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Project No. 36661

June 16, 2021

Re: Stable 2<sup>nd</sup> Floor Framing Review, House 2<sup>nd</sup> Floor Bathroom Framing Review, and 2<sup>nd</sup> Floor Load Bearing Wall Evaluation  
426 Ranch Road 962 E  
Round Mountain, TX 78663

Dear Raye Allen,

As requested, personnel of GreenWorks Engineering and Consulting have completed a structural review of the address referenced above on June 8, 2021. The purpose of the observation was to collect information necessary to assess the condition and performance of the existing framing. For the purpose of this report the house and stable faces north.

### **Introduction:**

Located on the property are a two-story house and a two-story building with an open-air stable on the lower level and a ballroom on the upper level. Both structures consist of load-bearing stone walls with wood framing built in 1874. The roofing material is light gauge steel supported on roof trusses that are not part of the original construction. All the information gathered was from the visual evaluation and no destructive or invasive testing was performed.

Per the homeowner, the wall to be removed in the house is an approximate 3-foot wall between the 2<sup>nd</sup> floor bedroom and the balcony overlooking the living room. The buildings are historic structures and any modifications should be conducted according to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

### **Observations:**

**Stable 2<sup>nd</sup> Floor Framing:** The ballroom floor framing above the stable consists of 2x8 floor joists spaced at 24 inches on center that span approximately 10-feet. The joists are supported by the exterior stone walls and 6x6 beams which span approximately 13' and rest on 6x6 columns. The joists and beams appear to be in good condition however the beams have deflected significantly. The stone walls have large full-depth cracks, missing or loose mortar, and evidence of multiple repair attempts. In addition, it appears that the walls have shifted, indicating that significant foundation movement has occurred.

**House 2<sup>nd</sup> Floor Bathroom Framing:** The house's 2<sup>nd</sup> floor framing in the existing closet that is to be converted to a bathroom consists of 2x10 floor joists spaced at 24 inches on center spanning 16'2". The joists bear on the exterior stone walls. The stone walls have large full-depth cracks, missing or loose mortar, and evidence of multiple repair attempts. In addition, it appears that the walls have shifted, indicating that significant foundation movement has occurred. The ceiling joists and rafters bear on the 2<sup>nd</sup> floor wall between the living room and the bedroom.

**House Load Bearing Wall Evaluation:** The ceiling joists and rafters bear on the 2<sup>nd</sup> floor wall between the living room and the bedroom.

### **Conclusions:**

Based on our observations, the existing framing for both buildings appeared to be in good condition, however it is supported by exterior walls that are in poor condition. Due to the condition of the exterior walls, we do not recommend increasing the loads on either structure without significant repairs to the existing stone walls. In addition, the floor joists in the existing closet are undersized by current standards.

It is our opinion that the subject wall between the 2<sup>nd</sup> floor bedroom and balcony over the living room is a load bearing wall. Additional framing is required to support the existing loads to remove the subject wall.

We recommend performing repairs only according to plans that have been stamped and signed by a licensed professional engineer. If requested GreenWorks Engineering can provide the required repair plans.

### **Limitations:**

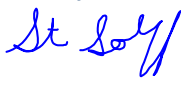
The opinions and recommendations contained in this report are based on the visual observation of the then current conditions of the structure and the knowledge and experience of the engineer. The evaluation was limited to visual observations and areas not visible, accessible or hidden behind furniture and appliances were not included in the evaluation. The evaluation did not include any soil sampling or testing.

The evaluation did not include any assessment of the existing foundation, plumbing or soil and no implication is made on the compliance or non-compliance of the house with old or current building codes. No verification was made of the existing concrete strength, thickness, reinforcement nor capacity to support any load.

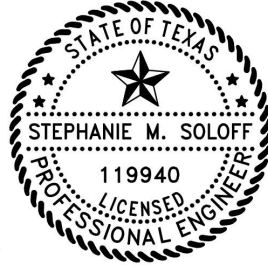
No guarantee or warranty as to the future performance or need for repair of the building or foundation is intended or implied. Limits of liability for any claims with respect to this report is limited to the fees paid for services and anyone relying on the content of this report agrees to indemnify GreenWorks Service Company for all costs exceeding this fee.

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Reviewed by,

Verified by PDFFiller  
  
06/16/2021

Stephanie Soloff, P.E.  
Professional Engineer



GreenWorks Service Company  
Texas Registered Engineering Firm 20170

Report Prepared by: Steven Wilson, Field Engineer