



# FINAL Baseline Property Condition Assessment

151 Metcalfe Street, Ottawa, Ontario

Prepared for:

# Morguard Investments Limited

350 Sparks Street, Suite 402 Ottawa, ON K1R 7S8

Attention:

Ms. Douaa Hassan Assistant Asset and Valuations Manager

January 26, 2016

Pinchin File: 111978





January 26, 2016 Pinchin File: 111978 FINAL

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#### **EXECUTIVE SUMMARY**

Pinchin Ltd. (Pinchin) was retained by Ms. Douaa Hassan of Morguard Investments Limited (Client) to conduct a Baseline Property Condition Assessment (BPCA), subject to the limitations outlined in Section 6.0 of this report. As discussed with the Client this service did not include any specialist review of items such as mechanical/electrical systems, structural components. A specialist review of the elevator systems was performed by KJA with findings and recommendations presented in Appendix II. The municipal address for the property is 151 Metcalfe Street, Ottawa, Ontario (the Site). Mr. Nicolas Rheault of Pinchin Ltd. (Pinchin), a member of the Pinchin Group of Companies, conducted a visual assessment of the Site on January 19<sup>th</sup> and 20<sup>th</sup>, 2016 at which time Pinchin interviewed and was accompanied by Mr. Scott Brooker of Cushman Wakefield, Sales Representative for the Site (hereafter referred to as the Site Representative).

Pinchin was advised by the Client that the purpose of the BPCA was to assess visible deficiencies in relation to potential acquisition and financing of the Site.

The Site is a rectangular-shaped property approximately 0.46 acre in area. The Site is occupied by a four storey, 49 unit, residential apartment building, complete with basement level units (the Site Building).

The Site Building is reported to have been constructed in approximately 1938. The Site Building has a footprint area of approximately 11,200 Square Feet (ft<sup>2</sup>) and total building area of 49,600 ft<sup>2</sup>. The Site does not possess any surface parking areas. Parking for the Site is provided by a single level Underground Parking Garage (UPG) with parking provisions for approximately 22 vehicles.

The Site Building is constructed with a basement level, cast-in-place concrete slab-on-grade complete with cast-in-place concrete and brick masonry foundation walls. The superstructure of the Site Building is comprised of load-bearing masonry walls and steel structural elements (i.e., beams, columns and open web steel joists) which support a main level cast-in-place concrete floor slab while the remainder of the floor slabs were noted to consist of composite (i.e., concrete laid within a steel pan) slabs. The roof deck was not visible for review at the time of the Site visit, however based on information in the "Cleland Jardine Engineering Ltd." report, the roof is comprised of built-up wood framing and sloped wood decking supported on a main composite roof deck. It is presumed that the structural steel framing (i.e., beams and columns) in the UPG are likely additional support for the center section of the building. The back-up wall systems of the Site Building reportedly consist of cinder block masonry and brick masonry walls.

Based on the engineering report received the exterior wall assemblies of the Site Building consist of a 4 inch thick brick veneer masonry, a 1 inch air space, 8 inch thick cinder block masonry back up walls. The brick veneer masonry is reportedly tied into the cinder block back-up wall using a Flemish bond system at every second course of cinder block.





The Site Building appears to be in fair condition, commensurate with its age and in comparable standing to other similar residential properties in the area.

Based on our visual assessment the Site Building appears to have been constructed in general accordance with standard building practices in place at the time of construction.

The assessment did not reveal any visual evidence of soil erosion or differential settlement. Pinchin did note areas of severe corrosion at the base of the support columns within the UPG serving the structural support system for the central portion of the building. Pinchin recommends and has included allowances to perform a structural investigation of the corroded steel elements within the basement and UPG of the building. It should be noted that estimated costs of repairs can only be determined by the findings and recommendations of the structural investigation.

An immediate cost of \$3,500.00 has been identified for the repair to the loose brick masonry units on the south and west elevations which have the potential to fall to grade and cause personal injury or vehicle damage. Repair requirements (under replacement reserves) over the term of the analysis (i.e., 10 years) of \$935,900.00 have been identified. As noted during the Site visit, deficiencies relating to the roof systems, wall systems, structural elements, underground parking garage, elevator systems, interior finishes, Site features and mechanical/electrical systems were noted. Of particular note, recommendations, repairs and replacements for the following items are included throughout the term of the analysis:

- Replacement of the main and stairwell access roof systems as well as the two roof systems atop the UPG extensions on the north and south elevations of the building;
- Complete a façade investigation to determine if the problems which occurred on the west elevation in 2007 were isolated or widespread and to investigate the area of slight bulging in the masonry on the north elevation;
- Immediate repairs of the loose brick masonry units on the south and west elevations;
- Repairs to the brick masonry walls as noted in the report;
- Consideration for the replacement of the older wood framed windows serving the building;
- Replacement of the broken or missing window panes noted during the assessment;
- Replacement of the deteriorated perimeter window sealants and refinishing of the corroded steel window lintels;
- A structural investigation of the corroded steel elements within the UPG and basement of the building to determine the appropriate method of repair and anticipated costs involved;





- Removal of the surface corrosion from the structural steel elements in the basement of the building and within the UPG;
- Repairs to the cast-in-place concrete and masonry foundation walls within the UPG;
- Repairs to the areas of active leaking noted within the UPG and replacement of the deteriorated asphalt pavements;
- Major modernization of the elevator system including the installation of a rooftop walkway and allowances for code changes and vandalism;
- Repairs to the moisture damaged interior finishes noted at the time of the assessment and repairs to the cracking noted in the terrazzo flooring;
- Re-inspection of the snow and ice covered Site features once the weather permits to verify if there are any deficiencies which may have been concealed at the time of the Site visit;
- Replacement of the two heating boilers in the early portion of the term;
- Replacement of the Domestic Hot Water (DHW) boiler in the mid-portion of the term and replacement of the two insulated storage tanks in the latter portion of the term of the analysis;
- Repairs to the plumbing leaks noted during the Site visit and contingency allowances for repairs to the plumbing risers throughout the term of the analysis;
- Retain the services of a licenced electrician to verify that the major electrical equipment was properly updated in 1998 at the time of the decommissioning of the older wiring;
- Replacement of the likely original main electrical disconnect switch serving the building;
- Inspection and repairs to the emergency exit lights throughout the building;
- Replacement of the main and annunciator fire alarm panels; and
- Replacement of the glass fuse plug style electrical panels within the suites and the electrical room.

The specific deficiencies identified during the BPCA and their associated recommendations for repair are described in the main body of the report. These deficiencies should be corrected as part of routine maintenance unless otherwise stated within the report. Costs associated with desired upgrades have not been carried.

Regular maintenance should be conducted on the roof systems, wall systems, underground parking garage, interior finishes, and the mechanical/electrical systems to ensure that the PUL of the major components is realized. Repair costs for the aforementioned items have been included over the term of





the analysis (i.e., 10 years) included within Appendix I. The specific deficiencies identified during the BPCA and their associated recommendations for repair are described in the main body of the report. These deficiencies should be corrected as part of routine maintenance unless otherwise stated within the report. Costs associated with desired upgrades have not been carried.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.





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### 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Ms. Douaa Hassan of Morguard Investments Limited (Client) to conduct a Baseline Property Condition Assessment (BPCA), subject to the limitations outlined in Section 6.0 of this report. As discussed with the Client this service did not include any specialist review of items such as mechanical/electrical systems, structural components. A specialist review of the elevator systems was performed by KJA with findings and recommendations presented in Appendix II. The municipal address for the property is 151 Metcalf Street, Ottawa, Ontario (the Site). Mr. Nicolas Rheault of Pinchin Ltd. (Pinchin), a member of the Pinchin Group of Companies, conducted a visual assessment of the Site on January 19th and 20th, 2016 at which time Pinchin interviewed and was accompanied by Mr. Scott Brooker of Cushman Wakefield, Sales Representative for the Site (hereafter referred to as the Site Representative).

The Client has advised Pinchin that no previous Baseline Property Condition Assessments reports have been prepared for the Site. Pinchin was provided with a façade report which was prepared by "Cleland Jardine Engineering Ltd." in 2007. The report was prepared for "Toth Equity Ltd." and relates to the replacement of the brick masonry on the west elevation of the building.

Pinchin was advised by the Client that the purpose of the BPCA was to assess visible deficiencies in relation to the potential acquisition and financing of the Site. The term of analysis requested by the Client is 10 years.

The results of the BPCA are presented in the following report. This report is subject to the Limitations discussed in Section 6.0.

#### 2.0 SCOPE AND METHODOLOGY

The scope of the BPCA included a visual examination (without any intrusive testing or demolition of finishes to observe hidden areas) of the following:

- The building envelope, comprised of the exterior walls, windows, exterior doors and roof systems;
- The structural elements (i.e., slabs, beams, columns and walls);
- The underground parking garage;
- The interior finishes of the common areas and a selection of individual tenant premises;
- The Site features;
- The mechanical systems (i.e., boilers, domestic hot water, etc.); and
- The electrical systems.





The scope for the specialist review included a visual examination (without any intrusive testing or demolition of the finishes to observe hidden areas) of the following:

The vertical transportation systems.

The object of the BPCA included the following:

- A visual examination of the property in order to assess the condition of the major elements;
- Review of general documentation on the repair/maintenance history of the elements, if available;
- Cursory review of previous reports pertaining to the Site Building, if made available by the Site Representative;
- Interviews and discussions with on-Site personnel regarding the repair/maintenance conducted on the Site Building;
- Documentation of observed existing deficiencies observed within the various elements;
- Photographic documentation of various components and observed deficiencies; and
- Compilation of Pinchin's findings in a formal written report including observed deficiencies, together with a list of recommendations for repair/replacement with associated estimated costs for both short and long term.

The report provides:

- A basic description of each of the various major components of the Site Building;
- A list of deficiencies noted with respect to the components examined; and
- Recommendations and cost estimates for the corrections recommended.

Cost estimates provided in this report are preliminary Class "D" and provided only as an indication of the order of magnitude of the remedial work. These values have been arrived at by determining a representative quantity from the visual observations made at the time of our Site visit and by applying current market value unit costs to such quantities and or a reasonable lump sum allowance for the work. More precise cost estimates would require more detailed investigation to define the scope of work. They are not intended to warrant that the final costs will not exceed these amounts or that all costs are covered. The estimates assume the work is performed at one time and do not include costs for potential de-mobilization and re-mobilization if repairs/replacement are spread out over the term of analysis.

All costs are identified in 2016 Canadian Dollars, and do not include consulting fees or applicable taxes. (For consulting fees, Pinchin typically recommends a budget allowance of 10% to 15% of the costs identified).





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All cost estimates assume that regular annual maintenance and repairs will be performed to all building elements at the facility. No cost allowance is carried for this regular maintenance.

The cost estimates provided in this report are based on costs of past repairs at similar buildings, recent costing data such as "RS Means Repair and Remodelling Cost Data – Commercial/Residential" and "Hanscomb's Yardsticks for Costing", or Pinchin's professional judgment.

Unless otherwise stated, the replacement costs identified for an element reflects the cost to remove and replace the existing element with the same type of element.

# 3.0 OBSERVATIONS AND COMMENTS

#### 3.1 Site Information



Partial view of the north elevation of the Site Building.



General view of the west elevation of the Site Building.





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General view of the south elevation of the Site Building.

General view of the east elevation of the Site Building.





Table 3.1 – S	ite Information
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Site Occupant/Name	ccupant/Name London Arms Apartments		
Site Address	151 Metcalfe Street, Ottawa, Ontario		
Existing Land Use Type	Residential	Primary On-Site Activity	Apartment Building
Multi-Tenant/Single Occupant	Multi-Tenant	Number of Units	49 residential apartments
Date First Developed	Unknown	Site Area	~ 0.46 acre
Number of Buildings	One	Building Footprint Area(s)	~ 11,200 ft <sup>2</sup>
Number of Stories (Excluding Basement)	Four	Total Rentable Building Area(s)	~ 49,600 ft <sup>2</sup>
Date Building(s) Constructed	~ 1938	Area of Tenant Spaces	Varies
Date Building(s) Renovated	Ongoing	Basement and/or U/G Parking	Yes/Yes
Type of Roof System(s)	Two ply modified bitumen membrane Built Up asphalt Roof (BUR) Mop-on membrane	Number of Levels U/G	One
Type of Wall Cladding	Brick veneer masonry	Area of Roof System(s)	~11,200 ft <sup>2</sup>
Type of Doors	Single Glazed (SG) units within aluminum frames Solid wood doors within metal frames Hollow metal doors within metal frames Sectional metal overhead door	Types of Windows	Operable (i.e., single hung) SG units within wood and aluminum frames complete with exterior aluminum SG storm windows
Above Grade Parking Area	N/A	Electrical Source	Hydro Ottawa
Surface Type	Asphalt/concrete	Type of Heating/Cooling	Natural gas-fired boiler which feeds hydronic radiators





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#### 3.2 Roof Systems

The roof systems of the Site Building are separated into four areas which consist of the main roof atop the fourth floor of the building, the roof atop the roof access stairwell/elevator penthouse and two roof systems above the UPG extensions on the north and south portions of the building. The roof systems atop the UPG extensions were noted to consist of a mop-on membrane which is presumably installed atop the concrete roof deck of the UPG. The roof system atop the fourth floor of the building consists of a combination of modified bitumen membranes, Built Up asphalt Roof (BUR) systems and mop-on membranes which are installed atop a wood roof deck which is installed on a main composite roof slab. Neither the presence of a vapour barrier nor the type or thickness of the insulation within the roof systems could be determined at the time of the Site visit, due to the fact that destructive testing was outside the scope of work.

It should be noted that the majority of the roof systems were snow and ice covered at the time of the Site visit which prevented Pinchin from completing a thorough inspection. The Site Representative did not know the ages of the roof systems, however based on the visual appearance and the number of patch replacements, Pinchin estimates that the roof systems have reached or exceeded their Projected Useful Life (PUL). Drainage of the roof systems is provided by internal roof drains which presumably drain to the municipal sewer system.

Penetrations through the roof systems consist of plumbing vents, roof drains and pitch pockets serving conduits. The total area of the roof systems is similar to the footprint area of the Site Building at approximately 11,200 ft<sup>2</sup>. No active leaking within the roof systems was reported during the assessment.





Table 3.2 outlines the findings of the inspection of the roof systems:

#### Table 3.2 – Roof Systems

Findings	Remarks/Recommendations	
Major Deficiencies/Deterioration		
<ul> <li>Based on observations of the visible areas of the roof systems and the number of patch replacements observed, it is Pinchin's opinion that the roof systems have reached or exceeded their PUL.</li> </ul>	<ul> <li>Pinchin has carried allowances for the replacement of the roof systems within the early portion of the term of the analysis.</li> </ul>	
Minor Deficiencies/Deterioration		
<ul> <li>Cracking and deterioration was observed in the mop-on membrane atop the north portion of the UPG roof.</li> </ul>	<ul> <li>Replace the mop-on membranes atop the root decks of the UPG on the north and south portions of the building.</li> </ul>	
• The various membranes atop the main roof system were noted to be deteriorated.	<ul> <li>Pinchin has included allowances to replace the main roof system within the early portion of the term.</li> </ul>	
• Vegetative growth was observed on the main roof system.	<ul> <li>This deficiency will be addressed as part of the anticipated roof replacement in the early portion of the term.</li> </ul>	



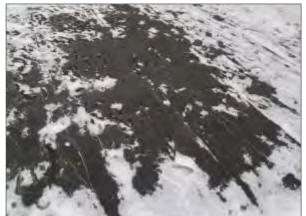
View of the snow covered roof system atop the UPG roof on the south portion of the building.





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View of a portion of the main roof system atop the fourth floor of the building.

View of cracking and deterioration noted in the mop-on membrane on the north UPG roof.



View of crazing and deterioration noted in a section of modified bitumen membrane atop the fourth floor roof.





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View of several patch repairs noted on the main roof of the building atop the fourth floor.



View of vegetative growth noted near the exterior wall of the stairwell penthouse on the main roof.

It has been Pinchin's experience that the Projected Useful Life (PUL) of a BUR system typically ranges between 20 to 25 years while the PUL of a typical modified bitumen membrane ranges between 23 to 25 years, depending on the quality of building materials used, the quality of workmanship during installation and the level to which the roof system has been maintained. It should be noted that due to partial snow and ice covered conditions a thorough visual assessment of the roof systems was not possible at the time of the Site visit.

Based on the observed condition of the visible areas and the numerous patch repairs noted, it is Pinchin's opinion that the roof systems have achieved or exceeded their PUL. Pinchin has carried allowances for the replacement of the roof systems within the early portion of the term of the analysis. Assuming the roof systems are replaced in the early portion of the term and regular annual maintenance is performed, no other major expenditures should be required within the term of the analysis.





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#### 3.3 Wall System

Based on the engineering report received the exterior wall assemblies of the Site Building consist of a 4 inch thick brick veneer masonry, a 1 inch air space and 8 inch thick cinder block masonry back up walls. The brick veneer masonry is reportedly tied into the cinder block back-up wall using a Flemish bond system at every second course of cinder block.

The window systems of the Site Building consist primarily of operable (i.e., single-hung) Single Glazed (SG) units within wood frames. A minor portion of the window units were noted to have been replaced using operable (i.e., single-hung) SG units within aluminum frames. Some of the window units serving the Site Building were noted to be complete with aluminum SG storm windows which were installed at an unknown date.

Exterior doors serving the Site Building are comprised of SG units set into aluminum frames located at the main entrance on the west elevation of the building which are complete with side-lites consisting of fixed SG units within aluminum frames. A boiler room entrance door serving the Site Building consists of a wood door within a wood frame complete with SG glazing units on the north elevation of the building, however it should be noted that this door is reportedly no longer used. Doors leading into the mechanical/locker/stairwells and other ancillary rooms consist of painted hollow metal doors within metal frames. The overhead door serving the UPG was noted to consist of an insulated overhead metal door.

It should be noted that due to the fact that the scope of work did not include any intrusive/destructive testing the presence or condition of brick ties behind the masonry walls could not be visually inspected.

It should be noted that in 2007 a portion of the west face brick veneer masonry started to bulge, as such a forced collapse was engineered to bring down the brick masonry which had separated from the back-up wall system. At the time of the forced collapse, a portion of the cinder block masonry back-up wall system came down as well. Pinchin was provided with an engineering report, which was prepared by "Cleland Jardine Engineering Ltd." for "Toth Equity Ltd." in October 2007. This letter report identified the probable causes of the brick masonry separating from the back-up wall system and provided recommendations for repairs. It should be noted that Pinchin was not provided with the specifications and drawings for the recommended repairs, nor was Pinchin provided with the final signed off engineering report stating that the repairs were completed as per the specifications and drawings provided. Due to the fact that no specifications and drawings were provided or a final signed off engineering report, Pinchin recommends that a façade investigation be completed on the Site Building to determine if this condition is present on any of the other three elevations.





Table 3.3 outlines the findings of the inspection of the wall systems:

#### Table 3.3 – Wall Systems

Findings	Remarks/Recommendations	
<ul> <li>Major Deficiencies/Deterioration</li> <li>Based on the failed brick veneer masonry which occurred in 2007 and the fact that no specifications, drawings or final signoff were provided and the observed deficiencies at the time of the assessment, Pinchin recommends that a façade investigation be completed.</li> </ul>	<ul> <li>Pinchin has included allowances for a façade investigation within the early portion of the term to determine if the failed brick masonry on the west elevation was isolated or if there is the potential for this condition (i.e., failed Flemish Bond ties) on other elevations. No allowances have been carried for the repairs as this can only be determined by completing a façade investigation.</li> </ul>	
• An area of slightly bulged masonry was noted on the north elevation of the building on the exterior wall section serving the UPG.	• This area should be investigated as part of the recommended façade investigation and repaired as per the recommendations in the investigation.	
• A few areas of loose brick masonry units were noted on the exterior walls which could potentially fall to grade and injure a pedestrian or damage a vehicle.	• Pinchin has included immediate allowances to address the areas of loose masonry to help prevent the potential for personal injury or vehicle damage.	
<ul> <li>Minor Deficiencies/Deterioration</li> <li>The majority of the windows serving the Site Building were noted to consist of older (possibly original) wood framed SG units.</li> </ul>	<ul> <li>Consideration should be given to the replacement of the older wood framed window systems serving the Site Building. Replacement of the windows is considered an upgrade, as such, no allowances have been carried for their replacement.</li> </ul>	
• Several cracked storm and regular window units were noted as well as torn screens on all elevations.	Replace the cracked window panes and replace the damaged screens.	
• A few missing window units were noted which have been covered using plywood.	• Remove the plywood and install a new window in these locations.	
Areas of spalling, cracking and damaged brick masonry units were noted on the exterior walls.	• Repair the spalled, cracked and damaged brick masonry units within the early portion of the term.	
• The majority of the perimeter window sealants were noted to be deteriorated and the steel window lintels were noted to be corroded.	Replace the deteriorated perimeter window sealants and remove the corrosion from the window lintels and repaint.	
<ul> <li>Deteriorated mortar joints were noted in several locations within the brick masonry walls.</li> </ul>	Repoint the deteriorated mortar joints in the brick masonry walls.	





Table 3.3 – Wall Systems

Findings Re		Remarks/Recommendations	
•	The older secondary boiler room door on the north elevation was noted to be damaged and is reportedly no longer is use.	Replace the older secondary boiler room doo	
•	Cracked and displaced concrete coping stones were noted atop the small brick masonry walls on the north and south elevations which flank the UPG.	Re-set and repair the concrete coping stones	
•	Deteriorated paint finishes were noted on the metal cladding above the overhead door on the east elevation.	Repaint the metal cladding above the overhead door.	



View of an area of brick masonry on the north elevation of the building (wall which flanks the UPG) which has a slight bulge.



View of deteriorated mortar joints, efflorescence and a displaced concrete coping stone noted on the portion of the exterior wall which is slightly bulged.





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View of loose brick masonry units noted on the south elevation of the building.



View of a loose brick masonry unit noted on the west elevation of the building.



View of a typical older wood framed window serving the majority of the building.





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View of a cracked glazing unit noted on a storm window on the north elevation.



View of a missing window unit which has been covered with plywood on the north elevation of the building.



View of a cracked glazing unit noted on a storm window on the east elevation of the building.





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View of deteriorated mortar joints noted in the brick masonry on the south elevation and a crack in the concrete coping stone.



View of cracked masonry units and deteriorated mortar joints noted in the brick masonry on the west elevation of the building.



View of deteriorated mortar joints noted within the brick masonry on the south elevation of the building.



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View of spalled brick masonry units noted at the top of the east elevation of the building.



View of a cracked and deteriorated perimeter window sealant serving the fixed main entrance windows on the west elevation of the building.



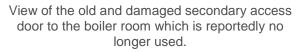
View of corrosion on a window lintel and a deteriorated perimeter window sealant observed on the south elevation of the building.





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View of faded paint finishes and deteriorated sealants on the boiler room ventilation louver.



View of a small crack noted in a concrete coping stone on the south elevation of the building.





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View of deteriorated paint finishes noted on the metal cladding above the overhead door serving the UPG on the east elevation of the building.

The wall, window and door systems of the Site Building were generally noted to be in fair to poor condition at the time of the Site visit with the above noted deficiencies.

Pinchin has included immediate allowances for the repairs to the areas of loose brick masonry units which currently pose as a personal injury/vehicle damage hazard as they could fall off the wall to grade below.

It should be noted that in 2007 a portion of the west face brick veneer masonry started to bulge, as such a forced collapse was engineered to bring down the brick masonry which had separated from the back-up wall system. At the time of the forced collapse, a portion of the cinder block masonry back-up wall system came down as well. Pinchin was provided with an engineering report, which was prepared by "Cleland Jardine Engineering Ltd." for "Toth Equity Ltd." in October 2007. This letter report identified the probable causes of the brick masonry separating from the back-up wall system and provided recommendations for repairs. It should be noted that Pinchin was not provided with the specifications and drawings for the recommended repairs, nor was Pinchin provided with the final signed off engineering report stating that the repairs were completed as per the specifications and drawings provided. Due to the fact that no specifications and drawings were provided or a final signed off engineering report, Pinchin recommends that a façade investigation be completed on the Site Building to determine if this condition is present on any of the other three elevations. Pinchin has carried allowances to perform a façade investigation in the early portion of the term; however, no allowances have been carried for repairs as the extent of damage and remedial requirements can only be determined by completing the façade investigation.

Pinchin has carried allowances to repair the majority of the above referenced deficiencies within the term of the analysis. No allowances have been carried for the replacement of the older wood framed windows as this is considered an upgrade.





Typical buildings of this age may contain PCBs in mastics, caulking and window putties. Testing for the presence of PCBs in these materials is beyond the scope of this BPCA report. The potential presence of PCBs in these materials could give rise to additional costs in future if extensive renovation requiring removal of these materials or demolition activities are undertaken at the Site. The extent of such potential issues could not be assessed as part of this BPCA report.

If the recommended investigation of the walls is carried out and does not detect further hidden deficiencies as long as the above mentioned deficiencies are addressed and that regular annual maintenance is performed there should be no other major expenditures required relating to the walls, windows and door systems of the Site Building throughout the term of the analysis. It should be noted however that the recommended investigation may detect further required repairs which have not been included in any cost estimates.

# 3.4 Balcony Systems

The Site Building does not possess any balcony systems.

Table 3.4 outlines the findings of the Balcony Systems:

Table 3.4 – Balcony Systems	
Findings	Remarks/Recommendations
Major Deficiencies/Deterioration	
• N/A	• N/A
Minor Deficiencies/Deterioration	
• N/A	• N/A

3.5 Structural Elements

As outlined in the scope of work, a visual assessment of the condition of the structural elements was carried out on the elements which were visible at the time of the inspection. The Site Building is constructed with a basement level, cast-in-place concrete slab-on-grade complete with cast-in-place concrete and brick masonry foundation walls. The superstructure of the Site Building is comprised of load-bearing masonry walls and steel structural elements (i.e., beams, columns and open web steel joists) which support a main level cast-in-place concrete floor slab while the remainder of the floor slabs were noted to consist of composite (i.e., concrete laid within a steel pan) slabs. The roof deck was not visible for review at the time of the Site visit, however based on information in the "Cleland Jardine Engineering Ltd." report, the roof is comprised of built-up wood framing and sloped wood decking supported on a main composite roof deck. It is presumed that the structural steel framing (i.e., beams and columns) in the UPG are likely additional support for the center section of the building. The back-up wall





systems of the Site Building were reportedly consist of cinder block masonry and brick masonry walls. No structural drawings were available for review.

Table 3.5 outlines the findings of the inspection of the structural elements:

#### Table 3.5 – Structural Elements

Findings	Remarks/Recommendations
<ul> <li>Major Deficiencies/Deterioration</li> <li>Severe corrosion was noted at the base of the majority of the columns within the UPG. These columns support the steel beams which support the center portion of the building.</li> </ul>	<ul> <li>Based on the advanced levels of corrosion, Pinchin recommends that these columns be inspected by a structural engineer to determine the requirements and associated costs with repairing these columns. Pinchin has included allowances for a structural review. It should be noted that cost estimates for repairs can only be determined by the findings of the structural investigation.</li> </ul>
Minor Deficiencies/Deterioration	
<ul> <li>Corrosion was observed on several steel beams in the basement areas of the building.</li> </ul>	• These steel beams should be inspected as part of the structural investigation, however the corrosion appears to only be surface corrosion which could likely be removed and the steel beams refinished.
<ul> <li>Cracking was noted in the concrete floor slab in the basement of the building within the locker rooms.</li> </ul>	Rout and seal the cracking in the concrete floor slabs within the locker rooms.



View of the steel beams and columns located in the UPG of the building which support the central portion of the building.





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View of a combination cast-in-place concrete and solid brick masonry foundation wall as well as a typical cinder block masonry demising wall.



- View of severe corrosion noted at the base of a column within the UPG.
- Note: Almost every column within the UPG was affected by moderate to severe corrosion.



View of severe corrosion noted at the base of a column within the UPG.

Note: Almost every column within the UPG was affected by moderate to severe corrosion.





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View of severe corrosion noted at the base of a column within the UPG.

Note: Almost every column within the UPG was affected by moderate to severe corrosion.

View of corrosion on a steel beam in the basement of the building.



View of cracking noted in the concrete floor slab in a basement locker room.





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View of cracking noted in the concrete floor slab in a basement locker room.

Assessment of the original or existing building design, compliance with prior or current Building Code or detection or comment upon concealed structural deficiencies are outside the scope of work. Similarly the identification and assessment of any Post-Tension reinforcing is not included in the scope of work. Accordingly, the findings are limited to the extent that the assessment has been made based on a walk-through visual inspection of accessible areas of the structure.

Due to the condition (i.e., moderate to severe corrosion) of the steel columns serving the structural steel beams in the UPG (which presumably support the central section of the building) as well as the steel beams in the basement areas of the building, Pinchin recommends and has included allowances for a structural investigation. Pinchin has not included preliminary allowances for the repairs to the steel structural components, as these cost estimates can only be determined by the findings and recommendations of the structural investigation.

#### 3.6 Underground Parking Garage

The Underground Parking Garage (UPG) serving the Site Building is constructed with a cast-in-place concrete slab-on-grade which is slightly below grade level (i.e., approximately 4 feet below grade). The foundation walls within the UPG were noted to consist of combination cast-in-place concrete and load-bearing brick masonry perimeter foundation walls which help support the cast-in-place concrete main floor slab/roof deck of the UPG. The floor within the UPG was noted to be asphalt paved. The UPG is accessed from an overhead door on the east elevation of the building. The overhead door is accessed via an asphalt paved laneway on the east portion of the Site. The asphalt paved ramp to the UPG is reportedly not heated. The exposed areas of the roof deck which extend beyond the footprint of the central portion of the building were noted to be protected by a mop-on membrane which is presumably installed directly onto the concrete roof deck. The UPG has parking provisions for approximately 22 vehicles. Drainage within the UPG is provided by a catch basin which presumably drains to the municipal storm sewer system. The UPG is not serviced with ventilation fans; however windows are present on the





side elevations which are opened on a regular basis. Heating within the UPG is provided by hydronic radiators which are mounted on the perimeter walls of the UPG and supplied with hot water from the main heating boiler system for the remainder of the building. Fire protection within the UPG is provided by cabinet mounted fire extinguishers.

Table 3.6 outlines the findings of the inspection of the underground parking garage:

Table 3.6 – Underground Parking Garage		
Findings	Remarks/Recommendations	
Major Deficiencies/Deterioration		
None observed/reported.	None required.	
Minor Deficiencies/Deterioration		
<ul> <li>Cracking was observed in the cast-in-place concrete and brick masonry foundation walls of the UPG.</li> </ul>	<ul> <li>Repair the areas of cracking in the cast-in- place concrete and brick masonry foundation walls.</li> </ul>	
<ul> <li>Spalling brick masonry was noted within the UPG on the foundation walls.</li> </ul>	<ul> <li>Repair the spalling brick masonry on the foundation walls within the UPG.</li> </ul>	
<ul> <li>Active leaking was noted on the south portion of the UPG from the exposed roof deck.</li> </ul>	• This deficiency will be addressed once the membranes atop the exposed roof decks of the UPG are replaced in the early portion of the term of the analysis.	
• Efflorescence was noted on the soffit of the UPG roof deck in the north portion of the UPG.	Once the membrane atop the exposed section of the UPG roof deck is replaced, clean the areas of efflorescence.	
• The asphalt pavements within the UPG were noted to be deteriorated.	Replace and repair the asphalt pavements within the UPG.	



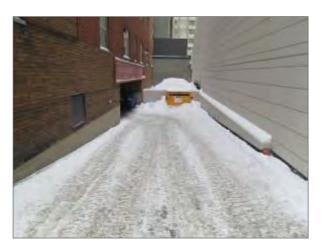
General view of the UPG serving the Site Building.

Note: The asphalt pavements were noted to be cracked, heaved and deteriorated.





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View of the UPG access ramp located on the east portion of the Site.

View of the UPG overhead door which is accessed from the east laneway.

View of a typical hydronic, wall mounted radiator serving the UPG.

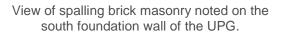




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View of cracking noted in the cast-in-place concrete and brick masonry foundation walls on the south portion of the UPG.



View of an orange tarp which is being used to divert leaking water from the UPG roof deck to the perimeter of the UPG.





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View of efflorescence noted on the soffit of the UPG roof deck within a service room in the northwest portion of the UPG.

The UPG was noted to be in fair to poor condition at the time of the assessment with the above noted deficiencies. Pinchin has included allowances to repair the foundation walls and for the replacement of the membranes atop the UPG extensions on the north and south portions of the building. Pinchin has also included allowances for concrete repairs to the soffit of the UPG and for the replacement of the asphalt pavement surface. Assuming that the above mentioned required work is completed and regular annual maintenance is performed, the UPG should continue to perform in a satisfactory manner throughout the term of the analysis.

# 3.7 Elevator Systems

A specialist review of the vertical transportation systems was performed by KJA. Please refer to Appendix II for the complete finding of the vertical transportation systems.

#### 3.8 Interior Finishes

As outlined in the scope of work, the interior finishes of the Site Building were reviewed during the Site assessment. The floor finishes within the main entrance areas as well as the corridors and stairwells were noted to consist of terrazzo flooring throughout. Floor finishes within the suites consist of vinyl floor tiles and hardwood flooring with ceramic floor tiles noted within the washrooms. The floor finishes within the mechanical and electrical rooms consist of exposed concrete floor slabs. The wall finishes within the suites, corridors and common areas of the Site Building consist of painted plaster walls throughout. Minor areas of painted gypsum board finishes were noted in select areas and ceramic wall tiles were noted within the washrooms. Wall finishes within the mechanical/electrical rooms, locker rooms, basement areas and UPG consist of un-painted and painted masonry. Wood paneling and a concrete block feature wall were noted in the main entrance lobby of the building. Ceiling finishes throughout the Site Building consist primarily of painted plaster with minor areas of painted gypsum board. Ceiling finishes within the mechanical/electrical rooms and other basement level service rooms were noted to consist of exposed structural elements.





During the Site visit access was gained to approximately 8% of the total number of units consisting of unit #s 5 (basement unit), 102, 204 and 303.

Table 3.8 outlines the findings of the inspection of the interior finishes:

#### Table 3.8 – Interior Finishes

Findings	Remarks/Recommendations
Major Deficiencies/Deterioration	
None observed/reported.	None required.
Minor Deficiencies/Deterioration	
• Damaged plaster and gypsum wall and ceiling finishes were noted in various areas of the building.	<ul> <li>Repair the areas of damaged plaster and gypsum wall and ceiling finishes in the Site Building.</li> </ul>
<ul> <li>Several areas of cracked terrazzo flooring were noted throughout the building.</li> </ul>	Repair the cracking in the terrazzo flooring.
<ul> <li>Damaged vinyl floor tiles were noted within select units.</li> </ul>	Replace the damaged vinyl floor tiles.
• Damaged wood window sills were noted in the majority of the suites.	Repair the damaged wood window sills in the suites.



General view of the interior finishes in the main entrance lobby area.





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View of the typical interior finishes within a common area corridor.

View of the typical interior finishes within a suite kitchen.



View of damaged gypsum ceiling finishes noted near the roof access door.





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View of popping plaster finishes noted within a stairwell.

View of cracked terrazzo flooring noted in the main entrance lobby.



View of cracking terrazzo flooring noted within a corridor.





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View of damaged vinyl floor tiles noted within the kitchen of suite 204.



View of a damaged wood window sill noted in suite 204.

The interior finishes within the Site Building were generally observed to be in fair condition with the above referenced deficiencies. Pinchin has included allowances for ongoing repairs to the interior finishes throughout the term of the analysis. Cyclical replacement of interior finishes (i.e., common and in-suite areas) and appliances are included as part of the annual operating budget and are completed as part of regular in-suite tenant fit ups when apartments are turned over. Assuming the above referenced deficiencies are addressed and regular annual maintenance is performed, no other major expenditures should be required within the term of the analysis.

#### 3.9 Site Features

The Site Building occupies approximately 56% of the 0.46 acre Site. The remainder of the Site is surfaced with soft landscaping (i.e., grassed areas with small trees) and an asphalt paved laneway. There are no surface parking spaces present on Site. The west elevation of the building is situated directly adjacent to the municipal walkway while the north and south portions of the Site consist of small areas of soft landscaping. Access to the main entrance doors on the west elevation is provided by terrazzo stairs. An asphalt paved laneway located on the east portion of the Site provides access to the UPG entrance on





the east elevation of the building. Drainage at the bottom of the ramp is presumably provided by a catch basin, however due to snow and ice covered conditions, Pinchin did not observe the catch basin. Since the inspection was limited to visible areas no examination of the catch basins was performed and no review of the initial compliance with code was performed. The inspection of underground or concealed components is outside the scope of work.

A wood framed staircase is present on the north elevation of the building which provides access to a secondary entrance while a cast-in-place concrete staircase provides access to a secondary door to the boiler room which is reportedly no longer used. Two small wood framed fences were noted on the north portion of the property.

Vehicular access to the Site is provided by an entrance from Gloucester Street located on the south portion of the Site while pedestrian access is available on the west portion of the Site to the main entrance doors. It should be noted that due to snow and ice covered conditions a thorough assessment of the Site features was not possible at the time of the Site visit. Pinchin recommends that the Site features be re-inspected when the weather permits.

Table 3.9 outlines the findings of the inspection of the Site features:

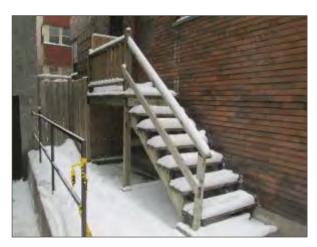
Table 3.3- Sile Tealules									
Findings	Remarks/Recommendations								
Major Deficiencies/Deterioration									
None observed.	None required.								
Minor Deficiencies/Deterioration									
• The Site features were snow and ice covered at the time of the assessment which prevented Pinchin from completing a thorough inspection.	• Pinchin recommends re-inspecting the Site features once the weather permits to determine if any deficiencies are present which were concealed at the time of the Site visit.								

#### Table 3.9– Site Features





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View of the wood framed staircase located on the north elevation of the building.



View of the terrazzo staircase serving the main entrance of the building on the west elevation.

It should be noted that due to snow and ice covered conditions a thorough assessment of the Site features was not possible at the time of the Site visit. Pinchin recommends that the Site features be reinspected when the weather permits. Pinchin also recommends that regular annual maintenance of the Site features be carried throughout the term of the analysis. Assessment of or comment upon concealed deficiencies and any buried/concealed utilities or components are outside the scope of work.





#### 3.10 Mechanical Systems

Major Service Providers

The following providers serve the subject property:

Water	-	City of Ottawa
Electric	-	Hydro Ottawa
Sewer	-	City of Ottawa
Natural Gas	-	Enbridge
Police	-	City of Ottawa Police Services
Fire	-	City of Ottawa Fire Department

#### 3.10.1 Heating, Ventilation and Air Conditioning (HVAC)

Heating throughout the Site Building is provided by hydronic radiators which are supplied with hot water from two natural gas-fired boilers. The two boilers were noted to be manufactured by "Raypack" and are located in the basement boiler room. The boilers were noted to have been manufactured in approximately 1991 (i.e., ~ 25 years old) with approximate input heating capacities of 627,000 BTUH each. Temperature control for the boilers is controlled by a "Tekmar" thermostat which is wall mounted in the boiler room. There is reportedly no cooling for the Site Building.

Domestic Hot Water (DHW) within the Site Building is provided by a natual gas-fired boiler which is located in the mechanical room. The boiler was noted to be manufactured by "A.O. Smith" in approximately 1997 (i.e., 19 years old) and was noted to possess an approximate input heating capacity of 420,000 BTUH. The boiler is complete with two insulated storage tanks manufactured by "A.O. Smith" in approximately 2003 (i.e., ~ 13 years old). Each storage tank was noted to possess an approximate storage capacity of 119 gallons. There is reportedly no shortage of DHW within the Site Building.

Drainage piping within the Site Building consists primarily of cast-iron with ABS as observed in the basement mechanical room and within the suite kitchens. It was reported by the Site Representative that the plumbing risers for the Domestic Cold and Hot water consist of galvanized piping. Due to the concealed nature of the plumbing system the condition of the risers could not be verified. Pinchin has included a contingency allowance for plumbing repairs to the risers throughout the term of the analysis.

The laundry room within the Site Building is located in the basement of the building and contains two electrically powered washing machines and two electrically powered dryers manufactured by "Heubsch". The laundry equipment is reportedly owned and maintained by "Coin-a-matic".





The inspection of the interior ductwork or associated components was beyond the scope of work. It should be noted that the heating and cooling duct work within the Site Building may contain interior insulation. The Site Representative was unaware of the presence of insulation within the duct work within the Site Building. It is Pinchin's experience that interior insulation within duct work is prone to deterioration or development of mould which may require removal of the insulation. In the case where interior insulation is present within the duct work, Pinchin recommends that the duct work insulation be inspected for the presence of mould.

#### 3.10.2 Fire Protection

Fire protection within the building is provided by cabinet mounted, stand-alone chemical fire extinguishers which are strategically located throughout the Site Building. The fire extinguishers were noted to be inspected annualy by "Eclipse Enterprises" with the last date of inspection noted to have taken place in July 2015. There are reportedly no sprinkler systems or fire hose cabinet systems serving the Site Building.

Table 3.10 outlines the findings of the inspection of the mechanical systems:

Table 5.10 – Mechanical Systems								
Findings	Remarks/Recommendations							
Major Deficiencies/Deterioration								
None observed.	None required.							
Minor Deficiencies/Deterioration								
• The two heating boilers are approximately 25 years old and will exceed their PUL within the early portion of the term of the analysis.	<ul> <li>Pinchin has carried allowances to replace the heating boilers in the early portion of the term of the analysis.</li> </ul>							
• The DHW boiler is approximately 19 years old and will exceed its PUL in the mid-portion of the term of the analysis.	• Pinchin has carried allowances to replace the DHW boiler in the mid-portion of the term of the analysis.							
• The DHW storage tanks are approximately 13 years old and will exceed their PUL in the latter portion of the term of the analysis.	<ul> <li>Pinchin has carried allowances to replace the two DHW storage tanks in the latter portion of the term of the analysis.</li> </ul>							
• Several plumbing leaks were noted in the basement and UPG and the age and condition of the plumbing risers was unknown by the Site Representative.	<ul> <li>Pinchin has carried allowances for plumbing repairs throughout the term of the analysis.</li> </ul>							

#### Table 3.10 – Mechanical Systems





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View of the first heating boiler serving the Site Building.

View of the second heating boiler serving the Site Building.



View of the DHW boiler and the two associated storage tanks.





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General view of the basement level laundry room.



View of the typical cabinet mounted chemical fire extinguishers serving the Site Building.

In summary, the mechanical systems within the Site Building are currently in fair but aged condition. Due to the current age of the heating boilers it is anticipated that replacement will be required in the early portion of the term of the analysis. The DHW boiler and the associated storage tanks will exceed their PUL in the mid to later portion of the term of the analysis. Active plumbing leaks were observed in the basement areas and UPG of the building. Pinchin has carried allowances to replace the heating boilers and the DHW boiler as well as the associated storage tanks within the term of the analysis. Pinchin has also included allowances for plumbing repairs throughout the term of the analysis.

Assuming that the above mentioned replacements and repairs are completed and regular annual maintenance is performed, no other major expenditures are anticipated relating to the mechanical systems throughout the term of the analysis.

In accordance with the proposed scope of work, no physical or destructive testing or design calculations will be conducted on any of the major components of the building. Similarly the inspection of the interior of boilers, pressure vessels, equipment, fan coils, ductwork or associated mechanical components is not





included in the scope of work. Accordingly, the findings are limited to the extent that the assessment will be made visually from the exterior of the systems.

#### 3.11 Electrical Systems

#### 3.11.1 Electrical Power

The electrical power for the Site Building is supplied from a transformer vault which is accessed from inside the UPG and feeds the electrical room in the basement of the Site Building via underground wires. The main electrical service for the Site Building consists of a 400 Ampere, 575 Volt service, complete with "Devoe" main disconnect switch. Based on the age of the Site Building may contain aluminum wiring. The individual suites were noted to be separately metered as observed in the basement electrical room. Electrical panels within the suites were reported to consist of glass plug fuse style panels.

The original electrical equipment within the building as observed within the former main electrical room in the basement of the building, was reportedly abandoned in approximately 1998. Although the electrical systems were upgraded in approximately 1998, the main disconnect switch for the building appears to be original to construction. Pinchin recommends that the Client retain the services of a licensed electrician to inspect the main electrical systems to see if further upgrading is required. There is reportedly no emergency backup power for the Site Building. No problems were reported relating the electrical systems of the Site Building.

#### 3.11.2 Fire Alarm System and Life Safety

The fire alarm system serving the Site Building consists of a multi-zone and single stage system complete with a "Simplex" Model 4002 fire alarm panel which is located in the basement corridor. The fire alarm system is complete with an annunciator panel which is located in the main entrance area of the building. The fire alarm monitors hardwired pull stations and heat detectors which are located throughout the building. Annunciation within the corridors is provided by gong-style alarm bells which are wall mounted. Battery powered smoke detectors were noted within the suites and are not connected to the fire alarm system is reportedly performed by "Eclipse Enterprises" an independent contractor. The last date of inspection for the fire alarm panel and associated systems was not displayed on the main fire alarm panel.

Emergency lighting and illuminated exit signs are located throughout the Site Building which are powered by internal battery packs. The units consist of single and double head lights which are both wall and ceiling mounted.





Table 3.11 outlines the findings of the inspection of the electrical systems:

#### Table 3.11 – Electrical Systems

Findings	Remarks/Recommendations					
<ul> <li>Major Deficiencies/Deterioration</li> <li>The main electrical switch was noted to be original to ~ 1938 (i.e., ~ 78 years old) and no information was available on the decommissioning of the older wiring systems noted in the basement.</li> </ul>	<ul> <li>Pinchin recommends and has included allowances to retain the services of a licenced electrician to inspect the major electrical systems to determine the approximate costs to replace the main disconnect switch and to identify if any other systems should be replaced.</li> </ul>					
<ul> <li>Minor Deficiencies/Deterioration</li> <li>Several emergency exit signs were noted to not be properly illuminated.</li> </ul>	<ul> <li>Pinchin recommends that the emergency exit signs be inspected in the early portion of the term of the analysis and that any burnt bulbs be replaced or that the sign itself be replaced if no longer operational.</li> </ul>					
The main and annunciator fire alarm panels have exceeded their PUL.	• Pinchin has included allowances to replace the main and annunciator fire alarm panels within the early portion of the term. The allowances carried do not include the replacement of the wiring and associated devices (i.e., pull stations and heat detectors) throughout the building.					
• The electrical panels were reported to consist of glass plug fuse style panels throughout the building.	<ul> <li>Pinchin recommends that these panels be replaced as part of unit turnover.</li> </ul>					



View of the abandoned knob and tube wiring system noted in the former main electrical room.





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View of the original main disconnect switch serving the Site Building.

View of a glass plug fuse electrical panel noted in the main electrical room.



General view of the main electrical room in the basement of the building.



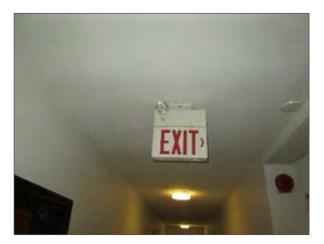


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View of the main fire alarm panel and the typical pull stations, gong-style alarm bell and emergency exit sign within the building.

View of the annunciator panel which is located in the main entrance lobby area.

View of an emergency exit sign which was not properly illuminated at the time of the Site visit.



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Upon inspection the electrical and life safety systems were noted to be in fair but aged condition. The main electrical disconnect switch serving the Site Building appears to be original to 1938 (i.e., ~ 78 years old) and will require replacement within the early portion of the term of the analysis. The main and annunciator fire alarm panels were noted to be older and have exceeded their PUL and will require replacement within the term of the analysis. Pinchin has carried preliminary allowances for the replacement of the main electrical disconnect switch, however these costs could vary significantly based on the results of the inspection and findings from the licensed electrician. Pinchin has also carried allowances for the replacement of the main and annunciator fire alarm panels within the early portion of the term; however the allowances do not include the replacement of wiring or the associated devices (i.e., pull stations and heat detectors). Several emergency exit signs were not properly illuminated at the time of the Site visit, Pinchin recommends that all emergency exit signs be inspected and that burnt bulbs be replaced or the sign itself be replaced if no longer operational.

Due to the age of the Site Building, there may be aluminum wiring present throughout the Site Building, as a result the Owner should retain the services of a licensed electrician to review the wiring and connections throughout to ensure there are no loose connections throughout the Site Building.

Pinchin recommend that the above referenced deficiencies be addressed and that regular ongoing maintenance be performed on the electrical systems throughout the term of the analysis.

#### 4.0 KNOWN VIOLATIONS OF CODE

It was reported to Pinchin by the Site Representative that no outstanding violations from the Building Department existed pertaining to the property. Compliance with the National Building Code (NBC) and National Fire Code (NFC) was not reviewed as it was beyond the scope of this survey.

#### 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on Pinchin's review of the property, conducted on January 19<sup>th</sup> and 20<sup>th</sup>, 2016 the Site Building appears to be in fair condition, commensurate with its age and in comparable standing to other similar residential properties in the area. Based on our visual assessment the Site Building generally appears to have been constructed in general accordance with standard building practices in place at the time of construction.

The assessment did not reveal any visual evidence of soil erosion or differential settlement. Pinchin did note areas of severe corrosion at the base of the support columns within the UPG serving the structural support system for the central portion of the building. Pinchin recommends and has included allowances to perform a structural investigation of the corroded steel elements within the basement and UPG of the building. It should be noted that estimated costs of repairs can only be determined by the findings and recommendations of the structural investigation.





As noted during the Site visit, deficiencies relating to the roof systems, wall systems, structural elements, underground parking garage, elevator systems, interior finishes, Site features and mechanical/electrical systems were noted. Of particular note, recommendations, repairs and replacements for the following items are included throughout the term of the analysis:

- Replacement of the main and stairwell access roof systems as well as the two roof systems atop the UPG extensions on the north and south elevations of the building;
- Complete a façade investigation to determine if the problems which occurred on the west elevation in 2007 were isolated or widespread and to investigate the area of slight bulging in the masonry on the north elevation;
- Immediate repairs of the loose brick masonry units on the south and west elevations;
- Repairs to the brick masonry walls as noted in the report;
- Consideration for the replacement of the older wood framed windows serving the building;
- Replacement of the broken or missing window panes noted during the assessment;
- Replacement of the deteriorated perimeter window sealants and refinishing of the corroded steel window lintels;
- A structural investigation of the corroded steel elements within the UPG and basement of the building to determine the appropriate method of repair and anticipated costs involved;
- Removal of the surface corrosion from the structural steel elements in the basement of the building and within the UPG;
- Repairs to the cast-in-place concrete and masonry foundation walls within the UPG;
- Repairs to the areas of active leaking noted within the UPG and replacement of the deteriorated asphalt pavements;
- Major modernization of the elevator system including the installation of a rooftop walkway and allowances for code changes and vandalism;
- Repairs to the moisture damaged interior finishes noted at the time of the assessment and repairs to the cracking noted in the terrazzo flooring;
- Re-inspection of the snow and ice covered Site features once the weather permits to verify if there are any deficiencies which may have been concealed at the time of the Site visit;
- Replacement of the two heating boilers in the early portion of the term;





- Replacement of the DHW boiler in the mid-portion of the term and replacement of the two insulated storage tanks in the latter portion of the term of the analysis;
- Repairs to the plumbing leaks noted during the Site visit and contingency allowances for repairs to the plumbing risers throughout the term of the analysis;
- Retain the services of a licenced electrician to verify that the major electrical equipment was properly updated in 1998 at the time of the decommissioning of the older wiring;
- Replacement of the likely original main electrical disconnect switch serving the building;
- Inspection and repairs to the emergency exit lights throughout the building;
- Replacement of the main and annunciator fire alarm panels; and
- Replacement of the glass fuse plug style electrical panels within the suites and the electrical room.

Regular maintenance should be conducted on the roof systems, wall systems, structural systems, underground parking garage, elevator systems, interior finishes, Site features and the mechanical/electrical systems to ensure that the PUL of the major components is realized. Repair costs for the aforementioned items have been included over the term of the analysis (i.e., 10 years) included within Appendix I. The specific deficiencies identified during the BPCA and their associated recommendations for repair are described in the main body of the report. These deficiencies should be corrected as part of routine maintenance unless otherwise stated within the report. Costs associated with desired upgrades have not been carried.

It was reported to Pinchin that the costs associated with ongoing general maintenance of the major components of the Site Building are carried as part of the annual operating budget for the Site.

#### 6.0 LIMITATIONS

In accordance with the proposed scope of work, no physical or destructive testing or design calculations were conducted on any of the components of the building. Assessment of the original or existing building design, or detection or comment upon concealed structural deficiencies and any buried/concealed utilities or components are outside the scope of work. Similarly the assessment of any Post Tension reinforcing is not included in the scope of work. Determination of compliance with any Codes is beyond the scope of this Work. The Report has been completed in general conformance with the ASTM Designation: E 2018 – 08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.





January 26, 2016 Pinchin File: 111978 FINAL

It should be noted that Pinchin has attempted to identify all the deficiencies required by this Standard associated with this project. Pinchin does not accept any liability for deficiencies that were not within the scope of the investigation.

As indicated above the personnel conducting the building assessment, where applicable, have performed a non-specialist review of the building and all associated finishes and related systems including the mechanical and electrical (including fire alarm and life safety) systems, Site features, etc. The personnel conducting the assessment are knowledgeable of building systems and construction, but not technical specialists in each of these fields. The intent of Pinchin's comments on these systems are for the sole purpose of identifying areas where Pinchin has observed a noteworthy condition which will lead to a likely significant expenditure during the term of the assignment and/or where Pinchin would recommend that the Client consider a further, more detailed investigation. The budget costs for remedial work for each specific item has been provided to the best of our ability and will provide an order of magnitude cost for the individual item and the overall possible remedial work. Our experience has shown that the costs that Pinchin have provided are appropriate and of reasonable accuracy for the purpose intended. It should be noted that the budget cost or reserve costs for any specific item may vary significantly based on the fact that the schedule or phasing of the future remedial work is unknown at this time, the impact on building operations of this remedial work is unknown at this time and that no intrusive inspection or detailed design work is included in the BPCA. If a more accurate, detailed or documented reserve cost is required at this time the Client should request Pinchin to provide the additional proposal to provide a more accurate cost estimate.

The assessment is based, in part, on information provided by others. Unless specifically noted, Pinchin has assumed that this information was correct and has relied on it in developing the conclusions.

It is possible that unexpected conditions may be encountered at the Site that have not been explored within the scope of this report. Should such an event occur, Pinchin should be notified in order to determine if we would recommend that modifications to the conclusions are necessary and to provide a cost estimate to update the report.

It should be noted that due to partial snow and ice covered conditions a thorough assessment of the roof systems and Site features was not possible at the time of the Site visit.

The inspection of the interior of ductwork or associated components was beyond the scope of work. It should be noted that the heating and cooling duct work within the Site Building may contain interior insulation. The Site Representative was unaware of the presence of insulation within the duct work within the Site Building. It is Pinchin's experience that interior insulation within duct work is prone to deterioration or development of mould which may require removal of the insulation. In the case where interior





insulation is present within the duct work, Pinchin recommends that the duct work insulation be inspected for the presence of mould.

Due to the concealed nature of the plumbing system the condition of the risers could not be verified.

Environmental Audits or the identification of designated substances, hazardous materials, PCBs, insect/rodent infestation, concealed mould and indoor air quality are excluded from this BPCA report.

Further to the aforementioned, determination of the presence of asbestos containing material within the building such as drywall joint compound or the lead content within the older paint finishes was beyond the scope of work.

Due to the fact that the scope of the work did not include for destructive testing, Pinchin could not ascertain whether Phenolic insulation was present within the roof systems at the time of the Site visit.

This report was prepared for the exclusive use of Morguard Investments Limited subject to the conditions and limitations contained within the duly authorized workplan. Pinchin will not be responsible for the use of this report by any third party, or reliance on of any decision to be made based on it without the prior written consent of Pinchin. Pinchin accepts no responsibility for damages, if any, by any third party as a result of decisions or actions based on this report.

Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from the negligence of Pinchin. Pinchin will not be liable for any losses or damage if the Client has failed, within a period of two years following the date upon which the claim is discovered (Claim Period), to commence legal proceedings against Pinchin to recover such losses or damage unless the laws of the jurisdiction which governs the Claim Period which is applicable to such claim provides that the applicable Claim Period is greater than two years and cannot be abridged by the contract between the Client and Pinchin, in which case the Claim Period shall be deemed to be extended by the shortest additional period which results in this provision being legally enforceable.

This report presents an overview on issues of the building condition, reflecting Pinchin's best judgment using information reasonably available at the time of Pinchin's review and Site assessment. Pinchin has prepared this report using information understood to be factual and correct and Pinchin is not be responsible for conditions arising from information or facts that were concealed or not fully disclosed to Pinchin at the time of the Site assessment.

111978 DRAFT Baseline PCA 151 Metcalf Street Ottawa ON Morguard Template: Master Report for Residential Tower Baseline PCA, PCA, July 27, 2015



APPENDIX I Table 1 – Summary of Anticipated Expenditures

	1		L Remaining	1	1		1	Replacement Reserve Costs											
ITEM	Projected	Effective Age	Projected	Quantity	Unit	Unit Cost	Total Cost	Immediate											
	Useful Life	(yrs)	Useful Life					Costs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	1 /
	(yrs)		(yrs)						1 yr Cost	2 yr Cost	3 yr Cost	4 yr Cost	5 yr Cost	6 yr Cost	7 yr Cost	8 yr Cost	9 yr Cost	10 yr Cost	1 - 10 Year Total
Life Safety, Consulting and ADA	<b>.</b>		1	1	1	1				r	1	1	r	r	1	r	1	1	·/
Life Safety & Code Compliance Follow-up Recommendations	┨──┤							-											
General ADA Accessibility	1 1																		
				•								•			•				
Table 3.2 - Roof Systems																			
Roof Structures and Roofing (Repairs)	Varies	Varies	Varies	1	LS						\$5,000.00			\$5,000.00			\$5,000.00		\$15,000.00
Roof Structures and Roofing (Replacement of the roof systems)	Varies	Varies	Varies	11,200	SF	\$12.00	\$134,400.00		\$134,400.00										\$134,400.00
Table 3.3 - Wall Systems																			
Exterior Walls (Façade investigation)	Varies	Varies	Varies	1	LS	\$17,500.00	\$17,500.00	1	\$17.500.00			1			1		1		\$17,500.00
Exterior Walls (Fick repairs (not including repairs that stem from the investigation))	Varies	Varies	Varies	1	LS	\$115,000.00	\$115,000.00		\$35,000.00	\$35,000.00	\$15,000.00			\$15,000.00			\$15,000.00		\$115,000.00
Exterior Walls (Repair to loose brick masonry units)	Varies	Varies	Varies	1	LS	\$3,500.00	\$3,500.00	\$3,500.00											
Exterior Walls (Concrete coping repairs and painting repairs)	Varies	Varies	Varies	1	LS	\$4,000.00	\$4,000.00		\$2,000.00	\$2,000.00									\$4,000.00
Exterior Windows and Doors (Wood framed window replacement (no cost - considered upgrade))																			
Exterior Windows and Doors (Replacement of broken or missing windows)	Varies	Varies	Varies	~ 10 4.500	EA LF	\$1,000.00	\$10,000.00		\$5,000.00 \$13,500.00	\$5,000.00 \$13,500.00									\$10,000.00
Exterior Windows and Doors (Sealant replacements) Exterior Doors Replacement (Replace secondary door to boiler room)	Varies Varies	Varies Varies	Varies Varies	4,500	EA	\$6.00 \$500.00	\$27,000.00 \$500.00		\$500.00	\$13,500.00									\$27,000.00 \$500.00
Exterior Doors Replacement (Replace Secondary door to bolier room)	Valles	valles	valles			\$300.00	\$500.00		\$300.00										\$300.00
	-		•	-						•	•		•	•		•			
Table 3.4 - Balcony Systems											-			-					
Balcony Systems	N/A	N/A	N/A																1
Table 3.5 - Structural Elements	<b>,</b> ,		1	1			1			1	1	1	1		1		1	1	
Foundations Super Structure (Structural investigation of the structural steel elements)	Varies	Varies	Varies	1	LS	\$8,500.00	\$8,500.00	1	\$8,500.00	<u> </u>			+				1		\$8,500.00
Super Structure (Structural investigation of the structural steel elements) Super Structure (Repairs to the surface corrosion on select steel elements in the basement)	Varies	Varies	Varies	1	LS	\$20,000.00	\$20,000.00		\$20,000.00										\$20,000.00
	Valies	Valies	Vanco		20	\$20,000.00	<i>\\\</i> 20,000.00		φ20,000.00		I			1					φ20,000.00
Table 3.6 - Underground Parking Garage																			
Foudations (Repairs to the foundation walls within the UPG)	Varies	Varies	Varies	1	LS	\$30,000.00	\$30,000.00		\$15,000.00	\$15,000.00									\$30,000.00
Concrete Elements (Concrete repairs)	Varies	Varies	Varies	1	LS	\$20,000.00	\$20,000.00		\$10,000.00	\$10,000.00									\$20,000.00
Traffic Surface (Asphalt replacements)	Varies	Varies	Varies	5,000	SF	\$4.50	\$22,500.00			\$22,500.00									\$22,500.00
Table 3.7 - Vertical Transportation																			
Major Modernizations (Major modernizations including estimated potential work by other trades)	Varies	Varies	Varies	1	LS	\$285,000.00	\$285,000.00	1	\$285,000.00			1			1		1		\$285,000.00
The states (Rooftop walkway)	Varies	Varies	Varies	1	LS	\$5,000.00	\$5,000.00		\$5,000.00										\$5,000.00
Elevators (Code Changes)	Varies	Varies	Varies	1	LS	\$3,000.00	\$3,000.00				\$3,000.00								\$3,000.00
Elevators (Vandalism)	Varies	Varies	Varies	1	LS	\$2,000.00	\$2,000.00			\$2,000.00									\$2,000.00
Table 3.8 - Interior Finishes		Martin				<b>6</b> 45 000 00	<b>0</b> 45 000 00	-	<b>6</b> 4 500 00	<b>64</b> 500 00	<b>0</b> 4 <b>5</b> 00 00		<b>#4</b> 500.00	<b>64</b> 500 00	#4 F00 00	<b>0</b> 4 500 00	<b>\$1</b> 500.00	<b>6</b> 4 500 00	<b>6</b> 45 000 00
Interior Finishes (Repairs)	Varies	Varies	Varies	1	LS	\$15,000.00	\$15,000.00	-	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$15,000.00
Furniture (Not Included) Appliances (Not Included)	1 1		1					1											
Appliances (Not included)	•		1		1	1	1			1	1	1	1	1		1			
Table 3.9 - Site Features																			
Site Features (Re-inspect once the weather permits - no costs)																			
Asphalt Paving																			I
Retaining Walls	┨───┤			I				1											ł
Sidewalks Landscaping	1 1			I				1		<u> </u>			<u> </u>	<u> </u>		<u> </u>			l
Lanussaphing	, 1		I	I	I	1	1		<u> </u>	1	1	1	1	1	1	1	1	1	ı
Table 3.10 - Mechanical Systems																			
Building HVAC (Replace two heating boilers)	Varies	Varies	Varies	2	EA	\$16,000.00	\$32,000.00		\$32,000.00										\$32,000.00
Building Plumbing and Hot Water (Replace DHW boiler)	Varies	Varies	Varies	1	EA	\$11,000.00	\$11,000.00						\$11,000.00						\$11,000.00
Building Plumbing and Hot Water (Replace DHW storage tanks)	Varies	Varies	Varies	2	EA	\$4,500.00	\$9,000.00										\$9,000.00		\$9,000.00
Building Plumbing (Contingency for plumbing repairs)	Varies	Varies	Varies	1	LS	\$30,000.00	\$30,000.00		\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$30,000.00
Table 3.11 - Electrical Systems																			
Electrical Systems (Specialist review of the electrical systems)	Varies	Varies	Varies	1	IS	\$5.000.00	\$5.000.00	1	\$5.000.00			1			1		1	1	\$5.000.00
Electrical Systems (Specialist review of the electrical systems)	Varies	Varies	Varies	1	LS	\$35,000.00	\$35,000.00	1	\$35,000.00	1		1	1	1	1	1	1	1	\$35,000.00
Electrical Systems (Replace glass plug fuse style electrical panels in units)	Varies	14.1	Varies			\$500.00			\$4,900.00	\$4,900.00	\$4,900.00	\$4,900.00	\$4,900.00						\$24,500.00
Fire/Life Safety Systems (Replace the main and annuciator fire alarm panels - does not include wiring or associated devices)	Varies	Varies	Varies	1	LS	\$50,000.00	\$50,000.00			\$50,000.00									\$50,000.00
Fire/Life Safety Systems (Inspect and repair all emergency exit signs)	Varies	Varies	Varies	1	LS	\$5,000.00			\$5,000.00										\$5,000.00
TOTALS (Uninflated)	4.			-			\$939,400.00	\$3,500.00	\$637,800.00	\$164,400.00	\$32,400.00	\$9,400.00	\$20,400.00	\$24,500.00	\$4,500.00	\$4,500.00	\$33,500.00	\$4,500.00	\$935,900.00
		Inflation	0.5%						1.00	1.005	1.050	1.075	1.100	1.405	1.450	4 475	1 000	1 005	1
Inflation Facto	4 <sup>1</sup>	Rate	2.5%	J						1.025	1.050	1.075		1.125	1.150 \$5.175.00	1.175 \$5,287,50	1.200 \$40,200.00	1.225 \$5 512 50	\$956 612 50
TO THE UNITED	4								9001,000.0U	φ100,010.00	ψ04,020.00	ψ10,100.00	ψεε, <del>14</del> 0.00	ψει,302.00	ψυ, 170.00	ψ0,207.00	ψτ0,200.00	ψ0,012.00	ψ000,012.00
Term of Analysis	10																		
Total number of units within the building	49																		
			-																
Average Cost per Unit per Year (Uninflated)		\$1,910.00																	

\$1,910.00
\$1,952.27

APPENDIX II Specialist Review of the Elevator System

# 151 Metcalfe Street Ottawa, Ontario

**Elevator Condition Assessment** 

221979 - O106462b.wpd Prepared by KJA Consultants Inc. for Pinchin Ltd. January 20, 2016

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# 1 Introduction

On January 20, 2016, we performed an inspection of the passenger elevator located at 151 Metcalfe Street in Ottawa, Ontario, Ontario. The purpose of the inspection was to review the equipment condition and provide an estimate for required and recommended capital expenditures over the next ten years. KJA did not inspect or test the safety features of the equipment and installation and did not check the equipment for compliance with requirements of the regulating authorities (TSSA).

The equipment reviewed in this report consists of one geared traction passenger elevator manufactured and installed by Westinghouse Turnbull circa 1938. We understand that CBM Elevators is currently maintaining the equipment under the terms of A typical "full-service" maintenance contract contract.

The periodic maintenance tasks (as outlined in the B44 Safety Code for Elevators) are regularly recorded as complete in the maintenance logbook.

The elevator at this building is provided with a single-speed AC drive. Due to safety issues concerning levelling accuracies, the province of Ontario has mandated (via TSSA Director's Order 267/14) that elevators with these types of drives must be modernized or replaced. The compliance date for this directive depends on the vintage of the elevator; for the elevator at this location replacement would be required no later than January 1, 2018. Note that the lead time for design, tender, equipment manufacture/delivery and construction would be in the area of 8-10 months so a project to modernize this elevator should be commenced no later than early 2017.

Later in this report (**Possible Upgrades and Concerns**) we have listed more information relating to this requirement as well as other upgrades that may be considered or required over the next ten years. Short of these items, we do not anticipate any immediate major problems that would require capital expenditures. Any major repairs short of vandalism or "Acts of God" should be covered under the terms of the full maintenance contract.

# 2 Equipment Description

Traction Elevator						
Number of elevators in group (designation):	1 (n/a)					
Government installation numbers:	3255					
Installed by:	Westinghouse Turnbull					
Date installed:	1938					
Modernized by:	n/a					
Date modernized:	n/a					
Service company:	CBM Elevators					
Capacity:	820 kg					
Function:	passenger					
Floors served:	1-4					
Contract speed (feet per minute):	approx. 75					
Governor trip speed (feet per minute):	no data tag					
Controller type:	relay-based Turnbull					
Drive type:	single speed AC					
Motor type:	AC (no data tag)					
Machine type:	geared traction					
Emergency brake:	none					
Roping:	4 x 5/8"					
Roping ratio:	1:1					
Door type:	car: single speed side opening gate hall: manual swing					
Door operator:	Turnbull					
Hall door interlocks:	provided					
Car door restrictors:	none					
Hall door retainers:	n/a					
Door dimensions (W x H, inches):	35 x 84					
Door protection:	none					
Cab size (W x D x H, inches):	61 x 59 x 94					
Car station:	main only					
Position indicator (car/hall):	none/none					
Arrival signals:	none					
Communication:	none					
Compensation:	none					
Firefighters' Emergency Operation:	none					
Emergency power operation:	none					
Security:	none					
Car top inspection station:	provided					
Machine room cooling:	none					

# **3** Possible Upgrades and Concerns

### 3.1 Introduction

A typical "full-service" maintenance contract covers the replacement of major components in addition to the labour and materials necessary for ongoing repairs, adjustment and preventative maintenance work. Entrances and cab finishes are normally excluded. The only additional operating costs to the Owner should be for malicious damage and repairs to the elevator cabs and entrances. We are assuming, of course, that repairs due to accidents or "Acts of God" (flood, fire, etc) are covered by insurance.

A summary of possible elevator upgrades or concerns is as follows. We would suggest that money be set aside for the following upgrades that will likely be required (voluntary or otherwise) over the next ten years. The costs noted are indicative budget figures only, are based on the current market and are in present dollars. The actual costs may vary depending on the time of tendering, the actual detailed scope of work and market conditions. The figures listed below do not include work required by other trades in conjunction with the elevator work.

Please note the intent of our inspection is to make recommendations for capital expenditures based on the present type and condition of the elevating equipment. No invasive procedures or equipment dismantling would typically be conducted. Hidden conditions that cannot be visually inspected may be present, hence we cannot guarantee that some will not exist that could result in requests for additional services or costs by the contractor.

Description of work	Units	Schedule	Improvement	Cost
3.3 Major Control Modernization	1	1 year	Safety, reliability, accessibility, code	\$205,000 - \$285,000
3.4 Roof Top Walkway	1	<1 year	Safety, code	\$5,000
3.5 Code Changes	1	5 years	Code	\$3,000
3.6 Vandalism	1	5 years	Reliability	\$2,000

## 3.2 Summary Table

## 3.3 Major Control Modernization - Single Speed AC

Elevators with single-speed AC drives cannot attain the levelling accuracy of more modern designs. Since the problem of passengers tripping on the sill when the elevator is out of level can lead to accidents and legal action we recommend the short-term modernization of the equipment. Furthermore, the province of Ontario has mandated (via TSSA Director's Order 267/14) that elevators with these types of drives must be modernized or replaced. The compliance date for this directive depends on the vintage of the elevator; for the elevator at this location **replacement would be required no later than January 1, 2018**. Note that the lead time for design, tender, equipment manufacture/delivery and construction would be in the area of 8+ months so a project to modernize this elevator should be commenced no later than early 2017.

This modernization would typically include variable-voltage-variable frequency solid-state drive technology and a new microprocessor controller. Apart from more precise levelling accuracy this would have the additional benefit of more reliable operation with fewer callbacks and improved performance. Given the vintage of equipment at this site (>75 years old) we would recommend that the modernization involve the replacement of most of the elevator

components; the car frame and guide rails could likely be retained, but all of the electrical and mechanical components, as well as the cab shell and hall entrances, should be replaced. The cost for this would be in the area of \$180,000 to \$210,000.

Note that the costs above do not include the costs of work by related trades, which might be significant given the age of the building and equipment arrangement. It is likely that the following major work by others would be required within the next 2 years concurrent with the modernization project: a new machine room structure, new machine room wiring and lighting, an upgraded power supply and disconnects, new lighting in the pits, cutting and patching around hall entrances, potential upgrade of the building fire alarm system and a new phone line. The building structure would also need to be reviewed to ensure it is capable of sustaining what is likely to be increased loads from the elevating equipment. We would speculate the costs could be in the area of \$25,000 - \$75,000; however, we recommend this be evaluate further by related trades (M&E and structural engineers) as this falls somewhat outside our scope of expertise.

## 3.4 Roof Top Walkway

The Ontario regulating authority (TSSA) has issued Director's Order 231/08 stating that for low parapet roof tops (< 1070 mm) the provision of a walkway with handrails is now a retroactive requirement. The compliance date for this work has already passed and the arrangement at this building is presently non-compliant. This work would normally not be performed by the elevator contractor. A figure of \$5,000 would be a reasonable amount to carry for budgeting purposes.

# 3.5 Code Changes

Code requirements have become more onerous over the past decade and the interval between code changes has decreased. For that reason, we recommend budgeting funds at five year intervals to address code changes. Without being able to pinpoint these changes, it is reasonable to expect that they would require in the area of \$3,000 per device every five years.

## 3.6 Vandalism

We recommend budgeting funds to repair vandalism - principally damage to exposed finishes and fixtures. No precise figure can be assigned since much depends on the location and environment but we suggest allowing a figure of \$2,000 per unit every five years.