

# Jasper County Planning and Building Services

358 Third Avenue - Post Office Box 1659 Ridgeland, South Carolina 29936 Phone (843) 717-3650 Fax (843) 726-7707

Lisa Wagner, CFM
Director of Planning and Building Services
<a href="https://www.ecs.gov">wagner@jaspercountysc.gov</a>

# Jasper County Planning Commission Staff Report

Meeting Date:	October 11, 2022
Project:	Master Plan – Center Point Storage
Applicant:	Bowling Green Capital, LLC
Tax Map Number:	A portion of 081-00-03-019
Submitted For:	Action
Recommendation:	

**Description**: Bowling Green Capital, LLC request approval of a Master Plan for a two-story self-storage building to be developed within the Center Point Planned Development District (PDD), which was approved by Jasper County Council on August 19, 2008. This Master Plan has been developed in accordance with the Center Point PDD standards and Concept Plan, and the Center Point Development Agreement (DA).

A Master Plan is a plan for the overall utilization of a particular area, including allocation of land uses and infrastructure. This Master Plan anticipates development of approximately a 4-acre tract, for a single lot commercial development and construction of a road, which will serve the development.

Analysis: The Master Plan for Center Point Storage was prepared in accordance with Article 8.1.10 of the Jasper County Zoning Ordinance, which is outlined below and is intended to serve as a checklist. The red print directs you to where the requested information is located in the Master Plan document.

#### 8:1.10 Master Plan.

The minimum requirements of the Master Plan include:

1. Multiple copies of the Master Plan to sufficiently distribute to all designated reviewing bodies at the time of submittal;

Received 12 copies on 9/20/2022 along with required fees.

2. Proposed arrangement of land uses, including land for public facilities, approximate acreage of each use area or tract, type of use and density (residential use tracts). All specified densities will be construed as maximums, with acceptance of the maximums subject to satisfaction of other provisions within the PDD ordinance;

See Overall Master Plan (Site) Exhibits - last tab in the binder

3. A boundary survey with the computed acreage of the tract bearing the seal of a registered land surveyor;

See Wetlands Exhibit  $-7^{th}$  tab in the binder

4. The location of primary control points to which all dimensions, angles, bearings, block numbers and similar data shall be referred;

See Overall Master Plan (Site) Exhibits – last tab in the binder

5. The proposed name of the development and the names and addresses of the owner(s) of record, and the applicant, if different from the owner(s), with proof of authority to submit and process the application;

See Project Narrative – 3rd tab in the binder

- 6. Type of land use of all parcels contiguous to the development property; See Project Narrative  $-3^{rd}$  tab in the binder
- 7. A Master Plan Planned Development Map showing:
  - a. Vicinity map or sketch showing the general relationship of the proposed development to the surrounding areas with access roads referenced to the intersection of the nearest state primary or secondary paved roads; See Site Maps and Flood Maps  $-2^{nd}$  tab in the binder
  - b. Topographic survey of the area being applied for; See Boundary and Topographic Survey  $-5^{th}$  tab in the binder
  - c. Where applicable, surveyed line delineating the extent of any special district boundary on the development property; Not Applicable
  - d. Where applicable, survey line delineating wetlands; See Wetlands Exhibit – 7<sup>th</sup> tab in the binder
  - e. The location, dimensions, descriptions, and flow of existing watercourses and drainage structures within the tract or on contiguous tracts; See Overall Master Plan (Site) Exhibits – last tab in the binder
  - f. Location of municipal limits or county lines, and district and overlay district boundaries, if they traverse the tract, form part of the boundary of the tract, or are contiguous to such boundary; Not Applicable

g. The location, dimensions, name and description of all existing or recorded streets, alleys, reservations, easements or other public rights-of-way within the tract intersecting or contiguous with its boundaries or forming such boundaries;

See Overall Master Plan (Site) Exhibits – last tab in the binder See Site Maps and Flood Maps – 2<sup>nd</sup> tab in binder

- h. The location, dimensions, name and description of all existing or recorded residential lots, parks, public areas, permanent structures and other sites within or contiguous with the tract; Not Applicable
- i. The proposed location, dimensions, and description of land(s) for public facilities; Not Applicable
- j. Proposed conceptual street system layout, vehicular and pedestrian, with the written comments of the DSR and/or his/her representative.

  See Overall Master Plan (Site) Exhibits last tab in the binder
- 8. Traffic impact analysis as set forth in the Jasper County Zoning Ordinance and Land Development Regulations or as required by the DSR and/or County Council, and a statement of need for mitigation (if any). If mitigation is required, a statement of proposed mitigation;

See Traffic Impact Analysis prepared by Stantec Consulting Services, dated July 2022 – 8<sup>th</sup> tab in binder

- 9. Preliminary Master Drainage Plan and Master Water and Sewer Plan with the written comments of the DSR and/or his/her representative.

  See Overall Master Plan (Site) Exhibits last tab in the binder
- 10. Preliminary comments from affected agencies having approval or permitting authority over elements related to the proposed development, or evidence that a written request for such comments was properly submitted to the agency and a reasonable period of time has elapsed without receipt of such comments. Minimum agency responses include South Carolina Department of Transportation, South Carolina Department of Health and Environmental Control (SCDHEC), and Office of Ocean and Coastal Resource Management (OCRM), Jasper County School District and Jasper County Emergency Services (as applicable).

See Agency Comments – 5<sup>th</sup> tab in binder and last page of Project Narrative – 3<sup>rd</sup> tab in binder

#### 11. A narrative addressing:

a. The proposed ownership and maintenance of streets, drainage systems, water and sewer systems, open space areas, parking areas, and other proposed amenities and improvements; and when any of the above are to be privately owned, a description of the governance, operation and financial structure to be used to secure their maintenance, management and long term improvements;

See Project Narrative – 3<sup>rd</sup> tab in the binder

- b. Proposed phasing and time schedule if development is to be done in phases; See Project Narrative  $-3^{rd}$  tab in the binder
- c. Proposed phasing and time schedule for lands to be dedicated for public facilities; See Project Narrative – 3<sup>rd</sup> tab in the binder
- d. Proposed internal site planning standards such as typical lot sizes and widths, and setbacks and buffers aimed at addressing potential incompatibility between adjacent land uses and activities;

See Project Narrative – 3<sup>rd</sup> tab in binder

- e. Letters of capability and intent to serve community water supply or sewage disposal service from the affected agency or entity, where applicable;

  See Utility Provider Letters of Intent Submittals 4<sup>th</sup> tab in binder
- f. A statement describing the character of, and rationale for, the proposed Master Plan;
   and
   See Project Narrative 3<sup>rd</sup> tab in binder
- g. Other information or descriptions deemed reasonably appropriate by staff or Planning Commission for review.

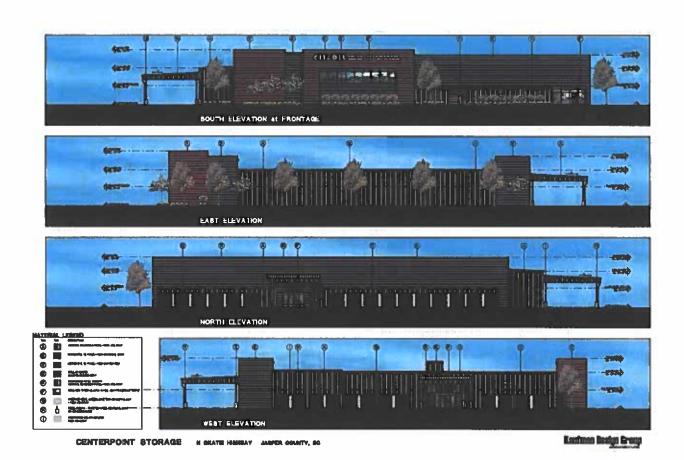
Staff Recommendation: Staff recommends approval of the Center Point Storage Master Plan.

#### Attachments:

- I. Master Plan Document
- 2. Concept Map for Center Point PDD inside document binder
- 3. Center Point PDD Standards inside document binder

# **CENTER POINT STORAGE**

### **MASTER PLAN REVIEW**



PREPARED FOR:

**BOWLING GREEN CAPITAL, LLC.** 

PREPARED BY:

WARD EDWARDS ENGINEERING

SUBMITTED TO:

JASPER COUNTY, SOUTH CAROLINA

**SEPTEMBER 20, 2022** 



## **Master Plan Submittal**

TAB 1	Cover Letter
TAB 2	Site Maps & Flood Map
TAB 3	Project Narrative
TAB 4	Utility Provider Letters of Intent Submittals
TAB 5	Agency Comments (No comments received from some agencies at this time; explanation of Agency submittal schedule is provided in lieu within the Narrative.)
TAB 6	Boundary & Topographic Survey
TAB 7	Original PDD Wetlands Exhibit with Current Site Shown
TAB 8	Traffic Impact Analysis
TAB 9	Overall Master Plan (Site) Exhibits Including Architectural Exhibits



# CIVIL ENGINEERING & LAND DEVELOPMENT CONSULTING

September 20, 2022

Lisa Wagner
Jasper County Planning & Zoning Department
P.O. Box 1659
358 Third Avenue
Ridgeland, SC 29936

RE: Center Point PDD Storage – Phase 1, Master Plan Review

Lisa;

I am submitting a Project Master Plan in accordance with Article 8, Section 10 of the Jasper County Zoning Ordinance for Center Point PDD Storage – Phase 1.

The following items are included in this package for your review:

- 1. 12 Copies of Phase I Master Plan including:
  - a. Site maps
  - b. Flood Map
  - c. Project narrative
  - d. Utility Provider Letters
  - e. Agency permit application letters
  - f. Boundary & Topographic Survey
  - g. Overall Wetlands Exhibit
  - h. Traffic Impact Analysis
  - i. Site & Building Exhibits
- 2. Development Fee Check (submitted directly to Planning Department)

Please review the contents of this package and contact me if you need additional information or if you have any questions about the enclosed items.

Respectfully submitted,

Paul Moore, PE Project Manager





P.O. 80X 381, BLUFFTON, SOUTH CAROLINA 29910 PH (843) 837-5250 / FAX (843) 837-2558 WWW.WARDEDWARDS.COM

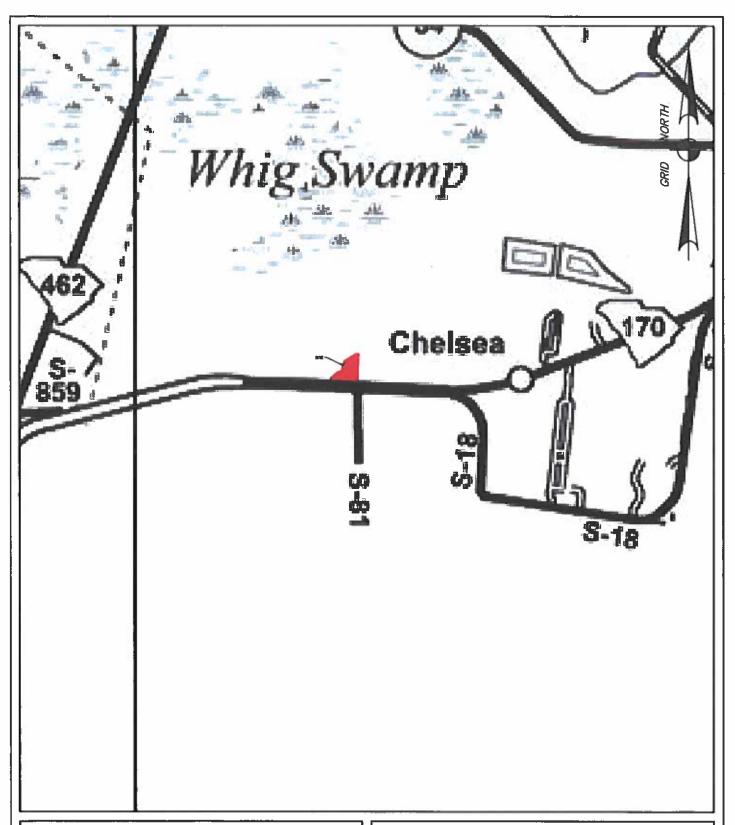
# **QUAD MAP**

CENTERPOINT PPD STORAGE FACILITY - PHASE 1

LOCATION: BEAUFORT, SC DATE: 07/28/2022 PROJECT#: 220105

SCALE:

1"=2000'





P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910 PH (843) 837-5250 / FAX (843) 837-2558 WWW.WARDEDWARDS.COM

# **SCDOT MAP**

CENTERPOINT PPD STORAGE FACILITY - PHASE 1

LOCATION: BEAUFORT, SC DATE: 07/28/2022

PROJECT #: 220105

SCALE:

1"=2000'





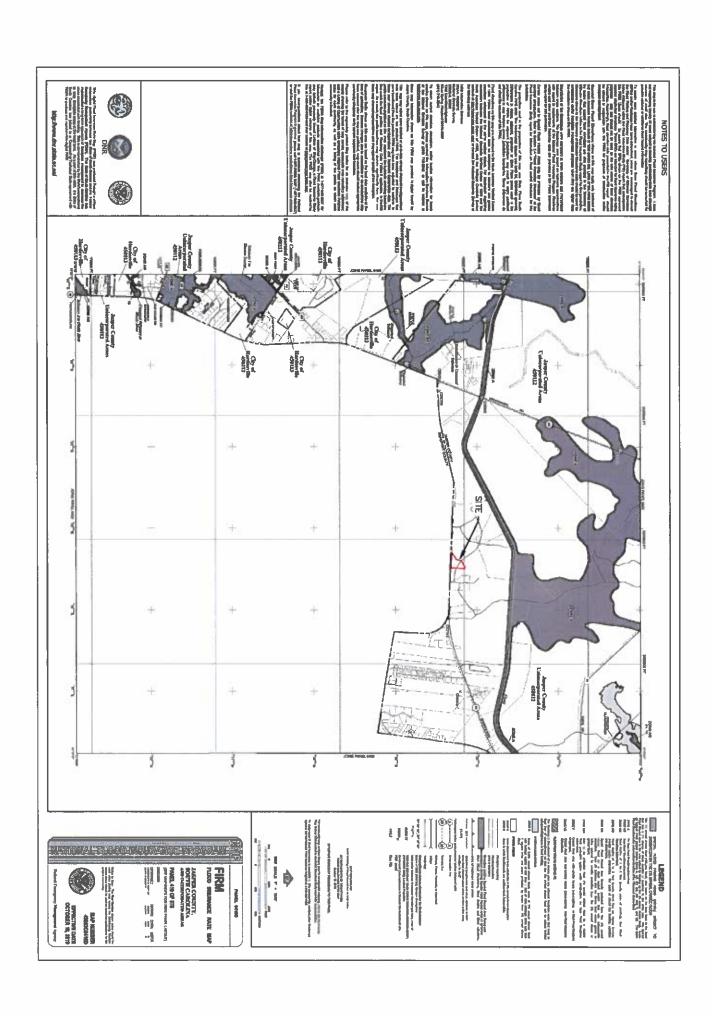
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910 PH (843) 837-5250 / FAX (843) 837-2558 WWW.WARDEDWARDS.COM

# **SOILS MAP**

CENTERPOINT PPD STORAGE FACILITY - PHASE 1

LOCATION: BEAUFORT, SC DATE: 07/28/2022

PROJECT #: 220105 SCALE: 1"=500'





#### PROJECT NARRATIVE

Page 1 of 3

Project: Center Point PDD Storage – Phase 1

Highway 170, Jasper County, SC

Coordinates: W -80° 53' 59" N 32°21'15"

Date: September 20, 2022

Applicant: Bowling Green Capital, LLC

(& Owner) Primary Contact: Dan Kunua 333 East Main Street

Louisville, KY 40202 P: 502-572-7880

Agent: <u>Ward Edwards, Inc.</u>

P.O. Box 381

Bluffton, SC 29910

E: pmoore@wardedwards.com

P: 843-384-5266 F: 843-837-2558

#### **Description**

The developer is proposing to construct a two story, 86,236 ft<sup>2</sup> indoor commercial storage building on a portion of the Center Point PDD property located near 5253 North Okatie Highway in Jasper County. The site is currently undeveloped and is across the highway from Camp St. Mary's Road.

The Center Point Planned Development District (PDD) allows for a mixture of commercial and residential uses, including the commercial storage use proposed by this project. The development will follow the applicable design and approval guidelines of the PDD and Jasper County. The project will be subdivide from the larger PDD parcel and will likely be in the range of 4 acres in size. The PDD property is currently owned by First Carolina Corporation of SC, and access will be provided through a shared access easement on the First Caroline Corp property. The access road will be located based on the original PDD Access Master Plan and will line up with Camp St. Mary's Road.

The onsite development will consist of the aforementioned building, associated parking, and the required stormwater treatment facilities. The proposed site will be configured to allow for future phases of construction, but there are no immediate plans to construct the future phase.

#### Adjacent Parcels

North BJWSA Water Supply Canal

South Hwy 170

East Undeveloped portion of the Center Point PDD.
West Undeveloped portions of the Center Point PDD



#### PROJECT NARRATIVE

Page 2 of 3

#### <u>Buffers</u>

Front 50' Rear and sides 0'

In accordance with Jasper County Ordinance Article 12:8.2 the existing adjacent uses to the North, East, and West of the property is Commercial or Industrial. There is no buffer required between the proposed comercial use and the adjacent uses. According to the Center Point PDD Section II.D.11 there are no interior setback or buffer requirements for the proposed development. The PDD Highway buffer of 50-ft will apply to the highway frontage portion of the site.

#### **Parking**

As required in **Table 12:1** for a Mini-Warehouse Use, the parking requirement of 10 spaces plus 1 per 100 storage units:

10 spaces + 386 units x 1.0 spaces / 100 units = 14 spaces required 8 dedicated parking spaces provided + exterior loading/parking along the site perimeter.

As required in Parking Lot Design Section 12.1.5-7 all design standards including stall and island dimensions will be met for 90 degree parking spaces. One handicap accessible parking space will be provided near the main entrance.

#### **Access**

Access to this phase of the project will be from Highway 170. The curb cut and access road will be constructed by the developer but will serve as the future access for the remaining PDD property in the area. The road will be in the pre-determined location, meeting the *Highway 170 Access Management Plan*.

#### **Landscape**

As required in Interior Plantings – Section 12:3.2, all interior planting islands have a minimum planting area of 5' wide, one peninsula or island type landscaped area is provided for every 10 parking spaces. All planting areas are covered with grasses, shrubs or mulch. Curbing and wheel stops are used to protect all planting areas from vehicles. The following minimums for tree and shrub plantings will be met as required:

Parking Lot Trees – 1/15 spaces = 1 Tree required Parking Lot Shrubs – 1/5 spaces = 3 Shrubs required

#### **Natural Resources**

The overall Centerpoint PPD property was evaluated for wetlands and natural resources in 2004. Wetlands were delineated and verified by USACE at that time. Based on the original wetland verification, there is a wetland to the west of the mini-storage property. The development will maintain at least a 100-ft buffer between the infrastructure and the wetland, providing adequate protection of the existing natural resources.



# PROJECT NARRATIVE Page 3 of 3

#### **Construction Schedule & Phasing**

This portion of the project will be executed in a single phase. Follow on phases will be treated as separate submittals.

#### Site Ownership

First Carolina Corporation currently owns the property and will be a partner in the development. The land for the development will be subdivided and transferred to a new LLC, while the access roads within the easements will remain under the ownership and maintenance of the First Carolina Corp.

Water and sewer systems will be owned, operated, and maintained by Beaufort-Jasper Water & Sewer Authority.

#### Site Electric

Dominion Energy will provide power to the project.

#### **Site Communications**

Hargray Communications will provide communications and data services to the project.

#### Waste Disposal

The owner will contract with a waste disposal/removal company for solid waste disposal.

#### General Maintenance

The owner will be responsible for general site maintenance.

#### **Agency Notifications and Permitting**

Local and State agencies, as well as public utilities such as SCDHEC-OCRM, SCDOT, SCDHEC, BJWSA, Hargray, and Dominion Energy are currently not providing preliminary review comments. Due to the volume of projects requiring reviews and staffing limitations, these agencies are requiring full application packages and complete design plans in order for them to provide comments or commitment letters. For this reason, preliminary comments are not available for this Master Plan application. Permit application cover letters to the required agencies are enclosed with the Master Plan package to show the agencies from which permits will be sought.



6 SNAKE ROAD, OKATIE, SC 29909-3937 Phone 843.987.8100 | Fax 843.548.0096 Customer Service 843.987.9200 Operations & Maintenance 843.987.8046 Engineering 843.987.8065

Our mission: Provide quality water and wastewater services to our current and future customers in the Lowcountry

JOE MANTUA, PE, GENERAL MANAGER

August 1, 2022

Tiffany Patrick Ward Edwards Engineering PO Box 381 Bluffton, SC 29910

Via email: tpatrick@wardedwards.com, cblaney@wardedwards.com

Subject: Availability - 5253 Okatie Highway (SC-170), A Portion of PIN 081-00-03-019.

Dear Ms. Patrick,

This letter is in response to the water and sewer availability request for Center Point Storage at the above referenced parcel. Water is available from BJWSA's existing 8" water main within the North Okatie Highway right of way. Concerning sewer service, gravity is not available; however, there is an 8" force main wastewater line on North Okatie Highway. Connection to sewer would require an owner operated and maintained grinder pump station, to be installed at the owner/developer's expense. Please be advised that, depending on the amount of water and sewer capacity required to serve the proposed development, offsite improvements or upgrades to BJWSA's existing infrastructure may be required.

If or when you wish to proceed with this development, design drawings and calculations must be submitted to BJWSA's Engineering Department for review and approval. Upon approval, capacity and project fees will be determined based on the information provided. These fees must be paid in full before a capacity commitment can be issued or a pre-construction meeting may be held. If construction on the proposed water and sewer systems has not started within twelve (12) months from the date of this letter, or if there are amendments to the project, this availability will be invalid.

Should you have questions or require additional information, please contact me at 843-987-8082 or james.clardy@bjwsa.org.

Sincerely,

James Clardy

Development Program Manager

JBC/mya



July 28, 2022

Conor Blaney, PE Ward Edwards Engineering PO Box 381 Bluffton, SC. 29910

Dear Mr. Marshall:

Subject: Letter of Availability to provide service for: Centerpoint PDD Storage Facilities/ Ridgeland, SC.

Hargray engineering services has reviewed the master plan for the above referenced project. This Letter of Availability is to report that Hargray can provide telecommunications service to the above referenced project. We request that you forward a digital copy of the plan that has been approved by the county or town for use with Micro station or AutoCAD. Our office will include the owner/developer conduit requirements on the plan and return it to your office.

By accepting this Letter of Availability, you accept the responsibility to forward the construction requirements listed on the Project Application Form to the owner/developer.

Where conduits are to be placed in commercial or subdivision areas the pipes are required to extend 5' (five feet) beyond any placed or planned curbed or sidewalk edge for facility access away from the roadside.

Should there be any changes or additions to the original master plan, this Letter of Availability will only cover areas shown on the original master plan. All changes or additions will require another Letter of Availability. All costs incurred by Hargray resulting from any requested change or failure to comply with minimum requirements shall be borne by the Developer.

Commercial projects require a pre-construction meeting with Hargray to review requirements. Non-recurring charges to offset construction costs may apply to certain projects. Easements are required prior to installing facilities for the project.

I am available to discuss these requirements at your convenience.

Sincerely,

Rodney Cannon

Rodney Cannon Manager, Facilities Engineering 843-815-1697

#### Requirement for Letter of Intent to Provide Service

#### HARGRAY COMMUNICATIONS GROUP, INC

Engineering Services
Construction Application

#### **CONTACT INFORMATION**

Project Owner Name: Lowcountry Real Estate	Phone No.: 843-812-2210
Address: 820 Bay Street	City, State, Zip Beaufort, SC 29902
Developer Name: John Trask	Phone No.:
Address:	City, State, Zip
Project Manager Name: Ward Edwards/Conor Blane	ey, PE Phone No.: 757-814-0824
Address: PO Box 381	City, State, Zip Bluffton, SC 29910
PRO	JECT INFORMATION
Project Name/Location Centerpoint PDD Storage Facility	
Proposed Start and Finish Dates	Lots
No. of Phases Units Per Phase	Condominium Units
Comments:	Commercial Sq. Ft. +/- 60,000 sr
REQUIR	EMENTS INFORMATION
APPLICATION REQUIREMENTS	PROJECT REQUIREMENTS
Hargray Communications Group, Inc. must have copies of the following items before we can furnish a "Letter of Intent" and schedule your project.  One copy of development or site plans indicating property and/or lot lines, proposed buildings, roads, parking, water, sewer and drainage layout.  Digital copy of county/town approved plan.	<ul> <li>✓ * Commercial Buildings-Apartments-Villas - Hotels         Minimum 4 inch diameter conduit Sch. 40 PVC with pull string buried         at 24 to 30 inch depth, from the equipment room or power meter locatio         to a point designated by Hargray at the road right-of- way or property         line. Conduits are required from each building site &amp; multiple         conduits may apply.</li> <li>✓ * Commercial buildings with multiple "units" may require conduit(s)         minimum ¾" from main equipment entry point to termination point         inside unit. Plenum type ceilings require conduits or flame retardant         Teflon wiring to comply with code.</li> <li>✓ A dedicated 110-volt, 20 amp circuit with a four way outlet to power         external equipment for the site. For Commercial Application.</li> <li>✓ Equipment rooms to have ¾ inch 4'X8' sheet of plywood         mounted on wall to receive telephone equipment.</li> <li>✓ A power ground accessible at equipment room or an insulated         #6 from the service panel or power MGN to the backboard.</li> <li>✓ Residential wiring requires CAT5E wiring (4 or 6 Pair) twisted wire for         Telephone and Data (industry standard).</li> <li>✓ CATV inside wiring will be RG6 foil wrapped 66% braid minimum,         home run to each outlet.</li> <li>✓ All interior wiring should be pulled to the area immediately         adjacent to the plywood backboard or power meter location. A         minimum of 5' of slack is required for terminations.</li> <li>✓ A 120 AC 15 A dedicated power outlet is to be located in the service         yard to supply AC power to the ONU. Power to the ONU will be         provided through a Pull Out Disconnected Switch, manufactured by</li> </ul>
* Commercial projects require pre-construction meeting	Square D Company, or equivalent. The Horsepower Rating for the disconnect switch is 240VAC max, 60A, not fusible.  Easements are required.  with Telco/CATV Company to review requirements.
these requirements. I understand that if the project design ch I must submit a new application. All costs incurred by TELCO	I project requirements as stated above <u>and to inform the contractor/builder of</u> anges or the proposed start date is delayed by nine (9) months or more, that a resulting from any requested change or failure to comply with minimum and charges to offset construction costs may apply to certain projects.
07/28/2022	Rodney Cannon 7/28/2022
Applicant/Representative Date	Engineering Services Representative Date

After recording return to:
Hargray Communication Group, Inc. Attn: Legal Department 856 William Hilton Parkway, Bldg. C. P.O. Box 5986 Hilton Head Island, SC 29938
STATE OF SOUTH CAROLINA )
COUNTY OF
NON-EXCLUSIVE TELECOMMUNICATIONS AND VIDEO AND/OR BROADBAND FACILITIES EASEMENT AND INDEFEASIBLE RIGHT TO USE  THIS NON-EXCLUSIVE TELECOMMUNICATIONS AND VIDEO AND/OR
BROADBAND FACILITIES EASEMENT AND INDEFEASIBLE RIGHT OF USE ("Easement") given this day of, 2022, by ("Grantor"), to Hargray
Communications Group, Inc., a South Carolina Corporation (hereinafter referred to as "Grantee").

#### WITNESSETH:

That in consideration of the sum of One Dollar (\$1.00) received from Grantee, Grantor does hereby grant a Non-Exclusive Telecommunications and Video and/or Broadband Facilities Easement and Indefeasible Right of Use to Grantee in, across, through, under and over that certain real property (including the buildings and other structures thereon) ("Property") hereinafter more fully described on Exhibit "A" attached hereto, which easement shall include, without limitation, an indefeasible right to use any current or future conduit system owned, controlled or authorized by Grantor for purposes of serving the Property with communications or other utility services (the "Conduit System").

Grantor hereby grants and conveys to Grantee, its successors and assigns, the perpetual right, privilege and authority, from time to time, to enter upon, construct, extend, inspect, operate, replace, relocate, repair and perpetually maintain over, under and through the Property, including, but not limited to, over and under and through any and all streets, alleys, roads and/or other public ways or areas of the said Property now existing or hereafter laid out, telecommunications and cablevision systems ("Systems"), including cables, wires, poles, pedestals, and other usual fixtures and appurtenances as may from time to time be or become convenient or necessary for the provision of telecommunications and video and/or broadband services to the homes and other structures located within the Property, together with the indefeasible right to use the Conduit System, and right of ingress and egress, and access to and from such easement, across and upon the Property, as may be necessary or convenient for the purposes connected therewith. The easement herein granted is an easement in-gross in favor of Hargray Communications Group, Inc., its affiliates, successors and assigns.

Grantee agrees to maintain all Systems, including cables, wires, poles, pedestals and other usual fixtures and appurtenances in good condition, and Grantee shall repair and restore any damage to Grantor's real or personal property, restore all paving resulting from Grantee's construction, installation and/or maintenance of the Systems, or any use or presence surrounding the Property.

Grantor reserves the right to grant other easements or rights-of-ways upon, over across, through or under the easement property for utility, access or other purposes which do not unreasonably interfere with Grantee's easement hereunder. Grantor further reserves the right to construct any manner of things, including, but not limited to, roads, landscaping and signage or other items upon, over, across, through and under the Grantee's Systems, which do not unreasonably interfere with Grantee's easement hereunder.

Grantor further grants and conveys to Grantee the right, from time to time, to trim trees and underbrush that create obstructions to the non-exclusive utilization of the easement by Grantee; provided, however, any damage to the Property of Grantor caused by Grantee in maintaining or repairing said lines shall be borne by Grantee; provided, further, however, the Grantor shall have the right to request relocation of any underground facility from time to time at Grantor's expense; provided that such relocation continues to afford Grantee the use of Conduit System(s) on the Property.

It is specifically agreed that all Systems Facilities shall be located underground, with the exception of those pedestals and other fixtures that are necessary and are designed for aboveground location.

NOW THEREFORE, Grantor hereby warrants and represents that it is the fee simple owner of the Property and has the right and authority to make this Grant of easement. Grantor further covenants, that Hargray Communications Group, Inc., and its affiliates, success and assigns, subject to the terms and conditions of this instrument, shall peaceably and quietly enjoy the use of the easement herein granted in perpetuity without hindrance, objection or molestation.

The words "Grantor" and "Grantee" shall include their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, Grantor has caused this Easement to be duly executed the day and year first above written.

WITNESSES:	GRANTOR:	
First Witness		
	Ву:	_
	Its:	_
Second Witness/Notary Public	-	

	TE OF SOUTH CARO	, )	PROBATE
the			the undersigned witness, and made that s/he sav , by , sign and seal and deliver the within other witness, whose signature appears above
writte witnes	n instrument, and the ssed the execution ther	at s/he with the eof.	other witness, whose signature appears above
			First Witness
SWO day of	RN TO before me this	s 0	
Notar My C	y Public for ommission Expires:		

A:\easement form.wpd

## EXHIBIT "A"

#### Easement and Access Area

All that certain piece, parcel, or tract of land containing (fill in legal)

This being the same property	, or a portion thereof,	, as described by	Deed (fill in derivation)
------------------------------	-------------------------	-------------------	---------------------------

(Add Tax Map number)



#### **Letter of Power Availability**

August 1, 2022

Correspondence Sent Electronically

Tiffany Patrick Ward Edwards Bluffton, S.C.

Re: Center Point Storage, Camp St. Mary's Road

Ms. Patrick:

I am pleased to inform you that Dominion Energy will be able to provide electric service to the above referenced project. Electric service will be provided in accordance with Dominion Energy General Terms and Conditions, other documents on file with the South Carolina Public Service Commission, and the company's standard operating policies and procedures. To begin engineering work for the project, the following information will need to be provided:

- 1.) Detailed utility site plan in AutoCAD format showing water, sewer, and storm drainage, as well as the requested service point/transformer locations.
- Additional drawings that indicate wetland boundaries, tree survey with barricade plan and buffer zones (if required), as well as any existing or additional easements that will also be needed.
- 3.) Electric load breakdown by type with riser diagrams and desired metering specifications.
- 4.) The anticipated timeline for each phase of the development.
- 5.) Dominion Energy has specific requirements for electric service to new water and sewer pump-stations. If your project requires these facilities, please contact me for more details.

Dominion Energy construction standards and specifications are available here: <a href="https://www.dominionenergy.com/south-carolina/start-stop-service/new-construction">https://www.dominionenergy.com/south-carolina/start-stop-service/new-construction</a>

If you have any questions, please contact me at 843-540-1315.

Sincerely.

Parks Moss

Parks Moss

Senior Key Account Manager

**Dominion Energy South Carolina** 

#### **Paul Moore**

From: Fleming, Juleigh B. <FlemingJB@scdot.org>
Sent: Wednesday, August 3, 2022 10:14 AM

Sent: Wednesday, August 3, 2022 10:14 AN

To: Paul Moore

Cc: McLaine, Lynda; Grooms, Robert W.

Subject: RE: Center Point Storage - Preliminary Site Plan Concurrence and TIA Review

**Attachments:** 220105-20220614-40 Box Truck Turn Path.pdf; 20220714

\_centerpoint\_storage\_tia\_draft.pdf

#### Paul,

Lynda forwarded your email to our office for review. I requested out District Traffic office review the TIA. Based on the low volume generated by the site, they had no comments. No road improvements are necessary.

I hope this gives you what you need to move forward.

#### Thank you!



#### JuLeigh & Fleming, PE

District 6 Permit Engineer

P 843-746-6722 E flemingjb@scdot.org

6355 Fain Street, North Charleston, SC 29406

LET 'EM WORK, LET 'EM LIVE.



From: McLaine, Lynda < McLaineLA@scdot.org>

Sent: Thursday, July 28, 2022 10:26 AM

To: Fleming, Juleigh B. <FlemingJB@scdot.org>

Subject: FW: Center Point Storage - Preliminary Site Plan Concurrence and TIA Review

Good morning Juleigh,

Please look at this.

Thanks, Lynda From: Paul Moore < pmoore@wardedwards.com>
Sent: Wednesday, July 27, 2022 12:31 PM

To: McLaine, Lynda < McLaineLA@scdot.org>

Subject: Center Point Storage - Preliminary Site Plan Concurrence and TIA Review

\*\*\* This is an EXTERNAL email. Please do not click on a link or open any attachments unless you are confident it is from a trusted source. \*\*\*

Lynda,

We are working on a proposed indoor storage project to be located in the Center Point PDD along Hwy 170 near Camp St. Mary's Road. This is the same PDD that the Caroline's Cottage project was developed under. Jasper County requires that development in this PDD include a master plan review and a Traffic Impact Analysis. We have a preliminary site plan and a TIA prepared and wanted to get preliminary review from SCDOT. Attached are both documents.

I wasn't sure who to contact at SCDOT for the preliminary review, but the ARMS Manual said that preliminary review packages should be submitted to the RME, so I figured I would start with you. Please let me know if there is someone else at SCDOT I need to send these items to conduct the preliminary review. Also, please let me know if there is anything else needed or if there are any questions.

Thanks for your help.

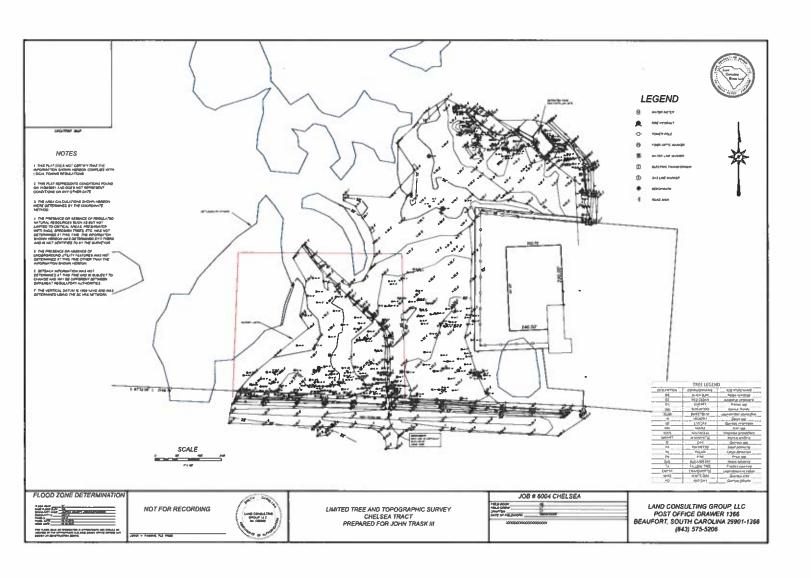
#### Paul Moore, PE

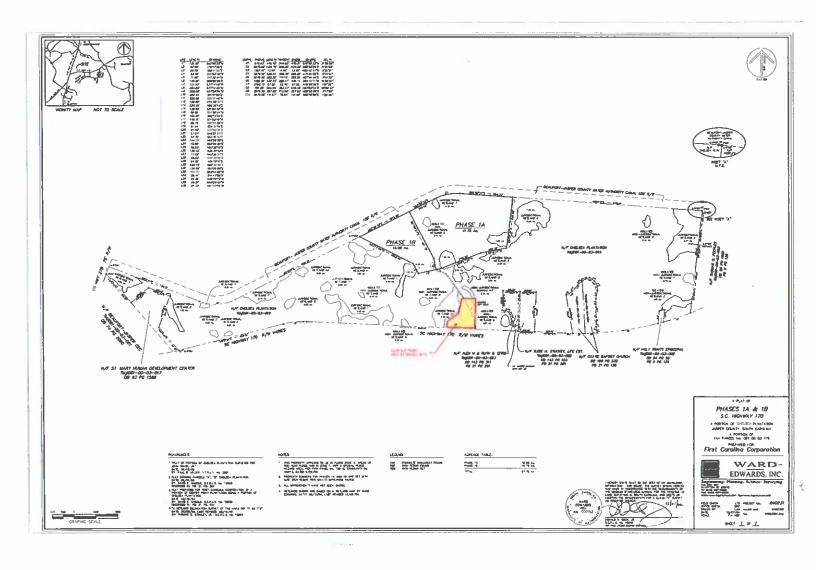
**Project Manager** 

#### Ward Edwards Engineering

T 843.384.5266 F 843.837.2558 PO Box 381, Bluffton, SC 29910 www.WardEdwards.com







#### Paul Moore

From:

**Paul Moore** 

Sent:

Monday, September 26, 2022 11:09 AM

To: Cc: 'rwells@jaspercountysc.gov'

Subject:

Lisa Wagner; Dan Kunau; Shelly Snyder

Attachments:

Center Point PDD Storage - EMS Review for Jasper County Master Plan Approval 220105-20220920-REL-A-MP.pdf; CenterpointColored\_Elevation9-19-2022.pdf

#### Chief Wells,

We are working on a proposed mini-storage building project in the Center Point PDD (located along Hwy 170 across from Camp St. Mary's Road). We have submitted to the County for a Master Plan review, which is required because the project is in a PDD. Lisa Wagner recommended we submit to you to see if Jasper County EMS has any comments or concerns about the project.

Attached are the conceptual site plan and the conceptual architectural elevations. The building will be two stories with maximum height of 32-ft. The building will have pavement access on all sides and capable of handling the movements of a full size a tractor trailer. The design is not far enough yet to provide water calculations or many of the other things you may review, but I can attempt to answer any questions you might have at this point.

Thanks for your time.

#### Paul Moore, PE

Project Manager

#### **Ward Edwards Engineering**

T 843.384.5266 F 843 837.2558 PO Box 381, Bluffton, SC 29910 www.WardEdwards.com





## TRANSMITTAL LETTER

DATE:		Sep 21	, 2022 W	'E PROJI	ECT NU	JMBER 22010	)5
PROJECT	NAME:	Center	Point Storage	-			
ATTN TO	):	Holly A	Martin				
COMPAN	VY:	SCDHE	C Coastal Zone Consistency				
ADDRES:	<b>S:</b>	1362 N	1cMillan Ave., Suite 400				
CITY:		Charle	ston	STATE	SC	ZIP CODE:	29405
CC:							
WE TRAN	NSMIT:	E	lerewith				
FOR YOU	JR:						
THE FOL	LOWING	: [	Other				
COPIES	DA	TE	DESCRIPTION	A PAGE		ACT	TON
1			CZC Request Form/Checklists				
1			Project Narrative, Site Plans, Vicinity Map	Y-Y	a S	an wat	
1			NOI Copy				
3.1	52.13		Digital Boundary Email	en de		The Mark	
Remarks:	:						
Paul Mo 843-384 pmoore	-5266	dwards.	com				



## TRANSMITTAL LETTER

DATE:		Sep 21	, 2022		,	WE PROJECT	NUMBER	22010	5
PROJECT	NAME:	Center	Point Storage						
SUBJECT	<b>:</b>	NPDES	Construction NOI App	lication Sul	bmittal				
ATTN TO	);	Pam W	inkler		CC:				
COMPAN	NY:	SCDHE	C OCRM - BOW, Coasta	1				1.0	
ADDRES	S:	1362 N	IcMillan Ave., Suite 400						
CITY:		Charle	ston			STATE SC	ZIP C	ODE;	29405
We trans	mit the f	ollowin	g:						
COPIES	DA	TE	DE	SCRIPTION		4.5	10.17	ACTI	ON
1			NOI Application 2617						
1	ULEUWO) F. S		Application Fee,	11/4/2	A STATE		NEW B		
1			Site Plans						
1			Project Narrative	Saldieri,			522 J. FAM	TO THE STATE OF	
1			Drainage Calculations						
11/		13.4	Maintenance Agreem	ent	Artentona Militar	## 1915年の機 			
1			Stormwater Mgt and S	ediment /E	Erosion C	hecklist			
							10		
人都能			Non-American				建设		eaving 1 Street
						_			
Remarks	:								
Paul Mod 843-384 pmoored	-5266	dwards.d	com						

NOTICE OF INTENT (NOI)
For Coverage(s) of Primary Permittees
Under South Carolina NPDES General Permit

	Sou	th Carolina Reparament of Stealth and Environmental Control	-or Stormwate	or Discharges Fro (Maintain As P	m Construction Aç arl of On-Sile SWPPP)	tivities SCR100000
	lle l	Number: SCR10	_			
		nittal Package Complete:	-			
th au Ca Fe ap	e A Ithol eroli 903   oplic	ission of this Notice of Intent const Applicant identified in Section II rized as a Primary Permittee in the ina under NPDES General Permi required for review and NPDES co cation type are as listed on p actions.	intends to be state of South SCR1000000.			
Dal	e: (	09/19/2022				
Pro	ect	/Site Name: Center Point Storage		Co	unty: Jasper	
(Mc	dific	calion or Change of Information Only	Prior Approved	NPDES Permit or File I	Number:	
Do	you	want this project to be consider	ed for the Expedi	ted Review Program	(ERP)? Tyes or 70N	o (See Instructions)
l.	Α.	Project (Application/Review) Ty Project (Application/Review) Ty New Project (Initial Notification Late Notification Low In New Owner/Operator or Cor Major Modification: (see Instru MS4 Project Review Ocean and Coastal Resource Change of Information/Othe	pe(s) (See ) All III on) Ongoing npact Developm npany Name Ch ctlons, attach Form  Management ( s (Specify):	g Project: Permitte pent (LID) or Project D pange (see instructions, p B (Major Modifications) (OCRM) Review	esign Above Regulator attach Form A (Transfer o ))	ry Requirements of Ownership))
	В.	If Applicable, identify the entity Greer, etc.): MS4 Reviewer	designated as M	IS4 Reviewer and MS4	Operator (i.e., Lexing	ton County, City of
II.	Pri	mary Permittee Information			1	Change of Information
		Person or Company	Company EIN (III	applicable i: FIN: 45-2	Institution or Gove	ernment Entity?
	Α.	Primary Permittee Name: Bowlin	o Green Capital L	TC		
		Mailing Address: 333 F Main St. 1	Suite 300	Cily: Louisville	State: K	Y Zip: 40202
	8.	Contact /ODSA Name (it differen	G	Email Address:	dkunau@andovermgt com	
	٥.	Mailing Address:	i irom above OK if	Owner is a company):	Dan Kungu	Zip:
		Phone: Fax	£	Email Address		Up:
	C.	Property Owner Name (If differen	from dbove):			
		Mailing Address:		City:	State:	Zip:
	_	rnone: Fax	:	Email Address:		
H.	Co	mprehensive Stormwater Polls C-SWPPP Preparer Name: Paul N	tion Prevention	Plan (C-SWPPP) Pr	eparer information	Change of Information
	8.	Registered Professional PEngir	neer Diandscar	ne Architect Tier R	Land Company & C. B.	atabattan #1 asses
	C.	Company/firm Name: Ward Edv	verda, Inc.	Do Viciliaci Pilei B	S. C. CC	gistration #: 22818
		Registered Professional Progin Company/Firm Name: Ward Edy Mailing Address: PO Box 381 Phone: 843-384-5288		City: Bluffton	State: no	7in: 20040
		FUX.	Harristan Edward	Email Address:	pmoore@wardedwards.co	m
	Α.	ect/Site Information  Type of Construction Activity(les  Commercial Industri  Residential: Single-tamily  Site Preparation (No New Imp	al Institu Residential; pervious Area)	tional Mass ( Multi-family M  Other (Specify)	Grading Dunear Multi-use (Commercial &	•
	В.	Site Address/Location (street add	ress, nearest interse	ection, e(c.) lossed of Camp	81 Matry & Road in Jesper County	
		CRALIOMU III IU BUIRRI.			Zin Onder	
		Latitude: 32 ° 21 ' 18 " N Long Tax Map Number (s) (List all): Port	gitude: - 80 54	3 "W (Source):	GPS Web Site Goo	gle Maps
			ion of 081-00-03-(	119		
	ALE	C 2517 (10/2012)				

<ul> <li>C. Is this site located on Indian Land?</li> <li>D. Praposed Start Date: 06/01/2023</li> <li>E. Disturbed Area (nearest tenth of an action of the control of the c</li></ul>	Propo crej: 3 d n acrej: Distur Only): mon Plan for Center Point	Torbed Area: Developme	otal Area (ac Current (Ap Total Distu ent or Sale (1	cres): 3 proved proved A CP)? [	.77 ) Area: 	er Cha No ere if th	nis is the First Ph	103e. <b>[</b> ]
Previous State Permit/File Number:	and the same	Pi	revious NPD	S Cove	erage N	umber	: SCR10	***
<ul> <li>H. Any Flooding Problems exist downst flooding problems and applicable flood</li> <li>I. Active S.C. DHEC Warning Notice, N</li> <li>J. List Relevant State and Federal Envir USACOE, Nationwide, etc.). If None None</li> </ul>	ream of or a way/flood zor ofice to Con onmental Pe	djacent to ne information	this site? [7] n in the C-SW ce of Violati	res (Z) No PPP) on for the	o (li yes,	provide	e detailed descr	
K. Any Waiver(s)/Variances/Exception  Justifications in the C-5WPPP for each pro-  1. Small Construction Activity Waive  If yes, Identify requested waiver:	er(s) From NF  Rainfall Erd	st) DES permit osivity Waiv	ting (Section er TMDL	1 4 2 Ar	mandly i	12	Ver Mile	
2. Detention Waiver (72-302(B)?	Yes 🔽 No	3. Other	(Specify):					
Waterbody Information (Attach addition A. Receiving Waterbody(s) (RWB) Informat stormwater discharges will drain. If storm	al sheet(s) as r fon (List the r nwater disch	needed) nearest and	next neare	vaterb	odies, lis	terbod t all suc	ch waterbodie	ne sites es).
1. Name of Receiving Waterbodies (RW	-			L.	Distance WB (fee		3. Classific RWI	
a. Nearest: Unnamed Trib to Okatee Rive	21	+		8,600			ORW	
b. Next Negrest: Okates River		3		7,700			ORW	
c. Coastal Zone ONLY: Coastal Receiving	Water (CRW):	Okateo Riv	01	7,700			Not Appl	icable
d. Other Waterbodies: N/A								
. Waters of the U.S. / State Information (At	tach addition	of sheet(s) as	needed					
Waters of the U.S./ State		the site?	2. Delined	-	3. Imp	acts?	4. Amount o	f impacts
a. Jurisdictional wetlands		es Eno	ØYes €	No	□Yes	<b>V</b> No	Ac	
b. Non-jurisdictional wellands		es 🖾 No	□Yes [	No	□Yes			
c. Other Water(s):		es 🔽 No	Yes [	No	Yes			Feet
d. Coastal Ione ONLY: Direct Critical Area		es 🗸 No	Yes [		Yes			Feet
5. If yes for impacts in B.3, describe each General Permit) and certifications that h  S.C. Navigable Waters (SCNW) Informat Waters' Program under SC Regulation 19-450 certification. (Attach additional sheets) or program	lon (Section	2 4 5) The D	obtained to	each	impac	l:		
1. Are S. C. Navigable Waters (SCNW) (a. If no, do not complete this question.  b. If yes, provide the name of S.C. N  2. If yes for C.1, will construction activities.	on the site: [ Proceed to Se lavigable Wo	Yes 7 No ection D (Importers (SCNW	aired Waterb	odies).	\$CNW2	Eva.		
proceed to Section C.3:	road crossing,	sub-aqueou	s utility line, te	mporary	or perm	anent s	structures, etc.)	and
3. Identify permits providing coverage	of SCNW act	ivities propo	osed for you	rsite. I	I NONE	list no	ne.	
a. DHEC General/ Other DHEC Permit	Permit or C	ertification	No. Сопе	spondin	g Cover	ed \$CI	NW Activity(ies	)
b. USACOE 404 Permit or 401 Certification c. SCNW Permit			CAI	Activitie	s or	Some A	Activities (Descri	he):
If applied for or issued, identify Date applied for or issued:  d. If a SCNW Permit has NOT been are	nflad for a							
d. If a SCNW Permit has <u>NOT</u> been ap (drawn to scale) of the SCNW and asso	ciated activ	ities. Includ	e a descript	on of o	et that : :II propo	sed ac	plan and prof tivities on this	ile views plan.

NPDES CGP FEE SCHEDULE B

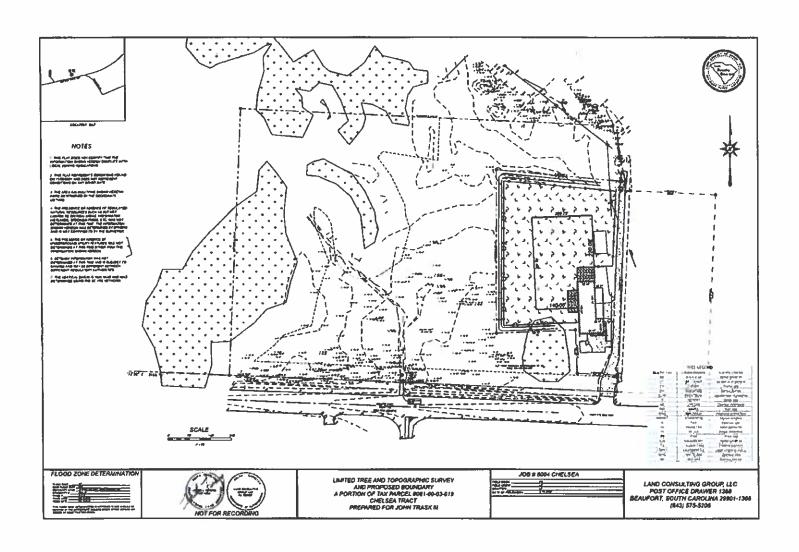
(ONLY for Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Horry, and Jasper Counties)

Submit payment for NPDES Coverage fees only to DHEC.

the schedule should be disached to DHEC Form 2617. Do not send payment in window envelope, <u>po no</u> the Project Owner/ Operator if the check or credit card payment cannot be processed. The review close payment is received and after the project is deemed consistent with the S.C. Coastal Zone Management P	k with		1 1 mg
1. Identify ( $$ ) the <u>Project/Review Types</u> (NOTE: You may <u>ONLY</u> select Item 1.a <u>OR</u> 1.b BELOW). Enter NPDES coverage fee of \$125 in the right-	0	y l	NPDES
hand column if any of the following project/review types apply to this application. Proceed to Item 2.	a Re		Coverage Fee(s
a. Project or LCP that is located within 1/2 mile of CRW (Item V.A) that will ultimately disturb more		7	
than 0.5 acres (it select a, do not select b)	14	]	
b. Project or LCP that is NOT located within ½ mile of CRW (Item V.A) that will ultimately disturb one (1) acre or more (it select b, do not select a)	Q.	7	
C. New Owner/Operator (Transfer of Ownership)/Company Name Change			\$ 125
\$125 NPDES Coverage fee is required by the Department for Transfers of Ownership and Company Name Changes		J	
d. Unpermitted Ongoing Project or Late Notification	T	7	
e. MS4 Project Review (item I.A and I.B)	1	+	
f. Other (Specify):	1-	41	
	11	1	
2. Determine the <u>Project Review Fees</u> (Review fees campot exceed \$2000 for a project).	Cult		
NOTE: COMPLETE ITEM 2.0 BELOW. COMPLETE EITHER SECTION 3 OR SECTION 4. DO NOT COMPLETE			
a. Enter the disturbed area (Item IV.E) for this project. Proceed to Item 3 OR Item 4.	neare	est ter	ith of an acre)
3. PROJECT OR LCP LOCATED WITHIN 1/2 MILE OF A CRW (ITEM V.A)	(v)		Review Fees
a. Will this project or LCP (Item IV.G) ultimately disturb more than 0.5 acres?	s 🗆 No	0	
	s DN	_	
<ol> <li>If this project will NOT ultimately disturb more than 0.5 acres and is not part of an LCP your project is au permit and the NPDES coverage fee and review fee are not required. See section 1.3.1.B. See the BOW-5 Land Disturbance - Coastal Counties".</li> <li>If this project or LCP will ultimately disturb more than 0.5 acres, proceed to Item 3.c.</li> <li>Enfor the project review fees (based on \$100/ disturbed acre) in the right-hand column.</li> </ol>	tomatic	cally of	ess Than 1-Acre o
<ol> <li>If this project will NOT ultimately disturb more than 0.5 acres and is not part of an LCP your project is au permit and the NPDES coverage fee and review fee are not required. See section 1.3.1.B. See the BOW-5 Land Disturbance - Coastal Counties".</li> <li>If this project or LCP will ultimately disturb more than 0.5 acres, proceed to Item 3.c.</li> <li>Enter the project review fees (based on \$100/ disturbed acre) in the right-hand column. (the disturbed area (Item 2.a.) by \$100/disturbed area). If the disturbed area for this project (Item 2.a.) totals 20.0 more, enter \$2000 in the right-hand column. Review fees cannot exceed \$2000 for a project. Proceed to Item 3.d. Total Required Fees (Coastal Project located WITHIN 1/2 mile of a CRW (Item V.A)</li> <li>Add the values in the right-hand columns of Items 1 and 3.c. (The Department will not review this project.)</li> </ol>	tomatic SPWS f Multipl acres of	for "Le	sovered under the ss Than 1-Acre of \$00
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a. Name of Nearest DHEC		erbodies 💮		140		r PS	1	1/9	Here .	No. 1	
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4 and the Name of the Corresponding Waterbody?			b. Is this WQMS(s) listed on the most current 303(d) List? If No. proceed to		poliu iden "CAI	c. List the pollutant(s) identified as "CAUSES" of		d. Will any poliutants causing the impairment be present in your		e. If yes for d list the "USE SUPPORT" Impairment(s)	
Nearest DHEC WQMS(s)	Corresponding Waterbody		Section 2 of this table. If Yes, complete items a thru f.			the impairment		site's construction stormwater discharges?		affected by the pollutant(s) identified in c.	
18-01	<del></del>	Okalea River	Yes				TY.	es	No		
18-02		Okalea River	Yes				EΥ		No		
MD-176		Okatea River	Yes				TY	es f	No		
I. If yes for d above, will cause further WQS viola NOTE: If no for f, this side	ations fo	or the impairment( Of eligible for cove	s) listed	inc? □Ye	s 🔲 No	)		ges w	M NOT	contribute to	
2. TMDL Impaired Water						535					
<ul> <li>D. Name of Nearest DHEC Water Quality Monitoring</li> </ul>						d. If yes for b, has the standard been			e. If no for d (Not Attained),		
Stations (WQMS)(s) that	(\$)(\$) that WQMS(\$) ?				"ATTAINED" or "			will any pollutants causing the impairment be present in you			
eceives stormwater from			"CAUSES" or		<b>Fully Supported</b> " for			site's construction stormwat			
our construction site and, thru an MS4?		elow and proceed t		iusing the		cairment(s)			orges?		
ITIU CITI IYD49		ection VI. Il Yes, omplete items c thru		npairment?							
		f this table.									
18-01		Yes 🔽 No	27.00		Yes	No		LYe:	EN	0	
18-02		Yes Z No	-		□Yes	□ No		CYe:	EN	0	
MD-176		Yes V No			□Yes	No		Ye	IN	D	
. If yes for e above, are yo	our disci	harges consistent wil	h the as	sumptions and I	equirem	ents of the	TMDL	(s)?	<b>□</b> Yes	No	
NOTE: It no for f, this sit Signatures and Certif	e is NO	)) aligible for cove	rage V	nder the CGP)	See Ins	tructions.		20.0			
documents submitted of my knowledge and Laws of SC, 1976 as as	mende	inai ine aesign is c ed, pursuant to Re	consiste: aulatio	nt with the red n 72-300 et se	quiremei o tif ar	nts of Title	48, (	~h	800 14 a	Alba Cala	
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DHEC 2617 (10/2012)





# **CENTERPOINT STORAGE FACILITY**

**2022** July

Project No: **171002621** 

**DRAFT** 

PREPARED FOR:

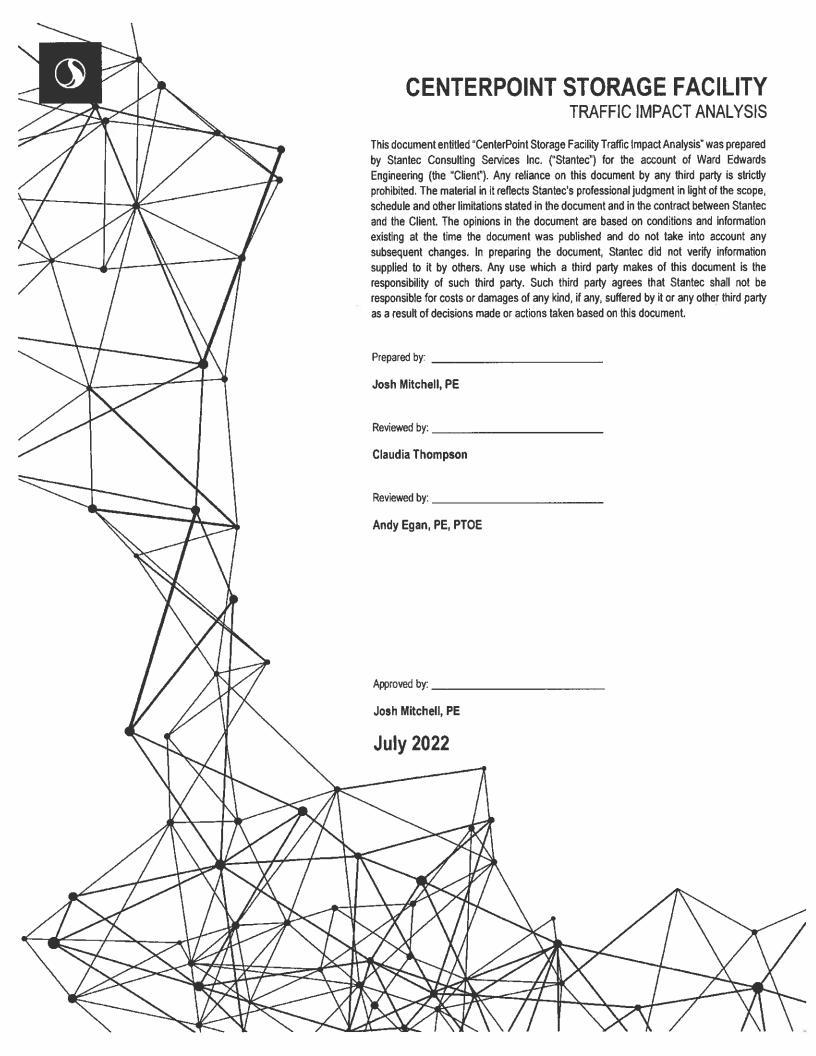
**WARD EDWARDS ENGINEERING** 

119 PALMETTO WAY \\ SUITE C \\ BLUFFTON, SC 29910

# TRAFFIC IMPACT ANALYSIS

ALONG SC 170/OKATIE HIGHWAY IN JASPER COUNTY, SOUTH CAROLINA





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### **EXECUTIVE SUMMARY**

A traffic impact analysis was conducted for the CenterPoint Storage Facility development in accordance with SCDOT and Jasper County guidelines.

The proposed CenterPoint Storage Facility development (which is anticipated to be constructed by 2025) is located along SC 170 and will consist of a 53,344 square-foot climate-controlled storage center.

Access to the development is proposed to be provided via one full access driveway along SC 170/Okatie Highway, aligned with Camp St Mary's Road, which meets the SCDOT spacing requirement.

Therefore, the extent of the roadway network analyzed consisted of the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway.

An ingress turn lane analysis was conducted for the project driveway, and the operation of this intersection (in terms of average vehicular delay and level of service) was analyzed with and without the project traffic anticipated to be generated by the CenterPoint Storage Facility development.

Based on SCDOT's Roadway Design Manual considerations, an exclusive eastbound left-turn lane along SC 170/Okatie Highway is recommended at the Project Driveway. Per the criteria documented in Section 5D-4 of SCDOT's Access and Roadside Management Standards (ARMS, 2008), the recommended length of the exclusive left-turn lane is a total of 400 feet, with 200 feet of storage and a 200-foot taper. However, since there is an existing two-way left-turn-lane (TWLTL) and since the projected left-turning volume is low, it is recommended that the existing TWLTL serve as left-turn storage into the site.

The results of the level of service analysis indicate that the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway is projected to experience undesirable delay in the AM peak hours of the 2025 Build Conditions and in the PM peak hours of both the 2025 No Build and Build Conditions. However, this projected delay is likely due to the conservative nature of the HCM 6th Edition unsignalized methodology and is not an uncommon condition for two-way stop control during the peak hours of the day. Furthermore, the delay at the southbound approach at the Project Driveway will only be experienced by patrons of the site. Therefore, no improvements to mitigate this delay are recommended.

### 1.0 INTRODUCTION

### 1.1 PROJECT BACKGROUND

The purpose of this report is to document the procedures and findings of a traffic impact analysis for the proposed CenterPoint Storage Facility development in accordance with SCDOT and Jasper County guidelines. The proposed CenterPoint Storage Facility development is located along SC 170, as shown in Exhibit 1.1, and will consist of a 53,344 square-foot climate-controlled storage center, with anticipated completion by 2025.

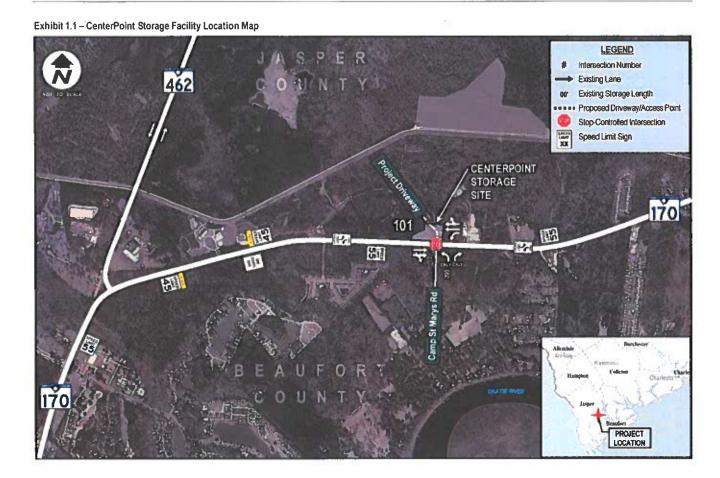
Access to the development will be provided through one full access driveway aligned with the existing Camp St Mary's Road, as shown in the site plan in Exhibit 1.2.

The traffic impact analysis considers the weekday AM peak hour (between 7:00 AM and 9:00 AM) and the weekday PM peak hour (between 4:00 PM and 6:00 PM) as the study time frames. The extent of the existing roadway network to be studied consists of the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway.

### 1.2 EXISTING ROADWAY CONDITIONS

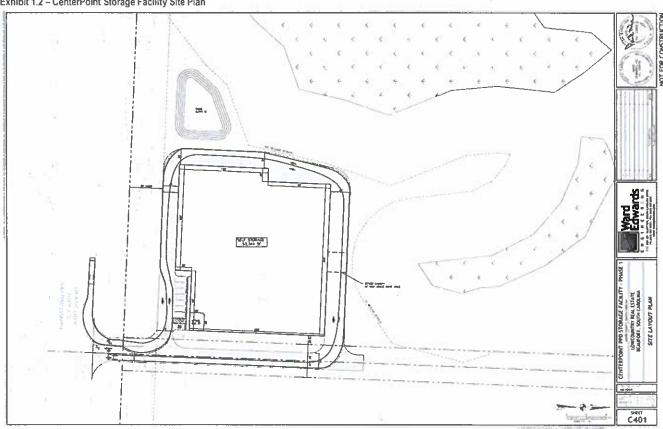
SC 170/Okatie Highway is a four-lane divided principal arterial that primarily serves residential and commercial land uses. The posted speed limit is 55 mph. The average annual daily traffic (AADT) in 2021 was 34,400 vehicles/day. Based upon existing turning movement counts, the percentage of heavy vehicles along SC 170/Okatie Highway is approximately 2%.

Camp St Mary's Road is a two-lane local roadway that primarily serves residential land uses. The average annual daily traffic (AADT) in 2021 was 325 vehicles/day. Based upon existing turning movement counts, the percentage of heavy vehicles along Camp St Mary's Road is less than 1%.



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Exhibit 1.2 - CenterPoint Storage Facility Site Plan



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### 2.0 DRIVEWAY SPACING REVIEW

Access to the development will be provided through one proposed full access driveway along SC 170/Okatie Highway.

The **Project Driveway** is proposed to be located along SC 170/Okatie Highway aligned with Camp St Mary's Road which meets the spacing criteria.

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### 3.0 PROJECT TRAFFIC

### 3.1 PROPOSED LAND USES

Project traffic in this analysis is defined as the vehicle trips anticipated to be generated by the proposed CenterPoint Storage Facility development. These trips were distributed and assigned throughout the study roadway network.

The CenterPoint Storage Facility development is proposed to consist of a 53,344 square-foot climate-controlled storage center.

### 3.2 TRIP GENERATION ESTIMATES

The trip generation potential for the development was estimated using information contained in ITE's *Trip Generation Manual*, 11<sup>th</sup> Edition (2021) reference. The estimates utilized LUC 151 – Mini-Warehouse.

Due to the nature of the proposed CenterPoint Storage Facility development, internal capture trips and pass-by trips were not considered in the trip generation estimates.

The trip generation estimates for the development are shown below in **Table 3.1** and documented in **Appendix A**.

### 3.3 TRIP DISTRIBUTION & ASSIGNMENT

### 3.3.1 New External Traffic

New external traffic expected to be generated by the CenterPoint Storage Facility development was distributed and assigned to the roadway network based upon existing travel patterns in the area. The general distribution of project trips was assumed to be:

- 50% to/from the east via SC 170/Okatie Highway; and
- 50% to/from the west via SC 170/Okatie Highway.

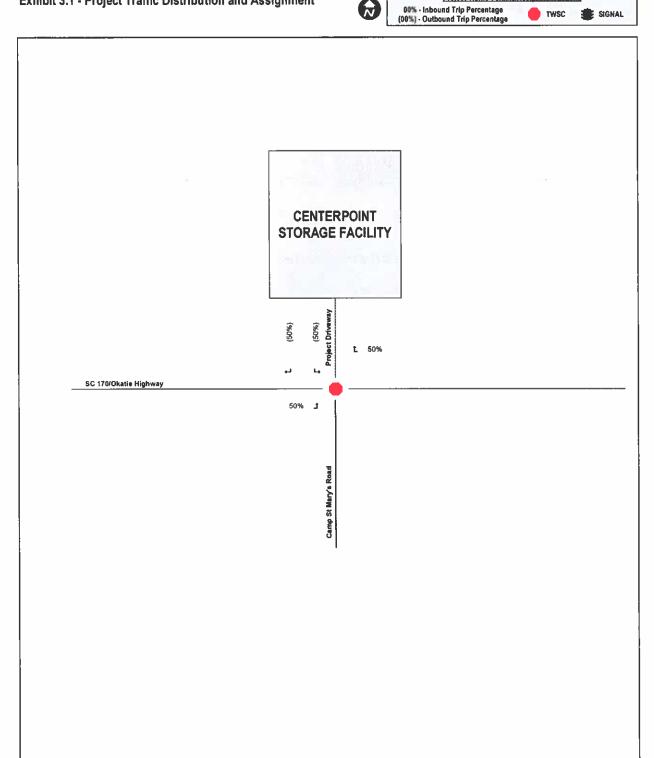
The assignment of new external project traffic anticipated to be generated by the CenterPoint Storage Facility development is illustrated in **Exhibit 3.1** and the AM and PM peak hour project traffic volumes are illustrated in **Exhibit 3.2**.

Table 3.1 - Trip Generation Estimates

Land Use	ITE LUC	Scale	Daily	Wee AM Pea	kday k Period	Weekday PM Peak Period		
	LUC			Enter	Exit	Enter	Exit	
Mini-Warehouse	151	53.344 KSF	78	3	2	4	4	
	New,	External Trips	78	3	2	4	4	

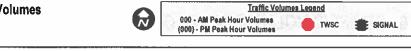
Project Traffic Volume Assignment Legend

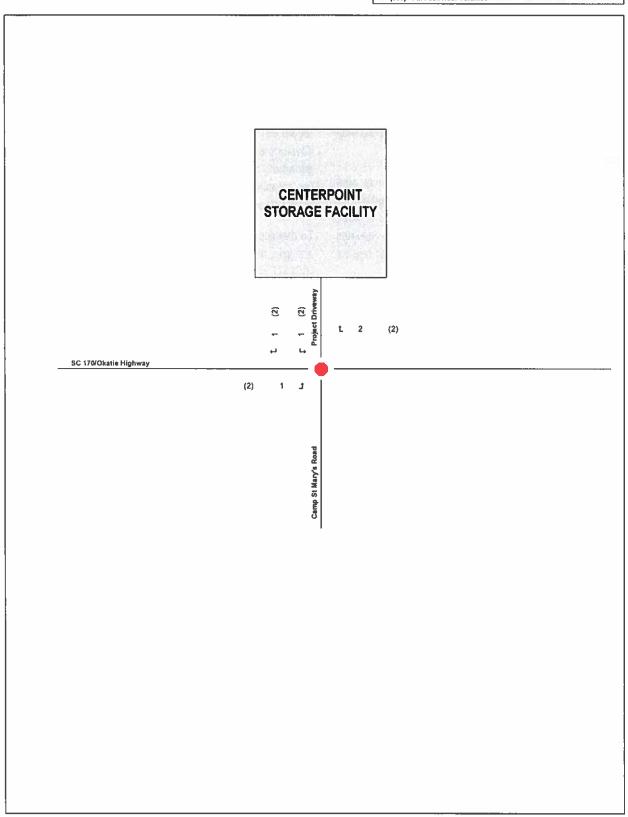
**Exhibit 3.1 - Project Traffic Distribution and Assignment** 



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**Exhibit 3.2 - Peak Hour Project Traffic Volumes** 





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### 4.0 TRAFFIC VOLUME DEVELOPMENT

### 4.1 EXISTING TRAFFIC VOLUMES

The traffic impact analysis considers the weekday AM peak hour (between 7:00 AM and 9:00 AM) and the weekday PM peak hour (between 4:00 PM and 6:00 PM) as the study time frames. The extent of the existing roadway network to be studied consists of the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway.

Traffic volumes were collected in 2021 at the study area intersection during the AM and PM peak periods listed above. In order to bring the 2021 collected traffic volumes to 2022 Existing Conditions, the previously collected traffic volumes were grown by 5%, based on the projected growth rate as detailed in the subsequent **Section 4.2**.

The raw traffic volume counts are provided in Appendix B and the 2022 existing AM and PM peak hour traffic volumes are illustrated in Exhibit 4.1.

### 4.2 FUTURE TRAFFIC PROJECTIONS

Future 2025 No Build traffic volumes were developed by adding background traffic growth and vested traffic to the collected existing study area peak hour volumes. Background traffic growth is growth anticipated to occur in the study area regardless of the proposed CenterPoint Storage Facility development. Vested traffic is traffic anticipated to be generated by other known nearby developments expected to be completed prior to the CenterPoint Storage Facility development

To develop an annual background growth rate for use in the analysis, historical count data along SC 170/Okatie Highway (SCDOT count stations #169 and #184) was reviewed over the past 10 years. It was determined that the roadways have experienced a collective annual growth of 4.8%. Therefore, in an effort to be conservative, a 5% annual growth rate was utilized to develop anticipated background traffic growth through the anticipated 2025 buildout year.

A separate project is currently proposed to the west of the CenterPoint Storage Facility development. The nearby development consisting of Multi-family Housing (Mid-Rise), Single Family Housing Units, and a Nursing Home is located along SC 170 with access aligned with Old Meadow Road. The traffic volumes anticipated to be generated by this development were considered in the analysis as *vested traffic*. These vested traffic volumes are illustrated in **Exhibit 4.2**.

Future 2025 No Build AM and PM peak hour traffic volumes, illustrated in **Exhibit 4.3**, were developed by adding the background traffic growth (assuming 5% annual growth of the existing traffic volumes) to the 2022 existing AM and PM peak hour traffic volumes.

Future 2025 Build AM and PM peak hour traffic volumes, illustrated in Exhibit 4.4, were developed by adding the CenterPoint Storage Facility project traffic (shown in Exhibit 3.2) volumes to the 2025 No Build traffic volumes.

Volume development worksheets for each intersection are documented in Appendix C.

Exhibit 4.1 - Existing Peak Hour Traffic Volumes



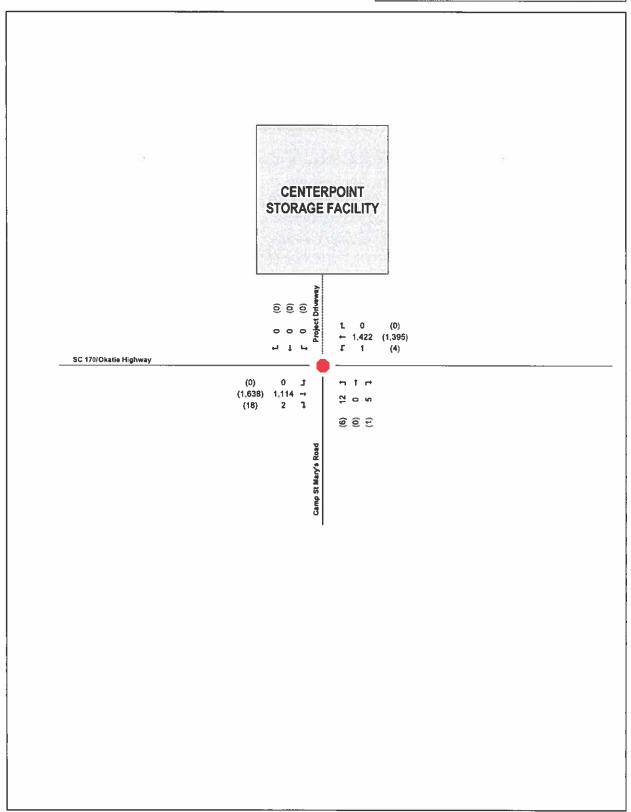


Exhibit 4.2 - Adjacent Vested Project Traffic



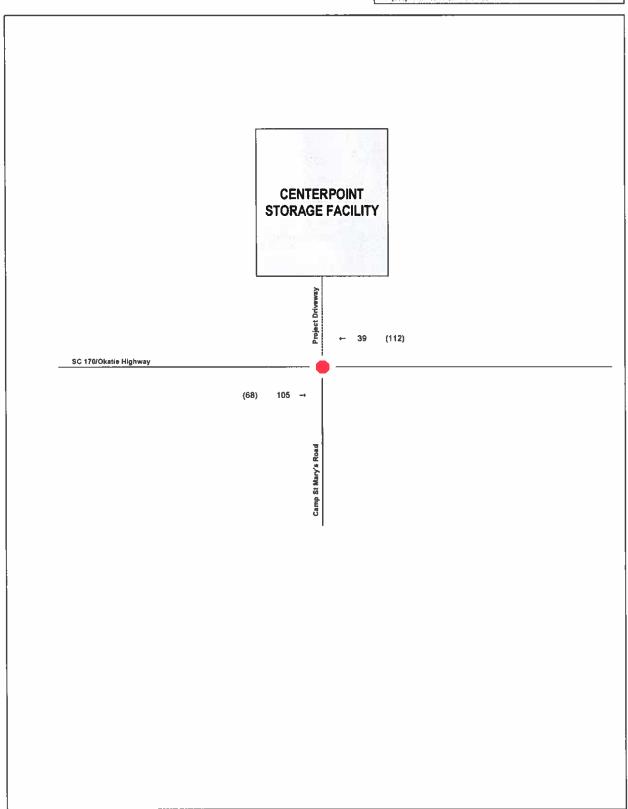
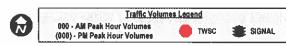


Exhibit 4.3 - 2025 No Build Peak Hour Traffic Volumes



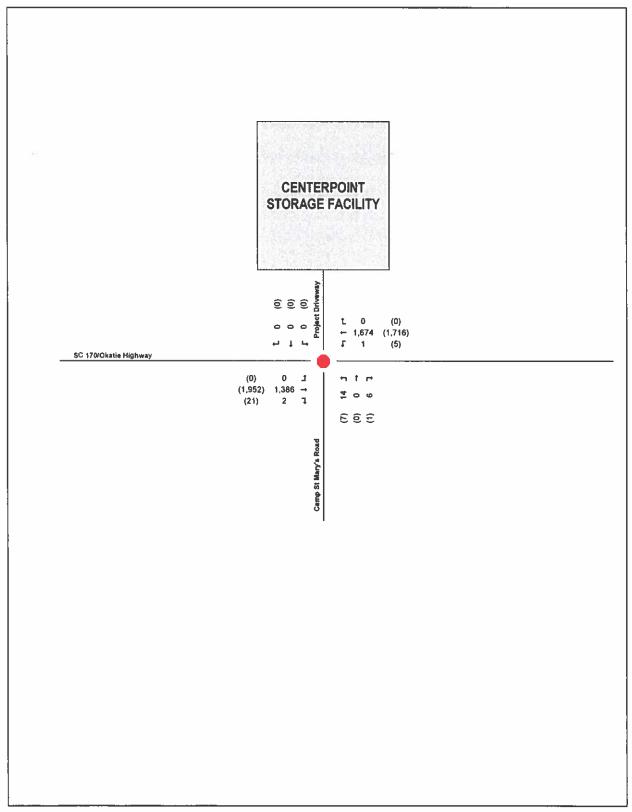
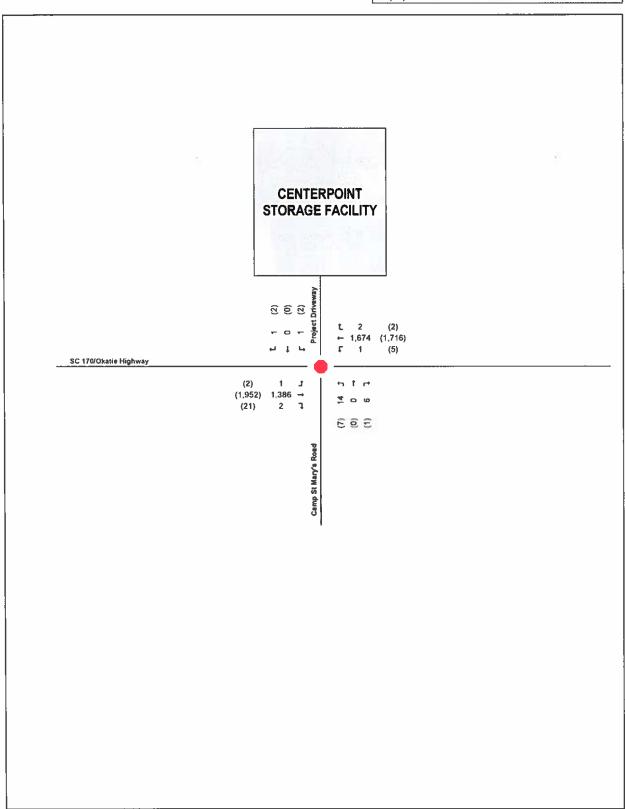


Exhibit 4.4 - 2025 Build Peak Hour Traffic Volumes





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### 5.0 TRAFFIC IMPACT ANALYSIS

A traffic impact analysis was conducted for the CenterPoint Storage Facility development which analyzed the need for turn lanes at the project driveways as well as the operation of study area intersections according to *Highway Capacity Manual 6th Edition (HCM 6th)* methodologies.

### 5.1 TURN LANE ANALYSIS

### 5.1.1 Right-Turn Lanes

The need for exclusive right-turn lanes is based upon the criteria documented in Section 9.5.1.1 of SCDOT's Roadway Design Manual (2021), which consists of nine considerations, listed below:

- At a free-flowing leg of any unsignalized intersection on a two-lane urban or rural highway which satisfies the criteria in Figure 9.5-A;
- at a free-flowing leg of any unsignalized intersection on a high-speed (50 mph or greater), four-lane urban or rural highway which satisfies the criteria in Figure 9.5-B;
- 3. at the free-flowing leg of any unsignalized intersection on a six-lane urban or rural highway;
- at any intersection where a capacity analysis determines a right-turn lane is necessary to meet the overall level-ofservice criteria;
- 5. as a general rule, at any signalized intersection where the projected right-turning volume is greater than 300 vehicles per hour and where there are greater than 300 vehicles per hour per lane on the mainline (A traffic analysis will be required if the turning volumes are greater than 300 vehicles per hour);
- for uniformity of intersection design along the highway if other intersections have right-turn lanes;
- at any intersection where the mainline is curved to the left and where the mainline curve requires superelevation;
- at railroad crossings where the railroad is paralleled to the facility and is located close to the intersection and where a right-turn lane would be desirable to store queued vehicles avoiding interference with the movement of through traffic; or
- at any intersection where the crash experience, existing traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgement indicates a significant conflict related to right-turning vehicles;

Table 5.1 below details whether the previously mentioned criteria for exclusive right-turn lanes are satisfied for each driveway. An \*\*∞" indicates that the criteria is not met; a "✓" indicates that it is met; and "N/A" indicates that the criteria is not applicable.

Table 5.1 – Right-Turn Lane Criteria Warrants

Criteria	Project Driveway	Reference/Note
1	30	Appendix H
2	ж	Appendix H
3	×	Not a 6-lane highway
4	30	Fails with or without turn lane
5	3c	Exhibit 4.3
6	sc	Right turn lanes provided at some driveways, but not at others.
7	ж	Not curved to the left
8	ж	No railroad crossing
9	N/A	Crash data not provided

Based on SCDOT's Roadway Design Manual considerations, an exclusive westbound right-turn lane along SC 170/Okatie Highway is not recommended at the Project Driveway.

### 5.1.2 Left-Turn Lanes

The need for exclusive left-turn lanes is based upon the criteria documented in *Section 9.5.1.2* of SCDOT's *Roadway Design Manual* (2021), which consists of nine considerations, listed below:

- 1. At any unsignalized intersection on principal, high-speed rural highways with other arterials or collectors;
- at any unsignalized intersection on a two-lane urban or rural highway that satisfies the criteria in Figures 9.5-C, 9.5-D, 9.5-E, 9.5-F, or 9.5-G;
- at any intersection where a capacity analysis determines a left-turn lane is necessary to meet the level of service criteria:
- at any signalized intersection where the left-turn volume is 300 vehicles per hour or more, conduct a traffic review to determine if dual left-turn lanes are required;
- as a general rule, at any intersection where the leftturning volume is 100 vehicles per hour (for a single turn lane) or 300 vehicles per hour (for a dual turn lane);
- at all entrances to major residential, commercial, and industrial developments;
- 7. at all median crossovers;
- for uniformity of intersection design along the highway if other intersections have left-turn lanes (i.e., to satisfy driver expectancy); or
- at any intersection where the crash experience, existing traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgement indicates a significant conflict related to left-turning vehicles;

Table 5.2 below details whether the previously mentioned criteria for exclusive left-turn lanes are satisfied for each driveway. An "\*" indicates that the criteria is not met; a "✓" indicates that it is met; and "N/A" indicates that the criteria is not applicable.

Table 5.2 - Left-Turn Lane Criteria Warrants

Criteria	Project Driveway	Reference/Note
1	ж	Not arterial or collector
2	✓	Appendix H
3	je.	Fails with or without turn lane
4	36	Exhibit 4.3
5	×	Exhibit 4.3
6	30	Not a major development
7	✓	SC 170 has median crossing
8	30	TWLTL provided along SC 170
9	N/A	Crash data not provided

"TWLTL = two way left turn lane

Based on SCDOT's *Roadway Design Manual* considerations, an exclusive eastbound left-turn lane along SC 170/Okatie Highway is recommended at the Project Driveway.

Per the criteria documented in Section 5D-4 of SCDOT's Access and Roadside Management Standards (ARMS, 2008), the recommended length of the exclusive left-turn lane is a total of 400 feet, with 200 feet of storage and a 200-foot taper. However, since there is an existing two-way left-turn-lane (TWLTL) and since the projected left-turning volume is low, it is recommended that the existing TWLTL serve as left-turn storage into the site.

### 5.2 INTERSECTION LOS ANALYSIS

Using the existing and projected peak hour traffic volumes previously discussed, intersection analysis was conducted for the study and project driveway intersections considering 2022 Existing Conditions, 2025 No Build Conditions, and 2025 Build Conditions. The analysis was conducted using the Transportation Research Board's *Highway Capacity Manual 6th Edition (HCM 6th)* methodologies of the *Synchro*, Version 11 software for stop-controlled and signalized intersection analysis.

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, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable. Table 5.3 summarizes the HCM 6th Edition control delay thresholds associated with each LOS grade for unsignalized and signalized intersections. Level of service A through D is considered to be acceptable LOS, while LOS E and F is considered to be undesirable.

Table 5.3 – HCM 6th Edition Intersection LOS Criteria

LOS	Control Delay per Vehicle (s) Unsignalized
Α	≤ 10
В	> 10 and ≤ 15
С	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

As part of the intersection analysis, SCDOT's default *Synchro* parameters were utilized. The existing 2022 traffic counts' peak hour factors (PHF) were utilized in the analysis of existing conditions. Future-year 2025 conditions were analyzed utilizing existing PHF, but with a minimum PHF of 0.90 and maximum PHF of 0.95 considered. The existing 2022 heavy vehicle percentages, as previously discussed, were utilized in the analysis, with a minimum percentage of 2% considered.

Existing lane geometry was utilized for the analysis of 2022 Existing Conditions and 2025 No Build Conditions. The 2025 Build Conditions were analyzed both with existing lane geometry and with any proposed improvements resulting from this impact analysis (including any proposed exclusive turn lanes per the results of Section 5.1) to illustrate their anticipated impact on traffic operations.

The results of the intersection analysis for existing and futureyear conditions for the weekday AM and PM peak hour time periods are summarized in Table 5.4.

For two-way stop-controlled (TWSC) intersections, the LOS and delay results are evaluated for the worst-case minor-street approaches only, per *HCM 6th Edition* methodologies for TWSC intersections.

As shown in Table 5.4, the results of the analysis indicate that the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway is projected to experience undesirable delay in the AM peak hours of the 2025 Build Conditions and in the PM peak hours of both the 2025 No Build and Build Conditions. However, this projected delay is likely due to the conservative nature of the *HCM 6th Edition* unsignalized methodology and is not an uncommon condition for two-way stop control during the peak hours of the day. Furthermore, the delay at the southbound approach at the Project Driveway will only be experienced by patrons of the site. Therefore, no improvements to mitigate this delay are recommended.

Worksheets documenting the intersection analyses are provided in **Appendix D** for 2022 Existing Conditions, **Appendix E** for 2025 No Build Conditions, and in **Appendix** F for 2025 Build Conditions.

Table 5.4 - Peak Hour Intersection Analysis Results

					LOS/Delay (see	conds/vehicle)				
1.4	041	[ <b>.</b>		AM Peak Hour		PM Peak Hour				
Intersection	Control	Approach	2022 Existing	2025 No Build	2025 Build	2022 Existing	2025 No Build	2025 Build		
SC 170/Okatie Highway & Camp St Mary's Road (NB)/	TWSC	NB	C/20.3	D/26.5	D/33.5	D/31.4	F/52.8	F/63.3		
Project Driveway (SB)	14400	SB	**	\$75	F/150.3	_		F/260.9		

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### 6.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

A traffic impact analysis was conducted for the CenterPoint Storage Facility development in accordance with SCDOT and Jasper County guidelines.

The proposed CenterPoint Storage Facility development (which is anticipated to be constructed by 2025) is located along SC 170 and will consist of a 53,344 square-foot climate-controlled storage center.

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An ingress turn lane analysis was conducted for the project driveway, and the operation of this intersection (in terms of average vehicular delay and level of service) was analyzed with and without the project traffic anticipated to be generated by the CenterPoint Storage Facility development.

Based on SCDOT's Roadway Design Manual considerations, an exclusive eastbound left-turn lane along SC 170/Okatie Highway is recommended at the Project Driveway. Per the criteria documented in Section 5D-4 of SCDOT's Access and Roadside Management Standards (ARMS, 2008), the recommended length of the exclusive left-turn lane is a total of 400 feet, with 200 feet of storage and a 200-foot taper. However, since there is an existing two-way left-turn-lane (TWLTL) and since the projected left-turning volume is low, it is recommended that the existing TWLTL serve as left-turn storage into the site.

The results of the level of service analysis indicate that the intersection of SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway is projected to experience undesirable delay in the AM peak hours of the 2025 Build Conditions and in the PM peak hours of both the 2025 No Build and Build Conditions. However, this projected delay is likely due to the conservative nature of the HCM 6th Edition unsignalized methodology and is not an uncommon condition for two-way stop control during the peak hours of the day. Furthermore, the delay at the southbound approach at the Project Driveway will only be experienced by patrons of the site. Therefore, no improvements to mitigate this delay are recommended.

# CENTERPOINT STORAGE FACILITY TRAFFIC IMPACT ANALYSIS

## **APPENDICES**

## Appendix A TRIP GENERATION WORKSHEETS

WARD EDWARDS ENGINEERING APPENDIX A

## **TRIP GENERATION ESTIMATES**

## Center Point Storage Facility

**Weekday Daily** 

Trip	Gene	eration	Contractors	tional bution	New	Trips				
Land Use	Ed.	LUC	Scale	Unit	Equation/Rate	In	Out	In	Out	Total
Mini-Warehouse	11th	151	53.344	DU	T=1.45*(X)	50%	50%	39	39	78
	0 100	SURE	100				Total:	39	39	78

Weekday AM Peak Hour

Triç	Gene	eration		tional bution	New	Trips				
Land Use	Ed.	LUC	Scale	Unit	Equation/Rate	ln	Out	ln	Out	Total
Mini-Warehouse	11th	151	53.344	DU	T = 0.09*(X)	59%	41%	3	2	5
							Total:	3	2	5

Weekday PM Peak Hour

Triţ	Gene	eration		tional bution	No	nal				
Land Use	Ed.	LUC	Scale	Unit	Equation/Rate	In	Out	ln	Out	Total
Mini-Warehouse	11th	151	53.344	DU	T = 0.15*(X)	47%	53%	4	4	8
							Total:	4	4	8

## Appendix B TRAFFIC VOLUME DATA

WARD EDWARDS ENGINEERING APPENDIX B

## S HO RT COUNTS, LEC 735 Maryland St Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name: SC 170 @ Camp St Marys Rd

Site Code :

Start Date : 08/03/2021

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

					noups r	SC 1	170			amp St I	Marys R						
		South				Westb				North					ound		
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	0	0	0	0	0	294	0	0	4	0	0	0	0	245	2	0	545
07:15	0	0	0	0	0	359	0	0	5	0	1	0	0	254	1	0	620
07:30	0	0	0	0	0	370	0	0	1	0	1	0	0	277	0	0	649
07:45	0	0	0	0	1	340	0	0	2	0	2	0	0	259	1	0	605
Total	0	0	0	0	1	1363	0	0	12	0	4	0	0	1035	4	0	2419
08:00	0	0	0	0	0	285	0	0	3	0	1	0	0	271	0	0	560
08:15	0	0	0	0	0	272	0	0	3	0	0	0	0	259	1	0	535
08:30	0	0	0	0	1	307	0	0	4	0	2	0	0	208	1	0	523
08:45	0	0	0	0	1	262	0	0	2	0	0	0	0	227	0	0	492
Total	0	0	0	0	2	1126	0	0	12	0	3	0	0	965	2	0	2110
16:00 l	0	0	0	0	0	313	0	o l	4	0	3	o l	0	323	4	0	647
16:15	0	0	0	0	1	356	0	ō	2	0	5	ol	0	357	4	0	725
16:30	0	0	0	0	3	340	0	ō	2	0	0	ol	0	359	1	0	705
16.45	0	0	0	0	1	331	0	0	2	0	1	0	0	343	2	0	680
Total	0	0	0	0	5	1340	0	0	10	0	9	0	0	1382	11	0	2757
17:00	0	0	0	0	0	342	0	0	0	0	0	0	0	401	7	0	750
17:15	0	0	0	0	2	317	0	0	3	0	0	0	0	399	6	0	727
17:30	0	0	0	0	1	339	0	0	1	0	0	0	0	417	2	0	760
17:45	0	0	0	0	0	267	0	0	3	0	1	0	0	375	6	0	652
Total	0	0	0	0	3	1265	0	0	7	0	1	0	0	1592	21	0	2889
Grand Total	0	0	0	0	11	5094	0	0	41	0	17	0	0	4974	38	0	10175
Apprch %	0	0	0	0	0.2	99.8	0	0	70.7	0	29.3	0	0	99.2	8.0	0	
Total %	0	0	0	0	0.1	50.1	0	0	0.4	0	0.2	0	0	48.9	0.4	0	
Passenger Vehicles	0	0	0	0	11	4957	0	0	41	0	17	0	0	4821	38	0	9885
% Passenger Vehicles	0	0	0	0	100	97.3	0	0	100	0	100	0	0	96.9	100	0	97.1
Heavy Vehicles	0	0	0	0	0	137	0	0	0	0	0	0	0	153	0	0	290
% Heavy Vehicles	0	0	0	0	0	2.7	0	0	0	0	0	0	0	3.1	0	0	2.9
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	l 0

# S HO RT COUNTS, LCC 735 Maryland St Columbia, SC 29201

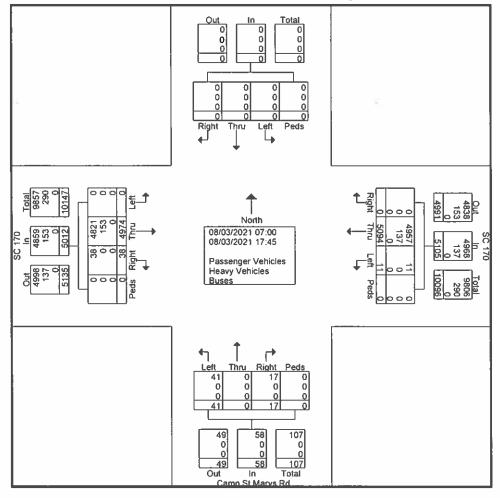
We can't say we're the Best, but you Can!

File Name: SC 170 @ Camp St Marys Rd

Site Code :

Start Date : 08/03/2021

Page No : 2



# S HO RT COUNTS, LLC 735 Maryland St Columbia, SC 29201

We can't say we're the Best, but you Can!

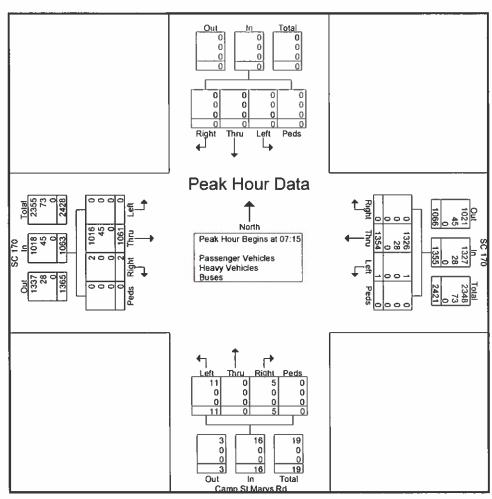
File Name: SC 170 @ Camp St Marys Rd

Site Code :

Start Date : 08/03/2021

Page No : 3

								SC 17	0			Camp	St Ma	arys Ro	t			SC 17	0		
		Sc	uthbo	und			V	/estboo	and			N	<u>orthbo</u>	und			E	astbou	ınd		
Start Time	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total	Int. Total
Peak Hour Ar	nalysis	From (	07:00 to	0 08:4	5 - Peak	1 of 1															
Peak Hour for	r Entire	Inters	ection	Begins	at 07:1	5															
07:15																620					
07:30	0	0	0	0	0	0	370	0	0	370	1	0	1	0	2	0	277	0	0	277	649
07:45	0	0	0	0	0	1	340	0	0	341	2	0	2	0	4	0	259	1	0	260	605
08:00	0	0	0	0	0	0	285	0	0	285	3	0	1	0	4	0	271	0	0	271	560
Total Volume	0	0	0	0	0	1	1354	0	0	1355	11	0	5	0	16	0	1061	2	0	1063	2434
% App. Total	0	0	0	0		0.1	99.9	0	0		68.8	0	31.2	0		0	99.8	0.2	0		
PHF	.000	.000	.000	.000	.000	.250	.915	.000	.000	.916	.550	.000	.625	.000	.667	.000	.958	.500	.000	.959	.938
Passenger Vehicles	0	0	0	0	0	1	1326										1016				
% Passenger Vehicles	0	0	0	0	0	100	97.9	0	0	97.9	100	0	100	0	100	0	95.8	100	0	95.8	97.0
Heavy Vehicles	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	0	45	0	0	45	73
Meavy Vehicles	0	0	0	0	0	0	2.1	0	0	2.1	0	0	0	0	0	0	4.2	0	0	4.2	3.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



# S HO RS COUNTS, LLC 735 Maryland St Columbia, SC 29201

We can't say we're the Best, but you Can!

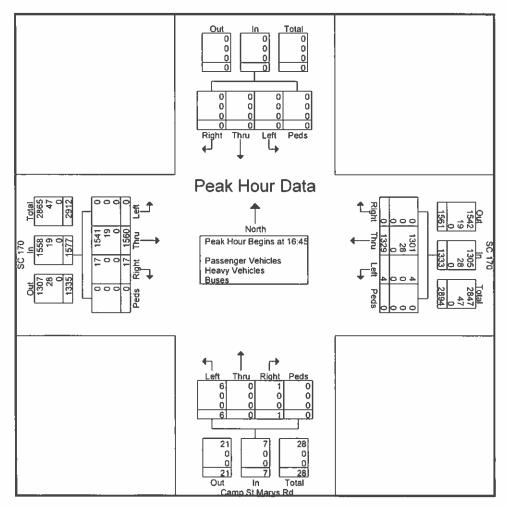
File Name: SC 170 @ Camp St Marys Rd

Site Code :

Start Date : 08/03/2021

Page No : 4

								SC 17	<u> </u>			Camr	St Ma	rys Rd				SC 17	n		
		Sn	uthboi	ind				/estbou					orthbol				F	astbou	_		
Start Time	Left	Thru			App Total	Left			Peds	Ann. Total	Left				A	Left				. 4.	Int. Total
Peak Hour Ar							THE	rugue	i eda [	App Total	LOIL	HIII	Right	1 603	App Total	Leit	HIIO	Trigit	reus	App Total	Int. I otal
Peak Hour fo	l .	inters	ection	begins	at 10.4	<b>o</b>		_	_		_	_		_		_		_		1	
16:45	0	0	0	0	0	1	331	0	0	332	2	0	- 1	0	3	0	343	2	0	345	680
17:00	0	0	0	0	0	0	342	0	0	342	0	0	0	0	0	0	401	7	0	408	750
□17:15	0	0	0	0	0	2	317	0	0	319	- 3	0	0	0	3	0	399	6	0	405	727
17:30	0	0	0	0	0	1	339	0	0	340	1	0	0	0	1	0	417	2	0	419	760
Total Volume	0	0	0	0	0	4	1329	0	0	1333	6	0	1	0	7	0	1560	17	0	1577	2917
% App. Total	0	0	0	0		0.3	99.7	0	0		85.7	0	14.3	0		0	98.9	1.1	0		
PHF	.000	.000	.000	.000	.000	.500	.971	.000	.000	.974	.500	,000	250	,000	.583	.000	.935	.607	.000	.941	960
Passenger Vehicles	0	0	0	0	0	4	1301					1.0	110	(0)			1541		07.0		
% Passenger Vehicles	0	0	0	0	0	100	97.9	0	0	97.9	100	0	100	0	100	0	98.8	100	0	98.8	98.4
Heavy Vehicles	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	0	19	0	0	19	47
% Heavy Vehicles	0	0	0	0	0	0	2.1	0	0	2.1	0	0	0	0	0	0	1.2	0	0	1.2	1.6
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō



## Appendix C TRAFFIC VOLUME DEVELOPMENT WORKSHEETS

WARD EDWARDS ENGINEERING APPENDIX C

				hway &								
					<u>ATOT</u>	<u>L PROJ</u>	ECT TR	<u> AFFIC</u>				
Traffic Control	: TWSC		IN	OUT		IN	OUT					
Date Counted	: 8/3/202	1		AM	3	2	PM	4	4			
AM PEAK HOUR 7:15 AM - 8:15 AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2021 Traffic Volumes	0	1,061	2	1	1,354	0	11	0	5	0	0	0
2022 Existing Traffic Volumes	0	1,114	2	1	1,422	0	12	0	5	0	0	0
Years to Buildout	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Background Traffic	0	167	0	0	213	0	2	0	1	0	0	0
Vested Traffic		105			39							
2025 No Build Traffic Volumes	0	1,386	2	1	1,674	0	14	0	6	0	0	0
Inbound Project Traffic %	50%					50%						
Outbound Project Traffic %										50%	317	50%
2025 Project Traffic	1	0	0	0	0	2	0	0	0	1	0	1
2025 Build Traffic Volumes	1	1,386	2	1	1,674	2	14	0	6	_ 1	0	- 1
PM PEAK HOUR 4:45 PM - 5:45 PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2021 Traffic Volumes	0	1,560	17	4	1,329	0	6	0	1	0	0	0
2022 Existing Traffic Volumes	0	1,638	18	4	1,395	0	6	0	1	0	0	0
Years to Buildout	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Background Traffic	0	246	3	1 1	209	0	1	0	0	0	0	0
Vested Traffic		68			112					[		
2025 No Build Traffic Volumes	0	1,952	21	5	1,716	0	7	0	1	0	0	0
Inbound Project Traffic %	50%					50%						
Outbound Project Traffic %										50%		50%
2025 Project Traffic	2	0	0	0	0	2	0	0	. 0	2	0	2
2025 Build Traffic Volumes	2	1.952	21	5	1,716	2	7	0	1	2	0	2

## Appendix D ANALYSIS WORKSHEETS: 2022 EXISTING CONDITIONS

WARD EDWARDS ENGINEERING APPENDIX D

Int Delay, s/veh	Intersection				15		
Novement		0.1					
Traffic Vol, veh/h							
Traffic Vol, veh/h			EBR				
Traffic Vol, veh/h	Lane Configurations	1		7	44	. 1	7
Conflicting Peds, #/hr   O   O   O   O   O   O   O   O   O	All the second s		2	1	1422		
Sign Control         Free RTC Free RTC None         Free RTC None         Free RTC None         Free RTC None         RTC None         None <td>Future Vol, veh/h</td> <td>1114</td> <td>2</td> <td>1</td> <td>1422</td> <td>12</td> <td>5</td>	Future Vol, veh/h	1114	2	1	1422	12	5
RT Channelized		0					
Storage Length		Free		Free		Stop	
Veh in Median Storage, #         0         -         -         0         2         -           Grade, %         0         -         -         0         0         -           Peak Hour Factor         94         94         94         94         94         94           Heavy Vehicles, %         4         4         2         2         2         2           Mvmt Flow         1185         2         1         1513         13         5           Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         1187         0         1945         594           Stage 1         -         -         -         1186         -         -         594         Stage -         -         759         -         -         186         -         -         -         186         -         -         -         186         -         -         -         284         6.94         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <td< td=""><td>CONTRACT PROPERTY AND ARRANGE TO SERVICE AND</td><td>-</td><td>None</td><td></td><td>None</td><td></td><td>None</td></td<>	CONTRACT PROPERTY AND ARRANGE TO SERVICE AND	-	None		None		None
Grade, %         0         -         -         0         0         -           Peak Hour Factor         94				225	-		0
Peak Hour Factor         94	Veh in Median Storage,	# 0	-		Ó	2	
Heavy Vehicles, %		0	700				
Mynt Flow         1185         2         1         1513         13         5           Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         1187         0         1945         594           Stage 1         -         -         -         1186         -           Stage 2         -         -         -         759         -           Critical Hdwy         -         4.14         -         6.84         6.94           Critical Hdwy Stg 1         -         -         -         5.84         -           Critical Hdwy Stg 2         -         -         -         5.84         -           Follow-up Hdwy         -         2.222         -         3.52         3.32           Pollow-up Hdwy         -         2.222         -         3.52         3.32           Pollow-up Hdwy         -         -         2.252         -         3.52         3.32           Pollow-up Hdwy         -         -         2.252         -         3.52         3.32           Pollow-up Hdwy         -         -         -         2.52         -           S	Peak Hour Factor	94	94	94	94	94	94
Mymt Flow         1185         2         1         1513         13         5           Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         1187         0         1945         594           Stage 1         -         -         -         1186         -           Stage 2         -         -         -         759         -           Critical Hdwy         -         -         4.14         -         6.84         6.94           Critical Hdwy Stg 1         -         -         -         5.84         -         -           Follow-up Hdwy         -         2.22         -         3.52         3.32           Pot Cap-1 Maneuver         -         584         -         57         448           Stage 1         -         -         -         252         -           Stage 2         -         -         -         242         -           Mov Cap-1 Maneuver         -         584         -         57         448           Mov Cap-2 Maneuver         -         -         252         -           Stage 1         -         - <td></td> <td>4</td> <td>4</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td>		4	4	2	2	2	2
Major/Minor         Major1         Major2         Minor1           Conflicting Flow All         0         0         1187         0         1945         594           Stage 1         -         -         -         1186         -           Stage 2         -         -         -         759         -           Critical Hdwy         -         4.14         -         6.84         6.94           Critical Hdwy Stg 1         -         -         -         5.84         -           Follow-up Hdwy         -         2.22         -         3.52         3.32           Pot Cap-1 Maneuver         -         584         -         57         448           Stage 1         -         -         -         252         -           Stage 2         -         -         -         2423         -           Platoon blocked, %         -         -         -         -         242         -           Mov Cap-1 Maneuver         -         584         -         57         448           Mov Cap-2 Maneuver         -         -         584         -         57         448           HCM Control Delay, s         0<		1185					
Stage 1							-
Stage 1	1	7 7					
Stage 1       -       -       1186       -         Stage 2       -       -       759       -         Critical Hdwy       -       4.14       -       6.84       6.94         Critical Hdwy Stg 1       -       -       5.84       -         Critical Hdwy Stg 2       -       -       5.84       -         Follow-up Hdwy       -       2.22       3.52       3.32         Pot Cap-1 Maneuver       -       584       -       57       448         Stage 1       -       -       252       -         Stage 2       -       -       -       423       -         Platoon blocked, %       -       -       -       -       -       -         Mov Cap-1 Maneuver       -       -       584       -       57       448         Mov Cap-2 Maneuver       -       -       210       -       -         Stage 1       -       -       252       -       -       -       252       -         Stage 2       -       -       -       252       -       -       -       252       -       -       -       -       252       -		_				_	
Stage 2		0	0	1187	0		594
Critical Hdwy         -         4.14         -         6.84         6.94           Critical Hdwy Stg 1         -         -         -         5.84         -           Follow-up Hdwy         -         2.22         -         3.52         3.32           Pot Cap-1 Maneuver         -         584         -         57         448           Stage 1         -         -         252         -           Stage 2         -         -         -         252         -           Platoon blocked, %         - <td></td> <td>-</td> <td></td> <td></td> <td>- 12</td> <td></td> <td>-</td>		-			- 12		-
Critical Hdwy Stg 1         -         -         5.84         -           Critical Hdwy Stg 2         -         -         5.84         -           Follow-up Hdwy         -         2.22         -         3.52         3.32           Pot Cap-1 Maneuver         -         584         -         57         448           Stage 1         -         -         -         252         -           Stage 2         -         -         -         -         -           Platoon blocked, %         -	Stage 2	-			-		
Critical Hdwy Stg 2         -         -         5.84         -           Follow-up Hdwy         -         2.22         -         3.52         3.32           Pot Cap-1 Maneuver         -         -         584         -         57         448           Stage 1         -	Critical Hdwy	-	-	4.14	-	6.84	6.94
Follow-up Hdwy - 2.22 - 3.52 3.32  Pot Cap-1 Maneuver - 584 - 57 448  Stage 1 252 -  Stage 2 423 -  Platoon blocked, %  Mov Cap-1 Maneuver - 584 - 57 448  Mov Cap-2 Maneuver - 584 - 57 448  Mov Cap-2 Maneuver 210 -  Stage 1 252 -  Stage 2 422 -  Approach EB WB NB  HCM Control Delay, s 0 0 20.3  HCM LOS C  Minor Lane/Major Mvmt NBLn1 NBLn2 EBT EBR WBL  Capacity (veh/h) 210 448 - 584  HCM Lane V/C Ratio 0.061 0.012 - 0.002  HCM Control Delay (s) 23.3 13.1 - 11.2  HCM Lane LOS C B - B	Critical Hdwy Stg 1		-		10-5	5.84	-
Pot Cap-1 Maneuver	Critical Hdwy Stg 2	-				5.84	- 15-
Stage 1       -       -       -       252       -         Stage 2       -       -       -       423       -         Platoon blocked, %       -       -       -       -         Mov Cap-1 Maneuver       -       -       584       -       57       448         Mov Cap-2 Maneuver       -       -       -       210       -         Stage 1       -       -       -       252       -         Stage 2       -       -       -       422       -         Approach       EB       WB       NB         HCM Control Delay, s       0       0       20.3         HCM LOS       C       C     Minor Lane/Major Mvmt  NBLn1 NBLn2  EBT  EBR  WBL  Capacity (veh/h)  210  448  - 584  HCM Lane V/C Ratio  0.061  0.012  - 0.002  HCM Control Delay (s)  23.3  13.1  - 11.2  HCM Lane LOS  C  B  - B	Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Stage 2	Pot Cap-1 Maneuver	-	140 -	584		57	448
Stage 2	Stage 1	_	_	-	-	252	-
Platoon blocked, %			-	- 2	_	423	
Mov Cap-1 Maneuver         -         -         584         -         57         448           Mov Cap-2 Maneuver         -         -         -         210         -           Stage 1         -         -         -         252         -           Stage 2         -         -         -         422         -           Approach         EB         WB         NB           HCM Control Delay, s         0         0         20.3           HCM LOS         C         C    Minor Lane/Major Mvmt  NBLn1 NBLn2  EBT  EBR  WBL  Capacity (veh/h)  210  448  584  HCM Lane V/C Ratio  0.061  0.012  - 0.002  HCM Control Delay (s)  23.3  13.1  - 11.2  HCM Lane LOS  C  B  - B		_	-				
Mov Cap-2 Maneuver			_	584	100	57	448
Stage 1				-			
Stage 2		_	_		WE T		
Approach				- 100			_
HCM Control Delay, s	Olago Z					722	
HCM Control Delay, s		-					
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         210         448         -         -         584           HCM Lane V/C Ratio         0.061         0.012         -         -         0.002           HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B		_	45				
Minor Lane/Major Mvmt         NBLn1 NBLn2         EBT         EBR         WBL           Capacity (veh/h)         210         448         -         -         584           HCM Lane V/C Ratio         0.061         0.012         -         -         0.002           HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B	HCM Control Delay, s	0		0			
Capacity (veh/h)         210         448         -         -         584           HCM Lane V/C Ratio         0.061         0.012         -         -         0.002           HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B	HCM LOS					C	
Capacity (veh/h)         210         448         -         -         584           HCM Lane V/C Ratio         0.061         0.012         -         -         0.002           HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B							
Capacity (veh/h)         210         448         -         -         584           HCM Lane V/C Ratio         0.061         0.012         -         -         0.002           HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B	Minor Lang/Major Mumb		MRI n1	MRI n2	EDT	ERD	VA/DI
HCM Lane V/C Ratio       0.061 0.012 - 0.002         HCM Control Delay (s)       23.3 13.1 - 11.2         HCM Lane LOS       C B - B							
HCM Control Delay (s)         23.3         13.1         -         -         11.2           HCM Lane LOS         C         B         -         -         B							
HCM Lane LOS C B B					_		
						-	
MUM 95th %tile Q(ven) 0.2 0 0						-	
	HUM 95th %tile Q(veh)		0.2	0	•	-	U

Intersection				Out E	-	
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		FOL				
	<b>1561</b>	17	7	1220	7	7
Traffic Vol, veh/h Future Vol, veh/h	1561	17	4	1329 1329	6	1
		-				
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	-	-	225		200	. 0
Veh in Median Storage,		-	-	0	2	-
Grade, %	0	-	-	0	0	
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1626	18	4	1384	6	1
No.						
Majorit Book	Interes		4-1-0		Ata and	
	lajor1		Major2		viinor1	
Conflicting Flow All	0	0	1644	0	2335	822
Stage 1	-	-	-	- 1	1635	-
Stage 2	-	-	-	-	700	-
Critical Hdwy	-	-	4.14		6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	_		_	5.84	_
Follow-up Hdwy		-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	· -	390	1	31	317
Stage 1				_	144	-
Stage 2		_		1 1	454	
Platoon blocked, %	_	-			707	
Mov Cap-1 Maneuver	-	-	390		31	317
Mov Cap-2 Maneuver					131	
	•	-	•	•		-
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	449	-
		_800,				
Approach	EB		WB	1 =140	NB	
HCM Control Delay, s	0	_	0		31.4	
HCM LOS	U		U		D	
TION LOS					U	
Minor Lane/Major Mvml		NBLn1	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		131	317	-		
HCM Lane V/C Ratio			0.003	_		0.011
HCM Control Delay (s)		33.9		-		14.3
HCM Lane LOS		D	C		-	B
HCM 95th %tile Q(veh)		0.1	0			
LICIAI ADRI MILIE (TIALI)		0.1	U	•	•	U

## Appendix E ANALYSIS WORKSHEETS: 2025 NO BUILD CONDITIONS

WARD EDWARDS ENGINEERING APPENDIX E

## 101: Camp St. Marys Road & SC 170/Okatie Highway

Intersection		2011				
Int Delay, s/veh	0.2					
		CDD	W/DI	MOT	MPI	NPG
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1206	0	7	1674	14	7
	1386 1386	2	1	1674 1674	14	6
Conflicting Peds, #/hr	1300	0	0	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	riee	None		None		None
Storage Length	-	HOHE	225	-	200	0
Veh in Median Storage,			225	0	200	-
Grade, %	# 0		_	0	0	
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	2	2	2	2
	1474	2	1	1781	15	6
MAHIT LIOM	14/4			1/01	10	0
A A STATE OF THE S						
Major/Minor M	ajor1		Major2	1	Minor1	
Conflicting Flow All	0	0	1476	0	2368	738
Stage 1					1475	3-
Stage 2			V SCHOOL STATE	-	893	
Critical Hdwy	-	-	4.14		6.84	6.94
Critical Hdwy Stg 1	-	-	_	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	_
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	_		452	_	29	360
Stage 1	-		-	-	177	-
Stage 2	_	-	-	-	360	_
Platoon blocked, %		-		-		
Mov Cap-1 Maneuver			452	-	29	360
Mov Cap-2 Maneuver		-		-	151	-
Stage 1	-			_	177	
Stage 2	-			-	359	-
Otago L					-	
			-		11.00	-
Approach	EB	100	WB	WIL.	NB	
HCM Control Delay, s	0		0		26.5	
HCM LOS				v-10	D	
Minor Lane/Major Mvmt		NBLn1i	NBLn2	EBT	EBR	WBL
Capacity (veh/h)		151	360		-	
HCM Lane V/C Ratio		0.099				0.002
HCM Control Delay (s)		31.4	15.2		-	13
HCM Lane LOS		D	C			В
HCM 95th %tile Q(veh)		0.3	0.1			_
Sin out was all on		010	VIII			_

Intersection			2 34		Ser of		
Int Delay, s/veh	0.2	10-07					
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	41		7	<b>^</b>	7	17	
Traffic Vol., veh/h	1952	21	5	1716	7	1	
Future Vol, veh/h	1952	21	5	1716	7	1	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	- 00	None	-	None		None	
Storage Length	-	-	225	-	200	0	
Veh in Median Storage	e,# 0	-		0	2	- 1	
Grade, %	0	-		0	0	•	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	2055	22	5	1806	7	1	
Major/Minor	Major1	1	Major2	7	dinor1		
Conflicting Flow All	0	0		0	2979	1039	
Stage 1	-	U	2011	-	0000	1039	
Stage 2				:	913		44-5
Critical Hdwy				-	6.84	6.94	
Critical Hdwy Stg 1			4, 14	-	5.84	0.94	
Critical Hdwy Stg 2					5.84		
Follow-up Hdwy	- :	•	2.22	:	3.52	3.32	
Pot Cap-1 Maneuver			264	_	11	227	
Stage 1			204	•	83	LLI	
Stage 2			_		352		
Platoon blocked, %		-	-		332		
Mov Cap-1 Maneuver			264		11	227	
Mov Cap-1 Maneuver			204	- :	76	- 221	
Stage 1			_		83		- 11
Stage 2	•				345	- 1	
Staye 2	•	-			343		
9 8 8 8 8							-
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.1		52.8		
HCM LOS					F		
Minor Lane/Major Myn	nt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	100	76	227	-	10.000	264	
HCM Lane V/C Ratio			0.005			0.02	
HCM Control Delay (s	)	57.4	20.9	St. Va		10.0	
HCM Lane LOS		F	С			С	-
HCM 95th %tile Q(veh	1)	0.3	0			0.1	
	7						

## Appendix F ANALYSIS WORKSHEETS: 2025 BUILD CONDITIONS

WARD EDWARDS ENGINEERING APPENDIX F

ntersection		10_33	- 281			8 11		Ē.,				L
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	41		7	<b>1</b>		. 7	1			व	7
Traffic Vol, veh/h	1	1386	2	1	1674	2	14	0	6	1	0	1
Future Vol, veh/h	1	1386	2	1	1674	2	14	0	6	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None			None		75	None	un T		None
Storage Length	200	-		225		-	200	-	-			50
Veh in Median Storage,	# -	0			0	-		2	-	-	0	-
Grade, %		0	-	-	0	-	-	0		- 1000	0	-
Peak Hour Factor	92	94	94	94	94	92	94	92	94	92	92	92
Heavy Vehicles, %	2	4	4	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1474	2	1	1781	2	15	0	6	1	0	1
Major/Minor N	/ajor1			Major2		1	Minor1		7	Minor2	17/3/3	No. of Lot
Conflicting Flow All	1783	0	0	1476	0	0	2370	3262	738	2523	3262	892
Stage 1	1,00			1910	-	-	1477	1477	730	1784	1784	-
Stage 2			9))))		-		893	1785		739	1478	
Critical Hdwy	4,14	W 1-	11-11-	4.14	-		7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-		-	-	-		6.54	5.54		6.54	5.54	0.04
Critical Hdwy Stg 2	11.5-		_	en ni			6.54	5.54		6.54	5.54	
Follow-up Hdwy	2.22	-	-	2.22			3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	344	7/-		452	-		18	9	360	14	9	285
Stage 1	-					_	132	188	-	85	133	
Stage 2	m-					-	303	133	· " -	375	188	-
Platoon blocked, %			-		-	-						
Mov Cap-1 Maneuver	344	( W -		452		-	18	9	360	14	9	285
Mov Cap-2 Maneuver	and the state of the	-		-	-	-	114	100		14	9	-
Stage 1			T		-		132	187		85	133	-
Stage 2	-		-		-	-	301	133	-	367	187	-
		70		1715	11.				14.	E		Marie I
Approach	EB		906	WB			NB	E 115	-1//	SB		- N 20
HCM Control Delay, s	0	1000		0			33.5		-	150.3		
HCM LOS	U			U			33.3 D			130.3 F		
TOM EOU		I E										
Denote NAT Y		MDI 4	NDI C	EDI	COT	FOO	14/71	MAT	LA PP PP	004	OD! C	
Minor Lane/Major Mvm		NBLn1		EBL	EBT	EBR	WBL	WBT			SBLn2	
Capacity (veh/h)		114	360	344	-		452	-	-	14	285	
HCM Lane V/C Ratio			0.018		-		0.002				0.004	
HCM Control Delay (s)		41.3	15.2	15.5	-	-	13	=		282.8	17.7	
HCM Lane LOS	4	E	C	C			8	-		F	C	
HCM 95th %tile Q(veh)		0.4	0.1	0	-		0		-	0.2	0	100

ntersection								die I	2				
nt Delay, s/veh	0.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	7	<b>1</b>	LUIX	7	41	HUIL	7	4	INDIX	000	4	7	
Traffic Vol. veh/h	2	1812	19	5	1716	2	7	0	1	2	0	2	
Future Vol, veh/h	2	1812	19	5	1716	2	7	0	1	2	0	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	1100	1166	None	1166	-	None	Olop -	Olop -	None	Ciop	Otop	None	
Storage Length	200		HOHE	225		TADRE	200		-			50	
Veh in Median Storage		0		-	0	-	200	2			0	-	-,
Grade, %	ın -	0			0	_	_	0			0		
Peak Hour Factor	92	95	95	95	95	92	95	92	95	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mymt Flow	2	1907	20	5	1806	2	7	0	1	2	0	2	
MALLICAN		1907	20	J	1000	2		U	-		U	2.	
Major/Minor	Major1		n N	viajor2			Minor1	ele pr		Minor2			0-1000
Conflicting Flow All	1808	0	0	1927	0	0	2834	3739	964	2775	3748	904	
Stage 1	-				-	-	1921	1921		1817	1817	-	
Stage 2					-	-	913	1818		958	1931		
Critical Hdwy	4.14	_		4.14	-		7.54	6.54	6.94	7.54	6,54	6.94	
Critical Hdwy Stg 1		-	_	-	-	_	6.54	5.54	0.01	6.54	5.54	_	
Critical Hdwy Stg 2			TANKE TO			- "	6.54	5.54		6.54	5.54	100	
Follow-up Hdwy	2.22		_	2.22	-		3.52	4.02	3.32	3.52	4.02	3.32	
Pot Cap-1 Maneuver	336	_	_	302		-	8	4	255	9	4	280	
Stage 1	-	-	_	-			69	113	-	81	128	-	
Stage 2	-		_			-	294	128		276	112	_	
Platoon blocked, %			_			-							
Mov Cap-1 Maneuver	336	_		302			8	4	255	9	4	280	
Mov Cap-2 Maneuver	-		-	-	_		63	76	_	9	4		
Stage 1			-				69	112	_	81	126		
Stage 2		-				-	287	126	-	273	111		
Olugo E							207	, 20					
Approach	EB	72	A	WB			NB	1115	1000	SB			
HCM Control Delay, s	0			0			63.3			260.9			
HCM LOS							F			F			
Minor Lane/Major Mvm	nt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR				
Capacity (veh/h)		63	255	336			302	-		9	280		
HCM Lane V/C Ratio			0.004		-	-	0.017	-		0.242			
HCM Control Delay (s)		69.6	19.2	15.8	П -	-	17.1		-\$	503.8	18		
HCM Lane LOS		F	С	C	-	-	C				С		
HCM 95th %tile Q(veh	1	0.4	0	0			0.1	_	-	0.6	0		

## Appendix G TURN LANE ANALYSIS WORKSHEETS

WARD EDWARDS ENGINEERING APPENDIX G



#### Stantec Study Area Information Date: 7/8/2022 County: Beaufort County SCDOT Engineering District District 6 Analyst: JM Agency: Stantec Consulting Services Inc. Analysis Year: 2025 Intersection: SC 170/Okatie Highway & Camp St Mary's Road/Project Driveway Left Turn Movement; Eastbound Left-Turn Lane Right Turn Movement: Westbound Right-Turn Lane Posted Speed Limit: 55 Median: Divided mph # of Approach Lanes: Urban or Rural? Rural Volume Information & Calculations Left Turn Lane Volume Calculations Volume (vph) Movement PM MA PM AM 1,389 1.975 Left Advancing Volume Advancing Through 1,386 1,952 Opposing Volume: 1,677 1,723 Right 2 21 Left Turn Volume: 2 5 Left Opposing 1,674 1,716 Through Right 2 2 % Left Turns in Advancing Volume: 0.1% 0.1% Right Turn Lane Volume Calculations Volume (vph) Adjustment to Right Turn Volume<sup>1</sup> Include? No Movement AM PM PM Left 5 AM Advancing Through 1,674 1,716 Advancing Volume: 1,677 1,723 Right Right Turn Volume: **Turn Lane Warrant Met?** Right Turn Lane Warrant Left Turn Lane Warrant Fig 9.5-D Applicable Warrant Chart: Applicable Warrant Chart: Flg 9.5-B Warrant Satisfied: Warrant Satisfied: No Yes Recommneded Turn Lane Length Advancing Approach Truck%: 2% Advancing Approach Truck%: 2% Left Turn Lane Right Turn Lane Storage Length (ft): N/A 200 Storage Length: Taper Length (ft): NΑ 200 ft Taper Length: Total Left Turn Lane (ft) 400 Total Left Turn Lane: N/A

Consider providing dual-turn lanes if the turning volumes are greater than 300 vehicles per hour. A traffic analysis will be required if the turning volumes are greater than 300 vehicles per hour.

The traffic designer should review the design to determine if longer turn lane lengths are required.

Source: SCDOT Roadway Design Manual (2021), SCDOT Access and Roadside Management Standards (2008), and TRB Highway Research Record 211, Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections.

