

Date: December 5, 2024  
Project: Wilkins Residence  
Address: 1201 Weeks Rd  
Dunn, NC 28334

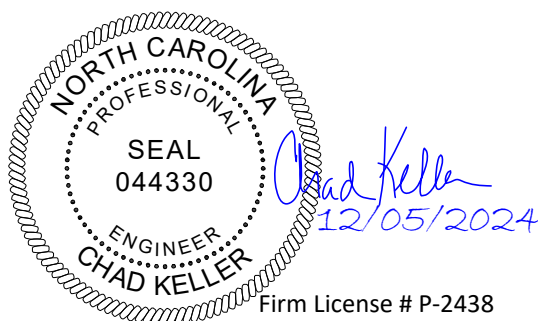
### Wood Framing Floor Support Analysis

This report is prepared for Southeast Foundation Repair (contractor) by FDN Engineering (engineer). Wood framing repairs and/or replacements on the first floor are proposed for installation at the above referenced project. Existing floor framing is damaged or rotten. The improved wood support system is intended to provide a long-term, structurally safe floor structure. Load requirements for the floor components were calculated at areas shown on the repair plan. Engineer performed design for this project - see page 2 for engineering notes and results. See page 3 for wood framing details. See page 4 for a repair plan of the wood framing on the structure.

To the best of my professional knowledge, the design of the wood floor framing support system meets the structural requirements of the 2018 North Carolina State Building Code to the extent that it applies to our scope of work. Engineer is retained in a limited capacity for this project. No responsibility and/or liability is assumed by, nor shall be assigned to engineer for items beyond the proposed scope as shown herein.

Upon completion of the floor support system, the contractor shall supply engineer a log of the installed floor framing and pictures. Engineer will evaluate the field data and prepare a completion report.

FDN Engineering, LLC  
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Omaha, NE 68116  
(402) 739-9642



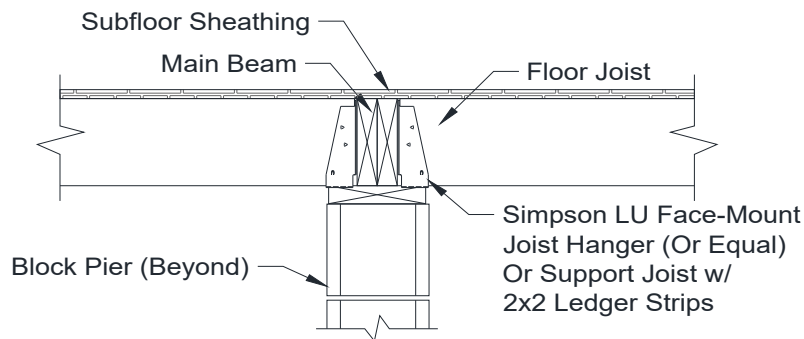
Wood Framing Project Notes (contractor to inform engineer if assumptions are inaccurate):

1. Structure is one-story, residential with wood-frame floors.
2. All structural lumber & framing to be #2 Spruce-Pine-Fir (SPF) or approved equivalent.
3. Any wood below the required base flood elevation shall be 0.40 CCA treated (flood resistant).
4. New wood-frame girders/joists that replace existing girders/joists to be at least as large as the original member, from like material, and supports placed no further than original distance.
5. Follow all requirements of applicable residential design code for all wood framing, including but not limited to, allowable span lengths, joist spacing, connections, bracing bridging, and nailing.
6. Per R317 of the current residential code, contractor to use preservative-treated wood if wood joists are closer than 18 inches to exposed ground.
7. Framing connections noted on the drawings are Simpson Strong-Tie (or equal). Install with the catalog designated connector in each hole.
8. All nails to be common wire (unless noted otherwise). All nailing into pressure treated wood shall be done with hot-dipped galvanized or stainless-steel nails.

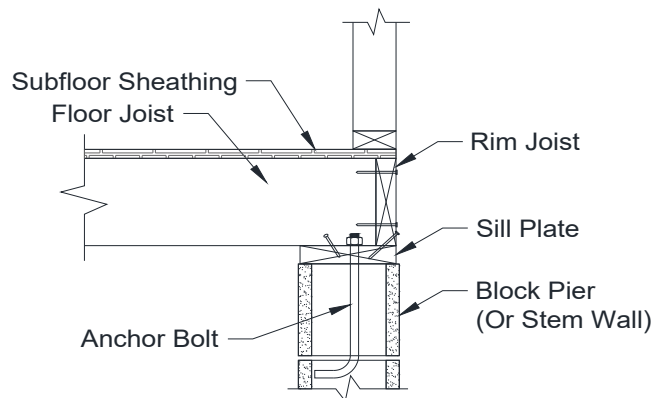
Wood Framing Analysis and Results:

9. Interior floor load is designed to not exceed 55 psf nominal load (15 psf DL + 40 psf LL), per Code.
10. Repair/replaced wood girders/joists do NOT support interior load-bearing walls or columns.
11. New framing replacements do not change the load path of the existing structure.
12. Where sistering floor joists, sister with a like size/type wood member. Fasten sister joist to existing with (2) 10d x 3-in nails in each row. #12 structural screws x 3-in may be used instead of nails. End two rows spaced 6" apart & 16" o.c. in between. Sister joist to bear on support at each end (same support location and type as existing joist).
13. Where the subfloor is replaced, use 3/4" thick plywood sheathing. Nail and glue to supporting joists with 10d common wire nails at 6" o.c. around edges and 12" o.c. throughout (use commercial grade adhesive for gluing to each joist). Subfloor panels shall be oriented with the face grain perpendicular to the joist supports and have panel joints staggered.
14. 2" x 8" wood joists to have a maximum span length of 12'-0" when placed at 16" o.c.

Follow the current building Code and/or manufacturer's catalog for fastening and nailing requirements (nail size, quantity, and method). See the repair plan for more information.




**JOIST ON BEAM HANGER FRAMING SECTION**



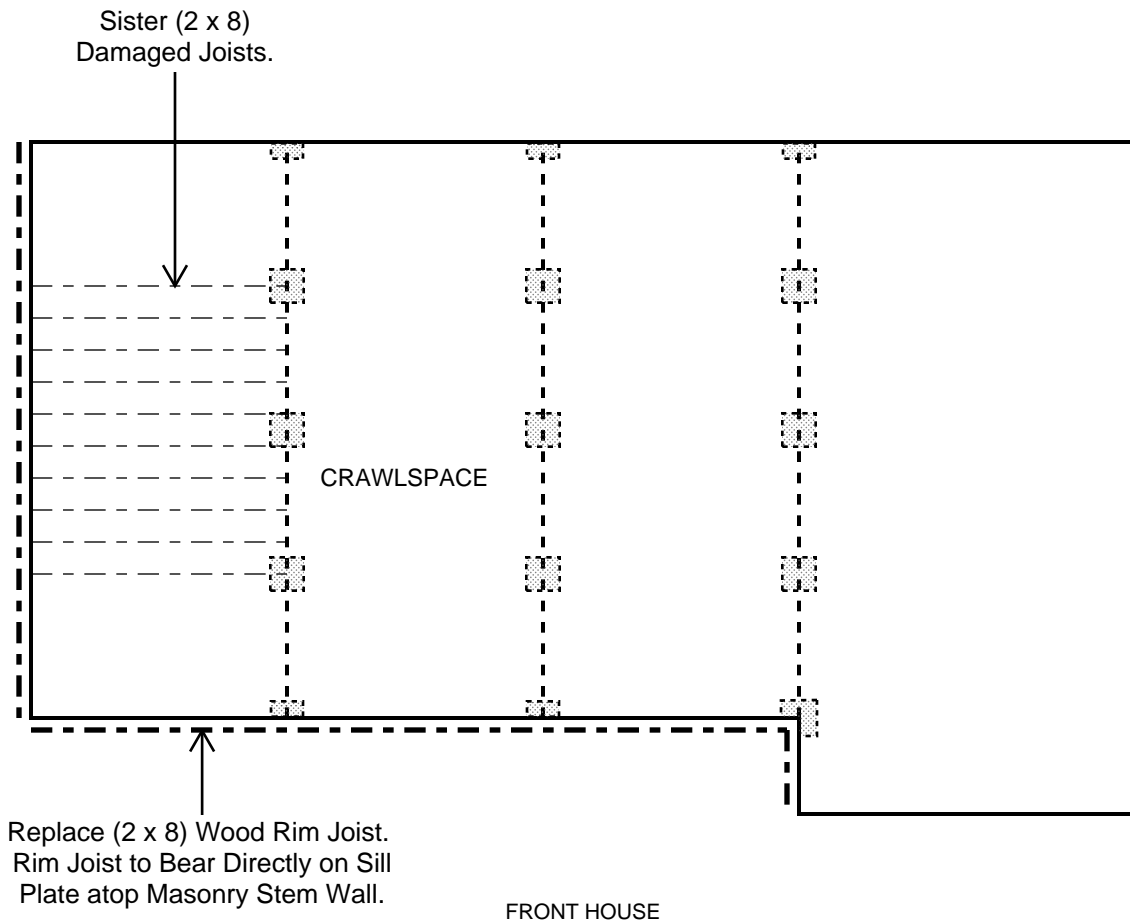
**PERIMETER FRAMING SECTION**

**LEGEND:**

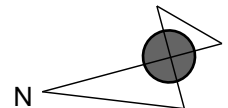
- - - - - Replace Rim Joist
- - - - - Sister Joist
-  Existing Pier
- - - - - Existing Main Beam

**Wood Framing Notes:**

1. Residential construction, one-story.
2. Layout of wood framing repairs and/or replacements on first floor.
3. Install per local Building Code.
4. See page 2 for notes, sizes, and specs.
5. Notify engineer if design assumptions are discovered inaccurate.



**REPAIR PLAN**



DRAWING NOT TO SCALE

**Project:**

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*Chad Keller*  
12/05/2024

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