



February 29, 2024

Reference Number: 24337

Kamel Samaha

Director of Construction
Spotlight Development Inc.
550 Queen St. E, Suite 200
Toronto, ON, M5A 1V2

Dear Kamel,

**RE: 121 Cavan Street, Port Hope, ON
Structural Assessment**

1.1 BACKGROUND

At your request, we completed a review of the building structures at the property of 121 Cavan Street, Port Hope. The property consists of multiple one and two storey buildings which we have grouped into five (5) different blocks. The purpose of the review was to provide a visual assessment of the conditions and soundness of the building structures. Primary focus on the west exterior wall fronting Cavan Street located within block #2. We have conducted a site walk through of blocks 1, 2, 3, and 5 where accessible, with a focus on the building areas which are directly adjacent to Cavan Street. Our review was limited to the structure where could be accessed and does not include any other areas such as electrical, mechanical, architectural or historic aspects of the buildings.

Block #4 and the single-story portion of block #5 were not reviewed. Our review was limited to the exterior façade facing Cavan Street, the south exterior façade, and ground floor level where accessible. For block #5 two storey portion, we were also able to access the 2nd floor level. See figures 1 to 5 for a breakdown of the five blocks defined.



Figure 1: Block #1 – Southern Block



Figure 2: Block #2 – Middle Block



Figure 3: Block #3 – Eastern Block



Figure 4: Block #4 – North Stand-Alone Block



Figure 5: Block #5 – North Interconnected Block



1.2 EXISTING INFORMATION

As part of our study, we reviewed the following documents that were supplied to us. The structural information contained within the documents were limited, however, they did provide information on the age of the different buildings located within the property:

- ▶ 121 Cavan Street, Port Hope – Lot 75, Smith Estate Plan - Historical Article – Author not provided.
- ▶ Conditions Overview Site Plan – PDF Markup Prepared by Philip Goldsmith Architect, dated July 17, 2020.
- ▶ Site Plan – PDF Markup of Existing Building Circa Year of Construction – Title Block not provided.

The oldest buildings on the property are contained within block #2, range from circa 1850 to 1900, and appear to consist of an original build with four additions. Block #3 ranges from circa 1889 to 1935 constructed with two additions. Block #1 is circa 1902 and 1935 constructed in two stages, and block #5 appears to be the newest addition circa 1935.

1.3 OBSERVATIONS AND REVIEW METHODOLOGY

Our review was conducted on a visual basis only of what we observed on site and does not include any destructive testing/investigation. Calculations were not performed, and recommendations are based solely on visual review. Many areas were not safe to access and as a result were not reviewed.

The buildings at 121 Cavan Street are constructed with various building materials, including within the same building block.

In general, block #1 was observed to be constructed of structural steel with mill deck floor on the 2nd floor. The perimeter beams appear to be structural steel encased in concrete. We were unable to access the 2nd floor level in order to observe the roof, however from aerial view drone footage it can be seen that the east portion of the roof has collapsed, see photo 1. Structural damage observed on the walk-through included failed 2nd floor deck/collapse, see photos 2a and 2b. The 2nd floor structural steel framing and west exterior brick wall have experienced some weathering; however, do not appear to show signs of significant deterioration in areas we were able to observe.

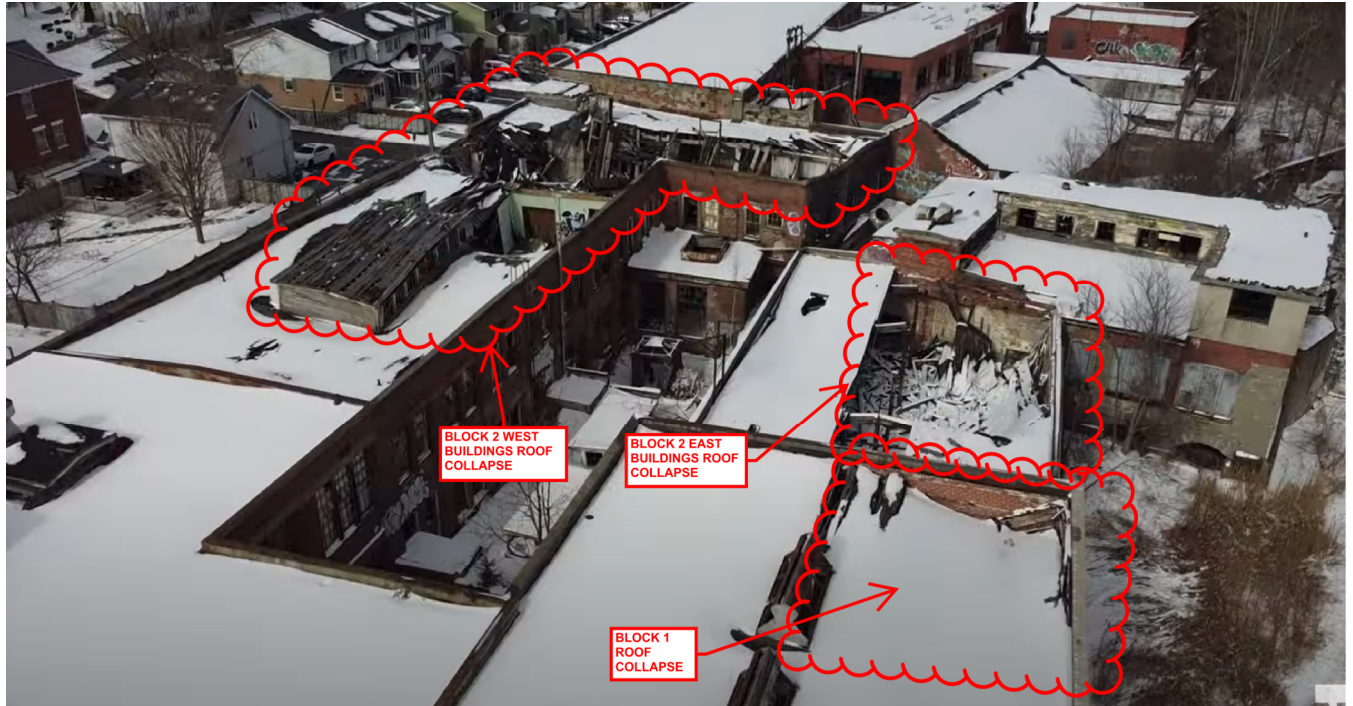


Photo 1: Aerial View – Roof Collapse East Portion Block #1, Large Portion Block #2



Photo 2a: 2nd Floor Deck Collapse in Block #1



Photo 2b: 2nd Floor Deck Collapse in Block #1

Block #2 is constructed of timber framing and flooring for both 2nd floor and roof levels. This block has experienced the most severe damage of the five blocks on the property, including substantial areas of both roof and 2nd floor collapse. The most widespread area of collapse occurs within the region directly behind the exterior west brick wall, where the parapet has begun to fall over and bowing out of the exterior wall was observed. See photo 3 and 4. We were unable to access the eastern buildings within block 2, however from aerial view drone footage substantial roof collapse has occurred here as well. See photo 1. Parapet



damage was also observed on the east side of the west building. See Photo 5. In other parts of the building where collapse has not occurred, the bottom 2'-3' of timber columns appear to have experienced water damage/surface rotting.



Photo 3: 2nd Floor and Roof Collapse, Block #2, Area behind West Exterior Wall



Photo 4: Parapet Deterioration and Wall Bowing, West Wall, Block #2



Photo 5: Parapet Deterioration East Wall, Block #2

Block #3 is located away from the Cavan Street frontage. Buildings within this block consist of a mix of structural steel and mill deck, as well as timber framed buildings. The greatest structural damage within this block occurs in the courtyard area where a structural steel building has experienced collapse. See photo 6. In some of the timber framed areas, temporary steel shore posts were observed.



Photo 6: Collapse in Courtyard Area Building, Block #3



Block #5 consists of reinforced concrete beams, columns, and floor for the ground and 2nd floor levels. What appears to be numerous anchors through the concrete floor, drop panels, and column capitals were also observed. It is unclear what the purpose of these anchors were used for. See photo 7. The upper level/roof consists of structural steel columns with what appears to be modern construction of timber roof with wood beams and joists. See photo 8. Even though block #5 appears to be in better condition, there is still substantial deterioration at the 2nd floor finished floor level where water egress and rotting floor boards were observed. From our observations the floor boards are a floor finish and are supported on the concrete floor.



Photo 7: Ground Floor Level Looking up at Underside of 2nd Floor – Block #5



Photo 8: 2nd Floor Level Looking up at Underside of Roof, Roof Drain Pouring into Building – Block #5



1.4 DISCUSSION

Based on our site observations, each block inspected has experienced structural deterioration to varying degrees including but not limited to: wood rot, corrosion of structural steel, spalling of concrete encasement around steel beams, mortar deterioration between bricks, concrete staining, water damage, wood structure collapse, and damages to the exterior of the west brick wall and parapet within block #2, with the latter two items being the most severe.

The buildings appear to have been unoccupied for several years and it is evident that the spaces are not protected against the elements as there are numerous broken windows, collapsed roofs, and other large openings exposing the building to the outdoor conditions. As such the building interiors have been consistently exposed to water/moisture, and extreme varying temperatures. If left in its current state, this exposure will continue to cause further deterioration. Since the buildings do not have basements, it is possible that the footings have been exposed to freeze thaw cycles. Geotechnical investigation as well as review of foundation was not part of this scope.

1.5 FINDINGS AND RECOMMENDATIONS

In our opinion, based on the information available and the level of study completed, blocks 1, 2, 3, and 5 should be demolished completely as each block is unfit for occupancy and beyond a state in which repairing is reasonably feasible. This can be completed in stages however and does not have to occur all at once.

Block #2, including the west exterior brick wall and parapet within block #2 impose the immediate safety concern to the public and should be demolished immediately. We recommend demolishing this block in whole and demolishing the west exterior wall up to the south end of block #5 and the north end of block #1. The demising wall between blocks #1 and #2, and between blocks #5 and #2 should remain in place during this demolition as in some areas, these walls are load bearing for the adjacent blocks. Care should be taken to ensure the demising walls are stabilized either by ensuring they are tied into the adjacent floor and roof structures of blocks #1 and #5, or by providing temporary shoring in areas where the walls are not braced by these floor structures.

Block #1 should be the next block demolished following block #2. Although the west exterior wall within this block appears to be in reasonable condition, there were areas of floor and roof collapse observed within this block. Following the demolition of block #1 we recommend demolition of block #3, and finally block #5. Block #3 and #5 demolition can occur at a later time as block #3 does not front Cavan Street, and block #5 has not shown any sign of collapse at this time within the portion of building directly fronting Cavan Street.

As each area is being demolished, hoarding should be installed to prevent the public from entering any of the buildings. We also recommend continuing monitoring of the buildings to ensure conditions do not worsen. Should the west exterior wall begin to deteriorate more substantially beyond block #2, this may expedite the need to demolish the other blocks of the building.



The demolition should be carried out by a qualified demolition contractor and under the supervision of a registered professional engineer specializing in demolition procedures. During demolition, the contractor and supervising engineer should monitor the structural integrity of the adjacent buildings and re-assess if necessary, the extent of demolition to be conducted during each phase.

We trust this provides the information you require; however, should you have any questions or comments please do not hesitate to contact us.

Yours truly,

LEA CONSULTING LTD.

A handwritten signature in black ink, appearing to read 'Shahe Sagharian', written over a light grey grid background.

Shahe Sagharian, P. Eng.
Project Manager



A handwritten signature in black ink, appearing to read 'Michael Ferguson', written over a light grey grid background.

Michael Ferguson, P. Eng.
Structural Engineer



Limitations

- No party other than the Client shall rely on the Consultant's work without the express written consent of the Consultant. The scope of work and related responsibilities are defined in the Conditions of Assignment. Any use which a third party makes of this work, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Decisions made or actions taken as a result of our work shall be the responsibility of the parties directly involved in the decisions or actions. Any third party user of this report specifically denies any right to any claims, whether in contract, tort and/or any other cause of action in law, against the Consultant (including Sub-Consultants, their officers, agents and employees).
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- This work does not wholly eliminate uncertainty regarding the potential for existing or future costs, hazards or losses in connection with a property. No physical or destructive testing and no design calculations have been performed unless specifically recorded. Conditions existing but not recorded were not apparent given the level of study undertaken. Only conditions actually seen during examination of representative samples can be said to have been appraised and comments on the balance of the conditions are assumptions based upon extrapolation. We can perform further investigation on items of concern if so required.
- Only the specific information identified has been reviewed. The Consultant is not obligated to identify mistakes or insufficiencies in the information obtained from the various sources or to verify the accuracy of the information.
- LEA Consulting Ltd. is not investigating or providing advice about pollutants, contaminants or hazardous materials. This work is included only in the mandate of the environmental consultant.
- LEA Consulting Ltd. is not providing any opinion on heritage significance or have investigated the historic aspects of the existing building. The heritage review shall be done by others.