



January 14, 2025

Butler Homes, LLC
c/o Steven Eisenberg

Re: Plan Deviation Letter
187 Dewar Street
Fuquay Varina, NC

Dear Mr. Eisenberg:

At your request, a limited structural inspection of the above property was performed on January 10, 2025. The report that follows has been prepared based on that inspection. The inspection was performed by Sean M. McDonald, PE of Giles Flythe Engineers.

The scope of this project was limited to inspection and evaluation of multiple plan deviations and framing concerns denoted in a recent city framing inspection at the addition under construction based on the latest revision of the structural plan drawings issued by Giles Flythe Engineers dated December 17, 2024. The evaluated conditions included the following:

OBSERVATIONS

1. The perimeter 4x4 posts at the rear-right porch addition (excluding the corner posts) were attached to the headers above using toenails in lieu of the plan specified Simpson BC4 post caps.
2. A portion of the existing porch roof framing was integrated into the new porch addition starting at the rear exterior wall of the existing house structure and extending rearward approximately 6'-6". The integrated framing spanned the length of the new porch addition (\approx 11'-3" left to right). New 2x6 ceiling joists were installed spanning left to right attached at the right heel joint of the integrated roof framing using nail-type fasteners. The rafters were noted to bear on the continuous 2-2x10 header extending from the rear-right corner of the house structure specified on Sheet S4.0, "Ceiling/Wall Framing Plan" in the structural plan drawings. The integrated roof framing was attached to the header using Simpson H2.5A hurricane ties. A new 2x4 knee wall comprised of 2x4 studs at 16" O.C. with a 2x4 sill plate and 2x4 top plate was installed above the left perimeter of the porch addition below the existing, integrated porch roof framing.
3. Standard 1-1/2" diameter fender washers were utilized at the (2) anchors bolts at the end panels of the garage portal frame (total of 4) in lieu of the plan specified 2"x2"x3/16" square plate washers as shown in detail 1/S4.0 in the structural plan drawings.
4. The elevated rafter ties within the vaulted ceiling of the garage were installed approximately 2'-1" above the perimeter wall top plates in lieu of the maximum 1'-10" height specified in Detail 2/S4.0 in the structural plan drawings.

5. The ceiling framing within the foyer/porch area of the front addition was framed in a differing manner from that specified in the structural plan drawings. The elevated rafter ties were installed continuous spanning from the right exterior wall (entry wall) leftward towards the right perimeter wall of the garage (span = 17'-8"). The 2-2x10 flush beam denoted on Sheet S4.0, "Ceiling/Wall Framing Plan" in the structural plan drawings was noted installed. Furthermore, a single skylight was installed in lieu of the two skylights shown on the plan drawings.

RECOMMENDATIONS

If there are any questions or concerns regarding location or method of repair contact the engineer prior to construction.

1. We recommend attaching the tops of the perimeter posts at the rear porch addition to the headers above (Observation #1) using (2) Simpson A23 angles (or approved equivalent), one on either side of the post. Single angles may be installed at posts directly adjacent to exterior stud walls. Note, angle installation is not required at corner posts already attached to the headers using the plan specified Simpson RTC44 hangers.
2. The integrated roof framing and installed framing renovations at the front area of the rear porch addition (Observation #2) are adequate to support the design loading conditions in their current configuration. No further repairs/modifications are required.
3. We recommend replacing the utilized fender washers at the (4) anchor bolts at the end panels of the garage portal frame (Observation #3) using 2"x2"x3/16" square plate washers in accordance with detail 1/S4.0 in the structural plan drawings. Note, installation of these plate washers is not required at the anchor bolts at the central panel (between the garage door openings).
4. The elevated rafter ties and in-place rafters above the garage (Observation #4) are adequate to support the design loading conditions at the installed rafter tie heights above the wall top plates. Verify the rafter ties are attached at the heel joints per the specifications denoted in detail 2/S4.0 in the structural plan drawings.
5. We recommend sistering the all single-ply rafters on the left side of the ridge board above the foyer/porch area of the front addition (Observation #5) for their full lengths (ridge to right perimeter wall of garage) using 2x10 members to create new 2-ply rafter members. The new sisters shall be installed using (3) 10d common nails at 16" O.C. The new sister plies shall be attached at the ridge board using Simpson L90 clip angles (or approved equivalent). Verify the installed rafter ties are attached at the heel joints per the specifications denoted in detail 2/S4.0 in the structural plan drawings.

General Notes:

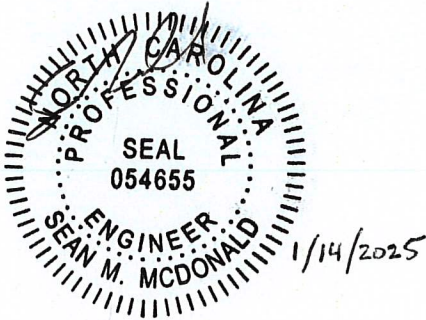
- All construction and workmanship shall adhere to the 2018 NC Building Code.
- All new lumber should be SPF or SYP No.2 or equivalent. All lumber exposed to concrete/masonry or weather must be pressure treated. All metal components exposed to weather or pressure-treated lumber shall be galvanized.
- All new metal hangers/ties/clips to be installed per manufacturer specifications.
- All fastening shall conform to R602.3(1) in the 2018 NC Building Code: Residential Code.
- Installation of the above recommended repairs may require temporary shoring of the in-place structural components. Shoring methods are the responsibility of the contractor.



CONCLUSION

We trust that this report provides the information you require. Please contact us at 919-465-3801 if you have any questions. Thank you for the opportunity to be of assistance to you.

Sincerely,



Sean M. McDonald, PE
Project Manager
Giles Flythe Engineers Inc.
NC Lic. No. C-2871

APPENDIX G

DESIGN PROFESSIONAL INSPECTION FORM

RECORD OF THE INSPECTION OF A **COMPONENT OR ELEMENT** BY A NC LICENSED ARCHITECT OR ENGINEER

Project Information:

Residential Single-Family Project: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Commercial Project: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Code Enforcement Project No:	Permit No: BRES2404-0096
Project Name: <i>Sturgess Residence Addition</i>	Owner: <i>Peter Sturgess</i>
Project Address: <i>187 Dewar Street, Fuquay Varina</i>	Suite No:
Date Inspected: <i>1/10/2025</i>	Contractor Name: <i>Butler Homes, LLC</i>
Component Inspected: <i>Various plan deviations (anchor bolts, roof framing, porch posts)</i>	

Responsible Licensed NC Architect or NC Engineer

Name:	<i>Sean McDonald</i>
Firm Name:	<i>Giles Flythe Engineers</i>
Phone Numbers:	Office: <i>919-465-3801</i> Mobile: <i>919-357-0154</i>
Email Address:	<i>seanm@gfengineers.com</i>
Mailing Address:	<i>7334 Chapel Hill Road, Suite 200 Raleigh, NC 27607</i>

APPLICABLE CODE:

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

Describe Element/Component/Type of Inspection: *

Evaluated multiple plan deviations/structural concerns called out during recent framing inspection. See associated engineering letter for additional details.

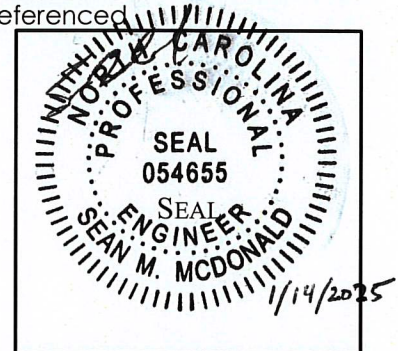
*(subgrade form/letter may also be required)

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 G.S. 160D-11-6 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.

[Handwritten Signature]

 Licensed Architect or Engineer



Inspection Department disclaimer:

Upon the receipt of a signed written document as required under subsection (a) of G.S. 160D-11-1, Code Enforcement shall be discharged and released from any liabilities, duties and responsibilities imposed by this article or in common law from any claim arising out of or attributed to the component or element in the construction of the building for which the signed written document was submitted. Be aware that this inspection will be noted in all inspection records including the Certificate of Occupancy or Certificate of Compliance. This inspection does not address any local ordinances or zoning requirements.