



Public Services

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

August 31, 2021

Mr. Robert Holding, Owner 1205 Airlie Road Wilmington, NC 28409

Subject: Stormwater Management Permit No. 2020029R1

Airlie View Drainage Plan

Dear Mr. Holding:

The City of Wilmington Engineering Division has received a request for a revision to the Stormwater Management Permit for Airlie View. 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:

- Realignment of access drive to avoid oak trees.
- Demolition of existing buildings on Lot 1
- Proposed new buildings on Lot 1

Please be aware all terms and conditions of the permit issued on December 3, 2020 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 Trent Butler at (910) 341-0094 or trent.butler@wilmingtonnc.gov

Sincerely,

for Sterling Cheatham, City Manager City of Wilmington

cc: Adam Grady, PE, Hanover Design Services, P.A.
Brian Chambers, Wilmington Development Services/Planning





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STORMWATER MANAGEMENT PERMIT APPLICATION FORM (Form SWP 2.3)

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.): AIRLIE VIEW SUBDIVISION |
|------|---|
| 2. | Location of Project (street address): 1205 AIRLIE ROAD, WILMINGTON NC |
| | City: Wilmington County: New Hanover Zip: 28409 |
| 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: |
| | 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: ROBERT HOLDING (OWNER) |
| | Signing Official & Title: ROBERT HOLDING (OWNER) |



| | a. Contact information for Applicant / Signing Off | cial: | | |
|----|---|--------|---------------------|---|
| | Address: 1205 AIRLIE ROAD | | | |
| | City: WILMINGTON S | | | |
| | Phone: 206-948-8643 E | nail: | bob | holding@me.com |
| | b. Please check the appropriate box. The applica | nt lis | ted al | pove is: |
| | The property owner/Purchaser (Skip to item 3) Lessee (Attach a copy of the lease agreement and con Developer (Complete items 2 and 2a below.) | plete | items 2 | 2 and 2a below) |
| 2. | Print Property Owner's name and title (if different from t | пе ар | plican | t). |
| | Property Owner / Organization: | | | |
| | Signing Official & Title: | | | |
| | a. Contact information for Property Owner: | | | |
| | Street Address: | | | |
| | City:Si | ate: ˌ | | Zip: |
| | Phone: E | nail: | | |
| 3. | (Optional) Other Contact name and title (such as a contact on all correspondence: | tructi | ion su _l | pervisor) who would like to be copied |
| | Other Contact Person / Organization: | | | Addition of the second of the |
| | Signing Official & Title: | | | |
| | a. Contact information for person listed in item 3 | ıbov | e: | |
| | Street Address: | | | |
| | City:Si | ate: ˌ | | Zip: |
| | Phone:E | nail: | | |
| 4. | Agent Authorization: Complete this section if you wish to firm (such as a consulting engineer and /or firm) so that the project (such as addressing requests for additional information | / may | | |
| | Consulting Engineer: ADAM H. GRADY | | | |
| | Consulting Firm: HANOVER DESIGN SERVICES | | | |
| | a. Contact information for consultant listed above | | | |
| | Mailing Address: 1123 FLORAL PARKWAY | | | |
| | | ate: _ | NC | Zip: 28403 |
| | | | | RADY@HDSILM.COM |



IV. PROJECT INFORMATION

| 1. | Total Property Area: 19,911 square feet |
|----|--|
| 2. | Total Coastal Wetlands Area: 0 square feet |
| 3. | Total Surface Water Area: 0 square feet |
| 4. | Total Property Area (1) – Total Coastal Wetlands Area (2) – Total Surface Water Area (3) = Total Project Area: 79,911 square feet. |
| 5. | Existing Impervious Surface within Project Area: 10,660 square feet |
| 6. | Existing Impervious Surface to be Removed/Demolished: 0square feet |
| 7. | Existing Impervious Surface to Remain: 10,660 square feet |
| 8. | Total Onsite (within property boundary) Newly Constructed Impervious Surface (in square feet): |

| Buildings/Lots | 0 | | |
|--|-------|-------|-----|
| Impervious Pavement | 1, | 716 | |
| Pervious Pavement (total area / adjusted area w credit applied) | 12066 | / | 0 |
| Impervious Sidewalks | | N\A | |
| Pervious Sidewalks (total area / adjusted area w credit applied) | N\A | 1 | N\A |
| Other lot 1 parking area | | 782 | |
| Future Development | - | 7,500 | |
| Total Onsite Newly Constructed Impervious Surface | | 9,998 | |

| 9. Total Onsite Impervious Surface | |
|---|-------------|
| (Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) 20658 | square feet |
| 10. Net Change in Onsite Impervious Surface (+ for net increase, - for net decrease) 9998 | square feet |
| | 05.0 |

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) $x100 = \frac{25.9}{\%}$ %

12. Total Offsite Newly Constructed Impervious Area (in square feet):

| Impervious Pavement | 246 |
|---|------|
| Pervious Pavement (total area / adjusted area w credit applied | d) / |
| Impervious Sidewalks | |
| Pervious Sidewalks (total area / adjusted area w credit applied | d) / |
| Other (Describe) | |
| Total Offsite Newly Constructed Impervious Surface | 246 |



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 | Permeable Pavement SCM # 1 | Type of SCM SCM# | Type of SCM SCM# |
|--|--------------------------------|---------------------|---------------------|
| Receiving Stream Name | WRIGHTSVILLE RECREATIONAL AREA | | |
| Receiving Stream Index Number | 18-87-24 | | |
| Stream Classification | SB:# | | |
| Total Drainage Area (sf) | 79,911 | | |
| On-Site Drainage Area (sf) | 79,911 | | |
| Off-Site Drainage Area (sf) | 0 | | |
| Buildings/Lots (sf) | 8284 | | |
| Impervious Pavement (sf) | 1716 | | |
| Pervious Pavement (total / adjusted) (sf) | 12066 / 0 | 1 | 1 |
| Impervious Sidewalks (sf) | N\A | | |
| Pervious Sidewalks (total / adjusted) (sf) | 1 | 1 | 1 |
| Other (sf) | | | |
| Future Development (sf) | | | |
| Existing Impervious to remain (sf) | 0 | | |
| Offsite (sf) | 0 | | |
| Total Impervious Area (sf) | 10000 | | |
| Percent Impervious Area (%) | 12.5 | | |

| Basin Information | Type of SCM SCM# | Type of SCM SCM# | Type of 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 | 1 | 1 |
| Impervious Sidewalks (sf) | | | |
| Pervious Sidewalks (total / adjusted) (sf) | / | 1 | 1 |
| Other (sf) | | | |
| Future Development (sf) | | | |
| Existing Impervious to remain (sf) | | | |
| Offsite (sf) | | | |
| Total Impervious Area (sf) | | | |
| Percent Impervious Area (%) | | | |



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.

| μ. σ | | Initials |
|------|---|-------------|
| 1. | One completed Stormwater Management Permit Application Form. | |
| 2. | One completed Supplement Form for each SCM proposed (signed, sealed and dated). | |
| 3. | One completed Operation & Maintenance agreement for each type of SCM. | |
| 4. | Proposed Deed Restrictions and Restrictive Covenants (for all subdivisions) | |
| 5. | Appropriate stormwater permit review fee. | |
| 6. | Minimum requirements identified on the Engineering Plan Review Checklist have been addressed. | |
| 7. | One set of calculations (sealed. signed and dated). | |
| 8. | A detailed narrative (one to two pages) describing the stormwater treatment/management system for the project. | 94.00 to |
| 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. | |
| 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. | |
| 11. | One full set of plans folded to 8.5" x 14". | |
| 12. | A map delineating and labeling the drainage area for each SCM proposed. | |
| 13. | A map delineating and labeling the drainage area for each inlet and conveyance proposed. | |
| 14. | A digital copy of the entire submittal package (can be submitted via flash drive, CD, email, dropbox or other file sharing system). | |



| VI. PROPERTY OWNER AUTH | ORIZATION (If Section III(2) has been filled out, complete this section) | | | |
|---|--|--|--|--|
| , certify that I own the property identified in this permit application, and hus give permission to with o develop the project as currently proposed. A copy of the lease agreement or pending property sales contract | | | | |
| to develop the project as currently p has been provided with the submitta the stormwater system. | roposed. A copy of the lease agreement or pending property sales contract al, which indicates the party responsible for the operation and maintenance of | | | |
| agent | wledge, understand, and agree by my signature below, that if my designated dissolves their company and/or cancels or defaults on their lease sibility for compliance with the City of Wilmington Stormwater Permit reverts the property owner, it is my responsibility to notify the City of Wilmington d Name/Ownership Change Form within 30 days; otherwise I will be operating but a valid permit. I understand that the operation of a stormwater treatment lation of the City of Wilmington Municipal Code of Ordinances and may result g the assessment of civil penalties. | | | |
| Signature: | Date: | | | |
| SEAL | 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, | | | |
| | My commission expires: | | | |
| form is, to the best of my knowledge approved plans, that the required de | certify that the information included on this permit application e, correct and that the project will be constructed in conformance with the sed restrictions and protective covenants will be recorded, and that the requirements of the applicable rules under the City's Comprehensive Date: | | | |
| SEAL SEAL COMMISSION SOLIO OB-28 THE PART OF THE | I, Kendal F Alway, a Notary Public for the State of North Cambra, County of New Haral, do hereby certify that Love Indian personally appeared before me this day of 9/1/1/20, and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal, | | | |
| William III | My commission expires: | | | |

SUPPLEMENT-EZ COVER PAGE

FORMS LOADED

| PROJECT INFORMATION | | | |
|---------------------|--|------------|--|
| 1 | Project Name | Arile View | |
| 2 | Project Area (ac) | 79911 | |
| 3 | Coastal Wetland Area (ac) | | |
| 4 | Surface Water Area (ac) | | |
| 5 | Is this project High or Low Density? | High | |
| 6 | Does this project use an off-site SCM? | No | |

| COMF | PLIANCE WITH 02H .1003(4) | |
|------|--|-------|
| 7 | Width of vegetated setbacks provided (feet) | n/a |
| 8 | Will the vegetated setback remain vegetated? | yes |
| 9 | Is BUA other that as listed in .1003(4)(c-d) out of the setback? | no |
| 10 | Is streambank stabilization proposed on this project? | no no |

| 11 | Infiltration System | Description of the control of the co |
|----|---------------------------------------|--|
| 12 | Bioretention Cell | 0 |
| 13 | Wet Pond | 0 |
| 14 | Stormwater Wetland | 0 0 0 0 0 |
| 15 | Permeable Pavement | 1 |
| 16 | Sand Filter | 2276 0 |
| 17 | Rainwater Harvesting (RWH) | 0 4 4 2 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 |
| 18 | Green Roof | 0 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 10 10 10 10 10 10 10 10 10 10 10 10 10 |
| 24 | Silva Cell | 4 14 |
| 25 | Bayfilter | 0 |
| 26 | Filterra | 0 |

FORMS LOADED

| ESIGNER CERTIFICATION | | |
|-----------------------|-----------------------------|--|
| 27 Name and Title: | Adam Grady, PE | |
| 28 Organization: | Hanover Design Services, PA | |
| 29 Street address: | 1123 Floral Parkway | |
| 30 City, State, Zip: | Wilmington, NC 28403 | |
| 31 Phone number(s): | 919-343-8002 | |
| 32 Email: | agrady@hdsilm.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

SEAL

A3166

Seal

Date

DRAINAGE AREAS

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

FORMS LOADED

| DRAINA | GE AREA INFORMATION | Entire Site | 1 |
|---------|---|-------------|---------------|
| | pe of SCM | PICP | PICP |
| 5 To | otal BUA in project (sq ft) | 9998 sf | 9998 sf |
| Ne | ew BUA on subdivided lots (subject to | | |
| | rmitting) (sq ft) | 9998 sf | 9998 sf |
| Ne | ew BUA outside of subdivided lots (subject to | | |
| 7 pe | rmitting) (sf) | | |
| 8 Of | fsite - total area (sq ft) | 246 sf | 246 sf |
| 9 01 | fsite BUA (sq ft) | 246 sf | 246 sf |
| 10 Br | eakdown of new BUA outside subdivided lots: | | |
| | Parking (sq ft) | | Parameter 12 |
| Ι. | Sidewalk (sq ft) | | ENGINEE RAP J |
| - | Roof (sq ft) | | |
| - | Roadway (sq ft) | | |
| | Future (sq ft) | | |
| - | Other, please specify in the comment box | | |
| | low (sq ft) | | |
| Ne | w infiltrating permeable pavement on | | |
| 11 su | bdivided lots (sq ft) | 12066 sf | 12066 sf |
| Ne | w infiltrating permeable pavement outside of | | |
| | bdivided lots (sq ft) | | |
| Ex | isitng BUA that will remain (not subject to | | |
| 13 pe | rmitting) (sq ft) | sf | sf |
| | isting BUA that is already permitted (sq ft) | 10660 sf | 10660 sf |
| | isting BUA that will be removed (sq ft) | 10660 sf | 10660 sf |
| | rcent BUA | 13% | 13% |
| | sign storm (inches) | 1.5" | 1.5" |
| | sign volume of SCM (cu ft) | 2354 cf | 2354 cf |
| 19 Ca | lculation method for design volume | SCS | SCS |

ADDITIONAL INFORMATION

Please use this space to provide any additional information about the

20 drainage area(s):

1,716 SF is proposed as ribbon curb surrounding pervious driveway. The remaining 8,282 sf is to be allocated to the lots.

| DRA | INAGE AREA INFORMATION | Entire Site | all at a 1 miles |
|-----|---|----------------|-----------------------------|
| 4 | Type of SCM | N/A | Permeable Pavement |
| 5 | Total BUA from project (sq ft) | 9998 sf | 9998 sf |
| 6 | 1995 rules | | |
| | SL 2006-246 | | |
| | 2008 rules | | |
| | 2017 rules | 9998 sf | 9998 sf |
| | New BUA on subdivided lots (subject to | | |
| 7 | permitting) (sq ft) | 9998 sf | 9998 sf |
| | 1995 rules | | 2003 (Name & A) |
| | SL 2006-246 | | SVS130+391351 |
| | 2008 rules | | |
| | 2017 rules | 9998 sf | 9998 sf |
| | New BUA outside of subdivided lots (subject | | |
| 8 | to permitting) (sf) | | |
| | 1995 rules | Dava S. March | Participation of the second |
| | SL 2006-246 | | |
| | 2008 rules | | |
| | 2017 rules | sf | sf |
| 9 | Offsite - total area (sq ft) | | |
| | 1995 rules | a. v. 500 m | |
| | SL 2006-246 | | |
| | 2008 rules | | |
| | 2017 rules | sf | sf |
| 10 | Offsite BUA (sq ft) | | |
| | 1995 rules | Elisa de Paris | |
| | SL 2006-246 | | |
| | 2008 rules | | |
| | 2017 rules | sf | sf |

| 11 | Design storm (inches) | PARENT PROPERTY. | |
|----|--|------------------|--|
| | 1995 rules | | T. A. M. Marian |
| | SL 2006-246 | | En President |
| | 2008 rules | | |
| | 2017 rules | 1.5" | 1.5" |
| 12 | Breakdown of new BUA: | | RESIDENCE OF THE PARTY OF THE P |
| | - Parking (sq ft) | | S La se se se se se |
| | - Sidewalk (sq ft) | | |
| | - Roof (sq ft) | 5868 sf | 5868 sf |
| | - Roadway (sq ft) | 1716 sf | 1716 sf |
| | - Future (sq ft) | 1630 sf | 1630 sf |
| | - Other, please specify in the comment box | | |
| | below (sq ft) | 784 sf | 784 sf |
| | New infiltrating permeable pavement on | | |
| 13 | subdivided lots (sq ft) | 12387 sf | 12387 sf |
| | New infiltrating permeable pavement outside of | | |
| 14 | subdivided lots (sq ft) | 1 | |
| | Exisitng BUA that will remain (not subject to | | kara 7. Sužies |
| 15 | permitting) (sq ft) | 6182 sf | 6182 sf |
| 16 | Existing BUA that is already permitted (sq ft) | | |
| 17 | Existing BUA that will be removed (sq ft) | 4672 sf | 4672 sf |
| 18 | Percent BUA | | |
| 19 | Design volume of SCM (cu ft) | 2354 cf | 2354 cf |
| 20 | Calculation method for design volume | SCS | SCS |

ADDITIONAL INFORMATION

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

Other is for lot 1 driveway.

PERMEABLE PAVEMENT

| 2 | Drainage area number | 1 |
|---|--|---|
| | Design volume of SCM (cu ft) | 2354 cf |
| 3 | Area of permeable pavement to be installed (square feet) | 12066 sf |
| 4 | Area of screened roof runoff that is directed to pavement (square feet) | sf |
| | Area of additional built-upon area runoff that is directed to pavement (square | |
| 5 | feet) | 9998 sf |
| | Area of incidental, unavoidable runoff from adjacent stable pervious areas | |
| 6 | (square feet) | n/a |
| GENE | RAL MDC FROM 02H .1050 | |
| 7 | Is the SCM sized to treat the SW from all surfaces at build-out? | No |
| 8 | Is the SCM located away from contaminated soils? | Yes |
| 5 | What are the side slopes of the SCM (H:V)? | 3:1 |
| | Does the SCM have retaining walls, gabion walls or other engineered side | (C. 1) - 1 - 1 - 1 - 1 - 1 - 1 |
| 6 | slopes? | No |
| | Are the inlets, outlets, and receiving stream protected from erosion (10-year | |
| 7 | storm)? | No |
| | Is there an overflow or bypass for inflow volume in excess of the design | |
| 8 | volume? | Yes |
| 9 | What is the method for dewatering the SCM for maintenance? | |
| 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 |
| | If the SCM is on a single family lot, does (will?) the plat comply with General | |
| 13 | MDC (10)? | Yes |
| 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 |
| FRM | IEABLE 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? | Yes |
| 21 | SHWT elevation (fmsl) | 12.83-22.38 |
| 22 | Storage elevation of the design rainfall depth (fmsl) | 12.03-22.30 |
| 22 | Will toxic pollutants be stored or handled on or near the permeable | |
| 23 | pavement? | |
| 24 | Does the proposed pavement surface comply with .1055(6)? | No |
| 24 | Does the proposed pavement surface comply with 1000(6)? | Yes |
| 25 | Will runoff from pervious surfaces be directed away from the pavement? | Vaa |
| 20 | Maximum adjacent area directed to a single point onto the permeable | Yes |
| 26 | pavement (sq ft) | n/a |
| 20 | pavement (sq tt) | 11/a |
| 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 |
| 25 | Will the permeable pavement be protected from sediment during | 162 |
| 30 | construction? | Yes |
| 31 | Will an in-situ permeability test be conducted after site stabilization? | |
| | | Yes |
| or Ir | nfiltrating Pavement Systems | |
| | Was the soil investigated in the footprint and at the elevation of the | |
| 20 | subgrade? | Yes |
| | Soil infiltration rate (in/hr) | 13 in/hr |
| 32 33 | In a database business and a second s | |
| 33 | Is a detailed hydrogeologic study attached if the separation is between 1 and | |
| 33 34 | 2 feet? | No |
| 33 34 35 | 2 feet? Is additional media being added to the soil profile? | No |
| 33 34 35 36 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) | No 2% |
| 33 34 35 36 37 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) | No 2% Varies See Pla |
| 33 34 35 36 37 38 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) | No 2% |
| 33 34 35 36 37 38 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) tetention Pavement Systems | No 2% Varies See Pla |
| 33 34 35 36 37 38 or D | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) | No 2% Varies See Pla |
| 33 34 35 36 37 38 or D | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) tetention Pavement Systems | No 2% Varies See Pla |
| 33 34 35 36 37 38 or D 39 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) etention Pavement Systems Drawdown time (hours) | No 2% Varies See Pla |
| 33 34 35 36 37 38 or D | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) eterntion Pavement Systems Drawdown time (hours) eggate Aggregate depth (in) Aggregate porosity (n) | No 2% Varies See Pla 1 hrs |
| 33 34 35 36 37 38 or D 39 ggre 40 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) eterntion Pavement Systems Drawdown time (hours) eggate Aggregate depth (in) Aggregate porosity (n) | No 2% Varies See Pla 1 hrs |
| 33 34 335 336 337 338 or D ggre 40 41 | 2 feet? Is additional media being added to the soil profile? Proposed slope of the subgrade surface (%) Top of the subgrade (bottom of the aggregate) (fmsl) Dewatering time (hours) **retention Pavement Systems** Drawdown time (hours) **regate** Aggregate depth (in) | No 2% Varies See Pla 1 hrs 9 in 30 |
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| Perm | it Number | r: | | |
|------------|-----------|---------|-----------|--------|
| (to be | provided | by City | of Wilmir | ngton) |
| SCM | Drainage | Basin # | : | |

Permeable Pavement Operation and Maintenance Agreement

I will keep a maintenance record on this SCM. This maintenance record will 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).

Important maintenance procedures:

At all times, the permeable pavement shall be kept free of:

- Debris and particulate matter through frequent blowing that removes such debris, particularly during the fall and spring.
- Piles of soil, sand, mulch, building materials or other materials that could deposit particulates on the permeable pavement.
- Piles of snow and ice.
- Chemicals of all kinds, including deicers.

The permeable pavement will be inspected **once a quarter**. 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.

| SCM element: | Potential problem: | How to remediate the problem: |
|---|--|--|
| The entire SCM | Trash/debris is present. | Remove the trash/debris. |
| 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, then plant ground cover and water until established. |
| | A vegetated area drains toward the pavement. | Regrade the area so that it drains away from the pavement, then plant ground cover and water until established. |
| The inlet device | The pipe is clogged. | Unclog the pipe. Dispose of the sediment off-site. |
| | The pipe is cracked or otherwise damaged. | Replace the pipe. |
| | Erosion is occurring in the swale. | Regrade the swale if necessary, to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion. |
| >1 | Stone verge is clogged or covered in sediment (if applicable). | Remove sediment and replace with clean stone. |

| SCM element: | Potential problem: | How to remediate the problem: |
|---------------------------------------|---|--|
| The surface of the permeable pavement | Trash/debris present. | Remove the trash/debris. |
| | Weeds. | Do not pull the weeds (may pull out media as well). Spray them with a systemic herbicide such as glyphosate and then return within the week to remove them by hand. (Another option is to pour boiling water on them or steam them.) |
| | Sediment. | Vacuum sweep the pavement. |
| | Rutting, cracking or slumping or damaged structure. | Consult an appropriate professional. |
| Observation well | Water present more than five days after a storm event. | Clean out clogged underdrain pipes. Consult an appropriate professional for clogged soil subgrade. |
| Educational sign | Missing or is damaged. | Replace the sign. |
| The outlet device | Clogging has occurred. | Clean out the outlet device. Dispose of the sediment off-site. |
| | 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. | Contact the NC Department of Environment and Natural Resources Regional Office. |

| Permit Numb | er: | | | |
|-------------|-------------|---------|------------|-----------|
| (to be j | provided by | City of | Wilmington | <u>1)</u> |

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 the City of Wilmington of any problems with the system or prior to any changes to the system or responsible party.

| Project name: AIRLIE VIEW |
|--|
| SCM drainage basin number: |
| |
| Print name: ROBERT HOLDING |
| Title: OWNER |
| Address: 1205 AIRLIE ROAD, WILMINGTON, NC 28409 |
| Phone: 206-948-8643 |
| Signature: |
| Date: 9-11-202 |
| 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, Kendal F Helen , a Notary Public for the State of North Carolina , County of New January , do hereby certify that personally appeared before me this day of September , 2020, and acknowledge the due execution of the forgoing filter strip, riparian buffer, and/or level spreader maintenance requirements. |
| Witness my hand and official seal, |

My commission expires 4/6/25

SEAL