July 27, 2020

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Subject: Structural Evaluation – Opinion Letter
1258 Obispo Avenue
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We are pleased to present this opinion letter regarding forensic engineering consulting services completed at the subject residence. This letter has been generated as requested by you and presents our opinion of the conditions of the following structural components at the subject residence.

1. Subfloor wood framing structure and,
2. Roof wood framing structure.

We understand you were concerned regarding evidence of termite infestation observed throughout the interior of your residence and whether or not the subject termite infestation was jeopardizing the structural integrity of the residence structure. Specifically, you requested an evaluation of the subfloor framing structure and the roof wood framing structure.

We visited the subject site on July 25, 2020 to observe and document the current condition of the above numbered structures. We have listed below observations obtained during our visual inspection.

- We observed evidence of decay/water intrusion damage, termite infestation, and aging on numerous wood structural members of both structures.
- We also observed that the damage becomes significant on numerous structural members to the point where their integrity, stability, and load carrying ability have been compromised.
- We noted significant water damage on various structural members of the subfloor framing structure and the roof wood framing structure. The subject water intrusion was observed to be active at various locations.
- During our investigation, we found that the subfloor framing structure was not connected to the foundation system of the residence
- We observed that some repair work has been performed to both structures.

The following photographs were taken at the time of our site visit and are representative of the conditions observed.

View of distressed roof joist due to termite infestation.

View of distressed roof plank due to termite infestation.

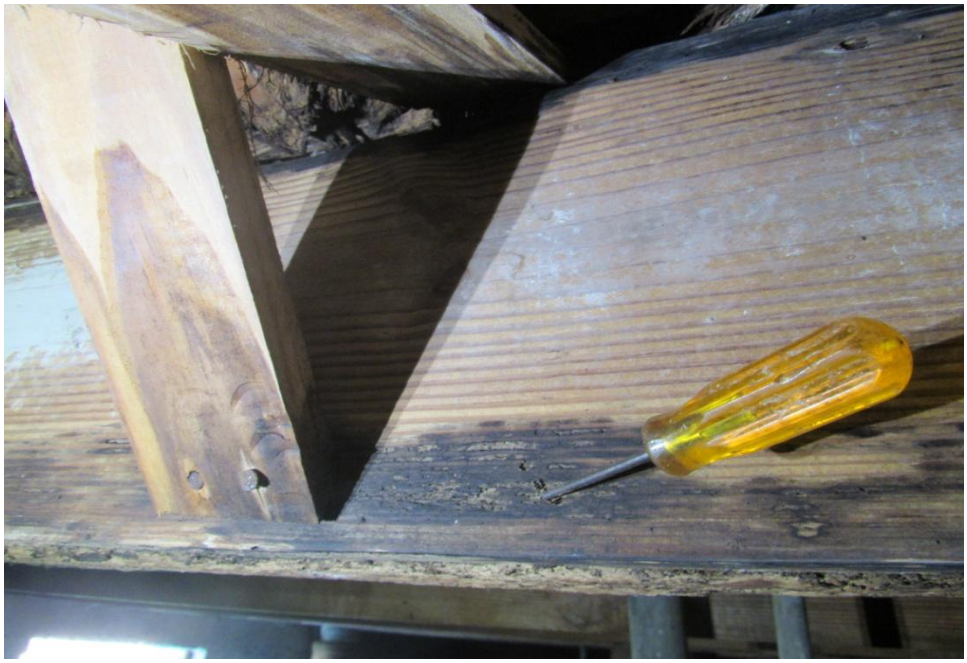
View of distressed rafter (local failure) due to water intrusion.

View of distressed roof joist due to termite infestation.

View of distressed roof joist due to termite infestation.

View of distressed (local failure) subfloor planks and joists due to water intrusion.

View of distressed (local failure) subfloor planks and joists due to water intrusion.



View of distressed subfloor joist due to termite infestation.

View of distressed subfloor planks and joists due to water intrusion.

View of termite infestation evidence throughout the residence's interiors

View of subfloor framing lacking structural connection to the foundation system.

View of subfloor framing lacking structural connection to the foundation system.

Opinions

Our opinions are based on the project information provided to us, our field observations, and our experience with similar conditions. Should new information become available, please contact us so we may evaluate the new information.

Based on our field observations, it is our professional engineering opinion that termite infestation, water intrusion damage, and aging has caused significant deterioration to numerous wood members of both the roof and the subfloor framing structures. The wood deterioration is revealed through the splits, decay, local failure, and dimensional changes that are visible on the affected wood members. The subject deterioration becomes significant on numerous wood members to the point where their integrity, stability, and load carrying ability have been compromised. Evidence of local failure was revealed through excessive cracking and deflection observed on numerous wood members.

Based on our evaluation, it is our professional engineering opinion, the roof structure of both the roof and the subfloor framing structures are at the end of their useful life and sectional failure may occur within the next hurricane season and/or any strong wind event. It is also our opinion that the best course of action would be to replace both the roof and the subfloor framing structures.

In addition, during our investigation, we found that the subfloor framing was not connected to the foundation system of the residence. Typically, the subfloor framing structure acts as a diaphragm as part of the lateral-load resisting system of the residence structure. Therefore, it must be properly connected to the foundation system in order to transfer the lateral loads to the foundation system as well as adequately resist the uplift forces.

It is also our professional engineering opinion that the repair cost to restore the structural stability, carrying load capacity, and extend the life of both the roof and the subfloor framing existing structures is not economically feasible. Most likely, the subject repair cost will exceed 50 percent of the cost to replace both the roof and the subfloor framing structures and will only return 5 to 10 years of useful life. On the other hand, the total replacement of both structures will provide a useful life of at least 40 years. A simple economics analysis of the two options suggests the total replacement of both the roof and the subfloor framing structures to be the best option.

Closing

We trust the information contained herein is suitable for your needs and appreciate the opportunity to have been of service to you. Please contact the undersigned if you have any questions concerning this letter.

Sincerely,

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Digitally signed by Felix M. Anton, P.E., S.I. 77755 State of Florida DN: cn=Felix M. Anton, P.E., S.I. 77755 State of Florida, O= This item has been electronically signed and sealed using SHA-1 authentication codes., ou=Printed copies of the document are not considered signed and sealed and all SHA-1 authentication codes must be verified on any electronic copies.

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Date: 2020.07.28 14:32:44 -04'00'

signed and sealed Date