



#### **Public Services**

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

August 29, 2019

Chris Blanton, Manager Pacific Place, LLC 709 Royal Bonnet Dr. Wilmington, NC 28405

Subject:

Stormwater Management Permit No. 2018013R1

Pacific Place High Density

Dear Mr. Blanton:

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

-Increase in building impervious area, within the future BUA allocation from the previous stormwater permit

Please be aware all terms and conditions of the permit Issued on 01/18/2018 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 Robert Gordon at (910) 341-5856 or rob.gordon@wilmingtonnc.gov

Sincerely,

for Sterling Cheatham, City Manager

City of Wilmington

cc: Howard Resnik, PE, CSD Engineering

Brian Chambers, Wilmington Development Services/Planning





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Engineering
414 Chestnut St, Suite 200
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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.): Pacific Place 2. Location of Project (street address): 6505 Pacific Road Zip: 28409 City: Wilmington County: New Hanover 3. Directions to project (from nearest major intersection): From intersection of Oleander Dr. & Greenville Loop, travel south on Greenville Loop approximately 0.56 miles. Turn right onto Pacific Rd. to enter site. II. PERMIT INFORMATION 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): State - NCDENR/DWQ: \_\_\_\_\_ City of Wilmington: 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: 2018013 State – NCDENR/DWQ: 3. Additional Project Permit Requirements (check all applicable): CAMA Major |X|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: NHC GP #3-19, Revision to GP #42-17 Rev. #1 Pacific Place issued 6-17-19



## **III. CONTACT INFORMATION**

۱.	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: Pacific Place, LLC
	Signing Official & Title: Chris Blanton, Manager
	a. Contact information for Applicant / Signing Official:
	Street Address: 709 Royal Bonnet Dr.
	City: Wilmington State: NC Zip: 28405
	Phone: 910-264-0940 Fax: Email: pacificplacellcnc@gmail.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:
	Signing Official & Title:



	City:	<u> </u>		State:	Zip:		
	Phone:						
	Mailing Address						
	City:						
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12. Total Offsite Newly Constructed Impervious Area (improvements made outside of property boundary, in square feet):

Impervious Pavement	804
Pervious Pavement (adj. total, with % cre	dit applied)
Impervious Sidewalks	
Pervious Sidewalks (adj. total, with % cre	dit applied)
Other (describe)	
Total Offsite Newly Constructed Impervious So	urface 804

13.	Total Newly Constructe	d Impervious	Surface		
(	Total Onsite + Offsite Newly	Constructed Im	pervious Surface)	= 207736	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#	(Type of BMP) BMP #
Receiving Stream Name	Bradley Creek		
Receiving Stream Index Number	18-87-244(2)		
Stream Classification	SC		
Total Drainage Area (sf)	409926	0	0
On-Site Drainage Area (sf)	409926	7	
Off-Site Drainage Area (sf)	0		
Total Impervious Area (sf)	206932	0	0
Buildings/Lots (sf)	132600		
Impervious Pavement (sf)	49954		
Pervious Pavement, % credit (sf)	-		
Impervious Sidewalks (sf)	21978		
Pervious Sidewalks, % credit (sf)			
Other (sf)	•		
Future Development (sf)	2400		
Existing Impervious to remain (sf)			
Offsite (sf)	0		
Percent Impervious Area (%)	50.5		

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



#### 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 414 Chestnut Street, Suite 200 Wilmington, NC 28402



## VI. CONSULTANT INFORMATION AND AUTHORIZATION

1.		er and /or firm) so that the	/ may	y pr	rity to another individual and/or rovide information on your beha tion).	
	Consulting Engineer: Howard	Resnik, PE				
	Consulting Firm: CSD Engine	ering				
	a. Contact information fo	or consultant listed above:				
	Mailing Address: PO BOX					
	City: Wilmington		te: N	ИС	Zip: 28406	
	Phone: 910-791-4441					
VII	. PROPERTY OWNER AU	THORIZATION (If Section I	I(2) ha	as be	een filled out, complete this section)	
owing person listed proof the sto As designed Will result of the validation of the control of th	n the property identified in this son listed in Contact Information, item of in Contact Information, item 1) possed. A copy of the lease ag submittal, which indicates the rmwater system.  the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and the legal property owner I ack signated agent (entity listed in Contact and entity listed in Contact a	reement or pending proper party responsible for the contact Information, item 1) of the contact Information immediately a perwise I will be operating the operation of a stormwater Municipal Code of Ordina	rty sa opera d agr issolv sibility erty nd su a stor	ree los	by my signature below, that if restheir company and/or cancels or compliance with the City of ner. As the property owner, it is nit a completed Name/Ownersh water treatment facility without a cent facility without a	of ion ntly ith my or my ip
ent	orcement including the assess	sment of civil penalties.				
Sig	nature:				Date:	
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		My commission expires:				



## VIII. APPLICANT'S CERTIFICATION

I, (print or type name of person listed in	Contact Information, item 1), Chris Blanton	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 st	ormwater rules under.					
Signature:	Date: 8/6/,	19				
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Design rainfall depth (in)  Minimum volume of SGM (cult)  No  AB Does the mainetenance access comply with General MDC (197  3.1 #9 Does the mainetenance access comply with General MDC (197  4.10 If the SCM is on a single family lot, does the plat comply with General MDC (107  Yes #11 is there an O&M Agreement that complies with General MDC (107  Yes #11 is there an O&M Plan that complies with General MDC (117)  Pump (preferred) #13 was the SCM designed by an NC licensed professional?  SA/DA #6 Midth of the vegetated shelf (feet)  1 7000 ft #7 Danneter of transdown office (inches)  3.51 ft #7 Deaneter of transdown office (inches)  2.5.5 ft #7 Deaneter of transdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #10 Deaneter of transdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #10 Is a trash and embankment planted in non-clumping turf grass?  #11 Are the dam and embankment planted in non-clumping turf grass?  #11 Are the dam and embankment planted in non-clumping turf grass?  #12 in #11 Deacribe the planting plan for the vegetated at a rate of 50 plants per 200 sf of shelf area.  Yes #11 Deacribe the planting blanted at a rate of 50 plants per 200 sf of shelf area.	Design rainfall depth (in)	es at build-out?         Yes           Is?         3:1           s or other engineered side slopes?         No           ected from erosion (10-year storm)?         Yes           sign flow?         Yes           maintenance?         Pump (preferred)           efeet)         17456 sf           ston of average depth?         No           mis)         17,000 ft           mis)         21.5 ft           sass         23.5 ft	(in)  quired (cu ft)  M (cu ft)  the SCM be cleaned out after construction?  enance access comply with General MDC (8)?  ge easement comply with General MDC (9)?  n a single family lot, does the plat comply with General MDC (10)?  A Agreement that complies with General MDC (11)?  A Plan that complies with General MDC (12)?  tesigned by an NC licensed professional?
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Minimum volume of SCM (cu ft)  Yes #7 If applicable, with the SCM be cleaned out after construction?  No #8 Does the mainetenance access comply with General MDC (8)?  3:1 #9 Does the mainetenance access comply with General MDC (9)?  #10 If the SCM is on a single family lot, does the plat comply with General MDC (10)?  Yes #11 Is there an O&M Agreement that complies with General MDC (11)?  Yes #12 Is there an O&M Agreement that complies with General MDC (11)?  Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  SA/DA #6 Width of the vegetated shelf (feet)  17466 sf #6 Location of vegetated shelf (fins)  No #7 Be Elevation of bottom of shelf (fins)  A5 SIDE of vegetated shelf (fins)  No #7 Diameter of drawdown from below the top surface of the permanent pool?  12 in #7 Does the onfrice drawdown from below the top surface of the permanent pool?  Yes #8 Are fourtains proposed?  #10 Is a trash rack or other device provided ber Wet Pond MDC (9)?  #11 In Describe the maining plan for the wegetated shelf.  #12 In #13 Describe the planting plan for the wegetated shelf.  #14 Describe the planting plan for the wegetated shelf.  #15 Describe the planting plan for the wegetated shelf.  #16 It have the dam and embankment and embankment  #17 Describe the planting plan for the wegetated shelf.  #18 If have the dam and embankment dam and embankment  #19 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 st of shelf area.  Yes Yes	Minimum volume eduired (cu ft)  Yes #7 If applicable, with the SCM (cu ft)  No #8 Does the mainetenance access comply with General MDC (9)?  #10 If the SCM is on a single family lot, does the plat comply with General MDC (10)?  Yes #11 is there an O&M Agreement that complies with General MDC (11)?  Yes #12 Is there an O&M Plan that complies with General MDC (11)?  Yes #12 Is there an O&M Plan that complies with General MDC (11)?  Yes #12 Is there an O&M Plan that complies with General MDC (11)?  Yes #12 Is there an O&M Plan that complies with General MDC (12)?  Pump (preferred) #13 Wast be SCM designed by an NC incensed professional?  \$ANDA #6 Width of the vegetated shelf (fms)  17 A000 ft #6 Elevation of top of shelf (fms)  No #8 Slope of vegetated shelf (fms)  12 In #7 Diameter of drawdown from below the top surface of the permanent pool?  12 In #8 Does the onlice drawdown from below the top surface of the permanent pool?  12 In #8 Does the onlice drawdown from below the top surface of the permanent pool?  #10 is a trash rack or other device provided to protect the outlet system?  #11 Species of furth that will be used on the dan and embankment and sine on in the dan and embankment painted at a rate of 50 plants per 200 sf of shelf area.  Yes #11 Species of furth that will be bead on the dan and embankment painted at a rate of 50 plants per 200 sf of shelf area.  Yes #12 Public Publ	Ses at build-out?   Yes	quired (cu ft)  CM (cu ft)  the SCM be cleaned out after construction?  enance access comply with General MDC (8)?  ge easement comply with General MDC (9)?  n a single family lot, does the plat comply with General MDC (10)?  M Agreement that complies with General MDC (11)?  W Plan that complies with General MDC (12)?  stesigned by an NC licensed professional?
Design volume of SCM (cu ft )   Pesign State of the drainage easement comply with General MDC (3)?     Pesign State SCM is on a single family lot, does the plat comply with General MDC (10)?     Pesign State SCM is on a single family lot, does the plat comply with General MDC (11)?     Pump (preferred) #11 is there an O&M Agreement that complies with General MDC (11)?     Pump (preferred) #13 Was the SCM designed by an NC licensed professional?     Pump (preferred) #13 Was the SCM designed by an NC licensed professional?     Factorion of vegetated shelf (feet)     F	Pesign volume of SCM (cu ft )   Pesign School (color)	es at build-out?  Is?  Sor other engineered side slopes?  Isign flow?  In Yes  Wes  Maintenance?  Pump (preferred)  SA/DA  SA/DA	h the SCM be cleaned out after construction?  The SCM be cleaned out after construction?  The access comply with General MDC (8)?  The a single family lot, does the plat comply with General MDC (10)?  The single family lot, does the plat comply with General MDC (11)?  The single family lot, does the plat comply with General MDC (11)?  The single family lot, does the plat complies with General MDC (11)?  The single family lot, does the plat complies with General MDC (12)?  The single family lot, does the family lot family lot family lot family lot family lot family lot.
Yes	Yes #7 If applicable, with the SCM be cleaned out after construction?  No #8 Does the maintenance access comply with General MDC (8)?  3.1 #9 Does the drainage easement comply with General MDC (9)?  No #11 Is there an O&M Agreement that complies with General MDC (10)?  Yes #11 Is there an O&M Agreement that complies with General MDC (11)?  Yes #11 Is there an O&M Pain that complies with General MDC (11)?  Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  \$ADA #6 Width of the vegetated shelf (feet)  17456 sf #6 Lecation of vegetated shelf (feet)  No #6 Slope of vegetated shelf (feet)  #7 Diameter of drawdown office (inches)  23.51 # #6 Elevation of vegetated shelf (#1)  No #6 Slope of vegetated shelf (#1)  17.000 ft #7 Diameter of drawdown office (inches)  23.54 #7 Dest the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the point minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #1 Describe the planting plan for the vegetated shelf:  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dean and embankment planted in non-clumping furl grass?  Yes #11 Species of furf that will be used on the dam and embankment  48 in #11 Describe the planting plan for the vegetated shelf:  On in minimum of 6 plant species will be planted at a rate of 50 plants per 200 of of shelf area.  Yes	es at build-out?  Is?  No  Sor other engineered side slopes?  No  Yes  Yes  Wes  Maintenance?  Pump (preferred)  SA/DA  T7456 sf  54710 cf  3.51 ft  Son of average depth?  No  msi)  17,000 ft  21.5 ft  23.5 ft	h the SCM be cleaned out after construction? enance access comply with General MDC (8)? ge easement comply with General MDC (9)? n a single family lot, does the plat comply with General MDC (10)? M Agreement that complies with General MDC (11)? M Plan that complies with General MDC (12)? Jesigned by an NC licensed professional?
No #8 Does the mainetenance access comply with General MDC (8)?  13:1 #9 Does the drainage easement comply with General MDC (10)?  14:2 No #10 If the SCM is on a single family lot, does the plat comply with General MDC (10)?  15:4 #11 Is there an O&M Agreement that complies with General MDC (11)?  16:5 #12 Is there an O&M Plan that complies with General MDC (11)?  17:456 \$\frac{\pmu}{2}\$ #6 Location of Wagetated shelf (feet)  17:456 \$\frac{\pmu}{2}\$ #6 Location of vegetated shelf (feet)  17:5 #8 Slope of vegetated shelf (fins)  17:5 #7 Does the ordice drawdown office (inches)  21:5 ft #7 Does the ordice drawdown from below the top surface of the permanent pool?  12:5 #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  16:0 #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  16:0 #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  16:0 #8 Are fountains proposed?  17:0 #8 Does the onfice drawdown of the dam and embankment  18:2 #11 Species of furfithat will be used on the dam and embankment  18:3 #11 Species of turfithat will be used on the dam and embankment  18:1  #11 Does cribe the plantage at a rate of 50 plants per 200 sf of shelf area.  12:in #11 Plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	No #8 Does the mainetenance access comply with General MDC (8)?  3:1 #9 Does the drainage easement comply with General MDC (10)?  Yes #11 is there an O&M Agreement that complies with General MDC (11)?  Yes #12 is there an O&M Plan that complies with General MDC (11)?  Yes #12 is there an O&M Plan that complies with General MDC (11)?  Yes #12 is there an O&M Plan that complies with General MDC (12)?  Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  \$A/DA #6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (feet)  SA/DA #8 Slope of vegetated shelf (first)  No #8 Slope of vegetated shelf (first)  A Drawdown from of bottom of shelf (first)  12.5 ft #7 Denavor of bottom of shelf (first)  #7 Denavor of bottom of shelf (first)  12.5 ft #7 Denavor of bottom of shelf (first)  #7 Denavor of bottom of shelf (first)  #7 Denavor of hostom of shelf (first)  #8 Dees the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #8 Are fountains proposed?  #10 Is a tresh rack or other device provided per Wet Pond MDC (9)?  #10 Is a tresh rack or ther device provided to protect the outlet system?  #10 Is a tresh rack or ther device provided to protect the outlet system?  #11 Are the dam and enhankment planted in non-clumping turf grass?  Yes #11 Describe the planting plan for the vegetated shelf:  On minimum of 6 plant species will be planted at a rate of 50 plants per 200 st of shelf area.  Yes	S or other engineered side slopes?   3:1	enance access comply with General MDC (8)?  ge easement comply with General MDC (9)?  n a single family lot, does the plat comply with General MDC (10)?  M Agreement that complies with General MDC (11)?  M Plan that complies with General MDC (12)?  Jesigned by an NC licensed professional?
#9 Does the drainage easement comply with General MDC (9)?  No #10 If the SCM is on a single family lot, does the plat comply with General MDC (10)?  Yes #11 Is there an O&M Agreement that complies with General MDC (11)?  Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  \$A/DA #6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (feet)  \$5.51f #6 Location of vegetated shelf (fins)  No #6 Slope of vegetated shelf (fins)  \$1.51f #7 Dirameter of drawdown orifice (inches)  \$2.55f #7 Dirameter of drawdown orifice (inches)  \$2.55f #7 Does the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the ond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Describe the planting plan for the dam and embankment  #11 Describe the planting plan for the vegetated shelf:  #11 Describe the planting plan for the vegetated shelf:  #12 Is minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	#10 If the SCM is on a single family lot, does the plat comply with General MDC (10)?  Yes #11 Is there an O&M Agreement that complies with General MDC (11)?  Yes #12 Is there an O&M Agreement that complies with General MDC (11)?  Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  \$ADDA #6 Width of the vegetated shelf (feet)  17466 sf #6 Elevation of vegetated shelf (fms)  3.51 ft #6 Elevation of vegetated shelf (fms)  No #6 Slope of vegetated shelf (fms)  17.000 ft #7 Diameter of drawdown office (inches)  21.5 ft #7 Diameter of drawdown films for the remporary pool (hours)  12 in #8 Does the ond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #11 Describe and embankment planted in non-clumping turf grass?  Yes #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Describe the planting plan for the vegetated shelf:  48 in #11 Describe the planting plan for the vegetated shelf:  12 in #11 Describe the planting plan for the vegetated shelf:  48 in #11 Describe the planting plan for the vegetated shelf:  12 in #11 Species of turf that will be used on the dam and embankment and embankment and embankment of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes #11 Species of turf that will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes #11 Species of turf that will be planted at a rate of 50 plants per 200 sf of shelf area.	3:1 s or other engineered side slopes? ected from erosion (10-year storm)?	ge easement comply with General MDC (9)?  n a single family lot, does the plat comply with General MDC (10)?  M Agreement that complies with General MDC (11)?  M Plan that complies with General MDC (12)?  tesigned by an NC licensed professional?  etated shelf (feet)
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Yes	# Yes #11 Is there an O&M Agreement that complies with General MDC (11)?    Yes #12 Is there an O&M Plan that complies with General MDC (12)?	ected from erosion (10-year storm)?  Yes  maintenance?  Pump (preferred)  SA/DA  e feet)  SA/DA  17456 sf  3.51 ft  ion of average depth?  No ms)  17.000 ft  21.5 ft	M Agreement that complies with General MDC (11)? M Plan that complies with General MDC (12)? Jesigned by an NC licensed professional? etated shelf (feet)
Pump (preferred) #13 Was the SCM designed by an NC licensed professional?  SA/DA #6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (finst)  3.51 ft #6 Elevation of top of shelf (finst)  No #8 Slope of vegetated shelf (finst)  17.000 ft #7 Diawdown time for the temporary pool (hours)  21.5 ft #7 Does the orifice drawdown orifice (inches)  23.5 ft #7 Does the prime for the temporary pool (hours)  48 Does the point minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #8 Does the point minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment 48 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes	Yes	sign flow?         Yes           maintenance?         Pump (preferred)           SA/DA         17456 sf           e feet)         17456 sf           ion of average depth?         54710 cf           ms)         17,000 ff           ms)         17,000 ff           21.5 ft         23.5 ft	M Plan that complies with General MDC (12)? Jesigned by an NC licensed professional? etated shelf (feet)
Pump (preferred) #13 Was the SCM designed by an NC licensed professional?    SA/DA	Pump (preferred) #13 Was the SCM designed by an NC licensed professional?    SA/DA	maintenance?  Pump (preferred)  SA/DA  e feet)  17456 sf  54710 cf  3.51 ft  ion of average depth?  No ms)  17.000 ft  21.5 ft	designed by an NC licensed professional?
#6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (fmsl)  3.51 ft #6 Elevation of top of shelf (fmsl)  3.51 ft #6 Elevation of bottom of shelf (fmsl)  No #6 Slope of vegetated shelf (H:V)  17.000 ft #7 Diameter of drawdown orifice (inches)  21.5 ft #7 Drawdown time for the temporary pool (hours)  23.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #9 Are fountains proposed?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Species of turf that will be used on the dam and embankment 48 in #11 Describe the planting plan for the vegetated shelf:  .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 st of shelf area.	#6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (fins)  3.51 ft #6 Elevation of top of shelf (fins)  No #8 Slope of vegetated shelf (H:V)  17.000 ft #7 Diameter of drawdown onfice (inches)  21.5 ft #7 Does the onfice drawdown from below the top surface of the permanent pool?  12 in #7 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr stom?  Yes #9 Are fountains proposed?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment #11 Describe the planting plan for the vegetated shelf:  On in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes Yes	SA/DA e feet) 17456 sf 17456 sf 54710 cf 3.51 ft ion of average depth? No msl) 17.000 ft 21.5 ft 23.5 ft	etated shelf (feet)
## Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf  54710 of #6 Elevation of top of shelf (fms)  3.51 ft #6 Elevation of bottom of shelf (fms)  No #6 Slope of vegetated shelf (fms)  17.000 ft #7 Diameter of drawdown orifice (inches)  21.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  23.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  Yes #9 Are fountains proposed?  #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #9 Are fountentation provided per Wet Pond MDC (9)?  #10 Is a trash rack or other device provided to protect the outlet system?  #8 If Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Describe the planting plan for the vegetated shelf:  On in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	#6 Width of the vegetated shelf (feet)  17456 sf #6 Location of vegetated shelf (feet)  54710 cf #6 Elevation of shelf (fms)  3.51 ft #6 Elevation of shelf (fms)  No #6 Slope of vegetated shelf (H-V)  17.000 ft #7 Diameter of drawdown onfice (inches)  21.5 ft #7 Drawdown time for the temporary pool (hours)  23.5 ft #7 Does the onfice drawdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storn?  Yes #9 Are fountains proposed?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment #11 Describe the planting plan for the vegetated shelf:  On in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes Yes	SA/DA   17456 sf   1	etated shelf (feet)
17456 sf   #6 Location of vegetated shelf	17456 sf   #6 Location of vegetated shelf	re feet) 17456 sf 54710 cf 54710 cf 3.51 ft No No msl) 17.000 ft 21.5 ft 23.5 ft	
\$4710 cf   #6 Elevation of top of shelf (finsl)	8263 12.67 17.000 ft 21.5 ft 23.5 ft 12 in Yes 10w path: 8263 Yes 48 in .00 in Yes 7 ves	54710 cf 3.51 ft ion of average depth? No msl) 17.000 ft 21.5 ft 23.5 ft	tated shelf
3.51 ft #6 Elevation of bottom of shelf (fmsl)  No #6 Slope of vegetated shelf (H:V)  17.000 ft #7 Diameter of drawdown orifice (inches)  21.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #9 Are fountains proposed?  #9 If yes, is documentation provided per Wet Pond MDC (9)?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of furf that will be used on the dam and embankment 48 in #11 Describe the planting plan for the vegetated shelf:  Oo in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	3.51 ft No No 17.000 ft 21.5 ft 23.5 ft 12 in Yes flow path: 8263 Yes 48 in .00 in Yes	3.51 ft on of average depth?  Ms)  17.000 ft  21.5 ft  23.5 ft	of shelf (fmsl)
No   #6 Slope of vegetated shelf (H:V)     17.000 ft   #7 Diameter of drawdown orifice (inches)     21.5 ft   #7 Drawdown time for the temporary pool (hours)     23.5 ft   #7 Does the orifice drawdown from below the top surface of the permanent pool?     12 in   #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?     #9 Are fountains proposed?     #9 Are fountains proposed?     #9 If yes, is documentation provided per Wet Pond MDC (9)?     #10 Is a trash rack or other device provided to protect the outlet system?     #11 Are the dam and embankment planted in non-clumping turf grass?     #11 Describe the planting plan for the vegetated shelf:     00 in   minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.     12 in     #12 in     12 in   #12 in     #12 in   #13 Describe the planted at a rate of 50 plants per 200 sf of shelf area.     12 in   #12 in     13 in   #14 Describe the planted at a rate of 50 plants per 200 sf of shelf area.     15 in   #15 in   #15 in     15 in   #15 in   #15 in   #15 in     15 in   #15 in   #15 in   #15 in     15 in   #15 in   #15 in   #15 in   #15 in     15 in   #15 in   #15 in   #15 in   #15 in   #15 in   #15 in     15 in   #15 in	No 17.000 ft 21.5 ft 23.5 ft 12 in Yes 48 in .00 in Yes Yes 75 ft 12 in Yes 75 ft 12 in Yes Yes 75 ft 12 in Yes Yes 75 ft 12 in Yes Yes Yes Yes Yes Yes Yes	ion of average depth? No 17.000 ft 17.000 ft 21.5 ft 23.5 ft	om of shelf (fmsl)
17.000 ft #7 Diameter of drawdown orifice (inches)  21.5 ft #7 Drawdown time for the temporary pool (hours)  23.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the orifice drawdown from below the top surface of the permanent pool?  Yes #9 Are fountains proposed?  #9 Are fountains proposed?  #10 Is a trash rack or other device provided to protect the outlet system?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment 48 in #11 Describe the planting plan for the vegetated shelf:  .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes 12 in	17.000 ft 21.5 ft 23.5 ft 12 in Yes flow path: 8263 Yes 48 in .00 in Yes 12 in Yes	msl) 17.000 ft 21.5 ft 23.5 ft	ed shelf (H:V)
23.5 ft #7 Drawdown time for the temporary pool (hours)  23.5 ft #7 Does the orifice drawdown from below the top surface of the permanent pool?  12 in #8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #9 Are fountains proposed?  #10 Is a trash rack or other device provided per Wet Pond MDC (9)?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment  48 in #11 Describe the planting plan for the vegetated shelf:  .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	21.5 ft 23.5 ft 12 in Yes flow path: 8263 Yes 48 in .00 in Yes 7 Y	21.5 ft 23.5 ft	vdown orifice (inches)
## Does the orifice drawdown from below the top surface of the permanent pool?    12 in	23.5 ft 12 in Yes 10w path: 8263 Yes 48 in .00 in Yes 75 Yes	23.5 ft	for the temporary pool (hours)
#8 Does the pond minimize impacts to the receiving channel from the 1-yr, 24-hr storm?  Yes #9 Are fountains proposed?  #10 If yes, is documentation provided per Wet Pond MDC (9)?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Describe the planting plan for the vegetated shelf:  Oo in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	12 in Yes flow path:  8263 Yes Yes 48 in .00 in Yes		drawdown from below the top surface of the permanent pool?
Yes   #9 Are fountains proposed?   #9   Fyes, is documentation provided per Wet Pond MDC (9)?   #10 Is a trash rack or other device provided to protect the outlet system?   #11 Are the dam and embankment planted in non-clumping turf grass?   #11 Are the dam and embankment planted in non-clumping turf grass?   #11 Species of turf that will be used on the dam and embankment   #11 Describe the planting plan for the vegetated shelf:   #11 Describe the planting plan for the vegetated shelf:   #12 In   #13 In   #14 In   #15 In   #15 In   #15 In   #15 In   #15 In   #15 In   #16 In   #16 In   #16 In   #17 In   #17 In   #17 In   #18 In   #18 In   #19	Yes flow path:  8263 Yes Yes 48 in .00 in Yes 7 es	12 in	ninimize impacts to the receiving channel from the 1-yr, 24-hr storm?
#10 Is a trash rack or other device provided to protect the outlet system?  #10 Is a trash rack or other device provided to protect the outlet system?  #11 Are the dam and embankment planted in non-clumping turf grass?  #11 Species of turf that will be used on the dam and embankment  48 in #11 Describe the planting plan for the vegetated shelf:  00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.	### ##################################	Yes	posed?
#10 Is a trash rack or other device provided to protect the outlet system?  8263 #11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment  48 in #11 Describe the planting plan for the vegetated shelf:  .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes   12 in   12	8263 Yes 48 in .00 in Yes 12 in		entation provided per Wet Pond MDC (9)?
#11 Are the dam and embankment planted in non-clumping turf grass?  Yes #11 Species of turf that will be used on the dam and embankment  48 in #11 Describe the planting plan for the vegetated shelf:  .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area.  Yes  12 in	8263 Yes 48 in .00 in Yes 12 in		or other device provided to protect the outlet system?
Yes #11 Species of turf that will be used on the dam and embankment 48 in #11 Describe the planting plan for the vegetated shelf: .00 in minimum of 6 plant species will be planted at a rate of 50 plants per 200 sf of shelf area. Yes 12 in	Yes 48 in .00 in Yes 12 in Yes	8263	d embankment planted in non-clumping turf grass?
48 in .00 in Yes 12 in	48 in .00 in .90 in Yes	Yes #11	that will be used on the dam and embankment
.00 in Yes 12 in	.00 in Yes 12 in Yes	48 in	anting plan for the vegetated shelf:
		ni 00.	species will be planted at a rate of 50 plants per 200 sf of shelf area.
CONTRACTOR OF THE PARTY OF THE			
	CALCULATION OF THE PROPERTY OF THE PERSON OF	#5 Will the forebay be cleaned out when the depth is reduced to less than the above?	

Please use this space to provide any additional information about this wet pond that you think is relevant to the review:



Оре	Operation & Maintenance Agreement			
Project Name: Pacific Place Project Location: 6505 Pacific Road				
Maintenance records shall be kept on t				
ocation. Any deficient BMP elements r leficiencies can affect the integrity of si				
endericies surramest the integrity of s	addition, surely of the public, ar	id the political removal	emoieries of the Bivii (e).	
he BMP(s) on this project include (che	eck all that apply & corresponding	a O&M tables will be ad	ded automatically):	
Bioretention Cell	Quantity:	Location(s):		
<b>Dry Detention Basin</b>	Quantity:	Location(s):		
Grassed Swale	Quantity:	Location(s):		
Green Roof	Quantity:	Location(s):		
Infiltration Basin Infiltration Trench	Quantity: Quantity:	Location(s):		
Level Spreader/VFS	Quantity:	Location(s):		
Permeable Pavement	Quantity:	Location(s):		
Proprietary System	Quantity:	Location(s):		
Rainwater Harvesting	Quantity:	Location(s):		
Sand Filter	Quantity:	Location(s):		
Stormwater Wetland Wet Detention Basin	Quantity: 1	Location(s):	faito	
Disconnected Impervious Are	Quantity: 1  a Present: No	Location(s): rear or Location(s):	i site	
User Defined BMP	Present: No	Location(s):		
* Responsible Party: Title & Organization: Street address:	Chris Blanton Manager, Pacific Place, LLC 709 Royal Bonnet Dr.			
City, state, zip:	Wilmington, NC 28405			
Phone number(s):	910-264-0940			
Email: [	pacificplacellcnc@gmail.con	n		
// -	20		0 1/2	
Signature:	Blez		Date: 8/6//5	
David Walter		Public for the State of	North Cooling	
ounty of New HANG		certify that	4/11/	
ersonally appeared before me this	day of	Hugust	$\frac{209}{}$ and	
cknowledge the due execution of the (	Operations and Maintenance Ag	reement .		
Vitness my hand and official seal,	Can pour	·	IN EREIMEI	
NOTARL OF A			AUG - 6 2019	
N PUBLIC A			ENGINEERING	
My comm	ission expires			

8/5/2019 Page 1 of 5

#### **Wet Detention Pond Maintenance Requirements**

The wet detention basin system is defined as the wet detention basin, pretreatment including forebays and the vegetated filter if one is provided.

Important maintenance procedures:

- Immediately after the wet detention basin is established, the plants on the vegetated shelf and perimeter of the basin should be watered twice weekly if needed, until the plants become established (commonly six weeks).
- No portion of the wet detention pond should be fertilized after the first initial fertilization that is required to establish the plants on the vegetated shelf.
- Stable groundcover should be maintained in the drainage area to reduce the sediment load to the wet detention basin.
- If the basin must be drained for an emergency or to perform maintenance, the flushing of sediment through the emergency drain should be minimized to the maximum extent practical.
- Once a year, a dam safety expert should inspect the embankment.

After the wet detention pond is established, it should be inspected **once a month and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance should be kept in a known set location and must be available upon request.

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

BMP element:	Potential problem:	How I will remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
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.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The forebay	Sediment has accumulated to a depth greater than the original design depth for sediment storage.	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 BMP.
	Erosion has occurred.	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 pesticide is used, wipe it on the plants rather than spraying.
The vegetated shelf	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying.

#### Wet Detention Pond Maintenance Requirements (Continued) The main treatment area Sediment has accumulated to Search for the source of the sediment and remedy the problem if a depth greater than the possible. Remove the sediment and dispose of it in a location where it original design sediment will not cause impacts to streams or the BMP. storage depth. Algal growth covers over 50% Consult a professional to remove and control the algal growth. of the area. Cattails, phragmites or other Remove the plants by wiping them with pesticide (do not spray). invasive plants cover 50% of the basin surface. The embankment Shrubs have started to grow Remove shrubs immediately. on the embankment. Evidence of muskrat or beaver Use traps to remove muskrats and consult a professional to remove activity is present. beavers. A tree has started to grow on Consult a dam safety specialist to remove the tree. the embankment. An annual inspection by an Make all needed repairs. appropriate professional shows that the embankment needs repair. (if applicable) 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 Contact the local NC Department of Environment and Natural damage have occurred at the Resources Regional Office. outlet.

The measuring device used to determine the sediment elevation shall be such that it will give an accurate depth reading and not readily penetrate into accumulated sediments.

Wet Detention Pond Design Summary  Wet Pond Diagram					
1		Permanent Pool El.	21.5	Permanent Pool El.	21.5
Pretreatment other No		Temporary Pool El:	23	Temporary Pool EI:	23
	,	Clean Out Depth:	4.5	Clean Out Depth:	4.5
than forebay?		Sediment Removal El:	17	Sediment Removal El:	17
Has Veg. Filter?	0	Bottom Elevation:	16	Bottom Elevation:	16

# <u>High Density Residential Subdivisions</u> <u>Deed Restrictions & Protective Covenances</u>

- 1. The following covenants are intended to ensure ongoing compliance with State Stormwater Management Permit Number <u>2018013</u>, as issued by the City of Wilmington under Article 14, Division III of the Land Development Code.
- 2. The City of Wilmington is made a beneficiary of these covenants to the extent necessary to maintain compliance with the stormwater management permit.
- 3. These covenants are to run with the land and be binding on all persons and parties claiming under them.
- 4. The covenants pertaining to stormwater may not be altered or rescinded without the express written consent of the City of Wilmington, Engineering Division.
- 5. Alteration of the drainage as shown on the approved plan may not take place without the concurrence of the City of Wilmington, Engineering Division.
- 6. The maximum allowable built-upon area per lot is 3400 square feet. This allotted amount includes any built-upon area constructed within the lot property boundaries, and that portion of the right-of-way between the front lot line and the edge of the pavement. Built upon area includes, but is not limited to, structures, asphalt, concrete, gravel, brick, stone, slate, coquina and parking areas, but does not include raised, open wood decking, washed stone or the water surface of swimming pools.
- 7. All runoff from the built-upon areas on the lot must drain into the permitted system. This may be accomplished through a variety of means including roof drain gutters which drain to the street, grading the lot to drain toward the street, or grading perimeter swales to collect the lot runoff and directing them into a component of the stormwater collection system. Lots that will naturally drain into the system are not required to provide these additional measures.

