



#### **Public Services**

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

## **COMPREHENSIVE STORMWATER MANAGEMENT PERMIT**

## **DRAINAGE PLAN**

#### **SECTION 1 – APPROVAL**

Having reviewed the construction drawings, application and all supporting materials, the City of Wilmington has determined that the proposed development meets the requirements for Drainage Plan Approval through the City of Wilmington's Comprehensive Stormwater Ordinance.

PERMIT HOLDER: PBW Holdings, LLC

PROJECT: Ardmore

ADDRESS: 501 S. 17<sup>th</sup> Street

PERMIT #: **2020042** 

DATE: **December 11, 2020** 

Therefore, the above referenced site is hereby approved and subject to all conditions set forth in Section 2 of this approval and all applicable provisions of the City of Wilmington Comprehensive Stormwater Management Ordinance.

This permit shall be effective from the date of issuance until modified or rescinded and shall be subject to the following specified conditions and limitations:

## **Section 2 - CONDITIONS**

- 1. This approval is valid only for the stormwater management system as proposed on the approved stormwater management plans dated December 10, 2020.
- 2. The project will be limited to the amount and type of built-upon area indicated in Section IV of the Stormwater Management Application Form submitted as part of the approved stormwater permit application package, and per the approved plans.
- 3. This permit shall become void unless the facilities are constructed in accordance with the approved stormwater management plans, specifications and supporting documentation.
- 4. The permittee shall submit a revised stormwater management application packet to the City of Wilmington and shall have received approval prior to construction, for any modification to the approved plans, including, but not limited to, those listed below:
  - a. Any revision to any item shown on the approved plans, including the stormwater management measures, built-upon area, details, etc.
  - b. Redesign or addition to the approved amount of built-upon area.
  - c. Further subdivision, acquisition, lease or sale of any part of the project area.
  - d. Filling in, altering, or piping of any vegetative or piped conveyance shown on the approved plan.
  - e. Construction of any permitted future areas shown on the approved plans.
- 5. A copy of the approved plans and specifications shall be maintained on file by the Permittee.





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- 6. During construction, erosion shall be kept to a minimum and any eroded areas of the system will be repaired immediately.
- 7. All areas must be maintained in a permanently stabilized condition. If vegetated, permanent seeding requirements must follow the guidelines established in the North Carolina Erosion and Sediment Control Planning and Design Manual unless an alternative is specified and approved by the City of Wilmington.
- 8. All applicable operation & maintenance agreements pertaining to all pervious pavement systems shall be referenced on the final plat and recorded with the Register of Deeds upon final plat approval. If no plat is recorded for the site the operation and maintenance agreements shall be recorded with the Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching standards.
- 9. The permittee shall at all times provide the operation and maintenance necessary to assure the pervious pavement system functions at optimum efficiency. The approved Operation and Maintenance Plan must be followed in its entirety and maintenance must occur at the scheduled intervals including, but not limited to:
  - a. Scheduled inspections
  - b. Sediment removal/vacuum sweep surface
  - Immediate repair of eroded areas adjacent to pervious pavement
- 10. Each component of the stormwater management system should be inspected once a quarter and within 24 hours after every storm event greater than 1.5 inches.
- 11. Records of inspection, maintenance and repair for the permitted pervious pavement system must be kept by the permittee for at least 5 years from the date of record and made available upon request to authorized personnel of the City of Wilmington. The records will indicate the date, activity, name of person performing the work and what actions were taken.
- 12. Upon completion of construction, before a Certificate of Occupancy shall be granted, and prior to operation of this permitted facility, the applicant shall submit to the City of Wilmington as-built plans for all stormwater management facilities. The plans shall show the field location, type, depth and invert of all devices, as installed. A certification shall be submitted, along with all supporting documentation that specifies, under seal that the as-built stormwater measures, controls and devices are in compliance with the approved stormwater management plans. A final inspection by City of Wilmington personnel will be required prior to issuance of a certificate of occupancy or operation of the permitted facility.
- 13. This permit is not transferable except after application and approval by the City of Wilmington. In the event of a change of ownership, name change or change of address the permittee must submit a completed Name/Ownership Change form to the City of Wilmington at least 30 days prior to the change. It shall be signed by all applicable parties and be accompanied by all required supporting documentation. Submittal of a complete application shall not be construed as an approved application. The application will be reviewed on its own merits by the City of Wilmington and may or may not be approved. The project must be in compliance with the terms of this permit in order for the transfer request to be considered. The permittee is responsible for compliance with all permit conditions until such time as the City of Wilmington approves the transfer request.





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- 14. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the City of Wilmington, in accordance with Sections 18-52 and 18-53 of the Land Development Code.
- 15. The City of Wilmington may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the City of Wilmington for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the City of Wilmington that the changes have been made.
- 16. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state, and federal) having jurisdiction.
- 17. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by the City of Wilmington, such as the construction of additional or replacement stormwater management systems.
- 18. The permittee grants City of Wilmington Staff permission to enter the property during normal business hours for the purpose of inspecting all components of the permitted stormwater management facility.
- 19. The permit issued shall continue in force and effect until revoked or terminated by the City of Wilmington. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and re-issuance or termination does not stay any permit condition.
- 20. The approved stormwater management plans and all documentation submitted as part of the approved stormwater management permit application package for this project are incorporated by reference and are enforceable parts of the permit.
- 21. If any one or more of the conditions of this permit is found to be unenforceable or otherwise invalidated, all remaining conditions shall remain in full effect.

Stormwater Management Permit issued this the 11th day of December, 2020.

Richard Christensen

for Sterling Cheatham, City Manager
City of Wilmington



I. GENERAL INFORMATION



Public Services
Engineering
212 Operations Center Dr
Wilmington, NC 28412
910 341-7807
91 341-5881 fax
wilmingtonnc.gov
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# STORMWATER MANAGEMENT PERMIT APPLICATION FORM (Form SWP 2.3)

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

	ARDMORE
2.	Location of Project (street address): 501 S. 17th Street
	City: Wilmington County: New Hanover Zip: 28401
II.	PERMIT INFORMATION
1.	Specify the type of project (check one): Low Density High Density  Offsite Stormwater System Drainage Plan Redevelopment Other  If the project drains to an Offsite System, list the Stormwater Permit Number(s):  City of Wilmington: State – NCDEQ/DEMLR:
2.	Is the project currently covered (whole or in part) by an existing City or State (NCDEQ/DEMLR) Stormwater Permit? Yes No
	If yes, list all applicable Stormwater Permit Numbers:  State NCDEO/DEMLB:
	City of Wilmington: State – NCDEQ/DEMLR:
3.	Additional Project Permit Requirements (check all applicable):
	CAMA Major Sedimentation/Erosion Control 404/401 Permit
III.	CONTACT INFORMATION
1.	Print Applicant / Signing Official's name and title (the developer, property owner, lessee, designated government official, individual, etc. who owns the project):
	Applicant / Organization: PBW HOLDINGS, LLC

Signing Official & Title: Dave Spetrino, Manager



	a. Contact information for Applicant / Signing Official:
	Address: 18 Palmetto Drive
	City: Wrightsville Beach State: NC Zip: 28480
	Phone: 910-44-0746Email: spetrino@pbcdesignbuild.com
	b. Please check the appropriate box. The applicant listed above is:
	The property owner/Purchaser (Skip to item 3) Lessee (Attach a copy of the lease agreement and complete items 2 and 2a below) Developer (Complete items 2 and 2a below.)
2.	Print Property Owner's name and title (if different from the applicant).
	Property Owner / Organization:
	Signing Official & Title:
	a. Contact information for Property Owner:
	Street Address:
	City:State:Zip:
	Phone:Email:
3.	(Optional) Other Contact name and title (such as a construction supervisor) who would like to be copied on all correspondence:
	Other Contact Person / Organization:
	Signing Official & Title:
	a. Contact information for person listed in item 3 above:
	Street Address:
	City:State:Zip:
	Phone:Email:
4.	Agent Authorization: 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: Howard Resnik, PE
	Consulting Firm: CSD Engineering
	a. Contact information for consultant listed above:
	Mailing Address: PO Box 4041
	City: Wilmington State: NC Zip: 28406
	Phone: 910-791-4441



## IV. PROJECT INFORMATION

1.	Total Property Area: 14,223 square feet
2.	Total Coastal Wetlands Area: 0square feet
3.	Total Surface Water Area: 0square feet
4.	Total Property Area (1) – Total Coastal Wetlands Area (2) – Total Surface Water Area (3) = Total Project Area: 44,233 square feet.
5.	Existing Impervious Surface within Project Area: 80square feet
6.	Existing Impervious Surface to be Removed/Demolished: 80 square feet
7.	Existing Impervious Surface to Remain: 0 square feet

8. Total Onsite (within property boundary) Newly Constructed Impervious Surface (in square feet):

Buildings/Lots	6936
Impervious Pavement	2398
Pervious Pavement (total area / adjusted area w credit applied)	2524 / 0
Impervious Sidewalks	649
Pervious Sidewalks (total area / adjusted area w credit applied)	/ 0
Other (Describe)	
Future Development	0
Total Onsite Newly Constructed Impervious Surface	9983

9. Total Onsite Impervious Surface (Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) 9983	_square feet
10. Net Change in Onsite Impervious Surface (+ for net increase, - for net decrease) +9983	_square feet
11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100	) = <u>70    </u> %
12. Total Offsite Newly Constructed Impervious Area (in square feet):	

Impervious Pavement	697
Pervious Pavement (total area / adjusted area w credit applied)	1
Impervious Sidewalks	93
Pervious Sidewalks (total area / adjusted area w credit applied)	1
Other (Describe)	
Total Offsite Newly Constructed Impervious Surface	790



13. Complete the following information for each Stormwater SCM drainage area. Low Density and Drainage Plan projects (with no permeable pavements) may omit this section and skip to Section V.

Basin Information	Type of SCM SCM#	Type of SCM SCM # 1	Type of SCM SCM # 2
Receiving Stream Name	Burnt Mill Creek	Burnt Mill Creek	Burnt Mill Creek
Receiving Stream Index Number	18-74-63-2	18-74-63-2	18-74-63-2
Stream Classification	C;Sw	C;Sw	C;Sw
Total Drainage Area (sf)			
On-Site Drainage Area (sf)		2044	480
Off-Site Drainage Area (sf)	0		
Buildings/Lots (sf)			
Impervious Pavement (sf)			
Pervious Pavement (total / adjusted) (sf)	/	1	/
Impervious Sidewalks (sf)			
Pervious Sidewalks (total / adjusted) (sf)	/ 0	2044 / 0	480 / 0
Other (sf)			
Future Development (sf)			
Existing Impervious to remain (sf)			
Offsite (sf)			
Total Impervious Area (sf)		0	0
Percent Impervious Area (%)			

Basin Information	Type of SCM	Type of SCM	Type of SCM
Dasiii iiiioiiiialioii	SCM#	SCM#	SCM#
Receiving Stream Name			
Receiving Stream Index Number			
Stream Classification			
Total Drainage Area (sf)			
On-Site Drainage Area (sf)			
Off-Site Drainage Area (sf)			
Buildings/Lots (sf)			
Impervious Pavement (sf)			
Pervious Pavement (total / adjusted) (sf)	/	/	1
Impervious Sidewalks (sf)			
Pervious Sidewalks (total / adjusted) (sf)	1	1	1
Other (sf)			
Future Development (sf)			
Existing Impervious to remain (sf)			
Offsite (sf)			
Total Impervious Area (sf)			
Percent Impervious Area (%)			

Initials



## V. SUBMITTAL REQUIREMENTS

Only complete application packages will be accepted and reviewed by the City. A complete package includes all of the items listed below. Copies of forms, deed restrictions, checklists as well as detailed instructions on how to complete this application form may be downloaded from the City of Wilmington Plan Review website below:

https://www.wilmingtonnc.gov/departments/engineering/plan-review/stormwater-permits

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

Please indicate that the following required information have been provided by initialing in the space provided for each item.

		IIIIIais
1.	One completed Stormwater Management Permit Application Form.	M
2.	One completed Supplement Form for each SCM proposed (signed, sealed and dated).	M3_
3.	One completed Operation & Maintenance agreement for each type of SCM.	M3
4.	Proposed Deed Restrictions and Restrictive Covenants (for all subdivisions)	N/A
5.	Appropriate stormwater permit review fee.	MS
6.	Minimum requirements identified on the Engineering Plan Review Checklist have been addressed.	M3
7.	One set of calculations (sealed. signed and dated).	_M3_
8.	A detailed narrative (one to two pages) describing the stormwater treatment/management system for the project.	_M3_
9.	A USGS map identifying the site location. If the receiving stream is reported as class SA or the receiving stream drains to class SA waters within $\frac{1}{2}$ mile of the site boundary, include the $\frac{1}{2}$ mile radius on the map.	m
10	A copy of the soils report, if applicable. Must meet NCDEQ SCM Manual and MDC requirements for the type of SCM proposed. The report must include boring logs and a map of boring locations.	m3_
11	. One full set of plans folded to 8.5" x 14".	M3
12	. A map delineating and labeling the drainage area for each SCM proposed.	Ms
13	. A map delineating and labeling the drainage area for each inlet and conveyance proposed.	M3
14	. A digital copy of the entire submittal package (can be submitted via flash drive, CD, email, dropbox or other file sharing system).	M



VI. PROPERTY OWNER AUTH	ORIZATION (If Section III(2)	has been filled out, complete th	is section)		
,, certify that I own the property identified in this permit application, and thus give permission to, with co develop the project as currently proposed. A copy of the lease agreement or pending property sales contract					
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 acknown agent agreement, or pending sale, responsack to me, the property owner. As immediately and submit a complete a stormwater treatment facility without a valid permit is a vicin appropriate enforcement including	dissolves their company sibility for compliance with the the property owner, it is my red Name/Ownership Change out a valid permit. I understanglation of the City of Wilmington	y and/or cancels or defaults on the City of Wilmington Stormwh responsibility to notify the City Form within 30 days; otherwing and that the operation of a stor- ton Municipal Code of Ordina	on their lease ater Permit reverts y of Wilmington se I will be operating		
Signature:		Date:			
SEAL					
SEAL		, a No			
		, County of			
	hereby certify that				
	personally appeared before	re me this day of			
	and acknowledge the due	execution of the application	for a stormwater		
	permit. Witness my hand	and official seal,			
	My commission expires: _				
VII. APPLICANT'S CERTIFIC  I Dave Spetrino  form is, to the best of my knowledge	certify that the	information included on this	permit application		
orm 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 rules under the City's Comprehensive Stormwater Ordinarce.  Date:					
SEAL.	01 60				
111111111111111111111111111111111111111	1, Rebecca E. Be		tary Public for the		
INGERECCA E BEIL		~ County of New H	anover, do		
35	hereby certify that Dou	id A. Spotringth			
EM NOTAPL ZE	personally appeared befor	re me this day of 42	Sept. , 2020,		
NO TARY DUBLIC WILLIAM PUBLIC WILLIA	and acknowledge the due	execution of the application	for a stormwater		
三克 0110 000	permit. Witness my hand	and official seal,			
77.57/1.005.33	Respecca &	Ren			
William, Control of the Control of t	My commission expires: 10 - 16 - 21				

## **SUPPLEMENT-EZ COVER PAGE**

ORMS LOADED

PROJECT INFORMATION		
1 Project Name	Ardmore	
2 Project Area (ac)	0.33	
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)	0
8	Will the vegetated setback remain vegetated?	
9	Is BUA other that as listed in .1003(4)(c-d) out of the setback?	
10	Is streambank stabilization proposed on this project?	No

11_	Infiltration System	0
12	Bioretention Cell	0
13	Wet Pond	0
14	Stormwater Wetland	0
15	Permeable Pavement	2
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 Na	ame and Title:	Howard Resnik, PE
28 Or	ganization:	CSD Engineering
29 Str	reet address:	PO BOX 4041
30 Cit	ty, State, Zip:	Wilmington, NC 28406
31 Ph	none number(s):	910-791-4441
32 Em	nail:	howard@csd-engineering.com

#### Certification Statement:

Loertify, 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.

SEAL Signature of Designer

OCINETIAN

OCINETIAN

Seal

## **DRAINAGE AREAS**

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

FORMS LOADED

DRA	INAGE AREA INFORMATION	Entire Site	1	2
4	Type of SCM	The second	Pervious Pave	Pervious Pave
5	Total BUA in project (sq ft)	9983 sf	2044 sf	480 sf
	New BUA on subdivided lots (subject to			
6	permitting) (sq ft)			1.00
	New BUA outside of subdivided lots (subject to			
7	permitting) (sf)	9983 sf	2044 sf	480 sf
8	Offsite - total area (sq ft)			
9	Offsite BUA (sq ft)			
10	Breakdown of new BUA outside subdivided lots:			
	- Parking (sq ft)	2398 sf	2044 sf	480 sf
	- Sidewalk (sq ft)	649 sf	sf	
	- Roof (sq ft)	6936 sf	sf	
	- Roadway (sq ft)	and the second second	sf	
	- Future (sq ft)		sf	
	- Other, please specify in the comment box			
	below (sq ft)			
	New infiltrating permeable pavement on		No. of the last	
11	subdivided lots (sq ft)		sf	
	New infiltrating permeable pavement outside of			
12	subdivided lots (sq ft)	2524 sf	2044 sf	480 sf
	Exisitng BUA that will remain (not subject to			
13	permitting) (sq ft)	sf		
14	Existing BUA that is already permitted (sq ft)			
15	Existing BUA that will be removed (sq ft)	80 sf		
16	Percent BUA	70%	100%	100%
17	Design storm (inches)		1.5 in	1.5 in
18	Design volume of SCM (cu ft)		409 cf	96 cf
19	Calculation method for design volume		Simple	Simple

## ADDITIONAL INFORMATION

Please use this space to provide any additional information about the drainage area(s):

## **PERMEABLE PAVEMENT**

1	Drainage area number	1	2
2	Design volume of SCM (cu ft)	409 cf	96 cf
	Area of permeable pavement to be installed (square feet)	2044 sf	480 sf
4	Area of screened roof runoff that is directed to pavement (square feet)		
	Area of additional built-upon area runoff that is directed to pavement (square		
5	feet)	sf	sf
	Area of incidental, unavoidable runoff from adjacent stable pervious areas		
6	(square feet)	sf	sf
NER	AL MDC FROM 02H .1050		
7	Is the SCM sized to treat the SW from all surfaces at build-out?	No	No
8	Is the SCM located away from contaminated soils?	Yes	Yes
5	What are the side slopes of the SCM (H:V)?		
	Does the SCM have retaining walls, gabion walls or other engineered side		
6	slopes?	No	No
	Are the inlets, outlets, and receiving stream protected from erosion (10-year		
7	storm)?	Yes	Yes
	Is there an overflow or bypass for inflow volume in excess of the design		
8	volume?	Yes	Yes
9	What is the method for dewatering the SCM for maintenance?	Other	Other
10	If applicable, will the SCM be cleaned out after construction?	Yes	Yes
11	Does the maintenance access comply with General MDC (8)?	Yes	Yes
12	Does the drainage easement comply with General MDC (9)?		1
	If the SCM is on a single family lot, does (will?) the plat comply with General		
13	MDC (10)?		
14	Is there an O&M Agreement that complies with General MDC (11)?	Yes	Yes
15	Is there an O&M Plan that complies with General MDC (12)?	Yes	Yes
16	Does the SCM follow the device specific MDC?	Yes	Yes
17	Was the SCM designed by an NC licensed professional?	Yes	Yes
	EABLE PAVEMENT MDC FROM 02H .1055		
18	Is this a detention or infiltration permeable pavement system?	Infiltration	Infiltration
		<=2%	<=2%
19	Proposed slope of the subgrade surface (%)	No	
20	Are terraces or baffles provided?		No
21	SHWT elevation (fmsl)	21.00	20.80
22	Storage elevation of the design rainfall depth (fmsl)	22.5 Yes	21.5
	Will toxic pollutants be stored or handled on or near the permeable		N.
23	pavement?	No	No
24	Does the proposed pavement surface comply with .1055(6)?	Yes	Yes
25	Will runoff from pervious surfaces be directed away from the pavement?	Yes	Yes
	Maximum adjacent area directed to a single point onto the permeable		
26	pavement (sq ft)		sf
27	Is at least one observation well per terrace been provided at the low point(s)?	Yes	Yes
28	Have edge restraints been provided?	Yes	Yes
29	Will the subgrade be graded when dry?	Yes	Yes
	Will the permeable pavement be protected from sediment during		100
30	construction?	Yes	Yes
31	Will an in-situ permeability test be conducted after site stabilization?	Yes	Yes
or In	filtrating Pavement Systems	No.	7
	Was the soil investigated in the footprint and at the elevation of the		With the last the las
32	subgrade?	Yes	Yes
33	Soil infiltration rate (in/hr)	.09 in/hr	0.20 in/hr
_	Is a detailed hydrogeologic study attached if the separation is between 1 and		1 0.20
34	2 feet?	Yes	Yes
35	Is additional media being added to the soil profile?	Yes	Yes
36	Proposed slope of the subgrade surface (%)	<2%	<2%
37	Top of the subgrade (bottom of the aggregate) (fmsl)	22 -21	21
38	Dewatering time (hours)	28.40 hrs	13.33 hrs
	etention Pavement Systems		
39	Drawdown time (hours)		
_			
	egate	0.1-	6:-
40	Aggregate depth (in)	6 in	6 in
41	Aggregate porosity (n)	0.4	0.4
42	Size of aggregate to be used in the subbase	57	57
43	Will the aggregate be washed?	Yes	Yes
DDI.	TIONAL INFORMATION		
-	Please use this space to provide any additional information about the		
	permeable pavement system(s):		
44		4	
44			
44			
44			
14			

3

## 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 wowed, 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 ½ inch or greater occurs, permeable pavement shall be removed and base / sub-base re-compacted, smoothed, and permeable pavement shall then be reinstalled. 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.		

Permit N	um	ber:						
(to	be	provided	by	City	of	Wilmir	ngton)	

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: Ardmore
BMP drainage area or lot number:
Print name: Dave Spetrion
Title:Manager
Address: 18 Palmetto Drive Wrightsville Beach NC 28480
Phone: 910-763-8760
Signature:
Date: 08.13.2020
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, Rebecca E. Benson, a Notary Public for the State of
North Carolina, County of New Hansver, do hereby certify that
David A. Speting, Jr. personally appeared before me this 13th
day of August, 2000, and acknowledge the due execution of the
forgoing permeable pavement maintenance requirements. Witness my hand and official
seal, Rebecca &. Bensa
PUBLIC PUBLIC STATES AND TARY

My commission expires 10 · 16 · 21

Permit Number:	
(to be prov	ided by City of Wilmington)