#### ALBEMARLE REGIONAL HEALTH SERVICES

#### Applicant:

Paul Henriques, Premiere Contracting PO Box 269 Kitty Hawk, NC 27949 Owner:
Cynthia Spain
112 Poplar Haven Road

Poplar Branch, NC 27965

#### Site Location:

4511 Caratoke Hwy Coinjock, NC 27923

GPD:

LTAR:

0.500

Classification:

PS w/Fill

If unsuitable, the site may be reclassified to provisionally suitable with the following modification(s):

To obtain an Authorization to Construct:

#### Comments:

- \*\*Before a septic can be properly sized, plans will be submitted showing proposed size of bakery and proposed use.
- \*\* Seasonal Soil Wetness was determined to be 22" towards front by highway and 18" towards rear of lot
- \*\*Permit fee will be based on proposed daily flow once determined
- \*\*Management Entity paperwork may be needed depending on type system designed
- \*\*Proposed 2 bedroom residential above bakery will add 240gpd to daily flow

EHS: Carver, Kevin

Date: 02/24/2022



# ALBEMARLE REGIONAL HEALTH SERVICES ON-SITE WASTE WATER SYSTEM APPLICATION

County: OURRITU	ch	File#					
Parcel Identification Number (Site Evaluations only): 0070000 22.70000							
Type of Service Requested Fee							
☑ Site Evaluation/ Improvement Permit for Wastewater System \$3							
☐ Existing Wastewater System Inspection \$ 100.0							
☐ Construction Authorization for Repair of Wastewater System \$ 100.00							
☐ Construction Authorization Permit *If Approved* \$400.00 - 450.00							
☐ Construction Author	ization Permit *If Approved* ( 5 BR+ fee	varies based on system typ	e) \$ 550.00 +				
☐ Permit Redraw			\$ 50.00				
,							
<b>Applicant Informat</b>							
Name: CYNTHIA							
	POPLAR HAVEN ROAD						
City/State/Zip: Pop							
Telephone Number:							
Email: MYO DINSO	n @ obxengineering com (a	MENT)					
<b>Property Owner Int</b>	formation	me as applicant					
Name:							
Mailing Address:							
City/State/Zip:							
Telephone Number:							
Email:							
<b>Property Information</b>	on .	Building Information	n				
Location	Lot I carter beumsel	Type of Facility	☐ Mobile Home				
	DIVISION. LOT BETWEEN		☐ House				
	4495 and 4511 CARATOKE		☐ Business (domestic strength only)				
	HWY, COINJOCK		Other RESTAURANT				
Date property was	P.C. B SL. 384	Number of Bedrooms					
originally deeded and		DESLAH FLOW	1640 ged				
recorded	8/17/88	SEE NOTE 11	10 10 982				
Size: (acres)	1.69 ac.	Number of Occupants	<u> NA</u>				
Water Supply	☑ Public supply	For Repairs, please					
	□Private Well	state the nature of	N/A				
		problem					
Map submitted	☐Survey Plat						
	☑Site Plan						
For Existing System	Inspection; List size/type of new c	onstruction:					
NEW L	PP SYSTEM FOR NEW R	CESTA UZAHT					
		• •					

(See Back)

The applicant shall notify ARHS upon submittal of this application if any of the following apply to the property in question. If "YES," the applicant must attach supporting documentation and show location(s) on the submitted site plan/plat.	YES	NO
Does the site contain any jurisdictional wetlands?		×
Does the site contain any wastewater systems?		X
Is any wastewater going to be generated on the site other than domestic sewage?	×	
Are there any easements or right of ways on this property?		X
Is this facility subject to approval by another public agency?	[X	
Are there any wells, springs, or existing water lines on this property?		24

#### INITIAL



THE APPLICANT SHALL MARK THE SITE AND MAKE THE SITE ACCESSIBLE FOR A SITE EVALUATION.



A \$60.00 REVISIT FEE WILL BE CHARGED IF THE PROPERTY IS UNIDENTIFIBLE OR INACCESSIBLE DUE TO VEGETATIVE OVERGROWTH, LOCKED GATES, LOOSE DOGS, ETC.



3. IF THE INFORMATION SUBMITTED BY THE APPLICANT IS FOUND TO BE INCORRECT, OR IF THE SITE AND SOIL CONDITIONS ARE ALTERED, ANY IMPROVEMENT PERMIT SHALL BECOME INVALID.

#### PLEASE ALLOW UP TO 2 WEEKS FOR COMPLETION.

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized county and state officials are granted right of entry to the property to conduct the services requested.

Date: 10-11-23

Owner or Agent Signature:

ROBIHSON R.E. (AGENT)

Mail To: ARHS Environmental Health; P.O. Box 189; Elizabeth City, NC 27907

Gates Co. Pasquotank Co. P: (252) 357-1380 P: (252)338-4490 F: (252) 357-2251 F: (252) 337-7921

Bertie Co. Camden Co. Chowan Co. Currituck Co. Hertford Co. Perquimans Co. P: (252) 794-5303 P: (252) 338-4460 P: (252) 482-1199 P: (252) 232-6603 P: (252) 862-4054 P: (252) 426-2100 F: (252) 338-4475 F: (252) 426-2104 F: (252) 794-5361 F: (252) 482-6020 F: (252) 232-1912 F: (252) 862-4263

October 24, 2023

Currituck County Planning & Zoning Currituck Historic Courthouse 153 Courthouse Road, Suite 110 Currituck, North Carolina 27929

Re: Stormwater Management Design Submittal

Major Stormwater Plan

Cindy's Kitchen

Corolla, Currituck County, NC

Dear Planning Staff;

On behalf of Cindy's Kitchen, we hereby submit for your review a Major Stormwater Plan application package for the stormwater management system design for the Cindy's Kitchen project.

Three copies of the following items are included with and shall be considered part of this submittal package:

- 1. Major Stormwater Plan Form SW-002
- 2. NCDEQ Stormwater Permit Application
- 3. NCDEQ Operation & Maintenance Agreement
- 4. Currituck County Stormwater Management Plan Narrative & Calculations

This package is being submitted with a matching Construction Plans TRC Submittal, and so additional Construction Plans are not included under this transmittal (you will receive your plans under the TRC submittal).

One (1) Solid State USB memory drive containing .pdf of all above reference documents is also included for your files

At your earliest convenience, please review the attached information for compliance. If you have any questions, or if you require any additional information, please do not hesitate to contact me at (252) 202-3803.

Sincerely,

David A. Deel, P.E. Encl: as stated



#### Major Stormwater Plan Form SW-002

#### **Review Process**

#### **Contact Information**

Currituck County Phone: 252.232.3055
Planning and Community Development Fax: 252.232.3026

153 Courthouse Road, Suite 110 Currituck, NC 27929

COTTIOCK, TVC 27727

Website: <a href="http://www.co.currituck.nc.us/planning-community-development.cfm">http://www.co.currituck.nc.us/planning-community-development.cfm</a>

Currituck County Phone: 252.232.6035

Engineering Department 153 Courthouse Road, Suite 302 Currituck, NC 27929

#### General

Major stormwater plan approval is required for:

- Major subdivisions.
- Major site plans development or expansion on a nonresidential, multi-family, or mixed use lot by 5,000 square feet or more of impervious coverage or resulting in 10% or more total impervious coverage.

#### Step 1: Application Submittal

The applicant must submit a complete application packet consisting of the following:

- Completed Currituck County Minor Stormwater Plan Form SW-002 (unless submitting a major subdivision or major site plan).
- O Completed Rational Method Form SW-003 or NRCS Method Form SW-004.
- Stormwater management plan drawn to scale. The plan shall include the items listed in the major stormwater plan design standards checklist.
- Alternative stormwater runoff storage analysis and/or downstream drainage capacity analysis, if applicable.
- NCDENR permit applications, if applicable.
- O Number of Copies Submitted:
  - 3 Copies of required plans
  - 3 Hard copies of ALL documents
  - 1 PDF digital copy (ex. Compact Disk e-mail not acceptable) of all plans AND documents.

On receiving an application, staff shall determine whether the application is complete or incomplete. A complete application contains all the information and materials listed above, and is in sufficient detail to evaluate and determine whether it complies with appropriate review standards. An application for major stormwater plan must be submitted and approved prior altering an existing drainage system, performing any land disturbing activity or, before construction documents are approved.

#### Step 2: Staff Review and Action

Once an application is determined complete staff shall approve, approve subject to conditions or disapprove the application.



#### Major Stormwater Plan Form SW-002

OFFICIAL USE ONLY	<b>Y</b> :
Permit Number:	
Date Filed:	
Date Approved:	,

Contact Informat	rion	ž g n n				
APPLICANT:		PROPERTY OWNER:				
Name:	Cynthia J. Spain	Name:	Cynthia J. Spain			
Address:	112 Poplar Haven Road	Address:	112 Poplar Haven Road			
	Poplar Branch, NC 27965		Poplar Branch, NC 27965			
Telephone:	252-619-0421	Telephone:	252-619-0421			
E-Mail Address:	cindy@cindyskitchennc.com	E-Mail Address:	cindy@cindyskitchennc.com			
Property Informa	ation					
Physical Street A	Address:tbd Caratoke Highway, Coinjock,	NC				
Parcel Identifica	tion Number(s):0070000022J0000					
FEMA Flood Zon						
Request		***				
Project Descripti	on: Proposed 48 seat restaurant on 1.69 a	cre undeveloped parcel				
Total land distur	bance activity:1 1.34 acef	Calculated volun	ne of BMPs: 11,113 cf			
Maximum lot co	verage:20,946sf	Proposed lot cov	verage:20,946sf			
TYPE OF REQUE	ST					
	ubdivision (10-year, 24-hour rate) ite plan (5-year, 24-hour rate)					
METHOD USED TO CALCULATE PEAK DISCHARGE  □ Rational Method □ NRCS Method (TR-55 and TR-20) □ Simple volume calculation for small sites (less than 10 acres) □ Alternative stormwater runoff storage analysis □ Downstream drainage capacity analysis						
	rize county officials to enter my pro mitted and required as part of this pro					
Property Owner	information submitted and required as part of this process shall become public record.					

The table below depicts the design standards of the major stormwater plan application. Please make sure to include all applicable listed items to ensure all appropriate standards are reviewed.

#### Major Stormwater Plan

#### Design Standards Checklist

Date Received:			
Project Name:	Cindy's Kitchen		
Applicant/Propert	y Owner: Cynthia J. Spai	า	

Min	or Stormwater Plan Design Standards Checklist	
	General	
1	Property owner name and address.	DAD
2	Site address and parcel identification number.	DAD
3	North arrow and scale to be 1" = 100' or larger.	DAD
	Site Features	
4	Scaled drawing showing existing and proposed site features:	
	Property lines with dimensions, acreage, streets, easements, structures (dimensions and square footage), fences, bulkheads, septic area (active and repair), utilities, vehicular use areas, driveways, and sidewalks.	DAD
5	Approximate location of all designated Areas of Environmental Concern (AEC) or	
3	other such areas which are environmentally sensitive on the property, such as Maritime Forest, CAMA, 404, or 401 wetlands as defined by the appropriate agency.	DAD
6	Existing and proposed ground elevations shown in one foot intervals. All elevation changes within the past six months shall be shown on the plan.	DAD
8	Limits of all proposed fill, including the toe of fill slope and purpose of fill.	DAD
9	Square footage of all existing and proposed impervious areas (structures, sidewalks,	_
	walkways, vehicular use areas regardless of surface material), including a description of surface materials.	DAD
10	Existing and proposed drainage patterns, including direction of flow.	DAD
11	Location, capacity, design plans (detention, retention, infiltration), and design discharge of existing and proposed stormwater management features.	DAD
12	Elevation of the seasonal high water level as determined by a licensed soil scientist.	DAD
13	Plant selection.	DAD
	Permits and Other Documentation	
14	NCDENR stormwater permit application (if 10,000sf or more of built upon area).	DAD
15	NCDENR erosion and sedimentation control permit application (if one acre or more of land disturbance).	
16	NCDENR coastal area management act permit application, if applicable.	N/A
17	Stormwater management narrative with supporting calculations.	DAD
18	Rational Method Form SW-003 or NRCS Method Form SW-004	N/A*
19	Alternative stormwater runoff storage analysis and/or downstream drainage capacity analysis, if applicable	N/A
20	Design spreadsheets for all BMPs (Appendix F – Currituck County Stormwater Manual).	DAD**
21	Detailed maintenance plan for all proposed BMPs.	DAD

"SIMPLE VOLUME CALCULATION" utilized to determine peak flows for pre-and post- construction conditions. Therefore Forms SW-003 and SW-004 do not apply.

<sup>\*\*</sup> Deel Engineering Design Spreadsheet is included in Appendix D of the Stormwater Narrative

		Certificate	
22	The major stormwater plan s	hall contain the following certificate:	
		wner/agent hereby certify the information included on this and and correct to the best of my knowledge.	DAD
	be installed according County. Yearly inspecti responsible for all maint the design, maintenance	, stormwater drainage improvements shall to these plans and specifications and approved by Currituck ons are required as part of the stormwater plan. The owner is tenance required. Currituck County assumes no responsibility for , or performance of the stormwater improvements.  Owner/Agent:	
**			
Male	jor Stormwater Plan Submittal (	Checklist	
all d		st to determine the completeness of your application. Please maked. Staff shall not process an application for further review until	
	ajor Stormwater bmittal Checklist	Plan Form SW-002	
Date	te Received:		
Proj	ject Name:Cindy's Kitchen		
	olicant/Property Owner: <u>Cy</u>	rnthia J. Spain	
, , , ,	onediny roperty owner.	·	
	ijor Stormwater Plan Form SW		т
1	Completed Major Stormwate		DAD
2	•	Form SW-003 or NRCS Method Form SW-004	N/A*
3	Stormwater plan		DAD
4	NCDENR permit applications,	, it applicable	DAD
5	3 copies of plans		DAD
6	3 hard copies of ALL docume		DAD
7	1 PDF digital copy of all pla	uns AND documents (ex. Compact Disk – e-mail not acceptable)	DAD
		LUME CALCULATION" utilized to determine peak flows for pre-and post-conditions. Therefore Forms SW-003 and SW-004 do not apply.	
Con	mments		
Com			
Com			

DEMLR USE ONLY						
Date Rece	eived	Fee Paid			Permit Number	
Applicable Rules:	☐ Coastal SW -	1995	☐ Coastal SW	- 2008	☐ Ph II - Post Construction	
(select all that apply)	☐ Non-Coastal	SW- HQW	//ORW Waters	☐ Univer	sal Stormwater Management Plan	
	$\square$ Other WQ M	gmt Plan:				

# State of North Carolina Department of Environment and Natural Resources Division of Energy, Mineral and Land Resources

#### STORMWATER MANAGEMENT PERMIT APPLICATION FORM

This form may be photocopied for use as an original

I.	GENERAL INFORMATION
1.	Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):
	Cindy's Kitchen
2.	Location of Project (street address):
	(tbd) Croatan Highway
	City:Coinjock County:Currituck Zip:27965
3.	Directions to project (from nearest major intersection):
	Project is located on the east side of NC 158 approximately 570 feet north
	of the intersection of NC 158 and Coinjock Acres Drive
4.	Latitude:36° 21′ 17.07″ N Longitude:75° 57′ 35.14″ W of the main entrance to the project.
	PERMIT INFORMATION:  a. Specify whether project is (check one): New Modification Renewal w/ Modification †  *Renewals with modifications also requires SWU-102 - Renewal Application Form  b. If this application is being submitted as the result of a modification to an existing permit, list the existing permit number , its issue date (if known) , and the status of
2.	
3.	□ Low Density □ High Density □ Drains to an Offsite Stormwater System □ Other  If this application is being submitted as the result of a <b>previously returned application</b> or a <b>letter from DEMLR requesting a state stormwater management permit application</b> , list the stormwater project number, if assigned, □ and the previous name of the project, if different than currently
4. a	proposed,  Additional Project Requirements (check applicable blanks; information on required state permits can be obtained by contacting the Customer Service Center at 1-877-623-6748):  CAMA Major  Sedimentation/Erosion Control: 1.69 ac of Disturbed Area
	NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts
t	o. If any of these permits have already been acquired please provide the Project Name, Project/Permit Number, issue date and the type of each permit:
5.	Is the project located within 5 miles of a public airport? No Yes  If yes, see S. I. 2012-200, Part VI: http://portal.ncdenr.org/web/lr/rules-and-regulations

#### III. CONTACT INFORMATION

	. who <u>owns the project</u> ):	
Applicant/Organization: Cynthia J. Spain		
Signing Official & Title:Cynthia J. Spain		
b. Contact information for person listed in item 1a		
C		
City:Poplar Branch		Zip: <u>27</u> 965
		r:
City:		Zip:
Phone: (252 ) 619-0421		)
Email:cindy@cindyskitchennc.com	<del>-</del>	,
<ul> <li>☑ The property owner (Skip to Contact Inform</li> <li>☐ Lessee* (Attach a copy of the lease agreement</li> <li>☐ Purchaser* (Attach a copy of the pending sa 2b below)</li> <li>☐ Developer* (Complete Contact Information,</li> </ul>	nt and complete Contact In les agreement and complet	
a. Print Property Owner's name and title below, it person who owns the property that the project		ser or developer. (This is the
Property Owner/Organization:same as above		
61 1 066 1 1 2 7711		
Signing Official & Title:		
Signing Official & Title:  b. Contact information for person listed in item 2a		
	a above:	
b. Contact information for person listed in item 2a	a above:	Zip:
b. Contact information for person listed in item 2a Street Address:	a above: State:	
b.Contact information for person listed in item 2a Street Address:  City:	a above: State:	
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):	State:State:	Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:	State:State:	Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:	State:State:Fax: (	Zip: Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  3. a. (Optional) Print the name and title of another of	State: State: Fax: (  contact such as the project's pject:	Zip:Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  3. a. (Optional) Print the name and title of another of person who can answer questions about the pro-	State: State: Fax: (  contact such as the project's oject:	Zip:Zip:
b.Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  .a. (Optional) Print the name and title of another of person who can answer questions about the pro- Other Contact Person/Organization:	State: State: Fax: ( contact such as the project's oject:	Zip:Zip:
b.Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  a. (Optional) Print the name and title of another of person who can answer questions about the pro Other Contact Person/Organization:  Signing Official & Title:	State: State: Fax: (  contact such as the project's oject:	Zip:Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  5. a. (Optional) Print the name and title of another of person who can answer questions about the pro Other Contact Person/Organization:  Signing Official & Title:  b. Contact information for person listed in item 3a	State: State: Fax: ( contact such as the project's oject:	Zip:Zip:
b.Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  .a. (Optional) Print the name and title of another of person who can answer questions about the pro Other Contact Person/Organization:  Signing Official & Title:  b.Contact information for person listed in item 3a Mailing Address:	State:State:State:State:state:	Zip:
b. Contact information for person listed in item 2a Street Address:	State: State: Fax: ( contact such as the project's pject: State: Fax: ( Fax: ( Contact such as the project's pject: Fax: ( Contact such as the project's pject:	Zip:Zip:
b. Contact information for person listed in item 2a Street Address:  City:  Mailing Address (if applicable):  City:  Phone: ( )  Email:  3. a. (Optional) Print the name and title of another of person who can answer questions about the pro Other Contact Person/Organization:  Signing Official & Title:  b. Contact information for person listed in item 3a Mailing Address:  City:  Phone: ( )	State: State: Fax: ( contact such as the project's oject: State: Fax: (	Zip:Zip:

#### IV. PROJECT INFORMATION

1.	In the space provided below, <u>briefly</u> summarize how the stormwater runoff will be treated.			
	Runoff from developed areas will be collected in a perimeter swale and conveyed to			
	an oversized infiltration basin located in the NE quadrant of the property			
	* * * *			
2. a	Approval of a Site Specific Development Plan or PUD  Valid Building Permit  Other:  Date:  Date:			
ŀ	o. <b>If claiming vested rights</b> , identify the regulation(s) the project has been designed in accordance with:  Coastal SW – 1995 Ph II – Post Construction			
3.	Stormwater runoff from this project drains to the <u>Pasquotank</u> River basin.			
4.	Total Property Area: 1.69 acres 5. Total Coastal Wetlands Area: 0.0 acres 6. Total Surface Water Area: 0 acres			
7.	Total Property Area (4) – Total Coastal Wetlands Area (5) – Total Surface Water Area (6) = Total Project Area <sup>+</sup> : 1.69 acres			
	<sup>+</sup> Total project area shall be calculated to exclude the following: the normal pool of impounded structures, the area between the banks of streams and rivers, the area below the Normal High Water (NHW) line or Mean High Water (MHW) line, and coastal wetlands landward from the NHW (or MHW) line. The resultant project area is used to calculate overall percent built upon area (BUA). Non-coastal wetlands landward of the NHW (or MHW) line may be included in the total project area.			
8.	Project percent of impervious area: (Total Impervious Area / Total Project Area) X 100 = 28.5% %			
9.	How many drainage areas does the project have? (For high density, count 1 for each proposed engineered stormwater BMP. For low density and other projects, use 1 for the whole property area)			

10. Complete the following information for each drainage area identified in Project Information item 9. If there are more than four drainage areas in the project, attach an additional sheet with the information for each area provided in the same format as below.

Basin Information	Drainage Area <u>1</u>	Drainage Area <u>U</u>	Drainage Area	Drainage Area
Receiving Stream Name	Coinjock Bay	Coinjock Bay		
Stream Class *	SC	SC		
Stream Index Number *	30-1-6	30-1-6		
Total Drainage Area (sf)	53,631	19,969		
On-site Drainage Area (sf)	53,631	19,969		
Off-site Drainage Area (sf)	0	0		
Proposed Impervious Area** (sf)	20,664	282		
% Impervious Area** (total)	38.5%	1.4%		

Impervious** Surface Area	Drainage Area <u>1</u>	Drainage Area <u>U</u>	Drainage Area	Drainage Area
On-site Buildings/Lots (sf)	4,791	0		
On-site Streets (sf)	0	0		
On-site Parking (sf)	14,031	282		
On-site Sidewalks (sf)	1,187	0		
Other on-site (sf)	155	0		
Future (sf)	500	0		
Off-site (sf)	0	0		
Existing BUA*** (sf)	0	0		
Total (sf):	20,664	282		

<sup>\*</sup> Stream Class and Index Number can be determined at: <a href="http://portal.ncdenr.org/web/wq/ps/csu/classifications">http://portal.ncdenr.org/web/wq/ps/csu/classifications</a>

<sup>\*\*</sup> Impervious area is defined as the built upon area including, but not limited to, buildings, roads, parking areas, sidewalks, gravel areas, etc.

<sup>\*\*\*</sup> Report only that amount of existing BUA that will <u>remain</u> after development. Do not report any existing BUA that is to be removed and which will be replaced by new BUA.

11.	How was the off-site impervious area listed above determined? Provide documentation.	
	AutoCAD Area Routine	
	<b>ejects in Union County:</b> Contact DEMLR Central Office staff to check if the project is located within a Thr langered Species watershed that may be subject to more stringent stormwater requirements as per 15A NC.	
v.	SUPPLEMENT AND O&M FORMS	
mu	e applicable state stormwater management permit supplement and operation and maintenance (C st be submitted for each BMP specified for this project. The latest versions of the forms can be do m <a href="http://portal.ncdenr.org/web/wq/ws/su/bmp-manual">http://portal.ncdenr.org/web/wq/ws/su/bmp-manual</a> .	
VI.	SUBMITTAL REQUIREMENTS	
Lar ins http	ly complete application packages will be accepted and reviewed by the Division of Energy, Mond Resources (DEMLR). A complete package includes all of the items listed below. A detailed truction sheet and BMP checklists are available from <a href="mailto:cy/portal.ncdenr.org/web/wq/ws/su/statesw/forms_docs">cy/portal.ncdenr.org/web/wq/ws/su/statesw/forms_docs</a> . The complete application package mitted to the appropriate DEMLR Office. (The appropriate office may be found by locating pro-	e should be
	eractive online map at <a href="http://portal.ncdenr.org/web/wq/ws/su/maps">http://portal.ncdenr.org/web/wq/ws/su/maps</a> .)	ject on the
for	ase <u>indicate that the following required information have been provided by initialing</u> in the speach item. All original documents MUST be signed and initialed in <b>blue ink</b> . <b>Download the late</b> each submitted application package from <a href="http://portal.ncdenr.org/web/wq/ws/su/statesw/f">http://portal.ncdenr.org/web/wq/ws/su/statesw/f</a>	st versions
1.	Original and one copy of the Stormwater Management Permit Application Form.	
2.	Original and one copy of the signed and notarized Deed Restrictions & Protective Covenants Form. (if required as per Part VII below)	
3.	Original of the applicable Supplement Form(s) (sealed, signed and dated) and O&M agreement(s) for each BMP.	
4.	Permit application processing fee of \$505 payable to NCDENR. (For an Express review, refer to <a href="http://www.envhelp.org/pages/onestopexpress.html">http://www.envhelp.org/pages/onestopexpress.html</a> for information on the Express program and the associated fees. Contact the appropriate regional office Express Permit Coordinator for additional information and to schedule the required application meeting.)	
5.	A detailed narrative (one to two pages) describing the stormwater treatment/management for the project. This is required in addition to the brief summary provided in the Project Information, item 1.	
6.	A USGS map identifying the site location. If the receiving stream is reported as class SA or the receiving stream drains to class SA waters within $\frac{1}{2}$ mile of the site boundary, include the $\frac{1}{2}$ mile radius on the map.	
7.	Sealed, signed and dated calculations (one copy).	
8.	Two sets of plans <u>folded to 8.5" x 14"</u> (sealed, signed, & dated), including:	
	<ul><li>a. Development/Project name.</li><li>b. Engineer and firm.</li></ul>	
	<ul><li>c. Location map with named streets and NCSR numbers.</li><li>d. Legend.</li></ul>	
	e. North arrow. f. Scale.	
	<ul> <li>g. Revision number and dates.</li> <li>h. Identify all surface waters on the plans by delineating the normal pool elevation of impounded structures, the banks of streams and rivers, the MHW or NHW line of tidal waters, and any coastal wetlands landward of the MHW or NHW lines.</li> <li>Delineate the vegetated buffer landward from the normal pool elevation of impounded structures, the banks of streams or rivers, and the MHW (or NHW) of tidal waters.</li> </ul>	
	<ul><li>i. Dimensioned property/project boundary with bearings &amp; distances.</li><li>j. Site Layout with all BUA identified and dimensioned.</li><li>k. Existing contours, proposed contours, spot elevations, finished floor elevations.</li></ul>	
	<ol> <li>Details of roads, drainage features, collection systems, and stormwater control measures.</li> <li>m. Wetlands delineated, or a note on the plans that none exist. (Must be delineated by a qualified person. Provide documentation of qualifications and identify the person who made the determination on the plans.</li> </ol>	
	n. Existing drainage (including off-site), drainage easements, pipe sizes, runoff calculations.  o. Drainage areas delineated (included in the main set of plans, not as a separate document).	

	p. Vegetated buffers (where required).
9.	Copy of any applicable soils report with the associated SHWT <u>elevations</u> (Please identify elevations in addition to depths) as well as a map of the boring locations with the existing elevations and boring logs. Include an 8.5"x11" copy of the NRCS County Soils map with the project area clearly delineated. For projects with infiltration BMPs, the report should also include the soil type, expected infiltration rate, and the method of determining the infiltration rate. (Infiltration Devices submitted to WiRO: Schedule a site visit for DEMLR to verify the SHWT prior to submittal, (910) 796-7378.)
10.	A copy of the most current property deed. Deed book: <u>17</u> Page No: <u>94</u>
11.	For corporations and limited liability corporations (LLC): Provide documentation from the NC Secretary of State or other official documentation, which supports the titles and positions held by the persons listed in Contact Information, item 1a, 2a, and/or 3a per 15A NCAC 2H.1003(e). The corporation or LLC must be listed as an active corporation in good standing with the NC Secretary of State, otherwise the application will be returned. <a href="http://www.secretary.state.nc.us/Corporations/CSearch.aspx">http://www.secretary.state.nc.us/Corporations/CSearch.aspx</a>
VII	. DEED RESTRICTIONS AND PROTECTIVE COVENANTS
cov BU. as a pro	all subdivisions, outparcels, and future development, the appropriate property restrictions and protective enants are required to be recorded prior to the sale of any lot. If lot sizes vary significantly or the proposed A allocations vary, a table listing each lot number, lot size, and the allowable built-upon area must be provide an attachment to the completed and notarized deed restriction form. The appropriate deed restrictions and tective covenants forms can be downloaded from <a href="http://portal.ncdenr.org/web/lr/state-stormwater-ms">http://portal.ncdenr.org/web/lr/state-stormwater-ms</a> docs. Download the latest versions for each submittal.
ow1	he instances where the applicant is different than the property owner, it is the responsibility of the property ner to sign the deed restrictions and protective covenants form while the applicant is responsible for ensuring t the deed restrictions are recorded.
pro on t unc	the notarized signature(s) below, the permit holder(s) certify that the recorded property restrictions and tective covenants for this project, if required, shall include all the items required in the permit and listed the forms available on the website, that the covenants will be binding on all parties and persons claiming der them, that they will run with the land, that the required covenants cannot be changed or deleted hout concurrence from the NC DEMLR, and that they will be recorded prior to the sale of any lot.
VII	I. CONSULTANT INFORMATION AND AUTHORIZATION
con	plicant: Complete this section if you wish to designate authority to another individual and/or firm (such as a sulting engineer and/or firm) so that they may provide information on your behalf for this project (such as dressing requests for additional information).
Cor	nsulting Engineer: <u>David A. Deel, P.E.</u>
Cor	nsulting Firm: <u>Deel Engineering, PLLC</u>
Ma	iling Address:P.O. Box 3901
City	y: <u>Kill Devil Hills</u> State: <u>NC</u> Zip: <u>27948</u>
Pho	one: <u>(252 ) 202-3803</u> Fax: <u>(</u> )
	ail: <u>dadeeleng@gmail.com</u>
IX.	<b>PROPERTY OWNER AUTHORIZATION</b> (if Contact Information, item 2 has been filled out, complete this section)
owi liste Con the	print or type name of person listed in Contact Information, item 2a), certify that I in the property identified in this permit application, and thus give permission to (print or type name of person with (print or type name of organization listed in the tact Information, item 1a) to develop the project as currently proposed. A copy of lease agreement or pending property sales contract has been provided with the submittal, which indicates the ty responsible for the operation and maintenance of the stormwater system.

As the legal property owner I acknowledge, understand, and agree by my signature below, that if my designated agent (entity listed in Contact Information, item 1) dissolves their company and/or cancels or defaults on their lease agreement, or pending sale, responsibility for compliance with the DEMLR Stormwater permit reverts back to me, the property owner. As the property owner, it is my responsibility to notify DEMLR immediately and submit a completed Name/Ownership Change Form within 30 days; otherwise I will be operating a stormwater treatment facility without a valid permit. I understand that the operation of a stormwater treatment facility without a valid permit is a violation of NC General Statue 143-215.1 and may result in appropriate enforcement action including the assessment of civil penalties of up to \$25,000 per day, pursuant to NCGS 143-215.6.

Signature:	Da	nte:
I,	, a Notary Public for the State of	, County of
, do hereby certif	y that	personally appeared
before me this day of	,, and acknowledge the due exe	cution of the application for
a stormwater permit. Witness my hand	and official seal,	
	SEAL	
	My commission expires	
X. APPLICANT'S CERTIFICATION		
certify that the information included on that the project will be constructed in co and protective covenants will be record applicable stormwater rules under 15A	this permit application form is, to the best of onformance with the approved plans, that the ed, and that the proposed project complies with NCAC 2H .1000 and any other applicable state.	required deed restrictions ith the requirements of the te stormwater requirements.
1 Josephine H. Lewis	Da Da A Notary Public for the State of North	Court of
CARRIEDICA do hereby certifi	fy that Cynthia J. Spain	personally appeared
before me this latter of Sanuar	and acknowledge the due exe	cution of the application for
	and official seal fospline	. Leus
a stormwater permit. Witness my hand	SEAL	
THE COUNTY HAVE	My commission expires	01001

Operation & Maintenance Agreement						
Project Name: Cindy's Kitchen						
Project Name: Cindy's Kitchen  Project Location: Caratoke Highway, Coinjock, NC						
	Cover Pag	je				
Maintenance records shall be kept on the following Any deficient SCM elements noted in the inspect affect the integrity of structures, safety of the public structures.	tion will be corrected, re	epaired, or replaced imme	diately. These defi			
The SCM(s) on this project include (check all tha	t apply & correspondin	g O&M sheets will be add	ed automatically):			
Infiltration Basin	Quantity: 1		ed in NE corner of	site		
Infiltration Trench	Quantity:	Location(s):				
Bioretention Cell	Quantity:	Location(s):				
Wet Pond Stormwater Wetland	Quantity:	Location(s): Location(s):				
Permeable Pavement	Quantity: Quantity:	Location(s):				
Sand Filter	Quantity:	Location(s):				
Rainwater Harvesting	Quantity:	Location(s):				
Green Roof	Quantity:	Location(s):				
Level Spreader - Filter Strip	Quantity:	Location(s):				
Proprietary System	Quantity:	Location(s):				
Treatment Swale	Quantity:	Location(s):				
Dry Pond	Quantity:	Location(s):				
Disconnected Impervious Surface	Present: No	Location(s):				
User Defined SCM	Present: No	Location(s):				
Low Density	Present: No	Type:				
I acknowledge and agree by my signature below each SCM above, and attached O&M tables. I a system or responsible party.	agree to notify NCDEQ	of any problems with the	system or prior to a	ny changes to the		
Responsible Party: Cynthia						
Title & Organization: Owner						
	pplar Haven Road					
City, state, zip: Poplar I						
Phone number(s): (252)-61						
Email. cindy@	cindyskitchennc.com					
Signature: Un thic	Span		Date:	1-12-2023		
1 Socophino HIDE.	a Notan	y Public for the State of	Norte	Carolina		
A Company of the Comp		^	~10. i ~ 1	Cas' a		
County of Cukin tuch	10	by certify that	MALLA CI.	Spair		
personally appeared before me this	12th day of		9093	and		
acknowledge the due execution of the Operation	ns and Maintenance Ag	greement .				
Witness my hand and official seal, Allie H. Allies.						
Seal My commission e	xpires	9-2024				

#### **Infiltration Basin Maintenance Requirements**

Important operation and maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the infiltration basin. No portion of the infiltration basin will be fertilized after the initial fertilization that is required to
- establish the vegetation. Lime may be allowed if vegetation is planted on the surface of the infiltration basin and a soil test shows that it is needed.
- The vegetation in and around the basin will be maintained at a height of four to six inches.

After the infiltration basin is established, it will be inspected **quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**Records of operation and maintenance shall be kept in a known set location and shall be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

SCM element:	Potential problem:	How to remediate the problem:
The entire infiltration basin	Trash/debris is present.	Remove the trash/debris.
The grass filter strip or	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, plant ground cover and water until it is established. Provide lime and a one-time fertilizer application.
other pretreatment area	Sediment has accumulated to a depth of greater than three inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
The flow diversion structure (if applicable)	The structure is clogged.	Unclog the conveyance and dispose of any sediment in a location where it will not cause impacts to streams or the SCM.
Structure (ii applicable)	The structure is damaged.	Make any necessary repairs or replace if damage is too much for repair.
	The inlet pipe is clogged (if applicable).	Unclog the pipe and dispose of any sediment in a location where it will not cause impacts to streams or the SCM.
	The inlet pipe is cracked or otherwise damaged (if applicable).	Repair or replace the pipe.
The inlet device	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary and provide erosion control devices such as reinforced turf matting or riprap to avoid future erosion problems.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and clogged stone and replace with clean stone.
	More than four inches of sediment has accumulated.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
The basin	Erosion of the basin surface has occurred or riprap is displaced.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Water is standing more than three days after a storm event.	Replace the top few inches of soil to see if this corrects the standing water problem. If not, consult an appropriate professional for a more extensive repair.

Infiltration Basin Maintenance Requirements (continued)						
SCM element:	Potential problem:	How to remediate the problem:				
	Shrubs or trees are growing on the embankment.	Remove shrubs and trees immediately.				
The embankment	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make needed repairs immediately.				
The outlet device	Clogging has occurred.	Clean out the outlet device and dispose of sediment in a location where it will not cause impacts to streams or the SCM.				
	The outlet device is damaged	Repair or replace the outlet device.				
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Repair the damage and improve the flow dissipation structure.				
	Discharges from the infiltration basin are causing erosion or sedimentation in the receiving water.	Contact the local NCDEQ Regional Office.				

#### **Stormwater Management Plan Narrative**

Cindy's Kitchen Currituck County Submittal October 24, 2023

# SEAL 025158

#### General

The following narrative will detail the proposed stormwater management plan for a proposed 48 seat restaurant proposed to be placed on a 1.69 acre parcel in Coinjock, NC. As per state regulations, a high density stormwater permit is being pursued, with water quality treatment provided in a stormwater infiltration basin. To meet Currituck County's peak flow mitigation requirements, the infiltration basin will be designed to retain a peak flow mitigation volume which exceeds the State required water quality volume. The following narrative, application and calculations will demonstrate the parameters of this design in full compliance with Currituck County regulations.

#### **Summary of Design Approach**

Currituck County's Stormwater Management Ordinance prescribes that for this project, stormwater control measures must be provided such that the post-construction runoff from the site for a 5yr, 24hr rainfall event must be equal to or less than the pre-construction runoff from a 2yr, 24hr rainfall event across a theoretically wooded site.

What we have found working with small commercial sites in Currituck County with soils predominately classified as "Hydrologic Soils Group A", is that the runoff from the 2-yr, 24hr rainfall for a wooded site is close to zero. The proposed project site has a mixture of A and C soils on the site, but a conservative approach is to analyze the site as entirely consisting of soils within Hydrologic Class A and to therefore assume a pre-construction runoff from a theoretically wooded site to be 0 cfs.

This allows a simplified approach to the analysis and design of a dry infiltration basin system for this site. Since the 5yr, 24 hr post-construction runoff target is 0cfs (as outlined above), the infiltration basins can be sized to fully capture and infiltrate the 5-yr, 24hr runoff total volume in order to meet the County's pre-/post-construction runoff requirements. This total runoff volume approach is what is presented in this report.

Approximately 25% of the site will remain undeveloped (the rear portion of the site). Therefore, the design & analysis was assigned a "Project Area" which encompassed the entirety of the disturbed area, leaving the undeveloped area uncontrolled. This Project Area is shown on an exhibit in the appendices to this Narrative.

#### **Summary of Existing Conditions**

The subject parcel is located on the east side of NC 158 approximately 570 feet north of the intersection of NC 158 and Coinjock Acres Drive. The site is currently vacant and maintained as a grassy field. Runoff from the site predominately flows to the rear of the property where it is collected in a ditch that ultimately discharges into the wooded wetland to the east.

#### **Summary of Proposed Conditions**

The proposed development consists of the construction of a 48 seat restaurant & bakery with associated parking and utility infrastructure. Stormwater will be managed via an oversized infiltration basin & swale located along the southern, western, and northern periphery of the developed area. Runoff from all developed areas will be collected in this infiltration basin & swale system. The total volume of post-construction runoff resulting from a 5-yr, 24 hr storm event across all developed areas will be captured and infiltrated without any discharge to the existing outfall ditch. Total flows for the property (developed area and open space) will not exceed the 2-yr, 24 hr peak runoff rate for the site in a theoretical wooded pre-development condition.

#### Stormwater Collection, Treatment, Storage and Disposal

#### Collection

Runoff from all developed areas will be collected in an infiltration basin & swale system "ringing" the south, west, and northern perimeter of the developed area.

#### Treatment & Storage

The infiltration basin will offer several methods of stormwater runoff treatment prior to release. Runoff from the drainage area will enter the basin via overland flow through vegetation. Large particulates and debris such as paper trash, sticks, and plastic products will accumulate within the vegetation.

The basin bottom, side slopes, and berm will be seeded or sodded and maintained according to the operation and maintenance plan. The runoff will undergo filtration of fine particulates and pollutants by the vegetation within not only the basin bottom but also the basin side walls. The filtration by the vegetation is considered the primary treatment method. A secondary treatment method is also available when the stormwater runoff infiltrates into the subsurface. When the water passes through the void spaces between the particles of soil material particulates and pollutants that have a particle or grain size larger than the void size will be filtered out. In addition, some pollutants will adsorb to the surface of the soil particles. The benefit of this adsorption will prevent the pollutants from reaching the water table and in some nutrient and microbe rich areas existing within the subsurface the pollutants will be consumed as food and undergo a natural biodegradation.

The runoff generated by a 1.5 inch storm (NCDEQ requirement) will require 2,721 ft<sup>3</sup> of storage. The runoff generated by a 4.81 inch storm (5yr, 24hr rainfall – Currituck County requirement) will require 8,824 ft<sup>3</sup> of storage.

The storage available above the ground surface within the basin is 8,544 ft<sup>3</sup>. An additional 2,569 ft<sup>3</sup> of storage is available within the subsurface in the 1.0 feet of separation between the basin bottom and the seasonal high water table and the separation between the submerged basin side-slopes and the seasonal high water table. The resulting total storage available within the infiltration basin is 11,113 ft<sup>3</sup> (equivalent to runoff generated by a 6.13 inch storm).

A more detailed discussion of subsurface storage volume value can be found within the soils section of this narrative.

#### **Disposal**

As discussed in previous sections the majority of stormwater runoff entering this management system will be infiltrated, therefore infiltration will be the primary source of disposal. Using a factor of safety of two and an infiltration rate of 0.8 in/hr (per the soils investigation report), the drawdown time for the 5yr, 24 hr rainfall event is calculated to be 56.90 hours for the proposed infiltration basin. In the event that the capacity of the system is exceeded, runoff will overflow the system via a drop inlet located in the east end of the infiltration basin and will be conveyed to the existing outfall ditch.

#### **Peak Flow Mitigation**

Currituck County's Stormwater Ordinance requires that the runoff rate from the 5-yr, 24-hr storm in the post-construction condition not exceed the runoff rate from the 2-yr, 24-hr storm in the pre-construction, theoretical fully wooded condition. As discussed at the beginning of this Narrative, this analysis treats the entire pre-construction site as Hydrologic Soils Group A, resulting in a total pre-construction runoff volume of 0 cf. Since there is no runoff from the theoretical pre-construction condition, a volumetric analysis will demonstrate compliance with pre-post runoff flow requirements.

Pre-development total runoff volume from the Project Area was conservatively assumed (based on prior experience / calculations) to be zero.

Pre-development 2-yr, 24hr, Wooded: 0.0 cf

In order to achieve a system with a total runoff volume of 0 cfs for the 5-yr, 24hr rainfall event, an infiltration basin system with a volumetric capacity equal to the total runoff volume from the developed Project Area was designed. The runoff generated by a 4.81 inch storm (5yr, 24hr rainfall – Currituck County requirement) will require 8,824 ft<sup>3</sup> of storage. Within the proposed infiltration basin system, the storage available above the ground surface within the basin is 8,544 ft<sup>3</sup>. An additional 2,569 ft<sup>3</sup> of storage is available within the subsurface in the 1.0 feet of separation between the basin bottom and the seasonal high water table and the separation between the submerged basin side-slopes and the seasonal high water table. The resulting total storage available within the infiltration basin system is 11,113 ft<sup>3</sup> (equivalent to runoff generated by a 6.13 inch storm). The entirety of this volume will be infiltrated into the subsurface, resulting in a net runoff volume from the developed Project Area of 0.0 cf.

Due to complete volume capture, peak flows can be expressed as follows:

Pre-development 2-yr, 24hr, Wooded: 0.00 cfs
Post-development 5-yr, 24hr, Proposed: 0.00 cfs

#### Soils

Protocol Sampling Service, Inc. performed on-site soil borings to verify soil type and determine elevation of the seasonal high water table. Information collected indicates that the soils found throughout this site are composed primarily of sandy loam and loamy sand. These soil types will have moderately high to high permeability. These findings generally correlate with the description mapped and discussed in the United States Department of Agriculture, Soil Conservation Service, Soil Survey of Currituck County, North Carolina, which map the soil for this site as follows:

AaA - Altavista fine sandy loam, Permeability is moderately high to high

BoA – Bojac loamy sand, Permeability is high

A soils map excerpt has been included in the appendix of this narrative.

#### **Calculations**

A set of calculations can be found within appendix portion of this narrative.

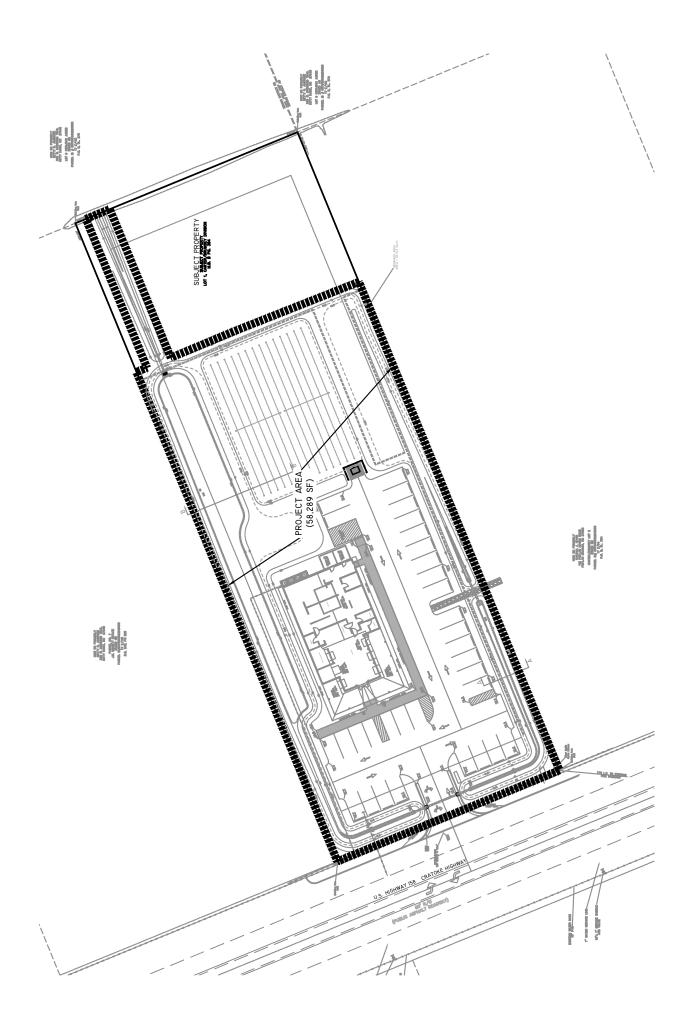
#### Conclusions

The proposed stormwater management plan for this site will handle the difference in runoff between the predevelopment 2-yr, 24hr and the post-development 5-yr, 24 hr storm events, as prescribed in the Currituck County Stormwater Management Ordinance. Additionally, the design provides treatment of the NCDEQ required water quality volume. This proposed design will more than adequately serve the stormwater management requirements of this site.

# APPENDIX A Aerial Imagery

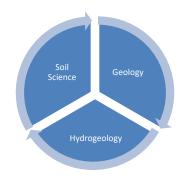


# **APPENDIX B Project Area Exhibit**



#### **APPENDIX C**

Soils Investigation & SCS Soil Survey Excerpts



Protocol Sampling Service, Inc. "Experts in Environmental Compliance"

(919) 210-6547

Protocolsampling@yahoo.com Environmentalservicesnc.com

4114 Laurel Ridge Drive Raleigh, North Carolina 27612

November 11, 2022

Mr. Andy Deel, P.E. Post Office Box 3901 Kill Devil Hills, North Carolina 27948 Via email; dadeeleng@gmail.com

Re: Storm Water Management Soil Investigation Hydraulic Conductivity (Ksat) Testing

Cindy's Kitchen

US Highway 158 – Caratoke Highway

Coinjock, Currituck County, North Carolina

Protocol Project #22-172

Dear Mr. Deel:

The following Soil Investigation is submitted to assist in a site assessment for the proposed storm water management improvements associated with the proposed Cindy's Kitchen Restaurant. The study area which is being considered for infiltration swales. The site is located on the east side of Caratoke Highway (US Highway 158) in Coinjock, Currituck County, North Carolina.

#### SITE HISTORY AND PHYSICAL CHARACTERISTICS

The study area is currently undeveloped. Commercial development surrounds the study area. Protocol Sampling Service, Inc. of Raleigh, North Carolina was hired to perform an investigation to identify the depth to seasonal high-water table, if any restrictive layers are present in the proposed location of the infiltration swales determine subsurface permeabilities at or slightly above the expected basin bottom elevation.

#### SOIL INVESTIGATION

The field survey was conducted on November 10, 2022. Three (3) soil borings were advanced to 48 inches below land surface (bls) with a hand auger in predetermined boring locations as shown on the attached exhibit. Soil color was determined with a Munsell Soil Color Chart. The presence of fill or other disturbances, the depth to the seasonal high-water table, soil structure and consistence were noted. The borings were also checked for reduced colors, an anaerobic smell or obvious soil wetness. Surface elevations range from 13 feet msl to 9 feet msl from west to east across the study area.

#### **FINDINGS - Soil**

- The subject property contains, from west to east, soil belonging to the Bojac series in the higher elevations, the Augusta series in the middle elevations and Dragston series in the lower elevations.
- The soil was found to have an apparent depth to seasonal high-water table ranging from 42, 27 and 12-inches bls in soil boring No.1, 2 and 3, respectively. Static water levels were found from 60-inches bls in soil boring No.1, 43-inches bls in soil boring No.2 and at 32-inches bls in boring No.3.
- No major restrictive horizons were encountered to a depth of 48-inches in any of the soil borings.

#### HYDRAUILIC CONDUCTIVITY TESTING

Saturated hydraulic conductivity tests were performed to determine the permeability at or slightly below the expected infiltration depth of the infiltration swale. Saturated hydraulic conductivity is a quantitative measure of a saturated soil's ability to transmit water. It can be thought of as the ease with which pores of a saturated soil permit water movement. A common method to measure saturated hydraulic conductivity ( $K_{SAT}$ ) of the unsaturated zone is by a constant-head well permeameter method (Amoozegar and Mecklenburg, 1999). These  $K_{SAT}$  tests take into account soil morphologic factors other than texture, because soil structure and clay mineralogy have been found to have a significant impact on the rate of water movement through soils (Bouma et al., 1983; Schoeneberger et al, 1995, Vepraskas et al, 1996). The Compact Constant Head Permeameter (Amoozemeter) is an example of a constant head permeameter which allows measurements of  $K_{SAT}$  in the vadose zone and is widely used in North Carolina and other parts of the country (Amoozegar, 2004; Amoozegar and Mecklenburg, 1999).

The Ksats were run at 18 and 6-inches above the current seasonal high water table elevation at 24 and 36-inches bls and above the capillary fringe. The saturated hydraulic conductivity test performed at 24-inches bls reached steady state readings within twenty minutes and three consecutive readings revealed an average conductivity of 0.854 inches/hour or 0.68 feet/day. The saturated hydraulic conductivity test performed at 36-inches bls reached steady state readings within five minutes and three consecutive readings revealed an average conductivity of 4.40 inches/hour or 8.70 feet/day.

#### **FINDINGS - Conductivity**

• In-situ testing has revealed an infiltration and percolation rate through the subsurface loamy sand found at 36-inches bls of greater than 4-inches/hour. The moderately well-sorted silty fine sand is estimated to have a porosity of 25 to 30%.

The findings presented herein are based on the site conditions observed during performance of the field survey on November 10, 2022.

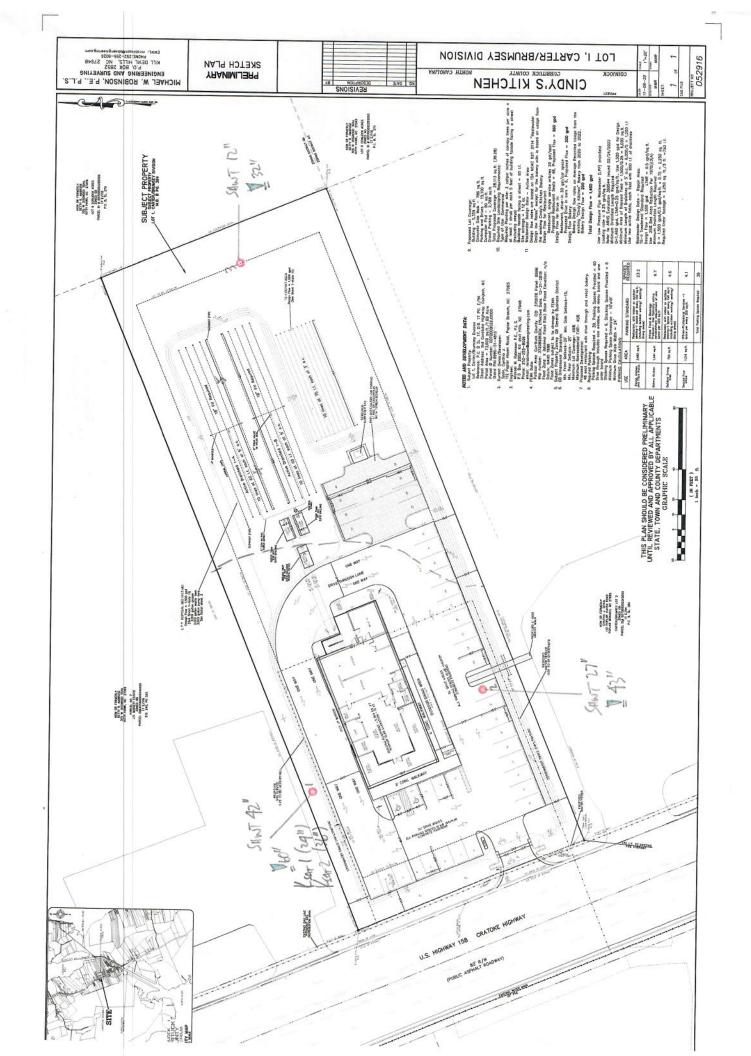
Please call me at (919) 210-6547 if you have any questions or need further assistance.

Sincerely,

**Protocol Sampling Service, Inc.** 

David E. Meyer, N.C.L.S.S

President



Protocol Sampling Service, Inc. 4114 Laurel Ridge Dr Raleigh, NC 27612

Sh

SOL

60

60

392

SPL

Sa

0-10

15-26"

26-39

39-48

SL

LS

SL

Su

50

4

Fr

Fr

Th

52

F.

SW WH

MN

4

*	Sheet	of /
PROPERTY	ID#:	00700000225000
		Coffee

Ps W Fice

PS

0.1-0.4

SOIL/SITE EVALUATION	
for ON-SITE WASTEWATER SYSTEM	
(Commission of the commission	

OWNER:  ADDRESS: Lot I Carrel Server Scorney Complete all fields in full)  PROPOSED FACILITY: futured PROPOSED DESIGN FLOW (.1949): 140 Mg  WATER SUPPLY: Private Public Well Spring Other  EVALUATION METHOD: Auger Boring Pit Cut TYPE OF WASTEWATER:						APPLICATION DATE DATE EVALUATED: PROPERTY SIZE: PROPERTY RECORDED: Sewage Industrial Process In			
	.1940 LANDSCAPE	HORIZON	SOIL MO	ORPHOLOGY 1941)			HER	•	al Piocess
#	POSITION/. SLOPE %	/ DEPTH	.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPR O CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
	0-1% SW	0-12" n-24" 24-35" 2x -45" 45 -48"	be LS SBL SQ SBL SL SBL SL SBL SS BR LS	FR 5151 FR 5151 FR 5151 FR 1111 FR 1111 L 1111	1046 12 42" 160" 1601 241 1507 245	48"+	· ·		63-0.6
	T-17.	0-8' 0-18' 16-31' 31-47"	by Se ser buse LS SE SE SE SE	Fr 55 SP FELL NY NP	1016 12 27" ¥ 43"	49"+			95
		0729	92 SL	Fe 55 8 Fm 59	10416/ 12"	26"+			

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM	OTHER FACTORS (.1946):
Available Space (.1945)	YE!	YES	SITE CLASSIFICATION (.1948):
System Type(s)			EVALUATED BY:
Site LTAR			OTHER(S) PRESENT:
COMMENTS:			

59 564

2) 21

MIN

1116

SB 5141-

wi m

MR 6/2 15"

¥3411

loye 6/2 2/11

¥ 40°

46"+

55 58



**NRCS** 

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Currituck County, North Carolina



#### **Preface**

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2 053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

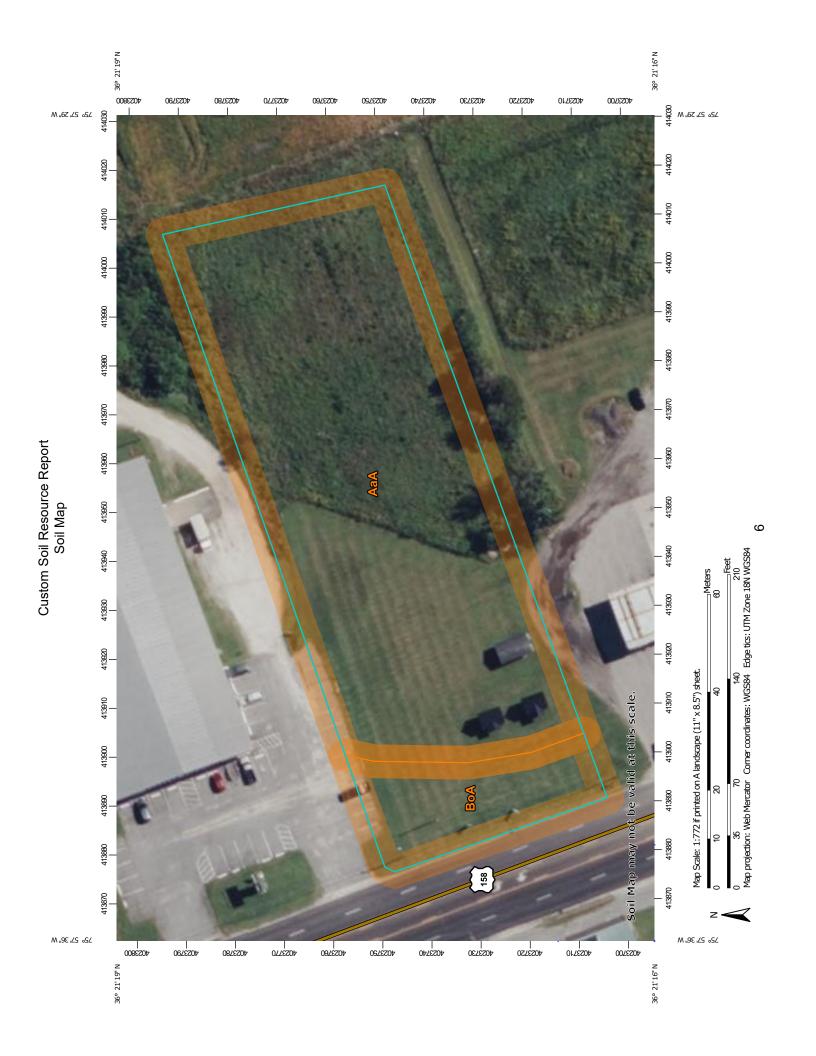
alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

## **Contents**

Preface	2
Soil Map	5
Soil Map	
Legend	
Map Unit Legend	
Map Unit Descriptions	8
Currituck County, North Carolina	
AaA—Altavista fine sandy loam, 0 to 2 percent slopes	10
BoA—Bojac loamy sand, 0 to 3 percent slopes	11
References	13

### Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



## MAP LEGEND

#### Special Line Features Streams and Canals Interstate Highways Very Stony Spot Major Roads Stony Spot US Routes Spoil Area Wet Spot Other Rails Nater Features **Fransportation** W 8 ◁ ŧ Soil Map Unit Polygons Area of Interest (AOI) Soil Map Unit Points Soil Map Unit Lines Closed Depression Special Point Features **Gravelly Spot Borrow Pit** Clay Spot **Gravel Pit** Area of Interest (AOI) Blowout 9 Soils

# MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857) Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

accurate calculations of distance or area are required.

Aerial Photography

Marsh or swamp

Lava Flow

Landfill

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot Sandy Spot

**3ackground** 

Local Roads

Soil Survey Area: Currituck County, North Carolina Survey Area Data: Version 22, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Severely Eroded Spot

Slide or Slip

Sinkhole

Sodic Spot

Date(s) aerial images were photographed: Oct 5, 2020—Oct 7, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

#### **Map Unit Legend**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	1.4	87.0%	
ВоА	Bojac loamy sand, 0 to 3 percent slopes	0.2	13.0%	
Totals for Area of Interest		1.6	100.0%	

#### **Map Unit Descriptions**

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

#### Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An association is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

#### **Currituck County, North Carolina**

#### AaA—Altavista fine sandy loam, 0 to 2 percent slopes

#### **Map Unit Setting**

National map unit symbol: 3rn7

Elevation: 0 to 20 feet

Mean annual precipitation: 42 to 58 inches Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 190 to 270 days

Farmland classification: All areas are prime farmland

#### **Map Unit Composition**

Altavista and similar soils: 80 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Altavista**

#### Setting

Landform: Marine terraces

Landform position (two-dimensional): Summit

Down-slope shape: Linear Across-slope shape: Linear

Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

#### **Typical profile**

Ap - 0 to 12 inches: fine sandy loam
BE - 12 to 15 inches: sandy clay loam
Bt - 15 to 35 inches: sandy clay loam
BC - 35 to 42 inches: sandy loam
Cg - 42 to 80 inches: coarse sandy loam

#### Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high

(0.57 to 1.98 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C Hydric soil rating: No

#### **Minor Components**

#### Tomotley, undrained

Percent of map unit: 5 percent

Landform: Depressions on stream terraces, flats on marine terraces

Down-slope shape: Linear Across-slope shape: Linear Hydric soil rating: Yes

#### BoA—Bojac loamy sand, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: 3rnb

Elevation: 0 to 30 feet

Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 190 to 270 days

Farmland classification: Farmland of statewide importance

#### **Map Unit Composition**

Bojac and similar soils: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Bojac**

#### Setting

Landform: Ridges on marine terraces

Down-slope shape: Convex Across-slope shape: Linear

Parent material: Loamy and sandy fluviomarine deposits

#### **Typical profile**

Ap - 0 to 8 inches: loamy fine sand Bt - 8 to 47 inches: fine sandy loam C - 47 to 85 inches: loamy fine sand

#### **Properties and qualities**

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95

in/hr)

Depth to water table: About 48 to 72 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 6.0 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A Hydric soil rating: No

#### Custom Soil Resource Report

#### References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2 053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

#### Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE\_DOCUMENTS/nrcs142p2\_052290.pdf

## **APPENDIX D**Stormwater Calculations

#### Cindy's Kitchen

2yr-5yr Infiltration Basin Calculations 10/23/2023

#### Infiltration Basin DA

	(sf)	(ac)
Drainage Area, A	58,289	1.34
Impervious Area, Imp	20,946	0.48

#### Calculate Design Volume:

Impervious Fraction, la	0.359	(Imp/A)
Runoff Coefficient Rv	0.373	(0.05+0.9*Ia)
Rainfall Depth Rd	4.81	(in)
Design Volume Dv (cf)	8,724	(3630*Rd*Rv*A)

Impervious Surface Area	DA 1 (Infil. Basin)
On-site Buildings / Lots (sf)	4,791
On-site Streets (sf)	-
On-site Parking (sf)	14,313
On-site Sidewalks (sf)	1,187
Other on-site (sf)	155
Future (sf)	500
Off-site (sf)	-
Existing BUA (sf)	-
Total (sf):	20,946



#### Cindy's Kitchen

Infiltration Basin Volume Tabulations 10/23/2023

#### DA1 Infiltration Basin

Above Grade Storage	
SHWT @:	8.8
Bottom Basin @	9.8
Top Storage @	11.0

<u>Elev:</u>	Area (sf)	Avg Area	<u>Vol</u>	Sum Vol (cf)	
9.8	4600			0	
		4985	997		
10.0	5370			997	
		7547	7547		
11.0	9723			8544	(Total)

Below Grade Storage	
SHWT @:	8.8
Bottom Basin @	9.8
Top Storage @	11.0
Porosity:	20%

Storage in Subgrade = [(Top Storage Area x Depth to SHWT)-Above Grade Volume]x0.2 Storage in Subgrade= 2569

Total Storage Available = 11113

#### Cindy's Kitchen

Infiltration System Dewatering (drawdown) Calculations 10/23/2023

Per NCDEQ SCM Manual:

 $T=FS \times (Dv \times 12)/(K \times SA)$ 

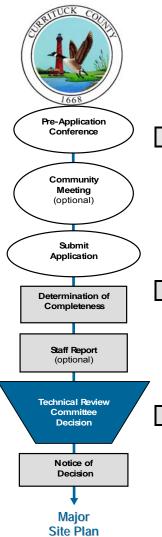
T = dewatering time (hrs)
FS = factor of safety (use 2.0)
Dv = design volume (cf)

K = hydraulic conductivity of soil (in/hr) = 0.8 in/hr

SA = surface area of bottom of infil system (sf)

#### **Drainage Area 1 - Infiltration Basin**

_		
Dv =	8724	
SA=	4600	sf
'-		
T=	56.90	hrs
T=	2.37	days



#### **Major Site Plan**

#### **Review Process**

#### **Contact Information**

Currituck County
Development Services Department
153 Courthouse Road, Suite 110
Currituck, NC 27929

Website: <a href="http://www.currituckcountync.gov/planning-zoning/">http://www.currituckcountync.gov/planning-zoning/</a>

#### General

Major site plan approval is required for any non-residential, multi-family, or mixed-use development that:

Phone: 252.232.3055

 Is 5,000 square feet or greater of building gross floor area, impervious surface, disturbed land area, and other use area.

#### Step 1: Pre-application Conference

The purpose of a pre-application conference is to provide an opportunity for the applicant to determine the submittal requirements and the procedures and standards applicable to an anticipated development application. A pre-application conference is also intended to provide an opportunity for county staff to become familiar with, and offer the applicant preliminary comments about, the scope, features, and impacts of the proposed development, as it relates to the standards in the Unified Devlopment Ordinance (UDO).

The applicant shall submit conceptual drawings that show the location, general layout, and main elements of the proposed development as part of the application to the Development Services Department at least three business days before the pre-application conference.

#### Step 2: Application Submittal and Acceptance

The applicant must submit a complete application packet on or before the application submittal date. A complete application packet consists of the following:

- Completed Currituck County Major Site Plan Application.
- Application Fee (\$.10 per square foot of gross floor area or \$400 minimum).
- Site plan drawn to scale. The plan shall include the items listed in the major site plan design standards checklist.
- Landscape plan drawn to scale. The plan shall include the items listed in the major site plan design standards checklist.
- Exterior lighting plan drawn to scale. The plan shall include the items listed in the major site plan design standards checklist.
- Stormwater Review Fee (see fee schedule) and Major Stormwater Plan and Form SW-002.
- Architectural elevations illustrating the design and character of the proposed structures, if applicable.
- ARHS site evaluation(s) OR if connecting to existing wastewater system, a letter of commitment from centralized sewer provider and letter from DWQ indicating the existing plant has sufficient capacity to serve the development at the time of site plan approval.

- NCDEQ, DWQ stormwater permit application (if 10,000sf or more of built upon area).
- NCDEQ, Land Quality, Erosion and Sedimentation Control permit application (if one acre or more of land disturbance).
- NCDOT Street and Driveway Access Permit Application and Encroachment Agreement.
- Number of Copies Submitted:
  - 2 Copies of site plans
  - □ 2 Hard copies of ALL documents
  - 1 PDF digital copy (ex. Compact Disk e-mail not acceptable) of all plans AND documents

On receiving an application, staff shall, within ten business days, determine whether the application is complete or incomplete. A complete application contains all the information and materials listed above, and is in sufficient detail to evaluate and determine whether it complies with appropriate review standards. If an application is determined to be incomplete, the applicant may correct the deficiencies and resubmit the application for completeness determination. Failure to resubmit a complete application within 45 calendar days after being determined incomplete will result in the application being considered withdrawn. Applicants may submit applications for a site plan and building permit concurrently.

#### Step 3: Staff Review and Action

Once an application is determined complete, it will be distributed to the Technical Review Committee (TRC) and placed on the TRC meeting agenda. TRC shall review and prepare a written report that will include any outstanding concerns with the application. TRC shall approve, approve subject to conditions or disapprove the application. Conditions of approval shall be limited to those deemed necessary to ensure compliance with the standards of the UDO.

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

- O Is consistent with the Land Use Plan or other officially adopted plan;
- Complies with the applicable district, use-specific, development, environmental, and infrastructure design standards of the UDO;
- Complies with the Currituck County Stormwater Manual and all other applicable standards of the UDO and the County Code of Ordinances; and
- O Complies with all standards or conditions of any prior applicable development permits or approvals.



## **Major Site Plan**

Application

OFFICIAL USE ON	ILY:
Case Number:	
Date Filed:	
Gate Keeper:	
Amount Paid:	

Contact Info	rmation		ssian Standards Cheddi	30
APPLICANT:		PROPERTY C		
Name:	Cynthia J. Spain	Name:	Same as Applicant	
Address:	112 Poplar Haven Road	Address:	jeci Namer Cindy's Klichen	Pro
	Poplar Branch, NC 27965			
Telephone:	252-619-0421	Telephone:		
E-Mail Addr	ress:	E-Mail Addr	ess:	
LEGAL RELA	TIONSHIP OF APPLICANT TO PROPER	RTY OWNER: Same		
Property Inf	ormation	= 100° or incoor s general lacation in	North arrow and stole to be I. Videlry map showing property	3
Physical Stre	eet Address: Caratoke Highway bet	ween 4495 and 451	1 Caratoke Highway	
	80 l.f. along Caratoke Highway Sou		Scaled drawing showing existing	
Location. 5	oo iii. diong cardioke ingilway 500			
	ification Number(s): 0070 000 022J			
	ification Number(s): 0070 000 022J (s) Acreage: 73,600 sq.ft. 1.69 ac			
Total Parcel	loggling spaces, refuse collection foci			
Total Parcel	(s) Acreage: <b>73,600 sq.ft. 1.69 ac.</b> _			
Total Parcel Existing Land Request	(s) Acreage: <b>73,600 sq.ft. 1.69 ac.</b> _d Use of Property: <b>Vacant with unpe</b>	rmitted sheds to be	removed	
Total Parcel Existing Land Request Project Nam	(s) Acreage: <b>73,600 sq.ft. 1.69 ac.</b> _d Use of Property: <b>Vacant with unpe</b>	rmitted sheds to be	removed	V
Total Parcel Existing Land Request Project Nam Proposed Us	(s) Acreage: <b>73,600 sq.ft. 1.69 ac.</b> _d Use of Property: <b>Vacant with unper</b>	rmitted sheds to be i	removed	×
Total Parcel Existing Land Request Project Nam Proposed Us Deed Book/	(s) Acreage: 73,600 sq.ft. 1.69 ac d Use of Property: Vacant with unper e: Cindy's Kitchen se of the Property: Restaurant with E	rmitted sheds to be a  Bakery  Side Number: D.B. 1	removed	7
Total Parcel Existing Land Request Project Nam Proposed Us Deed Book/ Total square	(s) Acreage: 73,600 sq.ft. 1.69 ac d Use of Property: Vacant with unper ee: Cindy's Kitchen se of the Property: Restaurant with E Page Number and/or Plat Cabinet/S e footage of land disturbance activity:	rmitted sheds to be a  Bakery  Side Number: D.B. 1	7 Pg. 17 P.C. E SI. 94	8 9
Total Parcel Existing Land Request  Project Nam Proposed Us Deed Book/ Total square Total lot cov	(s) Acreage: 73,600 sq.ft. 1.69 ac d Use of Property: Vacant with unper ee: Cindy's Kitchen se of the Property: Restaurant with E Page Number and/or Plat Cabinet/S e footage of land disturbance activity: erage: 20,446 sq.ft. Total vel	Bakery Silide Number: D.B. 1 53,000 sq.ft. +/- nicular use area: 14, d gross floor area: 4	7 Pg. 17 P.C. E SI. 94	8 8



## Major Site Plan

### Application

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

Contact Inform	ation			
APPLICANT:			PROPERTY O	WNER:
Name:	Cynthia J. Spain	٨	lame:	Same as Applicant
Address:	112 Poplar Haven Ro	ad	Address:	
	Poplar Branch, NC 2	7965		
Telephone:	252-619-0421		Telephone:	
E-Mail Address	:		E-Mail Addre	SS:
LEGAL RELATIO	DNSHIP OF APPLICANT	TO PROPERTY OW	NER: <b>Same</b>	
Property Inform	nation			
Physical Street	Address: Caratoke Hig	ghway between 44	195 and 451	I Caratoke Highway
Location: 580	I.f. along Caratoke Hig	jhway South of S.F	R. 1416	
Parcel Identific	ation Number(s): 0070	000 022J 0000		
Total Parcel(s)	Acreage: <b>73,600 sq.ft.</b>	1.69 ac		
Existing Land Use of Property: Vacant with unpermitted sheds to be removed				
Request				
Project Name:	Cindy's Kitchen			
Proposed Use	of the Property: <b>Restau</b>	rant with Bakery		
Deed Book/Pa	ge Number and/or Plat	Cabinet/Slide Nur	nber: <b>D.B. 1</b> 7	<sup>7</sup> Pg. 17 P.C. E Sl. 94
Total square fo	ootage of land disturbar	nce activity: <b>53,00</b> 0	O sq.ft. +/-	
Total lot cover	age: <b>20,446 sq.ft.</b>	Total vehicular u	se area: <b>14,</b> 3	313 sq.ft.
Existing gross f	loor area: <u>0</u>	Proposed gross	loor area: <b>4</b>	,791 sq.ft.
I hereby authorize county officials to enter my property for the purpose of determining zoning compliance.  All information submitted and required as part of this process shall become public record.				
Property Owne	er(s)/Applicant*			Date

\*NOTE: Form must be signed by the owner(s) of record, contract purchaser(s), or other person(s) having a recognized property interest. If there are multiple property owners/applicants a signature is required for each.

#### Major Site Plan Design Standards Checklist

The table below depicts the design standards of the major site plan application. Please make sure to include all applicable listed items to ensure all appropriate standards are reviewed.

#### **Major Site Plan**

Design Standards Checklist	
Date Received:	TRC Date:
Project Name: Cindy's Kitchen Applicant/Property Owner: Cynthia J. Spain	

Site	Plan Design Standards Checklist	
	General	
1	Property owner name, address, phone number, and e-mail address.	х
2	Site address and parcel identification number.	x
3	North arrow and scale to be 1" = 100' or larger.	x
4	Vicinity map showing property's general location in relation to streets, railroads, and waterways.	x
5	Existing zoning classification and zoning setback lines of the property.	х
6	Scaled drawing showing existing and proposed site features:  Property lines, acreage, adjacent use types, streets (right-of-ways), easements, buildings and accessory structures (including square feet and use), parking layout, vehicular use areas, driveways (including opposing driveways), loading spaces, refuse collection facilities (dumpsters), outdoor storage areas, ground based utility equipment, fences and walls, and sidewalks and pedestrian circulation.  And location and size of existing and proposed infrastructure:  Water mains (including and water taps), water meter details, backflow prevention details, wells, sewer mains or on-site septic systems (including repair area), electrical service, fire hydrants, detail of fire apparatus access to buildings, and any other public utility within all adjacent public right-of-ways and easements.	x
7	Approximate location of all designated Areas of Environmental Concern or other such areas which are environmentally sensitive on the property, such as Maritime Forest, CAMA, 404, or 401 wetlands as defined by the appropriate agency.	n/a
8	Sight distance triangles.	х
9	Proposed common areas, open space set-asides, and required buffers.	x
	Landscape Plan	•
10	All existing and proposed planting areas and vegetation that will be used to comply with the landscaping requirements, including the species, caliper, and spacing of all vegetation.	n/a
11	Existing and proposed physical barriers to be used to comply with the bufferyard and screening requirements.	x
12	Heritage tree inventory and proposed tree protection zones.	n/a
13	Adjoining property lines, zoning, and names and address of adjoining property owners.	x
	Exterior Lighting Plan	
14	Location, height, and type of all proposed exterior lighting including but not limited to site, street, building, and security lighting.	n/a

15	Footcandle measurements of the entire site including lot lines, or light fixture documentation	n/a
	when minimal lighting is proposed.	
	Major Stormwater Management Plan	
16	Major Stormwater Plan and Form SW-002	x
	Architectural Elevations	•
1 <i>7</i>	Architectural drawings and/or sketches illustrating the design, character, height, and materials of the proposed buildings.	
	Flood Damage Prevention, if Applicable	
18	• • • • • • • • • • • • • • • • • • • •	Τ.,
	Proposed elevation of all structures and utilities.	X
19	Location, dimensions, and use of:  Development and disturbance, existing and proposed structures and utility systems grading and pavement areas, fill materials, storage areas, drainage facilities, and other development.	x
20	Boundary of Special Flood Hazard Area (SFHA), floodway, Coastal Barrier Resource System (CBRS) Area, water course relocation, or a statement that the entire lot is within a specific SFHA.	x
21	Flood zone designation as determined on the County's Flood Insurance Rate Maps (FIRM).	x
22	Design Flood Elevation (Base Flood Elevation plus two foot freeboard).	х
23	Plans and/or details for the protection of public facilities and utilities (sewer, gas, electrical, and water systems) from inundation of flood waters up to Design Flood Elevation.	n/a
24	Water course alteration or relocation:  Description of alteration or relocation, report on effects of proposed project on the flood carrying capacity of the water course, and effects to properties located up and downstream.	x
25	Fill – plans for non-structural fill (if being utilized in VE zone).	x

#### Major Site Plan Submittal Checklist

Staff will use the following checklist to determine the completeness of your application within ten business days of submittal. Please make sure all of the listed items are included. Staff shall not process an application for further review until it is determined to be complete.

#### **Major Site Plan**

Sul	bmittal	Chac	·blict
S)UI		1 C.HEC	KIISI

Date Received:	TRC Date:
Project Name: Cindy's Kitchen Applicant/Property Owner: Cynthia J. Spain	

Major Site Plan Submittal Checklist		
1	Complete Major Site Plan application	X
2	Application fee (\$.10 per square foot of gross floor area or \$400 minimum)	X
3	Site plan	X
4	Landscape plan	X
5	Exterior Lighting plan	n/a
6	Stormwater Review Fee Deposit (see fee schedule) and Major Stormwater Management plan and Form SW-002	
7	Architectural elevations, if applicable	X
8	ARHS site evaluation(s) OR if connecting to existing wastewater system, a letter of commitment from owner of centralized sewer provider and letter from DWQ indicating the existing plant has sufficient capacity to serve the development at the time of site plan approval.	X
9	NCDEQ stormwater permit application (if 10,000sf or more of built upon area).	X
10	NCDEQ Erosion and Sedimentation Control permit application (if one acre or more of land disturbance).	x
11	NCDOT Street and Driveway Access Permit Application and Encroachment Agreement	X
12	2 copies of plans	X
13	2 hard copies of ALL documents	X
14	1 PDF digital copy of all plans AND documents (ex. Compact Disk – e-mail not acceptable)	X

For Staff Only

#### **Pre-application Conference**

Pre-application Conference was held on February 13, 2023 and the following people were present: Mike Robinson, P.E., Rick Godsey, Dave Spence, Dylan Lloyd, Jason Litteral, Anna Cherry, Jennie Turner, Kevin Kemp

Comments		
Completeness Determination		