

**Jeffrey J. Moss, P.E.**  
Senior Structural Engineer

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1104 Chimney Hill Drive  
Apex, NC 27502  
PH. (919) 740-0188  
Email: jeffmosspe@gmail.com

April 24, 2026

Megan Florence  
205 Sorrel Drive  
Franklinton, NC 27525

Re: Structural Investigation  
Project #26122

Dear Megan:

I conducted a site inspection of the property located at the above-referenced address. The property is a two-story single-family residence over a crawl space foundation system. For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the house and facing it. My inspection was limited to the stairway and crawl space under the stairway.

**FIELD OBSERVATIONS:**

Interior:

- There was horizontal drywall patch in the side wall of the stairway (photos 1 & 2).
- I was informed by the homeowner that there was a horizontal drywall crack that was patched.

Crawl Space:

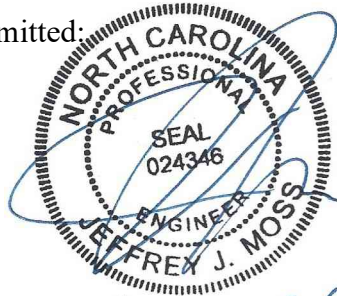
- It is assumed that the block pier supporting the floor framing (including the girder and floor joists) beneath the stairway wall has settled into the ground, resulting in settlement of the stairway and cracking of the wall.
- The floor joists and girder have been shimmed using TimberWolf composite shims (rated capacity: 16,000 lbs.). See attached for information.
- It is unclear whether the floor framing was lifted (jacked) during this process.

- I made observations of the shims and floor framing during the inspection (photos 3 to 10).

**CONCLUSION:**

The shims were properly installed, and the correct type of shims was used.

Respectfully Submitted:



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4-26-26

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



# COMPRESSION TEST

Test performed by RADCO  
Resources, Applications, Designs and Controls, Inc. | Long Beach, CA 90805

**Setup and procedure:** Two shims were held together with clear tape, smooth face to smooth face and were centrally placed on a 12" x 12" x 3/8" steel plate. The load was applied by a double 12" x 12" x 3/8" welded steel plate held above the shims, aligned to the bottom plate. The rate of loading was set to 0.032 inch per minute by RADCO's United Table Model Electro-mechanical testing machine, model number, STM-20, equipped with an electronic load cell and a computerized data acquisition system.

Loading was continued until 16,000 pounds approximately. The test was stopped at the ultimate load shown in the table due to the limitation capacity of the testing machine. Data was recorded to develop load vs. deformation curves.

**Test results:** The shims did not fail or show any permanent deformation.

| Load Cell Capacity |         | 20000 lbs |        | Crosshead Speed (inches/min) or Rate |                        | 0.032            |               |
|--------------------|---------|-----------|--------|--------------------------------------|------------------------|------------------|---------------|
| Preload Value      |         | 1 lb      |        | Extension or Position Measured by    |                        | XHD_100 (XHD100) |               |
| Test No            | Spec ID | Width     | Length | Peak Load                            | Extension at Peak Load | Peak (psl)       | Tan Mod (psl) |
| 9022               | 1-1     | 1.50"     | 8.00"  | 16,147.61 lbs                        | 0.08                   | 1,345.634        | 11,871.48     |
| 9023               | 1-2     | 1.50"     | 8.00"  | 16,123.73 lbs                        | 0.08                   | 1,343.644        | 12,411.82     |
| 9024               | 1-3     | 1.50"     | 8.00"  | 16,096.95 lbs                        | 0.08                   | 1,341.413        | 12,976.97     |
| 9025               | 1-4     | 1.50"     | 8.00"  | 16,106.64 lbs                        | 0.08                   | 1,342.220        | 12,435.33     |
| 9026               | 1-5     | 1.50"     | 8.00"  | 16,109.39 lbs                        | 0.08                   | 1,342.449        | 13,215.31     |
| Mean               |         | 1.50"     | 8.00"  | 16,116.87 lbs                        | 0.08                   | 1,343.072        | 12,582.18     |
| Std Dev            |         | 0.00      | 0.00   | 19.70 lbs                            | 0.00                   | 1.622            | 527.35        |
| Maximum            |         | 1.50      | 8.00   | 16,147.61                            | 0.08                   | 1,345.834        | 13,215.31     |
| Minimum            |         | 1.50      | 8.00   | 16,096.95                            | 0.08                   | 1,341.413        | 11,871.48     |
| Range              |         | 0.00      | 0.00   | 50.66                                | 0.00                   | 4.222            | 1,343.83      |

