461079

ALBEMARLE REGIONAL HEALTH SERVICES Improvement Permit

Applicant:

James Eaton 138 Oyster Bed Ln Southern Shores, NC 27949

Owner:

James Eaton 138 Oyster Bed Ln Southern Shores, NC 27949

Site Location:

117 West Side Ln Powells Point, NC 27966

GPD: 100 LTAR: 0.500 Classification: Suitable

The site will require the following modification(s):

To obtain an Authorization to Construct:

- * Submit a plat or scale drawing of the lot, showing location and dimensions of all property lines, proposed structures and driveways
- * Pay permit fee of \$441

Comments:

Fill building pad higher than finished septic tank grade

EHS:

Carver, Kevin

Date: <u>10/27/2025</u>

THIS APPROVAL WILL BECOME VOID AFTER 12 MONTHS AND A NEW APPLICATION WILL BE NECESSARY.



Stormwater Management Report Narrative, Calculations and Supporting Documentation

Project:

JUST FOR THE BEACH RENTAL WAREHOUSE COMMERCIAL SITE DEVELOPMENT

Powells Point,

Currituck County,

North Carolina

Prepared By:

Bissell Professional Group

P.O. Box 1068 3512 N. Croatan Highway Kitty Hawk, North Carolina 27949

October 27, 2025

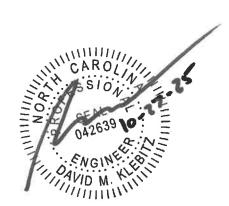


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STORMWATER MANAGEMENT NARRATIVE:

PROJECT OVERVIEW & PROPOSED DEVELOPMENTAL ACTIVITIES

The project is slated for development along the southern side of West Side Ln, Sr 1112 in the Powells Point area of Currituck County.

Proposed developmental activities include the following;

- a) (2) warehouse buildings
- b) A shared concrete driveway common with the western adjoining property
- c) Concrete and gravel parking and loading areas
- d) Stormwater management, utility and landscaping improvements

Please reference the **Development Overview Map** provided under **Attachment** A.

EXISTING SITE CONDITIONS, TOPOGRAPHY AND DRAINAGE FEATURES

The 0.55 acre property, along with the adjoining parcel to the west, was formerly utilized as a salvage yard operation. Improvements included a small building, truck scales with concrete access ramps, concrete driveways and stockpiles of salvaged materials. Recently, however, all structures and material stockpiles were removed and the site is now vacant. Topography is flat with an average ground surface elevation of around 13.5 ft-msl across the front portion of the property. Elevations across the rear gradually fall east to west from around 13.3' to 11.5'. There are no formal drainage measures on or around the property. Stormwater runoff is believed to be minimal and primarily infiltrates into the area's native sandy soils. The property is zoned Heavy Industrial (HI) with surrounding development that includes a mix of industrial and residential.

Please reference the **USGS 7.5 Minute Quadrangle Site Location Map** under **Attachment A**. Please reference the **Existing Site Features Map** provided in the **Construction Drawings**

SITE SOILS

Pursuant to the USDA Soil Survey Manual of Currituck County, soils across the proposed development area are composed of Bojac Loamy Sands. Bojac soils are described as well drained with moderately rapid permeability and a seasonal high-water table below a depth of 4 feet.

Protocol Sampling Service, Inc. conducted a site evaluation to determine the presence of restrictive horizons, seasonal high-water table conditions and permeability capabilities of the underlying soils. A single boring was advanced in the vicinity of the development's proposed infiltration basin. Findings include a seasonal high-water table elevation at 8.61 ft-msl, an infiltration rate of 20 inches/hour at a depth of 40" and soil porosity of 20-25%. The soils are described as sandy and well drained, belonging to the Conetoe series.

Please reference the **Soils Report** provided under **Attachment C**.

OVERVIEW OF STORMWATER MANAGEMENT DESIGN CRITERIA

CURRITUCK COUNTY

The development's stormwater management system shall be designed in accordance with the standards prescribed for Major Site Plans as outlined in Chapter 7.3 of the Currituck County UDO and Chapter 2.4 of the Currituck County Stormwater Manual. Among other provisions, the following primary standards shall be met:

- I. Major Site Plans shall implement adequate stormwater practices to reduce the post-development peak discharge from the 24-hour storm event with a 5-year recurrence interval down to the predevelopment discharge rate from the 24-hour storm event with a 2-year recurrence interval based on pre-development conditions from a wooded site, regardless of actual pre-development site conditions.
- II. Major Site Plans shall provide Minimum Building Pad Elevations required to prevent flooding from the 24-hour storm event with a 10-year recurrence interval.
- III. Finished Floor Elevations for all principal structures shall be above the 100-year Regulatory Flood Protection Elevation, or 18 inches above the 24-hour storm event with a 10-year recurrence interval, or at least 6 inches above a filled septic system, whichever is greater.

OVERVIEW OF STORMWATER MANAGEMENT FEATURES BY DRAINAGE AREA

Developmental activities will consist of those previously itemized in the "Project Overview and Proposed Development Activities" section above. Like Pre-Development drainage conditions, proposed grading and drainage improvements form a single primary Post-Development Drainage Area [#1].

Please reference Pre and Post Development Drainage Area Delineation Maps under Attachment B

Drainage Area #1

The drainage area totals 0.55 acres and includes all of the proposed built-upon area and the following stormwater management improvements:

Collection

The shared concrete driveway will be crowned along the common property line with the adjoining property. Runoff from the on-site, eastern half of the driveway will sheet-flow to on-site measures for management. Runoff from the off-site, western half will sheet flow off-site.

Roof runoff from the western half of Building A and the adjoining portion of the shared driveway will be collected buy a catch basin (CB-01) and conveyed by pipe to an infiltration basin proposed in the northeast corner of the property.

Roof runoff from the eastern half of Building A, the adjoining concrete access drive to the building, a portion of the rear gravel loading & parking area and concrete ADA parking pad will graded to promote sheet flow directly into the infiltration basin.

Roof runoff from the entire Building B and portions of the adjoining gravel loading area improvements will be collected by a typical vegetated swale running along the western, southern and eastern property boundaries. The swale is sloped to convey runoff to the southern end of an infiltration basin.

Stage and Storage

In accordance with County Design Criteria outline above, the Infiltration Basin has been designed with an open storage capacity capable of accommodating runoff <u>in excess of</u> the Post-Development 5 year - 24 hour storm event. The following is a summary of design conditions:

STAGE ELEVATIONS

•	Seasonal high-water table elevation	on = 8.61 ft-msl	(See Site Soils section above)		
•	Basin Bottom Elevation	= 11.00 ft-msl	(Provides greater than 2' of separation to SHWT)		
•	5 yr – 24 hr event stage	= 12.60 ft-msl	(See Currituck Calculations*)		
•	10 yr – 24 hr event stage	= 12.95 ft-msl	(See EPA SWMM Model Results)		
•	Emergency Overflow Elevation	= 13.10 ft-msl	(See grading and drainage plan)		
•	Basin Top Elevation	= 13.25 ft-msl	(See grading and drainage plan)		

STORAGE VOLUMES

5 yr-24 hr event storage = 3,617 cf (See Currituck Calculations*)
 10 yr-24 hr event storage = 4,686 cf (See EPA SWMM Model Results)
 Total Basin storage capacity = 5.731 cf (See Currituck Calculations*)

Treatment

Primary treatment will be provided by the proposed Infiltration Basin. Measures of Pre-treatment will also be provided by the leading vegetative swales and sump provided within the proposed catch basin. Roof runoff from Building B will also receive pre-treatment by sheet flowing over the vegetated rear yard before entering into the perimeter swale. Longitudinal slopes of the proposed swale and pipe collection network are kept to a minimum to reduce flow velocities, reduce erosion and promote infiltration.

Disposal & Overflow

Infiltration is the primary source of disposal and drawdown calculations resolve that the basin's full open storage volume will infiltrate into the site's excessively drained sandy soils in a period of approximately <u>6.0 hours</u>, or <u>0.25 days</u>. This is significantly less than the maximum 72 hour allowance prescribed by NCDEQ. In the event that the system capacity is exceeded, excess runoff will begin to overflow the northern bank of the infiltration basin at an elevation of 13.10 ft-msl and sheet flow towards West Side Ln.

Building Pad Elevation (BPE) and First Floor Elevation (FFE)

- Finished building pad elevations located immediately around the perimeter of the buildings are set at, or above 14.0 ft-msl. This provides 1.05' of separation to the 10 yr-24 hour storm stage of 12.95 ft-msl.
- First floor elevations of the proposed buildings are set at 14.5 ft-msl, providing 1.55' of separation to the 10 yr-24 hr storm stage of 12.95 ft-msl. The site is located in a FEMA X Flood Zone so there is no base flood or regulatory flood protection elevation. Finished grade elevations across the drainfield average around 14.00 ft-msl, providing at least 6" of separation to the finished first floor elevation.

Please reference **Stormwater Management Calculations** under **Attachment D** and the **Construction Drawings** for more details.

OPERATION & MAINTENANCE

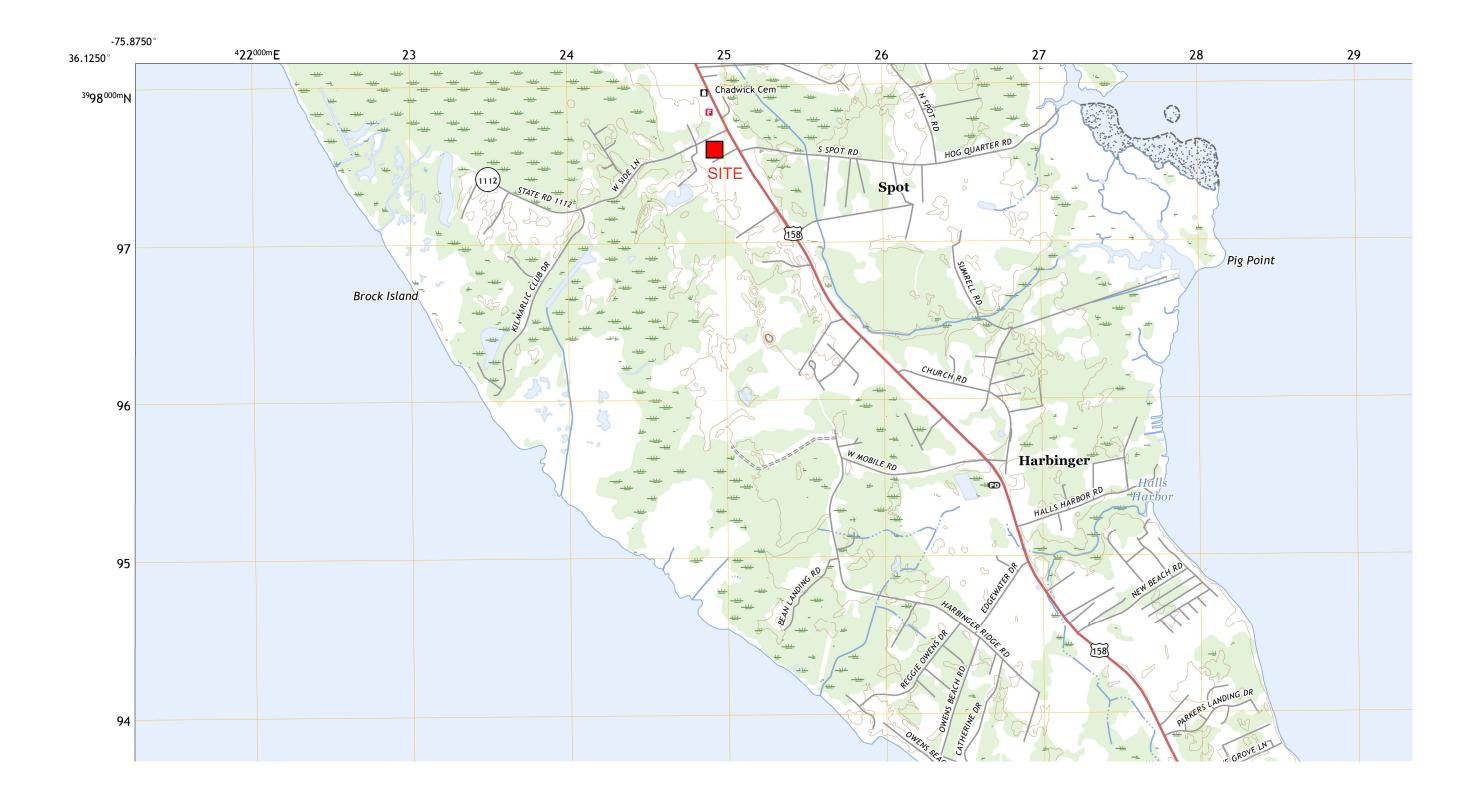
The following is a general overview of some, but possibly not all, maintenance responsibilities;

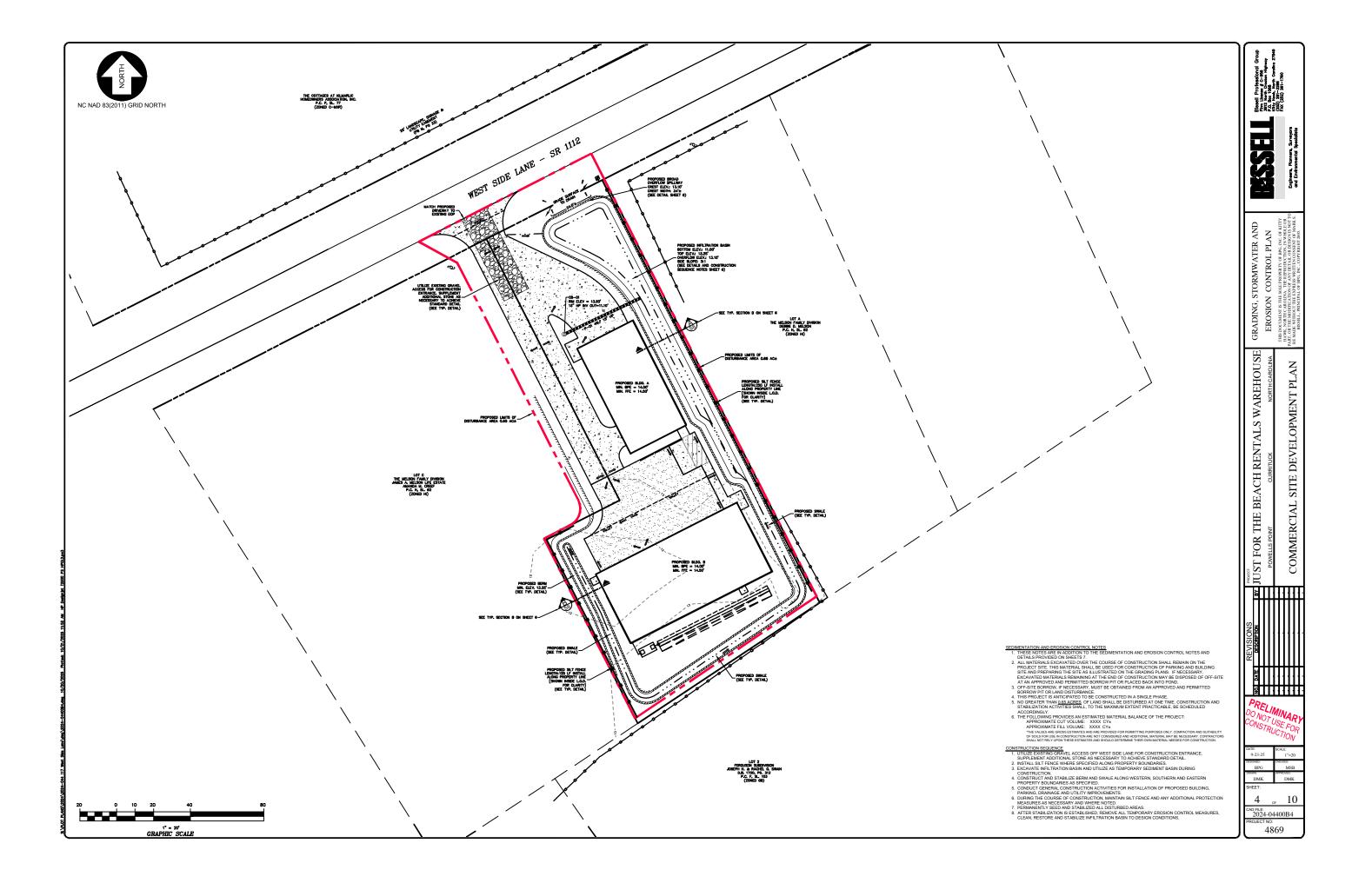
- **A.** For purposes of operating and maintaining the infiltration basin, access must be maintained such that the basin can be reached by light construction equipment.
- **B.** During and after construction, erosion shall be kept to a minimum and any eroded areas of vegetated conveyances shall be repaired immediately. Please refer to the <u>Infiltration Basin Construction Sequence Notes</u> provided on the construction drawings for further details.
- **c.** Regular inspections shall be performed and any problems found shall be repaired immediately.
 - 1. Trash and debris shall be removed.
 - 2. Sediment accumulation of more than 4 inches shall be removed.
 - 3. Erosion of the basin bottom and side slopes shall be regraded and vegetated immediately.
 - 4. New growth of shrubs and trees within the basin shall be removed.

^{*}Sections 2.4.3 and 2.4.4 of the Currituck County Stormwater Manual allows the use of "Rational Method" and "Simple Volume Calculations" determine runoff rates and required storage volumes for sites under 10 acres.

ATTACHMENT A — SITE MAPS

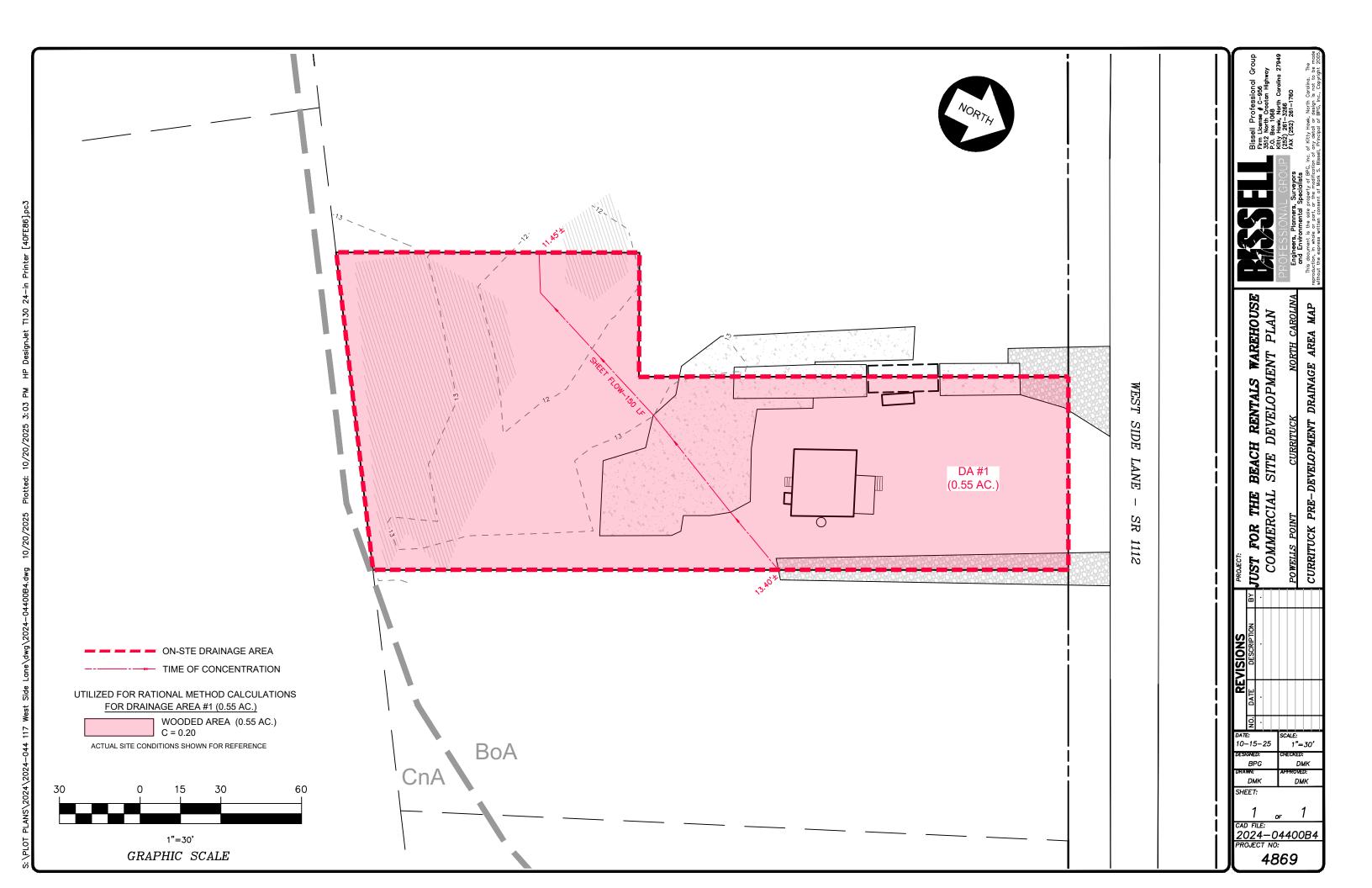
- USGS 7.5 Minute Quadrangle Site Location Map
- Development Overview Map (Reduction)

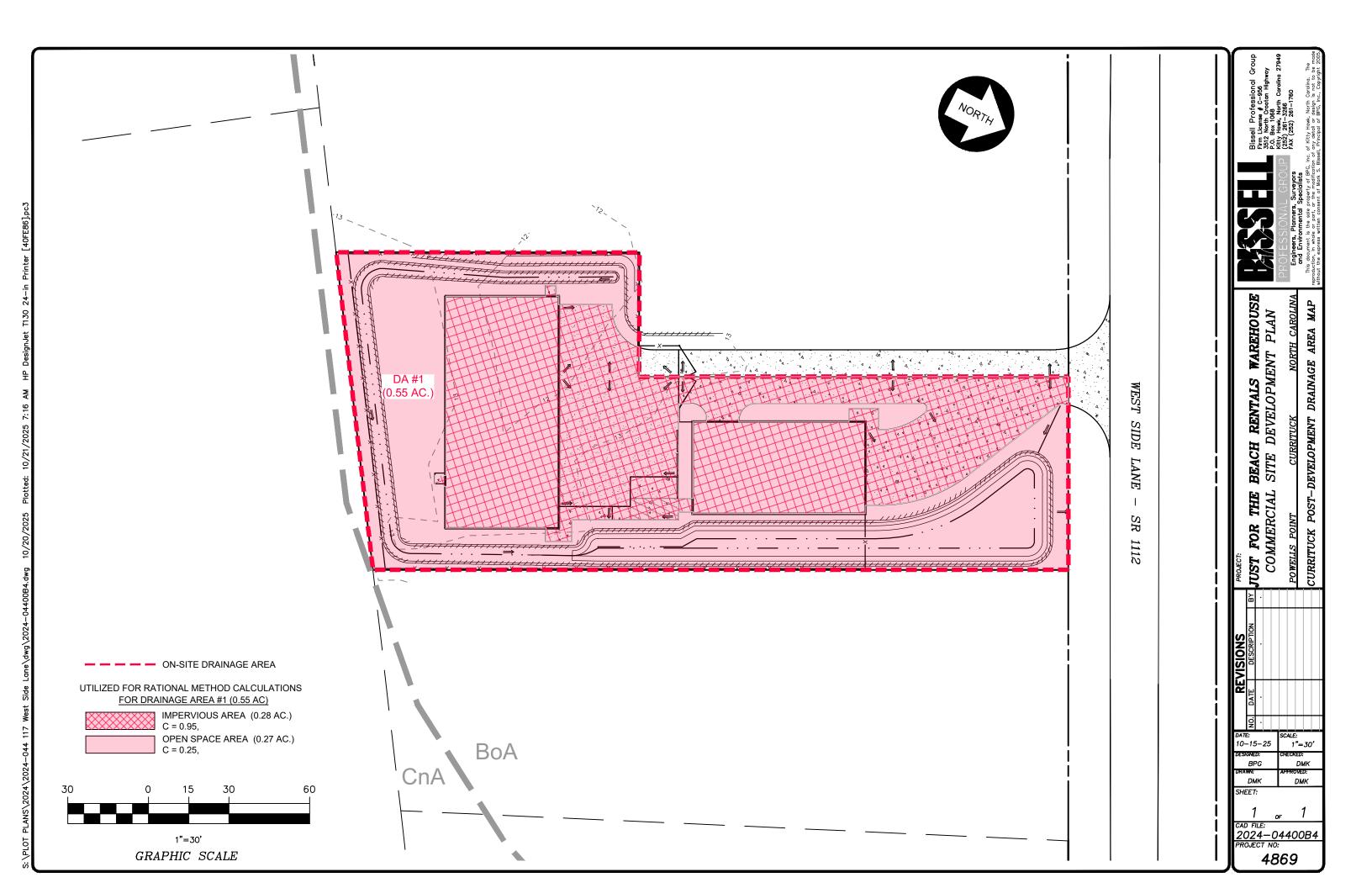


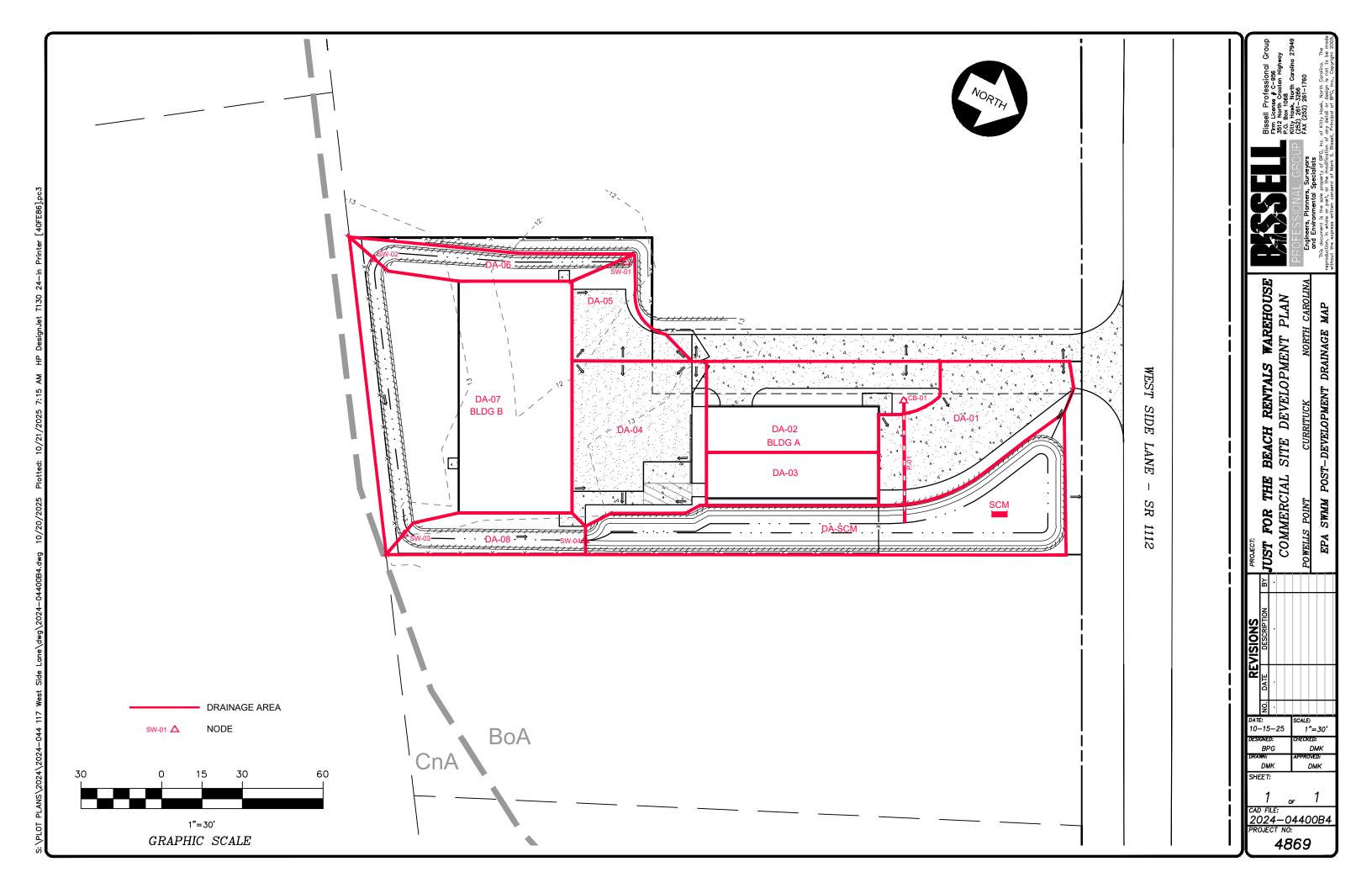


ATTACHMENT B - DRAINAGE AREA DELINEATION MAPS

- Currituck Pre Development Drainage Area Map used for Rational Method Calculations
- Currituck Post Development Drainage Area Map used or Rational Method Calculations
- Post Development Drainage Map used for EPA SWMM Model

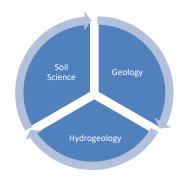






ATTACHMENT C — SOILS REPORT

Soils Report - Protocol Sampling Service, Inc.



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

(919) 210-6547

Protocolsampling@yahoo.com Environmentalservicesnc.com

October 20, 2025

4114 Laurel Ridge Drive

Raleigh, North Carolina 27612

Mr. David Klebitz, P. E. Bissell Professional Group, Inc. Post Office Box 1068 Kitty Hawk, North Carolina 27949

Email; davek@bissellprofessionalgroup.com

Re: Soil Inspection – Stormwater

Just for the Beach Rentals Warehouse

117 West Side Lane

Powells Point, Currituck County, North Carolina 27966

Protocol Project No. 25-131

Dear Mr. Klebitz:

The subject property that will be developed for the Just for the Breach Rentals warehouse was inspected by Protocol Sampling Service, Inc., personnel on Wednesday, September 3, 2025. Protocol personnel inspected the lot by advancing one (1) soil boring for lithologic description, depth to the seasonal high-water table, permeability and the depth to static water table in the center of the proposed stormwater disposal area (Commercial Site Development Plan – attached).

The northeast portion of the property comprises one (1) proposed infiltration basin. The proposed basin contains a surveyed elevation of 13.03-feet msl. The seasonal high-water table was found to be at 53 inches below land surface (elevation 8.61'-msl) and the static water table was not found to a depth of 60-inches below the soil surface (elevation <8.03'-msl). The soil porosity ranges from 20 to 25% with infiltration rates exceeding 20-inches/hour in the underlying sand with a seasonal high-water table elevation of at least 53-inches below land surface.

Due to the former use of the site as an automobile scrap yard, any non-native fill soil that may be encountered while constructing the basin should be removed and replaced with clean beach sand from the projected basin bottom to the sand layer at 40-inches below land surface to ensure proper infiltration rates.

The findings presented herein represent Protocol Sampling Service, Inc.'s professional opinion based on our site and soils evaluation and knowledge of the current laws and rules governing stormwater regulations in North Carolina.

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

Sincerely.

Protocol Sampling Service, Inc.

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

President

Soil Profile Description Just for the Beach Rentals Warehouse

- A 0-10 inches; dark brown (7.5YR 3/3) loamy fine sand; granular; friable.
- E 10 24 inches; yellowish brown (10YR 5/4) loamy sand; granular; friable.
- Bt 24 36 inches; brownish yellow (10YR 6/8) sandy loam; subangular blocky; friable.
- BC 36 40 inches; brownish yellow (10YR 6/8) and very pale brown (10YR 7/4) loamy sand; subangular blocky; friable.
- C1 40 60 inches; brownish yellow (10YR 6/8) fine sand with strong brown (7.5YR 5/6) concentrations and gray (10YR 6/1) depletions; single grained; loose

Soil Series: Conetoe Landscape: Coastal Plain Landform: terrace

Parent Material: Marine sediments Drainage Class: well drained Particle Size Class: sandy Temperature Regime: thermic

Subgroup Classification: Arenic Hapludult

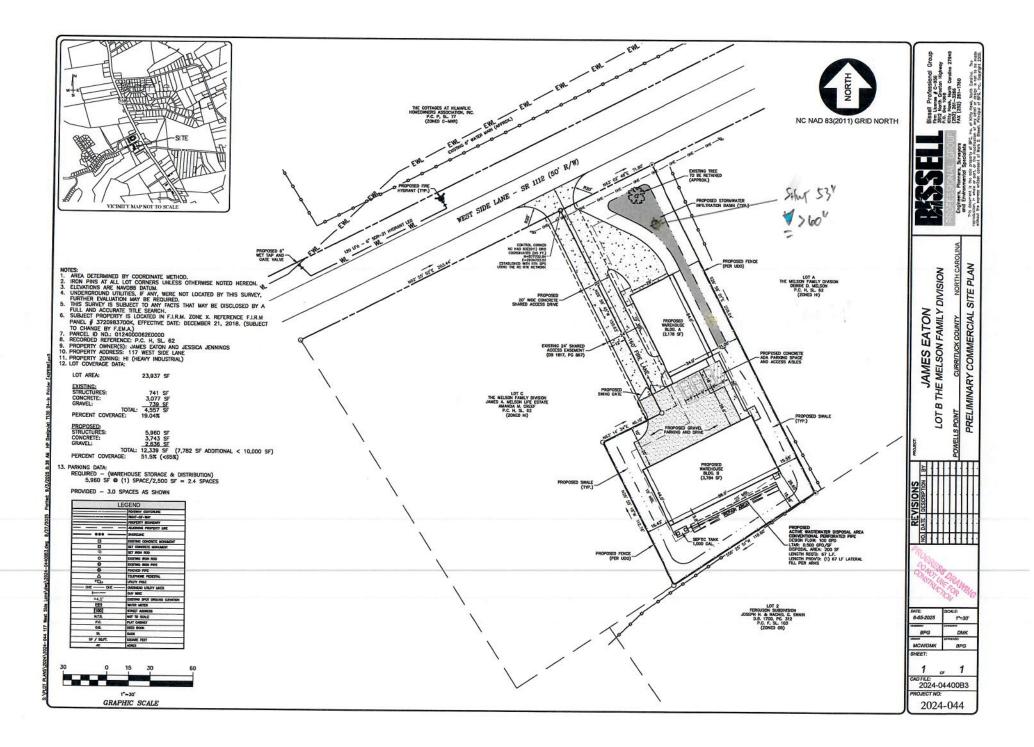
Examination Method: auger boring

Date: September 3, 2025 Weather: Sunny, 55 Investigators: David Meyer

Shwt: 53"

Measured water table depth: >60"

Surface elevation: 13.03;



ATTACHMENT D - STORMWATER MANAGEMENT CALCULATIONS

- Currituck 2 yr-24 hr Wooded Pre-Development Rational Method Calculations
- Currituck 5 Yr-24 hr Post-Development Rational Method Calculations
- Currituck Storage Volume and Drawdown Calculations
- 10 Yr -24hr Post-Development EPA SWMM Model Results

Rational Method Calculator

Just for the Beach Rentals Warehouse Pre-Construction (Wooded, 2-yr, 24 hr rainfall event)

Curr SW Manual Sec 2.4.3.A, Rational Method

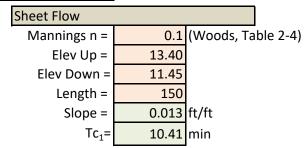
P =



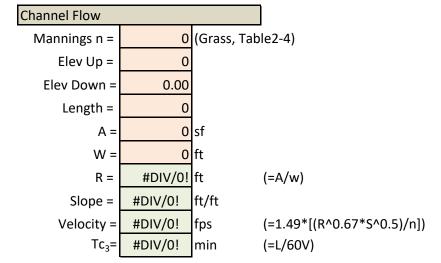
4.0 in, (2yr-24hr rain depth, Table 2-7)

"= Input"

Time of Concentration:



Shallow Concentrated Flow Land Use = Unpaved Elev. Up = 0 Elev. Down = 0 0 ft Length = Slope = #DIV/0! ft/ft Velocity = #DIV/0! fpm (=972xS^0.53) Tc₂= #DIV/0! min (=L/V)



Total Time of Concentration

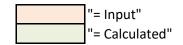
Total Tc = 10.41 min (=
$$Tc_1+Tc_2+Tc_3$$
)

Peak Flow Calculation:

Intensity, I =
$$\frac{4.80}{\text{in/hr}}$$
 (2 yr, Interpolated from Table 2-5)
 $Q_2 = \frac{0.53}{\text{cfs}}$ (Q=CiA)

Runoff Depth Calculator

Just for the Beach Rentals Warehouse Post-Construction (5-yr, 24 hr rainfall event) Curr SW Manual Sec 2.4.3.B, (Steps 2 & 3)



Composite Cn Calculation:

(Table 2-6)

Coverage	Cn	Area	Weighted Area
Impervious (A Soils)	98	0.28	27.44
Open Space (A Soils)	49	0.27	13.23

Composite Cn = 73.95

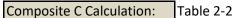
Calculate Runoff Depth:

Rational Method Calculator

Just for the Beach Rentals Warehouse

Post-Construction (5-yr, 24 hr rainfall event)

Curr SW Manual Sec 2.4.3.A, Rational Method



Coverage	С	Area	Weighted Area
Impervious	0.95	0.28	0.266
Open Space	0.25	0.27	0.07

Time fo Concentration:

Total Tc = 5.00 min (Conservative assumption based on experience with

similar small commercial sites)

"= Input" "= Calculated"

Peak Flow Calculation:

Intensity, I = 6.82 in/hr (5-yr, Table 2-5)

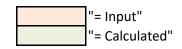
 $Q_5 =$ 2.27 cfs (Q=CiA)

Storage Volume Required Calculator

Just for the Beach Rentals Warehouse

Pre /Post -Construction (2-yr / 5yr, 24 hr mitigation)

Curr SW Manual Sec 2.4.4



Summary from other calculations:

Drainage Area =
$$0.55$$
 ac.
 $Q_2(pre) = 0.53$ cfs
 $Q_5(post) = 2.27$ cfs
 $Q(Depth) = 2.36$ in.

Calculate Runoff Volume:

$$(Vr = Q_{depth}/12*A)$$

Calculate Required Storage Volume:

$$(Vs = 1613.33 * Vr * (1 - Q2/Q5)$$

Calculate Storage Volume Provided:

	Elev. (ft)	Area (sf)	Storage (cf)	
Basin Bottom	11.00	1,035		
Contour	12.00	2,154	1,595	
Contour	13.00	3,339	2,747	
Basin Top	13.25	3,639	872	
	5,213	cf		

Interstitial Storage

Basin Bottom Area: 1,035 sf
Basin Bottom Elev.: 11.00 ft
SHWT Elev: 9.00 ft
Soil Void: 25 %

Interstitial Storage Volume = 518 cf

Total Storage Volume Provided = 5,731 cf

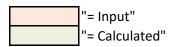
Estimated 5yr Stage = 12.60 ft

Basin Area @ 5yr Stage = 2,862 sf

Basin Volume @ 5yr Stage = 3,635 cf, includes interstitial storage

Infiltration Calculator

Just for the Beach Rentals Warehouse Infiltration System Drawdown Calculations NCDEQ SCM Manual



Summary of calculation:

Equation, T = FS * (Dv * 12)/(K * SA)

T = Dewatering (drawdown) Time (hrs)

FS = Factor of Safety

Dv = Design Volume (cf)

K = Hydraulic Conductivity (in/hr)

SA = Surface Area of bottom of infiltration basin (SF)

Calculate Drawdown time:

********	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches

Total Precipitation	0.258	5.740

Evaporation Loss	0.000	0.000
Infiltration Loss	0.134	2.985
Surface Runoff	0.122	2.708
Final Storage	0.002	0.051
Continuity Error (%)	-0.081	
*******	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal

Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.122	0.040
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.000	0.000
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
<pre>Initial Stored Volume</pre>	0.000	0.000
Final Stored Volume	0.121	0.040
Continuity Error (%)	0.468	

Highest Continuity Errors ***********

Node SW-02 (22.51%)

Node SW-03 (8.85%)

Node SW-04 (2.91%) Node SCM (1.40%)

None

All links are stable.

Routing Time Step Summary ************

Minimum Time Step : 0.04 sec
Average Time Step : 0.67 sec
Maximum Time Step : 0.67 sec
Percent in Steady State : -0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00

	Total	Total	Total	Total	Imperv	Perv	Total	Total	Peak	
Runoff	Dnocin	Pupon	Evan	Infil	Runoff	Runoff	Runoff	Runoff	Runoff	
Coeff	Precip	Runon	Evap	111111	KUIIOTT	Kullol I	Kullott	Kullott	Kulloll	
Subcatchment	in	in	in	in	in	in	in	10^6 gal	CFS	
DA-04	5.74	0.00	0.00	0.98	0.00	4.68	4.68	0.01	0.29	
0.816										
DA-03	5.74	0.00	0.00	1.10	0.00	4.59	4.59	0.00	0.14	
0.800										
DA-02	5.74	0.00	0.00	1.34	0.00	4.36	4.36	0.01	0.27	
0.759										
DA-01	5.74	0.00	0.00	1.22	0.00	4.46	4.46	0.01	0.26	
0.777	F 74	0.00	0.00	2 22	0.00	2 42	2 42	0.04	0.40	
DA-07	5.74	0.00	0.00	3.28	0.00	2.43	2.43	0.01	0.42	
0.424	F 74	0.00	0.00	F 60	0.00	0.00	0.00	0.00	0.00	
DA-06	5.74	0.00	0.00	5.69	0.00	0.00	0.00	0.00	0.00	
0.000	F 74	0.00	0.00	1 77	0.00	2 02	2.02	0.00	0.00	
DA-05	5.74	0.00	0.00	1.77	0.00	3.93	3.93	0.00	0.08	
0.684	F 74	0.00	0.00	F 60	0.00	0.00	0.00	0.00	0.00	
DA-SCM	5.74	0.00	0.00	5.69	0.00	0.00	0.00	0.00	0.00	

0.000 DA-08 0.000

5.74

0.00

0.00

5.71

0.00

0.00

0.00

0.000 gal

1.421

0.00

0.00

Average Maximum Maximum Time of Max Reported

		Average Depth	Maximum Depth	Maximum HGL	0ccu	of Max rrence	Reported Max Depth
Node	Туре	Feet	Feet	Feet	days	hr:min	Feet
CB-01	JUNCTION	1.68	1.85	12.95	4	14:02	1.85
SW-02	JUNCTION	0.65	0.72	12.95	4	19:36	0.72
SW-01	JUNCTION	0.40	0.45	12.95	4	05:34	0.45
SW-03	JUNCTION	0.79	0.88	12.95	4	05:18	0.88
SW-04	JUNCTION	0.86	0.96	12.95	5	01:53	0.96
Outfall1	OUTFALL	0.00	0.00	13.00	0	00:00	0.00
SCM	STORAGE	2.24	2.45	12.95	4	20:05	2.45

10yr Max HGL

Maximum Maximum Lateral Total Flow
Lateral Total Time of Max Inflow Inflow Balance
Inflow Inflow Occurrence Volume Volume Error

CFS days hr:min 10^6 gal 10^6 gal Node Type Percent 0.27 0.00711 0.00721 CB-01 JUNCTION 0.27 12:12 3.208 SW-02 0.00 0.08 12:06 0.00507 29.053 JUNCTION 0 9.875 SW-01 JUNCTION 0.08 0.08 12:12 0.00213 0.00286 SW-03 JUNCTION 0.42 0.44 0 12:13 0.0106 0.0161 9.704 0.0307 SW-04 JUNCTION 0.00 1.65 12:49 0 3.002

00:00

0.0199

0.0544

0 12:49

0.00

1.88

Outfall1

SCM

OUTFALL

STORAGE

0.00

0.69

Node Surcharge Summary **********

Surcharging occurs when water rises above the top of the highest conduit.

			Max. Height	Min. Depth
		Hours	Above Crown	Below Rim
Node	Type	Surcharged	Feet	Feet
CB-01	JUNCTION	137.19	0.599	0.551

No nodes were flooded.

Storage Volume Summary **********

Storage Unit	Average Volume 1000 ft3	Pcnt	Evap Pcnt Loss	Pcnt	Maximum Volume 1000 ft3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CFS
SCM	4.263	25	0	 0	4.686	28	4 20:05	1.53

Outfall Loading Summary **********

Flow Avg Max Total

	Flow	Avg	Max	Total
	Freq	Flow	Flow	Volume
Outfall Node	Pcnt	CFS	CFS	10^6 gal
Outfall1	0.00	0.00	0.00	0.000
System	0.00	0.00	0.00	0.000

Link Flow Summary **********

Link	Туре	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Veloc ft/sec	Max/ Full Flow	Max/ Full Depth
P-01	CONDUIT	0.25	0 12:12	1.08	0.07	1.00
SW02-SW03	CONDUIT	0.07	0 12:17	0.26	0.01	0.53
SW01-SW02	CONDUIT	0.08	0 12:12	0.47	0.01	0.39
SW03-SW04	CONDUIT	0.42	0 12:15	0.99	0.05	0.61
SW04-SCM	CONDUIT	1.72	0 12:49	0.47	0.01	0.74
OVERFLOWWEIR	WEIR	0.00	0 00:00			0.00

Flow Velocity < 4 fps

Flow Classification Summary *************

	Adjusted			Fract	ion of	Time	in Flo	w Clas	s	
	/Actual		Up	Down	Sub	Sup	Up	Down	Norm	Inlet
Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd	Ctrl
P-01	1.00	0.06	0.00	0.00	0.92	0.00	0.00	0.02	0.00	0.00
SW02-SW03	1.00	0.07	0.00	0.00	0.93	0.00	0.00	0.00	0.01	0.00
SW01-SW02	1.00	0.07	0.00	0.00	0.93	0.00	0.00	0.00	0.02	0.00
SW03-SW04	1.00	0.07	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00
SW04-SCM	1.00	0.05	0.02	0.00	0.93	0.00	0.00	0.00	0.01	0.00

.....

Hours Hours
------ Hours Full ----- Above Full Capacity
Conduit Both Ends Upstream Dnstream Normal Flow Limited

P-01 137.19 137.19 137.40 0.01 0.01 SW04-SCM 0.01 0.01 136.47 0.01 0.01

Analysis begun on: Fri Oct 17 14:41:26 2025 Analysis ended on: Fri Oct 17 14:41:28 2025

Total elapsed time: 00:00:02



Major Stormwater Plan Form SW-002

OFFICIAL USE ONLY:	
Permit Number: _	
Date Filed:	
Date Approved: _	
• •	

Contact Information				
APPLICANT:		PROPERTY OW	NER:	
Name:	_	Name:		
Address:	_	Address:		
	_			
Telephone:		Telephone:		
E-Mail Address:	_	E-Mail Address:		
Donat Information				
Property Information				
Physical Street Address:				
Parcel Identification Number(s):				
FEMA Flood Zone Designation:	_			
Γ-				
Request				
Project Description:				
Total land disturbance activity:	sf	Calculated volu	me of BMPs:	sf
Maximum lot coverage:	<u>sf</u>	Proposed lot co	verage:	sf
TYPE OF REQUEST				
 Major subdivision (10-year, 24-hour rat Major site plan (5-year, 24-hour rate) 	e)			
METHOD USED TO CALCULATE PEAK DISCHARC Rational Method	<u>SE</u>			
□ NRCS Method (TR-55 and TR-20)				
□ Simple volume calculation for small sites	•	ın 10 acres)		
Alternative stormwater runoff storage aDownstream drainage capacity analysis	-			
I hereby authorize county officials to enter my information submitted and required as part of the				All
		•		
Jane 8		•	10/23/25	
Applicant	_		Date	
Jewen () m ()	7		10/23/25	
Property Owner(s)			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 Stormwater Plan Design Standards Checklist

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:	
Applicant/Property Owner:	

Appl	icant/Property Owner:
Min	or Stormwater Plan Design Standards Checklist
	General
1	Property owner name and address.
2	Site address and parcel identification number.
3	North arrow and scale to be 1" = 100' or larger.
	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.
5	Approximate location of all designated Areas of Environmental Concern (AEC) 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.
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.
8	Limits of all proposed fill, including the toe of fill slope and purpose of fill.
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.
10	Existing and proposed drainage patterns, including direction of flow.
11	Location, capacity, design plans (detention, retention, infiltration), and design discharge of existing and proposed stormwater management features.
12	Elevation of the seasonal high water level as determined by a licensed soil scientist.
13	Plant selection.
	Permits and Other Documentation
14	NCDENR stormwater permit application (if 10,000sf or more of built upon area).
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.
17	Stormwater management narrative with supporting calculations.
18	Rational Method Form SW-003 or NRCS Method Form SW-004
19	Alternative stormwater runoff storage analysis and/or downstream drainage capacity analysis, if applicable
20	Design spreadsheets for all BMPs (Appendix F – Currituck County Stormwater Manual).
21	Detailed maintenance plan for all proposed BMPs.

Certificate	
The major stormwater plan shall contain the following certificate:	
I,, owner/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge.	
On the plan entitled, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required as part of the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements. Date: Owner/Agent:	
or Stormwater Plan Submittal Checklist	
ff will use the following checklist to determine the completeness of your application. Please make the listed items are included. Staff shall not process an application for further review unti ermined to be complete.	
bmittal Checklist e Received:	
ect Name:	
olicant/Property Owner:	
in Champanata Dian Farm CW 000 Submitted Chaplifut Dannata and it to HCD fluctuities	- CD
	r CD
NCDENR permit applications, if applicable	
nments	
	I,, owner/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge. On the plan entitled, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required as part of the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements. Date: Owner/Agent: or Stormwater Plan Submittal Checklist f will use the following checklist to determine the completeness of your application. Please make the listed items are included. Staff shall not process an application for further review until termined to be complete. ajor Stormwater Plan Form SW-002 omittal Checklist e Received: ect Name: licant/Property Owner: for Stormwater Plan Form SW-002 Submittal Checklist - Documents provided on USB flash drive of Completed Major Stormwater Plan Form SW-002 Completed Rational Method Form SW-003 or NRCS Method Form SW-004 Stormwater plan NCDENR permit applications, if applicable



Rational Method Peak Flow Form SW-003

Project Information					
Project Location: 117 West Side	e Ln. Powells Point	, NC 27966			
Parcel Identification Number(s): 0124-000-062E-0000					
Drainage area:		See Pre & Post Development			
Average Slope:	<u>%</u>	Rational Method Calculations under Attachment "D" of			
Maximum Slope Length:	<u>ft</u>	Stormwater Report			

Calculations

^{*}The Rational Method may only be used where development will impact less than 10 acres

Time of Concentration (Tc)			
(Use additional sheets if necessary)			1
	Pre-	Post-	
Sheet Flow			
Manning's roughness, n (Table 2-4)			
2-year, 24-hour Rainfall, P	4.0	6.0	in
Slope, S			ft/ft
Length of Sheet Flow, L (<=300 feet)			ft
Total Time for Sheet Flow			min
Shallow Concentrated Flow			
Surface Paved (P) or Unpaved (U)			
Length of flow, L			ft
Slope, S			ft/ft
Average Velocity, V (Table 2-3)			ft/min
Total Time for Shallow Concentrated Flow			min
<u>Channel Flow</u>			
Pipe (P) or Channel (C)			
If pipe: Diameter, D			in
If channel: Bottom Width, w			ft
If channel: side slope 1 (:1)			
If channel: side slope 2 (:1)			
Cross sectional flow area, A			sq ft
Wetted perimeter, Wp			ft
Hydraulic radius, $R = A/Wp$			ft

	Pre-	F	Post-		
Channel slope, S				ft/ft	
Manning's roughness, n (Table 2-4)					
Channel velocity				ft/sec	
Length of Flow, L				ft/sec	
Total Time for Channel Flow				min	
Total Time of Concentration, Tc				min	
Pre-development Conditions					
Land Use Description	С	Area	(acres)	C*A	
Woods	0.2		-		
Total	·				
Intensity for 2-year, 24-hour storm (Table 2-5)		4.80		in/hr	
illerisity for 2-year, 24-11001 storiii (fuble 2-3)				"'/'"	
Pre-development peak flow, Q = CiA		0.53		cfs	
Post-development Conditions		Ι.			
Land Use Description	С	Area	(acres)	C*A	
Totals	l				
Area-weighted C:		0.61			
5		6.82)		
Intensity for 10-year, 24-hour storm (Table 2-5)				in/hr	
Post-development peak flow, Q = CiA		2.27	•	cfs	
Minimum Storage Volume Required – Refer to Secti	on 2.4.4 fo			ations	
Storage Volume, V _s		3,61	<u>/</u>	ft ³	
Kony			10	-23-2025	
ent Engineer			Date		

APPLICATION	NIDENTIFICATION	N.C. DEPARTMENT OF TRANSPORTATION
1 10	te of 10-27-25	STREET AND DRIVEWAY ACCESS
10 10 10 10 10 10 10 10 10 10 10 10 10 1	olication	PERMIT APPLICATION
County: Currituck		
Development Name: Just for the E		ODERTY
Route/Road: SR 1112 (West	LOCATION OF PI	ROPERTE
` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	t Side Lir.)	
Exact Distance 485	☐ Miles N S E W ☐ ☐ ☐ ☐ ☐	
From the Intersection of Route No	SR 1112 and Route	No. <u>US Hwy 158</u> Toward <u>Kilmarlic</u>
Property Will Be Used For: 🔲 Res	sidential /Subdivision 🛛 Commercial 🗌	Educational Facilities
Property:	⊠ is ☐ is not	within Currituck County City Zoning Area.
	AGREEME	Million and Control of the Control o
of-way at the above location. I agree to construct and maint Street and Driveway Access to Transportation. I agree that no signs or object. I agree that the driveway(s) or lagree that that driveway(s) or change lanes as deemed necestage lanes	wher, request access and permission driveway(s) or street entrance to North Carolina Highways" as acts will be placed on or over the pure street(s) will be constructed as sor street(s) as used in this agreement or have any claim for preservoid if construction of drivewal priveway Access to North Carolina before mance with the current "Manual or Supplements thereto. Information of this construction. Information of this construction. Information of this construction. Information of this construction with the highway right-of-way limits, ince and Indemnity Bond in the anstate Highway system. Subject to the regulatory powers of the constructing and maintaining an avill be borne by the property owners of the constructing and maintaining an avill be borne by the property owners.	cion to construct driveway(s) or street(s) on public right- e(s) in absolute conformance with the current "Policy on lopted by the North Carolina Department of blic right-of-way other than those approved by NCDOT. hown on the attached plans. ent include any approach tapers, storage lanes or speed necessary, the portion of driveway(s) or street(s) the North Carolina Department of Transportation, and I ent expenditures for driveway or street construction. ((s) or street(s) is not completed within the time specified Highways". payable to NCDOT. This fee will be reimbursed if a safe manner so as not to interfere with or endanger s, signal lights, flaggers and other warning devices for on Uniform Traffic Control Devices for Streets and ion as to the above rules and regulations may be artment of Transportation from all damages and claims II assume no responsibility for any damages that may be

NOTE: Submit Four Copies of Application to Local District Engineer, N.C. Department of Transportation 61-03419

TEB 65-04rev.

2004-07

SIGNATURES	OF APPLICANT	
OPERTY OWNER (APPLICANT) les Eaton and Jessica Jennings Oyster Bed Ln. thern Shores, NC Phone No. 252-455-0205	NAME SIGNATURE ADDRESS	WITNESS (W. S.
	NAME SIGNATURE ADDRESS OVALS	WITNESS Le Kespass LOG Respans LOG RESPONSE LOG RESPON
VED BY DISTRICT ENGINEER		
SIGNATURE	DATE	
OVED BY LOCAL GOVERNMENTAL AUTHORITY (when	n required)	
SIGNATURE	TITLE	DATE
OVED BY NCDOT		
SIGNATURE	TITLE	DATE
ОТ		
SIGNATURE	TITLE	DATE
	OPERTY OWNER (APPLICANT) les Eaton and Jessica Jennings Oyster Bed Ln. thern Shores, NC Phone No. 252-455-0205 AUTHORIZED AGENT lell Professional Group 2 N. Croatan Highway Hawk, NC 27949 Phone No. 252-261-3266 APPR VED BY DISTRICT ENGINEER SIGNATURE OVED BY LOCAL GOVERNMENTAL AUTHORITY (when over the content of t	NAME SIGNATURE ADDRESS AUTHORIZED AGENT ell Professional Group NAME SIGNATURE ADDRESS AUTHORIZED AGENT ell Professional Group NAME SIGNATURE ADDRESS NAME SIGNATURE ADDRE

ROUTE	SR 1112	PROJECT	Just for the Beach Rental	COUNTY OF	Currituck Carolina	
DEPARTMENT OF TRANSPORTATION			THREE PARTY RIGHT OF WAY			
	AND			ENCROAC	HMENT AGREEMENT ON	
-AND- James Eaton & Jessica Jennings				PRIMARY AND SECONDARY SYSTEM		
138 Oyster Bed Ln. Southern Shores NC 27949						
	-AND					
County of Currituck, North Carolina			-			
153	Courthouse Rd. Cu	rrituck, NC 27929	inneralia.			
THIS AGREEMENT, made and entered into this the day of, 20, by and between the Department of Transportation, party of the first part; and Lames Eaton & Jessica Jennings						
or iransp	ortation, party of tr	ie first part; and	party of the second		County of Currituck, North	
Carolina			party of the 3000/10	part, and	party of the third part,	
WITNESSETH						
THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as						
Route(s)	SR 1112 (West	Side Ln)	, locate	d Approx. 560) feet west from the intersection	
with US HWY 158 (Caratoke Hwy.) towards Kilmarlic						
with the construction and/or erection of: Fire Hydrant and water service installations to serve proposed warehouse						
development						

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest <u>POLICIES AND PROCEDURES FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHTS-OF-WAY</u>, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utility Agent of the party of the first part.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest <u>Manual on Uniform Traffic Control Devices</u> for <u>Streets and Highways</u> and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with

ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. <u>Nondiscrimination</u>: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- c. <u>Solicitations for Subcontracts, including Procurements of Materials and Equipment</u>: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- e. <u>Sanctions for Noncompliance</u>: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,
 - (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (2) cancellation, termination or suspension of the contract, in whole or in part.
- f. Incorporation of Provisions: The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

That when title to the subject that constitutes the aforesaid encroachment passes from the party of the second part and vests in the party of the third part, the party of the third part agrees to assume all responsibilities and rights and to perform all obligations as agreed to herein by the party of the second part.

R/W (166): Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (166) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DIVISION ENGINEER
es Eaton & Jessica Jennings
Second Party
nty of Currituck, North Carolina
Third Party