

Takla Engineering, PLLC

NC Firm License # P-1952

Consulting | Design | Efficiency

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SEAL

Project: Serenity Lot 320

Address: 270 Inspiration Way

City: Fuquay-Varina, NC

Subject: Footing and 3rd Party

Inspection

Care Of: Will Dodge

Company: ICG Homes

Job Number: 1-4271-25

Page Number: 1 of 1

As requested, Alfred Takla, PE visited the aforementioned site on June 25th, 2025 to evaluate bearing capacity of the sub-grade soils supporting:

Foundation wall and/or interior pier footings

Turndown slab on grade and lug footings

Attached one-car and two-car garage foundation wall footings

Front porch foundation wall footings

Rear porch post lug footings

*Patio slabs with no thickened or lug footings are outside the scope of our inspection.

Observations of lot topography, vegetation, and soil characteristics were made to characterize the site. In-situ subgrade soil bearing capacity was evaluated by means of probing excavation bottoms with a 1/2" diameter steel probe rod and/or a static cone penetrometer (SCPT) with a 60 degree cone assembly, friction sleeve, and pressure gauge readings correlating with blow counts from a Dynamic Cone Penetrometer (DCP).

The evaluations indicate the average bearing capacity of the soils directly supporting the above referenced elements meet or exceed the minimum 2000 pounds per square foot as referenced by NCRC 2018, Chapter 4 and engineered specifications. It is important to note that this evaluation did not include mechanical soil borings, standard Proctor tests, or density testing. Additionally, this assessment does not address site drainage, which is crucial for maintaining long-term bearing capacity. Drainage design and implementation are outside the scope of this evaluation.

We also performed a 3rd party inspection in-lieu of municipal inspections department. We inspected the footings using sealed plans provided by builder. We verify footings preparations comply with North Carolina Residential Code 2018 per applicable code sections Chapter 4 (Sections R401, R402, R403 and R404) as well as our previous engineering recommendations. Specifically we verified:

- Depth and size of all footing excavations mentioned above meet or exceeds per plan specifications and code requirements. In order to reduce concrete volume, it is acceptable to line over-excavated footings with water-permeable fabric and backfilling with #57 stone.
- Locations of all footing excavations mentioned above are found to be per plans.
- Front porch and rear porch footing excavations mentioned above are per plans, of acceptable depth / dimensions, and per code.
- Footings are cut per NCRC 2018 Chapter 4, Sections R401, R402, R403, R404 as mentioned above.
- All footing layouts are per permitted plan, all conditions are acceptable to receive concrete.



Limitations of Inspection and Liability: Engineering services in this report follow standard structural engineering practice and the North Carolina Residential Code (2018 Edition). Conclusions and recommendations are based solely on practice and the North Carolina Residential Code (2018 Edition). Conclusions and recommendations are based solely on site conditions observed at the time of evaluation and are limited by the agreed scope, schedule, and budget. This report excludes any responsibility for construction sequencing, shoring, or means and methods. Evaluations are limited to visible and accessible elements; no destructive testing or inspection of concealed components was performed. No guarantees or warranties, express or implied, are provided in connection with these services. Takla Engineering relies on the accuracy of information provided by others and assumes no liability for conclusions based on incomplete, inaccurate, or misleading input. Reasonable efforts were made to ensure accuracy. However, the potential for human error and the limitations of non-invasive inspection must be acknowledged. Takla Engineering's maximum liability—whether from contract, tort, or otherwise—is limited to the total fees paid for services under this agreement, barring gross negligence. By accepting, referencing, or using this report, the recipient agrees to all terms, limitations, and conditions set forth herein, barring gross negligence by Takla Engineering.



Harnett County Inspections Department

3RD PARTY INSPECTION FORM

RECORD OF THE INSPECTION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OF A **COMPONENT OR ELEMENT** BY A NO DICENTIFICATION OR DICENTIFICATION OR

Project Information:

Residential Single Family Project:

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Commercial Project:

N

Code Enforcement Project No.:

Permit No.: SFD2504-0124

Project Name: Serenity Lot 320

Owner:

Project Address:

270 Inspiration Way

Suite No.:

Date Inspected:

6-25-2025

Contractor Name: ICG Homes (Dodge)

Component Inspected: Footing and 3rd Party Inspection, Job Number 1-4271-25

Responsible Licensed NC Architect or NC Engineer

Name: Alfred A Takla, PE

Firm Name: Takla Engineering, PLLC

Phone No.: Office 919-258-2648 Mobile 919-332-7903

Email Address: alfredtakla@taklaengr.com

Mailing Address: PO Box 71298 Durham, NC 27722

APPLICABLE CODE SECTION: NCRC 2018

2018 NCBC = 2018 NC Building Code; 2018 NCRC = 2018 NC Residential Code

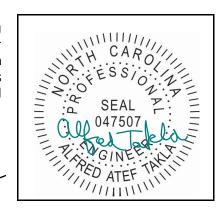
Describe Element/Component/Type of Inspection: *

Footing and 3rd Party Inspection for house, attached one-car and two-car garages, front porch and rear porch

*(subgrade form/letter may also be required) Attestation/Signature:

By signing below, I certify that the component and/or element of the building as identified on this form has been inspected by me or someone under my direct supervision per subsection (b2) of NC G.S. 153A-352 and is in compliance with the Code or other proposal of the architect or engineer for the project. This inspection is in compliance with all of the requirements of the above referenced Code. Attach any additional documents if needed.

LICENSED ARCHITECT OR ENGINEER



Inspection Department disclaimer: