stimmel | 601 N. TRADE STREET, SUITE 200
WINSTON-SALEM, NC 27101
www.stimmelpa.com 336.723.1067

November 4, 2016

Mr. Barry Baker
Granville County - Development Services
122 Williamsboro Street
Oxford, NC 27565

Reference: Stormwater Plan Approval
Project Name: Bingham Residence
Jurisdiction: Granville County
Basin: WS-IV NSW Falls Lake Watershed
Stimmel Project #13-045

Dear Barry:

Stimmel Associates received a transmittal on November 4, 2016 containing stormwater plans and calculations for a project entitled "Bingham Residence" located on Old Weaver Trail in Granville County. We performed a stormwater review and have determined the project **is** in compliance with the Water Supply Watershed WS-IV (15A NCAC 02B .0216), Falls Lake Stormwater Rules (15A NCAC 02B .0277) and Neuse River Basin Riparian Buffer Rules (15A NCAC 02B .0233 and .0242) or local zoning ordinance.

The following comments for additional information are required in order to approve the project under statute or regulation:

Falls Lake Comments (15A NCAC 02B .0277)
1. No comment.

Neuse River Buffer Comments (15A NCAC 02B .0233 and .0242)
1. This property contains 50-foot riparian buffers along each side of the existing stream. Clearing vegetation within 30 feet of the top of stream bank is prohibited. Impervious surfaces are not allowed within the 50-foot buffer. Contact Granville County prior to any land disturbance within the buffer.

Local Ordinance Comments
1. No comment.

North Carolina Best Management Practices Manual
1. No comment.

Other Comments
1. This plan review is limited to stormwater management and associated site storm drainage systems.
2. No land disturbance, development or redevelopment of any kind shall occur until a Stormwater Management Permit is issued regardless if NCDENR – Land Quality has issued an erosion control permit.

Please give me a call if you have any questions.
Sincerely yours:

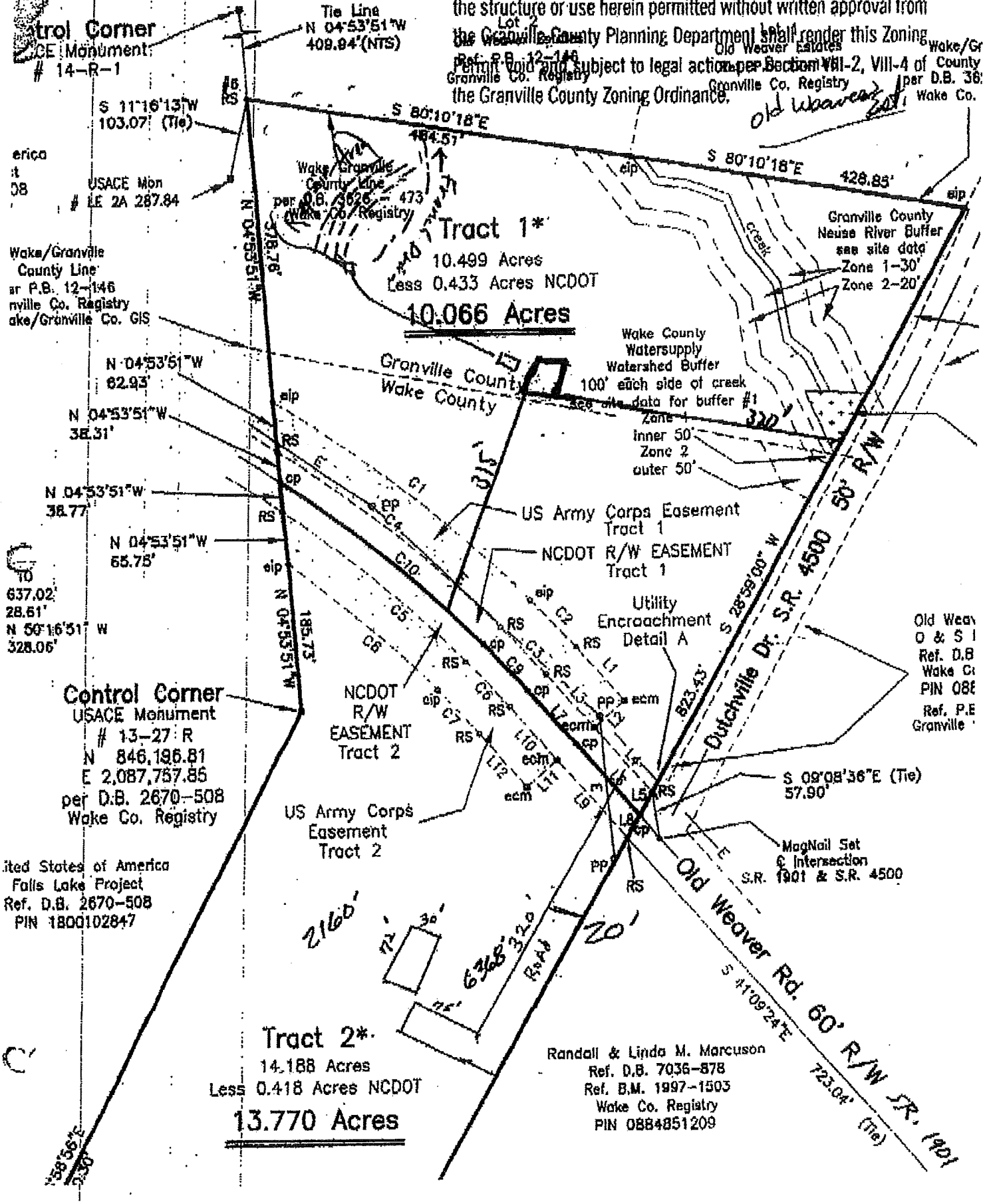
Kelway L. Howard III, P.E.
Stimmel Associates, P.A.
Partner/Senior Project Manager

Cc: Jennifer Fitts – Raftelis Financial Consultants

PERMIT ISSUED 4/23/07 UPDATED Aug 2011

NOTICE TO APPLICANT AND HEALTH/INSPECTION DEPTS.

Any changes made to this drawing/ plat or to the physical siting of the structure or use herein permitted without written approval from the Granville County Planning Department shall render this Zoning Permit void and subject to legal action per Section VIII-2, VIII-4 of the Granville County Zoning Ordinance.



WIC 1/20

GRANVILLE-VANCE DISTRICT HEALTH DEPARTMENT

APPLICATION FOR IMPROVEMENT PERMIT & CONSTRUCTION AUTHORIZATION

Application WILL NOT be accepted without site plan

Owner: Mary L Roberts Bowen
Address: 1641 North Old Oxford Rd
Creedmoor, NC 27522

PIN: 1805490188
Receipt# 34629
Work Phone#: 919-818-9133
Home Phone#: 919-596-2941

Owner's Representative: ____
Address: Same

Work Phone#: ____
Home Phone#: ____
Subdivision: ____

Directions to the property & 911 address, if available:
Go 15 - to Creedmoor 50 S - to Old Weaver Trail (right turn) - go about 1 mile property on right - Corner of Nutgrove Rd. & Old Weaver Trail Call Mary or Larry 740-6801 - to be out there -

New System ✓ Expansion/Repair of existing system ____ Desired system type: ✓ Conventional ____ Other

Permit valid for five (5) years (attach site plan): ✓
Permit valid without expiration (attach plat): ____
Construction Authorization (valid for five years): ✓

Old Weaver Trail / SR 1901

Number, description, and use of structures and proposed structures on the property:
60 x 30 Site Built Home

Number of bedrooms: 3 Number of persons served 1
Please describe any additional factors, which may affect the amount of water used: ____

Will wastewater other than domestic sewage be generated? Yes ____ No ✓
If so, please describe: ____

Is there a basement or construction below existing grade? No With plumbing? ____
Indicate type of water supply: Public ____ Private ✓ Type well
Are there any water supplies on adjoining property? Yes ____ No ✓
Are there designated wetlands on the property? Yes ____ No ✓
(If yes, please indicate their location on the plat or site plan)
Required zoning or other public agency approval obtained? Yes ✓ No ____
Date property was originally deeded or platted and recorded: ____
Is this property and proposed or existing structures under common or joint control?
(i.e., a condominium or other multiple ownership development) Yes ____ No ✓

Mary L. Roberts Bowen — 3-9-07
Signature of Owner or Legal Representative — Date

Meet NC 50 + old Weaver Trail

SWGVCHD-ENV 10/03

SOIL/SITE EVALUATION SHEET

Factors	Profile 1	2	Profile 3	4	Profile 5	6
Landscape Position	R.S	FS	R.S	FS		
Slope	32.5?	32.5?	22-4?	22		
Horizon I Depth	0"-30"					
Texture Group	LS-SL					
Consistence	vfr					
Structure	gr					
Mineralogy	1:1					
Horizon II Depth	30"-40"	-36"	-48"	-36"		
Texture Group	sc	LS.SL	SCL-SC	LS-SL		
Consistence	fir-fr	vfr	fr	vfr		
Structure	sbk	gr	sbk	gr		
Mineralogy	1:1	1:1	1:2	1:1		
Horizon III Depth						
Texture Group						
Consistence						
Structure						
Mineralogy						
Horizon IV Depth						
Texture Group						
Consistence						
Structure						
Mineralogy						
Soil Wetness	mottles 40"	mottles 36"				
Restrictive Horizon						
Saprolite						
Classification	PS	PS	PS	PS		
Long-Term Acceptance Rate	.3	.?	.3	.?		

Site Classification: PS Site Long-Term Acceptance Rate: .3

Evaluated By: [illegible] RS Other(s) Present: Larry

Remarks: Old Wesser Trail + Dutchville Drive 4-24-07

Landscape Position	Texture	Moist Consistence
R-Ridge	s-sand	vfr-very friable
S-Shoulder slope	ls-loamy sand	fr-friable
L-Linear slope	sl-sandy loam	fi-firm
FS-Foot slope	l-loam	vfi-very firm
N-nose slope	si-silt	efi-extremely firm
H-Head slope	sil-silt loam	**Wet Consistence**
Cc-Concave slope	sicl-silty clay loam	ns-non-sticky
Cv-Convex slope	cl-clay loam	ss-slightly sticky
T-terrace	scl-sandy clay loam	s-sticky
FP-Flood plain	sc-sandy clay	vs-very sticky
	sic-silty clay	np-non-plastic
	c-clay	sp-slightly plastic
Structures		p-plastic
sg-single grain	**Mineralogy**	vp-very plastic
m-massive	1:1	**Classification**
cr-crumb	2:1	s-suitable
gr-granular	mixed	u-unsuitable
sbk-sub-angular blocky	**Saprolite**	ps-provisionally suitable
abk-angular blocky	s-suitable	**Long-Term Acceptance Rate**
pl-platy	u-unsuitable	gallons/day/ft.^{2}
pr-prismatic		

Large Layout on Back

PERMIT NUMBER 06294

GRANVILLE-VANCE DISTRICT HEALTH DEPARTMENT
IMPROVEMENT AND OPERATION PERMITS

COUNTY: Granville	TAX NO. 18050	TYPE OF ESTABLISHMENTS		
	SR. NO. 1901	RESIDENCE ✓ BUSINESS — OTHER —	NUMBER OF BEDROOMS: 4 X	NUMBER OF OCCUPANTS: 1
OWNER: Daniel & Martina Bingham		WATER SUPPLY	WELL ✓ PUBLIC —	OTHER —
APPLICANT'S ADDRESS: ~~1644 Northside Road Creedmoor, NC 27522~~ Old Weaver Trail		TYPE OF WASTEWATER SYSTEM	INITIAL ✓ INSTALLATION	REPAIR
PROPERTY ADDRESS/LOCATION: Dutchville Drive		DESIGN FLOW:	480 gal/day	
SUBDIVISION: 3105 Old Weaver Trail		LTAR:	.3	
LOT NUMBER: Tract #1		ABSORPTION AREA:	1200 sq ft	
		TRENCH WIDTH:	3'	
REFERENCE SKETCH (SEE PLAT FOR DETAILS) See sketch on back.		TRENCH DEPTH:	18"-24"	
		TRENCH SPACING:	9' on center	
		TOTAL TRENCH LENGTH:	400 ft.	
		NUMBER OF TRENCHES:	4	
		GRAVEL DEPTH:	~~X~~ Accepted Status	
		TANK SIZE:	1200 gal	
		PUMP TANK SIZE:		
		DISTRIBUTION DEVICE:	D-Box	

Dig trenches 18"-24" deep level on contour. Stay at least 10' from house foundation drain, 10' from property line, & 100' from any well. Do not install or call for inspection in rain.

*THIS PERMIT SHALL BE ACCOMPANIED BY A LAYOUT SHOWN ON A PLAT, INCLUDING SYSTEM REQUIREMENTS.

*THIS IMPROVEMENT PERMIT IS SUBJECT TO REVOCATION IF THE INTENDED USES CHANGE FROM THOSE SHOWN ON THE IMPROVEMENT PERMIT. CHANGES SHALL REQUIRE HEALTH DEPARTMENT APPROVAL.

PERMIT VALID FOR: 5 YEARS YES NO
Exp. 2020

NO EXPIRATION YES NO (Updated)

****

IMPROVEMENT PERMIT DATE: 4-23-07 / 8-15-2011 / 8-3-2015 DC

FOR: Mary Roberts

ISSUED BY: M.E. Mount, R.S.

****

CONSTRUCTION AUTHORIZATION FOR IMPROVEMENT PERMIT# 06294

Unless otherwise indicated, the same conditions above apply regarding system type, layout, location and installation requirements.
(The wastewater system cannot be installed until authorization is signed)

Comments: Install French Drain - use 12" bucket - 36"-48" deep. Call Health Dept. To confirm site before construction.

Date: 4-23-07 Environmental Health Specialist: M.E. Mount, R.S.

Construction Authorization Addendum ☐ Yes ☐ No

****

OPERATION PERMIT DATE:

SYSTEM INSTALLED BY: _____

ISSUED BY

WELL CONSTRUCTION RECORD (GW-1)

For Internal Use Only:

1. Well Contractor Information:

James D. Stephenson Jr.
Well Contractor Name

2421-A
NC Well Contractor Certification Number

Stephenson's Well Drilling, Inc.
Company Name

2. Well Construction Permit #: 2041
List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:
- ☐ Agricultural
- ☐ Geothermal (Heating/Cooling Supply)
- ☐ Industrial/Commercial
- ☐ Irrigation
- ☐ Municipal/Public
- ☑ Residential Water Supply (single)
- ☐ Residential Water Supply (shared)

Non-Water Supply Well:
- ☐ Monitoring
- ☐ Recovery

Injection Well:
- ☐ Aquifer Recharge
- ☐ Aquifer Storage and Recovery
- ☐ Aquifer Test
- ☐ Experimental Technology
- ☐ Geothermal (Closed Loop)
- ☐ Geothermal (Heating/Cooling Return)
- ☐ Groundwater Remediation
- ☐ Salinity Barrier
- ☐ Stormwater Drainage
- ☐ Subsidence Control
- ☐ Tracer
- ☐ Other (explain under #21 Remarks)

4. Date Well(s) Completed: 7/18/17 **Well ID#** _____

5a. Well Location:

Daniel Bingham
Facility/Owner Name

Facility ID# (if applicable)

3105 Old Weaver Trail, Creedmoor, 27522
Physical Address, City, and Zip

Granville
County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

36° 04.554 N 78° 42.096 W

6. Is(are) the well(s): ☑ Permanent or ☐ Temporary

7. Is this a repair to an existing well: ☐ Yes or ☑ No
If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: _____

9. Total well depth below land surface: 545 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 25 (ft.)
If water level is above casing, use "+"

11. Borehole diameter: 6 1/8 (in.)

12. Well construction method: Air Rotary
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) 3 **Method of test:** Gunpe

13b. Disinfection type: HTH **Amount:** 2 lbs.

14. WATER ZONES

FROM	TO	DESCRIPTION
150 ft.	151 ft.	1 gpm
410 ft.	411 ft.	2 gpm

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0 ft.	32 ft.	6 1/4 in.	SDR-21	PVC

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
N/A ft.	ft.	in.		
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
0 ft.	545 ft.	4 in.	.030	Sch 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0 ft.	20 ft.	Bentonite	Pour
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
N/A ft.	ft.		
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0 ft.	1 ft.	Top Soil
1 ft.	25 ft.	Brown Soil
25 ft.	545 ft.	Rock
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

James D. Stephenson Jr. 7/18/17
Signature of Certified Well Contractor — Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.