

Field Observations Report

Project Name: **Lot 37 Williams Farm (CMT) Erwin, NC** Project Number: **RD210832**
Client Name: **H & H Homes** Placement#: **FO-1**
Contractor: **H & H Homes** Technician: **Justin Burbank**
Monitoring: **Shallow Footing Testing**

1 : Foundation Inspection

Passed

Our evaluation included hand rod probing and advancing hand auger with Dynamic Cone Penetrometer (DCP) testing. Based upon our hand rod probing, the soils are firm. To confirm these results, hand auger borings were advanced at four locations across the building envelope. At 12-inch increments in the hand auger boring, to a depth of three feet, Dynamic Cone Penetrometer (DCP) Testing was performed in accordance with ASTM STP-399. The following data was retrieved from this testing:

Test 1: [Front Right Corner]

-- Depth----"N"-----Soil Color---USCS-----
--- FSG --- 8 ----- Brown ---- SM -----
--- -1' ---- 9 ----- Brown ---- SM -----
--- -2' ---- 9 ----- Brown ---- SM -----
--- -3' ---- 11 ----- Brown ---- SM -----

Test 2: [Front Left Corner]

-- Depth----"N"-----Soil Color---USCS-----
--- FSG --- 7 ----- Brown ---- SM -----
--- -1' ---- 7 ----- Brown ---- SM -----
--- -2' ---- 8 ---- Dark Brown ---- SM -----
--- -3' ---- 9 ----- Brown ---- SM -----

Test 3: [Back Left Corner]

-- Depth----"N"-----Soil Color---USCS-----
--- FSG --- 8.5----- Brown ---- SM -----
--- -1' ---- 9 ----- Brown ---- SM -----
--- -2' ---- 10 ---- Brown ---- SM -----
--- -3' ---- 10--- Dark Brown ---- SM -----

Test 4: [Back Right Corner]

-- Depth----"N"-----Soil Color---USCS-----
--- FSG --- 9 ----- Brown ---- SM -----
--- -1' ---- 7.5 ----- Brown ---- SM -----
--- -2' ---- 10 ----- Brown ---- SM -----
--- -3' ---- 11.5 ---- Dark Brown ---- 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:

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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. 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 1 and 2 feet 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.

It is important to note that our testing was isolated to the upper 3 feet. As such, we are not able to comment upon the settlement characteristics of deeper soils. 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.

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Photographs

Picture ID	
34197	

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Photographs

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34198	

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Photographs

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Rachael Heath

Reviewed By

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Photographs

Picture ID	
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