

City of Ottawa
Building Code Services Branch
Planning, Infrastructure and Economic Development Department
101 Centrepointhe Drive, Nepean ON K2G 5K7

July 31, 2018
Project No. 18184

Attn: John Buck
John.Buck2@ottawa.ca

**Re: 1119 Wellington Street West
Partial Demolition Review and Investigation**

The purpose of this letter is to act as an update to our previous report dated July 26th following the partial demolition of unsafe elements at the above noted address. John G. Cooke & Associates Ltd. (JCAL) visited the site to review and direct partial demolition of the structure at the southwestern corner of the building. The site was visited by John Cooke, P.Eng. and Chris Vopni, P.Eng. on July 27, 2018.

PARTIAL DEMOLITION

As described in our previous letter, there were three elements which were unsupported and were recommended for immediate demolition to control their imminent collapse. Following review with the City, partial demolition was scheduled to be carried out July 27, 2018 by Priestly Demolition Inc. (PDI).

The City, PDI, and JCAL met on site to discuss procedures and agreed that the proposed method described in our previous letter would be carried out, however the unpredictable nature of the work would require immediate adaptability to accommodate as found conditions. JCAL remained on site for the duration of the work to advise the contractor as conditions presented themselves.

Demolition began by removal of metal siding to further expose the unstable upper area at the south of the West Elevation. Once siding was removed, the cross section was accessible and a large area of masonry was dislodged and collapsed to the existing rubble pile in a controlled manner. Following this dismantle, the condition of the roof appeared stable and PDI returned to the corner to address all unstable masonry for the remainder of the corner. With the west return of the masonry removed, PDI continued at the roof and mansard to gain access to unstable masonry at the upper west corner of the South Elevation. The masonry at the second floor west of the window was removed, as was the window. The conditions presented following the removal of the window offered relative stability and it was decided that this would be the extent of masonry demolition.



Figure 1: Bearing of 2nd Floor Joist

The floor joists at the second floor were found to be connected to a wood ledger embedded in the wall and was critical to the support of the wall above. It was decided that the failed joist would remain since its removal would cause further instability of the wall above.

With the masonry removed to a relatively stable condition, PDI began removal of weight from the 2nd and 3rd floors to reduce the load to already failed joists. Items with significant dead load were removed, including bookcases, copier, printer, desks, etc.



Figure 2: Extent of Partial Demolition (approx.)

Following the partial demolition of the masonry and removal of loads at the 2nd and 3rd floor, JCAL reviewed options for partial opening of Wellington Street West and for access to the units at the rear of 1121 Wellington. JCAL provided a brief letter to the City, transcribed as follows:

Following the partial demolition of the above noted address, the street may be re-opened with the following restrictions:

1. One lane each direction at the south side measured from the south curbline (eliminate street parking);
2. Separate traffic from the site with a minimum of 8' construction fence – more [*additional measures*] may be required to suit traffic needs/requirements;
3. The sidewalk and remainder of the road on the north side must remain closed from the west wall of 1115 Wellington to the East Wall of 1121 Wellington;
4. To allow safe passage to the stair at 1121 Wellington Unit 2&3, provide a protected walkway separated from the site by a hoarding wall consisting of 2x4 @ 16" c/c and 3/4" plywood braced to the east wall of 1121 Wellington.

Prior to the partial demolition, JCAL worked to prepare historic recordings of the current building condition using photogrammetry. The focus at the time was at the southwest corner where the partial demolition was to occur and recording of the remainder of the building will follow now that partial demolition is complete.

CONDITION OF REMAINING STRUCTURE

With our previous report we noted several indications to suggest the remainder of the masonry structure could be in comparable condition to the West Elevation. This was confirmed at the South Elevation during the partial demolition activities. The demolition at the corner offered a cross-section view of the masonry revealing that the condition of the masonry core is very poor. The previously observed bulge in the wall just above the concrete lintels can be attributed to buckling of the outer wythe of stone; there is no connection to the core or the interior wythe (fig.3).

During the demolition, the condition of the roof deck was noted to be severely deteriorated. This was observed during removals using the hydraulic shear; the wood roof decking offered little resistance when removed.



Figure 3: South Elevation - Empty Wall Core

RECOMMENDED ACTION

It is our opinion that with the above noted secured perimeter, the remaining structure is not presently a risk to public safety and can remain standing to allow for appropriate Heritage and City review. We strongly recommend that this review be carried out quickly. Our opinion regarding the stability of the remaining structure is for a short term extending no later than late November 2018 and does not extend to fall and winter months at which time freeze-thaw and snow loading can be expected to compromise the stability of the structure.

Based on our detailed review of July 25th and 27th and observations during the partial demolition, we continue to support the recommendations outlined in our report dated July 26th. It is our opinion that the remaining walls have deteriorated to the extent that they cannot be restored in place safely as removal of one stone may immediately create instability in the wall leading to a collapse. We recommend full dismantle of the original building.

Please do not hesitate to contact the undersigned should you have any questions or require clarifications.

Sincerely,

JOHN G. COOKE & ASSOCIATES LTD.



John Cooke, P.Eng., FCSC, RSW, CAHP
President



Chris Vopni, P.Eng.
Associate

JC/cv
18184/ltr3