | 0.591 | 0.184 | - | -0.079 | - |  |
| HCM Control Delay (s) | 74.4 | 18 | - | - | 10.5 | - |
| HCM Lane LOS | F | C | - | - | B | - |
| HCM 95th \%tile Q(veh) | 2.9 | 0.7 | - | - | 0.3 | - |


| Intersection |  |
| :--- | ---: | :--- |
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations |  | $\uparrow$ |  |  | $\uparrow$ |  |  | $\uparrow$ |  |  | \$ |  |
| Traffic Vol, veh/h | 59 | 0 | 0 | 0 | 0 | 6 | 0 | 58 | 0 | 2 | 60 | 59 |
| Future Vol, veh/h | 59 | 0 | 0 | 0 | 0 | 6 | 0 | 58 | 0 | 2 | 60 | 59 |
| 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 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 66 | 0 | 0 | 0 | 0 | 7 | 0 | 64 | 0 | 2 | 67 | 66 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Approach | EB |  |  |  | WB |  |  | NB |  | SB |  |  |
| Opposing Approach | WB |  |  |  | EB |  |  | SB |  | NB |  |  |
| Opposing Lanes | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| Conflicting Approach Left | SB |  |  |  | NB |  |  | EB |  | WB |  |  |
| Conflicting Lanes Left | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| Conflicting Approach Right | NB |  |  |  | SB |  |  | WB |  | EB |  |  |
| Conflicting Lanes Right | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| HCM Control Delay | 8 |  |  |  | 6.9 |  |  | 7.6 |  | 7.5 |  |  |
| HCM LOS | A |  |  |  | A |  |  | A |  | A |  |  |


| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
| :--- | ---: | ---: | ---: | ---: |
| Vol Left, \% | $0 \%$ | $100 \%$ | $0 \%$ | $2 \%$ |
| Vol Thru, \% | $100 \%$ | $0 \%$ | $0 \%$ | $50 \%$ |
| Vol Right, \% | $0 \%$ | $0 \%$ | $100 \%$ | $49 \%$ |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 58 | 59 | 6 | 121 |
| LT Vol | 0 | 59 | 0 | 2 |
| Through Vol | 58 | 0 | 0 | 60 |
| RT Vol | 0 | 0 | 6 | 59 |
| Lane Flow Rate | 64 | 66 | 7 | 134 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.075 | 0.082 | 0.007 | 0.143 |
| Departure Headway (Hd) | 4.163 | 4.482 | 3.828 | 3.819 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 851 | 791 | 941 | 929 |
| Service Time | 2.233 | 2.561 | 1.828 | 1.884 |
| HCM Lane V/C Ratio | 0.075 | 0.083 | 0.007 | 0.144 |
| HCM Control Delay | 7.6 | 8 | 6.9 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.2 | 0.3 | 0 | 0.5 |


| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh 3.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{*}$ | $\uparrow$ |  |  | $\uparrow$ | 「 |  | \$ |  |  | \$ |  |
| Traffic Vol, veh/h | 16 | 660 | 16 | 14 | 750 | 38 | 9 | 0 | 8 | 36 | 0 | 23 |
| Future Vol, veh/h | 16 | 660 | 16 | 14 | 750 | 38 | 9 | 0 | 8 | 36 | 0 | 23 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control F | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 200 | - | - | - | - | 125 | - | - | - | - | - | - |
| Veh in Median Storage, \# |  | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, \% | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 725 | 18 | 15 | 824 | 42 | 10 | 0 | 9 | 40 | 0 | 25 |




HCM LOS F

| Minor Lane/Major Mvmt | NBLn1 NBLn2 | EBT | EBR | WBL | WBT |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 112 | 473 | - | -866 | - |  |
| HCM Lane V/C Ratio | 0.97 | 0.198 | - | -0.091 | - |  |
| HCM Control Delay (s) | 148.9 | 14.5 | - | - | 9.6 | - |
| HCM Lane LOS | F | B | - | - | A | - |
| HCM 95th \%tile Q(veh) | 6.2 | 0.7 | - | - | 0.3 | - |


| Intersection |  |
| :--- | ---: | :--- |
| Intersection Delay, s/veh | 8.1 |
| Intersection LOS | A |


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations |  | ¢ |  |  | ¢ |  |  | \$ |  |  | ¢ |  |
| Traffic Vol, veh/h | 93 | 0 | 0 | 0 | 0 | 3 | 0 | 92 | 0 | 5 | 79 | 78 |
| Future Vol, veh/h | 93 | 0 | 0 | 0 | 0 | 3 | 0 | 92 | 0 | 5 | 79 | 78 |
| 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 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 103 | 0 | 0 | 0 | 0 | 3 | 0 | 102 | 0 | 6 | 88 | 87 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Approach | EB |  |  |  | WB |  |  | NB |  | SB |  |  |
| Opposing Approach | WB |  |  |  | EB |  |  | SB |  | NB |  |  |
| Opposing Lanes | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| Conflicting Approach Left | SB |  |  |  | NB |  |  | EB |  | WB |  |  |
| Conflicting Lanes Left | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| Conflicting Approach Right | NB |  |  |  | SB |  |  | WB |  | EB |  |  |
| Conflicting Lanes Right | 1 |  |  |  | 1 |  |  | 1 |  | 1 |  |  |
| HCM Control Delay | 8.5 |  |  |  | 7.1 |  |  | 8 |  | 8 |  |  |
| HCM LOS | A |  |  |  | A |  |  | A |  | A |  |  |


| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
| :--- | ---: | ---: | ---: | ---: |
| Vol Left, \% | $0 \%$ | $100 \%$ | $0 \%$ | $3 \%$ |
| Vol Thu, \% | $100 \%$ | $0 \%$ | $0 \%$ | $49 \%$ |
| Vol Right, \% | $0 \%$ | $0 \%$ | $100 \%$ | $48 \%$ |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 92 | 93 | 3 | 162 |
| LT Vol | 0 | 93 | 0 | 5 |
| Through Vol | 92 | 0 | 0 | 79 |
| RT Vol | 0 | 0 | 3 | 78 |
| Lane Flow Rate | 102 | 103 | 3 | 180 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.124 | 0.136 | 0.004 | 0.201 |
| Departure Headway (Hd) | 4.377 | 4.744 | 4.067 | 4.027 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 822 | 758 | 881 | 895 |
| Service Time | 2.388 | 2.759 | 2.086 | 2.035 |
| HCM Lane V/C Ratio | 0.124 | 0.136 | 0.003 | 0.201 |
| HCM Control Delay | 8 | 8.5 | 7.1 | 8 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.5 | 0 | 0.7 |

Kimley»"Horn

## 2025 Build Improved




| Approach | EB | WB | NB | SB |
| :--- | :--- | :---: | ---: | ---: |
| HCM Control Delay, s | 1.3 | 0.1 | 69.6 | 196.8 |
| HCM LOS |  | F | F |  |


| Minor Lane/Major Mvmt | NBLn1 NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR SBLn1 SBLn2 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Capacity (veh/h) | 48 | 364 | 948 | - | - | 792 | - | - |




## Appendix F - Turn Lane Warrant Analyses

May River Road/Stardust Lane at Site Access \#1


Note: For highways with a design speed below 50 miles per hour with a DHV $<300$ and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

## Example

AM Peak Hour
DHV = 915
Rights = 5
Given:

| Design Speed | $=$ | 35 miles per hour |
| :--- | :--- | :--- |
| DHV | $=$ | 250 vehicles per hour |
| Right Turns | $=$ | 100 vehicles per hour |

> | PM Peak Hour |
| :--- |
| DHV = 692 |
| Rights $=16$ |

Problem: Determine if a right-turn lane is necessary.
Solution: To read the vertical axis, use $100-20=80$ vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

## GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

May River Road/Stardust Lane at Site Access \#1


## Instructions.

1. The family of curves represents the percent of left turns in the advancing volume $\left(V_{A}\right)$. The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read $V_{A}$ and $V_{O}$ into the chart and locate the intersection of the two volumes.
3. Note the location of the point in \#2 relative to the line in \#1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a leftturn lane is not warranted based on traffic volumes.

To: Beaufort County Planning Commission
From: $\quad$ Eric Claussen, PE, Engineering Director
Subject: Text Amendments to the Community Development Code (CDC): Appendix C. 2 to update the Robert Smalls Parkway (SC 170) \& Broad River Boulevard Access Management Plan

Date: December 5, 2022
A. BACKGROUND: The Transportation Engineering Department has contracted Andrews Engineering to analyze Robert Smalls Parkway (SC 170) \& Broad River Boulevard from Castle Rock Road to W.K. Alston Drive to update the County's access management standards for these roadways. Andrews Engineering's analysis revealed necessary updates to the access management plan for this corridor based upon review of existing and planned developments, existing and future traffic patterns, and crash history along with the 2040 traffic projects from the Lowcountry Council of Governments (LCOG) Regional Travel Demand Model prepared by CDM Smith.
B. SUMMARY OF PROPOSED AMENDMENTS: The review of Robert Smalls Parkway and Broad River Boulevard revealed a need to update the future signal location recommendations to include 2 new intersection locations:

- SC 170 at Goethe Hill Road
- Broad River Boulevard at Joe Frazier Road

Additionally, the amendments will update the distances in feet between each planned or existing signalized intersection from 1,900 feet to 2,640 feet.

## C. ATTACHMENTS:

- Revised Section C. 2 (Robert Smalls Parkway (SC 170) \& Broad River Boulevard)
- Corridor Review of SC 170 \& Broad River Boulevard Study

Division C.2: - Robert Smalls Parkway (SC 170) \& Broad River Boulevard

## C.2.10-Application

The following access management standards apply to all properties within Beaufort County's jurisdiction on Robert Smalls Parkway (SC 170) between the intersection of SC 280 (Parris Island Gateway) and the Broad River Bridge to include Broad River Boulevard.

## C.2.20 - Signal Spacing

The minimum spacing between full signalized access is 3,200 feet. The minimum spacing between directional signalized access is approximately 1,900 feet 2,640 feet.

## C.2.30 - Future Signal Locations

The specific signalized access locations shall correspond to the Future Signal Locations provided in the Figure 1 in Appendix 10-B: Robert Smalls Parkway Joint Corridor Plan of the Beaufort County Comprehensive Plan Corridor Review of SC 170 \& Broad River Boulevard (2022). If a modification of the defined signal locations is desired to meet the demands of a specific development, the following conditions shall be satisfied:
A. The modified location must meet the warrants for signalization with the proposed development as defined in the Manual on Uniform Traffic Control Devices (MUTCD) by the Federal Highway Administration (FHWA) with the analysis and specific application of traffic signal warrants to be approved by the Beaufort County traffic Engineer.
B. The modified location must provide adequate spacing (as defined in the spacing standards indicated above) from existing traffic signals, programmed traffic signals, and future signalization of primary roadway intersections, including:

1. SC 170 at SC 280. (Existing)
2. SC 170 at W.K. Alston. (Existing)
3. SC 170 at Goethe Hill Road. (Future)
4. 4. SC 170 at Castle Rock Road. (Existing)
1. 5. SC 170 at Broad River Road. (Existing)
1. 6._SC 170 at SC 802. (Existing)
2. Broad River Boulevard at Joe Frazier Road. (Existing)
3. Broad River Boulevard at W.K. Alston. (Future)
C. The modified location shall not have an adverse impact on existing or future LOS based on comparative analysis of conditions with the recommended signal locations indicated in the Appendix 1: Robert Smalls Parkway Joint Corridor Plan of the Beaufort County Comprehensive Plan above-Corridor Review of SC 170 \& Broad River Boulevard (2022). The developer shall be required to conduct LOS and signal system progression analysis to demonstrate compatibility of the proposed signal location with operation of the remainder of the signal system.

## C.2.40 - Driveways

A. Spacing: A minimum of one point of access to a property will be allowed. Additional access points above the one permitted may be granted provided the continuous roadway frontage of the property exceeds 500 feet. Single parcel access is strongly discouraged. Joint access driveways are encouraged for small parcels to adhere to the 500 -foot spacing. Driveways should be limited to the number needed to provide adequate access to a property. Factors such as alignment with opposing
driveways and minimum spacing requirements will have a bearing on the location and number of driveways approved. Refer to Table B.2.40.A.

| Table C.2.40.A: Maximum Number of Driveways Per Frontage |  |
| :--- | :--- |
| Length of Frontage | Maximum Number of Driveways |
| 500 feet or less | 1 |
| 500+ to 1,000 feet | 2 |
| $1,000+$ to 1,500 feet | 3 |
| $1,500+$ to 2,000 feet | 4 |
| More than 2,000 feet | 4 plus 1 per each additional 500 feet of frontage |

For parcels with frontage both on Robert Smalls Parkway and a secondary road, a minimum spacing of 500 feet shall be maintained along Robert Smalls Parkway between a driveway and a signalized intersection. Within 500 feet of signalized intersections, access shall be off a secondary road. Driveway spacing shall be measured from the closest edge of pavement to the next closest edge of pavement.
B. Driveway design: Driveway width and turning radii shall conform to SCDOT's Access and Roadside Management Standards.
C. Driveway linkages: See Article VI, Section 6.3.10.D for driveway linkage requirements for nonresidential development.
D. Retrofitting existing driveways: As changes are made to previously developed property or to the roadway, driveways will be evaluated for the need to be relocated, consolidated, or eliminated if they do not meet the access management standards.

## C.2.50-Deceleration Lanes

Deceleration lanes shall be required when the volume of traffic turning at a site is high enough in relation to the through traffic to constitute the potential for disruption as indicated in the traffic impact analysis.

## C.2.60 - Traffic Impact Analysis

A traffic impact analysis study shall be provided for proposed developments along the Robert Smalls Parkway corridor anticipated to generate at least 50 peak-hour trips. The procedures and guidelines for a traffic impact analysis as set forth in Article 6, Division 6.3 shall be followed.

## MEMORANDUM

TO: Beaufort County Planning Commission
FROM: Robert Merchant, AICP, Beaufort County Planning and Zoning Department
DATE: December 5, 2022
SUBJECT: Text Amendment to the Community Development Code (CDC): Section 5.3.20 (Architectural Standards and Guidelines Applicability) and Appendix, Division A.1.20 (Community Preservation Districts - Relationship to the Community Development Code) to restrict that a shipping container or other similar portable storage container is not considered a dwelling.
A. BACKGROUND: This text amendment is a response to an inconsistency in the Community Development Code regarding the use of shipping containers as structures. Section 4.2.20.E(4) of the CDC prohibits the use of tractor trailers and shipping containers as accessory structures. The CDC, however, is silent on the use of shipping containers as a principal dwelling. This proposed ordinance (see attached) will restrict the use of shipping containers as dwelling units.
B. SUMMARY OF PROPOSED REVISIONS: The proposed text amendment provides minimum architectural standards for single-family residential that prohibits the use of any shipping container or the like, travel trailer, or recreational vehicle (RV) as a primary or accessory structures.
C. STAFF RECOMMENDATION: Staff recommends approval.

## D. ATTACHMENTS:

1. Draft Ordinance Revisions.
$\qquad$

# TEXT AMENDMENT TO THE COMMUNITY DEVELOPMENT CODE (CDC): SECTION 5.3.20 (ARCHITECTURAL STANDARDS AND GUIDELINES APPLICABILITY) AND APPENDIX A, DIVISION A.1.20 (COMMUNITY PRESERVATION DISTRICTS - RELATIONSHIP TO THE COMMUNITY DEVELOPMENT CODE) TO RESTRICT THAT A SHIPPING CONTAINER OR OTHER SIMILAR PORTABLE STORAGE CONTAINER IS NOT CONSIDERED A DWELLING. 


#### Abstract

WHEREAS, the Community Development Code in Section 4.2.20.E restricts the use of storage containers as accessory uses, but does not provide clear direction in their use as dwellings; and

WHEREAS, Article 5, Division 5.3 of the Community Development Code establishes architectural standards and guidelines for development in Beaufort County; and

WHEREAS, it is necessary for the Community Development Code to provide clear guidance on the use of shipping containers, other portable storage containers, travel trailers, and recreational vehicles (RVs) as dwellings or accessory uses;

NOW, THEREFORE be it ordained by County Council in meeting duly assembled that Section 5.3.20 and Appendix A, Division A.1.20 of the Community Development Code is hereby amended as set forth in Exhibit A hereto to prohibit the use of shipping containers, other portable storage containers, travel trailers, and recreational vehicles (RVs) as dwellings or accessory uses. Deletions in the existing code are stricken through. Additions are highlighted and underlined.


Adopted this $\qquad$ day of $\qquad$ 2022.

## COUNTY COUNCIL OF BEAUFORT COUNTY

By:
Joseph Passiment, Chairman

## ATTEST:

Sarah W. Brock, JD, Clerk to Council

## Division 5.3: Architectural Standards and Guidelines

## Sections:

5.3.10 Purpose
5.3.20 Applicability
5.3.30 General Architectural Standards and Guidelines
5.3.40 Architectural Styles

### 5.3.10 Purpose

The purpose of this Division is as follows:
A. To provide standards and guidelines that achieve and promote a consistently high level of design for the County's most intense and most visible development; and
B. To encourage new and renovated buildings to reflect the distinct characteristics of Beaufort County Places.

### 5.3.20 Applicability

A. Within Transect Zones. The standards and guidelines in Section 5.3.30 (General Architectural Standards) and Section 5.3.40 (Architectural Styles) are applicable to all proposed development within:

1. The T4HC, T4HCO, T4VC and T4NC Zones.
2. The T2 and T3 Zones with the exception of agricultural, single-family and two-family residential uses.
3. A Traditional Community Plan, in locations where new development is intended to create walkable places of character, and for which a Transect-based Regulating Plan will be established.
B. Within Conventional Zones, Existing PUDs, and Community Preservation Districts. Within Conventional Zones Existing PUDs, and Community Preservation Districts, all development located within 500 feet of the right-of-way of an arterial or major collector, with the exception of single-family and two-family residential, shall meet the standards in Section 5.3.30 (General Architectural Standards and Guidelines) and utilize Section 5.3.40 (Architectural Styles) as a "best practices manual" to achieve the standards in Section 5.3.30 (General Architectural Standards).
C. Within All Zones. The use of any shipping container or the like, travel trailer, or recreational vehicle (RV) as a primary or accessory structure shall be prohibited in all zoning districts.

D E. Standards and Guidelines. This Division includes both standards and guidelines. Statements predicated by the words "shall" or "must" are to be interpreted as standards. Statements predicated by the words "should" or "may" are to be interpreted as guidelines.

### 5.3.30 General Architectural Standards and Guidelines

The purpose of the following general architectural standards and guidelines are to create a quality built environment that reflects the County's unique Lowcountry character. This is achieved by adhering to good architectural design principles and incorporating traditional architectural features, while blending harmoniously with the natural surroundings.

| Table A.I.20: Applicability of the Community Development Code to the Community Preservation Districts |  |
| :---: | :---: |
| Article or Division | Applicability to CP Districts |
| Article I: General Provisions | Applicable |
| Article 2: Multi-lot Single-Lot Community Scale Development | Limited Applicable (see below) |
| Division 2.1: Overview | Applicable |
| Division 2.2: General to Community Design | Applicable |
| Division 2.3: Traditional Community Plans | Applicability limited to CP Districts that permit Traditional Community Plans |
| Division 2.4: Multi-Family Oriented Communities | Not Applicable |
| Division 2.5: Manufactured Home Communities | Applicability limited to CP Districts that permit Manufactured Home Communities |
| Division 2.6: Commercial Oriented Communities | Not Applicable |
| Division 2.7: Developments within Rural Areas | Section 2.7.40 applicable to CP Districts that permit family compounds. |
| Division 2.8: Civic and Open Space Standards | Sections 2.8.50 and 2.8.60 are applicable. |
| Division 2.9: Thoroughfare Standards | Sections 2.9.40, 2.9.50, 2.9.60, and 2.9.80 are applicable. |
| Division 2.10: Transfer of Development Rights | Applicable ${ }^{\text {1 }}$ |
| Article 3: Specific to Zones | Limited Applicable (see below) |
| Division 3.I: Establishment and Designation of Zones | Not Applicable |
| Division 3.2: Transect Zones | Not Applicable |
| Division 3.3: Conventional Zones | Not Applicable |
| Division 3.4: Overlay Zones | Overlay zones may overlay CP Districts |
| Article 4: Specific to Use | Limited Applicable (see below) |
| Division 4.1: Specific to Use | Not applicable |
| Division 4.2: Accessory Uses and Structures | Applicable |
| Division 4.3: Temporary Uses and Structures | Not applicable |
| Article 5: Supplemental to Zones | Limited Applicable (see below) |
| Division 5.I: Building Type Standards | Not applicable unless specific building type is referenced in this Appendix. |
| Division 5.2: Private Frontage Standards | Not Applicable |
| Division 5.3: Architectural Standards and Guidelines | Section 5.3.20 and 5.3.30 is are applicable. |
| Division 5.4: Fences and Walls | Applicable |
| Division 5.5: Off-Street Parking | Applicable |
| Division 5.6: Sign Standards | Applicable |
| Division 5.7: Exterior Lighting | Applicable |
| Division 5.8: Landscaping, Buffers, and Screening Standards | Applicable |
| Division 5.9: Neighborhood Compatibility Standards | Not Applicable |
| Division 5.10: Historic Preservation | Applicable |
| Division 5.11: Resource Protection Standards | Applicable |
| Division 5.12: Stormwater Standards | Applicable |
| Article 6: Subdivision and Land Development | Applicable |
| Article 7: Procedures | Applicable |
| Article 8: Nonconformities | Applicable |
| Article 9: Enforcement | Applicable |
| Article 10: Definitions | Not Applicable |

## MEMORANDUM

TO: Beaufort County Planning Commission
FROM: $\quad$ Beaufort County Planning and Zoning Department
DATE: $\quad$ December 5, 2022
SUBJECT: Proposed Text Amendment to Section 5.11.90.D (Penalty for Clear Cutting Prior to Development)

## STAFF REPORT:

## A. BACKGROUND:

The recently adopted 2040 Comprehensive Plan recommends Beaufort County assess the amount of time a property owner must wait to apply for a development permit after clear cutting property for development. During the September 8th, 2022 meeting of the Beaufort County Planning Commission, the Commissioners requested staff strengthen the penalties for clear cutting by considering a five-year deferral on development permits. Currently, the existing language in Section 5.11.90.D (Penalty for Clear Cutting Prior to Development) imposes a two-year deferral on property for a development permit. This amendment seeks to implement a recommendation of the Comprehensive Plan by increasing the penalties for clear cutting in Beaufort County while encouraging professional foresters to practice best management practices in Beaufort County.

## B. SUMMARY OF PROPOSED REVISIONS:

To achieve the desired results of the Planning Commission while taking into consideration the existing South Carolina State laws regarding the industry of Silviculture, staff has entirely removed the language of Section 5.11.90.D. Staff has replaced this section with a structure separating out the penalties depending on the manner in which the property is clear cut. To meet the requirements of the one-year deferral, the land will require a Forestry Management Plan prepared/approved by a registered South Carolina Forester. If a landowner and/or operator does not have a Forestry Management Plan and proceeds to clear cut the property, a five-year deferral will be imposed. In addition to the five-year deferral the landowner and/or operator will be responsible for planting the site back.

## C. STAFF RECOMMENDATION: Staff recommends approval.

## D. ATTACHMENTS:

1. Revised Community Development Code Section 5.11.90.D (Penalty for Clear Cutting Prior to Development)
2. South Carolina Code of Laws Title 48 - Environmental Protection and Conservation (Section 48-23-205 Local regulation of development affecting forest land)

### 5.11.90 Forests

A. Existing Forest Preservation. Existing forest types listed below shall be protected in accordance with Table 5.11.90.A:

Table 5.II.90.A: Existing Forest Preservation

| Zone | Maritime Forest | Upland Forest <br> (Mature) | Upland Forest <br> (Young) |
| :--- | :---: | :---: | :---: |
| TI,T2 | $70 \%$ minimum | $55 \%$ minimum | $25 \%$ minimum |
| T3, C3, C4, CP | $65 \%$ minimum | $45 \%$ minimum | $20 \%$ minimum |
| T4, C5, SI | $60 \%$ minimum | $20 \%$ minimum | $10 \%$ minimum |

B. Mitigation. Existing forests may be cut over a greater area than permitted in Table 5.11.90.A only if mitigation is provided and the following standards are met:

1. The mitigation is determined by the Director to be necessary due to unique conditions on the site that make it impossible to meet the protection standards due to site size, shape, utilities, or other elements that are unique to the property.
2. The best forests, in terms of percentage of tree size, tree health, and habitat value, shall be preserved.
3. The protection level given forests shall not be less than 80 percent of that required in Table 5.11.90.A. Thus, a forest with a protection level of 45 percent could be reduced to 36 percent ( $45 \%$ X $.80=36 \%$ ).
4. The land on which the mitigation is to occur shall be on the project site, except that within the T4 district only, where existing lots may be too small to permit on site mitigation, the land on which mitigation is to occur may be off-site, if within an approved mitigation bank area. All land used for mitigation shall be preserved as permanent open space.
5. Mitigation shall consist of planting 1.25 acres of new woodland of comparable species for every one acre of disturbed forest for which mitigation is required. Planting requirements are shown in Table 5.11.90.B.

Table 5.I I.90.B: Forest Mitigation Planting Requirements

| Plant Type | Quantity Per Acre | Size |
| :--- | :---: | :---: |
|  | Maritime Forest |  |
| Canopy Tree | 25 | $21 / 2$-in. caliper |
| Understory Tree | 50 | $11 / 2$-in. caliper |
| Shrubs | 325 | 3 -gallon pot |
|  | Upland Forest |  |
| Canopy Tree | 15 | $21 / 2$-in. caliper |
| Pine | 25 | 8-foot height |
| Understory Tree | 50 | $11 / 2$-in. caliper |
| Shrubs | 325 | 3 -gallon pot |

C. Penalty for Disturbing Protected Forest Areas. If a protected forest area is damaged or cut down during or after construction, the mitigation shall involve the creation of protected open space that is 1.25 times the area destroyed. This may result in a loss of buildable area and/or lots. The area shall be replanted at the rate specified in Table 5.11.90.B for the type of forest damaged or cut down.
D. Penalty for Clear Cutting Prior to Development. If a property owner clear cuts all or any portion of his or her property under the claim of good faith forestry practice, and then seeks a development permit for any portion of the property within two years of the clear cut, a rebuttable presumption shall arise that the clear cut was done in anticipation of future development and the permit denied. Any person seeking to rebut the presumption shall have the burden of proving their claim by clear and convincing evidence to the Zoning Board of Appeals. Nothing in this section shall be construed as to prevent the practice of Silviculture for forestry as defined in Section 3.1.70 (Land Use Definitions). Forestry practiced in the County shall be accompanied by a Forestry Management Plan that has been approved by a certified South Carolina Forester. If the landowner and/or operator does not have a Forestry Management Plan, it shall be considered a willful violation of county ordinances. This section will apply to parcels greater than 5 acres. For tree removal on parcels less than 5 acres, see section (Section 5.11.100.D) for penalties.

1. One Year Deferral. If a property owner and/or operator clear cuts their property under the claim of forestry practice as described in Section 5.11.90.D, the submittal of an application for a development permit on any portion of the property will be deferred for one year. If the clear cutting operation violates the Forest Management Plan in place, a five year deferral may be applied.
2. Five Year Deferral. If a property owner and/or operator clear cuts their property and cannot meet the standards as defined in Section 5.11.90.D (does not have a Forestry Management Plan), an application for a development permit on any portion of the property will be deferred for five years. In addition, mitigation plantings for clear cutting activities will be required as outlined in Table 5.11.90.B (Forest Mitigation Planting Requirements). For the purposes of this section, clear cutting is defined as more than twenty-five (25) percent of the area of a parcel(s) acreage being cleared. If less than twenty-five (25) percent is cleared, staff may consider enforcement using Tree Removal standards (Section 5.11.100.D).

## Portion of South Carolina Code of Laws Title 48 - Environmental Protection and Conservation

## Chapter 23 - Forestry Generally

SECTION 48-23-205. Local regulation of development affecting forest land.
(A) For purposes of this section:
(1) "Development" means any activity, including timber harvesting, that is associated with the conversion of forestland to nonforest or nonagricultural use.
(2) "Forestland" means land supporting a stand or potential stand of trees valuable for timber products, watershed or wildlife protection, recreational uses, or for other purposes.
(3) "Forest management plan" means a document or documents prepared or approved by a forester registered in this State that defines a landowner's forest management objectives and describes specific measures to be taken to achieve those objectives. A management plan shall include silvicultural practices, objectives, and measures to achieve them, that relate to a stand or potential stand of trees that may be utilized for timber products, watershed or wildlife protection, recreational uses, or for other purposes.
(4) "Forestry activity" includes, but is not limited to, timber harvest, site preparation, controlled burning, tree planting, applications of fertilizers, herbicides, pesticides, weed control, animal damage control, fire control, insect and disease control, forest road construction, and any other generally accepted forestry practices.
(B) A county or municipality must not adopt or enforce any ordinance, rule, regulation, resolution, or permit related to forestry activities on forestland that is:
(1) taxed on the basis of its present use value as forestland under Section 12-43-220(d);
(2) managed in accordance with a forest management plan;
(3) certified under the Sustainable Forestry Initiative, the Forest Stewardship Council, the American Forest Foundations Tree Farm System, or any other nationally recognized forest certification system;
(4) subject to a legally binding conservation easement under which the owner limits the right to develop or subdivide the land; or
(5) managed and harvested in accordance with the best management practices established by the State Commission of Forestry pursuant to Section 48-36-30.
(C) This section does not limit, expand, or otherwise alter the authority of a county or municipality to:
(1) regulate activities associated with development, provided that a county or municipality requires a deferral of consideration of an application for a building permit, a site disturbance or subdivision plan, or any other approval for development that if implemented would result in a change from forest land to nonforest or nonagricultural use, the deferral may not exceed a period of up to:
(a) one year after the completion of a timber harvest if the harvest results in the removal of all or substantially all of the trees from the specific area included in a building permit, site disturbance or subdivision plan in item (1), and the removal qualified for an exemption contained in subsection (B); or
(b) five years after the completion of a timber harvest if the harvest results in the removal of all or substantially all of the trees from the specific area included in a building permit, site disturbance or subdivision plan in item (1), and the removal qualified for an exemption contained in subsection (B) for which the permit or approval is sought and the harvest was a wilful violation of the county regulations;
(2) regulate trees pursuant to any act of the General Assembly;
(3) adopt ordinances that are necessary to comply with any federal or state law, regulation, or rule; or
(4) exercise its development permitting, planning, or zoning authority as provided by law.
(D) A person whose application for a building permit, a site disturbance or subdivision plan, or any other approval for development is deferred pursuant to the provisions contained in this section may appeal the decision to the appropriate governmental authority.

HISTORY: 2009 Act No. 48, Section 1, eff June 2, 2009.

| 2023 Meeting Schedule |  |  |  |
| :---: | :---: | :---: | :---: |
| Planning Commission |  |  |  |
|  |  |  |  |
| Date | Day | Time | $\underline{\text { Location * }}$ |
| January 5, 2023 | Thursday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| February 6, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| March 6, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| April 3, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| May 1, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| June 5, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| July 6, 2023 | Thursday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| August 7, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| September 7, 2023 | Thursday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| October 2, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| November 6, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
| December 4, 2023 | Monday | 6:00 | Council Chambers, Administration Building100 Ribaut Road, Beaufort, SC |
|  |  |  |  |
| * Meetings may be held in the Bluffton Library if agenda items are unique to areas south of the Broad River. Call the Community Development Department at 843-255-2140 for details. |  |  |  |
|  |  |  |  |
|  |  |  |  |
| A Planning Commission Workshop may be held at 5:30 p.m. prior to each scheduled Planning |  |  |  |
| Commission meeting. |  |  |  |


[^0]:    ${ }^{\text {i }}$ See attached Exhibit "A" - Business Filings Report of the South Carolina Secretary of State.

[^1]:    ${ }^{2}$ See attached Exhibit "B" - Beaufort County Assessor's Office GIS map of a portion of the Property.
    ${ }^{3}$ See Section 3.2.100 of the CDC.

[^2]:    ${ }^{4}$ See Beaufort County 2040 Comprehensive Plan (November 2021) ("Comprehensive Plan"), Page 19.

[^3]:    ${ }^{5}$ See Comprehensive Plan, Page 27.
    ${ }^{6}$ See Comprehensive Plan, Page 41.

[^4]:    ${ }^{7}$ See Comprehensive Plan, Page 49.

[^5]:    ${ }^{8}$ See Comprehensive Plan Page 59.

[^6]:    ${ }^{9}$ See Comprehensive Plan, page 87.
    ${ }^{10}$ See Comprehensive Plan, page 115.

