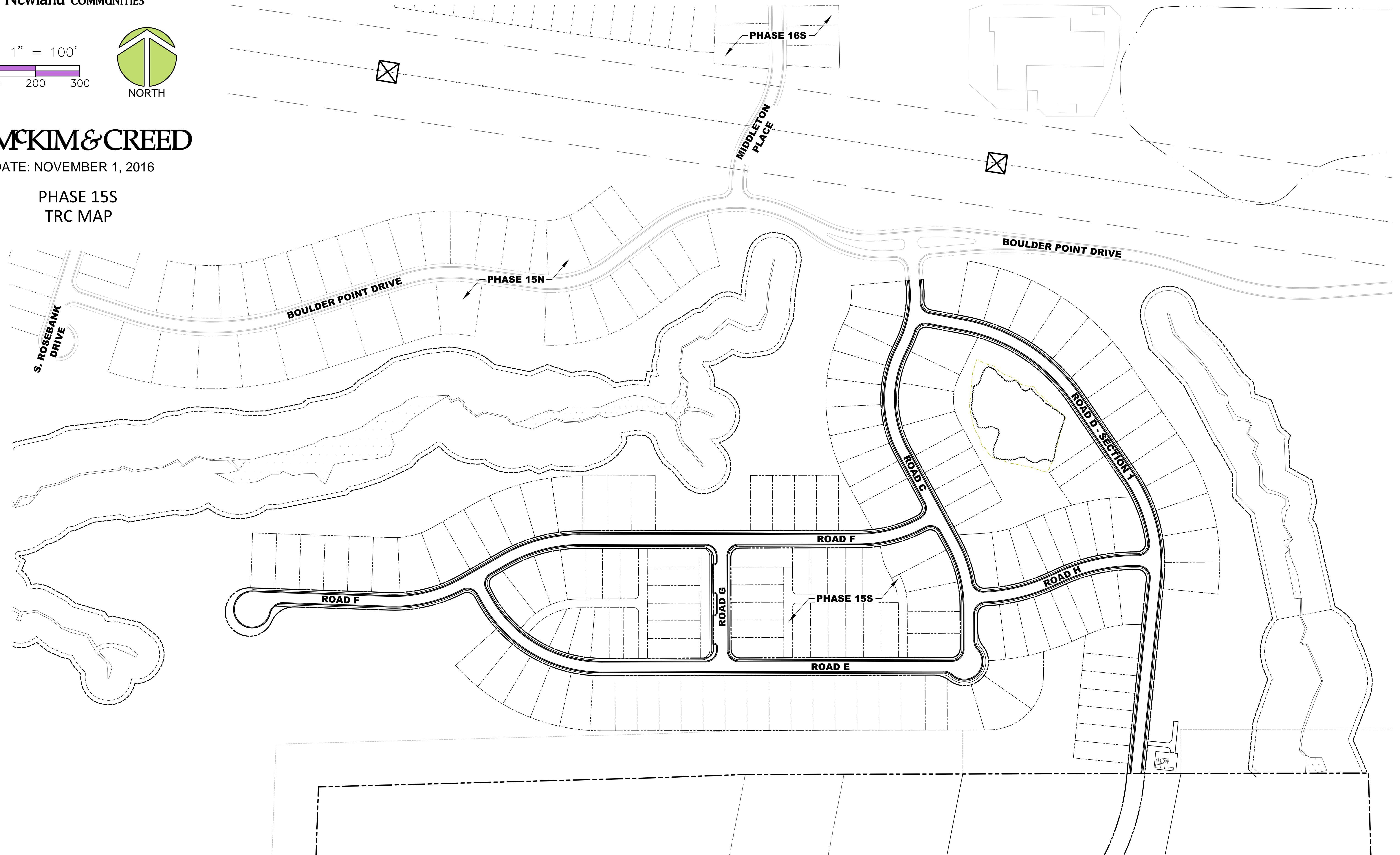


DATE: NOVEMBER 1, 2016

**PHASE 15S
TRC MAP**



SITE GENERAL NOTES:

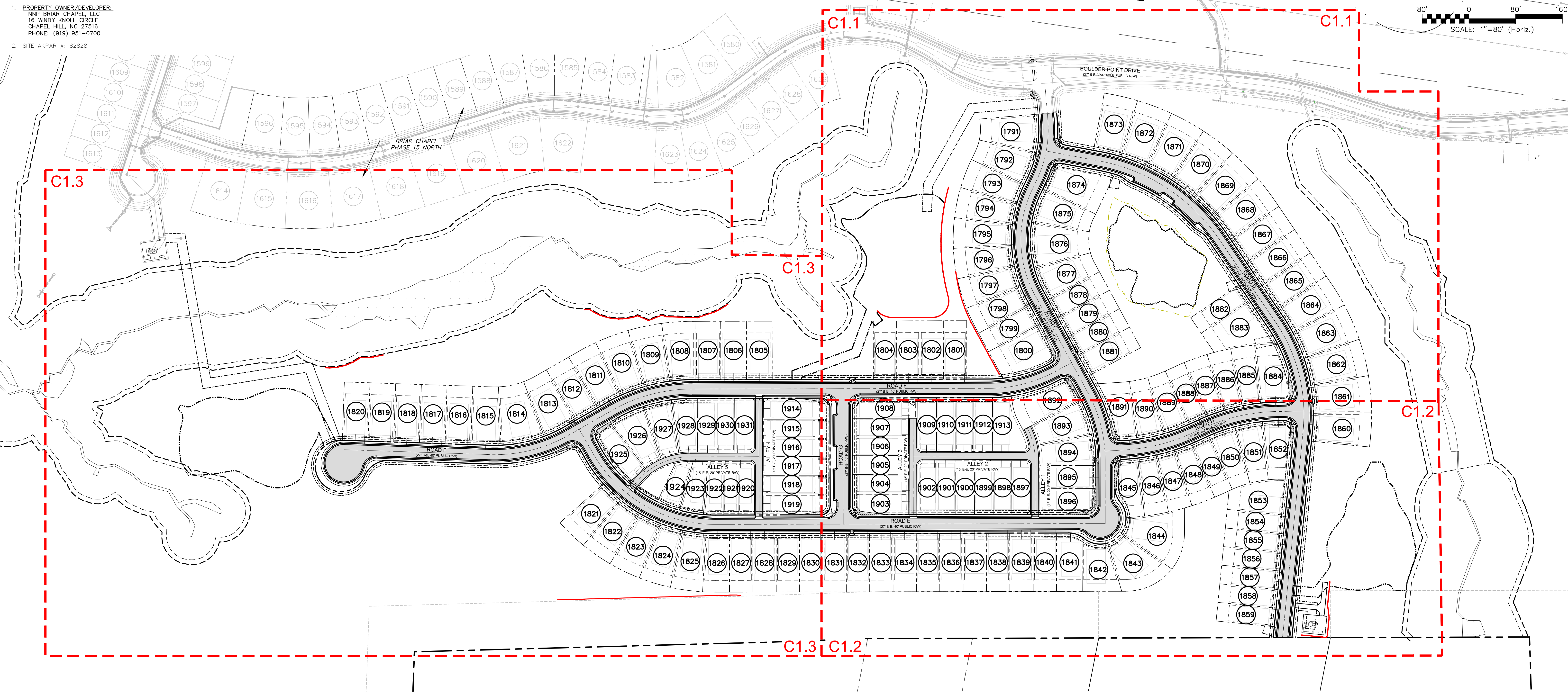
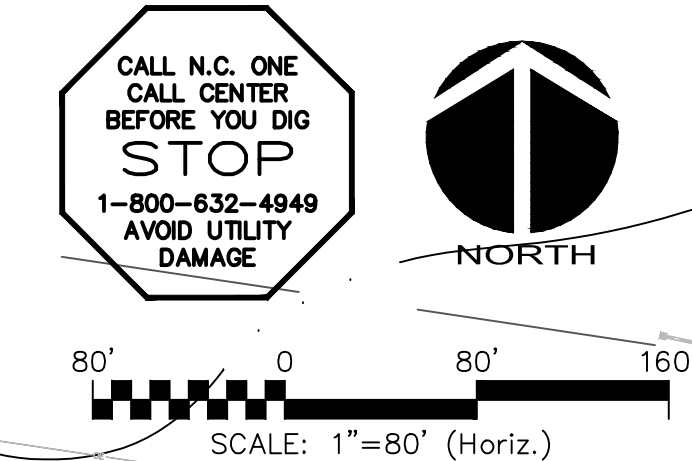
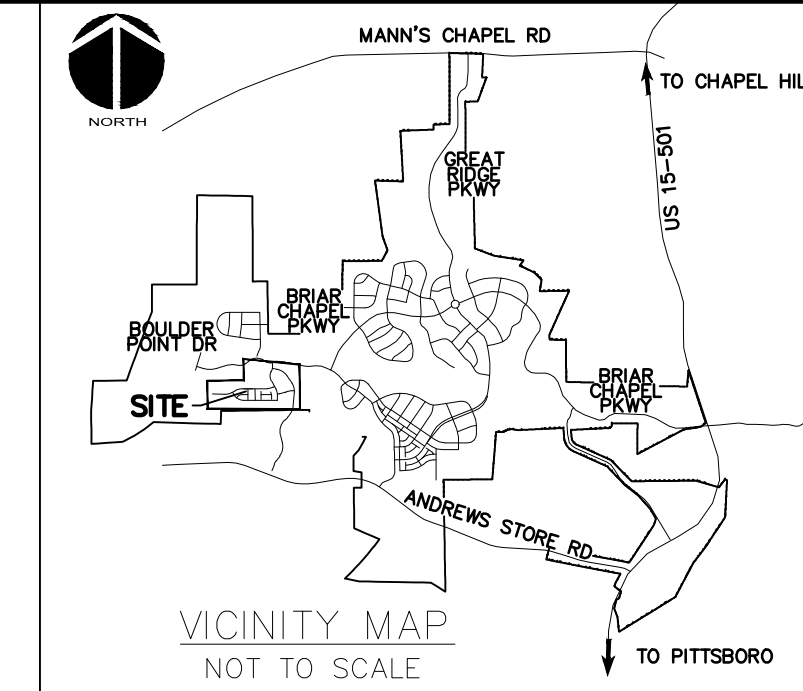
1. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
2. REFER TO THE FOLLOWING MCKIM & CREED, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:
 - BRIAR CHAPEL - BOULDER POINT DRIVE EXTENSION CONSTRUCTION PLANS SEALED MARCH 29, 2016.
 - US STEEL SECTION 1 CONSTRUCTION PLANS SEALED JUNE 13, 2016.
 - BRIAR CHAPEL - PHASE 15N CONSTRUCTION PLANS SEALED JUNE 13, 2016.
 - BRIAR CHAPEL - PHASE 16S CONSTRUCTION PLANS SEALED JUNE 13, 2016.
3. REFER TO THE FOLLOWING JOHN R. MCADAMS COMPANY, INC. CONSTRUCTION PLANS, AND ALL SUBSEQUENT CONSTRUCTION BULLETINS FOR INFORMATION ON EXISTING SITE INFRASTRUCTURE:
 - BRIAR CHAPEL - RECLAMATION FACILITY EROSION CONTROL PLAN SEALED JULY 29, 2005
 - BRIAR CHAPEL - PHASE 1 CONSTRUCTION PLANS SEALED OCTOBER 21, 2005.
4. STREAM AND WETLAND LOCATIONS ARE BASED ON DELINEATIONS PROVIDED BY SOIL AND ENVIRONMENTAL CONSULTANTS IN RALEIGH, NC - CONTACT NIKKI THOMSON AT 919-846-5900.
5. A PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD HAZARD AREA "AE" AS SHOWN ON FEMA FIRM MAP #3710976500J DATED FEBRUARY 2, 2007.
6. ALL PROPOSED ROADWAY DIMENSIONS AS SHOWN ARE MEASURED FROM BACK OF CURB TO BACK OF CURB, ALL PROPOSED ALLEY DIMENSIONS AS SHOWN ARE MEASURED FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
7. BEFORE STARTING ANY CONSTRUCTION OF IMPROVEMENTS WITHIN ANY NCDOT STREET OR HIGHWAY RIGHT-OF-WAY, CONTACT NCDOT DISTRICT OFFICE AND OBTAIN ALL PERMITS AND ENCROACHMENTS. KEEP COPIES ON CONSTRUCTION SITE. ALSO CONTACT NCDOT DISTRICT OFFICE 24 HOURS IN ADVANCE BEFORE PLACING CURB AND GUTTER AT 336-629-1423.
8. REFER TO PLAN AND PROFILE SHEETS FOR DETAILED SANITARY SEWER AND STORM DRAINAGE INFORMATION WITHIN PUBLIC ROADS.

CHATHAM COUNTY REQUIRED SITE NOTES:

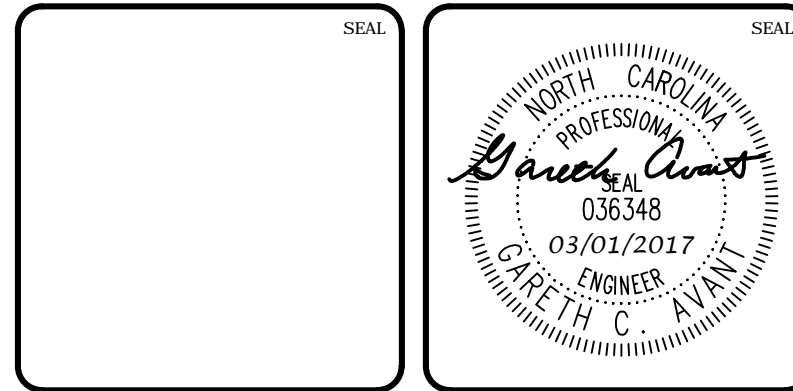
1. PROPERTY OWNER/DEVELOPER:
NMP BRIAR CHAPEL, LLC
16 WINDY KNOLL CIRCLE
CHAPEL HILL, NC 27516
PHONE: (919) 951-0700
2. SITE AKPAR #: 82828

LEGEND:

- R/W LINE
- FUTURE R/W LINE
- EXISTING R/W LINE
- HOA EASEMENT LINE
- PUBLIC UTILITY EASEMENT LINE
- PUBLIC DRAINAGE EASEMENT
- EXISTING POWER LINE EASEMENT
- OVERHEAD POWER LINE
- 10' NO BUILD BUFFER LINE
- RIPARIAN BUFFER LINE
- BMP MAINTENANCE & ACCESS EASEMENT
- ROADWAY CENTERLINE



REV. NO.	DESCRIPTIONS	DATE
4	REVISIONS PER COMMENTS RECEIVED FROM CHATHAM COUNTY EROSION CONTROL	2017.03.01
3	REVISIONS PER COMMENTS RECEIVED FROM NCDOT STORMWATER AND SCDOT	2017.02.21
2	REVISIONS PER COMMENTS RECEIVED FROM CHATHAM COUNTY PUBLIC WORKS	2017.02.13
1	ISSUED FOR PERMITTING	2017.01.11



MCKIM & CREED
1730 Varsity Drive, Suite 500
Raleigh, North Carolina 27606
Phone: (919) 233-8091, Fax: (919) 233-8031
F-1222
www.mckimcreed.com

BRIAR CHAPEL™
by
Newland COMMUNITIES

**BRIAR CHAPEL
PHASE 15 SOUTH
CHATHAM COUNTY, NORTH CAROLINA**

OVERALL SITE PLAN

DATE: JANUARY 11, 2017	SCALE: N/A	MCK FILE NUMBER: C1.X
MCE PROJ. # 02735-0178	HORIZONTAL: AS NOTED	DRAWING NUMBER: C1.0
DRAWN: BSS	VERTICAL: N/A	
DESIGNED: BSS		
CHECKED: GCA		
PROJ. MGR.: CHS		
STATUS: FINAL DRAWINGS FOR REVIEW PURPOSES ONLY	REVISION: 4	

CHATHAM COUNTY
MAJOR SUBDIVISION
REVIEW CHECKLIST – BRIAR CHAPEL

Phase: Phase 15 South
 Review For: Preliminary Plat

Section: _____
 Submittal Date: 5/11/2017

Attach all supporting documentation regarding these approvals.

#	PRELIMINARY PLAT	APPROVAL DATE
1	<input checked="" type="checkbox"/> Date of TRC Pre-Submittal Meeting (Per Condition 18 of 2012 CUP Revision)	12/14/2016
2	<input checked="" type="checkbox"/> 20 Copies of Plat/Detailed Site Plan (folded)
3	<input checked="" type="checkbox"/> Application
4	<input checked="" type="checkbox"/> Road name approval(s)	5/10/2017
5	<input checked="" type="checkbox"/> NCDOT Road Plan approval and Encroachment Agreement (if public roads)	3/10/2017
	[N/A] NCDOT Commercial Driveway Permit (if applicable)
6	<input checked="" type="checkbox"/> Erosion Control Plan approval	3/6/2017
7	<input checked="" type="checkbox"/> U. S. Army Corps of Engineers 404 Permit (if applicable)	8/21/2009
8	<input checked="" type="checkbox"/> NCDENR Water Quality 401 Permit (if applicable)	8/31/2009
9	<input checked="" type="checkbox"/> Statement regarding historical structures and/or features <i>See CUP Response letter, item 16.</i>	
10	<input checked="" type="checkbox"/> NCDENR DWQ Wastewater Collection System Extension	2/23/2017
11	<input checked="" type="checkbox"/> NCDENR DWQ Wastewater Treatment/Reclaimed Water/Spray Irrigation Permit	9/12/2014
12	<input checked="" type="checkbox"/> Chatham County Water Plan Approval & Fees Paid per Condition 13A of 2012 CUP Revision.	1/18/2017
13	<input checked="" type="checkbox"/> NCDENR Water Main Extension	3/10/2017
14	<input checked="" type="checkbox"/> NCDENR Authorization to Construct / Water System	3/10/2017
15	<input checked="" type="checkbox"/> Updated impervious surface calculations sheet for phase of development	
16	<input checked="" type="checkbox"/> Conditional Use Permit Stipulations Response & Master Plan updates: Per Condition 18 of 2012 CUP revision: (1 electronic copy and 1 hard copy of each)	
	<input checked="" type="checkbox"/> Updated T-zone tracking table	
	<input checked="" type="checkbox"/> Grading Plan (<i>See construction drawing set included with submittal</i>)	
	<input checked="" type="checkbox"/> Utility Plan in compliance with Condition #7 of 2012 CUP Revision (<i>See construction drawing set included with submittal</i>)	
17	<input checked="" type="checkbox"/> Stormwater Management Plan with detailed Hydraulic calculations and final construction drawings per Condition 4 and 18 (<i>See construction drawing set and calculations included with submittal</i>)	
18	<input checked="" type="checkbox"/> Any other permits or approval letters necessary to obtain Prelim Plat approval <i>Approval of Stormwater Management Plan 03/10/2017</i>	
	[X] Preliminary plat fees (\$45.00 per residential lot)	
	{ X } 1 electronic copy of all items above (see Digital Document Requirements)	
	Comments:	

Date Complete Application Rec'd: _____ / _____ / _____ By: _____

P.O. Box 54
Pittsboro, NC 27312
Tel: (919) 542-8204
Fax: (919) 542-2698

[X] Preliminary
[] Final

BRIAR CHAPEL MAJOR SUBDIVISION APPLICATION

Phase / Section : Phase 15 South

Subdivision Applicant:

Subdivision Owner:

Name: Lee Bowman, Project Manager
Address: 1342 Briar Chapel Parkway
Chapel Hill, NC 27516
Phone:(W) (919) 951-0712
Phone:(H) _____ Fax: (919) 951-0701
E-Mail lbowman@newlandco.com

Name: NNP Briar Chapel LLC
Address: 1342 Briar Chapel Parkway
Chapel Hill, NC 27516
Phone:(W) (919) 951-0712
Phone:(H) _____ Fax: (919) 951-0701
E-Mail lbowman@newlandco.com

Township: Baldwin Zoning: CUD-CC
Flood Map # 3710976500J Zone: X
Watershed: WS-IV PA

P. I. N. # Not Available
Parcel # 82828 (AKPAR)
Existing Access Road: Boulder Point Drive
S.R. road name SR# not yet established

Total Project Acreage: 1,589.36 ac
Total Acreage of Phase/Section: 44.23 ac

Total # of Lots: Overall 2,500
Total # of Lots: 141

Name and date of contact with Chatham County Historical Association: 10/17/2013

Type of new road: [X] Private/ Length: 1,240 LF

[X] Public/ Length: 5,800 LF

Road Surface:
[X] paved

Water System:
[X] Public System
Chatham County

Sewer System:
[X] Public Utility
On-Site WWTP

List other facilities in Phase/Section: commercial, recreation, etc., and the approximate acreage or square footage:

Signature of Applicant Date Signature of Owner Date

For Office Use Only:

Notes: _____

Approved by County Commissioners: CUP/Sketc Feb. 15, 2005

Fee Paid: _____ Date: _____ Preliminary Plan _____
Final Plat _____

ADJACENT LAND OWNERS (Property owners across a road, easement, or waterway are considered adjacent land owners):

Legal notices are mailed to these owners, please **type or write neatly, and include zip codes.**

1. THOMAS CHARLES SLEDD	11. RICHARDSON DAVID H
220 ROACK RIDGE ROAD	791 REDGATE ROAD
PITTSBORO, NC 27312	PITTSBORO, NC 27312
2. EDWARD MARCUS FREDRICK JR.	12. MANN LEON
1884 ANDREWS STORE ROAD	1809 MANNS CHAPEL ROAD
PITTSBORO, NC 27312	PITTSBORO, NC 27312
3. NIPPER RUSSELL GREY	13. RYAN LARRY W
184 STONE GATE DR.	2094 MANNS CHAPEL ROAD
PITTSBORO, NC 27312	PITTSBORO, NC 27312
4. LAWRENCE COURTNEY SCOTT	
6112 GRAY STONE DR.	
CHAPEL HILL, NC 27514	
5. MANN LEON	
1809 MANNS CHAPEL ROAD	
PITTSBORO, NC 27312	
6. DUNPHY FRANK R II	
4432 ANDRES STORE ROAD	
PITTSBORO, NC 27312	
7. CIMARRON CAPITAL INC	
2330 OPERATIONS DRIVE	
DURHAM, NC 27705	
8. DUNN LEE ALLEN	
220 VALLEY VIEW LN	
PITTSBORO, NC 27312	
9. TICON PROPERTIES LLC	
5836 FAYETTEVILLE ROAD, SUITE 203	
DURHAM, NC 27713	
10. MILLS JAYE E	
288 BLAKES DRIVE	
PITTSBORO, NC 27312	

FOR OFFICE USE ONLY

Date's Adjacent Owner Letters were mailed out

Preliminary	/ /	/ /
-------------	-----	-----

Dates and Actions of Planning Board Meetings

Preliminary	/ /	<input type="checkbox"/> Appv'd	<input type="checkbox"/> Denied	<input type="checkbox"/> Tabled
Final	/ /	<input type="checkbox"/> Appv'd	<input type="checkbox"/> Denied	<input type="checkbox"/> Tabled

Dates and Actions of Board of Commissioners Meetings

CC/CUP/ Sketch	2 /15 05/	<input checked="" type="checkbox"/> Appv'd	<input type="checkbox"/> Denied	<input type="checkbox"/> Tabled
Preliminary	/ /	<input type="checkbox"/> Appv'd	<input type="checkbox"/> Denied	<input type="checkbox"/> Tabled
Final	/ /	<input type="checkbox"/> Appv'd	<input type="checkbox"/> Denied	<input type="checkbox"/> Tabled

Conditions stipulated by Planning Board or Board of Commissioners (label as sketch, preliminary or final):

_See A RESOLUTION APPROVING AN APPLICATION FOR A CONDITIONAL USE PERMIT FOR A REQUEST BY MITCH BARRON ON BEHALF OF NEWLAND COMMUNITIES FOR BRIAR CHAPEL PLANNED RESIDENTIAL DEVELOPMENT dated February 15, 2005 for list of Conditional Use Permit and subdivision sketch design stipulations and conditions.

Financial Guarantee (if applicable):

Submitted by: _____
 Guarantee Type: _____
 Amount: \$_____

Acceptance Date: ___/___/___
 Expiration Date: ___/___/___
 Release Date: ___/___/___
 Release Payable to: _____

_____ / / _____
 Planning Department

Date

SUBDIVISION: BRIAR CHAPEL-PHASE 15 SOUTH

DIRECTIONS: NORTH ON US 15-501 FROM PITTSBORO. TURN LEFT ON
ANDREWS STORE ROAD. TURN RIGHT ON GRANITE MILL BLVD.

DEVELOPER: NNP BRIAR CHAPEL LLC **PHONE NUMBER:** 919-951-0712

Major Development: X **Minor Development:** _____
Development with acreage of 10 acreage of 10 acres or more: _____

Proposed road names	OK to submit	DUPLICATED Do not Submit
<u>CHAPEL LAWN AVENUE</u>	_____	_____
<u>BIRCH HOLLOW ROAD</u>	_____	_____
<u>BLUFFWOOD AVENUE</u>	_____	_____
<u>LOGBRIDGE ROAD</u>	_____	_____
<u>PINELAND STREET</u>	_____	_____
<u>CROWFOOT COURT</u>	_____	_____
<u>STAR GRASS TRAIL</u>	_____	_____
<u>GROUSE TRAIL</u>	_____	_____
<u>TOTTENHAM STREET</u>	_____	_____
<u>TRELAUNY DRIVE</u>	_____	_____
<u>TRAPPERS RUN</u>	_____	_____
_____	_____	_____
_____	_____	_____

DATE SUBMITTED TO EOC: 5/9/17

SUBMITTED BY: CHRIS SEAMSTER/MCKIM & CREED, INC.

EOC OFFICER: _____

DATE ROADS APPROVED: _____

DATE FINAL PLAT RECEIVED: _____

DATE GIVEN TO 911: _____

DATE CONTACT MADE WITH NUMBERS: _____

SURROUNDING COUNTY CONTACTED: _____

PERSON SPOKEN WITH: _____

COMMENTS: _____

Briar Chapel – Phase 15 South

Approved Road Names

Phase 15 South will consist of six (6) new public roads and five (5) new private roads. It is planned to be named per the following convention in reference to the approved Construction Drawings:

Road C – Chapel Lawn Avenue

Road D – Birch Hollow Road

Road E – Bluffwood Avenue

Road F – Logbridge Road

Road G – Pineland Street

Road H – Crowfoot Court

Alley 1 – Star Grass Trail

Alley 2 – Grouse Trail

Alley 3 – Tottenham Street

Alley 4 – Trelauny Drive

Alley 5 – Trappers Run



Soil Erosion and Sedimentation Control

LETTER OF APPROVAL

March 6, 2017

Laurie Ford
NNP-Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, NC 27516

RE: Project Name: Briar Chapel Ph.15S
 Project Number: 2014-053
 Acres approved: 68.34
 Total Acres: 217.78
 Submitted by: McKim & Creed
 Date Received: March 6, 2017

To The Above Named Person and Entity,

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The enclosed Certificate of Approval must be posted at the job site. This plan approval shall expire two (2) years following the date of approval, if no land-disturbing activity has been undertaken.

Section 10 (l) of the Chatham County Sedimentation and Erosion Control Ordinance requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to insure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Chatham County Sedimentation and Erosion Control Ordinance, this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may



LAND & WATER RESOURCES DIVISION
Environmental Quality Department

P.O. Box 548
Pittsboro, NC 27312
PHONE: (919) 545-8343

Fax: (919) 542-2698 • E-mail: rachael.thorn@chathamnc.org • Website: www.chathamnc.org

also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please be aware that your project will be covered by the enclosed NPDES General Stormwater Permit NCGO1000 (Construction Activities). You should first become familiar with all of the requirements for compliance with the enclosed general permit.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. Please notify us when you would like to schedule a preconstruction conference. Notification shall be given at least 7 days prior to initiation of activity.

Your cooperation is appreciated.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff McDermott", is written over a horizontal line.

Jeff McDermott
Lead Sedimentation and Erosion Control Officer
Land and Water Resources Division
Chatham County

Enclosures:



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

August 21, 2009

Regulatory Division

Action ID. 200121252

Mr. William S. Mumford
NNP – Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, North Carolina 27516

Dear Mr. Mumford:

Reference the Department of the Army (DA) permit issued on October 2, 2006, to Mitch Barron of Newland Communities for impacts associated with the Briar Chapel Development. Also reference the modification to this permit approved in December, 2007. This development is approximately 1,589 acres in size and is located west of US Highway 15-501, north of Andrew's Store Road (SR 1528), and south of Mann's Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina. Coordinates (in decimal degrees) for the site are 35.8251 ° North, 79.1059 ° West. The site contains several unnamed tributaries and adjacent wetlands of Pokeberry Creek and Wilkinson Creek, in the Cape Fear River Basin (8-Digit Cataloging Unit 03030002).

Permanent impacts authorized by this permit and the subsequent 2007 modification totaled 1,666 linear feet of stream channel and 0.4422 acre of wetland, and temporary impacts totaled 359 linear feet of stream channel and 0.156 acre of wetlands. Mitigation was implemented for the unavoidable impacts by: a) Payment into the North Carolina Ecosystem Enhancement Program for the restoration of 0.6655 acre of riparian wetlands; b) Restoration of 2,127 linear feet of stream channel at the Harpers Crossroads Mitigation Site; and c) On-site preservation of 59.3 acres of wetlands and 63,412 linear feet of stream channel.

Also reference your permit modification request received by the Corps on May 8, 2009. This modification was to address impact amounts and location changes associated with roadway crossings in and near the development. Also included within the requested modification were impacts associated with restoration to streams and wetlands as required to satisfy an existing on-site Clean Water Act violation. On May 22, 2009, a Public Notice was issued detailing this modification request which would bring total impacts associated with Briar Chapel to: 2,237 linear feet of permanent stream channel, 634 linear feet of temporary stream channel, 0.4374 acre of permanent wetland impact,

and 0.197 acres of temporary wetland impact. Please note the attached Tables 1, 2, and 3; originally created by your consultant S&EC, which describe the impact history by site number and amount. No additional mitigation was proposed due to the relatively large amount of preservation mitigation required within the original permit.

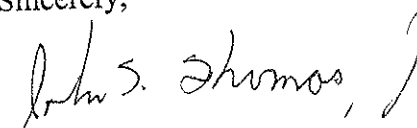
The Corps has completed the evaluation of your request and concurs with your request for a change in impacts associated with your referenced DA permit including the change to plans as requested. No additional mitigation is required for this modification.

Special condition 1 of your permit is hereby modified to read:

“All work authorized by this permit must be performed in strict compliance with the attached plans, Exhibit A, Exhibit E, and/or Exhibit F which are a part of this permit. These plans reflect the original proposal, Exhibit A; and the modifications as depicted within the January 26, and the revised June 7, 2007, proposals as shown in Exhibit E, and the modification request of May 8, 2009, as shown in Exhibit F. Only the attached modification plans reflect approved changes to the original plans, therefore any additional deviations from the original plans are not approved per this modification and any further modification to the plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation. The temporary impacts as identified on Exhibit E shall be removed by May 1, 2008, or the project shall be considered non-compliant with this condition. In addition, the following time deadlines are hereby established for work considered authorized under this 2009 permit modification: all impacts, both temporary and permanent, as shown in the stream repair and stabilization document received with the modification application on May 8, 2009, must be completed prior to April 15, 2010; and all additional temporary impacts, not requested within the stream repair and stabilization document but requested and authorized under this 2009 modification, shall be removed within 30 days of the completion of each respective crossing. Proper documentation of permit compliance for this 2009 modification shall be submitted to the Corps of Engineers Regulatory Representative via email on or before April 15, 2010, or at the time of each temporary impact removal, respectively. ”

Please note that all other permit conditions and exhibits remain in effect as written. Should you have questions, contact Mr. Monte Matthews, Raleigh Regulatory Field Office at telephone (919) 554-4884, Extension 30.

Sincerely,


for/ Jefferson M. Ryscavage
Colonel, U.S. Army
District Commander

Attachments

Copy Furnished (w/o attachment)

Ms. Cyndi Karoly
Division of Water Quality
North Carolina Department of Environment
and Natural Resources
2321 Crabtree Boulevard, Suite 250
Raleigh, NC 27604

Copy Furnished (w/attachment)

Ms. Nicole Thomson
Soil & Environmental Consultants
11010 Raven Ridge Road
Raleigh, NC 27614



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Coleen H. Sullins
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

August 31, 2009



Mr. William S. Mumford
NNP – Briar Chapel, LLC
16 Windy Knoll Circle
Chapel Hill, NC 27516

Re: Briar Chapel, Chatham County
DWQ Project # 20050732, Ver. 13; USACE Action ID. No. 200121252
APPROVAL of 401 Water Quality Certification with Additional Conditions - MODIFICATION

Dear Mr. Mumford:

Attached hereto is a copy of Certification No. 3567 issued to Mr. William S. Mumford of NNP- Briar Chapel, LLC, Inc., dated August 31, 2009. **This Certification replaces the Certification issued to you on January 11, 2008, July 21, 2009, and July 24, 2009.** In addition, you should get any other federal, state or local permits before you go ahead with your project including (but not limited to) Solid Waste, Sediment and Erosion Control, Stormwater, Dam Safety, Non-discharge and Water Supply Watershed regulations.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Coleen Sullins

CHS/cbk/ijm

Attachments: Certificate of Completion

cc: Becky Fox, EPA, 1307 Firefly Road, Whittier, NC 28789
U.S. Army Corps of Engineers, Raleigh Regulatory Field Office, Wilmington District
Lauren Witherspoon, DWQ Raleigh Regional Office
DLR, Raleigh Regional Office
File Copy
Nicole Thomson, S&EC, P.A., 11010 Raven Ridge Road, Raleigh, NC 27614

Filename: 050732Ver13BriarChapel(Chatham)401_IC_MOD2_Revised

NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .0500 to Mr. William S. Mumford of NNP- Briar Chapel, LLC to fill 0.4374 acres of 404/wetland (permanent impact), 0.197 acres 404/wetland (temporary impact), 2,154 linear feet of perennial stream (permanent impact), 612 linear feet of perennial stream (temporary impact), 83 linear feet of intermittent stream (permanent impact), and 22 linear feet of intermittent stream (temporary impact), in the Cape Fear River Basin, to construct the Briar Chapel residential and mixed use development at the site. The site is located west of U.S. Highway 15-501, and north of Andrew’s Store Road (SR 1528), and south of Mann’s Chapel Road (SR 1532), approximately 5 miles south of Chapel Hill, in Chatham County, North Carolina, pursuant to a permit application dated May 8, 2009, and received by the DWQ on May 8, 2009, by Public Notice issued by the USACE on May 22, 2009, and received by the DWQ on May 22, 2009, and by all additional correspondences received by the DWQ on May 20, 2009 and June 25, 2009.

The application and supporting documentation provides adequate assurance that the proposed work will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth.

This approval is only valid for the purpose and design submitted in the application materials and as described in the Public Notice. If the project is changed, prior to notification a new application for a new Certification is required. If the property is sold, the new owner must be given a copy of the Certification and approval letter and is thereby responsible for complying with all conditions of this Certification. Any new owner must notify the Division and request the Certification be issued in their name. Should wetland or stream fill be requested in the future, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). If any plan revisions from the approved site plan result in a change in stream or wetland impact or an increase in impervious surfaces, the DWQ shall be notified in writing and a new application for 401 Certification may be required. For this approval to be valid, compliance with the conditions listed below is required.

Conditions of Certification:

1. Impacts Approved

The following impacts are hereby approved as long as all of the other specific and general conditions of this Certification (or Isolated Wetland Permit) are met. No other impacts are approved including incidental impacts:

Type of Impact	Amount Approved (Units)	Plan Location or Reference
404/401 Wetlands	0.4374 (acres) – permanent impact	Table 2, Application, and Public Notice
404/401 Wetlands	0.197 (acres) – temporary impact	Table 2, Application, and Public Notice
Stream (perennial)	2,154 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (perennial)	612 (linear feet) – temporary impact	Table 2, Application, and Public Notice
Stream (intermittent)	83 (linear feet) – permanent impact	Table 2, Application, and Public Notice
Stream (intermittent)	22 (linear feet) – temporary impact	Table 2, Application, and Public Notice

Sediment and Erosion Control:

2. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
 - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the 404/401 Permit Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur;
4. Sediment and erosion control measures shall not be placed in wetlands or waters without prior approval from the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or stream beds or banks, adjacent to or upstream and down stream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources or locally delegated program has released the project.
5. Protective Fencing - The outside buffer, wetland or water boundary and along the construction corridor within these boundaries approved under this authorization shall be clearly marked with orange warning fencing (or similar high visibility material) for the areas that have been approved to infringe within the buffer, wetland or water prior to any land disturbing activities.

Continuing Compliance:

6. Mr. William S. Mumford and NNP- Briar Chapel, LLC shall conduct construction activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with section 303(d) of the Clean Water Act) and any other appropriate requirements of State law and federal law. If the Division determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the Division may reevaluate and modify this Certification to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H.0507(d). Before modifying the Certification, the Division shall notify Mr. William S. Mumford and NNP- Briar Chapel, LLC and the US Army Corps of Engineers, provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to Mr. William S. Mumford and NNP- Briar Chapel, LLC in writing, shall be provided to the United States Army Corps of Engineers for reference in any Permit issued

pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project;

7. Construction Stormwater Permit NCG010000

Upon the approval of an Erosion and Sedimentation Control Plan issued by the Division of Land Resources (DLR) or a DLR delegated local erosion and sedimentation control program, an NPDES General stormwater permit (NCG010000) administered by DWQ is automatically issued to the project. This General Permit allows stormwater to be discharged during land disturbing construction activities as stipulated by conditions in the permit. If your project is covered by this permit [applicable to construction projects that disturb one (1) or more acres], full compliance with permit conditions including the sedimentation control plan, self-monitoring, record keeping and reporting requirements are required. A copy of this permit and monitoring report forms may be found at http://h2o.enr.state.nc.us/su/Forms_Documents.htm.

Mitigation:

8. Compensatory Mitigation

Compensatory stream mitigation shall be accomplished by using 2,127 linear feet of stream mitigation credit at the Harpers Crossroads stream mitigation site and the remaining 27 linear feet of required stream credit (10:1 ratio = 270 linear feet) from the 63,412 linear feet of available onsite stream preservation. These mitigation efforts shall be protected through use of conservation easement written to satisfy the US Army Corps of Engineers. Uses which may be allowable in the protected stream buffers include water dependent activities and greenway trails upon additional written approval of the Division of Water quality and the US Army Corps of Engineers. These provisions should be explicitly reflected in the conservation easements, or similar mechanisms, written to satisfy the USACE.

The Permittee shall provide stream restoration in accordance with the plan entitled 'Harpers Crossroads Stream Restoration Plan,' dated September 2005. The restoration site, which was authorized with a separate DA nationwide permit (USACE Action Id No. 200420489) has already been constructed. The as-built report dated June 12, 2006 states the total stream restoration generated by the project as 2,127 linear feet. Within 90 days of the USACE's determination that the Harpers Crossroads Stream Restoration Project has met the success criteria outlined in the 'Harpers Crossroads Stream Restoration Plan,' the permittee shall arrange for the transfer of the existing conservation easements to a third-party grantee, subject to approval by the USACE.

Type of Impact	Compensatory Mitigation Required	River and Sub-basin Number
Stream (perennial)	2,154 (linear feet)	Cape Fear/03030002

9. Stormwater Management Plan Implementation Procedures (No Further Approval Needed)

- The approved SMP must be constructed and operational before any permanent building or other structure is occupied at the site. If a development is phased, then the approved SMP for each future phase must be constructed and operational before any permanent building or other structure associated with that phase is occupied.
- The approved SMP as well as drainage patterns must be maintained in perpetuity.
- The SMP may not be modified without prior written authorization from the SMP approval authority. If the SMP falls under another state stormwater program, then a copy of the approval letter and the modified SMP must be submitted to the 401 Oversight/Express Unit prior to the commencement of the modifications.

10. Culvert Installation

All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual (http://www.ncdot.org/doh/operations/BMP_manual/download/BMP_Manual.pdf) such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

Culverts required for this project shall be installed in such a manner that the original stream profiles are not altered. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert. Culverts shall be designed and installed to allow for aquatic life movement as well as to prevent head cutting of the streams. If any of the existing pipes are or become perched, the appropriate stream grade shall be re-established or, if the pipes installed in a perched manner, the pipes shall be removed and re-installed correctly.

Culvert(s) shall not be installed in such a manner that will cause aggradation or erosion of the stream up or down stream of the culvert(s). Existing stream dimensions (including the cross section dimensions, pattern and longitudinal profile) shall be maintained above and below locations of each culvert.

Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in disequilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.

The establishment of native, woody vegetation and other soft stream bank stabilization techniques must be used where practicable instead of rip rap or other bank hardening methods. If rip-rap is necessary, it shall not be placed in the stream bed, unless specifically approved by the Division of Water Quality.

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions.

Upon completion of the project, the Applicant shall complete and return the enclosed "Certificate of Completion" form to notify NCDWQ when all work included in the §401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the NC Division of Water Quality upon completion of the project. *Please send photographs upstream and downstream of each culvert site to document correct installation along with the Certificate of Completion form.*

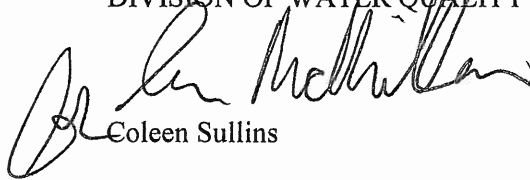
11. Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return the attached certificate of completion to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650.

Also, this approval to proceed with your proposed impacts or to conduct impacts to waters as depicted in your application shall expire upon expiration of the 404 or CAMA Permit.

If this Certification is unacceptable to you, you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 31st day of August 2009
DIVISION OF WATER QUALITY



Coleen Sullins

CHS/cbk/ijm

3567

Briar Chapel – Phase 15 South

Statement regarding historical structure(s) and/or features

1. Archaeological Survey

- a. Based on the August 2006 report by ESI (entitled “An Intensive Cultural Resource Investigation: Briar Chapel, Chatham County, NC”), there are no cemeteries or structures eligible for the National Register within the project area of Phase 15 South nor any structures or cemeteries 50 years old or older.



Water Resources
ENVIRONMENTAL QUALITY

ROY COOPER

Governor

S. JAY ZIMMERMAN

Director

February 23, 2017

Michael J. Myers, President
Old North State Water Company, LLC
4700 Homewood Court, Suite 108
Raleigh, NC 27609

Subject: Permit No. WQ0039058
Old North State Water Company, LLC
Briar Chapel – Phase 15 South
Wastewater Collection System Extension Permit
Chatham County

Dear Mr. Myers:

In accordance with your application received January 26, 2017, and additional information received on February 21, 2017, we are forwarding herewith Permit No. WQ0039058 dated February 23, 2017, to the Old North State Water Company, LLC (Permittee) for the construction and operation upon certification of the subject wastewater collection system extension. This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein. This cover letter shall be considered a part of this permit and is therefore incorporated therein by reference.

Please pay particular attention to the following conditions contained within this permit:

Condition I.1: No wastewater flow shall be made tributary to the subject sanitary sewer system until the Phase 15 Lift Station (Permit No. WQ0038321) is constructed, operational, and the engineer's certification has been received by the Division.

Condition II.1: This permit shall not be automatically transferable; a permit modification request for a name change must first be approved by this office.

Condition II.4: Requires that the wastewater collection facilities be properly operated and maintained in accordance with 15A NCAC 2T .0403 or any individual system-wide collection system permit issued to the Permittee.

Condition II.4.e: This project contains an aerial, high priority line. High-priority sewer lines shall be inspected at least once per every six-months and inspections are documented.

It shall be the responsibility of the Permittee to ensure that the as-constructed project meets the appropriate design criteria and rules. Failure to comply may result in penalties in accordance with North Carolina General Statute §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board.

Old North State Water Company, LLC
Permit No. WQ0039058

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

If you need additional information concerning this matter, please contact Ted Cashion at (919) 791-4254 or via e-mail at ted.cashion@ncdenr.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Daniel Smith". The signature is fluid and cursive, with a large, sweeping flourish at the end.

for S. Jay Zimmerman, P.G.
Director, Division of Water Resources

by S. Daniel Smith, Regional Supervisor
Water Quality Regional Operations Section
Raleigh Regional Office
Division of Water Resources, NCDEQ

cc: Gareth Avant, P.E., McKim & Creed, Inc., 1730 Varsity Drive, Suite 500, Raleigh, NC 27606
Chatham County Health Department
Raleigh Regional Office Files
Water Resources Central Files

North Carolina Department of Environmental Quality

STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENTAL QUALITY

WASTEWATER COLLECTION SYSTEM EXTENSION PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations, permission is hereby granted to the

Old North State Water Company, LLC
Chatham County

for the construction and operation of approximately 5,770 linear feet of 8-inch gravity sewer to serve 141 single family homes as part of the Briar Chapel – Phase 15 South project, and the discharge of 26,790 gallons per day of collected domestic wastewater into the Old North State Water Company, LLC's existing sewerage system, pursuant to the application received January 26, 2017, and additional information received on February 21, 2017, and in conformity with 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated in March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting data subsequently filed and approved by the Department of Environmental Quality and considered a part of this permit.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the specified conditions and limitations contained therein.



S. Jay Zimmerman, P.G.
Director, Division of Water Resources
By Authority of The Environmental Management Commission

Permit Number: WQ0039058
Permit Issued: February 23, 2017

SUPPLEMENT TO PERMIT COVER SHEET

Old North State Water Company, LLC is hereby authorized to:

Construct, and then operate upon certification the aforementioned wastewater collection extension. The sewage and wastewater collected by this system shall be treated in the Briar Chapel Utilities Wastewater Treatment Facility in accordance with Permit Number WQ0028552.

Permitting of this project does not constitute an acceptance of any part of the project that does not meet 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; and the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable, unless specifically mentioned herein. Division approval is based on acceptance of the certification provided by a North Carolina-licensed Professional Engineer in the application. It shall be the Permittee's responsibility to ensure that the as-constructed project meets the appropriate design criteria and rules.

Construction and operation is contingent upon compliance with the Standard Conditions and any Special Conditions identified below.

I. SPECIAL CONDITIONS

1. No wastewater flow shall be made tributary to the subject sanitary sewer system until the Phase 15 Lift Station is constructed, operational, and the engineer's certification has been received by the Division. [15A NCAC 02T .0116]

II. STANDARD CONDITIONS

1. This permit shall not be transferable. In the event there is a desire for the wastewater collection facilities to change ownership, or there is a name change of the Permittee, a formal permit request shall be submitted to the Division accompanied by documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request shall be considered on its merits and may or may not be approved. [15A NCAC 02T.0104; G.S 143-215.1(d3)]
2. This permit shall become voidable unless the wastewater collection facilities are constructed in accordance with the conditions of this permit; 15A NCAC 2T; the Division's Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting materials unless specifically mentioned herein. [15A NCAC 02T.0110]
3. This permit shall be effective only with respect to the nature and volume of wastes described in the application and other supporting data. [15A NCAC 02T .0110]
4. The wastewater collection facilities shall be properly maintained and operated at all times. The Permittee shall maintain compliance with an individual system-wide collection system permit for the operation and maintenance of these facilities as required by 15A NCAC 2T .0403. If an individual permit is not required, the following performance criteria shall be met: [15A NCAC 02T .0108(b)]:

- a. The sewer system shall be effectively maintained and operated at all times to prevent discharge to land or surface waters, and to prevent any contravention of groundwater standards or surface water standards.
 - b. A map of the sewer system shall be developed and shall be actively maintained.
 - c. An operation and maintenance plan including pump station inspection frequency, preventative maintenance schedule, spare parts inventory and overflow response has been developed and implemented.
 - d. Pump stations that are not connected to a telemetry system shall be inspected every day (i.e. 365 days per year). Pump stations that are connected to a telemetry system shall be inspected at least once per week.
 - e. High-priority sewer lines shall be inspected at least once per every six-months and inspections are documented.
 - f. A general observation of the entire sewer system shall be conducted at least once per year.
 - g. Overflows and bypasses shall be reported to the appropriate Division regional office in accordance with 15A NCAC 2B .0506(a), and public notice shall be provided as required by North Carolina General Statute §143-215.1C.
 - h. A Grease Control Program is in place as follows:
 1. For public owned collection systems, the Grease Control Program shall include at least biannual distribution of educational materials for both commercial and residential users and the legal means to require grease interceptors at existing establishments. The plan shall also include legal means for inspections of the grease interceptors, enforcement for violators and the legal means to control grease entering the system from other public and private satellite sewer systems.
 2. For privately owned collection systems, the Grease Control Program shall include at least bi-annual distribution of grease education materials to users of the collection system by the permittee or its representative.
 3. Grease education materials shall be distributed more often than required in Parts (1) and (2) of this Subparagraph if necessary to prevent grease-related sanitary sewer overflows.
 - i. Right-of-ways and easements shall be maintained in the full easement width for personnel and equipment accessibility.
 - j. Documentation shall be kept for Subparagraphs (a) through (i) of this Rule for a minimum of three years with exception of the map, which shall be maintained for the life of the system.
5. The Permittee shall report by telephone to a water resources staff member at the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours, following the occurrence or first knowledge of the occurrence of either of the following:

- a. Any process unit failure, due to known or unknown reasons, that renders the facility incapable of adequate wastewater transport, such as mechanical or electrical failures of pumps, line blockage or breakage, etc.; or
- b. Any SSO and/or spill over 1,000 gallons; or
- c. Any SSO and/or spill, regardless of volume, that reaches surface water

Voice mail messages or faxed information is permissible, but this shall not be considered as the initial verbal report. Overflows and spills occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Persons reporting any of the above occurrences shall file a spill report by completing and submitting Part I of Form CS-SSO (or the most current Division approved form) within five days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur. Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control. [G.S. 143-215.1C(a1)]

6. Construction of the gravity sewers, pump stations, and force mains shall be scheduled so as not to interrupt service by the existing utilities nor result in an overflow or bypass discharge of wastewater to the surface waters of the State. [15A NCAC 02T.0108(b)]
7. Upon completion of construction and prior to operation of these permitted facilities, the completed Engineering Certification form attached to this permit shall be submitted with the required supporting documents to the address provided on the form. A complete certification is one where the form is fully executed and the supporting documents are provided as applicable. Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Engineer's Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions.

If the permit is issued to a private entity with an Operational Agreement, then a copy of the Articles of Incorporation, Declarations/Covenants/Restrictions, and Bylaws that have been appropriately filed with the applicable County's Register of Deeds office shall be submitted with the certification.

A complete certification is one where the form is fully executed and the supporting documents are provided as applicable. Supporting documentation shall include the following:

- a. One copy of the project construction record drawings (plan & profile views of sewer lines & force mains) of the wastewater collection system extension. Final record drawings should be clear on the plans or on digital media (CD or DVD disk) and are defined as the design drawings that are marked up or annotated with after construction information and show required buffers, separation distances, material changes, etc.
- b. One copy of the supporting applicable design calculations including pipe and pump sizing, velocity, pump cycle times, and level control settings, pump station buoyancy, wet well storage, surge protection, detention time in the wet well, and force main, ability to flush low points in force mains with a pump cycle, and downstream sewer capacity analysis. If a portable power source or pump is dedicated to multiple stations, an evaluation of all the pump stations' storage capacities and the rotation schedule of the portable power source or pump, including travel timeframes, shall be provided.

- c. Changes to the project that do not result in non-compliance with this permit, regulations, or the Minimum Design Criteria should be clearly identified on the record drawings, on the certification in the space provided, or in written summary form.

Prior to Certification (Final or Partial): Permit modifications are required for any changes resulting in non-compliance with this permit (including pipe length increases of 10% or greater, increased flow, pump station design capacity design increases of 5% or greater, and increases in the number/type of connections), regulations, or the Minimum Design Criteria. Requested modifications or variances to the Minimum Design Criteria will be reviewed on a case-by-case basis and each on its own merit. Please note that variances to the Minimum Design Criteria should be requested and approved during the permitting process prior to construction. After-construction requests are discouraged by the Division and may not be approved, thus requiring replacement or repair prior to certification & activation. [15A NCAC 02T .0116]

8. Gravity sewers installed greater than ten percent below the minimum required slope per the Division's Gravity Sewer Minimum Design Criteria shall not be acceptable and shall not be certified until corrected. If there is an unforeseen obstacle in the field where all viable solutions have been examined, a slope variance can be requested from the Division with firm supporting documentation. This shall be done through a permit modification with fee. Such variance requests will be evaluated on a case-by-case basis. Resolution of such request shall be evident prior to completing and submitting the construction certification. [15A NCAC 02T.0105(n)]
9. A copy of the construction record drawings shall be maintained on file by the Permittee for the life of the wastewater collection facilities. [15A NCAC 02T .0116]
10. Failure to abide by the conditions and limitations contained in this permit; 15A NCAC 2T; the Division's Gravity Sewer Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Station and Force Mains adopted June 1, 2000 and updated March 2008 as applicable; and other supporting materials may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes §143-215.6A through §143-215.6C, construction of additional or replacement wastewater collection facilities, and/or referral of the North Carolina-licensed Professional Engineer to the licensing board. [15A NCAC 02T .0104; 15A NCAC 02T .0108(b-c)]
11. In the event that the wastewater collection 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 this Division, such as the construction of additional or replacement facilities. [15A NCAC 02T .0110; 15A NCAC 02T .0108(b)]
12. The issuance of this permit shall not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by the Division any other Federal, State, or Local government agencies which have jurisdiction or obtaining other permits which may be required by the Division or any other Federal, State, of Local government agencies. [G.S. 143-215.1(b)]

FAST TRACK SEWER ENGINEERING CERTIFICATION

PERMITTEE: Old North State Water Company, LLC
PERMIT #: WQ0039058
PROJECT: Briar Chapel – Phase 15 South
ISSUE DATE: February 23, 2017

This project shall not be considered complete nor allowed to operate in accordance with Condition 7 of this permit until the Division has received this Certification and all required supporting documentation. It should be submitted in a manner that documents the Division's receipt. Send the required documentation the Regional Supervisor, Water Quality Regional Operations Section at the address at the bottom.

Any wastewater flow made tributary to the wastewater collection system extension prior to completion of this Certification shall be considered a violation of the permit and shall subject the Permittee to appropriate enforcement actions. The Permittee is responsible for tracking all partial certifications up until a final certification is received. A Final Certification shall be a complete set of record drawings and design calculations regardless of whether partials have been submitted.

PERMITTEE'S CERTIFICATION

I, the undersigned agent for the Permittee, hereby state that this project has been constructed pursuant to the applicable standards & requirements, the Professional Engineer below has provided applicable design/construction information to the Permittee, and the Permittee is prepared to operate & maintain the wastewater collection system permitted herein or portions thereof.

Printed Name, Title

Signature

Date

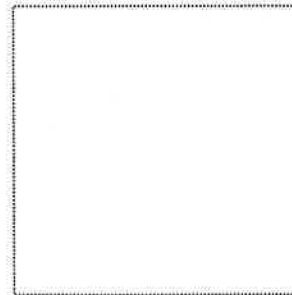
ENGINEER'S CERTIFICATION

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project name and location as referenced above for the above Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance of this permit; 15A NCAC 02T; the Division of Water Resources' (Division) Gravity Sewer Minimum Design Criteria adopted February 12, 1996 and updated March 2008, as applicable; the Division's Minimum Design Criteria for the Fast-Track Permitting of Pump Stations and Force Mains adopted June 1, 2000 and updated March 2008, as applicable; and other supporting materials.

North Carolina Professional Engineer's Seal w/signature & date:

Final

Partial (include description)



Certification Comments/Qualifiers (attach if necessary):



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

September 12, 2014

William Mumford – Assistant Secretary
Briar Chapel Utilities, LLC
16 Windy Knoll Circle
Chapel Hill, North Carolina 27516

Subject: Permit No. WQ0028552
Briar Chapel Development
Reclaimed Water Generation,
Conjunctive Reclaimed Water
Utilization, Non-Conjunctive
Reclaimed Water Utilization, and
Wastewater Irrigation System
Chatham County

Dear Mr. Mumford:

In accordance with your permit major modification request received June 2, 2014, and subsequent additional information received August 7, 2014 and August 28, 2014, we are forwarding herewith Permit No. WQ0028552 dated September 12, 2014, to Briar Chapel Utilities, LLC for the additional construction and continued operation of the subject facilities.

Modifications to the subject permit include an approval for construction of Package G; conjunctive reclaimed water utilization consisting of irrigation on additional residential lots and formal parks within Briar Chapel Development, and elimination of an existing non-conjunctive field (Phase 1-A, field C-5A). Please note that PPI 002 is deleted and WQ01parameter to report the total volume of reclaimed water used for conjunctive utilization is moved to PPI 001.

This permit shall be effective from the date of issuance until March 31, 2019, shall void Permit No. WQ0028552 issued October 7, 2013, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements listed in Attachments A and B for they may differ from the previous permit issuance. Failure to establish an adequate system for collecting and maintaining the required operational information shall result in future compliance problems.

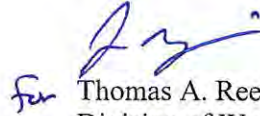
For your convenience, customized electronic copies of your facility's NDMR and NDAR-1 reporting forms are available for download at: <http://portal.ncdenr.org/web/wq/aps/lau/reporting>.

If any parts, requirements or limitations contained in this permit are unacceptable, the Permittee has the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request shall be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings at 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made, this permit shall be final and binding.

Mr. Mumford
September 12, 2014
Page 2 of 2

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Chonticha McDaniel at (919) 807-6337 or chonticha.mcdaniel@ncdenr.gov.

Sincerely,


for Thomas A. Reeder, Director
Division of Water Resources

cc: Chatham County Health Department (Electronic Copy)
Raleigh Regional Office, Water Quality Regional Operations Section
Mark P. Ashness, PE – CE Group (Electronic Copy)
Beth Buffington, PWSS – Protection and Enforcement Branch (Electronic Copy)
Central Files
Digital Permit Archive (Electronic Copy)

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

RALEIGH

**RECLAIMED WATER GENERATION, CONJUNCTIVE RECLAIMED WATER
UTILIZATION, NON-CONJUNCTIVE RECLAIMED WATER UTILIZATION, &
WASTEWATER IRRIGATION SYSTEM PERMIT**

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

Briar Chapel Utilities, LLC
Chatham County

FOR THE

operation of a wastewater treatment, non-conjunctive reclaimed water, conjunctive reclaimed water and wastewater irrigation facility consisting of the:

continued operation of a 250,000 gallon per day (GPD) extended aeration wastewater treatment plant (i.e., Phase A) consisting of: dual static screens for grit removal (serving Phases A, B and C); a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two 225 gallon per minute (GPM) variable speed pumps each with an influent flow meter and one 7.5 horsepower (hp) aerator; two 31,500 gallon anoxic chambers each with two 3 hp mixers; two 189,000 gallon aeration basins each with two 10 hp aerators; two 31,500 gallon clarifiers each with one variable speed sludge return pump; a 75,400 gallon sludge holding basin with one variable speed decanting pump and one 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two variable speed chlorine injection pumps; a 16,800 gallon mudwell with two 200 GPM return pumps; two 90 square foot (ft²) tertiary filters; a 13,800 gallon clearwell with four 675 GPM backwash pumps (pumps serve Phases A, B and C); dual banks of ultraviolet (UV) modules each with 10 bulbs; a 6,850 gallon dechlorination chamber with two air diffusers; an effluent flow measuring device (serving Phases A, B and C); an effluent turbidimeter (serving Phases A, B and C); a permanent auxiliary generator (serving Phases A, B and C); and all associated piping, valves and appurtenances; the

continued operation of: a 3.5 million gallon (MG) clay lined five day upset pond; a five day upset return pump station with two 400 GPM submersible pumps and audible/visual high-water alarms; and a 21.3 MG clay lined central storage pond with dual 2,000 GPM flooded suction pumps; the

continued operation of portions of the Phase 1-A non-conjunctive reclaimed water utilization system consisting of: portions of eight irrigation zones (E-1A, E-2A, E-3B, E-3C, E-3D, E-4A, E-4B and E-4C) and irrigation zone E-3A comprising approximately 31.9 acres with a hydraulic capacity of approximately 79,240 GPD; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-C non-conjunctive reclaimed water utilization system consisting of: approximately 7.5 acres of the permitted 9.48 acre irrigation zone C-1 with a hydraulic capacity of approximately 17,195 GPD; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-E conjunctive reclaimed water utilization system consisting of: three irrigation zones (E-1, E-2 and E-4) comprising 9.2 acres; and all associated piping, valves and appurtenances; the

continued operation of portions of the Phase 1-F conjunctive reclaimed water utilization system consisting of: portions of two irrigation zones (F-2 and F-3) and irrigation zone F-4 comprising approximately 3.84 acres; and all associated piping, valves and appurtenances; the

construction and operation of two additional 250,000 GPD extended aeration wastewater treatment plants to be constructed (i.e., Phases B and C) with each phase consisting of: a manually cleaned bar screen; a 75,400 gallon aerated flow equalization basin with two 225 GPM variable speed pumps each with an influent flow meter and one 7.5 hp aerator; two 31,500 gallon anoxic chambers each with two 3 hp mixers; two 189,000 gallon aeration basins each with two 10 hp aerators; two 31,500 gallon clarifiers each with one variable speed sludge return pump; a 75,400 gallon sludge holding basin with one variable speed decanting pump and one 7.5 hp aerator; a 10,730 gallon chlorine contact chamber with two variable speed chlorine injection pumps; a 16,800 gallon mudwell with two 200 GPM return pumps; two 90 ft² tertiary filters; dual banks of ultraviolet (UV) modules each with 10 bulbs; a 6,850 gallon dechlorination chamber with two air diffusers; and all associated piping, valves and appurtenances; the

construction and operation of the remaining portions of the Phase 1-A non-conjunctive reclaimed water utilization system consisting of: portions of eight irrigation zones (E-1A, E-2A, E-3B, E-3C, E-3D, E-4A, E-4B and E-4C), and 30 irrigation zones (C-1A through C-20A) comprising approximately 82.9 acres with a hydraulic capacity of approximately 205,686 GPD; a 14.1 MG clay lined east storage pond with dual 1,200 GPM vertical turbine pumps; a single 600 GPM temporary booster pump station and all associated piping, valves and appurtenances; the

construction and operation of the Phase 1-B wastewater irrigation system consisting of: 16 irrigation zones (B-1A through B-9C) comprising approximately 22.0 acres with a hydraulic capacity of approximately 55,508 GPD; and all associated piping, valves and appurtenances; the

construction and operation of the remaining portions of the Phase 1-C non-conjunctive reclaimed water utilization system consisting of: approximately 1.98 acres of irrigation zone C-1 with a hydraulic capacity of approximately 4,540 GPD; and all associated piping, valves and appurtenances; the

construction and operation of the Phase 1-D non-conjunctive reclaimed water utilization system consisting of: 22 irrigation zones (D-2 through D-26) comprising approximately 16.89 acres with a hydraulic capacity of approximately 35,527 GPD; and all associated piping, valves and appurtenances; the

construction and operation of portions of the Phase 1-E conjunctive reclaimed water utilization system consisting of: two irrigation zones (E-3 and E-5) comprising 2.8 acres; and all associated piping, valves and appurtenances;

construction and operation of the Phase 1-F conjunctive reclaimed water utilization system consisting of: one irrigation zone (F-1) and portions of two irrigation zones (F-2 and F-3) comprising 11.26 acres; and all associated piping, valves and appurtenances; and the

construction and operation of the Phase 1-G conjunctive reclaimed water utilization system consisting of: 9 irrigation zones (G-1 through G-9) comprising 26.4 acres; and all associated piping, valves and appurtenances;

to serve Briar Chapel Development, with no discharge of wastes to surface waters, pursuant to the application received June 2, 2014, and subsequent additional information received by the Division of Water Resources, and in conformity with the project plans, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until March 31, 2019, shall void Permit No. WQ0028552 issued October 7, 2013, and shall be subject to the following specified conditions and limitations:

I. SCHEDULES

1. Prior to commencing initial irrigation activities, an updated soil scientist site evaluation shall be submitted for all areas that have been significantly impacted during construction or altered by grading, cutting or filling. For conjunctive utilization areas, this report shall address soil compaction and the soil's ability to accept the designed hourly precipitation rate. For non-conjunctive utilization areas, this report shall specifically address, but not be limited to, soil features such as soil compaction and saturated hydraulic conductivity of the least permeable layer, as well as any other properties that might impact the soil's ability to accept irrigation water. The report shall certify that the disturbed areas are capable of accepting the designed annual hydraulic loading rate. The requested information must be received and acknowledged in writing by the Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.
2. The old farm gullies present in Phase 1-A, Field C-15C shall be properly filled with suitable soil material prior to its operation.
3. In accordance with 15A NCAC 02T .0116, upon completion of construction and prior to operation of any of the facilities permitted herein, a certification (attached) shall be submitted from a licensed North Carolina Professional Engineer certifying that the permitted facility has been installed in accordance with this permit, Division approved plans and specifications, and other supporting documentation, including the location of all monitoring wells as applicable. If this project is to be completed in phases and partially certified, the Permittee shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Division of Water Resources, Water Quality Permitting Section, 1636 Mail Service Center, Raleigh, NC 27699-1636.
4. The Raleigh Regional Office, telephone number (919) 791-4200, shall be notified at least 48 hours in advance (excluding weekends and holidays) of operation of any installed facilities such that an in-place inspection can be made. Notification to the regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
5. No later than six months prior to the expiration of this permit, the Permittee shall request renewal of this permit on official Division forms. Upon receipt of the request, the Division will review the adequacy of the facilities described therein, and if warranted, will renew the permit for such period of time and under such conditions and limitations as it may deem appropriate. Please note Rule 15A NCAC 02T .0105(d) requires an updated site map to be submitted with the permit renewal application.

II. PERFORMANCE STANDARDS

1. The subject non-discharge facilities shall be effectively maintained and operated at all times so there is no discharge to surface waters, nor any contravention of groundwater or surface water standards. In the event the facilities fail to perform satisfactorily, including the creation of nuisance conditions due to improper operation and maintenance, or failure of the utilization areas to adequately assimilate the reclaimed water, the Permittee shall take immediate corrective actions including Division required actions, such as the construction of additional or replacement wastewater treatment, disposal, or utilization facilities.
2. This permit shall not relieve the Permittee of their responsibility for damages to groundwater or surface water resulting from the operation of this facility.
3. Effluent limitations shall not exceed those specified in Attachment A.

4. Application rates shall not exceed those specified in Attachment B.
5. The irrigation/utilization system (excluding conjunctive utilization sites) shall be connected to a rain or moisture sensor, which shall indicate when utilization is not appropriate in accordance with Conditions III.6 and III.7 of this permit.
6. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F and 1-G, but may include Phase 1-B at the Permittee's discretion):
 - a. All reclaimed water valves, storage facilities and outlets shall be tagged or labeled to warn the public or employees that reclaimed water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with reclaimed water.
 - b. All reclaimed water piping, valves, outlets and other appurtenances shall be color-coded, taped or otherwise marked to identify the source of the water as being reclaimed water.
 - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER – DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
 - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER – DO NOT DRINK." Identification tape shall be installed on reclaimed water pipelines in a visible manner, fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.
 - iii. Existing underground distribution systems retrofitted for the purpose of distributing reclaimed water shall be taped or otherwise identified as noted above. This identification need not extend the entire length of the distribution system, but shall be incorporated within 10 feet of crossing any potable water supply line or sanitary sewer line.
 - c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
 - d. Hose bibs shall be located in locked, below grade vaults that shall be labeled as being of non-potable quality. As an alternative to the use of locked vaults with standard hose bib services, other locking mechanisms such as hose bibs which can only be operated by a tool may be placed above ground and labeled as non-potable water.
7. No direct cross-connections shall be allowed between reclaimed water (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) and potable water systems, unless such connection has been approved by the Department pursuant to 15A NCAC 18C .0406.
8. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) shall be located at least 10 feet horizontally from and 18 inches below any water line where practicable. Where these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.
9. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) shall not be less than 100 feet from a well unless the piping and integrity testing procedures meet water main standards in accordance with 15A NCAC 18C, but in no case shall they be less than 25 feet from a private well or 50 feet from a public well.

10. Reclaimed water distribution lines (at a minimum Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G but may include Phase 1-B at the Permittee's discretion) shall be located at least two feet horizontally from and 18 inches above any sewer line where practicable. Where these separation distances cannot be met, the piping and integrity testing procedures shall meet water main standards in accordance with 15A NCAC 18C.
11. The compliance and review boundaries for Phase 1-A non-conjunctive utilization areas are established at the property boundary. Any exceedance of standards at the compliance or review boundary shall require action in accordance with 15A NCAC 02L .0106.
12. The compliance and review boundaries for Phase 1-B [wastewater irrigation complying with 15A NCAC 02T .0506(c)], 1-C, 1-D, 1-E, 1-F, and 1-G are established at the irrigation/utilization area boundaries. Any exceedance of standards at the compliance or review boundary shall require action in accordance with 15A NCAC 02L .0106.
13. The Permittee shall apply for a permit modification to establish a new compliance boundary prior to any sale or transfer of property affecting a compliance boundary.
14. In accordance with 15A NCAC 02L .0107(d), no wells, excluding Division approved monitoring wells, shall be constructed within the compliance boundary except as provided for in 15A NCAC 02L .0107(g).
15. Except as provided for in 15A NCAC 02L .0107(g), the Permittee shall ensure any landowner who is not the Permittee and owns land within the compliance boundary shall execute and file with the Chatham County Register of Deeds an easement running with the land containing the following items:
 - a. A notice of the permit and number or other description as allowed in 15A NCAC 02L .0107(f)(1);
 - b. Prohibits construction and operation of water supply wells within the compliance boundary; and
 - c. Reserves the right of the Permittee or the State to enter the property within the compliance boundary for purposes related to the permit.

The Director may terminate the easement when its purpose has been fulfilled or is no longer needed.

16. The facilities permitted herein shall be constructed according to the following setbacks:
 - a. The setbacks for the Phase 1-A, 1-C, 1-D, 1-E, 1-F and 1-G conjunctive reclaimed utilization sites shall be as follows (all distances in feet):

i. Surface waters not classified SA:	25
ii. Surface waters classified SA:	100
iii. Any well with exception to monitoring wells:	100
 - b. The setbacks for the Phase 1-B wastewater irrigation sites shall be as follows (all distances in feet):

i. Any habitable residence or place of public assembly under separate ownership:	400
ii. Any habitable residence or place of public assembly owned by the Permittee:	200
iii. Any private or public water supply source:	100
iv. Surface waters:	100
v. Groundwater lowering ditches:	100
vi. Surface water diversions:	25
vii. Any well with exception of monitoring wells:	100
viii. Any property line:	0 ¹
ix. Top of slope of embankments or cuts of two feet or more in vertical height:	15

x. Any water line from a disposal system:	10
xi. Subsurface groundwater lowering drainage systems:	100
xii. Any swimming pool:	100
xiii. Public right of way:	50
xiv. Nitrification field:	20
xv. Any building foundation or basement:	15

¹ The Permittee is complying with 15A NCAC 02T .0506(c), therefore the setback to property lines is reduced from 150 feet to 0 feet.

- c. The setbacks for treatment units shall be as follows (all distances in feet):
- | | |
|----------------------------------------------------------------------------------|-----|
| i. Any habitable residence or place of public assembly under separate ownership: | 100 |
| ii. Any private or public water supply source: | 100 |
| iii. Surface waters: | 50 |
| iv. Any well with exception of monitoring wells: | 100 |
| v. Any property line: | 50 |

17. Areas in Phases 1-C and 1-D affected by significant compaction shall be identified and the soil aerated prior to any irrigation within these utilization sites listed in Attachment B.

III. OPERATION AND MAINTENANCE REQUIREMENTS

- The facilities shall be properly maintained and operated at all times. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any reclaimed water or partially treated effluent resulting from the operation of this facility.
- The Permittee shall maintain an Operation and Maintenance Plan pursuant to 15A NCAC 02U .0801, which at a minimum shall include the following:
 - Description of the system in sufficient detail to show what operations are necessary for the system to function and by whom the functions will be conducted;
 - A map of all distribution lines and record drawings of all utilization systems under the Permittee's control;
 - Description of anticipated maintenance activities;
 - Include provisions for safety measures including restriction of access to sites and equipment; and
 - Spill control provisions including response to upsets and bypasses including control, containment, remediation, and contact information for plant personnel, emergency responders and regulatory agencies.
- Upon the Water Pollution Control System Operators Certification Commission's (WPCSOCC) classification of the subject non-discharge facilities, in accordance with 15A NCAC 08G .0200 the Permittee shall designate and employ a certified operator in responsible charge (ORC) and one or more certified operator(s) as back-up ORC(s). The ORC or their back-up shall visit the facilities in accordance with 15A NCAC 08G .0200, and shall comply with all other conditions specified in the previously cited rules.
- An operator certified by the Water Pollution Control System Operators Certification Commission (WPCSOCC) of a grade equivalent or greater than the facility classification shall be on call 24 hours per day.

5. A suitable year round vegetative cover shall be maintained on irrigation sites at all times, such that crop health is optimized, allows for even distribution of reclaimed water, and allows inspection of the irrigation system.
6. Adequate measures shall be taken to prevent reclaimed water ponding in or runoff from the irrigation sites.
7. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause ponding or runoff.
8. All wastewater irrigation and non-conjunctive reclaimed water irrigation equipment shall be tested and calibrated at least once per permit cycle. Calibration records shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request.
9. Only reclaimed water generated at Briar Chapel Development shall be irrigated/utilized in accordance with this permit.
10. An automatically activated standby power source capable of powering all essential treatment units shall be on site and operational at all times. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
11. No automobiles or machinery shall be allowed on the wastewater irrigation site (Phase 1-B) except during equipment installation or while maintenance is being performed.
12. Public access to the wastewater irrigation sites (Phase 1-B), wastewater treatment facility, and five day upset pond shall be prohibited.
13. Public access to reclaimed water utilization sites (Phases 1-A, 1-C, 1-D, 1-E, 1-F, and 1-G) shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site.
14. Diversion or bypassing of untreated or partially treated wastewater from the treatment facilities is prohibited.
15. Freeboard in the five-day upset pond, central storage pond, and east storage pond shall not be less than two feet at any time.
16. A gauge to monitor waste levels in the five-day upset pond, central storage pond, and east storage pond shall be provided. This gauge shall have readily visible permanent markings at inch or tenth of a foot increments.
17. A protective vegetative cover shall be established and maintained on all earthen embankments (i.e., outside toe of embankment to maximum allowable temporary storage elevation on the inside of the embankment), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen dikes or embankments. Earthen embankment areas shall be kept mowed or otherwise controlled and accessible.
18. All effluent shall be routed to the five day upset pond should the limit for fecal coliform (e.g., daily maximum concentration of 25 colonies per 100 mL) or turbidity (e.g., instantaneous maximum of 10 NTU) be exceeded, until the problems associated with the wastewater treatment plant have been corrected. The wastewater in the five day upset pond shall be pumped back to the treatment plant headworks for re-treatment or treated in the five day upset pond prior to utilization.

19. The Permittee shall develop and implement an education program to inform users (including employees) about the proper use of reclaimed water. Educational material shall be provided to all residents and/or other facilities provided with reclaimed water, and these materials shall be maintained consistent with the reclaimed water uses. All educational materials shall be made available to the Division upon request.
20. In accordance with 15A NCAC 02U .0501, the Permittee shall provided notification to the public and/or employees about the use of reclaimed water, and that reclaimed water is not intended for drinking. Such notification shall be provided to employees in a language they can understand.
21. The residuals generated from the wastewater treatment facilities shall be disposed or utilized in accordance with 15A NCAC 02T .1100. The Permittee shall maintain a residual management plan pursuant to 15A NCAC 02U .0802.
22. The subject permitted wastewater treatment facility shall only treat domestic wastewater. The wastewater treatment plant shall not accept any wastewater from commercial facilities deemed industrial (i.e. from processes of trade or business, Laundromats, or vehicle/equipment washes) under 15A NCAC 02T .0103(20).

IV. MONITORING AND REPORTING REQUIRMENTS

1. Any Division required monitoring (including groundwater, plant tissue, soil and surface water analyses) necessary to ensure groundwater and surface water protection shall be established, and an acceptable sampling reporting schedule shall be followed.
2. Per 15A NCAC 02H .0800, a Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater or surface water parameters.
3. Flow through the reclaimed water generating facility shall be continuously monitored, and daily flow values shall be reported on Form NDMR.

The Permittee shall install and maintain an appropriate flow measurement device to ensure the accuracy and reliability of flow measurement consistent with accepted engineering and scientific practices. Selected flow measurement devices shall be capable of measuring flows with a maximum deviation of less than ten percent from true flow; accurately calibrated at a minimum of once per year; and maintained to ensure the accuracy of measurements is consistent with the selected device's accepted capability. The Permittee shall maintain records of flow measurement device calibration on file for a period of at least five years. At a minimum, documentation shall include:

- a. Date of flow measurement device calibration,
 - b. Name of person performing calibration, and
 - c. Percent from true flow.
4. The Permittee shall monitor the reclaimed water from the generating facility at the frequencies and locations for the parameters specified in Attachment A.
 5. The Permittee shall maintain adequate records tracking the amount of conjunctive reclaimed water utilized. Records shall be maintained for a minimum of five years. At minimum, these records shall include the following information for each utilization site listed in Attachment B:
 - a. Date of reclaimed water distributed; and
 - b. Volume of reclaimed water distributed (monthly total).

Monthly tracking records for all conjunctive sites shall be summed and reported on Form NDMR (see Attachment A) under parameter WQ01 (Flow, Reclaimed Water Distributed). This value shall represent the total volume of reclaimed water distributed for conjunctive utilization that month.

6. The Permittee shall maintain adequate records tracking the amount of effluent irrigated / non-conjunctive reclaimed water utilized. Records shall be maintained for a minimum of five years. At a minimum, these records shall include the following information for each utilization site listed in Attachment B:
 - a. Date of irrigation / utilization;
 - b. Volume of effluent irrigated / reclaimed water utilized
 - c. Site irrigated/utilized;
 - d. Length of time site is irrigated/utilized;
 - e. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings;
 - f. Continuous monthly and year-to-date loadings for any non-hydraulic parameter specifically limited in Attachment B;
 - g. Weather conditions; and
 - h. Maintenance of cover crops.
7. Freeboard (i.e., waste level to the lowest embankment elevation) in the five-day upset pond, central storage pond, and east storage pond shall be measured to the nearest inch or tenth of a foot, and recorded weekly. Weekly freeboard records shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request.
8. Three copies of all monitoring data (as specified in Conditions IV.3., IV.4. and IV.5.) on Form NDMR, and three copies of all operation and disposal/utilization records (as specified in Conditions IV.6. and IV.7.) on Form NDAR-1 shall be submitted on or before the last day of the following month. If no activities occurred during the monitoring month, monitoring reports are still required documenting the absence of the activity. All information shall be submitted to the following address: Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina, 27699-1617.
9. Pursuant to § 143-215.1C., the Permittee shall provide to its users and the Division of Water Resources an annual report summarizing the performance of the wastewater treatment and utilization facility and the extent to which the facility has violated this permit, or federal or State laws, regulations, or rules related to the protection of water quality. This report shall be prepared on either a calendar or fiscal year basis and shall be provided no later than 60 days after the end of the calendar or fiscal year. Two copies of the annual report provided to the Permittee's users shall be submitted to: Division of Water Resources, Water Quality Permitting Section, 1636 Mail Service Center, Raleigh, North Carolina 27699-1636.
10. A record shall be maintained of all residuals removed from this facility. This record shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this record shall include:
 - a. Name of the residuals hauler;
 - b. Non-Discharge permit number authorizing the residuals disposal, or a letter from a municipality agreeing to accept the residuals;
 - c. Date the residuals were hauled; and
 - d. Volume of residuals removed.

11. A maintenance log shall be maintained at this facility. This log shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, this log shall include:
 - a. Visual observations of treatment plant and plant site;
 - b. Date of calibration of flow measurement device(s);
 - c. Date and results of power interruption testing on alternate power supply;
 - d. Record of preventative maintenance (e.g., changing/adjusting of equipment, pump and valve maintenance, cross connection control, testing, inspections and cleanings, etc.); and
 - e. Record of all unpermitted releases of reclaimed water to surface water or land surface including date of occurrence, estimated volume of release, cause, and corrective action taken.

12. An annual representative soils analysis (i.e., Standard Soil Fertility Analysis) shall be conducted on each wastewater irrigation field in Phase 1-B (See Attachment B). These results shall be maintained at the facility for a period of no less than five years, and shall be made available to the Division upon request. At a minimum, the Standard Soil Fertility Analysis shall include the following parameters:

Acidity	Exchangeable Sodium Percentage	Phosphorus
Base Saturation (by calculation)	Magnesium	Potassium
Calcium	Manganese	Sodium
Cation Exchange Capacity	Percent Humic Matter	Zinc
Copper	pH	

13. Noncompliance Notification:

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours, or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the facility resulting in the treatment of significant amounts of wastes that is abnormal in quantity or characteristic, including the known passage of a hazardous substance.
- b. Any process unit failure (e.g., mechanical, electrical, etc.), due to known or unknown reasons, rendering the facility incapable of adequate wastewater treatment.
- c. Any failure resulting in a discharge of reclaimed water directly to surface waters or any unpermitted release of reclaimed water to land surface greater than or equal to 5,000 gallons. Unpermitted releases less than 5,000 gallons to land surface shall be documented by the permittee in accordance with Condition IV.9, but do not require Regional Office notification.
- d. Any time self-monitoring indicates the facilities permitted herein have gone out of compliance with the limitations contained in this permit.
- e. Ponding in or runoff from the reclaimed water utilization sites.

Any emergency requiring immediate reporting (e.g., discharges to surface waters, imminent failure of a storage structure, etc.) outside normal business hours shall be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to be taken to ensure the problem does not recur.

V. INSPECTIONS

1. The Permittee shall provide adequate inspection and maintenance to ensure proper operation of the wastewater treatment, irrigation, and utilization facilities.
2. The Permittee or their designee shall inspect the wastewater treatment, irrigation, and utilization facilities to prevent malfunction, facility deterioration and operator errors resulting in discharges, which may cause the release of wastes to the environment, a threat to human health or a public nuisance. The Permittee shall maintain an inspection log that includes, at a minimum, the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken. The Permittee shall maintain this inspection log for a period of five years from the date of the inspection, and this log shall be made available to the Division upon request.
3. Any duly authorized Division representative may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the wastewater treatment, irrigation, and utilization facilities permitted herein at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records required to be maintained under the terms and conditions of this permit, and may collect groundwater, surface water or leachate samples.

VI. GENERAL CONDITIONS

1. Failure to comply with the conditions and limitations contained herein may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.
2. This permit shall become voidable if the permitted facilities are not constructed in accordance with the conditions of this permit, the Division approved plans and specifications, and other supporting documentation.
3. This permit is effective only with respect to the nature and volume of wastes described in the permit application, Division approved plans and specifications, and other supporting documentation. No variances to applicable rules governing the construction or operation of the permitted facilities are granted, unless specifically requested and approved in this permit pursuant to 15A NCAC 02T .0105(n).
4. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other jurisdictional government agencies (e.g., local, state, and federal). Of particular concern to the Division are applicable river buffer rules in 15A NCAC 02B .0200; erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000; any requirements pertaining to wetlands under 15A NCAC 02B .0200 and 02H .0500; National Pollutant Discharge Elimination System (NPDES) requirements under 15A NCAC 02H .0100, and documentation of compliance with Article 21 Part 6 of Chapter 143 of the General Statutes.
5. In the event the permitted facilities change ownership or the Permittee changes their name, a written permit modification request shall be submitted to the Division. This request shall be made on official Division forms, and shall include appropriate property ownership documentation and other supporting documentation as necessary. The Permittee of record shall remain fully responsible for maintaining and operating the facilities permitted herein until a permit is issued to the new owner.
6. The Permittee shall retain a set of Division approved plans and specifications for the life of the facilities permitted herein.
7. The Permittee shall maintain this permit until all permitted facilities herein are properly closed or permitted under another permit issued by the appropriate permitting authority pursuant to 15A NCAC 02T .0105(j).

8. This permit is subject to revocation or unilateral modification upon 60 days notice from the Division Director, in whole or part for the requirements listed in 15A NCAC 02T .0110.
9. Unless the Division Director grants a variance, expansion of the permitted facilities contained herein shall not be granted if the Permittee exemplifies any of the criteria in 15A NCAC 02T .0120(b).
10. The Permittee shall pay the annual fee within 30 days after being billed by the Division. Failure to pay the annual fee accordingly shall be cause for the Division to revoke this permit pursuant to 15A NCAC 02T .0105(e)(3).

Permit issued this the 12th day of September 2014

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

for 

Thomas A. Reeder, Director
Division of Water Resources
By Authority of the Environmental Management Commission

Permit Number WQ0028552

Permit No. WQ0028552
Briar Chapel Utilities, LLC
Briar Chapel Development

Conjunctive, Non-Conjunctive, and Wastewater Irrigation System
September 12, 2014
Chatham County

ENGINEERING CERTIFICATION

Partial Final

In accordance with 15A NCAC 02T .0116, I, _____,
as a duly registered Professional Engineer in the State of North Carolina, having the Permittee's
authorization to periodically weekly fully observe the construction of the permitted facility,
hereby state to the best of my abilities that due care and diligence was used in the observation of the
construction, such that the facility was built within substantial compliance and intent of this permit, the
Division approved plans and specifications, and other supporting documentation.

Any variation to this permit, the Division approved plans and specifications, and other supporting
documentation has been documented in the attached as-built drawings, and shall serve as the
Permittee's minor modification request to amend the permit accordingly.

Provide a brief narrative description of any variations: _____

Professional Engineer's Name		
Engineering Firm		
Mailing Address		
City	State	Zip
Telephone	E-mail	NC PE Seal, Signature & Date

**THE COMPLETED ENGINEERING CERTIFICATION, INCLUDING ALL SUPPORTING
INFORMATION AND MATERIALS, SHALL BE SENT TO THE FOLLOWING ADDRESS:
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES
WATER QUALITY PERMITTING SECTION
NON-DISCHARGE PERMITTING UNIT**

By U.S. Postal Service:
1636 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1636

By Courier/Special Delivery:
512 N. SALISBURY STREET
RALEIGH, NORTH CAROLINA 27604

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PPI 001 - Reclaimed Water Generation System Effluent

EFFLUENT CHARACTERISTICS		EFFLUENT LIMITS					MONITORING REQUIREMENTS	
PCS Code	Parameter Description	Units of Measure	Monthly Average	Monthly Geometric Mean	Daily Minimum	Daily Maximum	Measurement Frequency	Sample Type
00310	BOD, 5-Day (20 °C)	mg/l	10			15	2 x Month	Composite
00940	Chloride (as Cl)	mg/l					3 x Year ^a	Composite
50060	Chlorine, Total Residual	mg/l					5 x Week	Grab
31616	Coliform, Fecal MF, M-FC Broth, 44.5 °C	#/100ml		14		25	2 x Month	Grab
50050	Flow, in conduit or thru treatment plant	gpd	329,548 ^b				Continuous	Recording
00610	Nitrogen, Ammonia Total (as N)	mg/l	4			6	2 x Month	Composite
00620	Nitrogen, Nitrate Total (as N)	mg/l					2 x Month	Composite
00400	pH	su			6	9	5 x Week	Grab
70300	Solids, Total Dissolved - 180 °C	mg/l					3 x Year ^a	Composite
00530	Solids, Total Suspended	mg/l	5			10	2 x Month	Composite
00076	Turbidity, HCH Turbidimeter	ntu				10	Continuous	Recording
WQ01	Flow, Reclaimed Water Distributed ^c	gallons					Monthly	Recording

- a. 3 x Year monitoring shall be conducted in March, July and November.
- b. The monthly average daily flow is limited to 329,548 GPD due to available wet weather storage capacity.
- c. Total volume of reclaimed water distributed for conjunctive utilization (Phases 1-E, 1-F, and 1-G).

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Briar Chapel Utilities, LLC – Briar Chapel Development

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-A	C-1A	Briar Chapel Utilities, LLC	Chatham	35° 48' 35"	-79° 06' 47"	8.00	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-2A	Briar Chapel Utilities, LLC	Chatham	35° 48' 45"	-79° 06' 38"	1.40	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-2C	Briar Chapel Utilities, LLC	Chatham	35° 48' 38"	-79° 06' 35"	5.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-2D	Briar Chapel Utilities, LLC	Chatham	35° 48' 41"	-79° 06' 36"	1.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-3A	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 55"	0.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3B	Briar Chapel Utilities, LLC	Chatham	35° 48' 50"	-79° 06' 50"	0.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3C	Briar Chapel Utilities, LLC	Chatham	35° 48' 47"	-79° 06' 49"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3D	Briar Chapel Utilities, LLC	Chatham	35° 48' 43"	-79° 06' 46"	0.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-3E	Briar Chapel Utilities, LLC	Chatham	35° 48' 50"	-79° 06' 53"	9.80	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-3F	Briar Chapel Utilities, LLC	Chatham	35° 48' 42"	-79° 06' 44"	3.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-6A	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 06' 01"	0.30	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-6C	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 06' 58"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-9A	Briar Chapel Utilities, LLC	Chatham	35° 49' 21"	-79° 07' 11"	4.20	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-9B	Briar Chapel Utilities, LLC	Chatham	35° 49' 15"	-79° 07' 09"	3.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-12A	Briar Chapel Utilities, LLC	Chatham	35° 49' 29"	-79° 07' 23"	2.00	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-12B	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 07' 12"	2.60	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-12C	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 07' 19"	3.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-12D	Briar Chapel Utilities, LLC	Chatham	35° 49' 18"	-79° 07' 15"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-13A	Briar Chapel Utilities, LLC	Chatham	35° 49' 26"	-79° 07' 00"	0.40	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13B	Briar Chapel Utilities, LLC	Chatham	35° 49' 29"	-79° 06' 59"	1.00	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13C	Briar Chapel Utilities, LLC	Chatham	35° 49' 33"	-79° 07' 03"	1.10	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13D	Briar Chapel Utilities, LLC	Chatham	35° 49' 36"	-79° 06' 59"	1.00	Rion	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	C-13E	Briar Chapel Utilities, LLC	Chatham	35° 49' 31"	-79° 06' 59"	2.70	Pacolet	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-13F	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 07' 03"	6.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-15B	Briar Chapel Utilities, LLC	Chatham	35° 49' 38"	-79° 06' 40"	0.90	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-A	C-15C	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 38"	1.30	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-15E	Briar Chapel Utilities, LLC	Chatham	35° 49' 40"	-79° 06' 45"	1.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-16A	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 26"	3.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	C-20A	Briar Chapel Utilities, LLC	Chatham	35° 49' 48"	-79° 07' 00"	0.40	Helena	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-1A	Briar Chapel Utilities, LLC	Chatham	35° 49' 21"	-79° 06' 01"	10.40 / 8.50 ¹	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-2A	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 06' 49"	9.00 / 4.90 ¹	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-3A	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 05' 30"	0.80 ²	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-3B	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 05' 22"	2.20 / 1.80 ¹	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-3C	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 05' 27"	3.50 / 2.50 ¹	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-3D	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 05' 39"	0.90 / 0.30 ¹	Rion	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-A	E-4A	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 05' 35"	3.10 / 2.00 ¹	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-4B	Briar Chapel Utilities, LLC	Chatham	35° 49' 18"	-79° 05' 18"	2.90 / 2.60 ¹	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-A	E-4C	Briar Chapel Utilities, LLC	Chatham	35° 49' 16"	-79° 05' 26"	9.30 / 8.50 ¹	Rion	01284 – Non-Discharge Application Rate	0.10	37.31	inches
Total for 1-A (Non-Conjunctive Reclaimed Water Utilization)						114.8 / 31.9¹					
1-B	B-1A	Briar Chapel Utilities, LLC	Chatham	35° 49' 28"	-79° 05' 58"	9.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-1B	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 05"	1.70	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-2A	Briar Chapel Utilities, LLC	Chatham	35° 49' 22"	-79° 06' 15"	0.30	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-3B	Briar Chapel Utilities, LLC	Chatham	35° 49' 36"	-79° 06' 11"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-3C	Briar Chapel Utilities, LLC	Chatham	35° 49' 41"	-79° 06' 11"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-4A	Briar Chapel Utilities, LLC	Chatham	35° 49' 42"	-79° 06' 17"	0.60	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-5A	Briar Chapel Utilities, LLC	Chatham	35° 49' 07"	-79° 06' 34"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-6A	Briar Chapel Utilities, LLC	Chatham	35° 49' 07"	-79° 06' 31"	1.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-7A	Briar Chapel Utilities, LLC	Chatham	35° 49' 59"	-79° 06' 28"	2.30	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-7B	Briar Chapel Utilities, LLC	Chatham	35° 50' 16"	-79° 06' 32"	0.60	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-B	B-8A	Briar Chapel Utilities, LLC	Chatham	35° 50' 14"	-79° 06' 26"	0.10	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-8B	Briar Chapel Utilities, LLC	Chatham	35° 50' 32"	-79° 06' 27"	1.90	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-B	B-8D	Briar Chapel Utilities, LLC	Chatham	35° 50' 25"	-79° 06' 25"	0.70	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-8E	Briar Chapel Utilities, LLC	Chatham	35° 50' 37"	-79° 06' 22"	0.50	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-9A	Briar Chapel Utilities, LLC	Chatham	35° 50' 42"	-79° 06' 26"	1.10	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-B	B-9C	Briar Chapel Utilities, LLC	Chatham	35° 50' 41"	-79° 06' 20"	0.40	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
Total for 1-B (Wastewater Irrigation)						22.0					
1-C	C-1	Briar Chapel Utilities, LLC	Chatham	35° 49' 14"	-79° 05' 46"	9.48 / 7.5 ¹	Wedowee	01284 – Non-Discharge Application Rate	0.10	30.84	inches
Total for 1-C (Non-Conjunctive Reclaimed Water Utilization)						9.48 / 7.5¹					
1-D	D-2	Briar Chapel Utilities, LLC	Chatham	35° 49' 25"	-79° 06' 38"	0.37	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-3	Briar Chapel Utilities, LLC	Chatham	35° 49' 26"	-79° 06' 43"	0.47	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-4	Briar Chapel Utilities, LLC	Chatham	35° 49' 41"	-79° 06' 48"	0.26	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-5	Briar Chapel Utilities, LLC	Chatham	35° 49' 48"	-79° 06' 35"	1.02	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-6	Briar Chapel Utilities, LLC	Chatham	35° 49' 51"	-79° 06' 42"	0.63	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-7	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 07' 04"	1.83	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-8	Briar Chapel Utilities, LLC	Chatham	35° 49' 12"	-79° 06' 52"	2.62	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-9	Briar Chapel Utilities, LLC	Chatham	35° 49' 10"	-79° 06' 49"	0.15	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
1-D	D-10	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 48"	0.06	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-11	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 48"	0.04	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-12	Briar Chapel Utilities, LLC	Chatham	35° 49' 08"	-79° 06' 50"	2.12	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-13	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 46"	0.62	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-15	Briar Chapel Utilities, LLC	Chatham	35° 49' 02"	-79° 06' 46"	0.25	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-16	Briar Chapel Utilities, LLC	Chatham	35° 48' 59"	-79° 06' 47"	0.31	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-17	Briar Chapel Utilities, LLC	Chatham	35° 49' 01"	-79° 06' 47"	0.03	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-18	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 40"	1.56	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	19.95	inches


IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-D	D-19	Briar Chapel Utilities, LLC	Chatham	35° 48' 51"	-79° 06' 35"	1.40	Fill ⁴	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-20	Briar Chapel Utilities, LLC	Chatham	35° 48' 49"	-79° 06' 34"	0.17	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-21	Briar Chapel Utilities, LLC	Chatham	35° 48' 52"	-79° 06' 32"	0.54	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-22	Briar Chapel Utilities, LLC	Chatham	35° 48' 56"	-79° 06' 33"	0.08	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-23	Briar Chapel Utilities, LLC	Chatham	35° 49' 57"	-79° 06' 33"	0.20	Wedowee	01284 – Non-Discharge Application Rate	0.10	37.31	inches
1-D	D-26	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 06' 57"	2.16	Helena	01284 – Non-Discharge Application Rate	0.10	19.95	inches
Total for 1-D (Non-Conjunctive Reclaimed Water Utilization)						16.89					
1-E	E-1 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 47"	-79° 06' 28"	1.0 ²	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-2 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 44"	-79° 06' 08"	4.9 ²	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-3 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 35"	-79° 06' 09"	1.0	Fill ⁴	01284 – Non-Discharge Application Rate	0.15	N/A	inches
1-E	E-4 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 34"	-79° 06' 18"	3.3 ²	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-E	E-5 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 50"	1.8	Fill ⁴	01284 – Non-Discharge Application Rate	0.15	N/A	inches
Total for 1-E (Conjunctive Reclaimed Water Utilization³)						12.0 / 9.2¹					
1-F	F-1 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 27"	-79° 06' 49"	4.1	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-2 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 30"	-79° 06' 44"	4.1 / 0.51 ¹	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-3 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 33"	-79° 06' 43"	4.3 / 0.73 ¹	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
1-F	F-4 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 35"	-79° 06' 50"	2.6 ²	Fill ⁴	01284 – Non-Discharge Application Rate	0.25	N/A	inches
Total for 1-F (Conjunctive Reclaimed Water Utilization³)						15.1 / 3.8¹					
1-G	G-1 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 20"	-79° 07' 02"	3.5	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-2 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 24"	-79° 07' 00"	2.2	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-3 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 22"	-79° 06' 54"	4.2	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-4 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 17"	-79° 06' 59"	4.0	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-5 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 39"	-79° 06' 54"	1.2	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-6 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 11"	-79° 06' 40"	3.1	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches

IRRIGATION / UTILIZATION AREA INFORMATION								APPLICATION LIMITATIONS			
Phase	Field	Owner	County	Latitude	Longitude	Net Acreage	Dominant Soil Series	Parameter	Hourly Rate	Yearly Max	Units
1-G	G-7 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 05"	-79° 06' 44"	2.5	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-8 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 06"	-79° 06' 27"	3.1	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
1-G	G-9 ³	Briar Chapel Utilities, LLC	Chatham	35° 49' 13"	-79° 06' 27"	2.6	Fill ⁴	01284 – Non-Discharge Application Rate	0.30	N/A	inches
Total for 1-G (Conjunctive Reclaimed Water Utilization³)						26.4					
Total						212.57 / 52.4 ²					

1. The second value represents portions of that field which are certified and operational.
2. This notation represents fields that are entirely certified and operational.
3. Records for conjunctive utilization sites are not required to be reported on Form NDAR-1. Instead, the total monthly flow distributed should be reported on Form NDMR for parameter WQ01.
4. Fields permitted with "Fill" as the dominant underlying soil shall be rototilled and amended with topsoil to a suitable depth to support growth of the intended vegetative cover and in no case less than six inches in depth.

**North Carolina Department of Environmental Quality
Division of Water Resources
Public Water Supply Section**

**Application for Approval
of Engineering Plans and Specifications
For Water Supply Systems**

Applicant	Design Engineer
Chatham County <small>(Name of Board, Council or Owner – the Applicant)</small>	Gareth Avant, P.E. <small>(Name of Design Engineer of Record)</small>
Renee Paschal, County Manager <small>(Name and Title of Authorized Official or Representative of the Applicant)</small>	McKim & Creed, Inc. <small>(Name of Engineering Firm)</small>
12 East Street, Courthouse Annex <small>(Mailing Address)</small>	1730 Varsity Drive, Suite 500 <small>(Mailing Address)</small>
Pittsboro, NC 27312 <small>(City, State & ZIP)</small>	Raleigh, NC, 27606 <small>(City, State & ZIP)</small>
(919) 542-8200 <small>(Phone Number)</small>	(919) 233-8091 <small>(Phone Number)</small>
(919) 542-8272 <small>(FAX Number)</small>	(919) 233-8091 <small>(FAX Number)</small>
Renee.Paschal@chathamnc.org <small>(Email address)</small>	gavant@mckimcreed.com <small>(Email address)</small>
 <small>(Signature of Authorized Official or Representative of the Applicant)</small>	

Project Name: Briar Chapel - Phase 15 South
(Name of Project to appear on Public Water Supply Section records and tracking system)

Approximately 1,665 LF of 6-inch ductile iron water main and 4,692 LF of 8-inch ductile iron water main and all associated appurtenances.
(description of project)

Southeast of Phase 15 North, south of Phase 16 South, off of Boulder Point Drive.
(general location of project)

in Chatham County.

Date _____
(for DEQ use only)

Serial No. _____
(for DEQ use only)

Application for Approval of Engineering Plans and Specifications for Water Supply Systems

To: Division of Water Resources,
Department of Environmental Quality

The **Applicant** applies under and in full accord with the provision of NCGS 130A-317, and such other statutes and rules as relate to public water systems. The **Authorized Official** or **Representative** of the **Applicant** represents that he is authorized to act for the **Applicant**. The **Authorized Official** or **Representative** of the **Applicant** understands and agrees to the following:

1. The **Applicant** shall not award contracts or begin construction without first receiving "Authorization to Construct" from DEQ.
2. The **Applicant** shall make no change or deviation from the engineering plans and specifications approved by DEQ except as allowed by 15A NCAC 18C .0306 or with the written consent and approval of DEQ.
3. The **Applicant** shall obtain Final Approval in accordance with 15A NCAC 18C .0306 prior to placing the project (or any portion thereof) into service.
4. Digital (PDF) submittals are true image copy of the original sealed/signed documents.

An authorized representative of the **Public Water System** (not always the same as the **Applicant**) is to complete and sign the following WSMP section.

Status of Water System Management Plan (WSMP)

Check one of the following, and if applicable, provide the required information:

- The WSMP for the project, as defined in the attached engineering plans and specifications, has not been submitted.
- Three copies of the WSMP for the project, as defined in the attached engineering plans and specifications, are submitted with this application.
- The WSMP that includes this project, as defined in the attached engineering plans and specifications, was previously submitted.

Provide the following:

Public Water System Name: North Chatham

Owner Name: Chatham County

Water System No.: NC 03-19-126

Serial Number of Deemed Complete WSMP: 12-00936

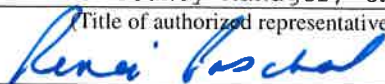
By my signature below, I certify that the previously submitted WSMP contains the information required by 15A NCAC 18C .0307(c) for the project defined in the attached engineering plans and specifications.

Renee Paschal

(Type or print name of authorized representative of Public Water System)

County Manager, Chatham County

(Title of authorized representative of Public Water System)



(Signature of authorized representative of Public Water System)

1/18/12

(Date)

Application for Approval of Engineering Plans and Specifications for Water Supply Systems

In accordance with NCGS 130A-328, the Public Water Supply Section charges a fee for plan review. **Any documents submitted for review must be accompanied by a check payable to DEQ-Public Water Supply Section before the review will begin.**

There is a \$25 fee for returned checks.

The charges for review of plans are shown below. Check one of the following.

Distribution System fees

- | | | |
|-------------------------------------|-----------------------------------------------------------|-------|
| <input type="checkbox"/> | Construction of water lines, less than 5000 linear feet | \$150 |
| <input checked="" type="checkbox"/> | Construction of water lines, 5000 linear feet or more | \$200 |
| <input type="checkbox"/> | Other construction or alteration to a distribution system | \$ 75 |

Ground Water System fees

- | | | |
|--------------------------|----------------------------------------------------------------|-------|
| <input type="checkbox"/> | Construction of a new ground water system or adding a new well | \$200 |
| <input type="checkbox"/> | Alteration to an existing ground water system | \$100 |

Surface water system fees

- | | | |
|--------------------------|-------------------------------------------------------------------|-------|
| <input type="checkbox"/> | Construction of a new surface water intake or treatment facility | \$250 |
| <input type="checkbox"/> | Alteration to existing surface water intake or treatment facility | \$150 |

Other fees

- | | | |
|--------------------------|--------------------------------------------------------|-------|
| <input type="checkbox"/> | Water System Management Plan review | \$ 75 |
| <input type="checkbox"/> | Miscellaneous changes or maintenance not covered above | \$ 50 |

Notes:

1. Projects for Tank Rehabilitation use separate "Application for Water Tank Reconditioning Plan Approval."
2. The fee is not refundable if the plans are not approved.
3. Revisions to plans to address the Public Water Supply Section's or other state agency's comments do not incur an additional fee.
4. If one set of plans has multiple related items (such as a new well with construction of water lines) only one fee must be submitted for highest price item. The amounts are not cumulative, except for fees for Water System Management Plans.
5. **If the appropriate plan review fee is not received within ten days after the receipt of plans, specifications, and reports for approval, then all plan documents will be recycled. A new set of documents must then be submitted with the appropriate fee for approval.**

This approval does not address all applicable laws, rules, standards and criteria, and other approvals and licenses that may be required by the local, state or federal government.

The Public Water Supply Section has stamped and sealed the official copies of plans and specifications accompanying this application with the serial number of this application _____. Any erasures, additions or alterations of the proposed improvements except those permitted in 15A NCAC 18C .0306 make this approval null and void.

This approval does not constitute a warranty of the design, construction or future operation of the water system.

Signed: _____
Robert W. Midgett, P.E., Operations Branch Head
Public Water Supply Section
Division of Water Resources

Application for Approval of Engineering Plans and Specifications for Water Supply Systems

Other Information and Checklist Page

- Attached is a check for the proper plan review fee amount, in accordance with NCGS 130A-328. See note 4 on page 3.
-

This submittal includes one paper original with two digital (PDF) CDs of the following items, each item in separate folders:

- This completed "Application for Approval of Engineering Plans and Specifications for Water Supply Systems"
- The sealed plan drawings, separate file in PDF format for each drawing. Cover sheet must include drawings index;
- The project-specific Engineering Report (ER) describing the scope and purpose of the project and addressing each of the items listed in 15A NCAC 18C .0307(b), including the design basis of the project. [15A NCAC 18C .0307(b) (12)];
- Specifications for this project; **OR**
- The project will use the following system's previously approved standard specifications for waterline extensions:

Name of System: _____

Serial Number: _____

The Serial Numbers for previously approved standard specifications can be found at the following website:

<http://www.ncwater.org/?page=424>

One of the following:

- Attached is a letter signed by an authorized representative of the Public Water System agreeing to serve the project and stating that the system has adequate supply;

OR

- The **Applicant** is the Public Water System.
-

If the project has sought funding (for example, DWSRF loan) list the program and (if available) the application or funding number below:

Program Name	Application or Funding Number, if available

- Yes No
- Project will be completed with significant expenditure of state moneys, greater than ten million dollars (\$10,000,000) in accordance with G.S. 113A-9 (7a).
- Project will cause substantial, permanent land-disturbing activity of an area greater than 10 acres of public lands in accordance with G.S. 113A-9 (11).

SUMMARY OF IMPERVIOUS SURFACE CALCULATIONS
BRIAR CHAPEL DEVELOPMENT

March 10, 2017

OVERALL IMPERVIOUS SUMMARY

Total Site Area		1,589.36 ac
	TOTAL PHASE IMPERVIOUS (SF)	TOTAL PHASE IMPERVIOUS (AC)
Total Phase 2	230,840	5.30 ac
Total Phase 4	2,645,299	60.73 ac
Total Phase 5S	167,420	3.84 ac
Total Phase 5N	801,283	18.39 ac
Total Phase 6S	821,992	18.87 ac
Total Phase 6N	588,450	13.51 ac
Total Phase 7	1,099,106	25.23 ac
Total Phase 8	506,074	11.62 ac
Total Phase 9	576,704	13.24 ac
Total Phase 10	470,900	10.81 ac
Total Phase 11	797,859	18.32 ac
Total Phase 12	1,124,323	25.81 ac
Total Phase 13	278,524	6.39 ac
Total Phase 14	243,632	5.59 ac
Phase 15S	794,230	18.23 ac
Phase 15N/Boulder Point Ext.	339,676	7.80 ac
Phase 16S	629,119	14.44 ac
Phase 16N	424,901	9.75 ac
County Park	76,314	1.75 ac
County School	318,823	7.32 ac
Woods Charter School	180,911	4.15 ac
Water Tank Site	13,755	0.32 ac
Water Treatment Plant	38,590	0.89 ac
BC Civic Building	41,274	0.95 ac
BC SD North	154,399	3.54 ac
BC Tennis Center	122,625	2.82 ac
Andrews Store Connector	41,968	0.96 ac
BC Commercial - SD West	891,238	20.46 ac
BC Commercial - SD East	869,458	19.96 ac
Catullo Run/Taylor Road Improvements	25,883	0.59 ac
Total Impervious	15,315,570	351.60
Total Impervious Percent	22.12%	

March 9, 2017

Lynn Richardson
Chatham County Planning
80-A East Street
Pittsboro, NC 27312-0146

Re: Briar Chapel Phase 15 South-Conditional Use Permit Stipulations

Dear Ms. Richardson:

The following are our responses to the Conditional Use Permit Stipulations for Briar Chapel Phase 15 South.

1. Construction Deadlines
 - a. Estimated Start Date: May 18, 2017
 - b. Estimated Completion Date: February 1, 2018

2. Land Use Intensity
 - a. Overall Briar Chapel
 - i. Gross land area (acres) = 1,589
 - ii. Maximum impervious surface area = 24%
 - iii. Maximum number of dwelling units = 2,500

 - b. Phase 15 South
 - i. Gross land area (acres) = 44.23
 - ii. Impervious surface area (acres) = 18.23
 - iii. Number of dwelling units = 141
 - iv. Maximum impervious surface (relative to overall) = 1.15%
 - v. *Cumulative impervious surface = 22.12%

Venture IV Building

Suite 500

1730 Varsity Drive

Raleigh, NC 27606

919.233.8091

Fax 919.233.8031

www.mckimcreed.com

*Cumulative percentage is based on actual phase design for phases platted prior to Phase 15 South and projected for future phases.

3. Watershed Management
 - a. Updated impervious surface calculations are included with this submittal.

4. Stormwater Management
 - a. A Stormwater Management Plan has been designed by McKim & Creed, Inc. and approved by NCDEQ-DWQ. A certificate of completion stating that stormwater control measures were observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications and other supporting materials, will be submitted to NCDEQ-DWQ upon completion of the work. Also, impervious surface calculations are included with this submittal.
5. Commercial Use
 - a. Commercial use is not proposed in this phase.
6. Lighting Plan
 - a. Applicant shall place note on the final plat stating that all area lighting shall meet County standards and not adversely affect adjoining residential areas.
7. Utility and Access Easements
 - a. Utility and access easements have been shown on the approved construction documents.
8. Unity of Development
 - a. The residences projected for Phase 15 South will be consistent with those approved in the previous phases.
9. Permits
 - a. Applicable permits required for Preliminary Plat have been obtained and are included within this submittal.
10. Improvements
 - a. No off-site improvements are necessary for this phase.
11. Parking and off-street loading areas
 - a. Sidewalks are shown throughout this phase to provide for pedestrian and bicycle circulation.
12. Streets
 - a. Six (6) public roadways and five (5) private alleys are included in Phase 15 South. The roadways have been approved by NCDOT.
13. Utilities
 - a. The proposed water main design was approved by Chatham County Public Utilities and NCDEQ Public Water Supply. The permits are included with this submittal.
 - b. The proposed sanitary sewer design for Phase 15 South was approved by NCDEQ-DWR and is included with this submittal. Also, the NCDEQ-

DWR wastewater treatment/reclaimed water/spray irrigation permit is included with this submittal.

14. Public Facilities

- a. The public facilities listed in the Conditional Use Permit are not proposed within this phase.

15. Landscaping/Screening

- a. Not applicable in this phase.

16. Archaeological Survey

- a. Based on the August 2006 report by ESI (entitled "An Intensive Cultural Resource Investigation: Briar Chapel, Chatham County, NC"), there are no cemeteries or structures eligible for the National Register within the project area of Phase 15 South nor any structures or cemeteries 50 years old or older.

17. Solid Waste Management Plan

- a. A solid waste management plan has been previously submitted and no changes are proposed for this phase.

18. Detailed site plan

- a. The detailed site plan included with this submittal conforms to the intent of the approved Briar Chapel Master Plan.

19. Stages

- a. Phase 15 South will be constructed as a phase of the overall Briar Chapel development.

20. Moderate Income Housing

- a. Requirements have been met. No further obligations are required.

21. Environment

- a. This stipulation involves the Bennett Mountain area of the development. Phase 15 South is not located in or near the Bennett Mountain area.

22. Erosion Control

- a. The approved erosion control plan and permit are included with this submittal.

23. Silt Control

- a. Silt control is part of the approved erosion control plan. See response to Erosion Control above.

24. Items #24-#29 in the CUP Stipulation List
 - a. Items #24-#29 are duly noted.

If you have any questions during your review, please do not hesitate to call me at (919) 233-8091. Thank you for your assistance.

Sincerely,
McKim & Creed, Inc.



Chris Seamster, PLA
Project Manager

Cc: Mr. Lee Bowman

BRIAR CHAPEL - TRANSECT ZONE

Frontage by Zone/Area

T3 Zone	Phase 6 N	Ph 7	Ph 8	Ph 9	Ph 11	Ph 15N	Ph 16S	Ph 10	Ph 15S	Cumulative (LF)	Cumulative (%)
50,500 LF	5,000 LF	2,355 LF	1,110 LF	3,000 LF	1,000 LF	2,970 LF	6,375 LF	740 LF	3,400 LF	25,950 LF	51%
T4a Zone	Phase 6 N	Ph 7	Ph 8	Ph 9	Ph 11	Ph 15N	Ph 16S	Ph 10	Ph 15S	Cumulative (LF)	Cumulative (%)
30,000 LF	600 LF	3,440 LF	4,150 LF	3,200 LF	1,888 LF	765 LF	00 LF	3,397 LF	2,875 LF	20,315 LF	68%
T4b Zone	Phase 6 N	Ph 7	Ph 8	Ph 9	Ph 11	Ph 15N	Ph 16S	Ph 10	Ph 15S	Cumulative (LF)	Cumulative (%)
5,500 LF	00 LF	780 LF	64 LF	00 LF	3,550 LF	00 LF	00 LF	00 LF	160 LF	4,554 LF	83%