

D. ALLEN HUGHES
ENGINEERING, Inc.

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June 25, 2024

A Plus Construction
425 Cranes Creek Rd.
Cameron, NC

Attention: Carl Gallimore

Reference: Foundation and Anchoring System Recommendations for Proposed 23'-4" by 74'
Modular Office
Proposed Sales Office at 3155 NC 210, Bunn Level, NC
Project No. D24ms85

Dear Mr. Gallimore:

Thank you for using D. Allen Hughes Engineering. Our scope of service is to evaluate the foundation plan for the proposed modular office in light of the geotechnical evaluation by Geotechnologies, summarized in their May 15, 2024 report sealed Conrad. E. Harris, PE. The recommendations in this report pertain to the site of Geotechnologies' evaluation and the recommendations should do not apply to other locations. The foundation plan is titled "Foundation", by First String Space, Serial No. FSSI-10912AB. Our services pertain to the review of the foundation plan and the report by Geotechnologies and we have made no site visit.

Based on a 2,000 psf bearing capacity, uniform loads prescribed by the NCBC, 2018 NC Building Code, review of the geotechnical report and the foundation plan, the following are recommended as an alternative to the foundation plan:

- Due to the reported rocky nature of the fill, it is recommended to place an approximate 12-in. to 8-in. layer of compacted course screenings over the building area to facilitate excavation of concrete footings and to avoid stress concentrations at the footings. The fill should be compacted in 4 in. max, lifts with a walk behind vibratory roller or Jumping Jack type compactor and should form a crown with the fill at the marriage line being about 4 in. higher than at the front and back edges.
- The chassis beam pier footings may be 24"x24"x8" concrete footings or 24"x24" ABS footings rated by the manufacturer for at least 8,000 lbs.
- The pier footings at each end of the marriage line should be 36"x36"x12" concrete footings with (4) no. 5 rebars each way. The rest of the marriage line pier footings may be 36"x36" ABS footings rated by the manufacturer for at least 12,000 lb.
- (2) patio anchors rated for at least 3,000 lb. uplift should be installed in the footing projection of the concrete pier footings at each end of the marriage line.
- The modular office should be anchored with (4) lateral bracing systems (either Oliver Technologies or Minute Man). The systems should be 3-brace systems installed at the second pier from each end of the front and back outside rows of piers.
- The lateral bracing systems, ABS footings and patio anchors should be installed in accordance with the

respective manufacturer's specifications.

- Any issues not addressed in this report should be constructed in accordance with the Foundation Plan, NC Building Code, 2018 and the recommendations in the geotechnical report.
- The local inspections department or D. Allen Hughes Engineering should observe the completed foundation and anchoring system once the recommendations have been implemented.

If you should have any questions pertaining to this report,
please call.

Sincerely,



D. Allen Hughes
022595
June 24, 2024
D. ALLEN HUGHES

D. Allen Hughes, P.E., President
D. Allen Hughes Engineering, Inc.