



July 25, 2024

Currituck County Planning Department
Currituck Historic Courthouse
153 Courthouse Road, Suite 110
Currituck, NC, 27929

ATTN: Jennie Turner, Assistant Planning Director

RE: Site Plan for Currituck Industrial Park, Lot 49

Dear Jennie:

Please find the attached Major Site Plan Application and submittal package for Lot 49 within the Currituck Industrial Park. The lot is owned by Harmony Land LLC who intends to develop a 7,200 sf metal building for his custom cabinet workshop facility. The property is zoned Light Industrial and light manufacturing is a permitted use in this district. The following summarizes key items for your review:

Stormwater Management

The Currituck Industrial Park has a county and state approved stormwater management system that includes an open collection system consisting of swales along the right of way that collect stormwater from the parcels and convey it one of 4 stormwater management ponds. However, the state permit (SW704604) has expired. Therefore, Harmony Land LLC is applying for an individual stormwater permit and will meet state and county requirements on site prior to being routed through the industrial park drainage system.

Lighting

The only site lighting for the facility will be three wall packs. The wall packs will be less than the 1600 lumen maximum allowable under the county ordinance. C302 includes a lighting plan illustrating light locations and a product data sheet.

Septic System

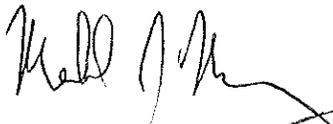
The small facility will include minimal water fixtures but is designed for 180 gpd based upon a maximum of 15 employees. The ARHS site evaluation is included.

Included with this submittal you will find the following items:

- \$1,080 Review Fee (7,200 sf * \$0.15/sf)
- \$5,500 stormwater review escrow
- Digital PDFs of the following
 - Major Site Plan Application
 - Plans
 - C101 – Erosion Control Plan (dated 7/24/2024)
 - C102 – Erosion Control Notes and Details (dated 7/24/2024)
 - C201 – Site Plan (dated 7/24/2024)
 - C202 – Buffer and Lighting Plan & Details (dated 7/24/2024)
 - C203 – Site & Septic Details (dated 7/24/2024)
 - C301 – Grading and Drainage Notes and Details (dated 7/24/2024)
 - A1 - Preliminary Building Plan with Elevations
 - ARHS Approved Septic Evaluation
 - NCDEQ Application packages for Stormwater and Land Disturbance

Please note that Greyson Loop has not been accepted into the NCDOT system and therefore a driveway permit cannot be obtained at this time. We look forward to working with you on this project. If you have any questions pertaining to this project, please do not hesitate to contact me.

Sincerely,



Michael J. Morway, PE
Engineer

cc: File 08814A (301)
Overton Contracting, LLC

ALBEMARLE REGIONAL HEALTH SERVICES

414761

Applicant:

Albemarle & Associates LTD
PO Box 3989
Kill Devil Hills, NC 27948

Owner:

Harmony Land LLC
119 Baum Bay Dr
Kill Devil Hills, NC 27948

Site Location:

150 Greyson Loop
Powells Point, NC 27966

GPD: 150 LTAR: 0.600 Classification: Suitable

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

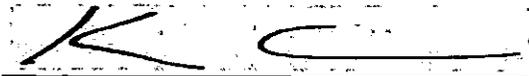
To obtain an Authorization to Construct:

- * 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 \$400

Comments:

Fill building pad higher than finished septic tank grade

EHS:



Carver, Kevin

Date: 06/21/2024

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



Major Stormwater Plan Form SW-002

Review Process

Contact Information

Currituck County
Planning and Community Development
153 Courthouse Road, Suite 110
Currituck, NC 27929

Phone: 252.232.3055
Fax: 252.232.3026

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

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

Phone: 252.232.6035

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).
- 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.
- 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:
Permit Number: _____
Date Filed: _____
Date Approved: _____

Contact Information

APPLICANT:		PROPERTY OWNER:	
Name:	<u>Albemarle & Associates Ltd</u>	Name:	<u>Harmony Land LLC</u>
Address:	<u>PO Box 3989</u>	Address:	<u>119 Baum Bay Dr</u>
	<u>Kill Devil Hills, NC, 27948</u>		<u>Kill Devil Hills, NC, 27948</u>
Telephone:	<u>252-441-2113</u>	Telephone:	_____
E-Mail Address:	<u>mikem@albemarleassociates.com</u>	E-Mail Address:	_____

Property Information

Physical Street Address: 150 Greyson Loop, Powells Point, NC, 27966
Parcel Identification Number(s): 123E00000490000
FEMA Flood Zone Designation: X

Request

Project Description: Cabinet manufacturing facility
Total land disturbance activity: 44,653 sf Calculated volume of BMPs: 8,007 cf sf
Maximum lot coverage: 26,204 sf Proposed lot coverage: 25,362 sf

TYPE OF REQUEST

- Major subdivision (10-year, 24-hour rate)
- Major site 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

I hereby authorize county officials to enter my property for purposes of determining compliance. All information submitted and required as part of this process shall become public record.



Property Owner(s)/Applicant

7/18/24

Date

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

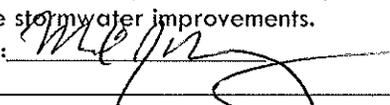
Date Received: _____

Project Name: CURRITUCK INDUSTRIAL PARK - LOT 49

Applicant/Property Owner: HARMONY LAND LLC

Minor 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.	N/A
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.	N/A
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.	N/A
17	Stormwater management narrative with supporting calculations.	✓
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).	✓
21	Detailed maintenance plan for all proposed BMPs.	✓

Certificate

22	<p>The major stormwater plan shall contain the following certificate:</p> <p>I, <u>MICHAEL Moeuw</u> owner/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge.</p> <p>On the plan entitled <u>CURRITUCK INDUSTRIAL PARK - LOT 49</u> 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.</p> <p>Date: <u>7/24/2024</u> Owner/Agent: <u></u></p>
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Major Stormwater Plan Submittal Checklist

Staff will use the following checklist to determine the completeness of your application. 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 Stormwater Plan Form SW-002 Submittal Checklist

Date Received: _____

Project Name: _____

Applicant/Property Owner: _____

Major Stormwater Plan Form SW-002 Submittal Checklist		
1	Completed Major Stormwater Plan Form SW-002	
2	Completed Rational Method Form SW-003 or NRCS Method Form SW-004	
3	Stormwater plan	
4	NCDENR permit applications, if applicable	
5	3 copies of plans	
6	3 hard copies of ALL documents	
7	1 PDF digital copy of all plans AND documents (ex. Compact Disk – e-mail not acceptable)	

Comments



**Currituck Industrial Park – Lot 49
Currituck County Stormwater Management Narrative**

July 24, 2024

Existing Conditions: In 2020 Harmony Land LLC purchased lot 49 of the Currituck Industrial Park in Carteret County. The 0.92 acre parcel located at 150 Greyson loop was created as part of the Industrial Park which was developed around 2005. The Natural Resource Conservation Service Soil Survey for Currituck County has mapped the soils on the site to consist of Conetoe (CnA) loamy sand soils. The lot was cleared and graded with the development of the subdivision and the majority of the site is around 10.5 feet above sea level (NAVD 1988). The property is not within a flood zone (Zone X), although the subdivision established the minimum first floor building elevation to be 11.5 feet above mean sea level. However, grades along a portion of the west half of the site and onto the adjacent site has some irregularities where it appears a small soil track (assumed for dirt bike or ATV use) was previously graded. The Currituck Industrial Park received a NCDEQ Stormwater Management Permit (SW7040604) which was a high-density permit that included 4 stormwater management ponds to account for 65% lot coverage on each parcel. However, SW7040604 has expired and has not been renewed.

Proposed Development: Harmony Land LLC intends to construct a 7,200 sf facility on Lot 49 for to be used for the manufacturing of cabinets. The construction will include a gravel driveway and parking as well as concrete pads in front of each of 3 overhead garage doors. The internal circulation has been designed to accommodate tractor trailer access to the rear of the building. The site will utilize County water and will include a septic system consisting of a septic tank and bed drainfield.

Soils: The Natural Resource Conservation Service Soil Survey for Currituck County has mapped the soils on the site to consist of Conetoe (CnA) loamy sand soils. On 5/24/2024 AAL performed an on-site investigation of the soils to a depth of 5' utilizing a hand auger. Four soil borings were taken on the parcel and confirmed the soil was comprised of loamy sand. The seasonal high water table was not detected within the 2 borings on the east side of the property. However, borings on the west side of the site terminated in a grey sand and/or mottling and the seasonal high water table was approximately 54" below the surface (elevation = 5.8 above MSL). The soils encountered were fairly consistent with the description provided within the Currituck County Soils Survey.

Stormwater Management (Currituck County): The Currituck Industrial Park was designed to manage runoff from the roadways and lots within the Currituck Industrial Park through 4 stormwater management ponds as provided in the NCDEQ permit. However, since that permit has expired, obtaining a NCDEQ off-site permit for lot development is not currently possible and stormwater management for each lot shall be done on-site. For this reason, stormwater for the project will be managed on site.

Stormwater management for the project has also been designed to meet the requirements of the Currituck County Stormwater Manual as a Major Stormwater Plan, which requires the storage of the increase of runoff from the site under the proposed development condition for a 5-yr / 24 hour rainfall event as compared to the runoff resulting from a 2-yr / 24-hour event area under a wooded condition. The calculations utilize the "Simple Volume Calculations for Small Sites (Under 10 Acres)" as outlined in the manual. The calculated the design storage volume to be 7,877 cf.

A continuous infiltration basin is proposed adjacent to the west, north and east property lines. Runoff from the site sheet flows into the perimeter basin on 3 sides while runoff on the front will be directed to the basin via curb and gutter. The perimeter basin has been designed with a storage elevation of 10' above msl. MSL. Although the perimeter basin is connected and maintains the same storage elevation, the bottom elevation of the perimeter swale varies between 8.0 and 9.2 feet above msl. Due to the irregular shape and depth, the basin has been divided into three separate areas for purposes of volume calculation. The basins provide a total of 8,007 cf of storage which includes open volume and interstitial volume beneath the basin (above the ESHWT). The bottom of the basin maintains between 2' and 3.4' of separation from the estimated seasonal high-water table at all points. Runoff in excess of the basin capacity will be directed into the Currituck Industrial Park drainage system along Greyson Loop via a concrete flume spillway at the east corner of the site. The excess runoff will then be routed through the system and into community stormwater management ponds.

Includes within this stormwater management report are:

- Design calculations for the runoff increase for the 0.92 acre lot as comparing the 5-yr / 24-hr event in the proposed development condition versus the runoff resulting from a 2-yr / 24-hour event in an undeveloped and wooded condition (performed in accordance with section 2.4.4 of the Currituck County Stormwater Manual).
- Design calculations for storage volume within stormwater management infiltration swale
- Soils boring log
- Soils Map for the NRCS Soils Survey for Currituck County

It should be noted that there is no discharge from the basin throughout the design storm, as the basin capacity accounts for the entire required storage without any discharge.

**HARMONY LAND LLC
STORMWATER MANAGEMENT REQUIREMENTS**

Currituck Industrial Park - Lot 49					
Basin Information					
Receiving Stream Name					
Receiving Stream Class & Index Number					
Drainage Area	40,315	SF			
Existing Impervious Area	0	SF			
Proposed Impervious Area	25,362	SF			
% Impervious Area (total)	62.9%				
Impervious Surface Area					
			<i>existing</i>	<i>existing (to remain)</i>	<i>proposed (additional)</i>
On-site Buildings or Lot BUA	7,200	SF	0	0	7,200
On-site Streets	0	SF	0	0	0
On-site Parking & Sidewalks	18,162	SF	0	0	18,162
Other on-site	0	SF	0	0	0
Future	0	SF	0	0	0
Off-site	0	SF	0	0	0
Total:	25,362	SF	0	0	25,362
Design Rainfall Event (in)	4	5			
Total Area (sf)	40,315	40,315			
Coverage	0.0%	62.9%			
CN	30	74			
S	23.33	3.51			
Q	0.0196	2.3643	inches	Runoff Depth	
V _r	0.0015	0.1823	acre-feet	Runoff Volume	
V _s	291.74		cy	Required Storage Volume	
	7,877		cf		

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

$$V_r = \frac{Q}{12} * A$$

$$V_s = 1613.33 * V_r * \left(1 - \frac{Q_{2-pre}}{Q_{5-post}}\right)$$

Weighted Site CN Value
(Conetoe = Hydraulic Group A)

	CN	SF
Roof	98	7,200
Concrete	98	3,960
Gravel	90	14,696
Lawn	39	14,459
Weighted	74	40,315

**HARMONY LAND LLC
STORMWATER MANAGEMENT CALCULATIONS
INFILTRATION BASIN DESIGN**

<u>West Portion of Swale</u>			<u>East portion of Swale</u>			<u>North Portion of Swale</u>			
	elevation (msl)	area (sf)		elevation (msl)	area (sf)		elevation (msl)	area (sf)	
Storage Elevation:	10.0	1,733	Storage Elevation:	10.0	2,566	Storage Elevation:	10.0	650	
	9.0	748		9.0	1,109	Bottom of basin:	9.3	78	
Bottom of basin:	8.0	125	Bottom of basin:	8.0	252				
Volume:	1677.0		Volume:	2518.0		Volume:	617.5		
ESHWT Elev.:	5.8	(msl)	ESHWT Elev.:	5.8	(msl)	ESHWT Elev.:	5.8	(msl)	
Permeability:	2.0	(in/hr)	Permeability:	2.0	(in/hr)	Permeability:	2.0	(in/hr)	
Void Space:	20%		Void Space:	20%		Void Space:	20%		
Available Storage Volume:	1,677	(cf)	Available Storage Volume:	2,518	(cf)	Available Storage Volume:	618	(cf)	CONNECTED
Intersitial Storage Volume:	1,120	(cf)	Intersitial Storage Volume:	1,652	(cf)	Intersitial Storage Volume:	423	(cf)	TOTAL
Total Volume:	2,797	(cf)	Total Volume:	4,170	(cf)	Total Volume:	1,040	(cf)	4,813 (cf)
									3,195 (cf)
									8,007 (cf)

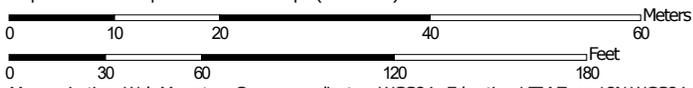
Currituck Industrial Park, Lot 49 Soil Boring Log

Soil Boring				
Depth	B-1	B-2	B-3	B-4
0" to 6"	fine brown loamy sand	fine brown loamy sand (trace clay)	fine brown loamy sand	fine reddish brown loamy sand (trace clay)
6" to 12"	fine brown loamy sand	fine brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
12" to 18"	fine tan sand	fine brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
18" to 24"	fine tan sand	fine brown loamy sand (trace clay)	fine light tan silty sand	fine reddish brown loamy sand (trace clay)
24" to 30"	fine reddish tan sand	fine reddish brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
30" to 36"	fine reddish tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
36" to 42"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
42" to 48"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand (moist)	fine tan loamy sand (trace clay)
48" to 54"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand (moist)	fine tan loamy sand (trace clay)
54" to 60"	fine tan sand	brown tan loamy sand (moist)	fine grey silty sand (moist)	fine tann loamy sand (trace clay & few mottles, moist)
Soil Type	Conetoe	Conetoe	Conetoe	Conetoe
Date of Boring	5/24/24	5/24/24	5/24/24	5/24/24
Ex. Ground Elevation (ft. above MSL)	10.4	10.6	9.8	10.3
Depth to ESHWT (in)	> 60"	> 60"	54	54
ESHWT Elevation	< 5.4	< 5.6	5.3	5.8

Custom Soil Resource Report Soil Map



Map Scale: 1:714 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CnA	Conetoe loamy sand, 0 to 3 percent slopes	0.9	100.0%
Totals for Area of Interest		0.9	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, onsite investigation is needed to define and locate the soils and miscellaneous areas.



July 24, 2024

NCDEQ DLQ
943 Washington Square Mall
Washington, NC, 27889

ATTN: Carl Dunn, PE

**RE: Currituck Industrial Park, Lot 49
Stormwater Management Permit Application**

Dear Mr. Dunn:

Please find the enclosed Stormwater Management Permit Application package for Lot 49 within the Currituck Industrial Park. Lot 49 is owned by Harmony Land LLC who intends to develop the lot with a 7,200 sf structure to relocate their custom cabinet making facility which is currently operating in Kitty Hawk.

The Currituck Industrial Park was approved in 2005 and constructed shortly thereafter. The development obtained a high density state stormwater permit SW7040604 from NCDENR which included 4 stormwater management ponds to meet state stormwater requirements for the coastal counties. The ponds provided capacity for the park infrastructure and associated lot development to the maximum 65% lot coverage allowed by county zoning code. However, the permit expired and remains inactive despite. For this reason, lot 49 is being developed to meet the state requirements through on-site means under an individual permit rather than an off-site supplement.

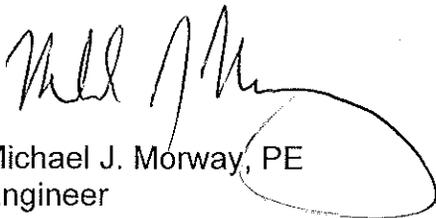
The site plan for the project is currently being reviewed by the Currituck Planning Department under the Major Site Plan review process. The project has been designed to meet state stormwater requirements as well as the Currituck County Stormwater Manual. Approval for land disturbance is also being submitted to NCDEQ for approval as the project includes land disturbance slightly over 1 acre.

This submittal includes the following items:

- Application Fee (\$1,000)
- SWU-101 - Stormwater Management Permit Application Form
- Infiltration Basin Supplement and O&M Agreement
- Stormwater Management Narrative
- USGS Maps
- Design Calculations
- Drawings (3 sets)
 - C101 – Erosion Control Plan (dated 7/24/2024)
 - C102 – Erosion Control Notes and Details (dated 7/24/2024)
 - C201 – Site Plan (dated 7/24/2024)
 - C202 – Buffer and Lighting Plan & Details (dated 7/24/2024)
 - C203 – Site & Septic Details (dated 7/24/2024)
 - C301 – Grading and Drainage Notes and Details (dated 7/24/2024)
- Soils Report
- Warranty Deeds
 - Book 1543, Pages 651 - 652
- Secretary of State Filings (proof of authority)
 - Harmony Land LLC

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

Sincerely,



Michael J. Morway, PE
Engineer

cc: File 08814A
Overton Contracting, LLC

DEMLR USE ONLY		
Date Received	Fee Paid	Permit Number
Applicable Rules: <input type="checkbox"/> Coastal SW - 1995 <input type="checkbox"/> Coastal SW - 2008 <input type="checkbox"/> Ph II - Post Construction (select all that apply) <input type="checkbox"/> Non-Coastal SW- HQW/ORW Waters <input type="checkbox"/> Universal Stormwater Management Plan <input type="checkbox"/> Other WQ Mgmt 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

- Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):
Currituck Industrial Park, Lot 49
- Location of Project (street address):
150 Greyson Loop,
 City:Powells Point County:Currituck Zip:27966
- Directions to project (from nearest major intersection):
From the intersection of US-158 and SR-168 in Barco, proceed south along US-158/SR-168 for 19 miles.
Turn left (east) onto Dr. Newbern Rd and proceed 0.44 miles to the intersection with Greyson Loop.
Turn right onto Greyson Loop approximately 600 ft and the site is on the left.
- Latitude:36° 8.' 53.70" N Longitude:75° 50' 14.89" W of the main entrance to the project.

II. 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 construction: Not Started Partially Completed* Completed* *provide a designer's certification
- Specify the type of project (check one):
 Low Density High Density Drains to an Offsite Stormwater System Other
- If this application is being submitted as the result of a **previously returned application** or a **letter from DEMLR requesting a state stormwater management permit application**, list the stormwater project number, if assigned, _____ and the previous name of the project, if different than currently proposed, _____.
- a. 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: 1.03 ac of Disturbed Area
 NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts _____
 b. 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: _____
- Is the project located within 5 miles of a public airport? No Yes
If yes, see S.L. 2012-200, Part VI: <http://portal.ncdenr.org/web/lr/rules-and-regulations>

III. CONTACT INFORMATION

1. a. Print Applicant / Signing Official's name and title (specifically the developer, property owner, lessee, designated government official, individual, etc. who owns the project):

Applicant/Organization:Harmony Land, LLC

Signing Official & Title:Jacob Dehus

b. Contact information for person listed in item 1a above:

Street Address:119 Baum Bay Dr.

City:Kill Devil Hills State:NC Zip:27948

Mailing Address (if applicable):

City: State: Zip:

Phone: () Fax: ()

Email:

c. Please check the appropriate box. The applicant listed above is:

- The property owner (Skip to Contact Information, item 3a)
- Lessee* (Attach a copy of the lease agreement and complete Contact Information, item 2a and 2b below)
- Purchaser* (Attach a copy of the pending sales agreement and complete Contact Information, item 2a and 2b below)
- Developer* (Complete Contact Information, item 2a and 2b below.)

2. a. Print Property Owner's name and title below, if you are the lessee, purchaser or developer. (This is the person who owns the property that the project is located on):

Property Owner/Organization:

Signing Official & Title:

b. Contact information for person listed in item 2a above:

Street Address:

City: State: Zip:

Mailing Address (if applicable):

City: State: Zip:

Phone: () Fax: ()

Email:

3. a. (Optional) Print the name and title of another contact such as the project's construction supervisor or other person who can answer questions about the project:

Other Contact Person/Organization:

Signing Official & Title:

b. Contact information for person listed in item 3a above:

Mailing Address:

City: State: Zip:

Phone: () Fax: ()

Email:

4. Local jurisdiction for building permits: Currituck County

Point of Contact:Jennie Turner Phone #: (252) 232-6031

*** Report only that amount of existing BUA that will remain 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. n/a

Projects in Union County: Contact DEMLR Central Office staff to check if the project is located within a Threatened & Endangered Species watershed that may be subject to more stringent stormwater requirements as per 15A NCAC 02B .0600.

V. SUPPLEMENT AND O&M FORMS

The applicable state stormwater management permit supplement and operation and maintenance (O&M) forms must be submitted for each BMP specified for this project. The latest versions of the forms can be downloaded from <http://portal.ncdenr.org/web/wq/ws/su/bmp-manual>.

VI. SUBMITTAL REQUIREMENTS

Only complete application packages will be accepted and reviewed by the Division of Energy, Mineral and Land Resources (DEMLR). A complete package includes all of the items listed below. A detailed application instruction sheet and BMP checklists are available from http://portal.ncdenr.org/web/wq/ws/su/statesw/forms_docs. The complete application package should be submitted to the appropriate DEMLR Office. (The appropriate office may be found by locating project on the interactive online map at <http://portal.ncdenr.org/web/wq/ws/su/maps>.)

Please indicate that the following required information have been provided by initialing in the space provided for each item. All original documents MUST be signed and initialed in blue ink. Download the latest versions for each submitted application package from http://portal.ncdenr.org/web/wq/ws/su/statesw/forms_docs.

- | | Initials |
|--|----------------|
| 1. Original and one copy of the Stormwater Management Permit Application Form. | <u>MSM</u> |
| 2. Original and one copy of the signed and notarized Deed Restrictions & Protective Covenants Form. (if required as per Part VII below) | <u>NA</u> |
| 3. Original of the applicable Supplement Form(s) (sealed, signed and dated) and O&M agreement(s) for each BMP. \$1000 | <u>MSM</u> |
| 4. Permit application processing fee of \$505 payable to NCDENR. (For an Express review, refer to http://www.envhelp.org/pages/onestopexpress.html 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.) | <u>MSM</u> |
| 5. A detailed narrative (one to two pages) describing the stormwater treatment/management | for <u>MSM</u> |
| 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 1/2 mile of the site boundary, include the 1/2 mile radius on the map. | <u>MSM</u> |
| 7. Sealed, signed and dated calculations (one copy). | <u>MSM</u> |
| 8. Two sets of plans folded to 8.5" x 14" (sealed, signed, & dated), including: | <u>MSM</u> |
| a. Development/Project name. | |
| b. Engineer and firm. | |
| c. Location map with named streets and NCSR numbers. | |
| d. Legend. | |
| e. North arrow. | |
| f. Scale. | |
| g. Revision number and dates. | |
| 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. <ul style="list-style-type: none">• 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. | |
| i. Dimensioned property/project boundary with bearings & distances. | |
| j. Site Layout with all BUA identified and dimensioned. | |
| k. Existing contours, proposed contours, spot elevations, finished floor elevations. | |
| l. Details of roads, drainage features, collection systems, and stormwater control measures. | |
| 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. | |
| 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 elevations (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.) MSM

10. A copy of the most current property deed. Deed book: 1543 _____ Page No: 651 - 652 _____ MSM
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. MSM
<http://www.secretary.state.nc.us/Corporations/CSearch.aspx>

VII. DEED RESTRICTIONS AND PROTECTIVE COVENANTS

For all subdivisions, outparcels, and future development, the appropriate property restrictions and protective covenants are required to be recorded prior to the sale of any lot. If lot sizes vary significantly or the proposed BUA allocations vary, a table listing each lot number, lot size, and the allowable built-upon area must be provided as an attachment to the completed and notarized deed restriction form. The appropriate deed restrictions and protective covenants forms can be downloaded from http://portal.ncdenr.org/web/lr/state-stormwater-forms_docs. Download the latest versions for each submittal.

In the instances where the applicant is different than the property owner, it is the responsibility of the property owner to sign the deed restrictions and protective covenants form while the applicant is responsible for ensuring that the deed restrictions are recorded.

By the notarized signature(s) below, the permit holder(s) certify that the recorded property restrictions and protective covenants for this project, if required, shall include all the items required in the permit and listed on the forms available on the website, that the covenants will be binding on all parties and persons claiming under them, that they will run with the land, that the required covenants cannot be changed or deleted without concurrence from the NC DEMLR, and that they will be recorded prior to the sale of any lot.

VIII. CONSULTANT INFORMATION AND AUTHORIZATION

Applicant: Complete this section if you wish to designate authority to another individual and/or firm (such as a consulting engineer and/or firm) so that they may provide information on your behalf for this project (such as addressing requests for additional information).

Consulting Engineer: Michael Morway, PE

Consulting Firm: Albemarle & Associates, Ltd

Mailing Address: PO Box 3989

City: Kill Devil Hills State: NC Zip: 27948

Phone: (252) 441-2113 Fax: (252) 441-0965

Email: mikem@albemarleassociates.com

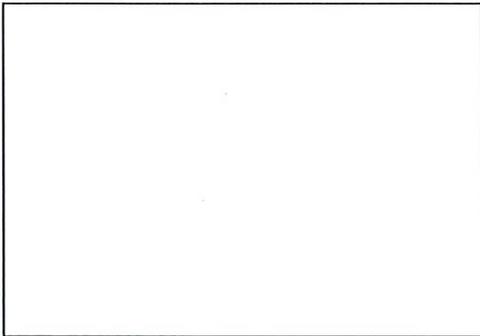
IX. PROPERTY OWNER AUTHORIZATION (if Contact Information, item 2 has been filled out, complete this section)

I, (print or type name of person listed in Contact Information, item 2a) _____, certify that I own the property identified in this permit application, and thus give permission to (print or type name of person listed in Contact Information, item 1a) _____ with (print or type name of organization listed in Contact Information, item 1a) _____ to develop the project as currently proposed. A copy of the lease agreement or pending property sales contract has been provided with the submittal, which indicates the party 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: _____ Date: _____

I, _____, a Notary Public for the State of _____, County of _____, do hereby certify that _____ personally appeared before me this ___ day of _____, _____, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal, _____



SEAL

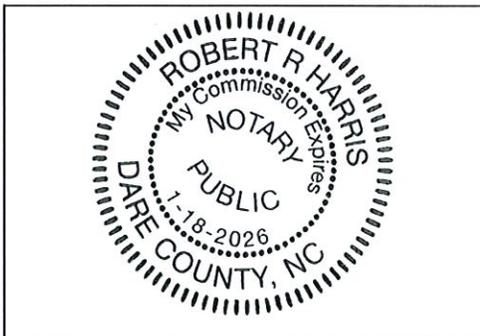
My commission expires _____

X. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in Contact Information, item 1a) _____, certify that the information included on this permit application form is, to the best of my knowledge, correct and that the project will be constructed in conformance with the approved plans, that the required deed restrictions and protective covenants will be recorded, and that the proposed project complies with the requirements of the applicable stormwater rules under 15A NCAC 2H .1000 and any other applicable state stormwater requirements.

Signature: [Handwritten Signature] Date: 7/18/24

I, Robert B Harris, a Notary Public for the State of NC, County of Dare, do hereby certify that Jacob R Dehub personally appeared before me this 18th day of July, 2024, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal, [Handwritten Signature]



SEAL

My commission expires 1-18-26

SUPPLEMENT-EZ COVER PAGE

FORMS LOADED

PROJECT INFORMATION		
1	Project Name	Currituck Industrial Park - Lot 49
2	Project Area (ac)	0.92
3	Coastal Wetland Area (ac)	0
4	Surface Water Area (ac)	0
5	Is this project High or Low Density?	High
6	Does this project use an off-site SCM?	No

COMPLIANCE WITH 02H .1003(4)		
7	Width of vegetated setbacks provided (feet)	N/A
8	Will the vegetated setback remain vegetated?	N/A
9	If BUA is proposed in the setback, does it meet NCAC 02H.1003(4)(c-d)?	N/A
10	Is streambank stabilization proposed on this project?	No

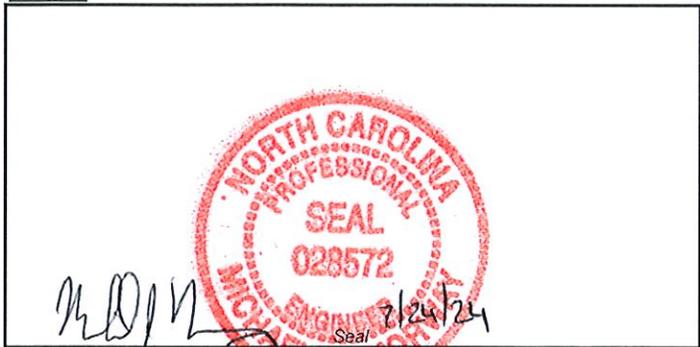
NUMBER AND TYPE OF SCMs:		
11	Infiltration System	1
12	Bioretention Cell	
13	Wet Pond	
14	Stormwater Wetland	
15	Permeable Pavement	
16	Sand Filter	
17	Rainwater Harvesting (RWH)	
18	Green Roof	
19	Level Spreader-Filter Strip (LS-FS)	
20	Disconnected Impervious Surface (DIS)	
21	Treatment Swale	
22	Dry Pond	
23	StormFilter	
24	Silva Cell	
25	Bayfilter	
26	Filterra	

FORMS LOADED

DESIGNER CERTIFICATION		
27	Name and Title:	Michael Morway, PE
28	Organization:	Albemarle & Associates, Ltd
29	Street address:	115 West St. Clair St.
30	City, State, Zip:	Kill Devil Hills, NC, 27948
31	Phone number(s):	252-441-2113
32	Email:	mikem@albemarleassociates.com

Certification Statement:
 I certify, under penalty of law that this Supplement-EZ form and all supporting information were prepared under my direction or supervision; that the information provided in the form is, to the best of my knowledge and belief, true, accurate, and complete; and that the engineering plans, specifications, operation and maintenance agreements and other supporting information are consistent with the information provided here.

Designer



(Handwritten Signature)

 Signature of Designer

7/24/2024

 Date

DRAINAGE AREAS

1	Is this a high density project?	Yes
2	If so, number of drainage areas/SCMs	1
3	Does this project have low density areas?	No
4	If so, number of low density drainage areas	0
5	Is all/part of this project subject to previous rule versions?	No

FORMS LOADED

DRAINAGE AREA INFORMATION		Entire Site	1
4	Type of SCM	infiltration	
5	Total drainage area (sq ft)	40315	
6	Onsite drainage area (sq ft)	40315	
7	Offsite drainage area (sq ft)	0	
8	Total BUA in project (sq ft)	26204 sf	
9	New BUA on subdivided lots (subject to permitting) (sq ft)	n/a	
10	New BUA not on subdivided lots (subject to permitting) (sf)	n/a	
11	Offsite BUA (sq ft)	n/a	
12	Breakdown of new BUA not on subdivided lots:		
	- Parking (sq ft)	18411 sf	
	- Sidewalk (sq ft)	263 sf	
	- Roof (sq ft)	7200 sf	
	- Roadway (sq ft)	n/a	
	- Future (sq ft)	330 sf	
	- Other, please specify in the comment box below (sq ft)	n/a	
13	New infiltrating permeable pavement on subdivided lots (sq ft)	n/a	
14	New infiltrating permeable pavement not on subdivided lots (sq ft)	n/a	
15	Existing BUA that will remain (not subject to permitting) (sq ft)	n/a	
16	Existing BUA that is already permitted (sq ft)	n/a	
17	Existing BUA that will be removed (sq ft)	n/a	
18	Percent BUA	65%	
19	Design storm (inches)	1.5 in	
20	Design volume of SCM (cu ft)	3349 cf	
21	Calculation method for design volume	stage/storage	
ADDITIONAL INFORMATION			
22	Please use this space to provide any additional information about the drainage area(s):		

INFILTRATION SYSTEM

1	Drainage area number	1
2	Minimum required treatment volume (cu ft)	3200 cf
GENERAL MDC FROM 02H .1050		
3	Is the SCM sized to treat the SW from all surfaces at build-out?	Yes
4	Is the SCM located away from contaminated soils?	Yes
5	What are the side slopes of the SCM (H:V or enter "Vertical" for trenches)?	3:1
6	Does the SCM have retaining walls, gabion walls or other engineered side slopes?	No
7	Are the inlets, outlets, and receiving stream protected from erosion (10-year storm)?	Yes
8	Is there an overflow or bypass for inflow volume in excess of the design volume?	Yes
9	What is the method for dewatering the SCM for maintenance?	Pump (preferred)
10	If applicable, will the SCM be cleaned out after construction?	Yes
11	Does the maintenance access comply with General MDC (8)?	Yes
12	Does the drainage easement comply with General MDC (9)?	N/A
13	If the SCM is on a single family lot, does (will?) the plat comply with General MDC (10)?	N/A
14	Is there an O&M Agreement that complies with General MDC (11)?	Yes
15	Is there an O&M Plan that complies with General MDC (12)?	Yes
16	Does the SCM follow the device specific MDC?	Yes
17	Was the SCM designed by an NC licensed professional?	Yes
INFILTRATION SYSTEM MDC FROM 02H .1051		
18	Proposed slope of the subgrade surface (%)	0%
19	Are terraces or baffles provided?	Yes
20	Type of pretreatment:	Other
Soils Data		
21	Was the soil investigated in the footprint and at the elevation of the infiltration system?	Yes
22	SHWT elevation (fmsl)	5.80
23	Depth to SHWT per soils report (in)	54" (minimum)
24	Ground elevation at boring in soils report (fmsl)	10.30
25	Is a detailed hydrogeologic study attached if the separation is between 1 and 2 feet?	N/A
26	Soil infiltration rate (in/hr)	2.00
27	Factor of safety (FS) (2 is recommended):	2.00
Elevations		
29	Bottom elevation (fmsl)	8 ft
30	Storage elevation (fmsl)	10. ft
31	Bypass elevation (fmsl)	10 ft
For Basins Only		
32	Bottom surface area (ft ²)	377 ft
33	Storage elevation surface area (ft ²)	4942. ft
For Trenches Only		
34	Length (ft)	
35	Width (ft)	
36	Perforated pipe diameter, if applicable (inches)	
37	Number of laterals	
38	Total length of perforated piping	
39	Stone type, if applicable	
40	Stone porosity (%)	
41	Is stone free of fines?	
42	Is the stone wrapped in geotextile fabric?	
43	Has at least one inspection port been provided?	
Volumes/Drawdown		
44	Design volume of SCM (cu ft)	3349 cf
45	Time to draw down (hours)	10 hrs
ADDITIONAL INFORMATION		
46	Please use this space to provide any additional information about the infiltration system(s):	
<p>Pretreatment includes sheet flow entry into the majority of the basin across a grassed verge and along the basin slope. The infiltration basin consists of 3 connected sections with 3 bottom elevations but the same storage elevation. Bottom elevations range from 8.0 on the lowest point, 9.0 along the majority of the basin, 9.2 along a connecting section.</p>		

Operation & Maintenance Agreement

Project Name: Currituck Industrial Park, Lot 49
Project Location: 150 Greyson Loop

Cover Page

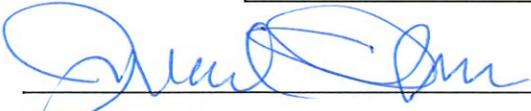
Maintenance records shall be kept on the following SCM(s). This maintenance record shall be kept in a log in a known set location. Any deficient SCM elements noted in the inspection will be corrected, repaired, or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the pollutant removal efficiency of the SCM(s).

The SCM(s) on this project include (check all that apply & corresponding O&M sheets will be added automatically):

Infiltration Basin	Quantity: <u>1</u>	Location(s): <u>perimeter of property (west, north & east)</u>
Infiltration Trench	Quantity: <u> </u>	Location(s): <u> </u>
Bioretention Cell	Quantity: <u> </u>	Location(s): <u> </u>
Wet Pond	Quantity: <u> </u>	Location(s): <u> </u>
Stormwater Wetland	Quantity: <u> </u>	Location(s): <u> </u>
Permeable Pavement	Quantity: <u> </u>	Location(s): <u> </u>
Sand Filter	Quantity: <u> </u>	Location(s): <u> </u>
Rainwater Harvesting	Quantity: <u> </u>	Location(s): <u> </u>
Green Roof	Quantity: <u> </u>	Location(s): <u> </u>
Level Spreader - Filter Strip	Quantity: <u> </u>	Location(s): <u> </u>
Proprietary System	Quantity: <u> </u>	Location(s): <u> </u>
Treatment Swale	Quantity: <u> </u>	Location(s): <u> </u>
Dry Pond	Quantity: <u> </u>	Location(s): <u> </u>
Disconnected Impervious Surface	Present: <u>No</u>	Location(s): <u> </u>
User Defined SCM	Present: <u>No</u>	Location(s): <u> </u>
Low Density	Present: <u>No</u>	Type: <u> </u>

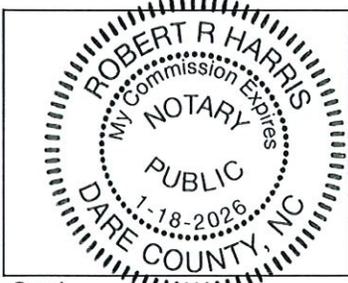
I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed for each SCM above, and attached O&M tables. I agree to notify NCDEQ of any problems with the system or prior to any changes to the system or responsible party.

Responsible Party: Jacob Dehus
 Title & Organization: Harmony Land, LLC
 Street address: 119 Baum Bay Drive
 City, state, zip: Kill Devil Hills, NC, 27948
 Phone number(s):
 Email:

Signature:  Date: 7/18/24

I, Robert B Harris, a Notary Public for the State of NC
 County of Dare, do hereby certify that Jacob Dehus
 personally appeared before me this 18th day of July 2024 and
 acknowledge the due execution of the Operations and Maintenance Agreement.

Witness my hand and official seal, .



Seal My commission expires 1.18.26

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.

action 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 other pretreatment area	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.
	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.
	The structure is damaged.	Make any necessary repairs or replace if damage is too much for repair.
The inlet device	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 inlet pipe is cracked or otherwise damaged (if applicable)	Repair or replace the pipe.
	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.
The basin	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.
	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:
The embankment	Shrubs or trees are growing on the embankment.	Remove shrubs and trees immediately.
	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.



Currituck Industrial Park – Lot 49 Stormwater Management Narrative

July 23, 2024

Existing Conditions: In 2020 Harmony Land LLC purchased lot 49 of the Currituck Industrial Park in Carteret County. The 0.92 acre parcel located at 150 Greyson loop was created as part of the Industrial Park which was developed around 2005. The Natural Resource Conservation Service Soil Survey for Currituck County has mapped the soils on the site to consist of Conetoe (CnA) loamy sand soils. The lot was cleared and graded as with the development of the subdivision and the majority of the site is around 10.5 feet above sea level (NAVD 1988). The property is not within a flood zone (Zone X), although the subdivision established the minimum first floor building elevation to be 11.5 feet above mean sea level. However, grades along a portion of the west half of the site and onto the adjacent site has some irregularities where it appears a small soil track (assumed for dirt bike or ATV use) was previously graded. The Currituck Industrial Park received a NCDEQ Stormwater Management Permit (SW7040604) which was a high-density permit that included 4 stormwater management ponds to account for 65% lot coverage on each parcel. However, SW7040604 has expired and has not been renewed.

Proposed Development: Harmony Land LLC intends to construct a 7,200 sf facility on Lot 49 for to be used for the manufacturing of cabinets. The construction will include a gravel driveway and parking as well as concrete pads in front of each of 3 overhead garage doors. The internal circulation has been designed to accommodate tractor trailer access to the rear of the building. The site will utilize County water and will include a septic system consisting of a septic tank and bed drainfield.

Soils: The Natural Resource Conservation Service Soil Survey for Currituck County has mapped the soils on the site to consist of Conetoe (CnA) loamy sand soils. On 5/24/2024 AAL performed an on-site investigation of the soils to a depth of 5'; utilizing a hand auger. Four soil borings were taken on the parcel and confirmed the soil was comprised of loamy sand. The seasonal high water table was not detected within the 2 borings on the east side of the property. However, borings on the west side of the site terminated in a grey sand and/or mottling and the seasonal high water table was estimated to be 54" below the surface (elevation = 5.8 above MSL)

The soils encountered were fairly consistent with the description provided within the Currituck County Soils Survey. The county survey denotes infiltration rates from 6 in/hr to 20 in/hr in the upper 23", with a reduced rate of 2 in/hr to 6 in/hr to a depth of 42" before returning to the more rapid 6 in/hr to 20 in/hr beneath 43". The soil borings did not note a significant reduction but have utilized the most limiting published value of 2 in/hr for design purposes.

Stormwater Management (NCDEQ): The Currituck Industrial Park was designed to manage runoff from the roadways and lots within the Currituck Industrial Park within one of 4 stormwater management ponds as provided in the NCDEQ permit. However, since that permit has expired, obtaining a NCDEQ off-site permit for lot development is not currently possible and stormwater management for each lot shall be done on-site. For this reason, stormwater for the project will be managed on site.

A continuous infiltration swale is proposed adjacent to the west, north and east property lines. Runoff from the site sheet flows into the perimeter basins on 3 sides while runoff on the front will be directed to the basins via curb and gutter. The system is being designed to meet NCDEQ requirements to accommodate runoff from the 1.5" rainfall design event. The project includes 25,875 sf of coverage with 64.2%. However, the system is being designed to manage runoff based upon the maximum allowable lot coverage of 26,204 sf (65%) which includes 330 sf of "future" coverage. The runoff resulting from 1.5" of rainfall with 65% coverage is calculated to be 3,200 cf. The basin maintains 3,349 cf of open volume to manage 105% of the 1.5" design storm. It is important to note that any increase in coverage beyond the 64.2% presented in the plans would require county approval in addition to a minor modification of the state stormwater permit.

The storage elevation of the basin is 10' above msl. And the bottom varies between 8.0 and 9.2. This maintains between 2' and 3.4' of separation from the estimated seasonal high-water table at all points in the basin. Runoff in excess of the basin capacity will be directed into the Currituck Industrial Park drainage system along Greyson Loop via a concrete flume spillway at the east corner of the site. The excess runoff will then be routed through the system and into community stormwater management ponds.



5.8750°



Volumetric Runoff Calculations Simple Method

Project Name : Currituck Industrial Park - lot 49

Total Site					
Basin Information					
Receiving Stream Name					
Receiving Stream Class & Index Number	SA, HWQ				
Drainage Area	40,315	SF			
Existing Impervious Area	0	SF			
Proposed Impervious Area	26,204	SF			
% Impervious Area (total)	65.0%				
Impervious Surface Area					
			<i>existing</i>	<i>existing (to remain)</i>	<i>proposed (additional)</i>
On-site Buildings or Lot BUA	7,200	SF	0	0	7,200
On-site Streets	0	SF	0	0	0
On-site Parking	18,411	SF	0	0	18,411
On-site Sidewalks	263	SF	0	0	263
Other on-site	0	SF	0	0	0
Future	330	SF	0	0	330
Off-site	0	SF	0	0	0
Total:	26,204	SF	0	0	26,204

Runoff Calculations (Simple Method)			
	NCDENR		
Design Runoff (in)	1.5		
Total Area (sf)	40,315	40,315	40,315
Coverage	65.0%	0.0%	65.0%
R(v)	0.635	0.050	0.635
Rainfall Volume	3,200	0	0

0.00 (cfs) 0.00 (cfs)

NCDENR 1.5" : **3,200**



STORMWATER MANAGEMENT CALCULATIONS - INFILTRATION BASIN DESIGN

Project	<u>Currituck Industrial Park - lot 49</u>
Drainage Area	<u>1</u>
Infiltration Basin	<u>1</u>

By : MJM
Date : 07/23/24

Infiltration Basin Information

	elevation	area	
	(msl)	(sf)	
Storage Elevation:	10.0	4,942	2,668
	9.3	2,682	681
	9.0	1,857	1,117
Bottom of basin:	8.0	377	
ESHWT Elev.:	5.8	(msl)	
Permeability:	1.0	(in/hr)	
Available Storage Volume:	3,349	(cf)	105%
Required NCDENR Volume:	3,200	(cf)	

NCDENR Drawdown Calculations

Average Hydraulic Gradient:	1.5	(ft/ft)
Drawdown Rate:	0.090	(cfs)
NCDENR Drawdown Time:	0.43	Days

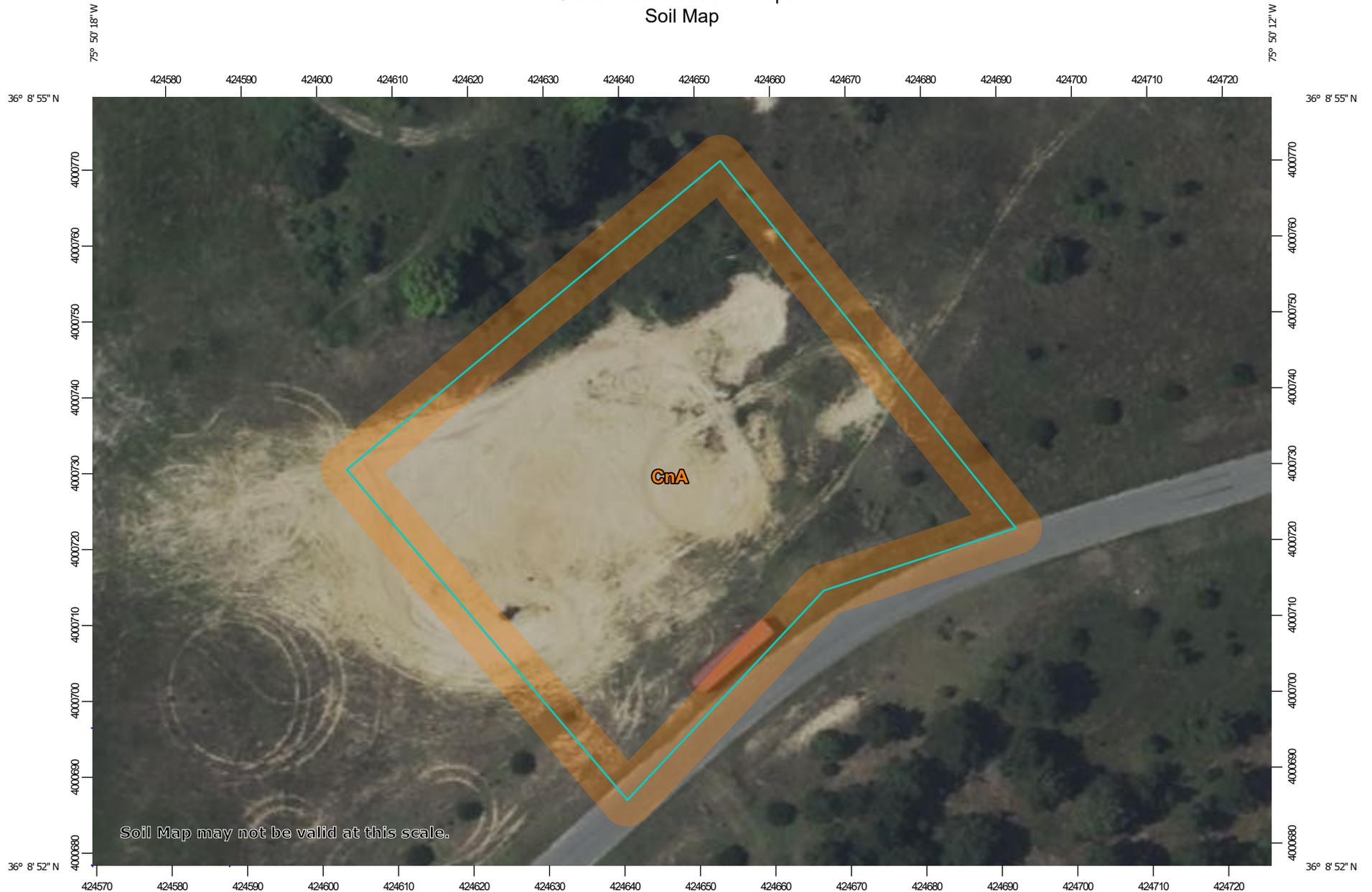


Currituck Industrial Park, Lot 49 Soil Boring Log



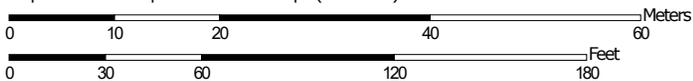
Soil Boring				
Depth	B-1	B-2	B-3	B-4
0" to 6"	fine brown loamy sand	fine brown loamy sand (trace clay)	fine brown loamy sand	fine reddish brown loamy sand (trace clay)
6" to 12"	fine brown loamy sand	fine brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
12" to 18"	fine tan sand	fine brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
18" to 24"	fine tan sand	fine brown loamy sand (trace clay)	fine light tan silty sand	fine reddish brown loamy sand (trace clay)
24" to 30"	fine reddish tan sand	fine reddish brown loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
30" to 36"	fine reddish tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
36" to 42"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand	fine reddish brown loamy sand (trace clay)
42" to 48"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand (moist)	fine tan loamy sand (trace clay)
48" to 54"	fine tan sand	fine tan loamy sand (trace clay)	fine tan reddish silty sand (moist)	fine tan loamy sand (trace clay)
54" to 60"	fine tan sand	brown tan loamy sand (moist)	fine grey silty sand (moist)	fine tann loamy sand (trace clay & few mottles, moist)
Soil Type	Conetoe	Conetoe	Conetoe	Conetoe
Date of Boring	5/24/24	5/24/24	5/24/24	5/24/24
Ex. Ground Elevation (ft. above MSL)	10.4	10.6	9.8	10.3
Depth to ESHWT (in)	> 60"	> 60"	54	54
ESHWT Elevation	< 5.4	< 5.6	5.3	5.8

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:714 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

[The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated]

Soil name and map symbol	Depth	Permeability	Available water capacity	Soil reaction	Shrink-swell potential	Erosion factors		Organic matter
						K	T	
	In	In/hr	In/in	pH				Pct
AaA-----	0-15	2.0-6.0	0.12-0.20	4.5-6.0	Low-----	0.20	4	.5-3
Altavista	15-42	0.6-2.0	0.12-0.20	4.5-6.0	Low-----	0.24		
	42-80	---	---	4.5-6.0	Low-----	---		
At-----	0-8	2.0-6.0	0.10-0.15	4.5-6.0	Low-----	0.15	4	.5-2
Augusta	8-48	0.6-2.0	0.12-0.18	4.5-6.0	Low-----	0.24		
	48-60	2.0-6.0	0.06-0.12	4.5-6.0	Low-----	0.24		
BN*: Beaches.								
Newhan-----	0-75	>20	<0.05	6.6-7.8	Low-----	0.10	5	---
BoA-----	0-10	6.0-20	0.05-0.08	4.5-6.5	Low-----	0.28	3	.5-1
Bojac	10-34	2.0-6.0	0.08-0.17	4.5-6.5	Low-----	0.28		
	34-72	>6.0	0.02-0.08	4.5-6.0	Low-----	0.28		
Ca-----	0-12	0.6-6.0	0.15-0.22	4.5-6.5	Low-----	0.15	5	5-15
Cape Fear	12-42	0.06-0.2	0.12-0.22	4.5-6.0	Moderate-----	0.32		
	42-60	6.0-20	0.02-0.06	4.5-6.0	Low-----	0.10		
Cb-----	0-13	0.2-2.0	0.20-0.26	3.6-5.5	Low-----	---	---	20-60
Conaby	13-21	2.0-6.0	0.04-0.10	3.6-5.5	Low-----	0.10		
	21-33	2.0-6.0	0.10-0.14	3.6-5.5	Low-----	0.15		
	33-73	---	---	---	---	---		
CnA-----	0-23	6.0-20	0.05-0.10	4.5-6.0	Low-----	0.15	5	.5-2
Conetoe	23-43	2.0-6.0	0.10-0.15	4.5-6.0	Low-----	0.15		
	43-80	6.0-20	0.05-0.10	4.5-6.0	Low-----	0.10		
CoB-----	0-72	>20	0.01-0.03	5.6-7.8	Low-----	0.10	5	<.5
Corolla								
CrB*: Corolla-----	0-72	>20	0.01-0.03	5.6-7.8	Low-----	0.10	5	<.5
Duckston-----	0-72	>20	0.02-0.05	5.6-8.4	Low-----	0.10	5	.5-1
Cu-----	0-14	0.6-6.0	0.25-0.35	4.5-6.0	Low-----	---	---	20-60
Currituck	14-28	0.6-6.0	0.25-0.35	4.5-6.0	Low-----	---		
	28-60	6.0-20	0.04-0.09	3.6-6.0	Low-----	---		
Da-----	0-70	0.06-0.2	0.20-0.26	3.6-4.4	Low-----	---	---	20-95
Dare	70-96	6.0-20	0.04-0.09	3.6-6.0	Low-----	0.15		
Do-----	0-10	0.6-2.0	0.25-0.50	3.6-4.4	---	---	---	20-60
Dorovan	10-84	0.6-2.0	0.25-0.50	3.6-4.4	---	---		
	84-96	6.0-20	0.05-0.08	4.5-5.5	Low-----	---		
Ds-----	0-8	>6.0	0.06-0.11	4.5-5.5	Low-----	0.17	4	.5-1
Dragston	8-42	2.0-6.0	0.08-0.16	4.5-5.5	Low-----	0.17		
	42-60	>6.0	0.04-0.08	4.5-5.5	Low-----	0.17		
Dt-----	0-72	>20	0.02-0.05	5.6-8.4	Low-----	0.10	5	.5-1
Duckston								
Du*. Dune land								
DwD*: Dune land.								
Newhan-----	0-75	>20	<0.05	6.6-7.8	Low-----	0.10	5	---

See footnote at end of table.

UNOFFICIAL Document

Currituck County Land Transfer Tax: 500.00 County Excise Tax: 1985 Sessions Law Chapter 670 (HB 215)

NORTH CAROLINA GENERAL WARRANTY DEED

LT#

\$ 500.00 Revenue Stamps \$100.00

Tax Lot No. _____ Parcel Identifier No. 123E-000-0049-0000

Verified by _____ County on the ____ day of _____,

by _____

Mail after recording to Sharp, Graham, Baker & Varnell, L.L.P., P. O. Drawer 1027, Kitty Hawk, NC 27949
This instrument was prepared by Casey C. Varnell, Attorney at Law

Brief Description for the index

Lot 49, Currituck Industrial Park

RE25520tf

THIS DEED made June 29, 2020, by and between

GRANTOR

GRANTEE

Matthew D. Ottavio, Unmarried

Harmony Land, LLC, a North Carolina
Limited Liability Company

4012 Midgett Road
Kitty Hawk, NC 27949

119 Baum Bay Drive
Kill Devil Hills, NC 27948

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in Poplar Branch Township, Currituck County, North Carolina and more particularly described as follows:

Being all of Lot 49, of Currituck Industrial Park, as shown on plats filed in Plat Cabinet I, Sides 279 through 281, Currituck County Registry.

 If checked, the property includes the primary residence of at least one of the Grantors. (NC GS § 105-317.2)

This instrument prepared by Casey C. Varnell, a licensed North Carolina attorney. Delinquent taxes, if any, to be paid by the closing attorney to the county tax collector upon disbursement of closing proceeds

Unofficial Document

The property hereinabove described was acquired by Grantor by instrument recorded in Book 1238, Page 535, Currituck County Registry.

A map showing the above described property is recorded in Plat Cabinet I, Slides 279-281, Currituck County Registry.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated.

Title to the property hereinabove described is subject to the following exceptions:

Easements and restrictions of record, if any, in the Currituck County Registry.

IN WITNESS WHEREOF the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers by authority of its Board of Directors, the day and year first above written.

Matthew D. Ottavio (SEAL)
Matthew D. Ottavio

_____ (SEAL)

Unofficial Document

STATE OF NORTH CAROLINA, COUNTY OF Currituck

I the undersigned Notary Public for the State and County aforesaid, do hereby certify that Matthew D. Ottavio personally appeared before me this day and acknowledged the due execution of the foregoing instrument. Witness my hand and official seal this 30th day of JUNE, 2020.

My Commission Expires: 7-26-2021

Tammy J. Fincham
Notary Public

(Place Seal or Stamp Here)

TAMMY J. FINCHAM
Notary Public
North Carolina
Currituck County

Unofficial Document



LIMITED LIABILITY COMPANY ANNUAL REPORT

1/6/2022

NAME OF LIMITED LIABILITY COMPANY: Harmony Land, LLC

SECRETARY OF STATE ID NUMBER: 1999539 STATE OF FORMATION: NC

REPORT FOR THE CALENDAR YEAR: 2022

Filing Office Use Only
E - Filed Annual Report
1999539
CA202300403121
1/4/2023 02:02
<input type="checkbox"/> Changes

SECTION A: REGISTERED AGENT'S INFORMATION

1. NAME OF REGISTERED AGENT: Dehus, Jacob

2. SIGNATURE OF THE NEW REGISTERED AGENT: _____

SIGNATURE CONSTITUTES CONSENT TO THE APPOINTMENT

3. REGISTERED AGENT OFFICE STREET ADDRESS & COUNTY	4. REGISTERED AGENT OFFICE MAILING ADDRESS
<u>119 Baum Bay Drive</u>	<u>119 Baum Bay Drive</u>
<u>Kill Devil Hills, NC 27948 Dare County</u>	<u>Kill Devil Hills, NC 27948</u>

SECTION B: PRINCIPAL OFFICE INFORMATION

1. DESCRIPTION OF NATURE OF BUSINESS: Land Ownership

2. PRINCIPAL OFFICE PHONE NUMBER: (252) 207-8463 3. PRINCIPAL OFFICE EMAIL: Privacy Redaction

4. PRINCIPAL OFFICE STREET ADDRESS	5. PRINCIPAL OFFICE MAILING ADDRESS
<u>119 Baum Bay Drive</u>	<u>119 Baum Bay Drive</u>
<u>Kill Devil Hills, NC 27948</u>	<u>Kill Devil Hills, NC 27948</u>

6. Select one of the following if applicable. (Optional see instructions)
- The company is a veteran-owned small business
- The company is a service-disabled veteran-owned small business

SECTION C: COMPANY OFFICIALS (Enter additional company officials in Section E.)

NAME: <u>Kara Dehus</u>	NAME: _____	NAME: _____
TITLE: <u>Administrative Member</u>	TITLE: _____	TITLE: _____
ADDRESS: _____	ADDRESS: _____	ADDRESS: _____
<u>119 Baum Bay Drive</u>	_____	_____
<u>Kill Devil Hills, NC 27948</u>	_____	_____

SECTION D: CERTIFICATION OF ANNUAL REPORT. Section D must be completed in its entirety by a person/business entity.

<u>Kara Dehus</u>	<u>1/4/2023</u>
SIGNATURE	DATE

Form must be signed by a Company Official listed under Section C of This form.

<u>Kara Dehus</u>	<u>Administrative Member</u>
Print or Type Name of Company Official	Print or Type Title of Company Official

This Annual Report has been filed electronically.

MAIL TO: Secretary of State, Business Registration Division, Post Office Box 29525, Raleigh, NC 27626-0525

Check if this project is ARPA-funded
Attach a copy of the Letter of Intent to Fund

FINANCIAL RESPONSIBILITY/OWNERSHIP FORM SEDIMENTATION POLLUTION CONTROL ACT

No person may initiate any land-disturbing activity on one or more acres as covered by the Act, including any activity under a common plan of development of this size as covered by the NCG01 permit, before this form and an acceptable erosion and sedimentation control plan have been completed and approved by the Land Quality Section, N.C. Department of Environmental Quality. Submit the completed form to the appropriate Regional Office. (Please type or print and, if the question is not applicable or the e-mail address or phone number is unavailable, place N/A in the blank.)

Part A.

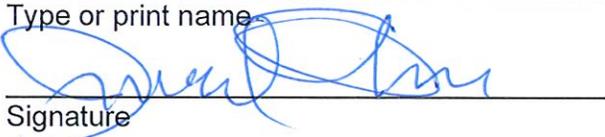
- Project Name Currituck Industrial Park, Lot 49
**If this project involves American Rescue Plan Act (ARPA) funds, list the Project Name or Project Number (e.g., SRP-D-ARP-0121) below under which you were approved for funding through the Division of Water Infrastructure (DWI).*
n/a
- Location of land-disturbing activity: County Currituck City or Township Powell's Point
Highway/Street Greyson Loop Latitude_(decimal degrees) 36.1483 Longitude_(decimal degrees) -75.8375
- Approximate date land-disturbing activity will commence: October 2024
- Purpose of development (residential, commercial, industrial, institutional, etc.): Industrial
- Total acreage disturbed or uncovered (including off-site borrow and waste areas): 1.03
- Amount of fee enclosed: \$ 200. The application fee of \$100.00 per acre (rounded up to the next acre) is assessed without a ceiling amount (Example: 8.10-acre application fee is \$900). Checks should be addressed to NCDEQ.
- Has an erosion and sediment control plan been filed? Yes Enclosed No
- Person to contact should erosion and sediment control issues arise during land-disturbing activity:
Name Jake Overton E-mail Address jake@overtoncontracting.com
Phone: Office # 252-441-9239 Mobile # 252-207-1121
- Landowner(s) of Record (attach accompanied page to list additional owners):

<u>Harmony Land LLC</u>	<u>252-207-8463</u>	
Name	Phone: Office #	Mobile #
<u>119 Baum Bay Dr</u>	<u>119 Baum Bay Drive</u>	
Current Mailing Address	Current Street Address	
<u>Kill Devil Hills</u> <u>NC</u> <u>27948</u>	<u>Kill Devil Hills</u> <u>NC</u> <u>27948</u>	
City State Zip	City State Zip	
- Deed Book No. 1543 Page No. 651 - 652 Provide a copy of the most current deed.

(c) If the Financially Responsible Party is engaging in business under an assumed name, give name under which the company is Doing Business As. If the Financially Responsible Party is an individual, General Partnership, or other company not registered and doing business under an assumed name, **attach a copy of the Certificate of Assumed Name.**

Company DBA Name

The above information is true and correct to the best of my knowledge and belief and was provided by me under oath. (This form must be signed by the Financially Responsible Person if an individual(s) or his attorney-in-fact, or if not an individual, by an officer, director, partner, or registered agent with the authority to execute instruments for the Financially Responsible Party). I agree to provide corrected information should there be any change in the information provided herein.

Jacob Dehus
Type or print name

Signature

Agent
Title or Authority
7/18/24
Date

I, Robert R Harris, a Notary Public of the County of Dare

State of North Carolina, hereby certify that Jacob Dehus appeared personally before me this day and being duly sworn acknowledged that the above form was executed by him/her.

Witness my hand and notarial seal, this 18th day of July, 2024




Notary

My commission expires 1/18/26