

ADDRESS : 40 HOPELAND DR  
CONTRACTOR : H & H CONSTRUCTORS INC  
OWNER : H & H CONSTRUCTORS INC  
PARCEL : 03-9589-01- -1021- -53-  
APPL NUMBER: 18-50043369 CP NEW RESIDENTIAL (SFD)  
DIRECTIONS : T/S: 02/21/2018 03:46 PM BPETRICH --  
40 HOPELAND DRIVE LILLINGTON 27546  
OAKMONT #294

SUBDIV: OAKMONT PH2 SECT 1B 44LTS  
PHONE : (910) 486-4864  
PHONE :

**STRUCTURE: 000 000 37X63 5BD 4.5BA SLAB W/GARAGE & PATIO**

FLOOD ZONE : FLOOD ZONE X  
# BATHS : 4.5 # BEDROOMS : 5.00  
PROPOSED USE : SFD SEPTIC - EXISTING? : NEW TANK  
WATER SUPPLY : COUNTY

**PERMIT: CPSF 00 CP \* SFD**

TYP/SQ	REQUESTED COMPLETED	INSP RESULT	DESCRIPTION RESULTS/COMMENTS
A814 01	3/26/18 3/26/18	SB AP	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 003105756 40 HOPELAND DR LILLINGTON 27546 T/S: 03/26/2018 03:35 PM SBENNETT -----
B101 01	4/26/18 4/26/18	TSG AP	R*BLDG FOOTING / TEMP SVC POLE TIME: 17:00 VRU #: 003118916 T/S: 04/25/2018 01:46 PM JBROCK ----- check t-pole please
B103 01	5/10/18 5/10/18	TSG AP	R*BLDG FOUND & TEMP SVC POLE TIME: 17:00 VRU #: 003125432 T/S: 05/09/2018 10:04 AM JBROCK -----
P309 01	5/24/18 5/24/18	DT AP	R*PLUMB UNDER SLAB TIME: 17:00 VRU #: 003131323 T/S: 05/23/2018 11:30 AM BPETRICH ----- T/S: 05/24/2018 03:54 PM DETAYLOR -----
B111 01	6/05/18 6/05/18	TSG DA	R*BLDG SLAB INSP/TEMP SVC POLE TIME: 17:00 VRU #: 003135209 T/S: 06/04/2018 11:00 AM JBROCK ----- COMPACTION LETTER RREQUIRED ON STEM WALL BACKFILL OVER 24
B111 02	6/08/18	TA	R*BLDG SLAB INSP/TEMP SVC POLE TIME: 17:00 VRU #: 003137247 T/S: 06/07/2018 10:32 AM JBROCK ----- compaction letter on jb's desk

COMMENTS AND NOTES

43369



Geotechnical Engineering Services  
Construction Material  
Civil Quality Control

H & H Homes  
2919 Breezewood Avenue  
Suite 400  
Fayetteville, NC 28303

06/07/2018

Attention : John Rice

RE: Daily Field Report for 06/06/2018  
Lot 294 Oakmont Subdivision OKM (CMT) Lillington, NC  
Building & Earth Project No : RD180333

Ladies and Gentlemen:

On this date, representative(s) of Building & Earth were present to perform construction material testing services at this project site. Our testing and observations for this date include the following:

FO-1 : Field Observations made on this date.

- Dynamic Cone Penetrometer Testing Passed
- Project Management Review Passed

ST-1 : In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTM D1556, using the results of field one-point as compared to the laboratory proctors. One(1) in-place field density test was performed on this date. The testing results indicate that in-place compaction and moisture content at the location and depth tested meet or exceed the specified requirements outlined in the project plans and specifications. For additional details of our testing, please refer to the attached Field Density Test Report.

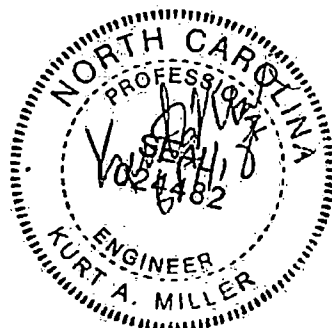
**Closing**

The testing and observations identified above have been reviewed by our project manager. If you have questions regarding this information, please do not hesitate to contact us.

Respectfully Submitted,  
Building & Earth Sciences, LLP

Enclosures : FO-1, ST-1

610 Spring Branch Road  
Dunn, NC 28334  
Phone 910-292-2085 Fax 910-292-2192  
www.BuildingandEarth.com



*Rachael Heath*

Reviewed By

## Field Observations Report

Project Name: <b>Lot 294 Oakmont Subdivision OKM (CMT)</b>	Project Number: <b>RD180333</b>
Client Name: <b>Lillington, NC</b>	Placement#: <b>FO-1</b>
Contractor: <b>H &amp; H Homes</b>	Technician: <b>Collin Futrell</b>
Monitoring: <b>DCP</b>	

**1 : Dynamic Cone Penetrometer Testing**

Passed

We arrived onsite to evaluate the building pad area for this residential lot. We understand the residence has been designed to be supported on a Stem Wall foundation. Upon arrival, the contractor had not finished excavating the footings. Our evaluation as documented in this report includes:

- 1) A visual description of the residential lot
- 2) Comments on any improvements that affect the foundations of the residence
- 3) Hand rod probing of the footing excavations
- 4) Performing Dynamic Cone Penetration (DCP) tests at representative locations
- 5) Soil Density tests on fill, if applicable.

**Visual Description of the Lot:**

The lot is generally slopes or is relatively flat. Building locations are referenced from the street looking at the front of the residence. Maximum relief across the lot is approximately 1 feet. Surface water runoff appears to drain towards the tree line, at the back of the site.

**Comments on Improvements:**

The site has been stripped of surface cover and topsoil, It appears that 12 inches of topsoil has been removed from the building pad area.

Structural fill (has or has not) been placed at the site to level the building pad. Based on our observations, we understand the pad has been (cut or filled) according to the following:

Section	Thickness of Cut or Fill
Left Front	12 inches of fill
Left Rear	24 inches of fill
Center	24 inches of fill
Right Front	12 inches of fill
Right Rear	12 inches of fill

DCP Testing: Our representative performed Dynamic Cone Penetration (DCP) testing in general accordance with ASTM STP-399 at two representative locations to a depth of 36 inches. Our representative did not observe water within the DCP boreholes as noted below.

The following information provides the results of our hand auger borings and DCP testing:

**Test 1: [Front Right Corner]**

Depth—"N"	Soil Color	USCS
ESG — 9.5	Orange	SM
— 1'	8.5 — Orange	SM
— 2'	8 — Orange	SM
— 3'	8 — Orange	SM

*Rachael Heath*

Reviewed By

### Field Observations Report

Project Name: **Lot 294 Oakmont Subdivision OKM (CMT)**  
                  **Lillington, NC**  
Client Name: **H & H Homes**  
Contractor: **H & H Homes**  
Monitoring: **DCP**  
Project Number: **RD180333**  
Placement#: **FO-1**  
Technician: **Collin Futrell**

**Test 2: [Rear Left Corner]**

-- Depth--"N"--Soil Color--USCS-----  
-- ESG -- 8.5 -- Orange -- SM -----  
-- 1' -- 7.5 -- Orange -- SM -----  
-- 2' -- 7 -- Orange -- SM -----  
-- 3' -- 7 -- Orange -- SM -----

**Soil Density Testing:**

Soil density testing was performed using the sand cone method of compaction in general accordance with ASTM D1556. The results of our tests are attached as ST-1.

**Results:**

Based on our observations and test results, the newly placed fill/existing soils appear to be suitable to provide support for the floor slab and footings, provided the floor slab has a loading of less than 150 pounds per square foot, and the footings have a design bearing capacity of 2,000, or less.

**Recommendations:**

To minimize the potential for future softening of the bearing materials due to water infiltration, the surface soils should be protected from construction traffic and inclement weather. The construction of the footings and structure should commence without delay. In the event that the subgrade soils become wet, or otherwise compromised from their current condition, should be observed and retested as necessary by Building and Earth Sciences.

We note that our testing was isolated to the upper 3 feet of the soil profile from the finished subgrade elevation as observed on this date. As such, we cannot be aware of any soil or groundwater conditions below this depth that could adversely affect the support of the new construction. If additional information is required, please contact our office.

**2: Project Management Review**

Passed

Our client has authorized Building & Earth Sciences to perform an evaluation of the prepared building pad for this project. The structure has a stem wall foundation, and the foundation walls have been backfilled to the slab grade using structural fill soils. It appears that between 1 and 2 feet of structural fill soils have been placed to achieve the slab grade. The intent of our testing was to determine if the newly placed structural fill soils have been compacted to 95% to support the floor slab and the interior lug footings.

Our evaluation included hand rod probing the entire area for consistency, performing hand auger borings with DCPs, and performing in place density tests to confirm compaction. Based upon our hand rod probing, the surface soils are firm and resistant to penetration. At selected locations, hand auger borings were advanced at 2 locations within the backfilled area. At 12-inch increments in the hand auger boring, to a depth of 3 feet, Dynamic Cone Penetrometer (DCP) Testing was performed in accordance with ASTM STP-399. With proper evaluation, DCP Testing can be correlated to both bearing capacity and percent compaction. Based upon our testing, the soils below the surface have been compacted properly at the locations tested.

### Field Observations Report

Project Name:	Lot 294 Oakmont Subdivision OKM (CMT) Lillington, NC	Project Number:	RD180333
Client Name:	H & H Homes	Placement#:	FO-1
Contractor:	H & H Homes	Technician:	Collin Futrell
Monitoring:	DCP		

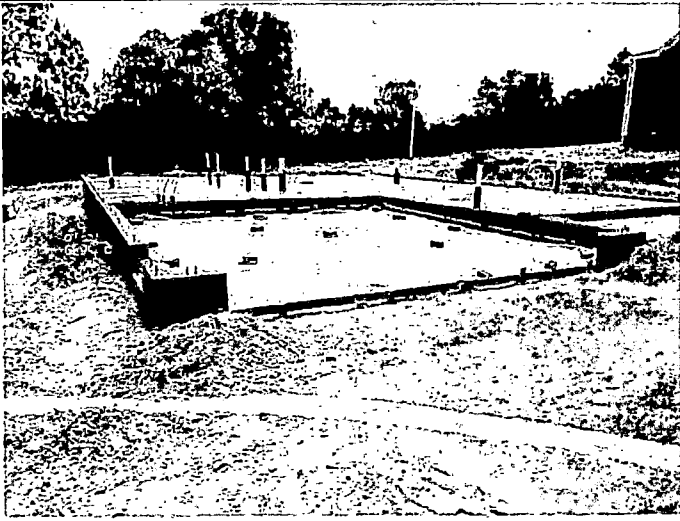
While on site, our representative also performed in place density testing to confirm compaction of the surface soils. Our testing was performed using the sand cone method in general accordance with ASTM D-1556. Our results were compared to an in-field proctor that was performed in general accordance with ASTM D-698.

Therefore based upon the results of our testing, the newly placed fill soils have been compacted adequately to provide support for the interior lug foundations and the floor slab. Additionally, inclement weather (rain or snow), as well as construction traffic across the pad, can compromise the stability and support characteristics of the surface soils. If the surface soils become compromised, it will be necessary to return to the site for re-testing. This decision should be executed by your onsite Quality Control and Superintendents.

### Field Observations Report

Project Name: **Lot 294 Oakmont Subdivision OKM (CMT)** Project Number: **RD180333**  
Lillington, NC  
Client Name: **H & H Homes** Placement#: **FO-1**  
Contractor: **H & H Homes** Technician: **Collin Futrell**  
Monitoring: **DCP**

### Photographs

Picture ID	Picture of the site
3700	



ST-1

Test Date: 06/06/2018  
 Field Technician: Collin Futrell  
 Tests requested by: N/R  
 Results provided to: N/R

**Report of Field Density Testing**

Project Name: Lot 294 Oakmont Subdivision OKM (CMT)      Ambient Temperature: 70-90  
 Lillington, NC  
 Project Number: RD180333      Weather: Clear  
 Project Location: Lillington, NC      Wind Conditions: Calm  
 Client: H & H Homes      Results Provided To: N/R  
 Contractor: H & H Homes      Superintendant: N/R

- Notes: 1 Test location by technician  
 2 Elevation by Technician  
 3 Fill/backfill placed prior to technician arriving

**Design & Specification Data**

Area ID	Area Description	Depth (ft)	Test Method	% Compaction	Moisture Range	
					Min	Max
FSG-Bldg	Finished Subgrade Soils -Building	0.0 - 2.0	ASTM D-698	95 %	- 10.0	+ 10.0

**Laboratory Proctors**

Proctor ID	Description of Material	USCS/AASHTO	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
ECS-2680	Silty Sand	SM	120.5	11.7%

**Density Test Data**

Test #	IDs		Test Type	Location	Elev. (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor							
1	FSG-Bldg	ECS-2680	ASTMD1556	Finished Subgrade Soils -Building : Center of Building Pad 10 ft N:	FSG	117.3	5.6	95%	PASS

Equipment Used:  
 Last Calibration:

Standard Counts:      Density:  
 Moisture:

*Rachael Heath*  
 Reviewed By