



ARCHAEOLOGY | HERITAGE | OUTREACH | EDUCATION

**FINAL**

**Cultural Heritage Protection Plan & Temporary Protection Plan  
58-60 Ellen Street East & 115 Lancaster Street East  
City of Kitchener  
Region of Waterloo  
Lot 3, German Company Tract  
Geographic Township of Waterloo  
Former Waterloo County**

Benjamins Real Estate Holdings Inc. – 001  
c/o

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HR-517-2024

Project #: 2023-0269/2023-0269

2024-10-01

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## **GLOSSARY OF ABBREVIATIONS**

ARA – Archaeological Research Associates Ltd.  
CCNHCD – Civic Centre Neighbourhood Heritage Conservation District  
CHPP – Cultural Heritage Protection Plan  
CHVI – Cultural Heritage Value or Interest  
CP – Conservation Plan  
HIA – Heritage Impact Assessment  
JMA – John MacDonald Architect Inc.  
OHA – Ontario Heritage Act  
O. Reg. – Ontario Regulation  
TOR – Terms of Reference  
TPP – Temporary Protection Plan

## **PERSONNEL**

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*Director - Heritage Operations:* K. Jonas Galvin, MA, RPP, MCIP, CAHP  
*Project Manager:* A. Barnes, MA CAHP  
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*Cartographer:* A. Bailey (GIS), M. Johnson (GIS), K. Crotty (GIS)

## 1.0 PROJECT CONTEXT

The City of Kitchener has requested that Archaeological Research Associates Ltd. (ARA) complete a Cultural Heritage Projection Plan (CHPP) and Temporary Protection Plan (TPP) for the proposed development at 58-60 Ellen Street East and Lancaster Street East to satisfy the conditions outlined in the May 2023 Conditional Approval of Site Plan Application. The Conditional Approval of Site Plan Application relates to the proposed development on the subject property in which the existing six-unit dwelling will be renovated and expanded with a three-storey addition containing an additional five units to create an eleven-unit multi unit rental building.

A Heritage Impact Assessment (HIA) on the subject property was completed by ARA in March 2022. The HIA included a Cultural Heritage Evaluation of the property according to *Ontario Regulation 9/06* (O. Reg. 9/06). This evaluation determined that the property has Cultural Heritage Value or Interest (CHVI) and met criteria for physical and design value, historical/associative value and contextual value. A Conservation Plan (CP) on the subject property was developed in August 2022 which provided an identification and assessment of the subject property’s cultural heritage resources and heritage attributes and provided an identification of short-, medium- and long-term conservation measures. An update memo for the HIA and CP was completed and submitted to City staff in September 2024.

As outlined by the City in the Conditional Approval of Site Plan Application, this CHPP and TPP will comment on the means and methods to minimize potential damage to the subject property and identify any protection measures recommended for the adjacent properties at 111 Lancaster Street East and 54 Ellen Street East (see Map 1).

### 1.1 Report Requirements

ARA consulted with City of Kitchener’s Heritage Planning staff who provided a terms of reference (ToR) for the CHPP and TPP. In conversation with City staff, it was determined that the CHPP and TPP could be submitted as one document and components of the ToR were clarified. Details are provided in Table 1 and Table 2.

**Table 1: Cultural Heritage Protection Plan Terms of Reference**

City of Kitchener Minimum Requirements (CHPP ToR)	Relevant ARA Section
Identification of all adjacent to the cultural heritage resource(s)  <i>City staff outlined to ARA that that identifying 111 Lancaster Street East and 54 Ellen Street East as adjacent cultural heritage resources protected under Part V of the OHA is sufficient (Pers. Comm. 2024).</i>	1.0 Project Context 2.0 Cultural Heritage Resources
Identification of protective measures to be applied to adjacent cultural heritage resources. This includes, but is not limited to, protecting fencing to ensure construction activities do not damage these resources, vibration monitoring plan, etc.  <i>City staff confirmed that the City does not have specific guidance regarding acceptable vibration levels or a zone of influence. City staff outlined that obtaining the professional advice of a qualified engineer on this matter would suffice (Pers. Comm. 2024).</i>	3.0 Protective Measures
Identification of measure to be applied in case unwanted damage does happen to adjacent resources during construction.  <i>City staff indicated that this section should provide general guidance in the event damage occurs and incident-specific recommendations are not required (Pers. Comm. 2024).</i>	3.0 Protective Measures

<p>An assessment of the current condition of the adjacent cultural heritage resources. The CHPP needs to provide a basic current condition report of the existing resources. The CHPP must identify the physical condition and integrity of the cultural heritage resources, with a view toward making recommendations regarding appropriate repair and maintenance, in keeping with good conservation practice.</p> <p><i>City staff confirmed the CHPP is only to include basic documentation of the adjacent properties prior to any construction work as viewed from the subject property and public realm and does not need to provide commentary on the current condition of the adjacent structures. No interior photographs will be taken. This documentation is to serve as a record of the existing conditions (Pers. Comm. 2024).</i></p>	<p>2.1 Cultural Heritage Resource Assessment Appendix A: Photographs</p>
<p>Identification of the short- and medium- term recommendations the conservation of the adjacent heritage resources, and of the specific conservation measures to be undertaken in the short and medium. Such measures shall describe the documentation, stabilization, repair, monitoring and maintenance strategies required to be undertaken for each phase (pre-, during and immediately post-construction) and shall reference the qualifications for anyone responsible for undertaking such work.</p> <p><i>City staff confirmed that in the event of unwanted damage to the adjacent properties identifying a work stoppage in the CHPP is acceptable (Pers. Comm. 2024).</i></p>	<p>3.0 Protective Measures</p>
<p>The qualifications and background of the person(s) completing the CHPP shall be included in the report. The author(s) must demonstrate a level of professional understanding and competence in the field of heritage conservation. The professional should be registered with the Canadian Association of Heritage Professionals (CAHP) and in good standing. The report will also include a reference for any literature cited, and a list of people contacted during the study and referenced in the report.</p>	<p>Appendix C: Key Team Members Biographies and Qualifications</p>

**Table 2: Temporary Protection Plan Terms of Reference**

City of Kitchener Minimum Requirements (TPP ToR)	Relevant ARA Section
<p>Identification of protective measures to be applied to the cultural heritage resource during construction. This includes, but is not limited to, protecting fencing to ensure construction activities do not damage this resource, vibration monitoring plan, etc.</p>	<p>3.0 Protective Measures</p>
<p>The TPP also needs to comment and focus on measures to protect and stabilize the cultural heritage resource during construction and what, if any, stabilization and repair work needs to be done post-construction. The TPP needs to comments on how the resource shall be protected as the openings are altered, the additions are built, and the partial demolition of the resource takes place.</p>	<p>2.1 Subject Property Condition Assessment</p>
<p>Identification of measures to be applied in case unwanted damage does happen to cultural heritage resource during construction.</p>	<p>3.0 Protective Measures</p>
<p>The qualifications and background of the person(s) completing the CHPP shall be included in the report. The author(s) must demonstrate a level of professional understanding and competence in the field of heritage conservation. The professional should be registered with the Canadian Association of Heritage Professionals (CAHP) and in good standing. The report will also include a reference for any literature cited, and a list of people contacted during the study and referenced in the report.</p>	<p>Appendix C: Key Team Members Biographies and Qualifications</p>



**Map 1: Subject Property in the City of Kitchener**  
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri)

## 2.0 CULTURAL HERITAGE RESOURCES

The subject property and adjacent properties at 111 Lancaster Street East and 54 Ellen Street East are located within the Civic Centre Neighbourhood Heritage Conservation District (CCNHCD) and are all designated under Part V of the *Ontario Heritage Act*. The CCNHCD applies groupings for properties within the HCD; Group A or Group B represent “fine or very fine” examples of an architectural style and Group C properties are properties that have attributes that “contribute value to the heritage environment of the district” (City of Kitchener 2007:27).

It should be noted that there is some inconsistency within the CCNHCD regarding the subject property’s grouping as the property includes multiple municipal addresses. Appendix B of the CCNHCD has identified 60 Ellen Street East as Class B and 115 Lancaster Street East as Group A, however an overview map of the Civic Centre neighbourhood identifies the entire property as Group A. The adjacent properties at 111 Lancaster Street East and 54 Ellen Street are rated B and C respectively.

### 2.1 Subject Property Condition Assessment

An architectural description and overview of the condition of the subject property and its heritage attributes was provided in ARA’s 2022 HIA and CP. A structural condition assessment on the subject property was conducted in July 2024 by Tacoma Engineers Inc. (Tacoma) to determine if the building on the subject property has the structural capacity to accommodate the proposed development. Tacoma’s structural condition assessment has been provided in Appendix B. Related to the subject property’s current condition, Tacoma’s report outlined the following:

*In general, the building exterior is in fair good condition. Typical deterioration for a building of this age was observed. The paint on the mass brick exterior walls likely masks minor deficiencies and maintenance items. Removal of the paint will allow the brick walls to breath as they were intended to, however, the process of removing the paint must be completed with care to avoid additional damage to the masonry. Approximately half of the interior rental units were recently upgraded. These units were in good condition. The rest of the unit finishes were in fair to poor condition as can be expected with delayed building upgrades (Tacoma Engineers Inc. 2024:i).*

Regarding the building’s ability to accommodate the proposed addition, Tacoma’s report outlined:

*Tacoma Engineers was asked to review the feasibility of the existing building to accommodate the proposed three storey addition on the north side of the existing building. In general, any immediate and short-term remedial actions should be completed prior to the proposed addition. The medium-term and long-term remedial actions may be completed as part of the proposed addition.*

*The proposed 3-storey addition has a footprint of approximately 500 sqft. The addition is anticipated to be constructed with wood framed walls and conventional concrete foundations on spread footings. Conventional excavation equipment is anticipated to be used for foundation construction. This building is a good candidate for the proposed addition to the north of the existing structure. (Tacoma Engineers Inc. 2024:15).*



### 2.1.1 Conservation Recommendations

ARA's 2022 CP provides short-, medium- and long-term conservation recommendations to best conserve the subject property's building and its heritage attributes. These recommendations are detailed in the CP however a summary of the report's recommendations are outlined below

#### **Short-Term (Stabilization Measures)**

- *Repair/clean gutters and downspouts where necessary, ensure drainage runs an adequate distance from the building;*
- *Monitor areas showing brick masonry deterioration for any changing conditions*

#### **Medium-Term (Construction Phase)**

- *Clean brick and stone masonry;*
- *Restore and repair any deteriorated masonry elements and mortar joints;*
- *Rehabilitate or restore wooden windows and doors (ideally within the first two years); and*
- *Clean and repaint wooden frieze board and gable ends.*

#### **Long-term (Ongoing Maintenance and Monitoring)**

*The long-term conservation of all heritage attributes and rehabilitated and restored elements require routine maintenance to prevent decay even following the building's restoration. This is achieved through maintenance and regular monitoring to extend the life of the attributes. The table below lists the periodic, monthly, and annual tasks that are suggested to ensure that the property is in good order and that the heritage attributes do not deteriorate.*

<b>Timeline</b>	<b>Maintenance Measure</b>
<i>Periodic</i>	<ul style="list-style-type: none"> <li>• <i>Check gutters and downspouts. Clean if necessary.</i></li> <li>• <i>Clean-up seasonal buildup including snow and vegetation and ensure surroundings are tidy and not resting against masonry.</i></li> </ul>
<i>Semi-Annual</i>	<ul style="list-style-type: none"> <li>• <i>Monitor and maintain/clean gutters and downspouts</i></li> <li>• <i>Monitor the roof and gable ends</i></li> <li>• <i>Clean and inspect the wooden window frames from the interior and exterior</i></li> </ul>
<i>Annual</i>	<ul style="list-style-type: none"> <li>• <i>Do an exterior check of brick and stone masonry to ensure cracking, freeze thaw, sinking of flagstone, spalling, and mortar erosion has not increased or occurred in a previously unidentified area</i></li> <li>• <i>Complete an exterior check of painted wood heritage features or elements for cracking, flaking, peeling, mildew, and wood rot</i></li> <li>• <i>Update maintenance and repair records document</i></li> </ul>
<i>Every two to five years</i>	<ul style="list-style-type: none"> <li>• <i>Reapplication of paint to wooden heritage features or elements</i></li> <li>• <i>Identified heritage elements/features should be safely cleaned, when necessary, with the correct protocol in accordance with the material</i></li> <li>• <i>Inspect the roof for loose or missing shingles.</i></li> <li>• <i>Conduct a heritage attribute check to assess for any forms of incurred damage</i></li> </ul>

Tacoma's 2024 Structural Condition Assessment also provided short-, medium- and long-term remedial actions recommended for the building on the subject property.

**Items requiring short-term remedial action:**

1. Hire a professional engineer to review the structural capacity of the fire escape.
2. Check and fasten exterior deck and stair boards to framing.

**Items requiring medium-term remedial action:**

1. A comprehensive restoration strategy should be developed to maintain the structural integrity of the brick walls.
2. Capital planning should be made for 25% of the mortar joints to be replaced within the next 10 years.
3. In addition to repointing, deep pointing will be necessary in areas of high deterioration.
4. Adjust flat roof membrane to drain water.
5. Replace deteriorated fascia and install metal fascia where missing.
6. Install counter flashing where missing.
7. Patch rodent holes to prevent water ingress.
8. Refasten the loose wood soffit.
9. Review all eavestroughs and downspouts and repair as necessary. Ensure water is deposited 6'-0" minimum away from the building on soil graded to drain water away from the building.
10. Replace deteriorated window frames with new window frames. New frames should consist of a durable material fashioned to maintain the current appearance.
11. Investigate the sloping floors in Unit 3 and repair as necessary.
12. Replace the basement concrete stair walkout.

**Items requiring long-term remedial action:**

1. The comprehensive restoration strategy should include removal of the paint using the least invasive method possible or anticipate an accelerated brick maintenance schedule.
2. Repair deteriorated rafter tails with the next roof replacement (Tacoma 2024:15).

Tacoma's report noted that "In general, any immediate and short-term remedial actions should be completed prior to the proposed addition. The medium-term and long-term remedial actions may be completed as part of the proposed addition" (Tacoma 2024:15).

## **2.2 Adjacent Properties Assessment**

As outlined by City staff, a field survey to document the existing condition of the adjacent properties was required and was conducted on September 9, 2024. 111 Lancaster Street East and 54 Ellen Street East were viewed and photographed from within the subject property's boundary and from public realm only. These photos were taken prior to initiation of construction activity and are intended to serve as a record of conditions. ARA was accompanied by the property owner and City of Kitchener Heritage staff. Photographs from the field survey are provided in Appendix A.

### 3.0 PROTECTIVE MEASURES

#### 3.1 Construction Fencing

As recommended in the 2022 HIA, construction fencing is to be erected around the perimeter of the subject property to protect adjacent properties during the construction period of the proposed new addition. The fencing will be 6'0" metal panel construction fencing and will have silt fence installed along the bottom. The fencing will be erected two feet from the property boundary lines with the adjacent properties to ensure that there will be no direct or indirect impacts because of the construction activities or equipment.

#### 3.2 Vibration Monitoring

The 2022 HIA outlined that the proposed development has the potential to create vibrations that could impact the cultural heritage resources on the subject property and adjacent property. As noted in the HIA, the City of Kitchener does not have a defined Zone of Influence (ZOI) or specific policies that outline when vibration monitoring is required. In consultation with City staff, it was determined that the property owner should seek the professional opinion of a qualified engineer on if vibration monitoring is required for the subject property and adjacent properties over the course of construction.

Tacoma Engineers Inc. produced a Vibration Monitoring Report in August 2024 that outlined that vibration monitoring would not be required for the subject property or either adjacent properties. Tacoma's report outlined:

*The proposed 3-storey addition has a footprint of approximately 500 sqft. The addition is anticipated to be constructed with wood framed walls and conventional concrete foundations on spread footings. Conventional excavation equipment is anticipated to be used for foundation construction. The undersigned reviewed the site on June 17, 2024. Based on the proposed construction processes and the site review, the following measures are recommended to be undertaken as requested by the Conditional Approval of Site Plan Application in addition to the pre-condition assessment report (58-60 Ellen Street East and 115 Lancaster Street East Structural Condition Assessment, Tacoma Engineers, dated July 25, 2024) that was completed by the undersigned and issued separately:*

- Vibration monitoring of each of the above noted addresses is not required. The construction work is anticipated to utilize conventional residential construction techniques. As such, the expected vibration is anticipated to be below a threshold that could damage any of the buildings at the addresses noted above.*
- Should the contractor or owner become aware of any structural damage to the building, they will stop work in the vicinity and notify the undersigned, the owner's Heritage Consultant, and the City's Heritage Planner so corrective action can be taken to the satisfaction of the City's Heritage Planner (Tacoma Engineers Inc 2024:1)*

Tacoma's full report is provided in Appendix B.

### **3.3 Work Stoppage**

Should the contractor or property owner become aware of any damage to the subject property or adjacent properties they will stop work in the vicinity immediately and contact the property owner's Heritage Consultant (ARA) and the City's Heritage Planner so corrective action can be taken to the satisfaction of the City's Heritage Planner. As outlined in Tacoma's Vibration Monitoring Report, if any incident involves structural damage to the subject building, the contractor or property owner shall stop work and contact those listed above as well as Tacoma Engineers Inc. (Tacoma 2024:1).

#### **4.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS**

The subject property at 58-60 Ellen Street East & 115 Lancaster Street East and the adjacent properties at 111 Lancaster Street East and 54 Ellen Street East are all located within the CCNHCD and designated under Part V of the *OHA*. A HIA was completed on the subject property in March 2022 which determined that the property has CHVI and met criteria for physical and design value, historical/associative value and contextual value. The CP for the subject property was developed in August 2022 which provided an identification and assessment of the subject property's cultural heritage resources and heritage attributes and provided an identification of short-, medium- and long-term conservation measures.

This CHPP and TPP has identified and outlined the necessary protective measures that should be implemented to minimize potential damage to the subject property and adjacent properties at 111 Lancaster Street East and 54 Ellen Street East. A Structural Condition Report completed by Tacoma Engineers Inc. found that the building on the subject property is capable of supporting an addition as outlined in the proposed development. Further, Tacoma Engineers Inc. completed a vibration monitoring report that outlined that the expected vibrations associated with the proposed development would not exceed the threshold that could cause damage to the adjacent properties. Tacoma's vibration monitoring report concluded in their professional opinion that vibration monitoring for the adjacent properties is not required during the course of construction.

With these findings in mind, it is recommended that the protective measures outlined in this CHPP/TPP be implemented: including construction fencing and orders of contact in the event of a work stoppage. These recommendations should be implemented alongside the recommendations outlined in the 2022 HIA and CP.

## 5.0 BIBLIOGRAPHY AND SOURCES

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City of Kitchener

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Tacoma Engineers Inc.

2024 *58-60 Ellen Street & 115 Lancaster Structural Condition Assessment*.

2024 *Vibration Monitoring Report – 58-60 Ellen Street and 115 Lancaster Street*.

### Appendix A: Adjacent Property Photographs



**Map 2: Image Locations on Current Aerial**  
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri)



**Image 1: View of Subject Property and 54 Ellen Street East Along Ellen Street  
(Photo taken September 9, 2024, Facing Northwest)**



**Image 2: View of Subject Property and 54 Ellen Street East Frontage on Ellen Street  
(Photo taken September 9, 2024, Facing Northeast)**





**Image 3: 54 Ellen Street East Façade**  
(Photo taken on September 9, 2024, Facing Northeast)



**Image 4: Subject Property Boundary with 54 Ellen Street East**  
(Photo taken on September 9, 2024, Facing Northwest)



**Image 5: 54 Ellen Street East – East Elevation from Subject Property  
(Photo taken on September 9, 2024, Facing Northwest)**



**Image 6: 54 Ellen Street East – East Elevation from Subject Property  
(Photo taken September 9, 2024, Facing Northwest)**



**Image 7: View of 54 Ellen Street Through Subject Property from Lancaster Street East  
(Photo taken September 9, 2024, Facing West)**



**Image 8: Subject Property and 111 Lancaster Street East on Lancaster Street East  
(Photo taken September 9, 2024, Facing North)**



**Image 9: Subject Property and 111 Lancaster Street East Frontage on Lancaster Street East**  
(Photo taken on September 9, 2024, Facing West)



**Image 10: 54 Ellen Street East Façade**  
(Photo taken September 9, 2024, Facing Northwest)



**Image 11: Detail of 111 Lancaster Street East  
(Photo taken September 9, 2024, Facing Northwest)**



**Image 12: Detail of 111 Lancaster Street East  
(Photo taken on September 9, 2024, Facing Northwest)**



**Image 13: Detail of 111 Lancaster Street East  
(Photo taken on September 9, 2024, Facing Northwest)**



**Image 14: Subject Property Boundary with 111 Lancaster Street East  
(Photo taken September 9, 2024, Facing Northwest)**



**Image 15: Subject Property Boundary with 111 Lancaster Street East  
(Photo taken September 9, 2024, Facing Northeast)**



**Image 16: Detail of 111 Lancaster Street East from Subject Property  
(Photo taken September 9, 2024, Facing North)**



**Image 17: Detail of 111 Lancaster Street East from Subject Property  
(Photo taken September 9, 2024, Facing North)**



**Image 18: Detail of 111 Lancaster Street East from Subject Property  
(Photo taken September 9, 2024, Facing North)**



**Appendix B: Tacoma Engineers Inc. Reports  
Structural Condition Assessment**

**58-60 Ellen & 115 Lancaster  
Structural Condition Assessment Rev1**

58-60 Ellen St E & 115 Lancaster St. E  
Kitchener Ontario



Prepared by:



155 Frobisher Drive  
Waterloo, ON  
TW-01551-24

August 30, 2024

Tacoma Engineers Inc.  
TW-01551-24  
August 30, 2024

Structural Condition Assessment Rev1  
58-60 Ellen & 115 Lancaster  
Kitchener Ontario

## Executive Summary

Tacoma Engineers has been retained by Mark Benjamins of Benjamins Real Estate Holdings Inc. to carry out a structural condition assessment of their 2 ½-storey masonry building located at the shared address of 58-60 Ellen Street East and 115 Lancaster Street East in Kitchener.

The Benjamins Real Estate Holdings Inc. owns the building in question, and Tacoma Engineers is being retained as a Consultant directly by the Owner.

This assessment is being undertaken by the Owner and is intended to form part of the heritage permit requirements for a proposed addition to the building. This report is not being prepared as a response to an Order, recommendations, or request by any regulatory body.

The residence at this address is located at the southeast corner of the Civic Centre Neighbourhood Heritage Conservation District under Part V of the Ontario Heritage Act. Most buildings in this neighbourhood were constructed between 1880 and 1917 according to the Civic Centre Neighbourhood Heritage Conservation District Plan. The owner reported this building was constructed in the 1890s. The building was constructed as a 2 ½-storey masonry building, complete with assumed wood-framed floors and partition walls.

Note that most of the spaces in the building have applied finishes that preclude a direct visual assessment of the structural systems. Limited areas are unfinished, and a review of the primary structure was possible in these areas.

A site visit was carried out by Michael Zwart, P.Eng., on June 17, 2024, accompanied by Mark Benjamins of Benjamins Real Estate Holdings Inc. A visual review of all accessible spaces was completed on this date, and photographs were taken of all noted deficiencies.

In general, the building exterior is in fair good condition. Typical deterioration for a building of this age was observed. The paint on the mass brick exterior walls likely masks minor deficiencies and maintenance items. Removal of the paint will allow the brick walls to breathe as they were intended to, however, the process of removing the paint must be completed with care to avoid additional damage to the masonry. Approximately half of the interior rental units were recently upgraded. These units were in good condition. The rest of the unit finishes were in fair to poor condition as can be expected with delayed building upgrades.

This building is a good candidate for the proposed addition to the north of the existing structure. Most remedial action recommended may be completed in conjunction with the proposed construction work.

The Cultural Heritage Protection Plan and the Temporary Protection Plan require vibration monitoring during construction to ensure the heritage asset is protected during construction activities. The undersigned will prepare a vibration monitoring plan prior to construction

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## 1. Introduction

Tacoma Engineers has been retained by Mark Benjamins of Benjamins Real Estate Holdings Inc. to carry out a structural condition assessment of their 2 ½-storey masonry building located at the shared address of 58-60 Ellen Street East and 115 Lancaster Street East in Kitchener.

Following initial discussions in early 2024, Tacoma Engineers was retained in April 2024. The undersigned attended the site on June 17, 2024, accompanied by Mark Benjamins of Benjamins Real Estate Holdings Inc.

This report includes a summary of the following items for the building:

- major structural systems;
- existing structural conditions and areas of potential concern;
- conceptual repair options for any areas that may require remedial work; and
- potential risks to the building related to future development.

## 2. Background

The Benjamins Real Estate Holdings Inc. owns the building in question, and Tacoma Engineers is being retained as a Consultant directly by the Owner.

This assessment is being undertaken by the Owner and is intended to form part of the heritage permit requirements for a proposed addition to the building. This report is not being prepared as a response to an Order, recommendations, or request by any regulatory body.

This report is based on a visual inspection only and does not include any destructive testing. Where no concerns were noted, the structure is assumed to be performing adequately. The structure is assumed to have been constructed in accordance with best building practices common at the time of construction. No further structural analysis or building code analysis has been carried out as part of this report unless specifically noted.

No previous work has been completed by Tacoma Engineers on this building for this or any other owner. No sub-consultants have been retained to participate in this assessment.

## 3. Building History

The residence at this address is located at the southeast corner of the Civic Centre Neighbourhood Heritage Conservation District under Part V of the Ontario Heritage Act. Most buildings in this neighbourhood were constructed between 1880 and 1917 according to the Civic Centre Neighbourhood Heritage Conservation District Plan. The owner reported this building was constructed in the 1890s. The building was constructed as a 2 ½-storey masonry building, complete with assumed wood-framed floors and partition walls.

## 4. Scope and Methods

The following documents were provided to the undersigned prior to the preparation of this report:

- Proposed Site Plan, John MacDonald Architect, Feb 26, 2024
- Multi-Residential Renovation Plans (6 pages), John MacDonald Architect, April 26, 2024
- Conditional Approval of Site Plan Application, City of Kitchener, May 8, 2024
- Cultural Heritage Protection Plan Terms of Reference, City of Kitchener
- Temporary Protection Plan Terms of Reference, City of Kitchener

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The assessment of the building is based on a visual assessment from grade. It was determined that a visual assessment would provide an adequate level of detail for the purposes of this report.

Note that most of the spaces in the building have applied finishes that preclude a direct visual assessment of the structural systems. Limited areas are unfinished, and a review of the primary structure was possible in these areas.

A site visit was carried out by Michael Zwart, P.Eng., on June 17, 2024, accompanied by Mark Benjamins of Benjamins Real Estate Holdings Inc. A visual review of all accessible spaces was completed on this date, and photographs were taken of all noted deficiencies.

## 5. Definitions

The following is a summary of definitions of terms used in this report describing the condition of the structure as well as recommended remedial actions. Detailed material condition definitions are included in Appendix A of this report.

- **Condition States<sup>1</sup>:**
  1. Excellent – Element(s) in “new” condition. No visible deterioration type defects present, and remedial action is not required.
  2. Good – Element(s) where the first signs of minor defects are visible. These types of defects would not normally trigger remedial action since the overall performance is not affected.
  3. Fair – Element(s) where medium defects are visible. These types of defects may trigger a “preventative maintenance” type of remedial action where it is economical to do so.
  4. Poor – Element(s) where severe or very severe defects are visible. These types of defects would normally trigger rehabilitation or replacement if the extent and location affect the overall performance of that element.
- **Immediate remedial action<sup>1</sup>:** these are items that present an immediate structural and/or safety hazards (falling objects, tripping hazards, full or partial collapse, etc.). The remedial recommendations will need to be implemented immediately and may include restricting access, temporary shoring/supports or removing the hazard.
- **Priority remedial action<sup>1</sup>:** these are items that do not present an immediate hazard but still require action in an expedited manner. The postponement of these items will likely result in the further degradation of the structural systems and finishes. This may include interim repairs, further investigations, etc. and are broken down into timelines as follows:
  1. **Short-term:** it is recommended that items listed as short-term remedial action are acted on within the next 6 months (**before the onset of the next winter season**).
  2. **Medium-term:** it is recommended that items listed as medium-term remedial action are acted on within the next 24 months.
  3. **Long-term:** it is recommended that items listed as long-term remedial action are acted on within the next 5-10 years. Many of these items include recommendations of further review/investigation.

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<sup>1</sup> Adapted from “Structural Condition Assessment”, 2005, American Society of Civil Engineers/Structural Engineering Institute

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- **Routine maintenance**<sup>1</sup>: these are items that can be performed as part of a regularly scheduled maintenance program.

In addition to the definitions listed above, it should be noted that the building in question is located in a Heritage Conservation District as defined under Part V of the Ontario Heritage Act. The Standards and Guidelines for the Conservation of Historic Places in Canada provide direction when a structural system is identified as a character-defining element of an historic place. They also provide direction on maintaining, repairing, and replacing structural components or systems<sup>2</sup>. Refer to the General Guidelines for Preservation, Rehabilitation, and Restoration to further inform the development of more detailed remedial actions.

## 6. General Structural Conditions

The building was constructed as a 2 ½-storey masonry building, complete with assumed wood-framed floors and partition walls. Exterior walls are constructed with mass brick masonry, finishes precluded the review of the interior load bearing wall construction, and the roof and floors were constructed with wood framing.

Due to the layout of the building, and the extent of finishes throughout, this report has been arranged by Unit interiors, basement, and exterior, with specific attention called to rooms or areas where deficiencies were noted.

### 6.1. Exterior

#### Construction

The exterior of the building is constructed with mass masonry clay brick. With the rear additions having a combination of EIFS and wood siding, and the main two storey portions having brick exteriors. The brick appears to be double wythe brick, as may be expected for a building of this age.

The building is founded on rubble stone foundations of unknown depth. Windows are characterized with decorative shutters, which are mostly intact, but in need of maintenance.

#### Historic Materials Discussion

Mass masonry walls, such as the ones present on this building of brick units, are typically mortared together with a natural lime-based mortar. The mortar acts to tie the bricks together. Tie bricks are installed at regular intervals to tie the wythes together and ensure that the full thickness of the wall acts as what is known as a composite structural element. This allows a properly constructed brick wall to provide a great deal of structural support. Mass masonry brick walls are typically two to four wythes thick depending on the number of stories in the building.

Natural lime-based mortars are susceptible to damage from moisture. They deteriorate over time and require regular maintenance to ensure that the wall is stable. Typically, a lime-based mortar joint will last between 50 and 100 years depending on the exposure and original construction quality.

In order for the wall mortar and bricks to become damaged, moisture must enter the wall and subsequently dry out. Typically, masonry walls are protected by roof eaves, soffits, and cap stones. In the case of this

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<sup>2</sup> "Standards and Guidelines for the Conservation of Historic Places in Canada", 2<sup>nd</sup> Edition, 2010, [www.historicplaces.ca](http://www.historicplaces.ca)

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building, there were several locations where the bricks were deteriorated. These specific areas will be addressed below in a separate section.

Historic mass masonry walls are typically mortared together with a natural lime-based mortar. This mortar was traditionally manufactured with natural lime and sand. Traditional mortar uses a natural chemical process, known as carbonation to cure (harden). This process relies on natural carbon dioxide in the air to chemically react with the mortar. This process occurs continuously and is still active on a building as old as this residence.

Since the mid-20th century, modern cement mortars have become more common in the masonry industry. Known as portland cement, these cements are much stronger than the natural lime-based cements used previously. While stronger, the portland cements behave much differently, and must be used in very specific ways when interacting with natural lime mortars. Unlike natural lime mortar, portland based mortars do not allow the free travel of moisture through the mass masonry assembly. If moisture is trapped within the masonry during the freeze-thaw cycles present in the spring and fall months, damage can be significant. Masonry walls must be allowed to dry out before the onset of colder weather to prevent accelerated damage from freeze-thaw.

As has been explained previously, lime-based mortars such as that present on this building are sensitive to moisture in the walls. The majority of paint is vapour impermeable, meaning moisture is unable to freely pass through the paint. If moisture is trapped within the masonry during the freeze-thaw cycles present in the spring and fall months, damage can be significant to the masonry units. Masonry walls such as the ones on this building must be allowed to dry out before the onset of colder weather to prevent accelerated damage from freeze-thaw. At patches of initial paint peeling, moisture in the wall migrates to this area to dissipate into the air. The higher concentration of moisture in the wall leads to accelerated levels of deterioration such as brick spalling and mortar degradation.

#### Conditions

The exterior walls consisted of painted multi-wythe brick walls. The paint (Photograph 1 & Photograph 2) precluded a direct visual assessment of the brick units and mortar; however, larger deficiencies typically propagate through paint and are apparent for visual review. For long term durability reasons, paint should be removed from the exterior of the brick walls.

The fire escape visible in Photograph 1 was not analyzed for structural conformity to modern building codes. It is anticipated that reinforcements are required for the fire escape to meet 4.8 kPa (100 psf) live load that is required by the Ontario Building Code for exits. Brace anchors to the brick wall at the spalled brick location should be addressed by replacing the defective bricks.

The fire escape visible in Photograph 1 was not analyzed for structural conformity to modern building codes. It is anticipated that reinforcements are required for the fire escape to meet 4.8 kPa (100 psf) live load that is required by the Ontario Building Code for exits. Brace anchors to the brick wall at the spalled brick location should be addressed by replacing the defective bricks.

The balcony below the fire escape had a flat roof membrane that was not draining water adequately. This membrane should be adjusted to provide positive water drainage.

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Photograph 1: Ellen Street Elevation

Brick step cracking and previous portland repairs were noted at various locations around the building including above the arched window in Photograph 3. The wood fascia boards around the building were largely exposed to the elements and had deteriorated in some locations. Metal fascia was installed in some locations, the missing fascia was found throughout. Counter flashing was also noted as missing in a few locations (Photograph 3 & Photograph 9). A rodent hole into the eaves was noted and covered with metal wire (Photograph 3). This hole should be patched to prevent water ingress into the building.



Photograph 2: Corner Elevation



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Photograph 3: Missing Fascia and Flashing and Access to Attic

The painted wood soffit was noted to be loose at one location (Photograph 4). This soffit should be repaired prior to becoming detached from the building.



Photograph 4: Loose Soffit

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Photograph 5: Lancaster Street Elevation

The undersigned was informed that the wood additions (Photograph 5) on both the north and south sides of the Lancaster Street elevation will be removed in the proposed addition. As such, these areas were not reviewed as part of this assessment.

The wood deck and stairs in Photograph 5 and tongue and groove boards that were loose. These boards should be checked and fastened to the framing.

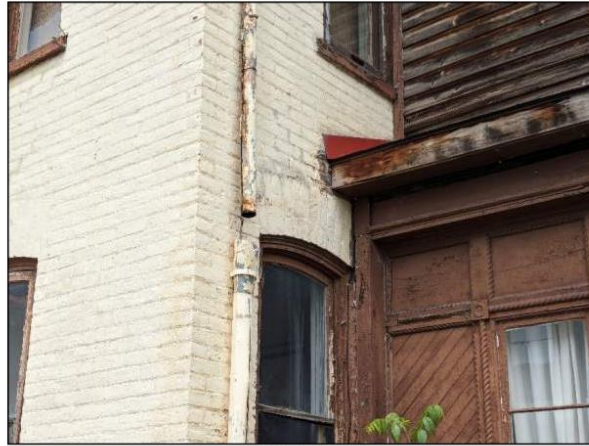
On the south side of the Lancaster Street elevation, eavestrough was missing near the valley in the high roof (Photograph 6). Other eavestroughs were noted to be missing such as near the front door (Photograph 7). Several downspouts were noted to be defective around the building (Photograph 7). Downspouts should be leak free and deposit water at least 6'-0" away from the building with soil graded such that water flows away from the building.



Photograph 6: Missing Eavestrough and Shingle Issue

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Photograph 7: Defective Downspout

Brick spalling was noted at several locations around the building (Photograph 8). The spalling was typically located where heavy wetting had occurred. The northeast corner of the building showed signs of paint peeling. This was likely caused by a leaking downspout. It is unknown if there is brick or mortar deterioration at this area due to the remaining paint obstructing direct visual observation. A brick was missing above the flat window arch on the north side of the building (Photograph 8).



Photograph 8: Deteriorated and Missing Bricks

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Photograph 9: Missing Counter Flashing

The rubblestone foundation had mortar loss near grade as can be seen in Photograph 10. This picture also shows a deteriorated wood windowsill at grade. This was also noted with wood door frames at the second level. Wood building materials are typical not recommended within 6" of grade to decrease deterioration rates.



Photograph 10: Deteriorated Wood Window Frame and Rubblestone Foundation

Recommended Actions

The following **short-term** remedial actions are recommended:

- Hire a professional engineer to review the structural capacity of the fire escape.
- Check and fasten exterior deck and stair boards to framing.

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The following **medium-term** remedial actions are recommended:

- A comprehensive restoration strategy should be developed to maintain the structural integrity of the brick walls.
- Capital planning should be made for 25% of the mortar joints to be replaced within the next 10 years.
- In addition to repointing, deep pointing will be necessary in areas of high deterioration.
- Adjust flat roof membrane to drain water.
- Replace deteriorated fascia and install metal fascia where missing.
- Install counter flashing where missing.
- Patch rodent holes to prevent water ingress.
- Refasten the loose wood soffit.
- Review all eavestroughs and downspouts and repair as necessary. Ensure water is deposited 6'-0" minimum away from the building on soil graded to drain water away from the building.
- Replace deteriorated window frames with new window frames. New frames should consist of a durable material fashioned to maintain the current appearance.

The following **long-term** remedial actions are recommended:

- The comprehensive restoration strategy should include removal of the paint using the least invasive method possible or anticipate an accelerated brick maintenance schedule.

## 6.2. Unit Interiors

### Construction

Due to applied finishes throughout the rental units, the building structure could not be determined.



Photograph 11: Unit 4 Interior

### Conditions

The building contained six rental units located in the 2 ½ storeys above grade with an unfinished basement below grade. The basement contained largely unfinished storage space. Unit 6 was not accessible at the time of the assessment. Several of the units were refinished in the past approximately 10 years. An example of the condition of these units can be seen in Photograph 11. These units were in generally in good condition. The units that were not refinished showed signs of wall and ceiling deterioration and cracking as would be expected in a building of this age. These conditions can be seen in Photograph 13 and

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Photograph 15. This deterioration is likely related to typical building movement and not signs of underlying structural issues. These unit finishes were in poor condition.



Photograph 12: Deterioration of Rafters

Access to the eaves was possible in one unit. Signs of water damage and rafter deterioration was noted near a valley. These rafter tails were in poor condition. The undersigned was informed that the shingles were replaced in approximately 2016. All signs of leaks appeared to not to have active water ingress. These rafter tails should be reinforced with the next roof replacement.



Photograph 13: Unit 5 Plaster Crack

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Photograph 14: Unit 3 Sloping Floors

Sloping floors were noted in Unit 3 on the second floor. Due to applied finishes, the cause of the sloping floors could not be determined. As part of the proposed renovations, the area should be exposed to determine the root cause of the sloping floors. Reinforcement of the floor system should be made as required.



Photograph 15: Unit 1 Deteriorated Finishes

Recommended Actions

The following **medium-term** remedial actions are recommended:

- Investigate the sloping floors in Unit 3 and repair as necessary.

The following **long-term** remedial actions are recommended:

- Repair deteriorated rafter tails with the next roof replacement.

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### **6.3. Basement**

#### Construction

The basement floor was a poured concrete floor with rubblestone foundation walls. Interior load bearing walls were mass masonry and concrete block. The main floor was constructed with wood framed floors and beams.

#### Conditions

The rubblestone foundation walls and interior mass masonry was found to be in fair condition (Photograph 16). The floor structure was also in fair condition with localized areas previously reinforcement (Photograph 17).



Photograph 16: Typical Basement Conditions



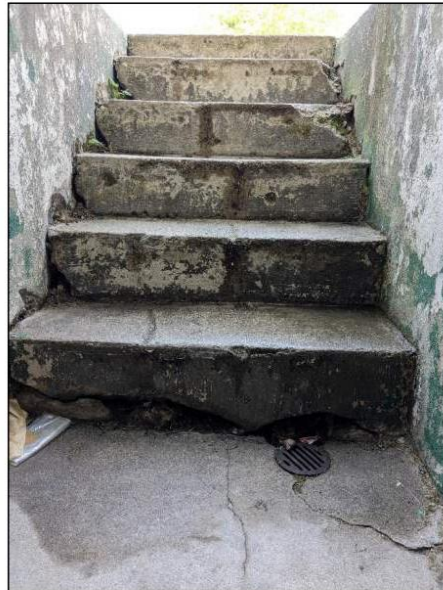
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Photograph 17: Localized Reinforcement

The basement concrete walkout stairs were in poor condition with spalling occurring on most steps (Photograph 18). These stairs should be replaced in the upcoming renovations.



Photograph 18: Basement Walkout Stair Deterioration

Recommended Actions

The following **medium-term** remedial actions are recommended:

- Replace the basement concrete stair walkout.

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## 7. Addition Construction Feasibility

Tacoma Engineers was asked to review the feasibility of the existing building to accommodate the proposed three storey addition on the north side of the existing building. In general, any immediate and short-term remedial actions should be completed prior to the proposed addition. The medium-term and long-term remedial actions may be completed as part of the proposed addition.

The proposed 3-storey addition has a footprint of approximately 500 sqft. The addition is anticipated to be constructed with wood framed walls and conventional concrete foundations on spread footings. Conventional excavation equipment is anticipated to be used for foundation construction. This building is a good candidate for the proposed addition to the north of the existing structure.

The Cultural Heritage Protection Plan and the Temporary Protection Plan require a vibration monitoring plan during construction to ensure heritage assets are protected during construction activities. The vibration monitoring plan has been prepared and issued separately by the undersigned.

## 8. Summary of Recommendations

The following provides a summary of the recommendations for the existing structure.

### Items requiring short-term remedial action:

1. Hire a professional engineer to review the structural capacity of the fire escape.
2. Check and fasten exterior deck and stair boards to framing.

### Items requiring medium-term remedial action:

1. A comprehensive restoration strategy should be developed to maintain the structural integrity of the brick walls.
2. Capital planning should be made for 25% of the mortar joints to be replaced within the next 10 years.
3. In addition to repointing, deep pointing will be necessary in areas of high deterioration.
4. Adjust flat roof membrane to drain water.
5. Replace deteriorated fascia and install metal fascia where missing.
6. Install counter flashing where missing.
7. Patch rodent holes to prevent water ingress.
8. Refasten the loose wood soffit.
9. Review all eavestroughs and downspouts and repair as necessary. Ensure water is deposited 6'-0" minimum away from the building on soil graded to drain water away from the building.
10. Replace deteriorated window frames with new window frames. New frames should consist of a durable material fashioned to maintain the current appearance.
11. Investigate the sloping floors in Unit 3 and repair as necessary.
12. Replace the basement concrete stair walkout.

### Items requiring long-term remedial action:

1. The comprehensive restoration strategy should include removal of the paint using the least invasive method possible or anticipate an accelerated brick maintenance schedule.
2. Repair deteriorated rafter tails with the next roof replacement.

## 9. Conclusions

In general, the building exterior is in fair good condition. Typical deterioration for a building of this age was observed. The paint on the mass brick exterior walls likely masks minor deficiencies and maintenance

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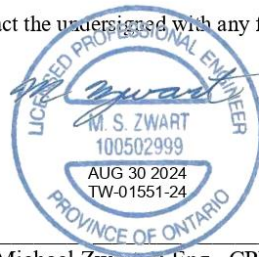
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items. Removal of the paint will allow the brick walls to breathe as they were intended to, however, the process of removing the paint must be completed with care to avoid additional damage to the masonry. Approximately half of the interior rental units were recently upgraded. These units were in good condition. The rest of the unit finishes were in fair to poor condition as can be expected with delayed building upgrades.

This building is a good candidate for the proposed addition to the north of the existing structure. Most remedial action recommended may be completed in conjunction with the proposed construction work.

The Cultural Heritage Protection Plan and the Temporary Protection Plan require vibration monitoring during construction to ensure the heritage asset is protected during construction activities. The undersigned will prepare a vibration monitoring plan prior to construction

Please contact the undersigned with any further questions or comments.



**Per**

Michael Zwart, P.Eng., CPHD, CAHP Intern  
Structural Engineer, Associate  
Tacoma Engineers

## Vibration Monitoring Report



### STRUCTURAL REPORT REV1 *Vibration Monitoring Report*

<b>Date:</b>	August 30, 2024	<b>No. of Pages:</b>	1 + Encl.
<b>Project:</b>	58-60 Ellen & 115 Lancaster Assessment	<b>Project No.:</b>	TW-01551-24
<b>Address:</b>	58-60 Ellen St E & 115 Lancaster St. E Kitchener Ontario	<b>Permit No.:</b>	N/A
<b>Client:</b>	Benjamins Real Estate Holdings Inc.		
<b>Distribution:</b>	Mark Benjamins Benjamins Real Estate Holdings Inc. <a href="mailto:mark@benjaminsrealty.com">mark@benjaminsrealty.com</a>		

#### Background

Tacoma Engineers has been retained by Benjamins Real Estate Holdings Inc. to provide structural engineering for vibration monitoring at 58-60 Ellen St E & 115 Lancaster St. E Kitchener Ontario. An addition to the above noted address is proposed and the Conditional Approval of Site Plan Application (SP22/154/L/BB) requires a vibration monitoring plan as per the Cultural Heritage Protection Plan and the Temporary Protection Plan of the following addresses:

- 111 Lancaster Street East
- 54 Ellen Street East
- 58-60 Ellen Street East & 115 Lancaster Street East.

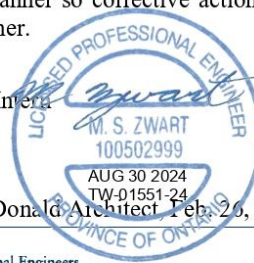
#### Comments

The proposed 3-storey addition has a footprint of approximately 500 sqft. The addition is anticipated to be constructed with wood framed walls and conventional concrete foundations on spread footings. Conventional excavation equipment is anticipated to be used for foundation construction. The undersigned reviewed the site on June 17, 2024. Based on the proposed construction processes and the site review, the following measures are recommended to be undertaken as requested by the Conditional Approval of Site Plan Application in addition to the pre-condition assessment report (58-60 Ellen Street East and 115 Lancaster Street East Structural Condition Assessment, Tacoma Engineers, dated July 25, 2024) that was completed by the undersigned and issued separately:

- Vibration monitoring of each of the above noted addresses is not required. The construction work is anticipated to utilize conventional residential construction techniques. As such, the expected vibration is anticipated to be below a threshold that could damage any of the buildings at the addresses noted above.
- Should the contractor or owner become aware of any structural damage to the building, they will stop work in the vicinity and notify the undersigned, the owner's Heritage Consultant, and the City's Heritage Planner so corrective action can be taken to the satisfaction of the City's Heritage Planner.

#### Per

Michael Zwart, P.Eng., CPHD, CAHP Int'l  
Structural Engineer, Associate  
Tacoma Engineers

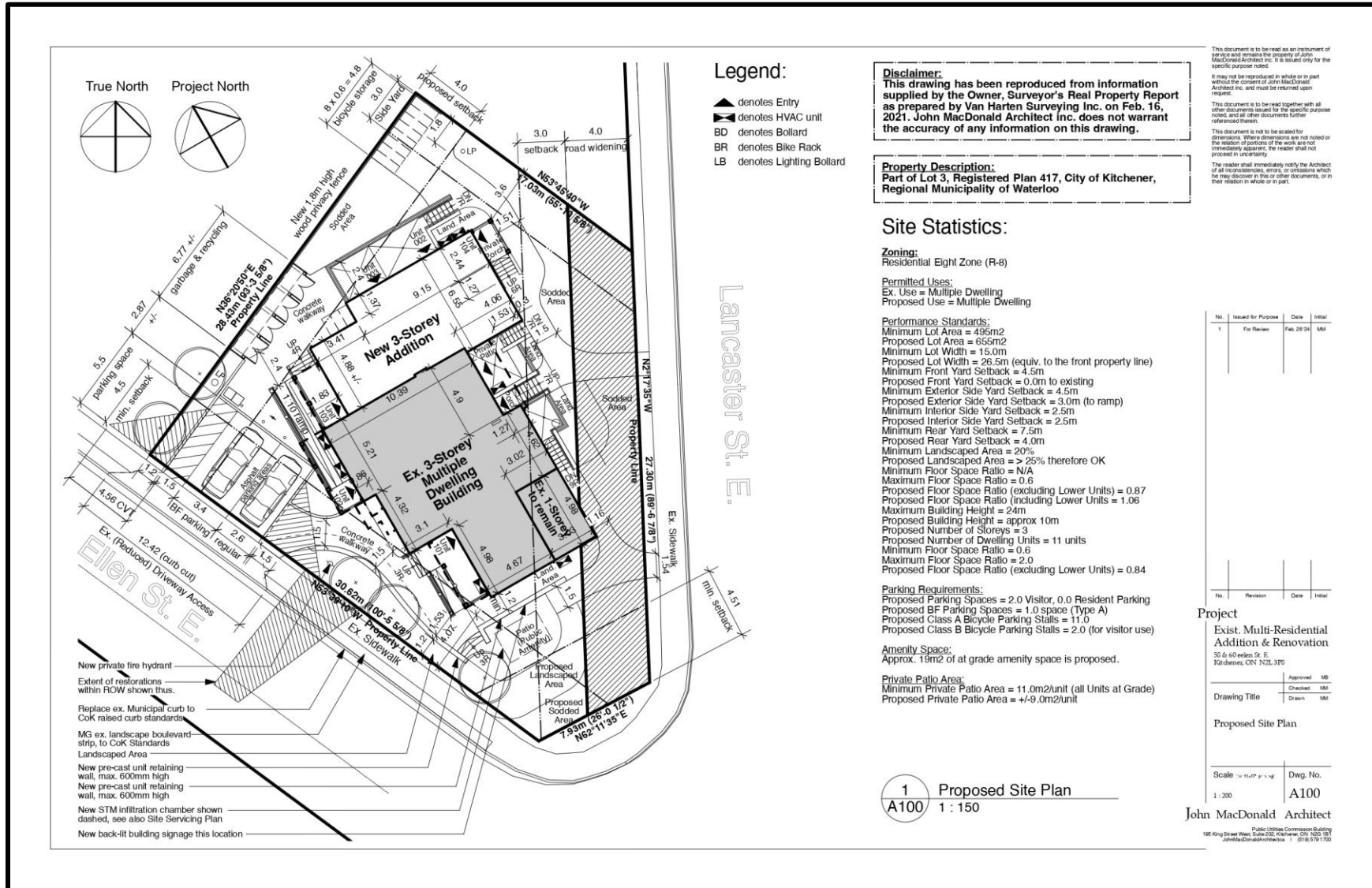


**Encl.** Proposed Site Plan (1 page), John MacDonald Architect, Feb. 25, 2024

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## Appendix C: Key Team Member Biographies and Qualifications

### **Kayla Jonas Galvin, MA, RPP, MCIP, CAHP, Director – Heritage Operations**

Kayla Jonas Galvin, Archaeological Research Associates Ltd.'s Director - Heritage Operations, has extensive experience evaluating cultural heritage resources and landscapes for private and public-sector clients to fulfill the requirements of provincial and municipal legislation such as the Environmental Assessment Act, the Standards & Guidelines for the Conservation of Provincial Heritage Properties and municipal Official Plans. She served as Team Lead on the Ministry of Tourism, Culture and Sport Historic Places Initiative, which drafted over 850 Statements of Significance and for Heritage Districts Work!, a study of 64 heritage conservation districts in Ontario. Kayla was an editor of Arch, Truss and Beam: The Grand River Watershed Heritage Bridge Inventory and has worked on Municipal Heritage Registers in several municipalities. Kayla has drafted over 150 designation reports and by-laws for the City of Kingston, the City of Burlington, the Town of Newmarket, Municipality of Chatham-Kent, City of Brampton and the Township of Whitchurch-Stouffville. Kayla is the Heritage Team Lead for ARA's roster assignments for Infrastructure Ontario and oversees evaluation of properties according to Standards & Guidelines for the Conservation of Provincial Heritage Properties. Kayla is a Registered Professional Planner (RPP), a Member of the Canadian Institute of Planners (MCIP), is a professional member of the Canadian Association of Heritage Professionals (CAHP) and sits on the board of the Ontario Association of Heritage Professionals.

### **Amy Barnes, MA, CAHP – Project Manager**

Amy Barnes, a Project Manager with the Heritage Team, has over ten years of experience evaluating cultural heritage resources and leading community engagement. Amy has extensive experience working with provincial and municipal legislation and guidelines, including the Ontario Heritage Act, Official Plans, the Standards and Guidelines for the Conservation of Historic Places, and the Ontario Heritage Toolkit. Ms. Barnes has completed over fifty heritage related projects including 150+ cultural assessments and has been qualified as an expert witness at the Ontario Superior Court of Justice. Amy has worked in the public and private sector where her duties included project management, public consultation, facilitator, research, database and records management, and report author. Amy has worked with the Town of Oakville, City of Cambridge, City of Kitchener, Niagara-on-the-Lake, City of London, and the City of Kingston on projects which range in size, scale and complexity. Amy Barnes holds an M.A. in Heritage Conservation from the School of Canadian Studies at Carleton University in Ottawa, Ontario. Amy has successfully completed the International Association of Public Participation (IAP2) Foundations in Public Participation, the IAP2 Planning and Techniques for Effective Public Participation, and Indigenous Awareness Training through Indigenous Awareness Canada. Amy is a professional member of the Canadian Association of Heritage Professionals (CAHP) and formerly served as the Vice-Chair of the Cambridge Municipal Heritage Advisory Committee.

### **Aly Bousfield-Bastedo, BA. Dip. Heritage Conservation – Project Manager/Conservator**

Aly Bousfield-Bastedo, a Heritage Project Manager and Conservator has five years of experience in evaluating cultural heritage resources, conducting historical research and providing conservation recommendations on a variety of projects. She holds an Honours BA in Sociology from the University of Guelph as well as a post-graduate certificate in Urban Design from Simon Fraser University. Building on these experiences, Aly received a graduate Diploma in Heritage Conservation from the Willowbank School of Restoration Arts. Aly has gained substantial experience in provincial and municipal legislation and guidelines, including the Ontario Heritage Act, Official Plans, the Standards and Guidelines for the Conservation of Historic Places, and the Ontario Heritage Toolkit. Aly has gained considerable experience in evaluating historic materials, assessing potential impacts and recommending mitigation strategies for a variety of resources

such as farmsteads, bridges, houses, churches, cultural heritage landscapes and heritage districts in urban and rural areas.