

05/29/2025

Dream Finders Homes-Carolinas 2919 Breezewood Avenue Suite 400 Fayetteville, NC 28303

Attention : Blake Dickerhoff Chandler Harrell

RE: Daily Field Report for 05/28/2025 Lot 479 Colony at Lexington (CMT) Cameron, NC Building & Earth Project No : RD250508

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.

Shallow Foundation Inspection

Project Management Review

Comment 1 : Compact surface soils before the construction of foundations (non-vibratory compaction).

**ST-1**: In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTMD6938, 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

1027 US Highway 70 West Garner, NC 27529 Phone 910-292-2085 Fax 910-292-2192 www.BuildingandEarth.com



Rachael Heat

Passed

Passed



## Field Observations Report

Project Name:	Lot 479 Colony at Lexington (CMT) Cameron, NC	Project Number:	RD250508
Client Name:	Dream Finders Homes-Carolinas	Placement#:	FO-1
Contractor:	Dream Finders Homes-Carolinas	Technician:	Noah Dudley
Monitoring:	Shallow Foundation Inspection		

#### 1: Shallow Foundation Inspection

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 monolithic slab 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 relatively flat. The site slopes downward from Left to Right. Building locations are referenced from the street looking at the front of the residence. Maximum relief across the lot is approximately 1 foot. Surface water runoff appears to drain towards the road.

Comments on Improvements:

The site has been stripped of surface cover and topsoil. It appears that 4 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 Fill Left Front-----6 inches of fill Left Rear-----6 inches of fill Center-----6 inches of fill Right Front-----6 inches of fill Right Rear-----6 inches of fill

Measurements:

1) How far is the nearest slope from the edge of the foundation? 15 feet

**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 4-6 inches.

DCP Testing: Our representative performed Dynamic Cone Penetration (DCP) testing in general accordance with ASTM STP-399 at four representative locations to a depth of 36 inches. Our representative did 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------

Rachael Heath Reviewed By



## **Field Observations Report**

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Monitoring:	Shallow Foundation Inspection		

---- FSG ----- 9 ----- Red -- -----SC ------

---- -1' ----- 11 ----- DK Tan ------SM -------

---- -2' ----- 12 ----- Brown ----- SM -----

---- -3' ----- 15+ ----- Grey ----- SM ----- Water Observed

Test 2: [Back Right Corner]

-- Depth----"N"-----Soil Color---USCS--------- FSG ---- 5 ---- Red ------ SC ---------- -1' ----- 6.5 ----- DK Tan ------ SM ----------- -2' ----- 6 ----- DK Tan ----- SM --------- -3' ----- 10 ----- Tan ----- SM ----- Water Observed

Test 3: [Back Left Corner]

-- Depth----"N"-----Soil Color---USCS--------- FSG ---- 5 ---- Red -- SC ---------- -1' ----- 11 ---- Red ----- SC ----------- -2' ----- 15+ ----- DK Tan -- SM --------- -3' ----- 15+ ---- Tan ----- SM ----- Water Observed

Test 4: [Front Left Corner]

-- Depth----"N"-----Soil Color---USCS--------- FSG ---- 6 ---- Red -- SC --------- -1' ----- 7 ----- Red ---- SC ----------- -2' ----- 12 ----- Red ----- SM ----- Water Observed ---- -3' ----- 13 ----- 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.

Rachael Heath Reviewed By

## **Field Observations Report**

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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. We understand that the structure will have a monolithic slab-on-grade floor system that will have foundations and a floor slab that will be supported by the newly placed structural fill soils. It appears that between .5 and 1 foot of structural fill soils have been placed to achieve the desired grades. The intent of our testing was to determine if the newly placed structural fill soils are adequate to provide a bearing capacity of 2,000 psf for the foundations, and have been compacted to 95% to support the floor slab for the new structure.

Our evaluation included hand rod probing, advancing hand auger borings with DCPs and performing a density test on the surface. Based upon our hand rod probing the newly placed soils are firm and resistant to significant penetration. Hand auger borings were then advanced at 4 selected location across the building envelope to determine the consistency of the below grade soils. 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 the results of this testing, the below grade soils that will support the foundations and floor slab are acceptable.

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. Based upon our tests results, the soils have been properly compacted at the surface.

#### Comments

Comment	Log Date	Log Time
Compact surface soils before the construction of foundations (non-vibratory compaction).	05/29/2025	09:36:46

1027 US Highway 70 West Garner, NC 27529 Phone 910-292-2085 Fax 910-292-2192 www.BuildingandEarth.com

Geovault, LLC.

Rachael Heath



ST-1

Test Date: 05/28/2025 Field Technician: Noah Dudley Tests requested by: N/R Results provided to: N/R

Geotechnical, Environmental, and Materials Engineers							Results	•	-				
				Report of Field De	ensity	Tes	ting						
	Cont	umber: Ca umber: RD cation: Ca Client: Dra ractor: Dra Test locati Elevation	meron, NC 250508 meron, NC eam Finders eam Finders on by techni by Techniciar			Wind sults	emperatu Weath I Conditic Provided erintende	ner: ons: To:	55-65 Overe Breez N/R N/R	cast			
				Design & Specifi	catio	n Da	ata						
Area ID Area Description   FSG-Bldg Finished Subgrade Soils -Building			Description	Dep	oth (ft) - 2.0	) Test			% Compact 95 %		sture nge Max + 10.0		
				Laboratory F	Procto	ors							
	Proctor ID Desc		Desc	ription of Material		U	USCS/AASHTO		Maximum Dry Density (pcf)		Moist Conter	Optimum Moisture Content (%)	
1-p	oint			Donaity Too	+ 0-+					115.5	12.4	%	
Test #	Area Proctor <sup>Type</sup>		-	Pro De (i	a obe pth n)	Elev. (ft)			% Moisture	% Compaction	Result		
1	FSG-Bldg	1-point	ASTMD6938	Center of pad		6	FSG	FSG 109		14.7	95%	PASS	
		ibration: 04/	529-Troxler343 23/2025	OP			Standard	d Coun	ts:	Density: Moisture:			

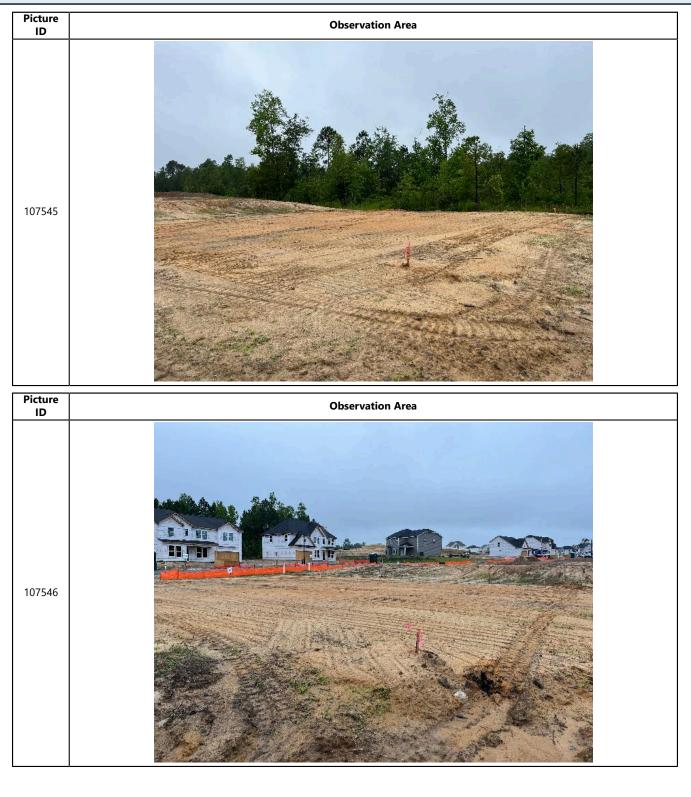
Rachael Heath Reviewed By



ST-1

Test Date: 05/28/2025 Field Technician: Noah Dudley Tests requested by: N/R Results provided to: N/R

# Photographs



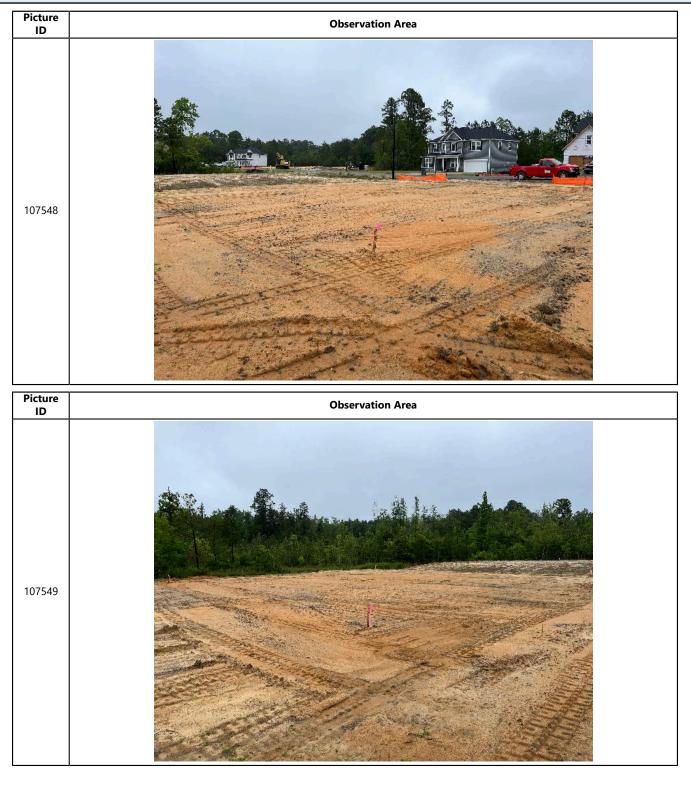
Rachael Heath Reviewed By



ST-1

Test Date: 05/28/2025 Field Technician: Noah Dudley Tests requested by: N/R Results provided to: N/R

# Photographs



Rachael Heath Reviewed By