John Alexander McRae, P.E., Inc. (NC C-2298) 218 Coley Farms Road Fuquay-Varina NC P O Box 1466 Apex, North Carolina, 27502 (919) 210-5749 <u>jampe@nc.rr.com</u>

7 January 2022

To: Whom it May Concern CC: Bruce Underwood

Re: New Home for Taylor Permit # SFD2102-0009 5675 SOUTH RIVER RD Lillington, NC JAMPE Job Number 2201-16

The following design and recommendation is based on the latest edition of the North Carolina Residential Code and any local codes that may be in effect at the time of this letter.

Live Loads: 800f/Limited Storage- 20 psf Upper Floors- 40 psf Main floors- 40 psf Dead loads as applicable. Allowable Soil Pressure- 2000psf Wind load- 27 psf. Allowable Stress: #2 SPF- 875 psi #2 SYP- 1050 psi LVL- 2900 psi

Builder has requested verification of the following soils compaction and footing issues based on ON-SITE review and prior to concrete pour at 1230 hours 7 January 2022. Design is to North Carolina Residential Code 2018 (IRC 2015) Chapter 4 R401.4 (Soils Testing) and R403.1 (Footings) based on **Harnett County** approved plan as Third-Party Soils Engineer

Footing excavated at 20-inch minimum width. Per Plan, Contractor has installed (2) #5 Reinforcing Bars horizontally, properly lapped, tied, and supported. Per Plan, Contractor has installed #5 Reinforcing Bars 16 Inches o.c., Vertically, Reinforcement is properly lapped, tied, and supported to Horizontal Reinforcement. Native clays, clay sands, rocky sands, rocky clays, and Sand Subsoils at base. Footings and piers are level and clear of debris. Soils Bearing of 2000 pounds per square foot all areas at base of wall and pier footings.

01/07/2022 – Footing preparation wall and pier layout and including front and rear porch footings to Approved Construction plans. Soils bearing and footing preparations meet or exceed my recommendations ON site as 3rd Party Engineer based on Harnett County approved plans Footing and soils bearing exceed requirements of Chapter 4 R401.1 (Soils Testing) and R403.1 (Footings) of the North Carolina Residential Code. Per Plan, Contractor has installed (2) #5 Reinforcing Bars horizontally, properly lapped, tied, and supported. Per Plan, Contractor has installed #5 Reinforcing Bars 16 Inches o.c., Vertically, Reinforcement is properly lapped, tied, and supported to Horizontal Reinforcement.

Respectfully

John A. McRae NCPE 20081 (NC C-2898)

Questions or Comments John A McRae <u>Jampe@nc.rr.com</u> Upin Design and Soils Evaluation is to 2018 North Carolina Residential Code