A & G Residential
916 Arsenal Ave
Suite B
Fayetteville, NC 28305

05/11/2021

Attention : Jamie Godwin
Matt English

RE: Daily Field Report for 05/10/2021
71 Tanna Place (CMT) Cameron, NC
Building & Earth Project No : RD210272

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-2 : Field Observations made on this date.

• Foundation Inspection-Stem Wall	Passed
• Project Management Review	Passed

ST-2 : In place field density testing was performed for Finished Subgrade Soils -Building. The field density testing was performed in general accordance with ASTMD1556, 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-2, ST-2

NORTH CAROLINA PROFESSIONAL SEAL 024482 ENGINEER KURT A. MILLER

Rachael Heath
Reviewed By

610 Spring Branch Road
Dunn, NC 28334
Phone 910-292-2085 Fax 910-292-2192
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Field Observations Report

Project Name:	**71 Tanna Place (CMT) Cameron, NC**	Project Number:	**RD210272**
Client Name:	**A & G Residential**	Placement#:	**FO-2**
Contractor:	**A & G Residential**	Technician:	**Ian Callaway**
Monitoring:	**DCP**		

1 : Foundation Inspection-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 is relatively flat. Building locations are referenced from the street looking at the front of the residence. Maximum relief across the lot is approximately less than 1 feet. Surface water runoff appears towards the back.

Comments on Improvements:

The site has been stripped of organics and topsoil. It appears that 8 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 (cut or filled) according to the following:

Section----------Thickness of Fill
Left Front----------18 inches of fill
Left Rear----------18 inches of fill
Center----------18 inches of fill
Right Front----------18 inches of fill
Right Rear----------18 inches of fill

Measurements:
1) How far is the nearest slope from the edge of the foundation? 5 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 1-2 inches.

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]

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-- Depth----"N"------Soil Color---USCS--------
--- FSG ---- 6 -------- Brown ---- SM --------
--- -1' ------ 15+ ------Brown ---- SM ---------
--- -2' ------ 12.5 ---- Light Tan -- SM -----
--- -3' ------ 15+ ----- Light Tan -- SM -----

Test 2: [Back Left Corner]

-- Depth----"N"------Soil Color---USCS--------
--- FSG ---- 6.5 ---- Dark Brown -- SM --------
--- -1' ----- 15+ ------- Brown ----- SM ---------
--- -2' ----- 15+ -------Light Tan --- SM -----
--- -3' ----- 15+ ------ Light 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.

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.

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.

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Monitoring:	**DCP**		

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. It is important to note that structural inspections were not within our scope of work for this project. As such, we are not able to comment on the construction of the foundation wall.

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.

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Rachael Heath
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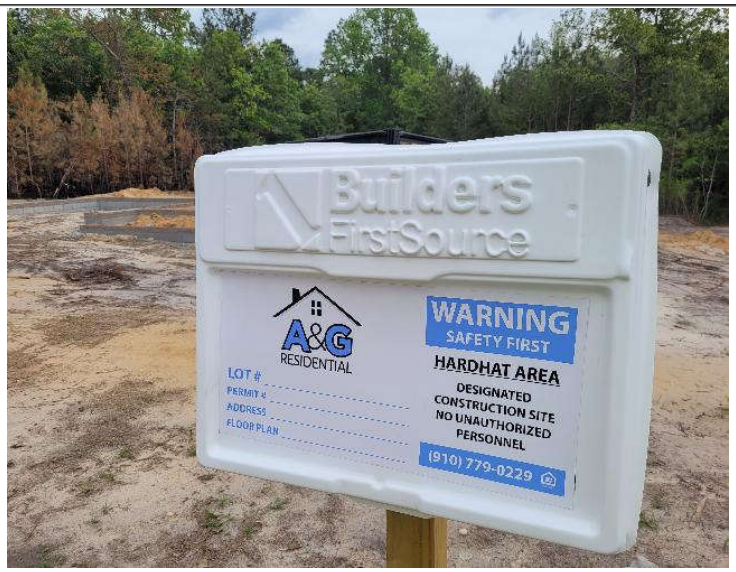
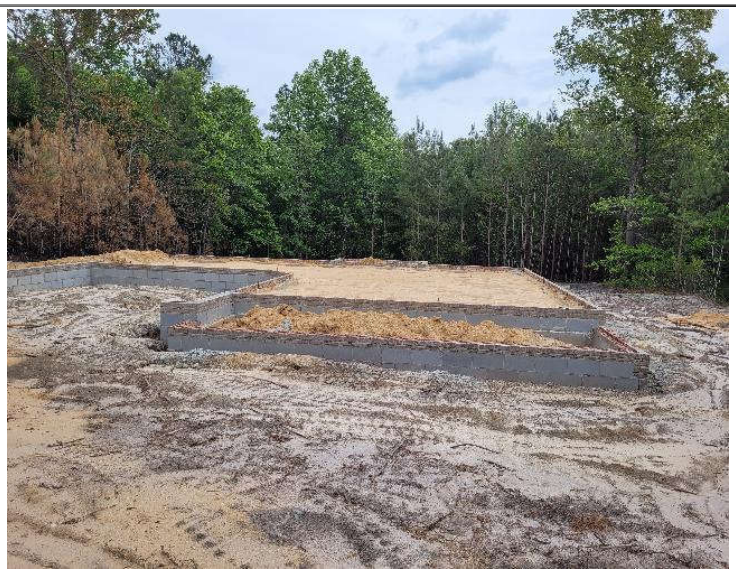
Photographs

Picture ID	Lot 71
29465	

Picture ID	Lot 71 front
29466	

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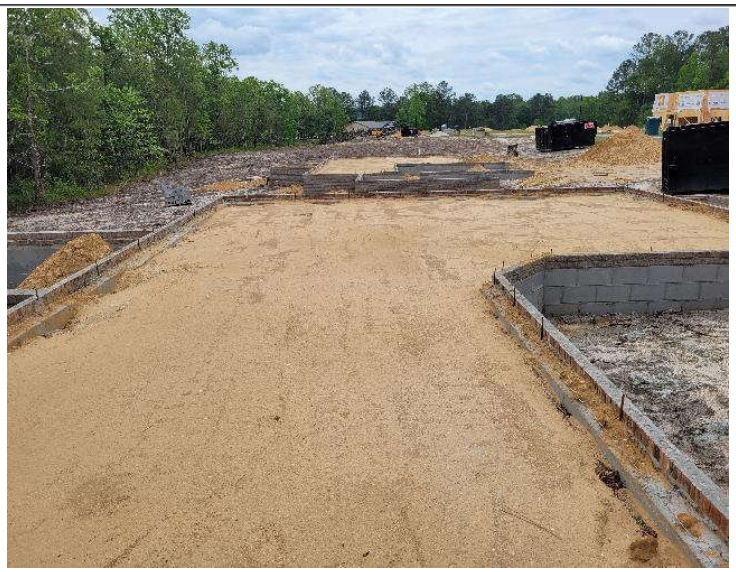
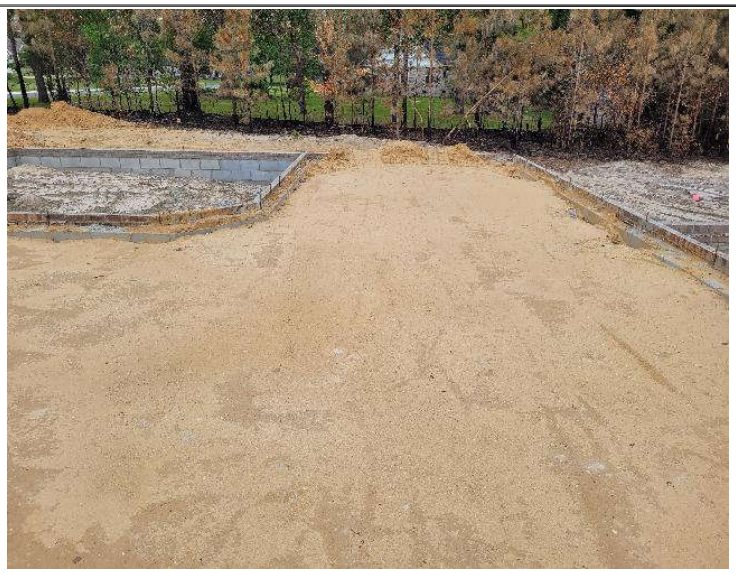
Photographs

Picture ID	Lot 71 Left
29467	

Picture ID	Lot 71 Right
29468	

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BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

ST-2

Test Date: 05/10/2021
Field Technician: Ian Callaway
Tests requested by: N/R
Results provided to: N/R

Report of Field Density Testing

Project Name:	71 Tanna Place (CMT) Cameron, NC	Ambient Temperature:	75-85
Project Number:	RD210272	Weather:	Overcast
Project Location:	Cameron, NC	Wind Conditions:	Breezy
Client:	A & G Residential	Results Provided To:	N/R
Contractor:	A & G Residential	Superintendant:	N/R

Notes:
1 Test location by technician
2 Elevation by Contractor
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			121.0	11.5%

Density Test Data

Test #	IDs		Test Type	Location	Probe Depth (in)	Elev. (ft)	Dry Density(pcf)	% Moisture	% Compaction	Result
	Area	Proctor								
1	FSG-Bldg	1-point	ASTMD1556	Finished Subgrade Soils -Building : Back Left Corner :		FSG	120.0	14.0	99%	PASS

Equipment Used:
Last Calibration:
Standard Counts:
Density:
Moisture:

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