



November 9, 2021

Mr. Don Gilmore  
GFD Builders, LLC

**Subject: Summary of Foundation Bearing Material Evaluation  
2514 Walker Road  
Linden, North Carolina  
Permit Number: N/A  
Project Number: 8975.F0002 (34089-00)**

Dear Mr. Gilmore:

On November 8, 2021, SUMMIT Engineering, Laboratory and Testing, Inc. (SUMMIT) visited the subject site for the purpose of observing and evaluating the near surface foundation bearing materials for the proposed residential structure. The following is a summary of our onsite observations and evaluation

Our work included testing and bearing grade evaluations of the in-place soil at the bottom of the foundation excavations. Hand auger borings were incrementally advanced by manually twisting a sharpened steel auger into the soil at selected locations along the footing excavation. The soil consistency in the bottom of the excavation and at selected intervals below the bearing grade was evaluated by Dynamic Cone Penetrometer (DCP) testing. The conical point of the DCP was first seated to penetrate any loose cuttings and then driven three additional 1-3/4 inch increments with blows from a 15-pound hammer falling 20 inches. The soil's strength characteristics and foundation support capability was determined based on the average blows per increment (bpi) over the last two increments to achieve this penetration. Additionally, the entire excavated foundation was evaluated by hand probing using a 1/2 inch diameter steel probe rod to check for soft areas at the surface intermediate of our hand auger boring locations.

The materials encountered in our hand auger borings generally consisted of brown-tan, sandy-clay and sandy-silt (fill soils) and were free of significant quantities of organics and debris. It should be noted that soft soils were encountered at the right rear exterior wall footing line. We recommended to excavate the soft soils to an approximate depth of 2 feet below bottom of the footing bearing elevation. SUMMIT remained on site to observe the over-excavation. We recommend backfilling the over-excavated areas with full depth concrete or compacted clean washed stone (NCDOT No.57 stone) wrapped in a woven geotextile (Mirafi 500x or equivalent). If additional testing for the purpose of estimating volumetric change (shrink/swell) potential or to estimate consolidation is desired, SUMMIT can provide these services.

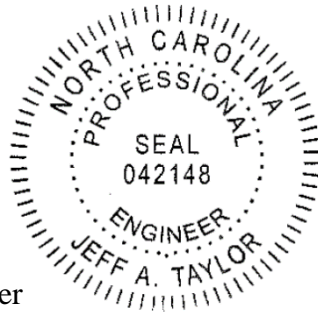
**SUMMIT** tested the four exterior wall corners of the residential foundation and fill soils were encountered to a minimum approximate depth of 3 feet below the foundation bearing elevation. **SUMMIT** assumes that the fill placement was observed and tested to verify that the fill material was placed and compacted properly. Based on the results of our DCP testing, the completed remedial measures, and the assumption that the fill placed throughout the building pad is similar or better than the properly compacted fill material encountered in the hand auger borings, the soils encountered are suitable for support of the residential structure utilizing a net allowable soil bearing pressure of **2,000 pounds-per-square-foot**.

If foundation bearing materials are exposed to inclement weather or adverse construction activities, **SUMMIT** should be contacted to re-evaluate the foundation bearing materials prior to concrete placement.

**SUMMIT** appreciates the opportunity to provide our professional services to you on this project. If you have any questions concerning the information in this report or if we can be of further service, please contact us.

Sincerely,  
**SUMMIT** Engineering, Laboratory and Testing, Inc.

Jeff A. Taylor, P.E.  
Geotechnical Engineer



Adam D. Perry, E.I.  
Staff Professional