

# **G.K. Bell & Associates**

GEO-ENVIRONMENTAL ENGINEERING

March 8, 2016

Reference No. 1613

Zetta Construction Inc.,  
324 Cherry Street,  
Toronto, Ontario  
M5A 1B6

Attention: Mr. Victor Freire

Re: Structural Assessment  
6840 14<sup>th</sup> Avenue  
Markham, Ontario

## **Introduction**

The house at 6840 14<sup>th</sup> Avenue in Markham was viewed on March 7, 2016 to provide a structural assessment.

## **Background**

The site is located in Markham on the north side of 14<sup>th</sup> Avenue as shown in Figure 1. The geology shown in Figure 2 was mapped by D.R. Sharpe in 1980 as “young tills; clayey silt till”.

It is planned to demolish the house and replace it with a new house.

## **Observations**

The existing house is a two story wood frame structure with asbestos siding as shown in Photograph 1 taken on March 7, 2016. The house and additions are all cased in hard asbestos tiles which were popular in the 1950's. The tiles were assumed to be asbestos based and the assumption may be verified by testing.

Photograph 2 is a view of the west wall of the house with the rear addition at the back. Photograph 3 shows the foundation concrete of the rear addition.

Photograph 4 shows the foundation of the front of the house taken on March 7, 2016. Photograph 5 shows the view of the rear addition and the house. Photograph 6 shows the east side of the house and rear addition.

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## **Discussion**

There was a lock box on the front door but the combination was unknown and access to the interior of the house was not available at the time of the inspection.

The two story house appears to have been modified by enclosing areas at the front, rear and the west of the house as seen in Photographs 1 and 6.

The well is seen in Photograph 2. Photograph 3 shows the rough concrete foundation supporting the rear addition. The concrete block wall foundation in the front of the house shows signs of distress as seen in Photograph 4. Where the asbestos tiles have broken in a couple of places, the underlying asphalt tar paper with a brick pattern was evident.

Photographs 5 and 6 show the rear addition. It is evident that the rear addition was built at a later time than the main house. The two brick chimneys showed severe distress at the top.

It was reported that the floor in the second level is rather uneven suggesting some structural distress possibly due to settlement of the foundations.

Should renovations be considered, all of the work would be subject to the requirements of the current Ontario Building Code 2012 (OBC).

The foundations should be stabilized and repaired accordingly. The wiring, plumbing and insulation should all be upgraded to current standards. The chimneys would certainly need major repairs.

The asbestos tiles should be removed and disposed in the manner required by the Ministry of Environment and Climate Change (MOECC).

The house appears to have been constructed in phases over a period of time and the foundation may have settled in some locations.

It would be costly to renovate the house to current OBC requirements and, given the somewhat haphazard construction, it would be more cost effective to replace it.

## **Conclusion and Recommendations**

It is concluded that the existing house is encased in asbestos tile and there is some evidence of foundation distress. It is recommended that;

1. The house be removed and replaced and
2. The asbestos tiles should be removed carefully and disposed in the manner specified by the MOECC.

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### Limitations

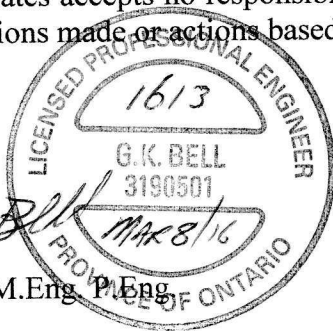
This report was prepared for use by Zetta Construction Inc., and is based on the work as described in the Scope of Work. The conclusions presented in this report reflect existing site conditions within the scope of this assignment and the results of previous investigation on the property.

No investigation method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. It can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and the formulation of the conclusions and recommendations. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions reached, but commit ourselves to care and competence in reaching those conclusions. No warranty, whether expressed or implied, is included or intended in this report.

The scope of services performed may not be appropriate for the purposes of other users. This report should not be used in contexts other than pertaining to the evaluation of the property at the current time. Written authorization must be obtained from G.K. Bell & Associates prior to use by any other parties, or any future use, of this document or its findings, conclusions, or recommendations represented herein. Any use which a third party makes of this report, or any reliance on or decisions made on the basis of it, are the responsibility of the third parties. G.K. Bell & Associates accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Yours truly,

  
George Bell, M.Eng. P.Eng.



Encl.

1. Photographs 1 to 6
2. Figure 1 Location Plan
3. Figure 2 Surficial Geology



Photograph 1 showing the front of the house at 6840 14th Ave., on Mar 7, 2016.



Photograph 2 showing the west side of the house on Mar 7, 2016.





Photograph 3 showing the rear addition on Mar 7, 2016.



Photograph 4 showing the front wall of the house on Mar 7, 2016.

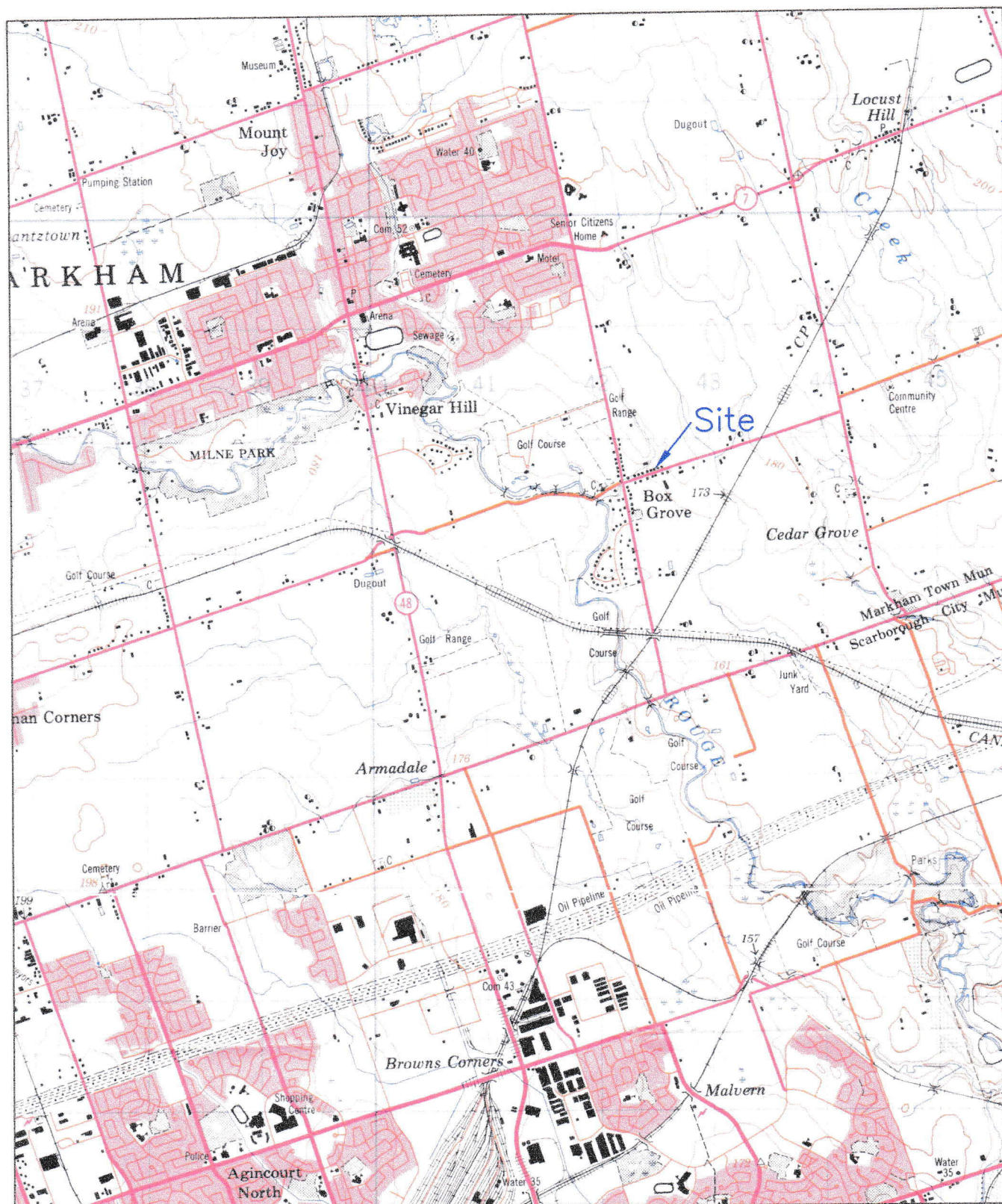


Photograph 5 showing the rear view of the house and addition on Mar 7, 2016.



Photograph 6 showing the east side of the house and addition on Mar 7, 2016.

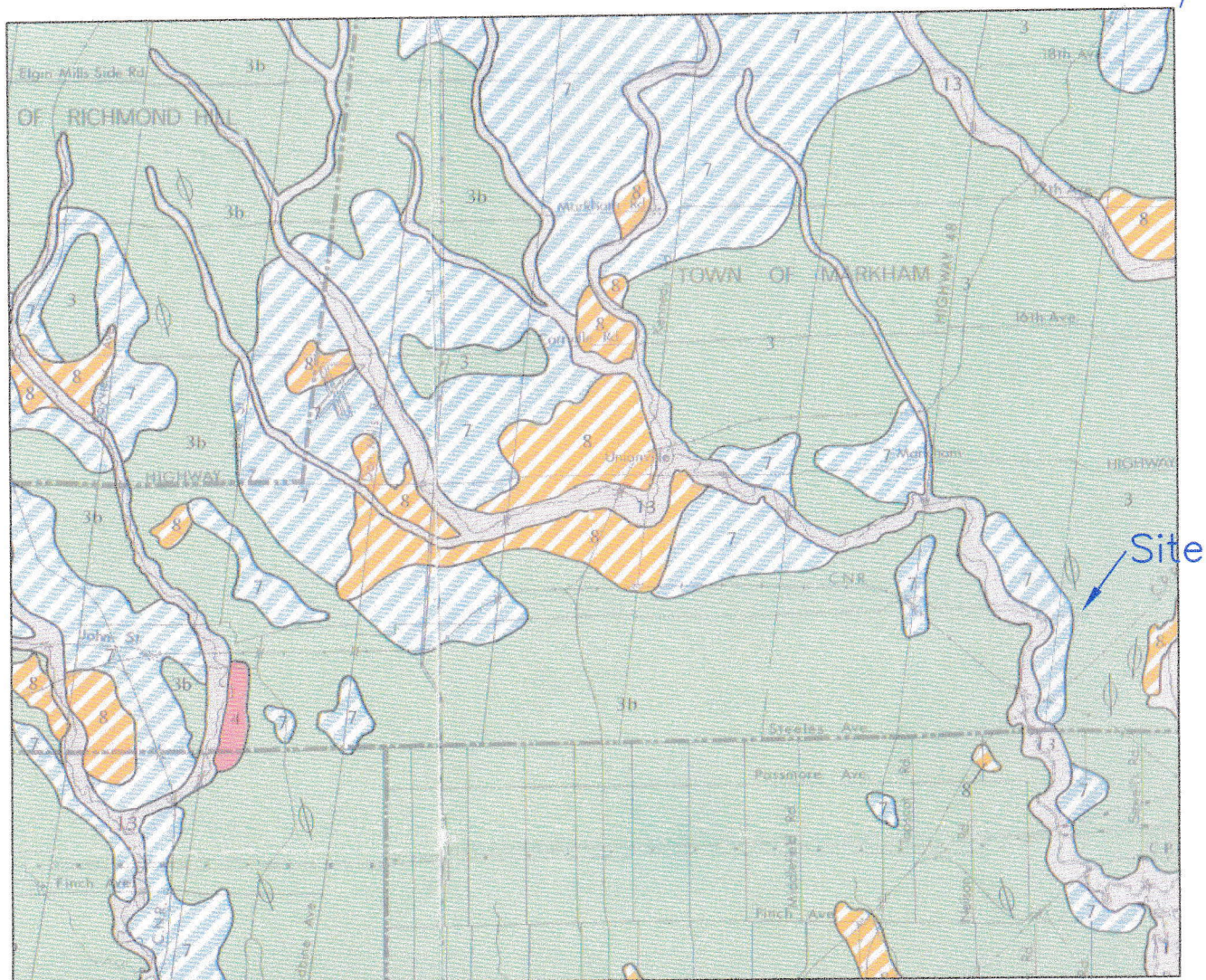




Ministry of Natural Resources. Department of Energy, Mines and Resources. 1985. Markham 30 M/14

Location Plan		
6840 14th Avenue Markham, Ontario		
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Sharpe, D.R. 1980. Quaternary Geology of Toronto and Surrounding Area; OGS Map P. 2204.

Surficial Geology Plan		
6840 14th Avenue Markham, Ontario		
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