

ADDRESS : 173 HEATHERWOOD DR SUBDIV: OAKMONT PH 2 SECT 1 30LTS  
CONTRACTOR : H & H CONSTRUCTORS INC PHONE : (910) 486-4864  
OWNER : H & H CONSTRUCTORS INC PHONE :  
PARCEL : 03-9589-01- -1021- -12-  
APPL NUMBER: 18-50043367 CP NEW RESIDENTIAL (SFD)  
DIRECTIONS : T/S: 02/21/2018 03:46 PM BPETRICH --  
173 HEATHERWOOD DRIVE LILLINGTON 27546  
OAKMONT #180

**STRUCTURE: 000 000 40X52 4BD 2.5BA SLAB W/GARAGE & PATIO**

FLOOD ZONE : FLOOD ZONE X  
# BATHS : 2.5 # BEDROOMS : 4.00  
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	4/24/18	SB	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 003117694
	4/24/18	AP	173 HEATHERWOOD DR LILLINGTON 27546
			T/S: 04/24/2018 12:15 PM SBENNETT -----
B101 01	4/25/18	JH	R*BLDG FOOTING / TEMP SVC POLE TIME: 17:00 VRU #: 003117702
	4/25/18	AP	T/S: 04/23/2018 11:46 AM JBROCK -----
			check t - pole
			T/S: 04/24/2018 09:16 AM JBROCK -----
			T-POLE PASSED
B103 01	5/02/18	JH	R*BLDG FOUND & TEMP SVC POLE TIME: 17:00 VRU #: 003121886
	5/02/18	AP	T/S: 05/01/2018 12:05 PM JBROCK -----
P309 01	5/17/18	TSG	R*PLUMB UNDER SLAB TIME: 17:00 VRU #: 003128394
	5/17/18	AP	T/S: 05/16/2018 08:33 AM JBROCK -----
B111 01	5/22/18	TI	R*BLDG SLAB INSP/TEMP SVC POLE TIME: 17:00 VRU #: 003130010
			T/S: 05/21/2018 11:06 AM BPETRICH -----

----- COMMENTS AND NOTES -----

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

05/14/2018

Attention : John Rice  
Matt Betts

**RE:** Daily Field Report for 05/14/2018  
Lot 180 Oakmont Subdivision OKM (CMT) Lillington, NC  
Building & Earth Project No : RD180277

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.

- DCPS and Hand Augers-Stem Wall
- Project Management Review

Passed  
Passed

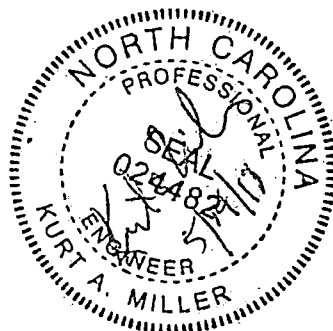
**ST-1 :** In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTM D1556, using the results of field one-point as compared to the laboratory proctors. One(1) in-place field density test was performed on 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



*Rachael Heath*

Reviewed By

## Field Observations Report

Project Name: **Lot 180 Oakmont Subdivision OKM (CMT)** Project Number: **RD180277**  
Lillington, NC  
Client Name: **H & H Homes** Placement#: **FO-1**  
Contractor: **H & H Homes** Technician: **James Johnson**  
Monitoring: **DCP**

### 1 : DCPS and Hand Augers-Stem Wall

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 hat 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 slopes back to front. Building locations are referenced from the street looking at the front of the residence. Maximum relief across the lot is approximately 3 feet. Surface water runoff appears to drain to the back of the lot.

#### 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 been placed at the site to level the building pad. Based on our observations, we understand the pad has been filled according to the following:

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

#### Future Footing Tests

Hand Rod Probing: Our representative performed hand rod probing of the surface of the building pad. Hand rod probing of the bearing material generally showed an average penetration of approximately 2 to 4 inches. Our representative did not observe standing water or evidence of standing water on the footing's bearing surface.

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: [FR corner]

-- Depth--"N"--Soil Color--USCS--

## Field Observations Report

Project Name: **Lot 180 Oakmont Subdivision OKM (CMT)** Project Number: **RD180277**  
Lillington, NC  
Client Name: **H & H Homes** Placement#: **FO-1**  
Contractor: **H & H Homes** Technician: **James Johnson**  
Monitoring: **DCP**

-- FSG -- 10 -- Orange -- SM -----  
-- -1' -- 15 -- Tan -- SM -----  
-- -2' -- 10 -- Tan ----- SM ----  
-- -3' -- 8 -- Tan ----- SM ----

Test 2: [BL corner]

-- Depth -- "N" -- Soil Color -- USCS -----  
-- FSG -- 6.5 -- Orange -- SM -----  
-- -1' -- 12.5 -- Tan -- SM -----  
-- -2' -- 13 -- Gray -- SM -----  
-- -3' -- 8 -- Tan -- 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 1.5 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.

## Field Observations Report

Project Name:	Lot 180 Oakmont Subdivision OKM (CMT) Lillington, NC	Project Number:	RD180277
Client Name:	H & H Homes	Placement#:	FO-1
Contractor:	H & H Homes	Technician:	James Johnson
Monitoring:	DCP		

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.

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.



ST-1

Test Date: 05/14/2018  
 Field Technician: James Johnson  
 Tests requested by: N/R  
 Results provided to: N/R

**Report of Field Density Testing**

Project Name: Lot 180 Oakmont Subdivision OKM (CMT) Ambient Temperature: 70-90  
 Lillington, NC.  
 Project Number: RD180277 Weather: Partly Cloudy  
 Project Location: Lillington, NC Wind Conditions: Calm  
 Client: H & H Homes Results Provided To: N/R  
 Contractor: H & H Homes Superintendent: 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 (%)
1-point			115.0	11.5%

**Density Test Data**

Test #	IDs		Test Type	Location	Elev. (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor							
1	FSG-Bldg	1-point	ASTMD1556	Finished Subgrade Soils -Building : Lot 180 FR corner :	FSG	112.3	8.6	98%	PASS

Equipment Used:  
 Last Calibration:

Standard Counts: Density:  
 Moisture:

*Rachael Heath*  
 Reviewed By