

October 03, 2025,

Project #25-123

Eunice Bucur,

5075 Old US 421,

Lillington, NC 27546

Dear Eunice,

At your request, a limited structural inspection was performed on the properties located at the above address to inspect the following items. This report has been prepared based on that inspection. Directions are used herein as they would appear to an observer facing the properties from the front main entrance.

Observations, evaluations, and recommendations:

1. Soil and footing excavations at the rear right deck of the house.

A site visit was made to inspect the soil and footing excavations for a proposed deck at the rear right side of the house. EEI noted that at the location of the footing marked as "F1", the existing continuous concrete footing along the rear side of the house was cut (see Picture 1).

A Dynamic Cone Penetrometer (DCP) test was performed at three different locations to determine the bearing capacity of the soil. Based on the DCP test and interpretation of the test data, a minimum of 2000 psf soil bearing capacity can be achieved at approximately 12" below the finished grade.

Based on the evaluation of the loads applied from the proposed floor framing system, each footing marked as "F1 to F4" shall be minimum of 24"x24"x12" deep (see Picture 1). Underneath each footing, a minimum of 6" layer of compacted gravel shall be placed so that the bottom of compacted gravel is 18" below the ground level, and the bottom of the footings is at 12" below the ground level. Footings shall be reinforced with a minimum of 4 pieces of #4 rebars spaced at 6" o.c., both ways with a minimum of 3" rebar clear cover. Additionally, EEI recommends attaching the new concrete footing "F1" to the existing cut continuous concrete footing along the rear side of the house using (4) pieces of #4 rebars spaced at maximum 6" on center at the mid-depth of the height of the footing. EEI recommends that the rebars should be drilled a minimum 6" into existing concrete and shall extend a minimum of 12" into the newly footing using the "HILTY HIT-RE 100" epoxy adhesive system or approved equivalent. The concrete shall have a minimum 28-day compressive strength of 2500 psi. All reinforcing steel shall conform to ASTM A615, Grade 60.

2. Soil and footing excavations at the rear left deck of the house.

A site visit was made to inspect the soil and footing excavations for a proposed deck at the rear left side of the house. EEI noted that at the location of the footing marked as “F5 and F6”, the existing continuous concrete footing along the rear side of the house was cut (see Picture 2).

A Dynamic Cone Penetrometer (DCP) test was performed at three different locations to determine the bearing capacity of the soil. Based on the DCP test and interpretation of the test data, a minimum of 2000 psf soil bearing capacity can be achieved at approximately 12” below the finished grade.

Based on the evaluation of the loads applied from the proposed framing system, each footing marked as “F5 to F8” shall be a minimum of 24”x24”x12” deep (see Picture 2). Underneath each footing, a minimum 6” layer of compacted gravel shall be placed so that the bottom of compacted gravel is 18” below the ground level, and the bottom of the footings is 12” below the ground level. Footings shall be reinforced with a minimum of 4 pieces of #4 rebars spaced at 6” o.c., both ways, with a minimum of 3” rebar clear cover. Additionally, EEI recommends attaching the new concrete footing “F5 and F6” to the existing cut continuous concrete footing along the rear side of the house using (4) pieces of #4 rebars spaced at maximum of 6” on center at the mid-depth of the height of the footing. EEI recommends that the rebars should be drilled a minimum 6” into existing concrete and shall extend a minimum 12” into the newly footing using the “HILTY HIT-RE 100” epoxy adhesive system or approved equivalent. The concrete shall have a minimum 28-day compressive strength of 2500 psi. All reinforcing steel shall conform to ASTM A615, Grade 60.

General notes:

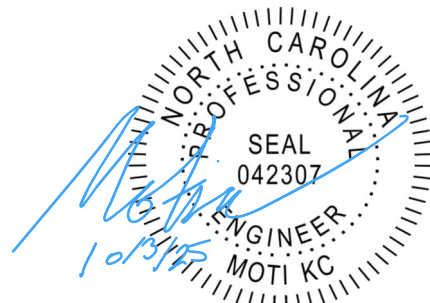
1. The above evaluation is based on the current site condition.
2. Means, methods, sequences, and safety precautions in connection with the construction work shall be the contractor’s responsibility.
3. EEI is not responsible for unsuitable site and drainage conditions that may lead to future settlement issues. The contractor shall ensure that all soft, very wet and loose soils shall be removed from building areas prior to concrete placement

Please let EEI’s know if you have any questions.

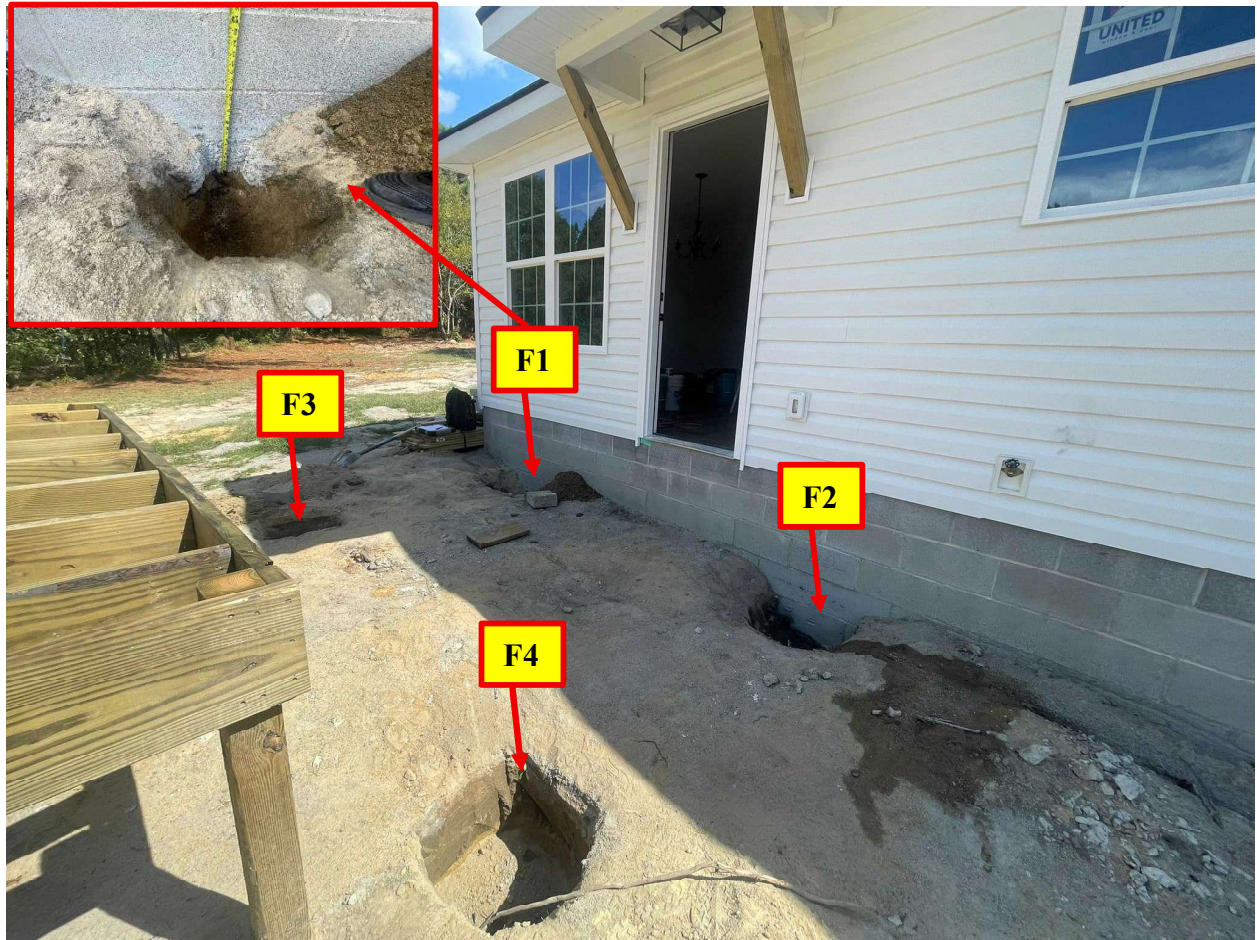
Best Regards,



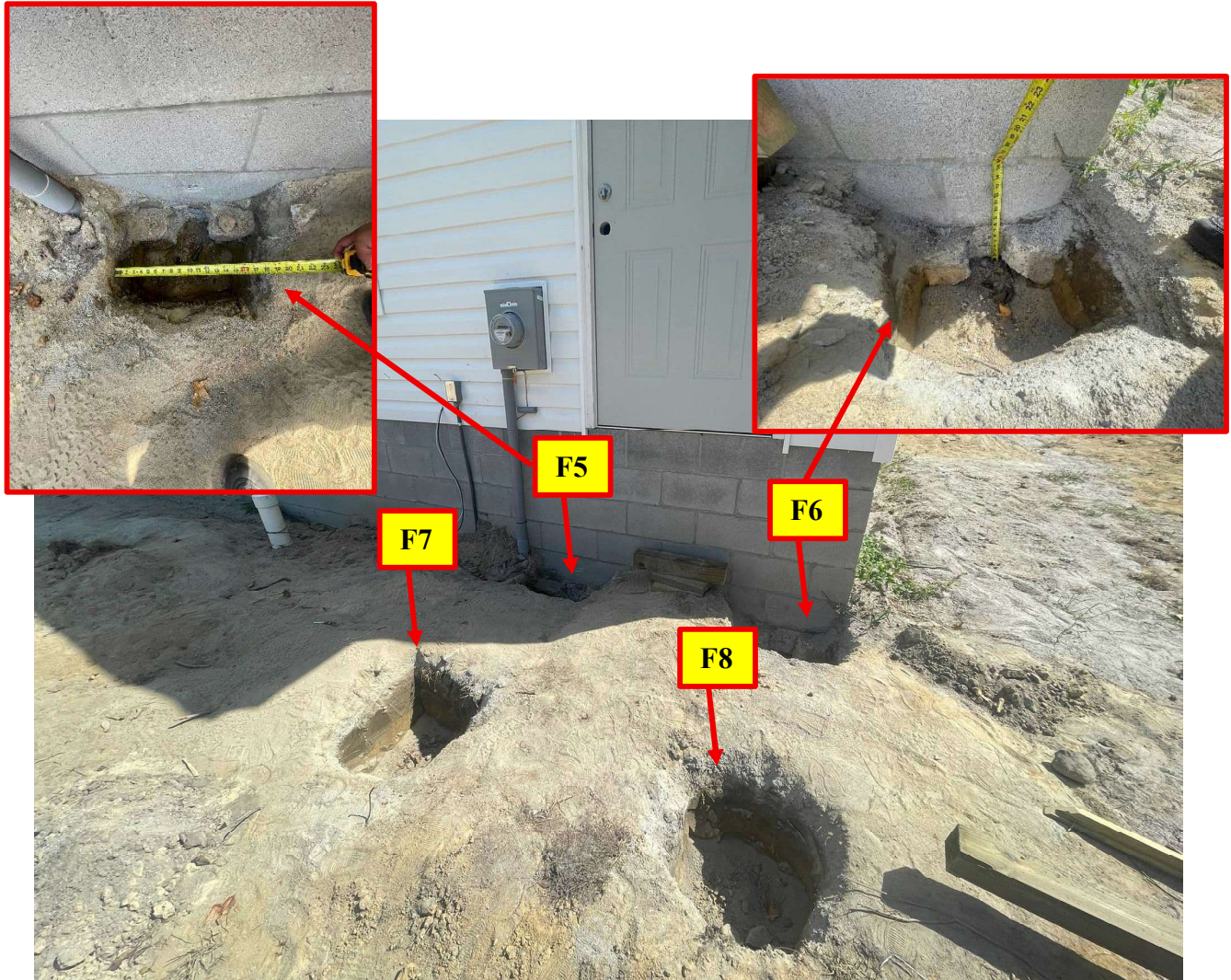
Jorge Ivan Aguas, EI
Structural Designer and Inspector



Moti KC, PE
Phone: 919.267.3004



Picture 1



Picture 2

LIMITATIONS, TERMS, and CONDITIONS

This report of work performed is only for the use of the specified client. It gives no rights or advantages to any party other than that client and Equagen/EEI, except as may be provided herein.

The conclusions reached in this report are based upon the condition of the structure at the time of the review. No warranty as to the future performance of any item is expressed or implied. No tests, measurements, or calculations have been made except as described herein. The EEI has not investigated for toxic materials or wastes or examined public records regarding this property. The scope of the inspection does not assure the property conforms to any regulations, restrictions, or building codes that may be in effect at its location.

Work was limited strictly to visual assessment of the exterior and interior of the locations specified/reported in the report and did not include any examination of other structures on the property. There has been no evaluation of issues regarding compliance with codes or certification.

The review used a standard of care consistent with other local design professionals limited by scope and budget. Work has followed standard engineering procedures but resulting recommendations do not to any extent eliminate hazards or the need to follow federal, state, or local laws and regulations. It is the property owner's responsibility to inform appropriate authorities of any conditions in violation of relevant laws and regulations. All opinions are subject to revision based on new or additional information. No responsibility will be taken for conditions that could not be easily seen or are outside the scope of this review. Any use which a third party makes of this report, or any reliance upon, decisions made in response to or in any way influenced by this report are the responsibility of such third party.

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