

D. ALLEN HUGHES
ENGINEERING, Inc.

1669 Jimmie Kerr Rd., Haw River, NC 27258
336-578-8634, Firm No. C-2951

April 6, 2020

Choo Choo Homes
5657 Bragg Blvd.
Fayetteville, NC 28303

Attention: Mr. Charles Dent

Reference: Subgrade Evaluation for Proposed Approximate 27 ft. by 56 ft. Mobile Home
3855 US 401, Fuquay Varina, NC
Project No. D20mh45, Harnett County Permit No. BRES-52002-0006

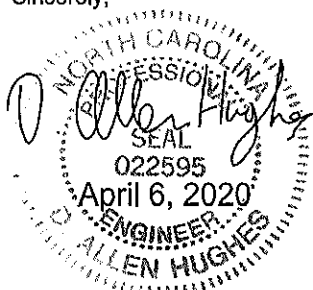
Dear Mr.Dent:

Thank you for using D. Allen Hughes Engineering for your engineering needs. The site was visited March 23, 2020, March 31, 2020 and April 3, 2020 to evaluate the subsurface conditions for the footing excavations for the proposed Approximate 27 ft. by 56 ft. mobile home.

During footing excavation, unsuitable fill consisting of soft organic clay and topsoil was encountered to depths ranging from about 1 to 6 ft. below grade. The area of the undercut was located at the left end of the home corresponding with the (2) left rows of piers at the inner chassis beams and marriage line. Also, the second and third pier footings from the right on the front of the home encountered soft soil to depths of about 2 to 4 ft. below grade. The soft areas were undercut to remove the unsuitable fill down to adequate bearing residual soil. The undercut areas were backfilled with no 67 washed stone up to the planned bottom of footing elevation and tamped on top with a "Jumping Jack" type compactor. The rest of footing excavations were terminated in adequate bearing residual soil consisting of stiff sandy silt. The excavation bottoms were tested with a Static Cone Penetrometer (SCP) and were found to be of adequate bearing capacity throughout. Per our recommendation, (2) no 4 steel reinforcing bars were properly placed in the perimeter footings. The pier footings along the front, back, and both ends were excavated continuously with the perimeter footings. Two no. 4 bars were placed in each perimeter pier footing connecting it to the steel reinforcing in the in the perimeter footing. Pier footing groups of (2) or (3) joined as (1) larger footing were reinforced with (2) no. 4 bars joining them continuously.

Based on observation, testing and implementation of the recommendations, it is my professional opinion that the subgrade prepared for the footing excavations at 3855 US 401, Fuquay Varina, NC, (Harnett County Permit No. BRES-52002-0006) is adequate to support the proposed loads (2000 psf max.) of the mobile home. The footing excavations and steel reinforcing were properly prepared for placing concrete and are in compliance with the current edition of the NC Regulations for Manufactured Homes, and meet or exceed the requirements of the Foundation Plan. If you have any questions concerning this report or need further assistance, please call.

Sincerely,



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

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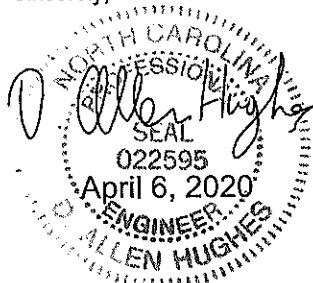
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