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September 25, 2015 (Updated report)

David Wood  
118 Brentwood Street  
Portland, Maine  
207-332-4279

Re: Field investigation of existing framing at 118 Brentwood Street, Portland, Maine

Mr. Wood,

At your request I recently met with you on August 18th at your residence at 118 Brentwood Street, Portland, Maine to conduct a field investigation of the existing framing conditions in your kitchen/ living area. You have inquired on how to create a larger span (approx. 11ft.) between the kitchen and living room area and a span (approx. 6') behind the refrigerator. This letter is a report of my inspection and findings and recommendations.

**OBSERVATIONS:**

The subject residence is a traditional colonial style home with a full finished attic (approximately 12/12 pitch roof) and one larger A-dormer on the front side of the building. The main size of the home is approximately 24'-0" x 25'-0" w/ a 12'-2" x 24'-0" single story mono pitch roof at the rear of the building. The first floor consist of the foyer, living room, stairwell, and kitchen. The second floor consist of (3) bedrooms, bathroom, and stairwell. The third floor (attic space) consist of (1) large bedroom, stairwell, and minimal storage space behind the knee wall on the stairwell side. At the time of my inspection only the first floor framing (Refer to photo #1) and the floor framing in the storage area behind the knee wall was visible.



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Photo #1:

The first floor framing consisted of 2x8 rough sawn floor joist @ 16" o.c. with a 5"x7" rough sawn girder beam down the center of the basement. This has a maximum span of 7'-4" from the edge of the fireplace to a lally column support and then 5'-5" from lally to lally. Per my request the client has opened up the gypsum ceiling so the direction of the framing may be confirmed. The framing appears to run the width of the building (24' span direction, Refer to Photo #2) with the wall down the center of the building as a load bearing support. This coincides with the girder location in the basement.



Photo #2:

It is fair to assume the 2<sup>nd</sup> floor ceiling/ 3<sup>rd</sup> floor floor framing also runs in this direction for there is also a wall that runs down the middle of the house at that level. The roof framing runs in the opposite direction.

#### PROFESSIONAL OPINION:

The direction of the joist at each level indicates that the center wall is load bearing and supports the floor loads from above.

#### For the proposed header between the kitchen / living room:

There is a bump out on the living room gable end side that increases the tributary length of the joist to 25'-6". I would propose a 3-1/2" x 11-1/4" LVL header be installed directly below the top plate of the existing wall at the first floor level for the proposed 11'-0" span. Each End of the header shall bear on a minimum of (2) 2x4's that carry the load to the basement floor. These 2x4 columns may be stopped at the first floor level but shall be continued from the bottom of the floor sheathing to the basement floor level.

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For the proposed header behind the refrigerator:

I would propose either a (3) 2x10 SPF #2 Header or a 3-1/2" x 9-1/4" LVL header be installed directly below the top plate of the existing wall at the first floor level for the proposed 6'-0" span. Each End of the header shall bear on a minimum of (2) 2x4's that carry the load to the basement floor. These 2x4 columns may be stopped at the first floor level but shall be continued from the bottom of the floor sheathing to the basement floor level. The contractor is to confirm that this location falls over a foundation wall.

Thank you for the opportunity to be of service to you in this matter. If you need additional assistance, please contact me at any time.

Sincerely,

Jason J. Landry

