CITY OF WILMINGTON
NORTH CAROLINA

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

May 11, 2022

Mr. Charles Hale - Vice President of Operations & Programs
Food Bank of Central & Eastern NC
1924 Capital Blvd
Raleigh, NC, 27604

Subject: **Stormwater Management Permit No. 2022015R1**
Wilmington Food Bank
High Density

Dear Mr. Hale:

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

- Replace RCP IV (shallow cover) pipe with RCP III
- Add an open grate structure for the infiltration basin inlet

Please be aware all terms and conditions of the permit 03/28/2022 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 Anthony Caudle, City Manager
City of Wilmington

cc: Jerry Burks, P.E., Paramounte Engineering, Inc.
Jeff Walton, Wilmington Development Services/Planning

RECEIVED
By Jeff Walton at 8:38 am, Mar 09, 2022

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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.):
   The Wilmington Food Bank

2. Location of Project (street address):
   1000 Greenfield 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:
   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: Food Bank of Central & Eastern NC
   Signing Official & Title: Charles Hale - Vice President of Operations & Programs

a. Contact information for Applicant / Signing Official:

Address: 1924 Capital Blvd

City: Raleigh State: NC Zip: 27604

Phone: 919-865-3057 Email: chale@foodbankcenc.org

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: Jerry Burks, PE

Consulting Firm: Paramounte Engineering, Inc.

a. Contact information for consultant listed above:

Mailing Address: 122 Cinema Drive

City: Wilmington State: NC Zip: 28403

Phone: 910-791-6707 Email: jburks@paramounte-eng.com

IV. PROJECT INFORMATION

1. Total Property Area: 223,942 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: 223,942 square feet.
5. Existing Impervious Surface within Project Area: 45,787 square feet
6. Existing Impervious Surface to be Removed/Demolished: 45,787 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	31,915
Impervious Pavement	53,295
Pervious Pavement (total area / adjusted area w credit applied)	0 /
Impervious Sidewalks	5,240
Pervious Sidewalks (total area / adjusted area w credit applied)	0 /
Other (Describe)	0
Future Development	0
Total Onsite Newly Constructed Impervious Surface	90,450

9. Total Onsite Impervious Surface
(Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) 90,450 square feet
10. Net Change in Onsite Impervious Surface (+ for net increase, - for net decrease) +44,663 square feet
11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = 40.4 %
12. Total Offsite Newly Constructed Impervious Area (*in square feet*):

Impervious Pavement	1,157
Pervious Pavement (total area / adjusted area w credit applied)	/
Impervious Sidewalks	2,115
Pervious Sidewalks (total area / adjusted area w credit applied)	/
Other (Describe)	
Total Offsite Newly Constructed Impervious Surface	3,272

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	Infiltration Basin SCM # 1	Type of SCM SCM #	Type of SCM SCM #
Receiving Stream Name	Greenfield Creek		
Receiving Stream Index Number	18-76-1.4		
Stream Classification	C,SW		
Total Drainage Area (sf)	142,589		
On-Site Drainage Area (sf)	142,589		
Off-Site Drainage Area (sf)	0		
Buildings/Lots (sf)	31,915		
Impervious Pavement (sf)	53,295		
Pervious Pavement (total / adjusted) (sf)	0 /	/	/
Impervious Sidewalks (sf)	5,240		
Pervious Sidewalks (total / adjusted) (sf)	0 /	/	/
Other (sf)	0		
Future Development (sf)	0		
Existing Impervious to remain (sf)	0		
Offsite (sf)	3,272		
Total Impervious Area (sf)	90,450		
Percent Impervious Area (%)	63.43		

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)	/	/	/
Impervious Sidewalks (sf)			
Pervious Sidewalks (total / adjusted) (sf)	/	/	/
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.

		Initials
1.	One completed Stormwater Management Permit Application Form.	GJB
2.	One completed Supplement Form for each SCM proposed (signed, sealed and dated).	GJB
3.	One completed Operation & Maintenance agreement for each type of SCM.	GJB
4.	Proposed Deed Restrictions and Restrictive Covenants (for all subdivisions)	N/A
5.	Appropriate stormwater permit review fee.	GJB
6.	Minimum requirements identified on the Engineering Plan Review Checklist have been addressed.	GJB
7.	One set of calculations (sealed. signed and dated).	GJB
8.	A detailed narrative (one to two pages) describing the stormwater treatment/management system for the project.	GJB
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 ½ mile of the site boundary, include the ½ mile radius on the map.	GJB
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.	GJB
11.	One full set of plans folded to 8.5" x 14".	GJB
12.	A map delineating and labeling the drainage area for each SCM proposed.	GJB
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).	GJB

CITY OF WILMINGTON ENGINEERING

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

I, Charlie Hale / Food Bank CENC, certify that I own the property identified in this permit application, and thus give permission to _____ with _____ 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 _____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: 10/12/21

SEAL

I, Brenda K Stevens, a Notary Public for the State of NC, County of Wake, do hereby certify that Charles Hale personally appeared before me this day of 12, Oct, 2021 and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,

_____

My commission expires: 6/15/2023

BRENDA K. STEVENS Notary Public Wake County My Comm. Exp. 06-15-2023 NORTH CAROLINA

VII. APPLICANT'S CERTIFICATION

I, _____ 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 rules under the City's Comprehensive Stormwater Ordinance.

Signature: _____ Date: 10/12/21

SEAL

I, Brenda K Stevens, a Notary Public for the State of NC, County of Wake, do hereby certify that Charles Hale personally appeared before me this day of 12 Oct, 2021 and acknowledge the due execution of the application for a stormwater permit. Witness my hand and official seal,

_____

My commission expires: 6/15/2023

BRENDA K. STEVENS Notary Public Wake County My Comm. Exp. 06-15-2023 NORTH CAROLINA

SUPPLEMENT-EZ COVER PAGE

FORMS LOADED

RECEIVED
By Jeff Walton at 8:38 am, Mar 09, 2022

PROJECT INFORMATION		
1	Project Name	**The Wilmington Food Bank**
2	Project Area (ac)	3.27
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)	na
8	Will the vegetated setback remain vegetated?	
9	If BUA is proposed in the setback, does it meet NCAC 02H.1003(4)(c-d)?	
10	Is streambank stabilization proposed on this project?	

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:	Gerald J. Burks, PE
28	Organization:	Paramounte Engineering, Inc.
29	Street address:	122 Cinema Drive
30	City, State, Zip:	Wilmington, NC 28409
31	Phone number(s):	910-791-6707
32	Email:	jburks@paramounte-eng.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

Gerald Burks
Signature of Designer

03/03/2022
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 Basin
5	Total drainage area (sq ft)		142,589
6	Onsite drainage area (sq ft)		142,589
7	Offsite drainage area (sq ft)		
8	Total BUA in project (sq ft)	90450 sf	90450 sf
9	New BUA on subdivided lots (subject to permitting) (sq ft)		
10	New BUA not on subdivided lots (subject to permitting) (sf)	44663 sf	44663 sf
11	Offsite BUA (sq ft)	3272 sf	3272 sf
12	Breakdown of new BUA not on subdivided lots:		
	- Parking (sq ft)	53295 sf	53295 sf
	- Sidewalk (sq ft)	5240 sf	5240 sf
	- Roof (sq ft)	31915 sf	31915 sf
	- Roadway (sq ft)		
	- Future (sq ft)	sf	sf
	- Other, please specify in the comment box below (sq ft)		
13	New infiltrating permeable pavement on subdivided lots (sq ft)		
14	New infiltrating permeable pavement not on subdivided lots (sq ft)	sf	sf
15	Existing BUA that will remain (not subject to permitting) (sq ft)		
16	Existing BUA that is already permitted (sq ft)		
17	Existing BUA that will be removed (sq ft)		
18	Percent BUA		63.43%
19	Design storm (inches)		1.50 in
20	Design volume of SCM (cu ft)		15002 cf
21	Calculation method for design volume		simple

	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)	11107 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)?	Yes
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?	No
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)	12.50
23	Depth to SHWT per soils report (in)	66.00
24	Ground elevation at boring in soils report (fmsl)	18.00
25	Is a detailed hydrogeologic study attached if the separation is between 1 and 2 feet?	N/A
26	Soil infiltration rate (in/hr)	13.95
27	Factor of safety (FS) (2 is recommended):	2.00
Elevations		
29	Bottom elevation (fmsl)	14.50 ft
30	Storage elevation (fmsl)	17. ft
31	Bypass elevation (fmsl)	17.25 ft
For Basins Only		
32	Bottom surface area (ft^2)	4467 ft
33	Storage elevation surface area (ft^2)	7583. 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)	15002 cf
45	Time to draw down (hours)	6 hrs

ADDITIONAL INFORMATION	
46	Please use this space to provide any additional information about the infiltration system(s):
Pretreatment = Inlet Sumps	

Permit Number: _____
(to be provided by City of Wilmington)
SCM Drainage Basin #: _____

Infiltration Basin 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.

Important maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the infiltration basin.
- Immediately after the infiltration basin is established, the vegetation will be watered twice weekly if needed until the plants become established (commonly six weeks).
- No portion of the infiltration basin will be fertilized after the initial fertilization that is required to establish the vegetation.
- The vegetation in and around the basin will be maintained at a height of approximately six inches.

After the infiltration basin is established, it 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.

SCM element:	Potential problem:	How to remediate the problem:
The entire SCM	Trash/debris is present.	Remove the trash/debris.
The perimeter of the infiltration basin	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.
The inlet device: pipe or swale	The pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged (if applicable).	Replace the pipe.
	Erosion is occurring in the swale (if applicable).	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.

SCM element:	Potential problem:	How to remediate the problem:
The forebay	Sediment has accumulated and reduced the depth to 75% of the original design depth.	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. Replace any media that was removed in the process. Revegetate disturbed areas immediately.
	Erosion has occurred or riprap is displaced.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticides are used, wipe them on the plants rather than spraying.
The main treatment area	A visible layer 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. Replace any media that was removed in the process. Revegetate disturbed areas immediately.
	Water is standing more than 5 days after a storm event.	Replace the top few inches of filter media and see if this corrects the standing water problem. If so, revegetate immediately. If not, consult an appropriate professional for a more extensive repair.
	Weeds and noxious plants are growing in the main treatment area.	Remove the plants by hand or by wiping them with pesticide (do not spray).
The embankment	Shrubs or trees have started to grow on the embankment.	Remove shrubs or trees immediately.
	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
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 local NC Department of Environment and Natural Resources Regional Office.

Permit Number: _____
(to be provided by City of Wilmington)

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: The Wilmington Food Bank

SCM drainage basin number: 1

Print name: Charlie Hale

Title: Senior Vice President of Operations

Address: 1924 Capital Blvd Raleigh, NC 27604

Phone: 919-865-3057

Signature: [signature]

Date: 1/27/22

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, Brenda K. Stevens, a Notary Public for the State of NC, Wake, County of Wake, do hereby certify that Charlie Hale personally appeared before me this 27 day of Jan., 2022, and acknowledge the due execution of the forgoing infiltration basin maintenance requirements. Witness my hand and official seal,

BRENDA K. STEVENS
Notary Public
Wake
County
My Comm. Exp.
06-15-2023
NORTH CAROLINA

SEAL

My commission expires 6-15-2023