



March 18, 2025

Mr. Blake Dills  
Dan Ryan Builders – North Carolina, LLC  
1101 Slater Road, Suite 300  
Durham, NC 27703

**Subject:           Summary of Foundation Bearing Material Evaluation & 3<sup>rd</sup> Party Inspection  
Lot No. 9 – (236 Alden Way)  
Campbell Ridge Subdivision  
Angier, North Carolina  
Permit Number: 2501-0007  
Project Number: 3241.F0003 (42063-00)**

Dear Mr. Dills:

On February 18, 2025 and March 13 and 14, 2025, a representative of UES Professional Solutions 29, Inc. (UES) visited the subject site for the purpose of observing the near surface foundation bearing materials and to perform a third-party foundation inspection for the proposed residential structure. The following is a summary of our onsite observations and evaluation.

We returned on March 13 and 14, 2025 to perform a third-party footing inspection. It should be noted that we observed (2) smaller lug footings combined at (1) larger lug footing. We recommended informing the design Engineer of the combined lugs to confirm that this is suitable. On March 14, 2025 we were informed that rebar was to be added at the combine lug footing. Rebar size and spacing was provided by the Design Engineer. We observed that rebar was installed in accordance with the design Engineer's request. The residential footings were excavated approximately 16 inches wide and approximately 20 inches below the existing ground surface. We observed that the exterior and interior wall foundations and lugs, including the rear deck footings, were prepared per the structural plans provided onsite.

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 were 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 ½ inch diameter steel probe rod to check for soft areas at the surface intermediate of our hand auger boring locations.

The materials exposed at the bottom of footing excavation generally consisted of brown-orange and gray, sandy-clay (residual soils) and were free of significant quantities of organics and debris. It should be noted that soft soils were encountered to approximate depths ranging from 2 to 4 feet below the planned foundation

bearing elevation along the rear half of the excavated footings. The contractor was informed and **UES** recommended over-excavating to firm soils in the areas designated in marking paint. **UES** returned on March 14, 2025 and observed that the recommended remedial measures had been completed. We recommend backfilling the over-excavated areas with compacted clean washed stone (NCDOT No. 57 stone) wrapped in a woven geotextile (Mirafi 500x or equivalent) or place full depth concrete. If additional testing for the purpose of estimating volumetric change (shrink/swell) potential or to estimate consolidation of the tested soils is desired, **UES** can provide these services.

Based on the results of our DCP testing, the completed remedial measures, and site observations, 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**. The foundation bearing soils are in accordance with HUD requirements.

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

**UES** 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,

**UES** PROFESSIONAL SOLUTIONS 29, INC.

Jeff A. Taylor, P.E.  
Geotechnical Engineer



A handwritten signature in black ink, appearing to read "Adam D. Perry".

Adam D. Perry, E.I.  
Staff Professional

