July 2, 2018

Mr. Robert Doyle

77 Huron Avenue

Cambridge, MA 02138

bobdoyle@informationphilosopher.com

**RE: 77 Huron Avenue, Cambridge, MA**

Dear Mr. Doyle:

This report documents our observations made on June 26, 2018 during our visit to the referenced address.

This report is based on our observations, qualifications, and information provided to us during this visit. It does not claim to be an itemization of all structural problems and is intended only to provide the client with a general idea of the typical structural concerning problems observed during the walk-through inspection.

This visit was conducted as a walk-through without destructive tests and limited to portions of the structure which were exposed.

For the purposes of clarity and orientation, the left, right, front, and back relate to the observation of the building from the street looking at the front of the building.

All the following observations and recommendations relate only to structural items.

OBSERVATIONS AND RECOMMENDATIONS

The purpose of this visit was your concern about the two beams in the back half of this house separated by approximately 3’6”.

Upon looking at the beams we noticed they were damaged by insects and overstressed and we recommend that these beams be replaced. In order to perform this work, we recommend that the joists be shored possibly over two stories because of the load induced by the floor above and the roof.

We understand that the maximum span of the beam will be approximately seven feet.

If, as mentioned above, the column will have a maximum span of seven feet, you may use 3-2x10LVL’s bolted to each other at 1’6” on center at the top and bottom. They will be properly supported on the column. If there is a splice, it should be exactly at the center of the column.

There must not be less than two bolts into the beam above and then a couple of spikes for each of the joists. It is important that all members, plates, beams, and joists are properly connected to each other and in full contact. If shims have to be introduced, they could be made of hard wood, be full size of the joists, and glued to the joists and to the members below.

During the work it is possible that some cracks will occur on the upper floors and then the contractor will have to address these conditions when the project has been completed.

For this work we are assuming that the existing footings are proper under the existing columns.

II. RECOMMENDATIONS

Recommendations given in this report are for estimates only and must be properly calculated and detailed.

We recommend, as required by the Massachusetts State Building Code, that structural plans be drawn indicating the structures as they existed at the time of the investigation including all new reinforcements necessary to bring the structures up to Code. Such plans would be useful in that:

* They would allow necessary permits to be obtained for the repair work.
* They would provide a good way to estimate the work to be executed.
* They would document the executed work for future reference, such as an event of later alterations to the building.

It is also important that the structural engineer visit the site during construction to verify its compliance with the plans and structural recommendations.

It will also be very important to keep copies of all documents, contracts, checks, permits, etc. to prove to a future potential buyer of your house that although movements can be seen on the house structural problems have been resolved.

Please let us know if you would like a proposal for our services.

This report addresses only those structural problems observed during the walk‑through which are brought to our attention and documented above as per the scope of our visit. Since few structures were exposed during the visit, other structural problems may be concealed behind finishes, plaster ceilings, and walls. We did not implement computations and do not claim that all the observed structural members are of the proper size and properly transmit the load from floor to floor.

The structural engineer is not responsible for determining the existence of insect infestation, environmental hazards, and waterproofing.

This report and analysis is based upon observations of the visible and apparent condition of the building and its major components on the date of this inspection. Although care was taken to perform a proper and thorough inspection, we make no representation regarding the existence of latent or concealed defects. No warranty or guarantee is expressed or implied with any structure. We do not take responsibility for the capacity of stairs, banisters, and handrails. This report is made only in the best exercise of our ability and judgment.

Conclusions in this report are based on the normal working life of various structural items. Predictions of life expectancy and the balance of useful life are not necessarily based on industry and/or statistical comparisons. It is essential to understand that actual working conditions can alter the useful life of any item. Previous use or misuse, irregular maintenance, faulty manufacture, unfavorable conditions, unforeseen circumstances and acts of God can make it impossible to state precisely when a specific item would require replacement. The client should be aware that certain components at the referenced property may have functioned normally at the time of the inspection, but due to their nature may have deteriorated rapidly without notice.

Time spent in legal or insurance related items or subpoenas for fact-findings sent by you or the other party (parties), if needed, will be billed on an hourly basis and charged to you.

Structural work recommended herein requires design and supervision from a structural engineer. Our office specializes in structural construction and can be contracted for further investigations and the preparation of structural plans referred to above.

If you disagree with any issues pertaining to this report, please contact our office and send us a marked-up copy with your comments.

Should you have any questions, or if you need further structural involvement, please feel free to contact us.

Please contact our office by phone, fax, or letter. If you would like to send an email, please contact our administrative assistant.



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**RE: 77 Huron Avenue, Cambridge, MA**

For Professional Services

Invoice Number: **18-890.00**

 Structural inspection

 June 26, 2018 and report $420.00

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 BALANCE DUE THIS INVOICE $**PAID**

*Please Indicate Invoice Number on All Payments*