



Public Services

Engineering
212 Operations Center Drive
Wilmington, NC 28412
910 341-7807
910 341-5881 fax
wilmingtonnc.gov
Dial 711 TTY/Voice

August 7, 2019

Mr. Collins Hartzog
Wilmington NC 2018, LLC
109 Still Wild Lane
Elgin, SC 29045

**Subject: Stormwater Management Permit No. 2019044R1
Starbucks Hospital Plaza
High Density Redevelopment**

Dear Mr. Hartzog:

The City of Wilmington Engineering Division has received a request for a revision to the Stormwater Management Permit for Starbucks Hospital Plaza. Having reviewed the application and all supporting materials, the City of Wilmington has determined that the proposed revision meets the requirements of the City of Wilmington's Comprehensive Stormwater Ordinance.

The revisions include:

- Tree removal/preservation revisions. See approved plans dated August 1, 2019.

Please be aware all terms and conditions of the permit Issued on July 19, 2019 remain in full force and effect. Any additional changes to the approved plans must be approved by this office prior to construction. The issuance of the plan revision does not preclude the permittee from complying with all other applicable statutes, rules, regulations or ordinances which may have jurisdiction over the proposed activity, and obtaining a permit or approval prior to construction.

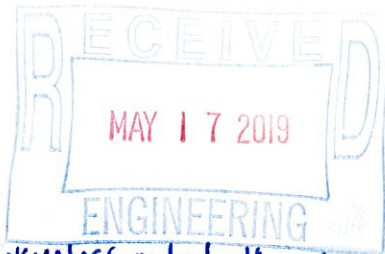
The revised stamped, approved stormwater management drawings will be released for construction by the Wilmington Planning Division under separate cover. Please replace any old plan sheets from the approved set with the new, revised sheet. An electronic copy of the approved drawing set, permit, application and supplementary documents will be maintained by the Wilmington Engineering Division. If you have any questions, or need additional information, please contact Richard Christensen at (910) 341-7813 or richard.christensen@wilmingtonnc.gov

Sincerely,

A handwritten signature in blue ink that reads 'Rich Christensen'.

for Sterling Cheatham, City Manager
City of Wilmington

cc: Matt Lowder, PE, Triangle Site Design, LLC
Jeff Walton, Associate Planner, City of Wilmington



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STORMWATER MANAGEMENT PERMIT APPLICATION FORM
(Form SWP 2.2)

I. GENERAL INFORMATION

1. Project Name (subdivision, facility, or establishment name - should be consistent with project name on plans, specifications, letters, operation and maintenance agreements, etc.):

Starbucks - Hospital Plaza

2. Location of Project (street address):

2018 South 16th Street

City: Wilmington County: New Hanover Zip: 28401

3. Directions to project (from nearest major intersection):

At the intersection of South 16th Street and Hospital Plaza Drive

II. PERMIT INFORMATION

1. Specify the type of project (check one): Low Density **High Density**
Drains to an Offsite Stormwater System Drainage Plan Other

If the project drains to an Offsite System, list the Stormwater Permit Number(s):

City of Wilmington: _____ State - NCDENR/DWQ: _____

2. Is the project currently covered (whole or in part) by an existing City or State (NCDENR/DWQ) Stormwater Permit? Yes **No**

If yes, list all applicable Stormwater Permit Numbers:

City of Wilmington: _____ State - NCDENR/DWQ: _____

3. Additional Project Permit Requirements (check all applicable): N/A

CAMA Major Sedimentation/Erosion Control

NPDES Industrial Stormwater 404/401 Permit: Proposed Impacts: _____

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:

III. CONTACT INFORMATION

1. 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: Wilmington NC 2018, LLC

Signing Official & Title: Collins Hartzog (manager)

- a. Contact information for Applicant / Signing Official:

Street Address: 109 Still Wild Lane

City: Elgin State: SC Zip: 29045

Phone: 803-361-6718 Fax: _____ Email: collins@hartzogholdings.com

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

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

The property owner (Skip to item 3)

Lessee* (Attach a copy of the lease agreement and complete items 2 and 2a below)

Purchaser* (Attach a copy of the pending sales agreement and complete items 2 and 2a below)

Developer* (Complete items 2 and 2a below.)

2. 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 on.)

Property Owner / Organization: _____

Signing Official & Title: _____

- a. Contact information for Property Owner:

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Mailing Address (if different than physical address): _____

City: _____ State: _____ Zip: _____

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

Other Contact Person / Organization: Rodger Nelms CRH Construction, LLC

Signing Official & Title: Owner

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

Street Address: 109 Still Wild Lane
 City: Elgin State: SC Zip: 29175
 Phone: 404-314-7051 Fax: _____ Email: rodger@crhconstruction.us
 Mailing Address (if different than physical address): _____
 City: _____ State: _____ Zip: _____

IV. PROJECT INFORMATION

1. In the space provided below, briefly summarize how the stormwater runoff will be treated.

Stormwater will be treated with permeable pavement
The stormwater that by-passes the permeable pavement
will flow to the right-of-way

- 2. Total Property Area: 33,498 square feet
- 3. Total Coastal Wetlands Area: ∅ square feet
- 4. Total Surface Water Area: ∅ square feet
- 5. Total Property Area (2) – Total Coastal Wetlands Area (3) – Total Surface Water Area (4) = Total Project Area: 33,498 square feet.
- 6. Existing Impervious Surface within Property Area: 19,135 square feet
- 7. Existing Impervious Surface to be Removed/Demolished: 19,135 square feet
- 8. Existing Impervious Surface to Remain: ∅ square feet
- 9. Total Onsite (within property boundary) Newly Constructed Impervious Surface (in square feet):

Buildings/Lots	2,510
Impervious Pavement	14,515
Pervious Pavement (adj. total, with 100% credit applied)	0,2080
Impervious Sidewalks	1,675
Pervious Sidewalks (adj. total, with % credit applied)	∅
Other (describe)	∅
Future Development	∅
Total Onsite Newly Constructed Impervious Surface	18,700

10. Total Onsite Impervious Surface
 (Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 18,700 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 55.82%

12. Total Offsite Newly Constructed Impervious Area (Improvements made outside of property boundary, in square feet):

Impervious Pavement	
Pervious Pavement (adj. total, with % credit applied)	
Impervious Sidewalks	1,250
Pervious Sidewalks (adj. total, with % credit applied)	
Other (describe)	
Total Offsite Newly Constructed Impervious Surface	1,250

13. Total Newly Constructed Impervious Surface
 (Total Onsite + Offsite Newly Constructed Impervious Surface) = 19,950 square feet

14. Complete the following information for each Stormwater BMP drainage area. If there are more than three drainage areas in the project, attach an additional sheet with the information for each area provided in the same format as below. Low Density projects may omit this section and skip to Section V.

Basin Information	BMP #	BMP #	BMP #
Receiving Stream Name	Clay Bottoms Branch		
Receiving Stream Index Number	18-76-1-2		
Stream Classification	C; SW		
Total Drainage Area (sf)	2,080		
On-Site Drainage Area (sf)	2,080		
Off-Site Drainage Area (sf)	∅		
Total Impervious Area (sf)			
Buildings/Lots (sf)	∅		
Impervious Pavement (sf)	2,080		
Pervious Pavement (sf)	∅		
Impervious Sidewalks (sf)	∅		
Pervious Sidewalks (sf)	∅		
Other (sf)	∅		
Future Development (sf)	∅		
Existing Impervious to remain (sf)	∅		
Offsite (sf)	∅		
Percent Impervious Area (%)	∅		

15. How was the off-site impervious area listed above determined? Provide documentation:

Design drawings

V. SUBMITTAL REQUIREMENTS

1. Supplemental and Operation & Maintenance Forms - One applicable City of Wilmington Stormwater BMP supplement form and checklist must be submitted for **each** BMP specified for this project. One applicable proposed operation and maintenance (O&M) form must be submitted for **each type** of stormwater BMP. Once approved, the operation and maintenance forms must be referenced on the final plat and recorded with the register of deeds office.
2. Deed Restrictions and Restrictive 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. Due to variability in lot sizes or the proposed BUA allocations, 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 at the link listed in section V (3). Download the latest versions for each submittal.

In 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 City of Wilmington, and that they will be recorded prior to the sale of any lot.

3. Only complete application packages will be accepted and reviewed by the City. A complete package includes all of the items listed on the City Engineering Plan Review Checklist, including the fee. Copies of the Engineering Plan Review Checklist, all Forms, Deed Restrictions as well as detailed instructions on how to complete this application form may be downloaded from:

<http://www.wilmingtonnc.gov/PublicServices/Engineering/PlanReview/StormwaterPermits.aspx>

The complete application package should be submitted to the following address:

City of Wilmington – Engineering
Plan Review Section
212 Operations Center Dr
Wilmington, NC 28412

VI. CONSULTANT INFORMATION AND AUTHORIZATION

1. 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: Matt Lowder

Consulting Firm: Triangle Site Design, PLLC

a. Contact information for consultant listed above:

Mailing Address: 4004 Barrett Dr. suite 101

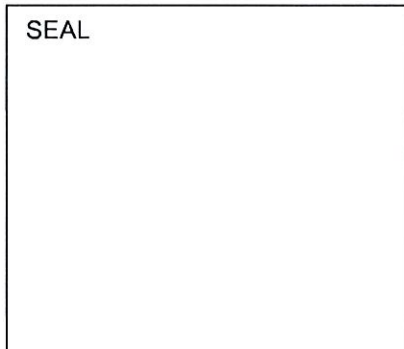
City: Raleigh State: NC Zip: 27609

Phone: (919) 553 6570 Fax: _____ Email: Mlowder@trianglesitedesign.com

VII. PROPERTY OWNER AUTHORIZATION (If Section III(2) has been filled out, complete this section)

I, (print or type name of person listed in Contact Information, item 2) _____, 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 1) _____ with (print or type name of organization listed in Contact Information, item 1) _____ 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 City of Wilmington Stormwater Permit reverts back to me, the property owner. As the property owner, it is my responsibility to notify the City of Wilmington 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 the City of Wilmington Municipal Code of Ordinances and may result in appropriate enforcement including the assessment of civil penalties.



Signature: _____

Date: _____

I, _____, a Notary Public for the

State of _____, County of _____, do

hereby certify that _____

personally appeared before me this day of _____ **RECEIVED** _____.

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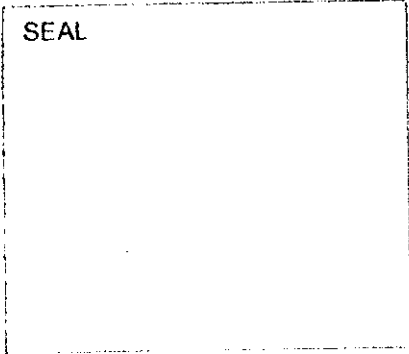


and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal.

My commission expires: _____

VIII. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in Contact Information, Item 1), Collins Hartog 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.



Signature: [Signature]
Date: 5/11/19

I, Stephanie Hartog, a Notary Public for the State of North Carolina, County of Richmond, do hereby certify that Collins Hartog personally appeared before me this day of 17th of May, 2019 and acknowledge the due execution of the application for a stormwater

permit. Witness my hand and official seal,

My commission expires _____

Sworn to and Subscribed Before Me
My Commission Expires
February 27th, 2023
[Signature]

SUPPLEMENT-EZ COVER PAGE

FORMS LOADED

PROJECT INFORMATION		
1	Project Name	Starbucks - Hospital Plaza
2	Project Area (ac)	0.77
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)	
8	Will the vegetated setback remain vegetated?	
9	Is BUA other than as listed in .1003(4)(c-d) out of the setback?	
10	Is streambank stabilization proposed on this project?	

NUMBER AND TYPE OF SCMs:		
11	Infiltration System	0
12	Bioretention Cell	0
13	Wet Pond	0
14	Stormwater Wetland	0
15	Permeable Pavement	1
16	Sand Filter	0
17	Rainwater Harvesting (RWH)	0
18	Green Roof	0
19	Level Spreader-Filter Strip (LS-FS)	0
20	Disconnected Impervious Surface (DIS)	0
21	Treatment Swale	0
22	Dry Pond	0
23	StormFilter	0
24	Silva Cell	0
25	Bayfilter	0
26	Filterra	0

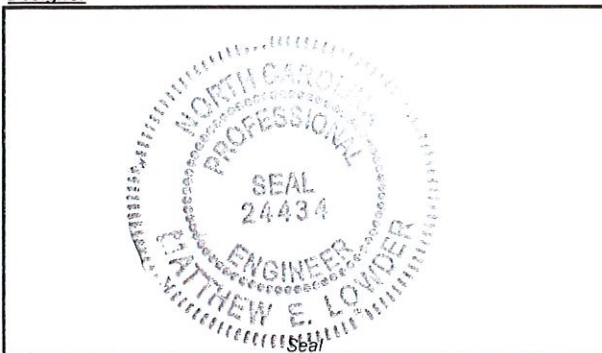
FORMS LOADED

DESIGNER CERTIFICATION		
27	Name and Title:	Matt Lowder, PE
28	Organization:	Triangle Site Design, PLLC
29	Street address:	4004 Barrett Drive, Suite 101
30	City, State, Zip:	Raleigh, NC 27609
31	Phone number(s):	919-553-6570
32	Email:	mlowder@trianglesitedesign.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

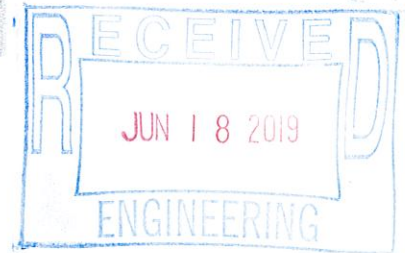


Matt LP

Signature of Designer

6/14/19

Date



PERMEABLE PAVEMENT

1	Drainage area number	1
2	Design volume of SCM (cu ft)	na
3	Area of permeable pavement to be installed (square feet)	2080 sf
4	Area of screened roof runoff that is directed to pavement (square feet)	sf
5	Area of additional built-upon area runoff that is directed to pavement (square feet)	sf
6	Area of incidental, unavoidable runoff from adjacent stable pervious areas (square feet)	sf

GENERAL MDC FROM 02H.1050

7	Is the SCM sized to treat the SW from all surfaces at build-out?	Ne
8	Is the SCM located away from contaminated soils?	Yes
5	What are the side slopes of the SCM (H V)?	na
6	Does the SCM have retaining walls, gabion walls or other engineered side slopes?	Ne
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?	Other
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)?	Yes
13	If the SCM is on a single family lot, does (will?) the plat comply with General MDC (10)?	No
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

PERMEABLE PAVEMENT MDC FROM 02H.1055

18	Is this a detention or infiltration permeable pavement system?	Infiltration
19	Proposed slope of the subgrade surface (%)	2%
20	Are terraces or baffles provided?	Ne
21	SHWT elevation (fmsl)	20.00
22	Storage elevation of the design rainfall depth (fmsl)	Yes
23	Will toxic pollutants be stored or handled on or near the permeable pavement?	No
24	Does the proposed pavement surface comply with 1055(6)?	Yes
25	Will runoff from pervious surfaces be directed away from the pavement?	Yes
26	Maximum adjacent area directed to a single point onto the permeable pavement (sq ft)	sf
27	Is at least one observation well per terrace been provided at the low point(s)?	Yes
28	Have edge restraints been provided?	Yes
29	Will the subgrade be graded when dry?	Yes
30	Will the permeable pavement be protected from sediment during construction?	Yes
31	Will an in-situ permeability test be conducted after site stabilization?	Yes

(3.75 in depth) (24.32)

For Infiltrating Pavement Systems

32	Was the soil investigated in the footprint and at the elevation of the subgrade?	Yes
33	Soil infiltration rate (in/hr)	14 in/hr
34	Is a detailed hydrogeologic study attached if the separation is between 1 and 2 feet?	No
35	Is additional media being added to the soil profile?	Yes
36	Proposed slope of the subgrade surface (%)	2%
37	Top of the subgrade (bottom of the aggregate) (fmsl)	24
38	Dewatering time (hours)	1 hrs

For Detention Pavement Systems

39	Drawdown time (hours)	
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Aggregate

40	Aggregate depth (in)	4 in
41	Aggregate porosity (n)	40
42	Size of aggregate to be used in the subbase	#57
43	Will the aggregate be washed?	Yes

ADDITIONAL INFORMATION

44	Please use this space to provide any additional information about the permeable pavement system(s):

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JUN 28 2019

ENGINEERING

Permeable Pavement Operation and Maintenance Agreement

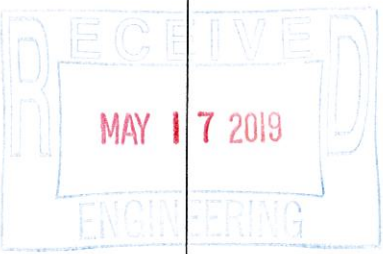
I will keep a maintenance record on this BMP. This maintenance record will be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

Important operation and maintenance procedures:

- Stable groundcover will be maintained in the drainage area to reduce the sediment load to the permeable pavement.
- The area around the perimeter of the permeable pavement will be stabilized and mowed, with clippings removed.
- Any weeds that grow in the permeable pavement will be sprayed with pesticide immediately. Weeds will not be pulled, since this could damage the fill media.
- Once a year, the permeable pavement surface will be vacuum swept.
- At no time shall wet sweeping (moistening followed by sweeping) be allowed as a means of maintenance.
- There shall be no repair or treatment of Permeable Pavement surfaces with other types of pavement surfaces. All repairs to Permeable Pavement surfaces must be accomplished utilizing permeable pavement which meets the original pavement specifications.
- Concentrated runoff from roof drains, piping, swales or other point sources, directly onto the permeable pavement surface shall not be allowed. These areas must be diverted away from the permeable pavement.

Initial Inspection: Permeable Pavements shall be inspected monthly for the first three months for the following:

BMP element:	Potential problem:	How to remediate the problem:
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies have formed.	In the event that rutting or failure of the groundcover occurs, the eroded area shall be repaired immediately and permanent groundcover re-established. Appropriate temporary Erosion Control measures (such as silt fence) shall be installed in the affected area during the establishment of permanent groundcover, and any impacted area of permeable pavement is to be cleaned via vacuum sweeping.
The surface of the permeable pavement	Rutting / uneven settlement	This indicates inadequate compaction of the pavement base / sub-base. If rutting or uneven settlement on the order of 1/2 inch or greater occurs, permeable pavement shall be removed and base / sub-base re-compacted, smoothed, and permeable pavement shall then be re-installed. Base and sub-base compaction shall be monitored by a licensed geotechnical engineer to ensure that infiltration capacity of base and sub-base are not compromised by compaction and smoothing processes.
	The pavement does not dewater between storms, or water is running off.	Vacuum sweep the pavement. If the pavement still does not dewater, consult a professional.



The permeable pavement will be inspected **once a quarter and within 24 hours after every storm event greater than 1.5 inches**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

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

BMP element:	Potential problem:	How to remediate the problem:
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of 3 to 6 inches (remove clippings).
The surface of the permeable pavement	Trash/debris is present.	Remove the trash/debris.
	Weeds are growing on the surface of the permeable pavement.	Do not pull the weeds (may pull out media as well). Spray them with pesticide.
	Sediment is present on the surface.	Vacuum sweep the pavement.
	The structure is deteriorating or damaged.	Consult an appropriate professional. Damaged areas of the pavement shall be removed and repaired.
	The pavement does not dewater between storms.	Vacuum sweep the pavement. If the pavement still does not dewater, consult a professional. Permanently clogged pavement shall be removed and repaired.

I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed above. I agree to notify City of Wilmington of any problems with the system or prior to any changes to the system or responsible party.

Project name: Starbucks 16th Street

BMP drainage area or lot number: 1

Print name: Collins Hartzog

Title: Manager

Address: 109 Still Wild Lane Elgin, SC 29045

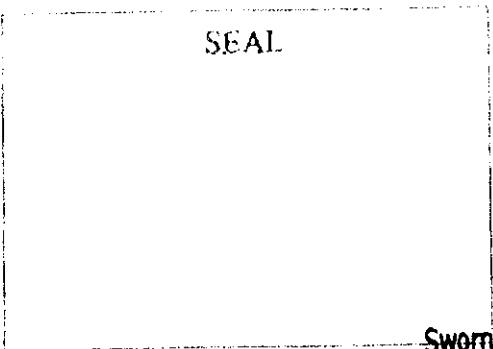
Phone: 803-361-6718

Signature: [Handwritten Signature]

Date: 5/1/19

Note: The legally responsible party should not be a homeowners association unless more than 50% of the lots have been sold and a resident of the subdivision has been named the president.

I, Stephanie M. Harty, a Notary Public for the State of North Carolina, County of Newland, do hereby certify that Collins Hartzog personally appeared before me this 1st day of May, 2019, and acknowledge the due execution of the forgoing permeable pavement maintenance requirements. Witness my hand and official seal,



Sworn to and Subscribed Before Me
My Commission Expires
February 27th, 2023

My commission expires: [Handwritten Signature]