



May 7, 2024

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Reference: Engineering Services
400 Mason Dr.
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TE&D Project No.: 2401-020174_A

To Whom It May Concern;

As requested by the client, a representative of Tyndall Engineering & Design, PA (TE&D) was on-site to inspect and observe the following:

- 1) Analysis of fire damaged house framing.

The following conclusions and recommendations were noted:

- 1) We observed numerous framing members throughout the first and second floors of the house to be severely damaged by fire, heat and smoke. TE&D recommends removing and replacing the following fire damaged framing (Note: the recommended repairs are made to comply with the 2018 NC Residential Building Code):
 - A) All existing 2 x 4 rafters (Front and Back of the house) are to be removed and replaced with new 2 x 8 rafters at 16" o.c.
 - B) All existing 2 x 6 collar ties are to be removed and replaced with new 2 x 6 collar ties at 16" o.c.
 - C) All 2 x 6 ceiling/second floor joists spanning front to back over the back-left bedroom, the kitchen, and the laundry room are to be removed and replaced with 2 x 10 joists installed at 12" o.c.
 - D) The rear wall of the second floor is to be removed and reframed.
 - E) The entire rear exterior wall framing is to be removed and replaced as well as the rear exterior band for the first-floor framing.
 - F) The rear 12'-0" of the left exterior wall framing on the first floor is to be removed and replaced.
 - G) The rear 12'-0" of the right exterior wall framing on the first floor is to be removed and replaced.
 - H) The left and right exterior wall framing on the second floor is to be removed and replaced.
 - I) We observed heat damage to an approximately 10'-0" wide section of the rear foundation wall causing the brick to crack and chip. The 10'-0" section of the foundation wall centered approximately 3'-0" to the left of the rear exterior door is to be replaced with new masonry.

Additionally, while no fire damage was observed within the crawlspace/first floor framing, we observed moisture and insect damage within the first-floor framing. TE&D recommends removing the first-floor framing below back-left bedroom, the kitchen, and the laundry room and new, treated 2 x 10 joists should be installed at 12" o.c.



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We appreciate being able to assist you during this phase of the project. If you need further assistance or require additional information, please do not hesitate to contact us.

Sincerely,
Tyndall Engineering & Design

Tripp Amos
BH | 2401-020174_A

Prentice Tyndall Jr., P.E.





Site Inspected



Right Side



Wall framing to be replaced



Left Side

Wall framing to be replaced



Back of House





Examples of Fire Damaged Framing:





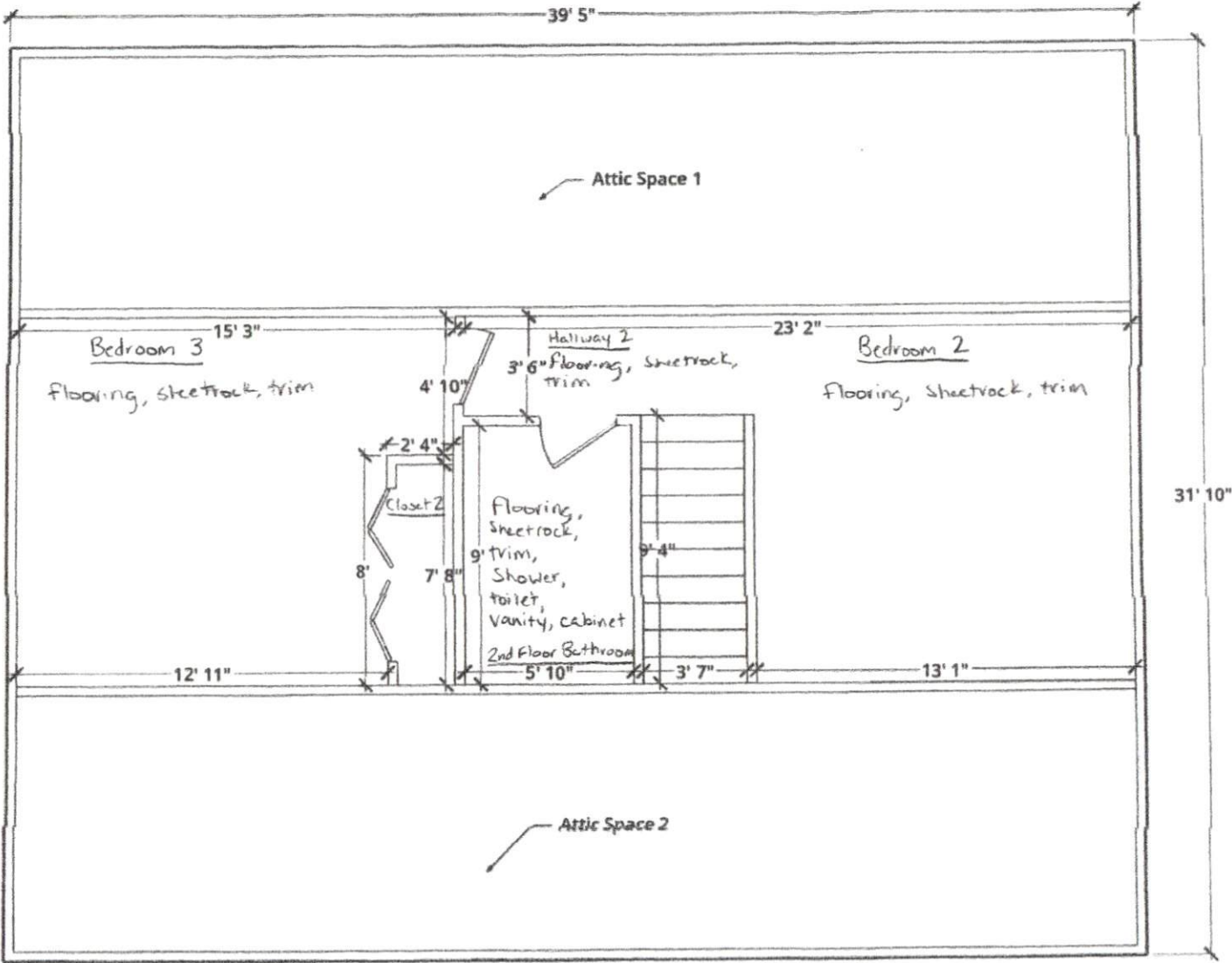
Example of Moisture and Insect Damage in the First Floor Framing





Example of Heat Damaged Brick Foundation

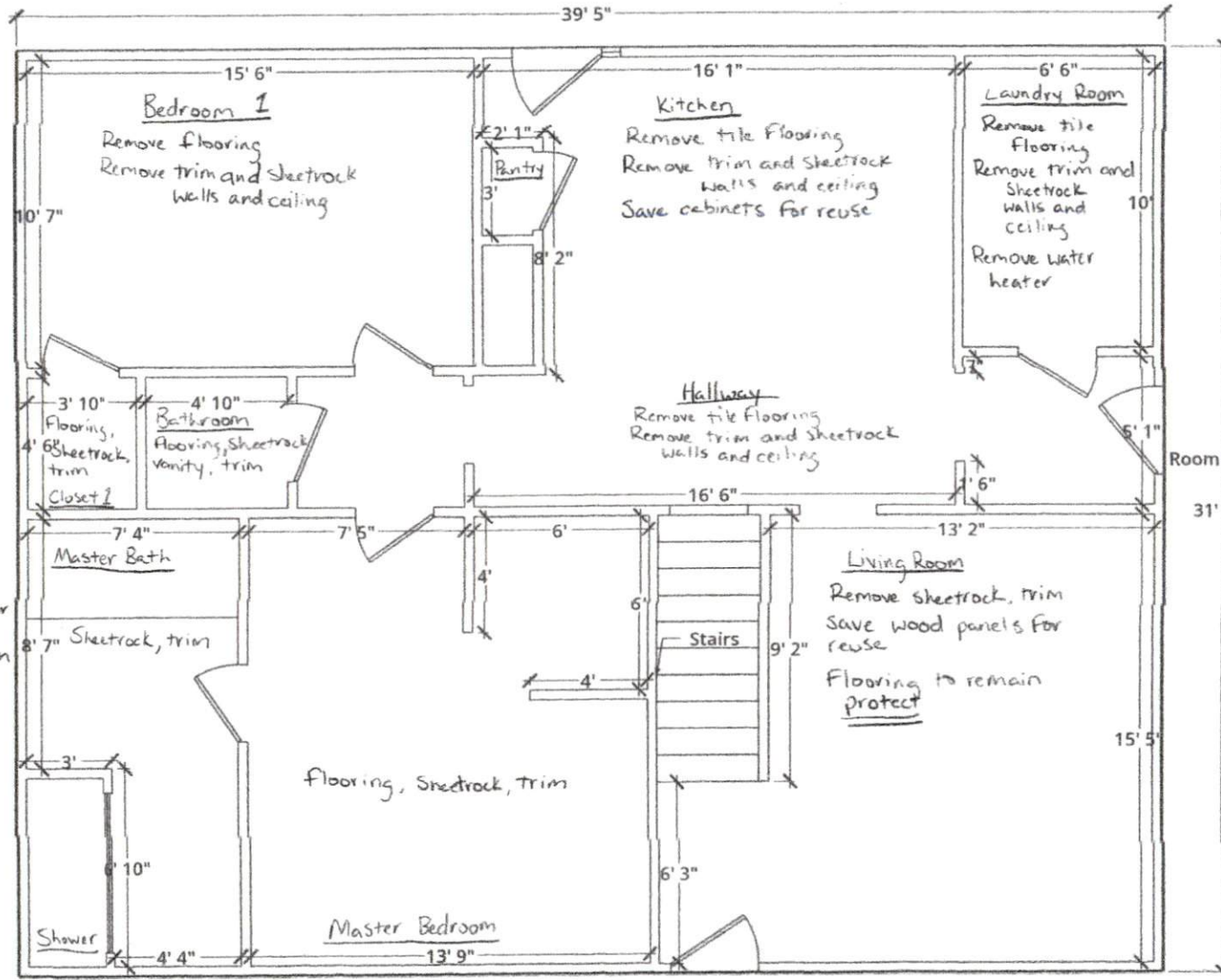




Demo Plan



Electrical throughout to be replaced



Tile in master bath to remain, clean only
Save vanity for reuse

