



COMPREHENSIVE STORMWATER MANAGEMENT PERMIT

HIGH DENSITY DEVELOPMENT

SECTION 1 – APPROVAL

Having reviewed the application and all supporting materials, the City of Wilmington has determined that the application is complete and the proposed development meets the requirements of the City of Wilmington's Comprehensive Stormwater Ordinance.

PERMIT HOLDER: **National Gypsum Company (New NGC, Inc.)**
PROJECT: **NGC Wilmington Sidetrack Expansion Project**
ADDRESS: **838 Sunnyvale Drive**
PERMIT #: **2018041R1**
DATE: **November 10, 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 November 10, 2030 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 June 23, 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, including information provided in the application and supplements.
4. The runoff from all built-upon area within any permitted drainage area must be directed into the permitted stormwater control system for that drainage area.
5. 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 or to the drainage area.
 - c. Further subdivision, acquisition, lease or sale of any part of the project area.
 - d. Filling in, altering, or piping of any vegetative conveyance shown on the approved plan.
 - e. Construction of any permitted future areas shown on the approved plans.



6. A copy of the approved plans and specifications shall be maintained on file by the Permittee.
7. During construction, erosion shall be kept to a minimum and any eroded areas of the system will be repaired immediately.
8. If the stormwater system was used as an Erosion Control device, it must be restored to design condition prior to operation as a stormwater treatment device, and prior to issuance of any certificate of occupancy for the project.
9. 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.
10. All applicable operation & maintenance agreements and easements pertaining to each stormwater treatment system 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 and easements 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.
11. The stormwater management system shall be constructed in its entirety, vegetated and operational for its intended use prior to the construction of any built-upon surface unless prior approval is obtained. City Staff must be notified of any deviation prior to construction of the built-upon surface. Any deviation request shall include justification and must propose an alternative timeline or construction sequence. Notification shall not constitute approval. Any alternative timeline approved by City staff shall become an enforceable component of this permit.
12. The permittee shall at all times provide the operation and maintenance necessary to assure the permitted stormwater system functions at optimum efficiency. The approved Operation and Maintenance Agreement must be followed in its entirety and maintenance must occur at the scheduled intervals including, but not limited to:
 - a. Scheduled inspections (interval noted on the agreement).
 - b. Sediment removal.
 - c. Mowing and revegetation of slopes and the vegetated areas.
 - d. Maintenance of landscape plants, including those within the landscape buffer and on the vegetated shelf.
 - e. Immediate repair of eroded areas, especially slopes.
 - f. Debris removal and unclogging of outlet structure, orifice device, flow spreader, catch basins and/or piping.
 - g. Access to the outlet structure must be available at all times.
13. Records of inspection, maintenance and repair for the permitted stormwater 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.



14. Upon completion of construction, before a Certificate of Occupancy shall be granted, and prior to operation or intended use 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 final design specifications and the field location, type, depth, invert and planted vegetation of all measures, controls and 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.
15. 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. Neither the sale of the project nor the conveyance of common area to a third party should be considered as an approved transfer of the permit.
16. 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 and any other applicable section of the Land Development Code.
17. 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.
18. 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.
19. 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.
20. 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.



Public Services

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

21. 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.
22. 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.
23. The permittee shall submit a renewal request with all required forms and documentation at least 180 days prior to the expiration date of this permit.
24. 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 10th day of November, 2020.

Richard Christensen

for Sterling Cheatham, City Manager
City of Wilmington

RECEIVED

APR 01 2020

ENGINEERING



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212 Operations Center Dr
Wilmington, NC 28412
910 341-7807
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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.):

NGC Wilmington Sidetrack Expansion Project

2. Location of Project (street address):

838 Sunnyvale Drive

City: Wilmington County: New Hanover Zip: 28412

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

At the Intersection of Shipyard Blvd. and Carolina Beach Road, travel south on 421 Carolina Beach Road for 0.9 Miles. Turn right onto Sunnyvale Drive. Destination is 1.3 miles on the right.

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: DP2018041 State – NCDENR/DWQ: _____

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

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:

Submitting for permit concurrently

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: National Gypsum Company (New NGC, Inc.)

Signing Official & Title: John Corsi, VP of Manufacturing

- a. Contact information for Applicant / Signing Official:

Street Address: 2001 Rexford Road

City: Charlotte State: NC Zip: 28211

Phone: 704-365-7300 Fax: _____ Email: jmcorsi@nationalgypsum.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: National Gypsum Company (New NGC, Inc.)

Signing Official & Title: Meghan Zehringer, Project Engineer / Manager

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

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

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.

NGC Wilmington is proposing 75,000 SF of Impervious area improvements that include a new rail spur and expanded asphalt parking area. A large 1.5' deep infiltration basin is proposed to manage impervious area draining to the basin. All stormwater is received through overland flow.

2. Total Property Area: 1,175,031 square feet

3. Total Coastal Wetlands Area: 0 square feet

4. Total Surface Water Area: 0 square feet

5. Total Property Area (2) – Total Coastal Wetlands Area (3) – Total Surface Water Area (4) = Total Project Area: 1,175,031 square feet.

6. Existing Impervious Surface within Property Area: 504,215 square feet

7. Existing Impervious Surface to be Removed/Demolished: 7,686 square feet

8. Existing Impervious Surface to Remain: 496,529 square feet

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

Buildings/Lots	3,150
Impervious Pavement	64,871
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	0
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe)	0
Future Development	0
Total Onsite Newly Constructed Impervious Surface	68,021

10. Total Onsite Impervious Surface

(Existing Impervious Surface to remain + Onsite Newly Constructed Impervious Surface) = 564,550 square feet

11. Project percent of impervious area: (Total Onsite Impervious Surface / Total Project Area) x100 = ~~47.8~~%

48.0

4/15/20 RAC

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

Impervious Pavement	525
Pervious Pavement (adj. total, with % credit applied)	0
Impervious Sidewalks	0
Pervious Sidewalks (adj. total, with % credit applied)	0
Other (describe)	0
Total Offsite Newly Constructed Impervious Surface	525

13. Total Newly Constructed Impervious Surface
 (Total Onsite + Offsite Newly Constructed Impervious Surface) = 68,571 ^{4/15/20 RAC} ~~565,075~~ 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 # 1	BMP #	BMP #
Receiving Stream Name	Cape Fear		
Receiving Stream Index Number	18-(63)		
Stream Classification	C; SW		
Total Drainage Area (sf)	275,385		
On-Site Drainage Area (sf)	275,385		
Off-Site Drainage Area (sf)	0		
Total Impervious Area (sf)	113,883		
Buildings/Lots (sf)	11,643		
Impervious Pavement (sf)	70,320		
Pervious Pavement (sf)	0		
Impervious Sidewalks (sf)	0		
Pervious Sidewalks (sf)	0		
Other (sf)	0		
Future Development (sf)	0		
Existing Impervious to remain (sf)	31,920		
Offsite (sf)	0		
Percent Impervious Area (%)	41.35%		

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

N/A

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: John Bonck

Consulting Firm: Urban Engineers, Inc.

a. Contact information for consultant listed above:

Mailing Address: 530 Walnut St

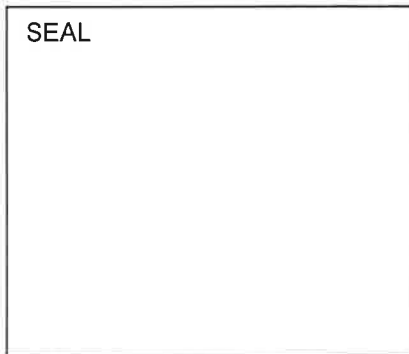
City: Philadelphia State: PA Zip: 19106

Phone: 215-922-8081 Fax: _____ Email: jabonck@urbanengineers.com
Ext 1462

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 _____, _____.

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), John Corsi 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: [Handwritten Signature]
Date: 11/12/19

I, Andeela Loukakis Bowen, a Notary Public for the State of North Carolina, County of Mecklenburg, do hereby certify that John Corsi personally appeared before me this day of November 12, 2019 and acknowledge the due execution of the application for a stormwater

permit. Witness my hand and official seal,

[Handwritten Signature]
My commission expires: 3-12-2020

SUPPLEMENT-EZ COVER PAGE

FORMS LOADED

PROJECT INFORMATION		
1	Project Name	NGC Wilmington Sidetrack Expansion Project
2	Project Area (ac)	7
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?	No
9	Is BUA other than as listed in .1003(4)(c-d) out of the setback?	Yes
10	Is streambank stabilization proposed on this project?	No

No Vegetation Setback exists

NUMBER AND TYPE OF SCMs:		
11	Infiltration System	1
12	Bioretention Cell	0
13	Wet Pond	0
14	Stormwater Wetland	0
15	Permeable Pavement	0
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

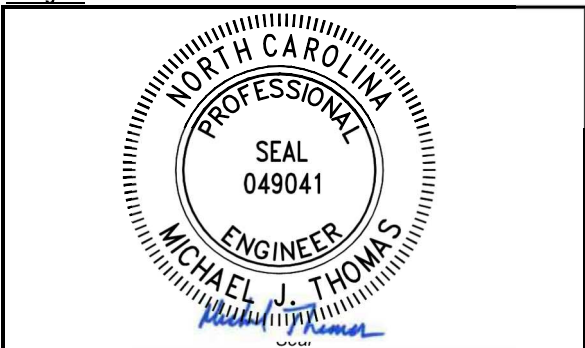
FORMS LOADED

DESIGNER CERTIFICATION		
27	Name and Title:	Mike Thomas
28	Organization:	Urban Engineers, Inc.
29	Street address:	530 Walnut Street
30	City, State, Zip:	Philadelphia, PA 19106
31	Phone number(s):	215-922-8081 Ext 1462
32	Email:	mjthomas@urbanengineers.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



Michael Thomas

Signature of Designer

3/31/2020

Date

DRAINAGE AREAS

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

[FORMS LOADED](#)

DRAINAGE AREA INFORMATION		Entire Site	1
4	Type of SCM	N/A	Infiltration Basin
5	Total BUA in project (sq ft)		68021 sf
6	New BUA on subdivided lots (subject to permitting) (sq ft)		
7	New BUA outside of subdivided lots (subject to permitting) (sf)		sf
8	Offsite - total area (sq ft)		sf
9	Offsite BUA (sq ft)		525 sf
10	Breakdown of new BUA outside subdivided lots:		
	- Parking (sq ft)		26774 sf
	- Sidewalk (sq ft)		sf
	- Roof (sq ft)		3150 sf
	- Roadway (sq ft)		11200 sf
	- Future (sq ft)		sf
	- Other, please specify in the comment box below (sq ft)		26927 sf
11	New infiltrating permeable pavement on subdivided lots (sq ft)		sf
12	New infiltrating permeable pavement outside of subdivided lots (sq ft)		sf
13	Existing BUA that will remain (not subject to permitting) (sq ft)		
14	Existing BUA that is already permitted (sq ft)		sf
15	Existing BUA that will be removed (sq ft)		7686 sf
16	Percent BUA		
17	Design storm (inches)		1.50
18	Design volume of SCM (cu ft)		14528 cf
19	Calculation method for design volume		Simple Method

ADDITIONAL INFORMATION	
20	Please use this space to provide any additional information about the drainage area(s):
Information provided is for Drainage Area 3 only. The 'other' impervious area is the rail spur construction area.	

DRAINAGE AREA INFORMATION		Entire Site	1
4	Type of SCM	N/A	Infiltration System
5	Total BUA from project (sq ft)		68021 sf
6	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		68021 sf
7	New BUA on subdivided lots (subject to permitting) (sq ft)		
	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		68021 sf
8	New BUA outside of subdivided lots (subject to permitting) (sf)		
	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		sf
9	Offsite - total area (sq ft)		
	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		525 sf
10	Offsite BUA (sq ft)		
	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		sf
11	Design storm (inches)		

	1995 rules		
	SL 2006-246		
	2008 rules		
	2017 rules		1.50
12	Breakdown of new BUA:		
	- Parking (sq ft)		26744 sf
	- Sidewalk (sq ft)		sf
	- Roof (sq ft)		3150 sf
	- Roadway (sq ft)		11200 sf
	- Future (sq ft)		
	- Other, please specify in the comment box below (sq ft)		26927 sf
13	New infiltrating permeable pavement on subdivided lots (sq ft)		sf
14	New infiltrating permeable pavement outside of subdivided lots (sq ft)		sf
15	Existing BUA that will remain (not subject to permitting) (sq ft)		45862 sf
16	Existing BUA that is already permitted (sq ft)		sf
17	Existing BUA that will be removed (sq ft)		7686 sf
18	Percent BUA		41%
19	Design volume of SCM (cu ft)		14528 cf
20	Calculation method for design volume		Simple Method

ADDITIONAL INFORMATION

21	Please use this space to provide any additional information about the drainage area(s):
Information provided is for Drainage Area 3 only. The 'other' impervious area is the rail spur construction area. Design volume (Item 19) was determined using NCDEQ's Section B Stormwater Calculations using the Simple Method Runoff Volume.	

INFILTRATION SYSTEM

1	Drainage area number	1
2	Design volume of SCM (cu ft)	14528 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)?	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?	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)?	No
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
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)	34.80
23	Depth to SHWT per soils report (in)	50.00
24	Ground elevation at boring in soils report (fmsl)	39.00
25	Is a detailed hydrogeologic study attached if the separation is between 1 and 2 feet?	Yes
26	Soil infiltration rate (in/hr)	4.50
27	Factor of safety (FS) (2 is recommended):	2.00
Elevations		
29	Bottom elevation (fmsl)	36 ft
30	Storage elevation (fmsl)	36.5 ft
31	Bypass elevation (fmsl)	37 ft
For Basins Only		
32	Bottom surface area, ft ² :	40239 ft
33	Storage elevation surface area (ft ²)	41667. 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 void ratio (%)	
41	Is stone free of fines?	
42	Is the stone wrapped in geotextile fabric?	
43	Has at least one infiltration port been provided?	
Volumes/Drawdown		
44	Design volume of SCM (cu ft)	21684 cf
45	Time to drawdown (hours)	3 hrs
ADDITIONAL INFORMATION		
46	Please use this space to provide any additional information about the infiltration system(s):	
	Drainage area number 1 correlates to Drainage Area 3 of Plan Sheet C-901. Design volume (Item 2) was determined using NCDEQ's Section B Stormwater Calculations using the Simple Method Runoff Volume. Although the Design volume is 14,528 CF, the Construction Design Volume is 21,684 due to the outlet elevation 36.50', therefore Item 44, lists the Construction design volume and the drawdown time is based off that volume.	

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.

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: NGC WILMINGTON SIDETRACK EXPANSION PROJECT

SCM drainage basin number: #1

Print name: John Corsi

Title: VP, Manufacturing (New NGC, Inc.)

Address: 2001 Rexford Road, Charlotte, NC 28211

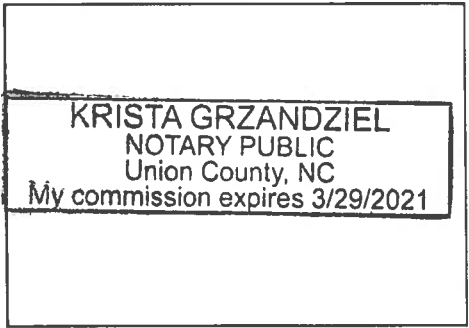
Phone: 704-365-7300

Signature: *John Corsi*

Date: 8/5/20

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, Krista Grzandziel, a Notary Public for the State of North Carolina, County of Union, do hereby certify that John Corsi personally appeared before me this 5th day of August, 2020, and acknowledge the due execution of the forgoing infiltration basin maintenance requirements. Witness my hand and official seal,



Notary Krista Grzandziel

SEAL

My commission expires 3/29/2021