This is the 1st affidavit
of Brett Johnston in this case and
was made on the 5th day of June 2025

No. S-246230
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

BETWEEN:

INTRACORP VANNESS LIMITED PARTNERSHIP

PLAINTIFF

AND:

THE OWNERS, STRATA PLAN LMS992, and CROWE MACKAY & COMPANY LTD., AS LIQUIDATOR OF THE OWNERS, STRATA PLAN LMS992

DEFENDANTS

AFFIDAVIT

I, Brett Johnston, Co-Founder of Woola Mechanical, of #3 – 62 Fawcett Road, Coquitlam, British Columbia, V3K 6V5, SWEAR THAT:

1. I am the Co-Founder of Woola Mechanical and as such, I have personal knowledge of the facts and matters deposed to in this affidavit, except where they are stated to be based on information and belief, and those matters I believe to be true. I am the controlling partner in Woola's Mechanical, Power, and Build departments (the departments collectively, "**Woola**").

2. Woola provides a variety of installation, maintenance, repair, and inspection services for commercial and strata residential properties.

3. I have been in the building inspection and construction industry for seventeen years. I formerly owned a fire prevention company for over fifteen years, was a Registered Fire Protection Technician with Applied Science Technologists & Technicians of British Columbia, and took courses on Fire Prevention and the British Columbia Building Code at the British Columbia Institute of Technology.

4. In or around August 2024, Woola was engaged by Intracorp to inspect and provide recommendations and price quotes for repair and maintenance work to the tower and townhomes at 3362, 3364, 3366, 3368, 3370, 3372, 3374, 3376, 3378, 3380, 3382 and 3384 Vanness Avenue, Vancouver, British Columbia (the "**Property**").

5. Intracorp instructed Woola to review and consider a list of work to be done to the building from a previous report on the Property, assess several key components of the Property, and prepare a report setting out the repairs necessary to meet building code and life safety requirements for temporary occupation as well as the cost of these repairs. Attached hereto as **Exhibits "A"**, **"B"**, and **"C"** are the three reports I reviewed further to Intracorp's instructions.

6. The following representatives from Woola attended the Property to conduct the requested assessment on or around August 23, 26, and 27, 2024:

   (a) Myself;

   (b) Andrew Blaze, the head of Woola's Build Department, who has been a Licensed Home Builder for over twenty years; and

   (c) Brock Johnson, the then-head of Woola's Mechanical Department, who had been a Registered Red Seal Plumber for over ten years at the time he attended the property.

7. Woola assessed each component, except the elevator, which was under a service contract with Richmond Elevator.

8. Based on Woola's assessments and the information provided by Richmond Elevator, I prepared a Critical System Assessment Report. Attached hereto as **Exhibit "D"** is a true copy of a Critical System Assessment Report dated September 4, 2024, which I prepared after Woola's inspection of the Property on August 23, 26, and 27, 2024. The report sets out Woola's assessment and recommendations for repairs and maintenance to the Property, along with the estimated costs for the work.

SWORN BEFORE ME at City of Coquitlam, Province of British Columbia, on the 5th day of June, 2025)

A Commissioner for taking affidavits for British Columbia

Youssef Mian
Temporary Summer Articling Student
Commissioner of Oaths
Cassels Brock and Blackwell LLP
#2200 - 885 West Georgia Street
Vancouver, B.C. V6C 3E8
Phone: (778) - 372 - 7341
* My appointment expires August 8th, 2025

BRETT JOHNSTON

This is Exhibit "A" referred to in the affidavit of Brett Johnston sworn before me at Coquitlam, this 5th day of June, 20 25

A Commissioner for taking Affidavits in British Columbia

BUILDING ENVELOPE CONDITION ASSESSMENT

AT

JOYCE PLACE

3380 VANNESS AVENUE (TOWER)
3362 TO 3376 VANNESS AVENUE (TOWN HOMES)

VANCOUVER, BC

Prepared for:

The Owners, Strata Plan LMS 992
c/o Siegle Properties BC Ltd.
#211 - 8680 Cambie Road
Richmond, BC V6X 4K1

Attention: Mr. Edward Jang

Prepared By:
Brian Lee, P.Eng.

Date: January 3, 2017
MGH File No: 2016.06.003

MGH Consulting Inc.

5650 Cedarwood Street
Burnaby, B.C. V5G 2K6
Canada
Telephone: (604) 612-5841
Email: blee@mghconsulting.ca

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MGH Consulting Inc.

5650 Cedarwood Street
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BUILDING ENVELOPE CONDITION ASSESSMENT REPORT

PROJECT NAME:	Joyce Place
LOCATION:	3380 Vanness Avenue, Vancouver, BC (Tower) 3362 to 3376 Vanness Avenue, Vancouver, BC (Town Homes)
OWNER:	The Owners, Strata Plan LMS 992
PROPERTY MGR:	Siegle Properties B.C. Ltd.
MGH PROJECT NO:	2016.06.003

Joyce Place
Strata Plan LMS 992

ITEM	DESCRIPTION
1.0	**BACKGROUND** Acting on behalf of The Owners, Strata Plan LMS 992 (the "Strata" or the "Client"), Siegle Properties B.C. Ltd. ("Siegle") retained MGH Consulting Inc. ("MGH") to perform a building envelope condition assessment ("BECA") at the residential tower and the town homes at Joyce Place. The purpose for MGH's review was to identify whether problematic areas exist that warrant building maintenance or repair. The building components in the scope of review included the building exterior cladding, exterior windows & sliding doors, exterior caulking, balconies/decks, roofing, and the below-grade parkade.
2.0	**BUILDING DESCRIPTION** Joyce Place is a residential complex located in Vancouver, BC comprised of a tower and a separate building containing eight (8) town homes. a. The tower has 12 floor levels, containing 52 apartment style units, b. The eight (8) town homes have 3-storeys and the units are attached (side-by-side) in a row. **Figure 1: Site Plan** shows the general arrangement of the tower and the town homes. See **Photographs 1 to 24** for general views of the salient features at the tower and the town homes.

Per: _____
MGH Consulting Inc.

View looking South

View looking North

Acknowledgements:
Images were obtained from Google maps

Figure 1: Site Plan

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION

2.0 BUILDING DESCRIPTION (Continued)

The original Building Permit drawings were prepared by William Rhone Architects, and issued for construction in 1992. For the purpose of this report the age of the completed buildings will be considered 23 years (approximate) as of December 2016.

A. Tower

The tower is located at 3380 Vanness Avenue, Vancouver, BC (See **Figure 1** and **Photographs to 4**). There are fifty-two (52) apartment style units in the tower. Six (6) units per floor occupy floor levels 3 through 10. Four (4) two-storey units occupy floor levels 11 and 12. Floor level 2 contains common facility areas including a sauna, change rooms, an indoor conference room, and an outdoor patio.

The tower is concrete construction with metal stud framing at exterior walls and partition walls. The exterior walls are comprised of stucco cladding, window walls, and individual windows. The cladding assembly is face-sealed stucco over Tyvek sheathing membrane on gypsum sheathing board. See **Photographs 5 and 6**.

The exterior windows at the North elevation are double-glazed pre-finished aluminum windows that typically extend horizontally the full length of a room, and extend vertically from the top of a pony wall to the underside of the ceiling. See **Photographs 6, 7 and 9**.

The exterior windows at other elevations are typically smaller rectangular shaped double-glazed prefinished aluminum windows. See **Photographs 5, 6 and 10**.

The top of the tower has a flat roof with a mechanical penthouse centrally located on the flat roof. The top of the mechanical penthouse has a flat roof. The tower also has a lower flat roof on floor level 2. See **Photographs 13 to 16** for general views of the flat roofs.

Exterior balconies facing South are open to the air. Balconies facing North are fully enclosed. See **Photographs 5, 6 and 9**.

B. Town Homes

Eight (8) town homes are located at 3362 through 3376 Vanness Avenue, Vancouver, BC. See **Photographs 17 and 18**.

The town homes are wood frame construction. Each town home has three floor levels above ground and a crawlspace below-grade. The town homes are attached side-by-side and form a single building that is separated from the tower. The top of the town homes have flat roofs and pitched roofs. Each town home has an outdoor balcony facing North at floor level 2, and an outdoor deck facing South at floor level 3. See **Photographs 17 to 20**.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

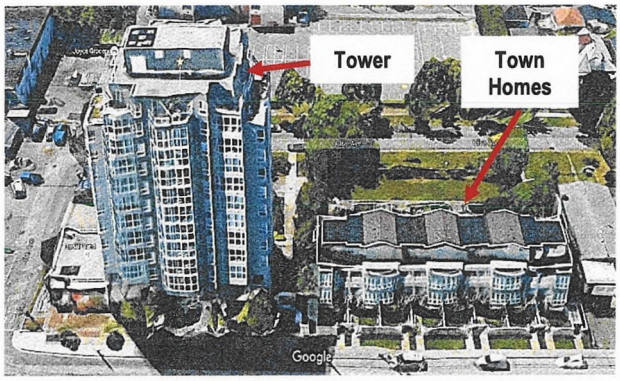
ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)** **C. Parkade** The parkade is concrete construction. The single level parkade is below-grade, and is located beneath the tower and the row of town homes. See **Photographs 21 to 24**. **D. Common Facilities Area** Floor level 2 is comprised of common facilities including a sauna, men's and women's change rooms, an indoor conference room, and an outdoor patio. These facilities were not included in MGH's current scope of review. **E. Retail Space** Retail / Commercial businesses occupy the ground floor spaces. These areas were not included in MGH's current scope of review.

Per: _____

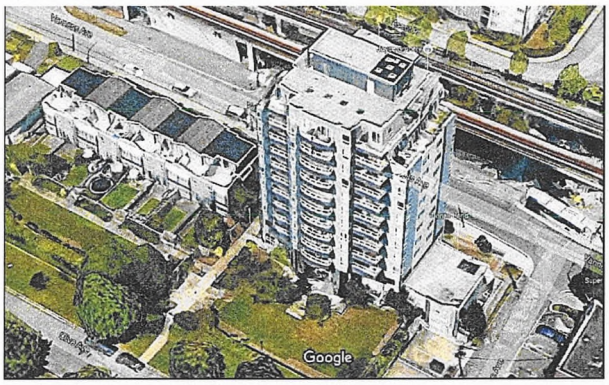
MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

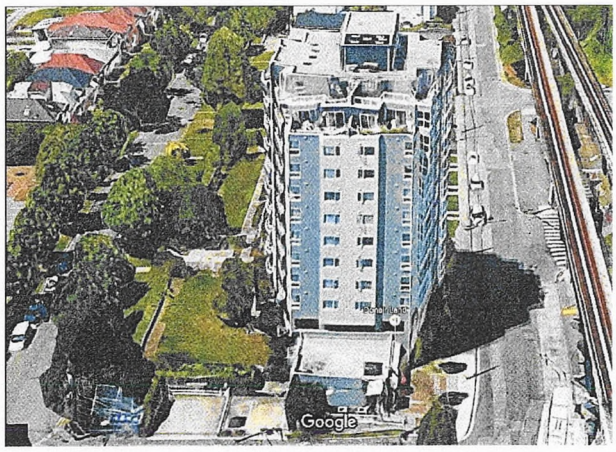
ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**



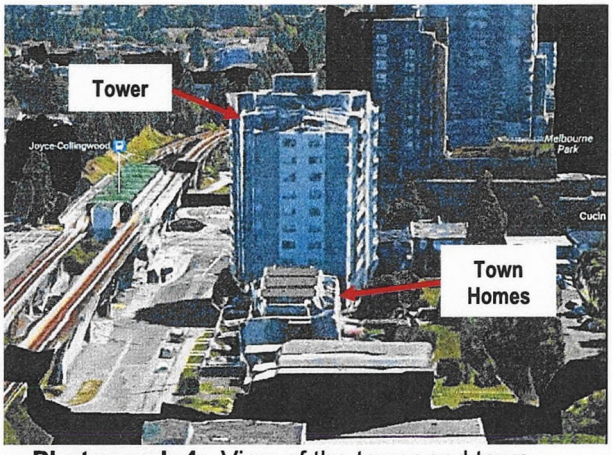
Photograph 1: View of the tower and town homes looking South.



Photograph 2: View of the tower and town homes looking North-West.



Photograph 3: View of the tower looking West.



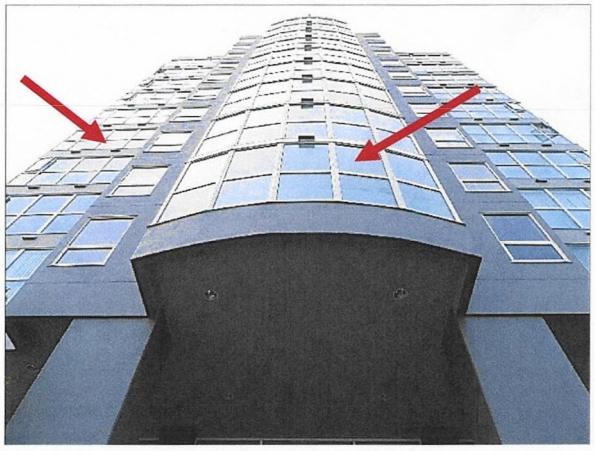
Photograph 4: View of the tower and town homes looking East.

Per: _____

MGH Consulting Inc.

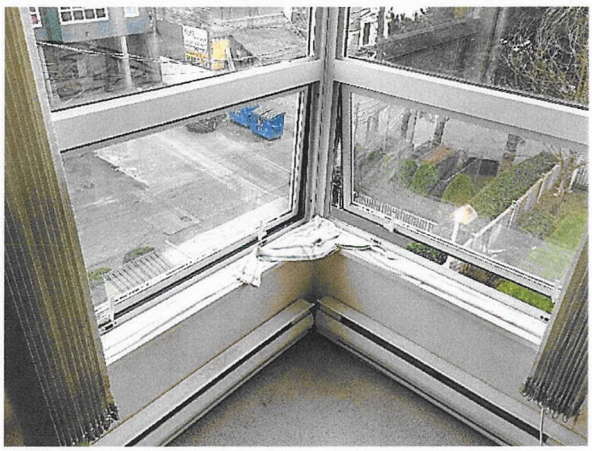
ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**

Photograph 5: Tower
View of the stucco cladding at the West elevation. The arrow points to a typical "rectangular-shaped" window at a stucco wall.



Photograph 6: Tower
View at the North elevation. The left arrow points to a column of "enclosed" balconies. The right arrow points to the column of "solarium" windows. See **Photographs 7 and 9**.

Photograph 7: Tower
View inside a typical "solarium" at the North elevation. See **Photograph 6**.



Photograph 8: Tower
A typical corner window (South-East corner at a typical apartment).

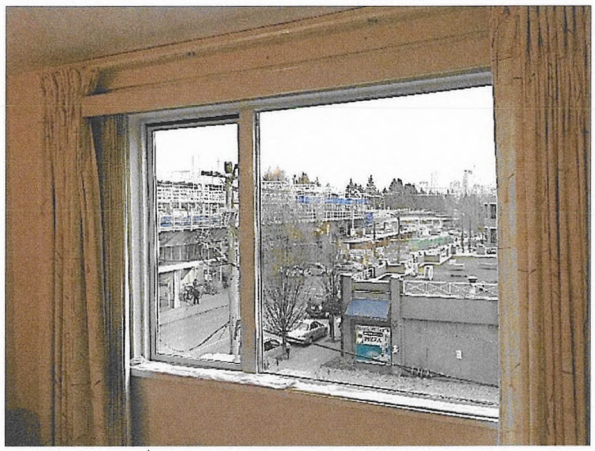
MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

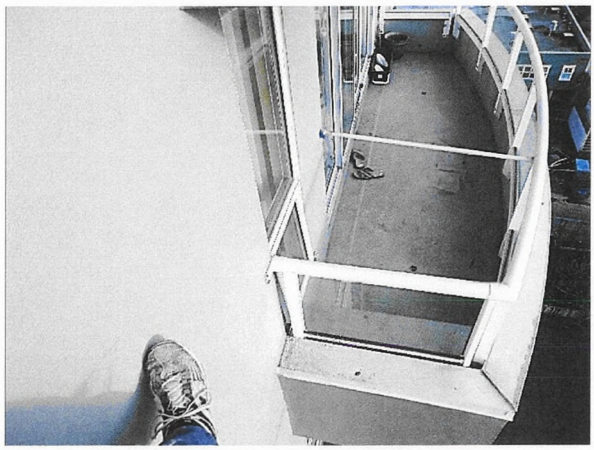
ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**

Photograph 9: Tower
View of a typical "window wall" at an enclosed balcony (North elevation).



Photograph 10: Tower
View of a typical "rectangular-shaped" window at a stucco clad exterior wall.

Photograph 11 Tower
The arrows point to the typical outdoor balconies exposed to the air (South elevation).
See **Photograph 12**.



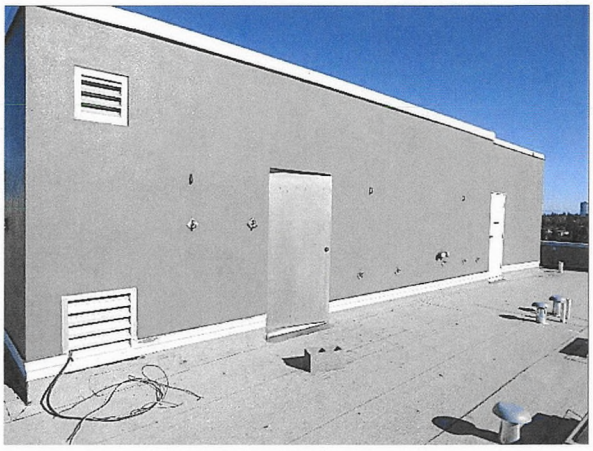
Photograph 12: Tower
Closer view of a typical outdoor balcony (South elevation). See **Photograph 11.**

Per: _____
MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**

Photograph 13: Tower
View of the upper flat roof at the top of tower. (South side of Mechanical Penthouse looking West)



Photograph 14: Tower
View of the Mechanical Penthouse at the top of tower (South elevation of penthouse). See **Photographs 15 & 16**.

Photograph 15: Tower
View of the flat roof on the Mechanical Penthouse. See **Photographs 14 & 16**.

Photograph 16: Tower
View of the lower flat roof on floor level 2 (Looking North).

Per: _____
MGH Consulting Inc.

MGH Consulting Inc.

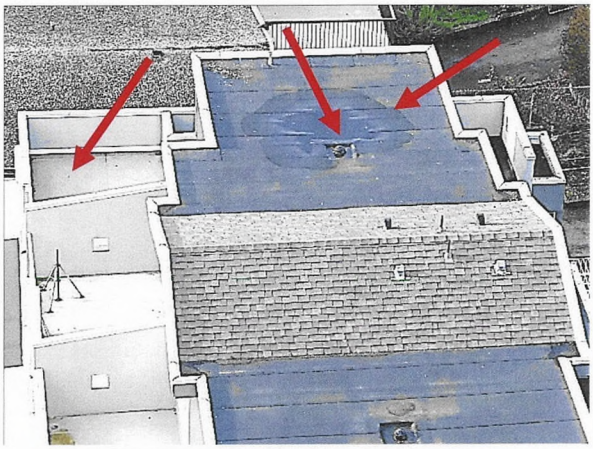
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**

Photograph 17: Town Homes
General view of the stucco cladding, windows, outdoor balconies, and roof-line (North elevation).

Photograph 18: Town Homes
The left arrow points to a "pitched" roof. The right arrow points to a "flat" roof.

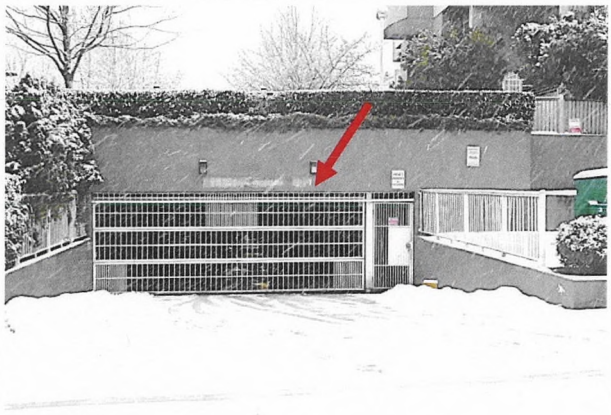


Photograph 19: Town Homes
Closer view of the roofing shown in **Photograph 18**. The left arrow points to a typical outdoor deck at floor level 3. The middle arrow points to a typical roof drain. The right arrow points to the outline of a large area of standing water.

Photograph 20: Town Homes
Closer view of a typical outdoor deck on floor level 3 at the South side of the town home. See **Photograph 19**.

Per: _____
MGH Consulting Inc.

ITEM	DESCRIPTION
2.0	**BUILDING DESCRIPTION (Continued)**



Photograph 21: Parkade
The arrow points to the exterior lift gate which provides access to the Retail / Commercial parking area in the below-grade parkade.

Photograph 22: Parkade
The arrow points to the interior lift gate which provides access to the residential Strata Owners' parking area in the below-grade parkade.

Photograph 23: Parkade
View of the Retail / Commercial parking area in the below-grade parkade.

Photograph 24: Parkade
View of the residential Strata Owners' parking area in the below-grade parkade.

Per: _____

MGH Consulting Inc.

ITEM	DESCRIPTION

3.0 SCOPE OF ENGINEERING SERVICES

MGH's current scope of review is intended to be a cursory level building envelope condition assessment ("BECA") at the tower and the town homes.

A BECA is an investigation of the various components at the building exterior that comprise the building envelope. Typically, a BECA includes a review of the cladding assembly, exterior windows, vents, and caulking at exterior joints. MGH also reviewed the roofing, balconies, and the below-grade parkade.

The objective of the BECA is to identify the existence and severity of deficiencies that may exist at the building envelope, the roofing, and the below-grade parkade.

MGH's scope of engineering services at the tower and the 8 town homes was confined to the following:

a. Review the original architectural drawings,

b. Visually review the building exterior. The review of the tower exterior was performed from bosun's chair-drops suspended from the roof top. Eight (8) separate chair drops were conducted at the tower (i.e., 2 chair drops per elevation). Review of the town home exterior was performed from the ground floor, the balconies, and from ladders.

c. Visually review the building roof tops, and the ceiling and foundation walls at the below-grade parkade,

d. Perform a moisture content ("MC") survey at the building exterior at selected locations to identify whether elevated levels of moisture content currently exist behind the stucco cladding,

e. Locally remove small areas of stucco cladding at selected locations to make an exploratory opening ("EO") to reveal the building materials behind the cladding,

f. Locally remove small areas of interior drywall at selected town homes to make an exploratory opening ("EO") to reveal the building materials within the wall cavity at the North elevations.

g. Provide an Opinion of Probable Cost ("OPC") of construction for the recommended scope of repairs. The OPC will be to an "order-of-magnitude" accuracy. The actual cost of construction can be determined from a proper tendering process that involves competitive bidding contractors.

Coastpro Contracting Ltd. ("Coastpro") and Simplistic Solutions Building Maintenance ("Simplistic Solutions") assisted MGH during its BECA investigation. Coastpro's and Simplistic Solutions' services included making EO's under the direction of MGH, and to temporarily seal the EO's upon completion of the investigation. Final repairs to restore the EO's to its original condition will be the responsibility of the Strata Corporation. Coastpro also assisted MGH in preparing the OPC.

MGH reviewed the interior of selected units at the tower and the town homes. The interior review was intended to look for indications of previous moisture related problems (if any) at the interior side of exterior walls.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
4.0	**REPORT FORMAT** MGH's observations and findings will be documented separately for the tower and for the town homes. The report will summarize the findings from a moisture content ("MC") survey. The exploratory test openings ("EO") revealed the condition of the underlying materials behind the stucco cladding (at the tower and the town homes) and within the wall cavity of the North exterior walls (at the town homes). The report will summarize the findings from the EO's. The report will describe the category of the various components under review, accompanied by a representative photograph (when appropriate). MGH will opine on whether the component is performing as intended, whether the component requires maintenance, or whether the component is deficient. If the category of component displays a high frequency of defect/deficiency the report will discuss recommendations for remedial repairs or replacement. This report is not intended to serve as a proper specification for remedial repairs. The report will provide an Opinion of Probable Cost ("OPC") of construction to implement the recommended repair strategy. A separate OPC will be provided for the tower and the town homes. The OPC will be inclusive of the City of Vancouver permit fees, the estimated cost of construction, consulting fees, and taxes.
5.0	**DISCLAIMER** This report has been prepared based upon the information referenced herein. The report has been prepared in a manner consistent with good engineering judgement. Should new information come to light, MGH requests the opportunity to review this information, and to revisit our conclusions and recommendations contained in this report. MGH has prepared this report for the exclusive use of the Client, and there are no representations made by MGH to any other party. MGH accepts no responsibility for damages suffered by third parties as a result of decisions or actions made by such parties based on this report. MGH does not claim to have discovered or discussed every deficiency during the course of its work which may be present at the Joyce Place tower and the Joyce Place town homes. Specifically, MGH has reported on what has been brought to its attention by the Client, as well as to what MGH has observed during its limited site investigation.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
6.0	**MOISTURE CONTENT SURVEY**

6.1 Background

MGH performed a moisture content ("MC") survey at the exterior walls of the tower and the town homes. The purpose of the MC survey is to measure the moisture content of the components behind the cladding for evidence of previous moisture ingress past the cladding and/or into the wall cavity. Please be advised that the detection of moisture behind the cladding or within a wall cavity does not necessarily indicate the source of that moisture, the time at which that moisture ingress occurred, nor the duration that moisture had existed at the location where the moisture reading was taken.

6.2 Moisture Content ("MC") Meter

Moisture content readings were measured using a Delmhorst BD-2100 hand-held moisture meter. The moisture content reading is shown on the meter as a percentage value (MC%) on the LED screen. See **Photograph 25** for a view of the moisture meter in use at Joyce Place.

The moisture meter has two (2) metal pins / probes that are inserted into the material being tested. The instrument measures the electrical resistance to conductivity between the 2 pins / probes and the firmware in the instrument translates the information into a "moisture content" reading in the material being measured. The short metal pins are suitable for measuring the MC at materials that are easily accessible. The moisture meter also has two (2) metal probes to replace the pins that serve the same purpose as the 2 pins. The longer length of the probes allows the investigator to measure the MC at a material that is less accessible, such as a layer of material located deeper in the wall assembly behind the cladding.

The longer metal probes also provide tactile feed-back to the investigator during the moisture testing procedure as to the structural integrity of the substrate. If the substrate material is in good condition the material should feel firm and offer resistance when the probes are pushed by hand force. Moisture damaged material will feel soft. In the event the substrate is severely damaged, the probe may easily pass through the substrate with little resistance.

6.3 Interpretation of the MC Readings

The moisture content survey is intended to obtain readings that are representative of the moisture content of the underlying material only at the time of the survey. The moisture meter is pre-calibrated to measure the moisture content ("MC") of the substrate (i.e., wood or gypsum sheathing). Every MC reading from the survey is documented on drawings located in **Appendix B: Figures 2 (MC) through 8 (MC)**. The legend below describes how to read the information on the figures.

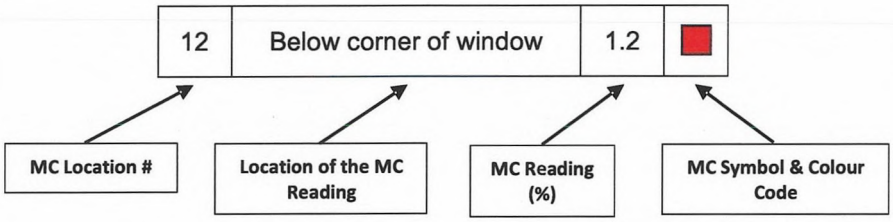
MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
6.0	**MOISTURE CONTENT SURVEY (Continued)**
6.3	**Interpretation of the MC Readings (Continued)**

A. TOWER:



In addition to the value of the numeric MC reading, pushing the moisture meter's metal probes onto the substrate provides tactile feed-back on the condition of the material behind the cladding. At the tower, the exterior sheathing board is **"gypsum."** Gypsum sheathing that has become damaged from moisture may feel soft "punky" or may be so deteriorated that the probes penetrate the gypsum under hand pressure.

MC readings do not provide historical information, and MC readings do not indicate the length of time the material has been experiencing the MC% reading.

The table below describes how to interpret each moisture content ("MC") symbol & colour code for MC readings. Each MC symbol & colour code represents a range in the MC readings (as a percentage of moisutre content) and an interpretation of the condition of the substrate. The substrate being measured is "gypsum sheathing board." MC readings are categorized by the following three classifications;

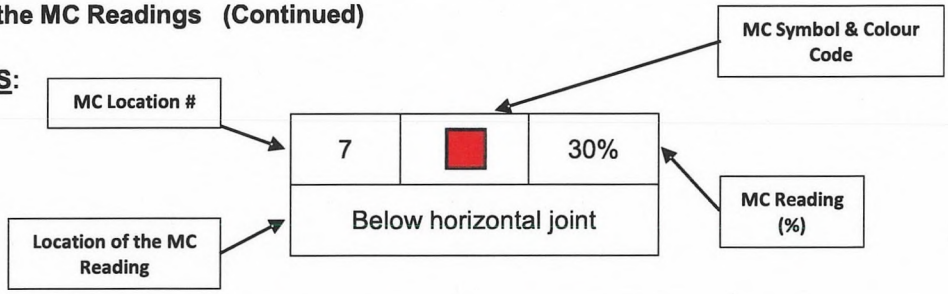
MC Symbol	MC Range	Colour Code	Definition
●	0% to 0.5%	Green	No suggestion there is a moisture related problem.
◆	0.5% to 1.0%	Yellow	Moisture content that is borderline (Higher than normal operating conditions).
■	Greater than 1.0%	Red	Moisture content that exceeds the acceptable range.

Per: _____

MGH Consulting Inc.

ITEM	DESCRIPTION
6.0	**MOISTURE CONTENT SURVEY (Continued)**
6.3	**Interpretation of the MC Readings (Continued)**

B. TOWN HOMES:



In addition to the value of the numeric MC reading, pushing the moisture meter's metal probes onto the substrate provides tactile feed-back on the condition of the material behind the cladding. At the town homes, the exterior sheathing board is **"plywood."** Wood that has become damaged from moisture may feel soft "punky" or may be so deteriorated that the probes penetrate the wood under hand pressure.

MC readings do not provide historical information, and MC readings do not indicate the length of time the material has been experiencing the MC% reading.

The table below describes how to interpret each moisture content ("MC") symbol & colour code for MC readings. Each MC symbol & colour code represents a range in the MC readings (as a percentage of moisutre content) and an interpretation of the condition of the substrate. The substrate being measured is "plywood." MC readings are categorized by the following four classifications;

MC Symbol	MC Range	Colour Code	Definition
●	Up to 19%	Green	No suggestion there is a moisture related problem.
◆	20% to 28%	Yellow	Moisture content at which decay fungi may be sustained after the fungi has germinated (at a higher level of MC).
■	29% to 35%	Red	Moisture content at which decay fungi can germinate and take hold.
■	Greater than 35%	Red	Moisture content at which decay fungi can propagate and flourish.

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ITEM	DESCRIPTION
6.0	**MOISTURE CONTENT SURVEY (Continued)**

6.4 Summary of Findings from the MC Survey

6.4.1 Background

MGH obtained MC readings at one hundred twenty nine (129) locations (i.e., 84 locations at the tower, and 45 locations at the town homes). See **Appendix B** for the MC survey locations and a summary of the MC readings. MGH focused its MC survey to include architectural details that historically have demonstrated susceptibility to water ingress at other similar buildings. The MC locations included the bottom corner of windows, below vents, and below horizontal joints in the stucco cladding.

6.4.2 Observations

A. Tower:

MGH discovered problematic locations where the moisture content of the gypsum sheathing board (behind the stucco cladding) was elevated higher than what would be expected under normal conditions.

At the majority of moisture probe locations where the MC reading was elevated, the gypsum board was intact. At multiple locations where the MC reading at the gypsum board was elevated, MGH discovered that the board was soft "punky" when the metal probes of the MC meter where pushed against the gypsum board using hand pressure.

MGH visited selected units in the tower to observe the condition of the various components (i.e., windows, interior drywall, carpet edges, etc.) inside the apartment. MGH also interviewed the occupants. Many occupants reported to MGH that they experience repeated occurrences of condensation on the interior surfaces of the exterior windows. MGH observed severe condensation on the window glazing and window frames (including large-sized water droplets hanging from the head of the window frame) at the majority of units it visited. Water running down the window surfaces accumulated in the horizontal troughs of the window frames and sometimes water overflowed the top edge of the trough spilling onto the wood stool plate along the window sill. The occupants typically placed towels along the window sill.

MGH made exploratory openings ("EO's") in the cladding at locations where elevated MC readings were encountered at the gypsum sheathing. MGH observed that the gypsum sheathing behind the cladding was deteriorated at multiple EO locations where elevated MC readings were measured.

6.4.3 Comments

A. Tower:

It had rained sporadically but very heavily in Vancouver during the few weeks prior to MGH's site investigation. The rain provides an opportunity for moisture to penetrate various architectural details and/or cladding details that may have been susceptible to water ingress. Based on the evidence from MGH's investigation, it is the opinion of MGH that a significant source of moisture causing damage to the gypsum sheathing is likely condensation at the exterior windows.

Per: _____

MGH Consulting Inc.

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ITEM	DESCRIPTION
6.0	**MOISTURE CONTENT SURVEY (Continued)**

6.4	**Summary of Findings from the MC Survey (Continued)**
6.4.4	**Observations** **B. Town Homes:** MGH visited six (6) of the eight (8) town homes to observe the various components (i.e., exterior windows, exterior sliding doors, interior drywall, carpet edges, etc.) inside the town homes. MGH discovered problematic locations where the moisture content of the plywood sheathing board (behind the stucco cladding) was elevated higher than what would be expected under normal conditions. Many occupants informed MGH that they frequently experience condensation on the interior surfaces of the exterior windows. MGH observed severe condensation on the window glazing and window frames (including large-sized water droplets hanging from the head of the window frame) at the majority of town homes it visited. Water running down the surfaces of the window accumulated in the horizontal troughs of the window frames and on the wood stool plate along the window sill. MGH observed towels along the window sill that occupants typically placed to absorb the water. MGH made exploratory openings ("EO's") at the stucco cladding on the exterior side of the exterior walls at locations where elevated (high) MC readings were encountered during the moisture content survey. MGH also made EO's at the interior drywall below the windows on the North exterior wall. The EO's revealed that the plywood sheathing, as well as other wood structural components (i.e., columns, wall studs, floor sheathing boards, floor joists, etc.) were severely deteriorated from previous contact with moisture. At some of the locations of severe decay the MC reading at the decayed material was low at the time of MGH's site visit. At the majority of moisture probe locations where the MC reading was elevated, MGH discovered that the sheathing was deteriorated and the metal probes of the MC meter easily penetrated the plywood when pushed against the plywood using hand pressure. At some locations the severity of decay at the plywood caused the wood to disintegrate.
6.4.5	**Comments** **B. Town Homes:** It had rained sporadically but very heavily in Vancouver during the few weeks prior to MGH's site investigation. The rain provides an opportunity for moisture to penetrate various architectural details and/or cladding details that may have been susceptible to water ingress. Based on the evidence from MGH's investigation, it is the opinion of MGH that a significant source of moisture causing damage to the wood components at the North exterior wall assembly is likely condensation at the exterior windows.

Per: _____

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6.0	**MOISTURE CONTENT SURVEY (Continued)**

6.4

Photograph 25:

The instrument shown is a Delmhorst BD-2100 hand-held moisture meter.

The arrow points to an example location where the MC reading was taken below the bottom corner of a window at the Joyce Place town homes.

Metal probes are inserted into holes drilled through the stucco cladding. Pushing the metal probes onto the substrate behind the cladding provides tactile feed-back on the integrity of the exterior sheathing board (i.e., gypsum at the tower, and plywood at the town homes).

ITEM	DESCRIPTION

7.0 EXPLORATORY OPENINGS ("EO")

7.1 Introduction

MGH directed Coastpro Contracting Ltd. ("Coastpro") to make exploratory openings ("EO") at the building exterior at selected locations at the tower and the town homes. The purpose for the EO is to remove a portion of the cladding to reveal the condition of the building components behind the building cladding. Candidate locations for EO's often coincide with locations of elevated MC readings, and/or with architectural details that the investigator suspects may be at risk of water ingress.

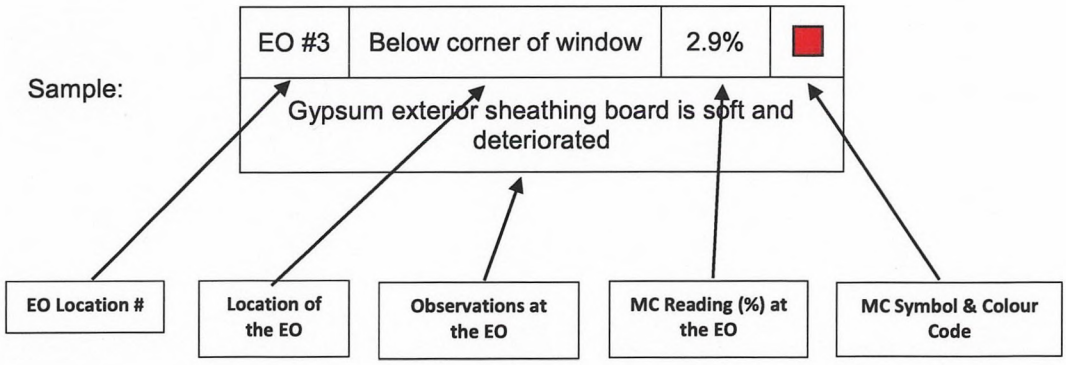
EO's at the building exterior were made by cutting and removing an area of the stucco cladding (a circle approximately 3 inch diameter) to reveal the various layers of the cladding assembly. See **Appendix C** for the EO locations and a summary of observations at the EO's.

MGH directed Simplistic Solutions Building Maintenance ("Simplistic Solutions") to make EO's at the interior drywall of the North exterior wall at selected town homes. The EO's were made by cutting and removing a square area of drywall (approximately 12 inch x 12 inch) to reveal the wall cavity.

MGH reviewed exploratory openings ("EO's") made at nine (9) locations at the building exterior (i.e., 5 locations at the tower, and 4 locations at the town homes), and at six (6) locations at the interior of the town homes.

7.2 Interpretation of the EO Observations & Readings

Observations at the Exploratory Openings ("EO") are documented on drawings in **Appendix C.** The locations of the EO, and the observations / findings at the EO's are documented on **Figures 3 (EO) through 6 (EO), and Figure 8 (EO)**. The legend below describes how to read the information on the figures.



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ITEM	DESCRIPTION
7.0	**EXPLORATORY OPENINGS ("EO")**

7.3	**Summary of Findings at the EO's**
7.3.1	**A. Tower:** MGH observed at the majority of EO locations that the paper cover on the gypsum sheathing board was stained by previous contact with moisture. However the gypsum core sandwiched between the paper appeared intact. At a few EO locations the gypsum sheathing was soft and deteriorated from previous contact with moisture behind the stucco cladding. See **Photograph 26**.
7.3.2	**B. Town Homes:** MGH observed at the majority of EO locations (at the interior drywall, as well as at the stucco cladding) that the plywood sheathing board at the North exterior walls was severely decayed by previous moisture ingress into the wall cavity. The severity of decay was so high at most EO locations that the wood crumbled easily and disintegrated when probed by hand using a sharp metal instrument. MGH also observed moisture damage to other wood components in the wall assembly at the North exterior walls (i.e, corner columns, wall studs, horizontal plate at bottom of exterior wall, horizontal plate at the window sill). The decay at those components of the wall assembly was so severe that the wood crumbled easily and disintegrated when probed by hand using a sharp metal instrument. At town home #3362 Vanness Avenue, the extent of decay included the horizontal plywood floor sheathing board adjacent to the North exterior wall (main floor level), and portions of the floor joists beneath the plywood floor board. See **Photographs 27 to 31** for representative views of the extent of severity of decay of the structural framing at the exterior wall assemblies.

Per: _____

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INVESTIGATION REPORT (Cont'd)

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**

Introduction

The following observations are of categories of building envelope components where MGH observed defects/deficiencies during its investigation of the building exterior. The observations were limited to areas of the building exterior that were accessible from the bosun's chair drops, from the roof tops, from ladders, and/or from the ground floor level.

The intent is to identify the nature of problems that currently exist at the building exterior. This investigation is not intended to identify an exhaustive list of defects/deficiencies that may currently exist at the building. Similar defects/deficiencies may exist at other areas of the building exterior that were not visited by MGH.

MGH will opine on the impact that such defects/deficiencies have on the performance of the building envelope, and opine on whether such defects are a maintenance item or require replacement.

Per: _____

MGH Consulting Inc.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower)**

Summary of Findings

The categories of problematic issues at the Joyce Place Tower are summarized below. A brief description of the observed defect(s) is provided. For a more detailed description including locations and photographs of the observed defects see **Appendix D**.

8.1.1 **Exterior Windows:**

Unit #303:

a. Mr. Kim Tay (Owner / Occupant since 2003).

b. MGH observed heavy condensation on the interior side of the windows, specifically the windows at the South-East corner of the apartment.

c. Water accumulating in the horizontal troughs (upper and lower troughs) of the window frame.

d. Mr. Tan informed MGH that previous repairs were performed from July 2014 through October 2014 at the interior side of the East exterior wall to remedy moisture damage to components within the wall assembly. The extent of repair included the East exterior wall in the living room and the East exterior wall in the adjacent bedroom. The repairs were performed in conjunction with the repair program being implemented at the exterior cladding on the tower.

e. Mr. Tan still experiences recurring condensation on the interior side of the window frames, and water accumulating in the horizontal troughs of the window frames. Water running down the surfaces on the interior side of the windows saturates the wood stool plates on the window sills.

f. Mr. Tan experiences air infiltration through the windows at the East exterior wall in the bedroom. MGH did not experience excessive air infiltration at the suspect window at the time of its site visit.

g. Additional weep-holes were drilled through the window frame (by other parties) at the upper horizontal trough of the window frame to drain water that accumulates in the trough. See **Photograph 32**.

Per: _____

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.1 Exterior Windows: (Continued)

Unit #502:

a. Ms. Amanda Wu (Owner / Occupant)

b. **Active Leaks:**
MGH observed an active leak at the holes where screws penetrate the window frame along the window head (North exterior wall). See **Photograph 33**. MGH observed corrosion of those screws (the screws fasten the window frame to the building substrate). Corroded screw fasteners were visible at multiple window panels, and at multiple locations within the panels (See **Photograph 34**).

It is the opinion of MGH that the source of moisture that MGH observed leaking from the window frame along the window head is likely the wall cavity above the window frame in Unit #502. Specifically, water from condensation on the windows in the apartment directly above Unit #502 (i.e., #602) can potentially migrate down the interior side of the windows at #602 and penetrate gaps within the window frame and gaps between the window frame and the wood stool along the window sill and leak into the wall cavity below the window at #602. Water in the wall cavity can continue to migrate down the wall cavity and potentially leak through the window frame along the head of the window in #502.

c. **Weep Holes:**
MGH observed water accumulating in the horizontal troughs of the window frame. The source of water accumulating in the troughs was condensation on the cold surfaces of the glass and the metal frame. The original design of the windows incorporate weep holes through the window frame at the lower horizontal trough to enable entrapped water to drain out and away from the building. However, the original windows do not incorporate similar weep holes at the upper troughs. Therefore, water from condensation that accumulates in an upper trough remains entrapped in that trough.

Ms. Wu informed MGH that additional weep holes were drilled through the window frame (by other parties) at the upper horizontal troughs to enable entrapped water to drain out from the trough and away from the building. MGH verifies it observed weep holes added to the upper troughs. See **Photograph 32** for an example of a weep-hole that was drilled into the original window frame.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.1 Exterior Windows: (Continued)

<u>Unit #505</u>:

a. Mr. Peter Leung (Owner / Occupant)

b. Mr. Leung informed MGH that he experiences dampness (by hand) on the surface of the interior drywall in his living room at the West exterior wall.

c. MGH did not feel dampness of the interior drywall on the West exterior wall at the time of its site visit

d. Mr. Leung has not experienced issues relating to the exterior windows at his apartment.

e. MGH did not observe obvious evidence of moisture problems relating to the exterior windows at the time of its site visit.

Per: _____

MGH Consulting Inc.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.1 **Exterior Windows: (Continued)**

Unit #901:

a. Ms. Florina Tobias (Owner / Occupant since 2004).

Condensation:

b. MGH observed severe condensation on the surfaces of the window glass and window frames on the interior side of the exterior wall at the solarium and the bedrooms. See **Photograph 35**.

c. MGH observed at multiple windows (i.e., solarium windows and bedroom windows) and at multiple panels within the window assembly large-sized water droplets forming along the head of the window frame (See **Photograph 36**). Water from condensation was running down the interior face of the windows. Water has saturated the exposed wood trim along the window head and the wood stool plate along the window sill.

d. The solarium has two (2) separate operable vents in the window assembly. During MGH's site visit MGH observed that one of the 2 vents was slightly open allowing air to locally circulate around that vent. The severity of condensation was greater on the solarium windows nearest the closed vent and minimal on the solarium windows nearest the open vent. The open vent promoted air circulation which helped dissipate the moisture laden air.

Weep Holes:

e. MGH observed water accumulating in the horizontal troughs (upper and lower) at the window frames in the solarium and the bedrooms. The design of the existing windows does not enable water accumulating in the upper horizontal trough to drain out from the window frame.

The original drainage "weep holes" in the window frame are designed to enable water accumulating in the "lower" horizontal trough of the window frame to drain out and discharge away from the building. MGH observed that the existing weep holes were clogged with debris preventing drainage of the water in the trough. The level of water accumulating in the trough (bedroom #2) rose high enough to over-flow the top edge of the trough and spill onto the wood stool along the window sill (See **Photograph 37**).

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.1 **Exterior Windows: (Continued)**

<u>Unit #901</u>: (Continued)

Humidistat Control:

f. A single humidistat control panel is located on a wall in the living room. The humidistat controls the operation of a single fan to govern the level of humidity within the entire apartment. The exhaust fan is located in the bathroom, at one corner of the apartment, which makes the fan quite remote from most areas of the apartment. The remote location of the fan makes it difficult to maintain a consistent and uniform level of humidity throughout the apartment, especially when the door to the bathroom is closed (or even partially closed). See **Photograph 38**.

g. MGH observed severe condensation on the windows in the solarium and on the wood trim surrounding the window wall opening. The solarium area is an example where the single bathroom fan for the entire apartment is difficult to maintain and control a proper level of humidity because the solarium area is separated from the main living area by a patio sliding door (See **Photograph 39**), and especially when the sliding door is closed (or even partially closed). The absence of a source of heat in the solarium area also contributes to an environment that promotes condensation on the colder surfaces of the window assembly.

h. **Structural Support of Exterior Windows:**
Ms. Tobias informed MGH that a previous investigation (by other parties) at their unit included removing interior drywall at selected areas from the walls/ceiling above the window head to make exploratory openings ("EO"). The EO's revealed decay at the wood components concealed behind the interior drywall surrounding the window. The exterior windows at Joyce Place tower are fastened to the wood surrounding the wall openings, and rely on the structural integrity of that wood to anchor the windows to the building. Decay of the wood surrounding the wall openings translates to loss of integrity of the structural anchorage of the window assembly.

It is the opinion of MGH that repeated cycles of severe condensation at the window assemblies is likely a major contributor to the moisture that causes saturation of materials surrounding the wall openings (i.e., interior drywall, wood trims, wood window sill plates, etc.) and results in decay of the wood behind the drywall. If exterior water (i.e., wind-driven rain) does penetrate the cladding / window assemblies, that water may also be a contributor of moisture causing decay but there was no evidence of exterior water penetrating the cladding at the time of MGH's site review.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.1 **Exterior Windows: (Continued)**

Unit #1006:

a. The Khangura family have been the Owner / Occupant since original construction. Mr. Hera Khangura has been the Occupant since 2015.

b. Mr. Khangura informed MGH that water accumulates in the horizontal troughs of the window frame at the North elevation and West elevation of his enclosed balcony.

c. MGH removed a small area of interior drywall above the window head at the narrow West exterior wall in the enclosed balcony. MGH observed corrosion of the horizontal metal corners/edges of the interior drywall assembly at the exterior wall above the head of the window (See **Photograph 40**). The components of the exterior wall assembly that were visible through the small wall opening (above the window head) did not display evidence of moisture damage.

d. Corrosion of the metal components of the interior drywall assembly is likely the result of previous moisture ingress into the wall cavity. Such moisture related damage behind the interior drywall is consistent with MGH's observations of the environment/conditions inside other apartments at Joyce Place tower.

Specifically, repeated cycles of severe condensation on the interior side of the window assembly saturates the materials of the wall assembly surrounding the window. The extent and severity of corrosion of other metal corners/edges (if any) at other area in the enclosed balcony is not known at this time. Removal of additional interior drywall would be required to determine the total extent of corrosion (if any) of the metal corners/edges.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.2 Cladding:

a. MGH was informed that all exterior surfaces of the stucco cladding were previously renewed with a new waterproofing coating in year 2014. The coating appears to be a silicone elastomeric product "AllGuard" as manufactured by Dow Corning. The coating generally appears in good condition. See **Photograph 41**.

b. It is the opinion of MGH that when such coating products are applied to an existing face-sealed stucco cladding the intended function of the coating is to maintain the continuity of the "face-seal" of the existing stucco cladding. However, the design of the exterior cladding assembly still remains as a "face-seal" which cannot manage, drain, and/or discharge exterior water (i.e., wind-driven rain) that may penetrate the face-seal of the stucco cladding. The AllGuard coating will still require continued diligent periodic reviews and maintenance to prolong the life of the stucco cladding.

c. It is the opinion of MGH that such coatings cannot serve to protect against moisture ingress into the wall cavity of an exterior wall when the source of moisture is water from condensation on the interior side of an exterior window. Water that accumulates at the base of a window (after repeated cycles of condensation) can potentially leak into the wall cavity below the window sill. It is the opinion of MGH that water from condensation is likely a significant source of moisture that has caused damage to the wood components surrounding the wall openings at windows.

8.1.3 Caulking:

a. The exterior joints at the stucco cladding were previously repaired at the time the new AllGuard waterproofing coating was applied at the tower in year 2014. New "123 Silicone Seal" as manufactured by Dow Corning was the product installed at the exterior joints to replace the original sealant/caulking at those joints. 123 Silicone Seal is a silicone based pre-formed strip (approximately 2 inches wide) that is typically applied over-top the existing sealant at a joint. This precludes the need to cut-out and remove the existing sealant from a joint. The 123 Silicone Seal at Joyce Place tower generally appears in good condition. See **Photograph 41**.

b. MGH reviewed the caulking at miscellaneous joints at windows and at mechanical units located on the flat roof of the tower. The existing caulking generally appeared weathered and cracked from normal exposure to weather (See **Photographs 42 to 44**). Caulking at exterior joints should be reviewed periodically (every 2 to 3 years) and repaired or replaced as needed. Caulking at exterior joints should be replaced every 8 to 10 years (on average) or sooner on an as-needed basis.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.1	**3380 Vanness Avenue (Tower) - Continued**

Summary of Findings (Continued)

8.1.4 Roofing:

a. The roofing membrane on the flat roof of the mechanical penthouse, the roofing membrane on the upper flat roof (top of tower), and the roofing membrane on the lower flat roof (floor level 2) of the tower generally appear in good condition. MGH has not been made aware of any reports of roof leaks. See **Photographs 13 to 16**.

b. MGH observed metal debris on the flat roof of the Mechanical Penthouse (See **Photograph 45**). MGH also observed extension ladders stored on the flat roof of the tower. MGH recommends removing all debris off the roofing membrane, and storing maintenance items (such as ladders) inside the Mechanical Penthouse or in the parkade.

c. MGH observed miscellaneous plumbing pipe stacks that project vertically above the top of the flat roof at the top of the tower. The end of pipe is open to the air (See **Photograph 46**). MGH recommends installing a mesh screen across the open end of the pipe stack to prevent potential access to insects and rodents.

d. MGH observed 2 separate large areas of standing water on the lower flat roof (floor level 2) surrounding the roof drains (See **Photographs 16 and 47**). Standing water is considered acceptable (RCABC and industry standard practises) if the standing water dissipates/evaporates within 48 hours. MGH recommends that the Strata Corporation monitor the duration it takes for those large areas of standing water to dissipate. In the event the standing water remains for a lengthy period (i.e., 4 days or more), MGH recommends that the Strata Corporation retain the services of a qualified roofing contractor to examine the roof drains and the roof slope.

8.1.5 Balconies:

a. The waterproof / traffic coating on the top side of the balconies generally appear in good condition based on the visual review of the balconies during the bosun's chair drops. See **Photograph 12**.

Per: _____

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes)**

Summary of Findings

The categories of problematic issues at the town homes are summarized below. A brief description of the observed defect(s) is provided. For a more detailed description including locations and photographs of the observed defects see **Appendix D**.

8.2.1 **Structural Framing:**

Exploratory Openings: **(Interior Locations)**

An exploratory opening ("EO") was made at selected town home units to assess the condition of the structural wood framing at the North exterior wall. The EO was made by removing a small square-shaped area of interior drywall (approximately 12 inch x 12 inch) to expose the wood framing within the wall assembly. The EO was typically located below the windows at the North exterior wall (facing Vanness Avenue) on the ground floor level. It is assumed that the observations at the EO are representative of the condition of the wood at the immediate surrounding areas at the same wall.

Unit #3362:

a. Mr. Chan (Owner / Occupant since 1994).

b. MGH observed severe decay of the wood structural wall framing, the floor plywood sheathing board, and the wood floor joists. Specifically, portions of the wood columns at the outside corner of wall, portions of the vertical wall studs, the majority of the exterior plywood sheathing board, portions of the interior plywood floor sheathing board, and portions of the wood floor joists were decayed and/or disintegrated. See **Photographs 27 and 28**.

c. MGH observed water ingress into the crawlspace beneath the North exterior wall.

d. It is the opinion of MGH that the decay/deterioration of the structural wall framing has compromised the structural integrity of the exterior wall to resist lateral loading under a seismic event. The risk of failure/collapse of the exterior wall under seismic loading is a potential life-safety hazard. Such a risk warrants replacement of the decayed components in the affected wall assembly in the immediate or near-term (i.e., within one year).

Per: _____

MGH Consulting Inc.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

8.2.1

Summary of Findings (Continued)

Structural Framing: (Continued)

Exploratory Openings: (Interior Locations)

<u>Unit #3362</u>: (Continued)

e. The capacity of the North exterior wall to resist vertical loading has also been reduced. It is the opinion of MGH that the North exterior wall is not at risk of imminent failure under vertical gravity loading from the dead weight of the wall itself. However, MGH recommends that large/heavy fixed loads (e.g., piano, refrigerator, bookcases, desk, bed, etc) not be placed on the lower or upper floor adjacent the North walls.

f. MGH recommends that the Strata Corporation commence discussions within the next year to make preparations to repair / replace the decayed wood at the structural framing.

Per: _____

MGH Consulting Inc.

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8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

8.2.1

Summary of Findings (Continued)

Structural Framing (Continued)

Exploratory Openings: (Interior Locations)

Unit #3364:

a. Mr. Riaz Merchant (Owner / Occupant since 2006).

b. MGH observed severe decay of the wood at the wall structural framing (See **Photograph 31**). Specifically, the plywood exterior sheathing board, the bottom horizontal plate of the wall assembly, and the wall studs are severely decayed and disintegrated. The moisture content reading at the wood was low (MC=13%) at the time of MGH's site visit.

c. The extent and severity of decay has significantly reduced the structural integrity of the North exterior wall. The structural integrity of the exterior wall to resist lateral loading has been compromised which poses a potential life-safety hazard under a seismic event. Repairs to replace the decayed components is warranted, and such repairs should be scheduled to occur in the immediate or near-term (i.e., within one year).

d. The capacity of the North exterior wall to resist vertical loading has also been reduced. It is the opinion of MGH that the North exterior wall is not at risk of imminent failure under vertical gravity loading from the weight of the wall. However, MGH recommends that large/heavy loads (i.e., piano, bookcases, refrigerator, etc) not be placed on the lower or upper floor adjacent the North walls.

e. MGH recommends that the Strata Corporation commence discussions within the year to make preparations to repair / replace the decayed wood at the structural framing.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

Summary of Findings (Continued)

8.2.1 **Structural Framing (Continued)**

Exploratory Openings: (Interior Locations)

Unit #3366:

a. Mr. Pance LImapichant (Owner / Occupant since 2015).

b. MGH observed severe decay of the wood at the wall structural framing. Specifically, the plywood exterior sheathing board, the bottom horizontal plate of the wall assembly, and the wall studs are severely decayed and disintegrated. The moisture content reading at the wood was low (MC=13%) at the time of MGH's site visit.

c. The extent and severity of decay has significantly reduced the structural integrity of the North exterior wall. The structural integrity of the exterior wall to resist lateral loading has been compromised which poses a potential life-safety hazard under a seismic event. Repairs to replace the decayed components is warranted, and such repairs should be scheduled to occur in the immediate or near-term (i.e., within one year).

f. The capacity of the North exterior wall to resist vertical loading has also been reduced. It is the opinion of MGH that the North exterior wall is not at risk of imminent failure under vertical gravity loading from the weight of the wall. However, MGH recommends that large/heavy loads (i.e., piano, bookcases, refrigerator, etc) not be placed on the lower or upper floor adjacent the North walls.

g. MGH recommends that the Strata Corporation commence discussions within the year to make preparations to repair / replace the decayed wood at the structural framing.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

8.2.1

Summary of Findings (Continued)

Structural Framing (Continued)

Exploratory Openings: (Interior Locations)

Unit #3372:

a. Mr. Xi Zhu (Owner / Occupant since 2010).

b. MGH observed severe decay of the wood at the wall structural framing (See **Photographs 48 and 49**). Specifically, the plywood exterior sheathing board, the bottom horizontal plate of the wall assembly, and the wall studs are severely decayed and disintegrated. The batt insulation in the wall cavity was damp. The moisture content readings at the various wood components in the wall cavity were high (ranging from MC=29% to MC=40%) at the time of MGH's site visit.

c. The extent and severity of decay has significantly reduced the structural integrity of the North exterior wall. The structural integrity of the exterior wall to resist lateral loading has been compromised which poses a potential life-safety hazard under a seismic event. Repairs to replace the decayed components is warranted, and such repairs should be scheduled to occur in the immediate or near-term (i.e., within one year).

h. The capacity of the North exterior wall to resist vertical loading has also been reduced. It is the opinion of MGH that the North exterior wall is not at risk of imminent failure under vertical gravity loading from the weight of the wall. However, MGH recommends that large/heavy loads (i.e., piano, bookcases, refrigerator, etc) not be placed on the lower or upper floor adjacent the North walls. MGH recommends that the Strata Corporation commence discussions within the year to make preparations to repair / replace the decayed wood at the structural framing.

Unit #3374:

a. Ms. Hoa Nguyen (Owner / Occupant since April 2016).

d. The moisture content readings at the various wood components in the wall cavity were high (ranging from MC=20% to MC=30%) at the time of MGH's site visit. The wood in the wall cavity appeared in very good condition even though the moisture content was high. The batt insulation was saturated.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

Summary of Findings (Continued)

8.2.1 Structural Framing (Continued)

Exploratory Openings: (Interior Locations)

Unit #3376:

a. Ms. Peggy Tong (Owner / Occupant since 1993).

b. MGH observed severe fungal growth on the majority of surfaces on the interior drywall and the wood surrounding the windows (North wall). See P**hotograph 29**.

c. MGH observed severe decay of the wood framing in the wall cavity and severe decay of the wood horizontal plate at the window sill. Specifically, the majority of the exterior plywood sheathing board, and portions of the wall studs are decayed. See **Photographs 29 and 30**.

d. The moisture content of the various wood components in the wall cavity were negligible at the time of MGH's site visit. The existing decay/damage is the result of previous moisture ingress.

e. MGH observed a horizontal gap/void between the bottom of the exterior sheathing board and the horizontal plate at the bottom of the wall assembly. The gap exists because the exterior sheathing board was not installed properly during original construction. The sheathing board should overlap the bottom plate of the exterior wall. As a result, the gap enables outside air to penetrate the wall cladding and enter the wall cavity.

f. The extent and severity of decay has significantly reduced the structural integrity of the North exterior wall. The structural integrity of the exterior wall to resist lateral loading has been compromised which poses a potential life-safety hazard under a seismic event. Repairs to replace the decayed components is warranted, and such repairs should be scheduled to occur in the immediate or near-term (i.e., within one year).

i. The capacity of the North exterior wall to resist vertical loading has also been reduced. It is the opinion of MGH that the North exterior wall is not at risk of imminent failure under vertical gravity loading from the weight of the wall. However, MGH recommends that large/heavy loads (i.e., piano, bookcases, refrigerator, etc) not be placed on the lower or upper floor adjacent the North walls. MGH recommends that the Strata Corporation commence discussions within the year to make preparations to repair / replace the decayed wood at the structural framing.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

Summary of Findings (Continued)

8.2.1 **Structural Framing (Continued)**

Exploratory Openings: (Exterior Locations):
Exploratory openings ("EO") were made at the exterior side of the exterior wall by removing a small circular area of exterior stucco (approximately 3 inch diameter) to expose the wood sheathing board. Typically, the EO was located either where a high moisture content reading was encountered during the moisture probe survey, or where the wood sheathing board felt soft ("punky") when the moisture probes were pushed against the sheathing bord during the moisture probe survey. It is assumed that the observations at the EO are likely representative of the condition of the wood at the immediate surrounding areas at the same wall.

Unit #3362:

a. **North Elevation:**
An EO was made in the stucco cladding, at floor level 2, at the narrow wall facing East, below a horizontal joint (See **Photograph 50**). The sheathing board was severely decayed from previous water ingress. The wood crumbled easily when probed by hand using a sharp metal instrument.

b. **West Elevation:**
An EO was made at floor level 2, at the narrow wall facing West, below the bottom corner of a window (See **Photograph 51**). The sheathing board was severely decayed from previous water ingress. The wood easily crumbled easily when probed by hand using a sharp metal instrument.

Unit #3666 / #3368:

c. **North Elevation:**
An EO was made at floor level 2, at the narrow face of the wall that divides the outdoor balconies at Units #3362 and #3368 (See **Photograph 52**). The sheathing board was severely deteriorated/decayed from previous water ingress. The wood crumbled easily when probed by hand using a sharp metal instrument.

Unit #3376:

d. **East Elevation:**
An EO was made at floor level 2, at the narrow wall facing South, below a horizontal joint (See **Photograph 53**). The sheathing board was severely deteriorated/decayed from previous water ingress. The wood crumbled easily when probed by hand using a sharp metal instrument.

Per: _____
MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

Summary of Findings (Continued)

8.2.2 Cladding:

a. MGH was informed that all exterior surfaces of the stucco cladding were previously renewed with a new waterproofing coating in year 2014. The coating appears to be a silicone elastomeric product "AllGuard" as manufactured by Dow Corning. The coating generally appears in good condition.

b. It is the opinion of MGH that when such coating products are applied to an existing face-sealed stucco cladding the intended function of the coating is to maintain the continuity of the "face-seal" of the existing stucco cladding. However, the design of the exterior cladding assembly still remains as a "face-seal" which cannot manage, drain, and/or discharge exterior water (i.e., wind-driven rain) that may penetrate the face-seal of the stucco cladding. The AllGuard coating will still require continued diligent periodic reviews and maintenance to prolong the life of the stucco cladding.

c. It is the opinion of MGH that such coatings cannot serve to protect against moisture ingress into the wall cavity of an exterior wall when the source of moisture is water from condensation on the interior side of an exterior window. Water that accumulates at the base of a window (after repeated cycles of condensation) can potentially leak into the wall cavity below the window sill. It is the opinion of MGH that water from condensation is likely a significant source of moisture that has caused damage to the wood components surrounding the wall openings at windows.

8.2.3 Caulking:

a. The exterior joints at the stucco cladding were previously repaired at the time the new AllGuard waterproofing coating was applied at the tower in year 2014. New sealant/caulking was applied to the exterior joints at various location on the exterior surfaces of the stucco cladding. The sealant/caulking at the Joyce Place town homes generally appears in good condition.

8.2.4 Doors:

a. The patio sliding door (upper floor entering onto the South exterior deck) at TH # 3362 is not functioning properly. The door panel is not properly seated in the sliding track and it was extremely difficult to adjust the panel to sit properly in the track.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

Summary of Findings (Continued)

8.2.5 Roofing:

a. The roofing membrane at the upper roof and lower flat roof generally appear in good condition

b. A large area of standing water is visible surrounding the roof drain on the flat roofs (See **Photographs 18 and 19**). The water is not able to fully drain towards the roof drain.

c. MGH recommends that the Strata Corporation authorize a roofing contractor to review the roof drain and the roof slope, and to verify the location of the roof drain relative to the low point on the flat roof.

8.2.6 Balconies:

a. MGH reviewed the outdoor balconies (facing North) at the town homes it visited.

b. MGH observed standing water at the front (outside) corner of the balcony floor, adjacent the balcony drain hole.

c. The balcony drain is a pipe that penetrates the bottom corner of balcony guard wall.

d. The balcony floor does not properly slope towards the drain pipe, and the low point on the balcony floor does not coincide with the location of the balcony drain. As a result, standing water on the balcony floor (from rain and melting snow) accumulates near but does not completely drain out through the hole in the guard wall. See **Photograph 54**.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.2	**3362 to 3376 Vanness Avenue (Town Homes) - Continued**

8.2.7 **Summary of Findings (Continued)**

Windows:

a. MGH observed severe condensation on the interior side of exterior windows at selected town homes. See **Photographs 49 and 55**.

b. Condensation was not evident at every town home MGH visited, and the severity of condensation varied from town home to town home.

c. The time of day when MGH visited the town homes did not coincide with periods of cooking nor periods of bathroom/shower use.

d. The severe condensation resulted in:

- Large-sized water droplets hanging from the horizontal edge of the window frame along the window head (See **Photograph 55**).
- Water accumulating in the horizontal trough at the sill of the window frame.
- Mold / fungal growth on most of the surfaces surrounding the interior side of the window frame (i.e., the interior drywall, the wood stool plat at the window sill, window coverings, etc.) See **Photograph 29**.

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS**
8.3	**Parkade**

Summary of Findings (Continued)

Parkade:

8.3.1 **Active Leaks:**

a. MGH observed active leaks through the parkade roof slab, and through the parkade foundation wall (See **Photographs 56 and 57**).

8.3.2 **Catch Pans/Trays:**

a. Metal pans/trays have previously been installed (by other parties) at selected locations along the underside of the parkade roof slab to capture water leaking through the concrete slab. Pipes attached to the pans/trays redirect water from the tray and discharge the water onto the parkade floor (See **Photograph 58**).

b. The trays capture water to prevent water splashing onto parked vehicles, but the trays do not address or prevent a more important issue which is that water can still penetrate the cracks/voids at the top-side of the parkade roof slab. Water that penetrates such cracks in concrete can wet the reinforcing steel embedded in the concrete slab. Repeated cycles of wetting the embedded reinforcing steel has the potential to corrode the reinforcing steel.

8.3.3 **Repair Strategy:**

a. MGH recommends a longer-term repair strategy that addresses sealing the cracks in the concrete (from the top side of the parkade roof slab) to prevent water contacting the reinforcing steel embedded in the slab.

b. Applying a new waterproof coating or membrane on the top side of the parkade roof slab is preferable to injecting a sealant into the cracks in the concrete from the underside of the parkade roof slab. Injecting a sealant into the underside of a crack does not ensure that the sealant penetrates the full depth of the crack. There still remains a risk that water may penetrate the top half of a crack that was not sealed the full depth of the crack.

c. Applying a new coating / membrane to the top side of the parked roof slab will also entail removing the existing soil over-burden and landscaping in order to expose and remove the existing waterproof coating on the top side of the parkade roof slab.

Per: _____

MGH Consulting Inc.

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ITEM	DESCRIPTION
8.0	**OBSERVATIONS, FINDINGS, COMMENTS, and RECOMMENDATIONS - Continued**
8.4	**Miscellaneous Topics**

Summary of Findings (Continued)

8.4.1 Fence:

a. MGH observed several of the wood panels missing from the partition fence that separates the tower from the row of town homes (See **Photograph 59**).

b. MGH recommends installing new panels at the areas where panels are missing to maintain a uniform appearance for the fence.

8.4.2 Stains on Ceiling at Town Homes:

TH #3376:

MGH observed the following stains at the ceiling of the rooms at the upper floor:

a. A large circular stain surrounding the electrical junction box was not wet at the time of MGH's site visit (See **Photograph 60**). The Occupant could not confirm whether the leak was still active at this location. MGH recommends that the Strata Corporation coordinate with the Stata Owner / Occupant to monitor the stain on the ceiling and to verify whether the leak is still active at the electrical junction box.

b. A lineal stain that extends between the fire sprinkler head and the sliding door was not wet at the time of MGH's site visit (See **Photograph 61**). The Occupant could not confirm whether the leak was still active at this location. MGH recommends that the Strata Corporation coordinate with the Stata Owner / Occupant to monitor the stain on the ceiling and to verify whether the leak is still active. If the leak is still active, a further investigation will be required to verify whether the source of moisture is related to the fire sprinkler head.

Note:
MGH observed similar stains (adjacent to a fire sprinkler head) on the ceiling at other town homes at Joyce Place. MGH recommends that the Strata Corporation coordinate with the Strata Owner / Occupant at other town homes to verify whether there may be an active leak above the ceiling at those stains.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC")**

9.1 Introduction

MGH Consulting Inc. ("MGH") has prepared an Opinion of Probable Cost ("OPC") in 2016 Canadian dollars to implement the scope of repair described below. The OPC includes anticipated City of Vancouver permit fees, an estimate of the cost of construction, anticipated professional consultant fees, and applicable taxes. The OPC is intended to be only an order-of-magnitude estimate for the purpose of budgetary discussions amongst the Strata Owners. The actual costs can be derived more accurately when tendering the repair project to bidding Contractors.

9.2 Permit Fees

MGH contacted the City of Vancouver Building Department to enquire about Building Permit and Development Permit issues. The permit fees are based on the City of Vancouver "2017 Schedule of Building Permit and Inspection Fees" and the "2017 Planning Department Fees."

9.3 Cost of Construction

The cost of construction in the OPC is intended to be an "order of magnitude" level of accuracy for the purpose of budgetary discussion. The OPC was based on applying unit prices to the estimated surface areas and quantities of the various building envelope components. The unit prices are derived from the previous experience of qualified Contractors who perform this type of work. The OPC is not intended to be the same level of accuracy that can be obtained through a proper tendering process. The tendering process reflects the prevailing cost for labour and materials at the time of the tender, and reflects the prevailing competitive market conditions amongst the bidding contractors at the time of the tender. An estimated cost of construction was provided for each of the repair alternatives assuming the work for each repair option is performed as a stand-alone project. In the event the repairs are combined under a single project there may be cost savings due to economies of scale.

9.4 Consultant Fees

For the purpose of this OPC, the estimated consultant fee for building envelope related services was based on a fixed percentage (%) of the cost of construction. The fixed percentage varies depending on the estimated cost of construction. An estimated fee was provided for each of the repair alternatives assuming the work for each repair option is performed as a stand-alone project. In the event the repairs are combined under a single project, there may be cost savings due to economies of scale.

The consultant's services include preparation of construction documentation (e.g., schematic designs, detailed repair drawings and specifications), assisting the Strata Corporation in applying for City permits, tendering the project to bidding Contractors, performing contract administration services, and performing field review services during construction.

In the event the services of a specialty consultant is required to address unforeseeable issues that may arise during the design phase and/or the construction phase of the project, an allowance for additional consultants has been included in the OPC.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC") - Continued**

9.5 SCOPE OF REPAIR

9.5.1 A.1 Tower: Base Scope of Repair

The proposed "Base Scope of Repair" is confined to replacing the existing exterior windows and exterior sliding doors and includes the following:

a. Remove the existing exterior windows and exterior sliding doors and replace them with new thermally efficient windows and sliding doors.

b. Prepare the structure and cladding surrounding the wall openings prior to installing the new windows and sliding doors. For simplicity, we assume that the finished surface of the new cladding will be made to resemble the current stucco appearance of the existing cladding.

9.5.2 A.2 Tower: Additional Scope of Repair (Optional)

The scaffolding erected under the Base Scope of Repair will fully surround the building for the full height of the tower. In the event the Strata Corporation elects to include replacing the existing cladding and/or replacing the traffic membrane at the outdoor balconies/decks to the Base Scope of Repair, then no additional cost related to scaffolding would need to be incurred.

For information purposes, the attached OPC includes the incremental costs that would be added to the cost for the Base Scope of Repair to implement the following additional (optional) scope of repair:

a. **Cladding:**
Remove the existing exterior "face-sealed" stucco cladding and replace it with a new "rain screen" cladding assembly. For simplicity, we assume that the finished surface of the new cladding will be made to resemble the current stucco appearance of the existing cladding.

b. **Roofing:**
Remove the existing roofing membrane on the flat roof, and the flat roof on the mechanical penthouse, and replace it with a new roofing assembly.

c. **Balcony/Deck Membrane:**
Remove the existing waterproof / traffic coating on the outdoor (open to the air) balconies and replace it with a new pedestrian traffic membrane.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC") - Continued**
9.5	**SCOPE OF REPAIR (Continued)**
9.5.3	**B. <u>Town Homes</u>: Base Scope of Repair** The proposed "Base Scope of Repair" is assumed to be similar at each of the town home units and includes the following: a. Remove the existing "face-sealed" cladding assembly and replace it with a new "rain screen" cladding assembly. For simplicity, we assume that the finished surface of the new cladding will be made to resemble the current stucco appearance of the existing cladding. b. Remove the existing exterior windows and patio sliding doors and replace them with new thermally efficient windows and sliding doors. c. Remove the existing waterproof / traffic coating at each exterior balcony and replace it with a new pedestrian traffic coating / membrane. d. Remove the existing metal guardrail assembly at each balcony and replace it with a new metal guardrail assembly.
9.6	**Summary of OPC** The anticipated costs described below apply to the tower and the row of town homes. The summary of costs is stated in 2016 Canadian dollars. For the purpose of this OPC it will be assumed that the initial repair strategy is to perform the work at the tower as a stand-alone project, and to perform the work at the row of town homes as a stand-alone project. Variations to the costs may occur depending on factors such as; a) whether repairs to the two separate buildings (i.e., the tower and the town homes) are combined as a single project, b) the length of delay before commencing any of the repairs, and c) the length of delay between implementing repairs at the two separate buildings (in the event repairs to the 2 buildings are undertaken as 2 separate stand-alone projects). Variations to the costs may also occur in order to reflect the rate of inflation, the prevailing cost of labour, and the prevailing cost of materials at the time of construction.

Per: _____

MGH Consulting Inc.

ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC") - Continued**

9.7 3380 Vanness Avenue (Tower)

A.1 Tower: Base Scope of Repair

Replace Existing Exterior Windows and Exterior Sliding Doors

1.	City of Vancouver Permits: Building Permit & Revisit Development Permit (See notes a. and b. below)	$	nil
2.	Cost of Construction: (Includes a 25% contingency allowance)	$	981,250.00
3.	Consultant Fees:		
	a. Building Science - Based on 15% of Cost of Construction	$	147,200.00
	b. Structural - Allowance (If services are required)	$	20,000.00
	c. Mechanical - Allowance (If services are required)	$	20,000.00
	d. Electrical - Allowance (If services are required)	$	20,000.00
	Sub-total (a, b, c & d) =	$	207,200.00
	Sub-total (1, 2 & 3) =	$	1.188,450.00
	5% GST =	$	59,422.50
	TOTAL =	$	1,247,872.50
	Round-up to =	$	1,250.000.00

Notes:

a. Based on MGH's discussions with personnel at the City of Vancouver ("CoV"), the Building Permit ("BP") fee may be eligible to be waived as a building envelope restoration project.

b. Based on MGH's discussions with personnel at the CoV, the fee to re-visit an existing Development Permit ("DP") may be eligible to be waived if there are no significant changes to the appearance or the materials of the building. Subject to review by the Cov during an application for a BP.

c. Based on Regulatory Bulletin No.6 (Feb 2012) from BC Housing (administrator for the Homeowner Protection Act) Home Warranty Insurance may not be mandatory for this project because the Scope of Repair does not fall under the definition of "substantially reconstructed." In the event the Strata Corporation elects to purchase Home Warranty as a proactive measure then budget 3% of the Cost of Construction (approximate).

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ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC") - Continued**
9.7	**3380 Vanness Avenue (Tower) - Continued**

A.2 Tower: Additional Scope of Repair (Optional)

Replace Existing Cladding, Existing Membrane on Exterior Balconies/Decks, and Existing Roofing on the Tower & the Mechanical Penthouse

1. City of Vancouver Permits:
   Building Permit & Revisit Development Permit — $ nil
   (See notes a. and b. below)

2. Cost of Construction:
   a. Exterior Cladding and Membrane on Balconies/Decks — $ 1,298,438.00
      (Includes a 25% contingency allowance)
   b. Roofing — $ 138,000.00
      (Includes a 20% contingency allowance)

3. Consultant Fees:
   Building Science - Based on 12% of Cost of Construction — $ 172,372.50

Sub-total (1, 2 & 3) = $ 1,608,810.50
5% GST = $ 80,440.53

TOTAL = $ 1,689,251.02

Round-up to = $ 1,700,000.00

Notes:

a. Based on MGH's discussions with personnel at the City of Vancouver ("CoV"), the Building Permit ("BP") fee may be eligible to be waived as a building envelope restoration project.

b. Based on MGH's discussions with personnel at the CoV, the fee to re-visit an existing Development Permit ("DP") may be eligible to be waived if there are no significant changes to the appearance or the materials of the building. Subject to review by the Cov during an application for a BP.

c. Based on Regulatory Bulletin No.6 (Feb 2012) from BC Housing (administrator for the Homeowner Protection Act) Home Warranty Insurance may not be mandatory for this project because the Scope of Repair does not fall under the definition of "substantially reconstructed." In the event the Strata Corporation elects to purchase Home Warranty as a proactive measure then budget 3% of the Cost of Construction (approximate).

Per: _____
MGH Consulting Inc.

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ITEM	DESCRIPTION
9.0	**Opinion of Probable Cost ("OPC") - Continued**

9.8 3362 to 3376 Vanness Avenue (Town Homes)

B. Town Homes: Base Scope of Repair

Replace Existing Cladding, Existing Exterior Windows and Exterior Sliding Doors, and Existing Membrane on the Outdoor Balconies

1.	City of Vancouver Permits:	
	Building Permit & Revisit Development Permit (See notes a. and b. below)	$ nil
2.	Cost of Construction: (Includes a 25% contingency allowance)	$ 942,500.00
3.	Consultant Fees:	
	a. Building Science - Based on 15% of Cost of Construction	$ 141,375.00
	b. Structural - Allowance (If services are required)	$ 20,000.00
	c. Mechanical - Allowance (If services are required)	$ 20,000.00
	d. Electrical - Allowance (If services are required)	$ 20,000.00
	Sub-total (a, b, c & d) =	$ 201,375.00
	Sub-total (1, 2 & 3) =	$ 1,143,875.00
	5% GST =	$ 57,193.75
	TOTAL =	$ 1,201,068.75
	Round-up to =	$ 1,205,000.00

Notes:

a. Based on MGH's discussions with personnel at the City of Vancouver ("CoV"), the Building Permit ("BP") fee may be eligible to be waived as a building envelope restoration project

b. Based on MGH's discussions with personnel at the CoV, the fee to re-visit an existing Development Permit ("DP") may be eligible to be waived if there are no significant changes to the appearance or the materials of the building. Subject to review by the Cov during an application for a BP

c. Based on Regulatory Bulletin No.6 (Feb 2012) from BC Housing (administrator for the Homeowner Protection Act) Home Warranty Insurance may not be mandatory for this project because the Scope of Repair does not fall under the definition of "substantially reconstructed." In the event the Strata Corporation elects to purchase Home Warranty as a proactive measure then budget 3% of the Cost of Construction (approximate).

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

10.1 **Issues / Concerns Raised by Strata Owners:**

A common theme of the issues/concerns raised by various Strata Owners/Occupants is that excessive moisture accumulates on the interior side of the exterior windows. Many Occupants interviewed by MGH were concerned that the source of the moisture may be exterior water (i.e., wind-driven rain) that penetrated the windows and migrated down the interior side of the window glass and window frame.

Based on its review of the apartments visited, it is the opinion of MGH that a significant source of moisture is likely condensation which forms on the cold surfaces of the window assembly. MGH observed multiple examples of severe condensation at the windows in the tower and in the town homes. Repeated cycles of severe condensation can create large volumes of water that can potentially penetrate and enter the wall cavity below the window sill.

10.2 **Condensation:**

MGH recommends that the Strata Corporation take steps to improve ventilation of the interior space in the apartments. Such steps may include the following:

a. Re-educating the Occupants on the proper use of their humidistat control,
b. Enhancing the existing ventilation equipment in the tower apartments and the town homes. Currently, there is just a single exhaust fan in the bathroom of a typical apartment (located at one corner of the apartment),
c. Supplying heat to the solarium area and to the enclosed balcony areas (located at the North elevation of the tower).

10.3 **Existing Face-Seal Stucco Cladding:**

The existing cladding at the tower and the town homes is a "face-seal" stucco cladding. The nature of the face-seal design of stucco cladding requires diligent maintenance of the building exterior to keep the face-seal intact (i.e., caulking at exterior joints, sealant at window joints, the window assembly itself, and the stucco coating itself). The face-seal must be intact and continuous (absent of any voids) in order for the cladding to resist water ingress into the wall cavity and/or into the suite interior.

MGH observed the existing coating on the building exteriors that was applied during previous maintenance repairs (performed by other parties) to the buildings at the tower and the town homes. It appears that the scope of maintenance was limited to re-coating the stucco areas, and re-sealing exterior joints. It is the opinion of MGH that the new coating on the exterior surfaces of the exterior walls generally appears in good condition.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

Anticipated Future Performance of the Existing Wall & Cladding Assembly

10.4 Damaged / Decayed Wood at Wall Openings:

Such coatings on the exterior side of walls do not protect against the potential for moisture ingress into the wall cavity from condensation originating on the cold surfaces on the interior surfaces of the exterior windows.

a. **Tower:**
It is the opinion of MGH that a history of recurring cycles of severe condensation on the interior surfaces of the windows has contributed to the decay of the wood components surrounding the wall openings. The window assembly relies upon the wood surrounding the wall openings to serve as a substrate to structurally support the window assemblies. Decay of the wood components translates into loss of structural support of the window assemblies.

b. **Town Homes:**
It is the opinion of MGH that a history of recurring cycles of severe condensation on the interior surfaces of the windows has contributed to the decay of the wood components surrounding the wall openings (i.e., plywood sheathing board, wall studs, corner columns, wall plates, etc). The window assembly relies upon the wood surrounding the wall openings to serve as a substrate to structurally support the window assemblies. The town home building relies upon the exterior plywood sheathing, the wall studs, and the wall plates to be intact to provide structural resistance to lateral loads (such as a seismic event). Decay of the wood components translates into loss of structural integrity of the exterior wall under seismic loading

10.5 Life-Safety Hazard:

A. Tower:

It is the opinion of MGH that the risk is small for imminent structural failure of the window anchorage under normal operating conditions. It is less likely that a window assembly will fall out from the wall opening under normal operating conditions of gravity loading and/or nominal wind loading. However, in the event of lateral loading on the building during a seismic event, there is an increased risk of failure of the window anchorage system, which translates to a potential life-safety hazard from an entire window assembly (or portions of the window assembly) becoming dis-lodged and falling to the ground.

It is the opinion of MGH that such a risk of life-safety hazard warrants repairs in the near-term to remedy the risk. MGH recommends that the Strata Corporation commence discussions within the next calendar year to plan for such repairs. Such repairs should include replacing all existing windows with new thermally efficient windows.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

Anticipated Future Performance of the Existing Wall & Cladding Assembly (Continued)

10.5 Life-Safety Hazard: (Continued)

B. Town Homes:

It is the opinion of MGH that in the event of lateral loading on the building during a seismic event, there is a real risk of life-safety hazard due to failure and collapse of the structural framing at the East exterior wall of the building.

Such a risk of life-safety hazard warrants repairs in the near-term to remedy the risk. MGH recommends that the Strata Corporation commence discussions within the next calendar year to plan for such repairs. Such repairs should include replacing all damaged structural framing, replacing the existing windows with new thermally efficient windows, and installing new cladding that incorporates "rain screen" technology.

MGH recommends that the Strata Corporation advise all Strata Owners / Occupants at the town homes to not store and to move away any large and/or heavy fixtures/objects on the floor adjacent the North exterior walls.

The Strata Owners/Occupants should report to their Strata Council any unusual activity such as settlement of the floors adjacent the North exterior walls.

As a proactive safety measure, Strata Corporation should investigate and identify those town homes that have experienced decay of the wood columns (especially at the corner of exterior walls), and to install temporary shoring to replace the decayed columns until such time that more permanent repairs to the structural framing can be implemented.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

10.6 **Recommended Repairs:**

Opportunity to Replace Cladding Assembly

The nature of repairs to the windows at the tower, and repairs to the exterior walls at the town homes provides an opportunity to replace the existing "face-seal" cladding at the tower and the town homes with new cladding that incorporates "rain screen" technology. MGH recommends that the Strata Corporation take this opportunity to review the potential benefits of replacing the existing cladding at both buildings. The age of the existing stucco cladding currently exceeds twenty (20) years (approximate).

10.6.1 **A. <u>Tower</u>:**

It is the opinion of MGH that the wood components surrounding the wall openings at exterior windows has been damaged by previous moisture. The exterior windows are anchored to the wood surrounding the wall opening and rely upon the structural integrity of that wood to remain intact. The severity of moisture damage at the wood cannot be remedied by maintenance type repairs.

MGH's recent investigation at the tower was limited in its frequency of making exploratory openings ("EO's") to reveal the condition of the wood behind the interior drywall. Although MGH can identify the nature of the problems relating to the exterior windows, MGH cannot claim with certainty at this time that repairs to all windows at all elevations at the tower is warranted. MGH recommends that the Strata Corporation authorize an additional investigation at the window wall openings specifically to assess the frequency of occurrence of damage to the wood components surrounding the wall openings. The objective is to verify whether decay to the wood is limited to selected apartments, in which case targeted repairs to windows at selected apartments may be appropriate, or whether replacement of all windows at all elevations of the tower is warranted,

As part of the repair program to remedy decayed structural components at the windows, MGH recommends that the repair program include replacing the existing windows with new thermally efficient windows. It is not recommended nor cost effective to refurbish and re-use the existing windows.

In the event that all exterior windows at the tower require replacement, then scaffolding will be required to be erected around the entire tower (the full height of the tower) to provide access to replace the exterior windows. The cost to supply and install scaffolding will be a significant portion of the total cost of construction. MGH recommends that the Strata Corporation take advantage of the scaffolding that will already be erected for the window replacement program and to consider replacing the existing face-seal stucco cladding as part of the project. MGH has provided in the attached opinion of probable cost ("OPC") of construction the additional incremental costs (shown as separate line items) to include replacing the cladding as part of the window replacement project.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

10.6 **Recommended Repairs: (Continued)**

10.6.2 **B. Town Homes:**

It is the opinion of MGH Consulting Inc. ("MGH") that the wood structural framing at the North exterior walls at the town homes is significantly damaged by previous contact with moisture. The extent and severity of damage/decay warrants repairs/replacement of the damaged wood. Maintenance type repairs are no longer appropriate and will not provide the necessary remedy to the disintegration of internal structural components at the exterior wall assembly.

Total removal of the existing stucco cladding will be required to reveal the underlying wood components in the wall assembly and ro establish the extent of damage to the structural framing.

Upon completion of repairs to the structural framing, the Strata Corporation should take this opportunity to improve the design of the building envelope by installing new cladding that incorporates "rain screen" technology.

10.7 **C. Parkade:**

MGH's cursory review of the below grade parkade identified active leaks through the parkade roof slab, and the parkade foundation walls.

It is the opinion of MGH that the current system of metal pans/trays installed along the underside of the slab serve only as an interim measure to protect water falling onto the parked automobiles.

MGH recommends that the Strata Corporation commence discussion on undertaking a repair strategy that offers a longer-term remedy to stop active leaks through the top side of the parkade roof slab.

The level of urgency to address the matter of leaks through the parkade roof slab is much less than the urgency for repairs to remedy the weakened structural support of the exterior windows at the tower, and the urgency to remedy the weakened structural framing of the town home exterior walls.

Per: _____

MGH Consulting Inc.

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

10.8 Strategy to Implement Repairs:

It is the opinion of MGH that the defects / deficiencies that have been identified at both buildings are of a structural nature that pose potential life-safety hazards under a seismic event.

It is the opinion of MGH that "maintenance" type repairs to the tower and to the town homes to prolong the life of the structural components is no longer a viable option.

It is the opinion of MGH that the severity of damage to structural components and/or structural framing is greater at the row of town homes in comparison to the tower.

The tower is a stand-alone building separated from the row of town homes. Therefore, repairs to each building can be undertaken as a separate stand-alone project. Although repairs to each building (i.e., tower and town homes) should be scheduled to occur in the near term, priority should be assigned to repairing the town homes due to the severity and wide-spread occurrence of decay of the structural framing at exterior walls.

10.8.1 A. Tower:

Due to the nature of moisture-related damage to structural components at the tower it is possible (but not likely) that targeted repairs to selected windows would be appropriate.

Replacement of windows can include the option to perform the work to all windows at a single selected elevation (i.e, North, South, East or West) as a stand-alone project, or to perform the work to all windows at all four elevations as a single project.

10.8.2 B. Town Homes:

Due to the nature of moisture-related damage to structural framing at the town homes it is possible (but not recommended) to perform targeted repairs to selected exterior walls at selected town homes.

Removal of all existing cladding is required at the town homes will be required to identify the total extent of repair/replacement of the damaged structural framing that is currently concealed by the cladding.

Upon completion of repairs to the structural framing, MGH recommends installing new cladding at the town homes that incorporates "rain screen" technology. In the event the Strata Corporation elects to alter the cladding from the existing stucco finish to a different material (e.g., wood siding, wood panels, fibre-cement product, metal panels, etc.) the design process will entail re-visiting the exist Development Permit with the City of Vancouver.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	DESCRIPTION
10.0	**CLOSING REMARKS**

10.9 Estimated Costs to Undertake Repairs:

10.9.1 A.1 Tower: Base Scope of Repair

The estimated costs (in 2016 Canadian dollars) including city permits, consulting fees, and taxes to replace the exterior windows and exterior sliding doors are as follows:

$1,250,000.00 (Approximate)

10.9.2 A.2 Tower: Additional Scope of Repair (Optional)

The estimated costs (in 2016 Canadian dollars) including city permits, consulting fees, and taxes to replace the cladding, the membrane on balconies/decks, and the roofing are as follows:

$1,700,000.00 (Approximate)

10.9.3 B.1 Town Homes: Base Scope of Repair

The estimated costs (in 2016 Canadian dollars) including city permits, consulting fees, and taxes to replace the cladding, the exterior windows & exterior sliding doors, and the traffic coating on outdoor balconies/decks are as follows:

$1,205,000.00 (Approximate)

Note:
See Section 9.0 of this report and Appendix E for a detailed description of the Opinion of Probable Cost ("OPC").

Report prepared by:

Brian Lee, P.Eng.

Date: January 3, 2017

Per: _____

MGH Consulting Inc.

APPENDIX - A

FIGURE 1:

SITE PLAN

View looking South

View looking North

Acknowledgements:
Images were obtained from Google maps

Figure 1: Site Plan

APPENDIX - B

MOISTURE CONTENT ("MC") SURVEY

APPENDIX - B

3380 VANNESS AVENUE
(TOWER)

MOISTURE CONTENT ("MC") SURVEY

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

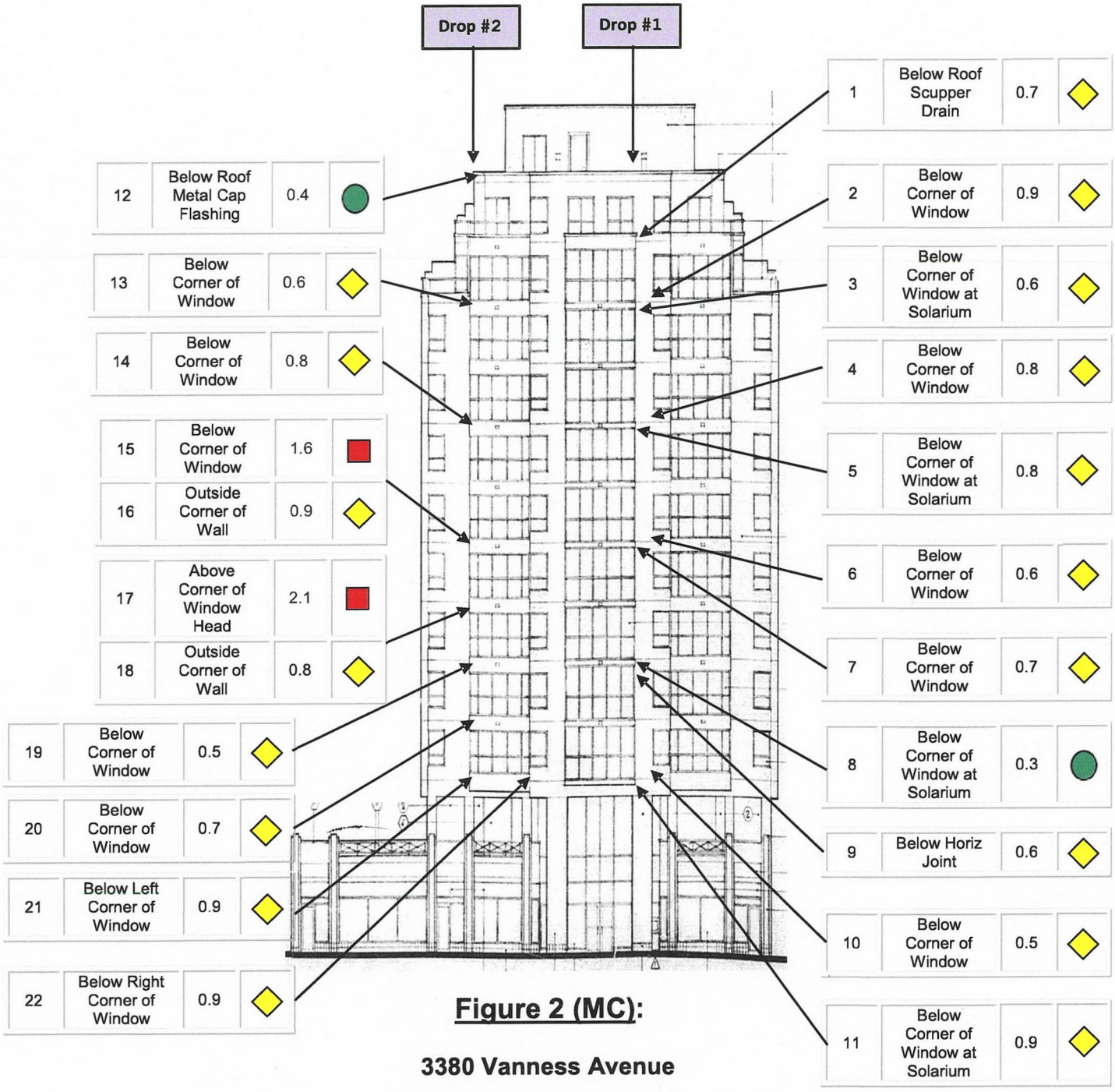


Figure 2 (MC):

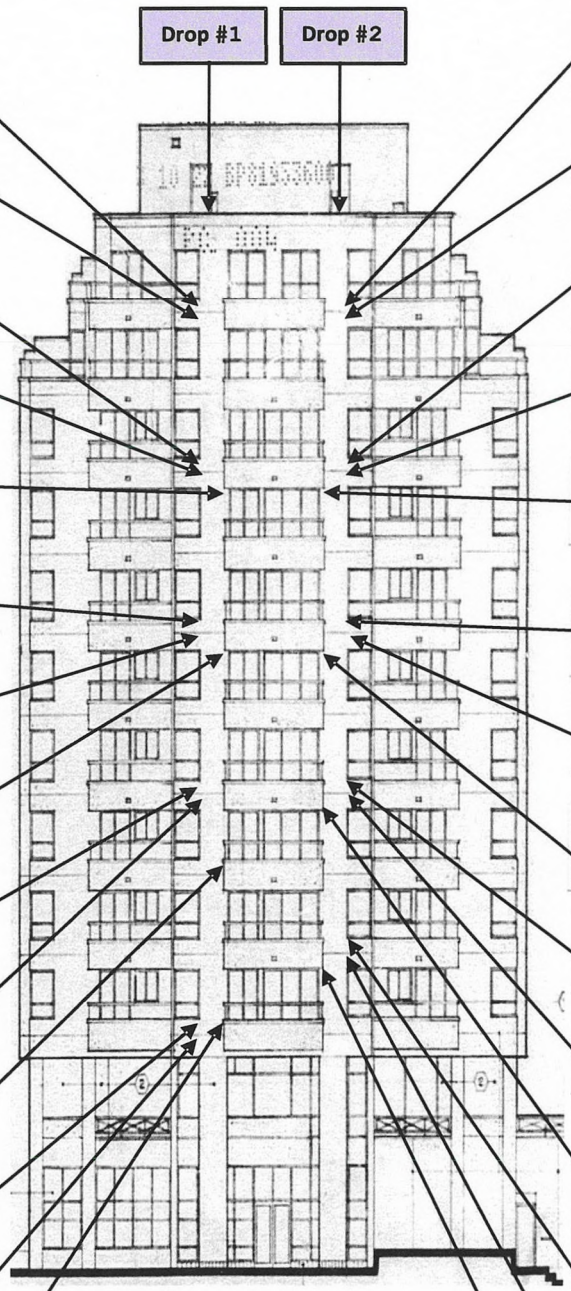
3380 Vanness Avenue

North Elevation
Moisture Content ("MC") Survey

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017



1	Below Corner of Window	0.5	◆
2	Below Horizontal Joint	0.6	◆
3	Below Corner of Window	0.4	●
4	Below Horizontal Joint	0.7	◆
5	Below Back Corner of Balcony	0.5	◆
6	Below Corner of Window	0.7	◆
7	Below Horizontal Joint	0.6	◆
8	Below Back Corner of Balcony	0.4	●
9	Below Corner of Window	0.3	●
10	Below Horizontal Joint	0.5	◆
11	Below Cap Flashing at Balcony	0.8	◆
12	Below Corner of Window	0.5	◆
13	Below Horizontal Joint	0.6	◆
14	Below Cap Flashing at Balcony	0.9	◆

15	Below Corner of Window	0.4	●
16	Below Horizontal Joint	0.8	◆
17	Below Corner of Window	0.6	◆
18	Below Horizontal Joint	0.6	◆
19	Below Back Corner of Balcony	0.7	◆
20	Below Corner of Window	0.9	◆
21	Below Horizontal Joint	0.6	◆
22	Below Back Corner of Balcony	0.6	◆
23	Below Corner of Window	0.5	◆
24	Below Horizontal Joint	0.6	◆
25	Below Back Corner of Balcony	0.3	●
26	Below Corner of Window	0.7	◆
27	Below Horizontal Joint	0.6	◆
28	Below Back Corner of Balcony	0.6	◆

Figure 3 (MC):

3380 Vanness Avenue

South Elevation
Moisture Content ("MC") Survey

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

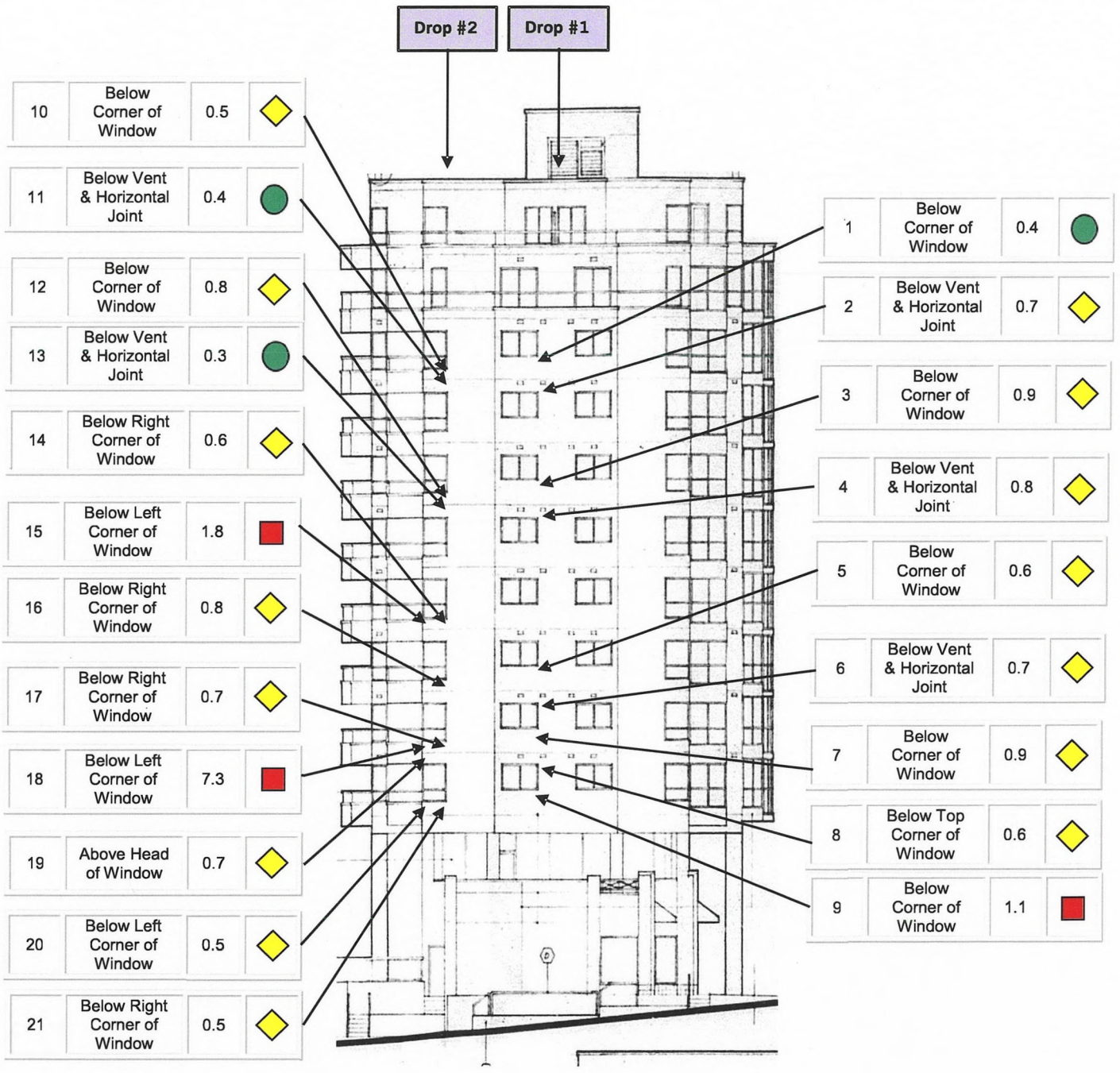


Figure 4 (MC):

3380 Vanness Avenue

East Elevation
Moisture Content ("MC") Survey

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

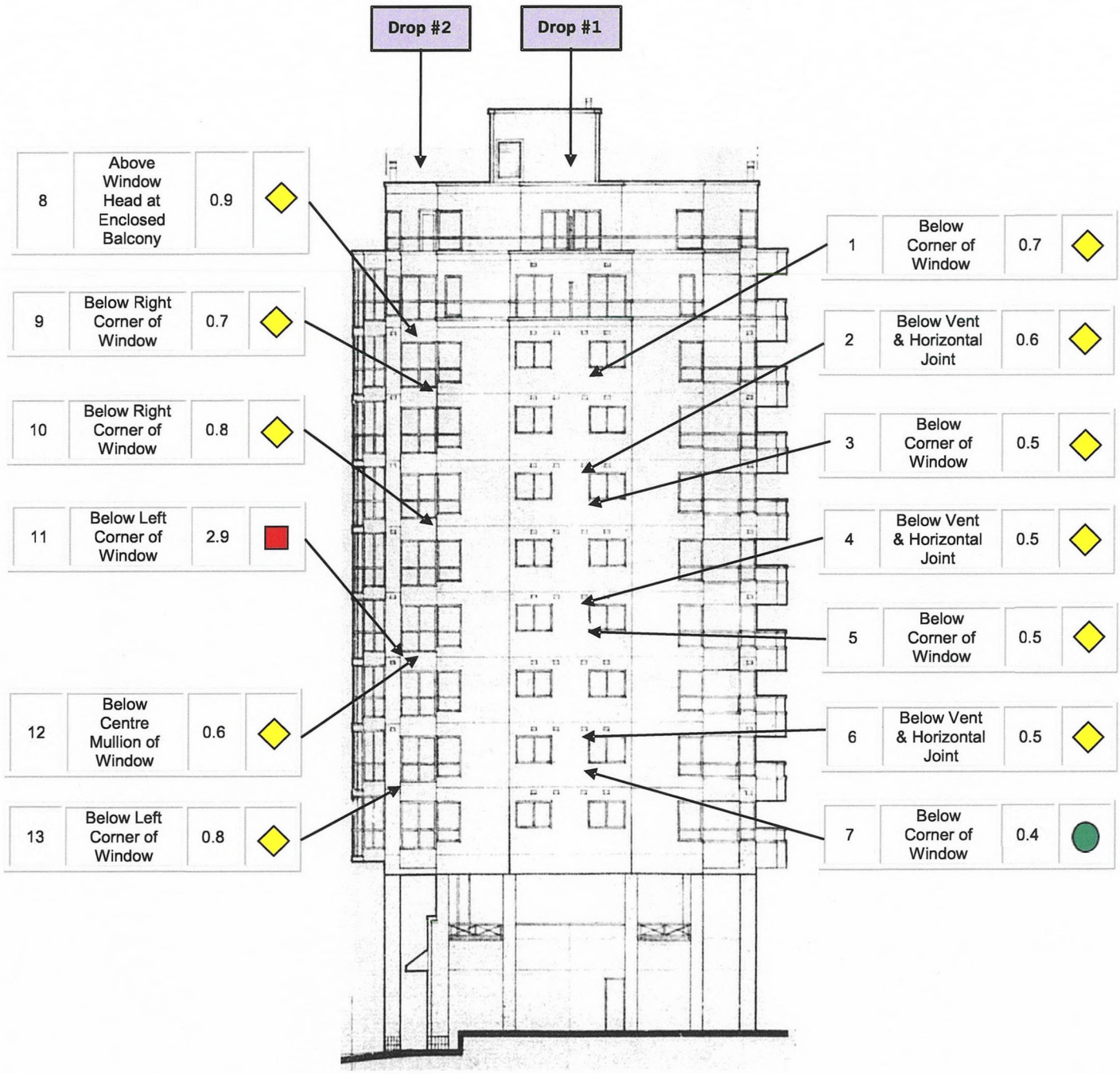


Figure 5 (MC):

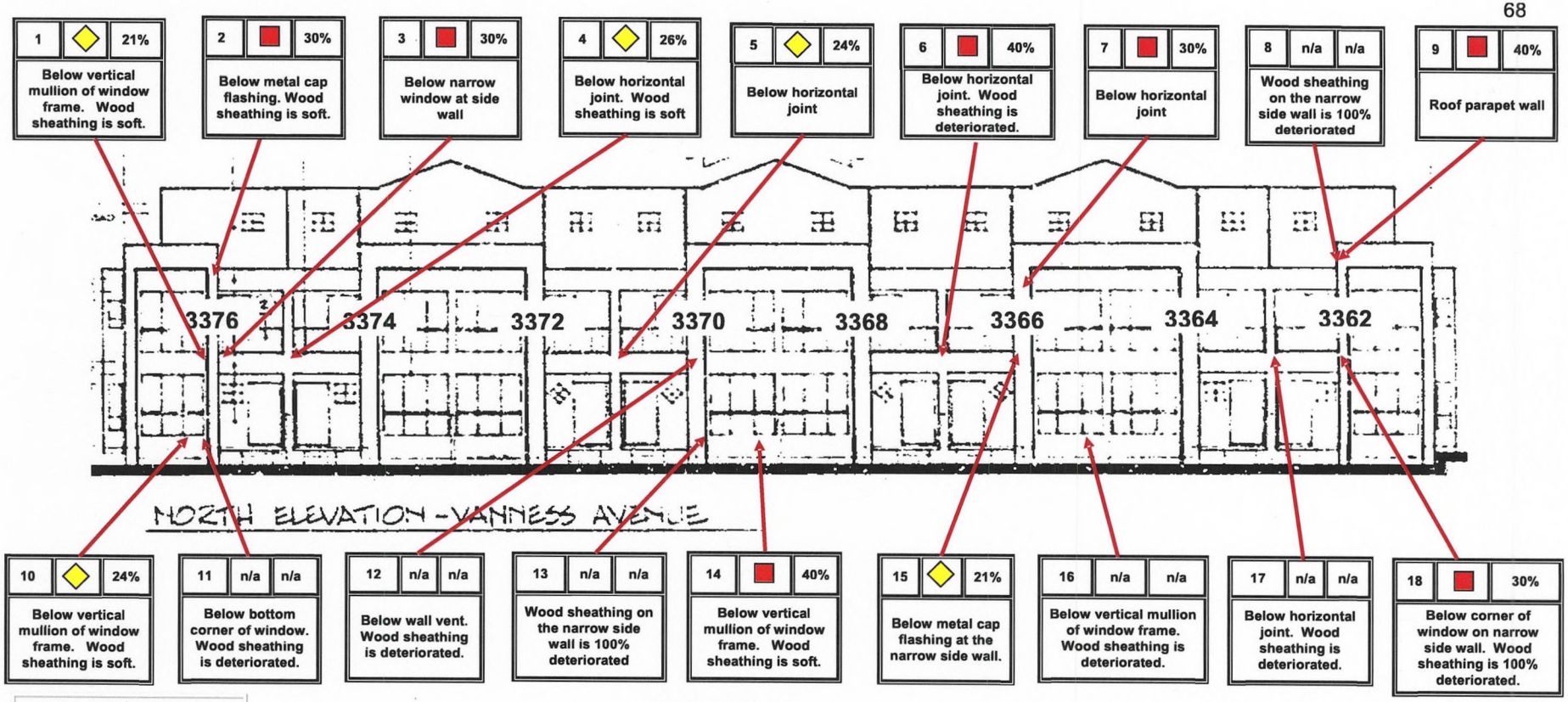
3380 Vanness Avenue

West Elevation
Moisture Content ("MC") Survey

APPENDIX - B

3362 TO 3376 VANNESS AVENUE (TOWN HOMES)

MOISTURE CONTENT ("MC") SURVEY



Legend: Sample MC Reading		
Location MC#	MC Symbol	MC Reading
14	■	40%

Figure 6 (MC):

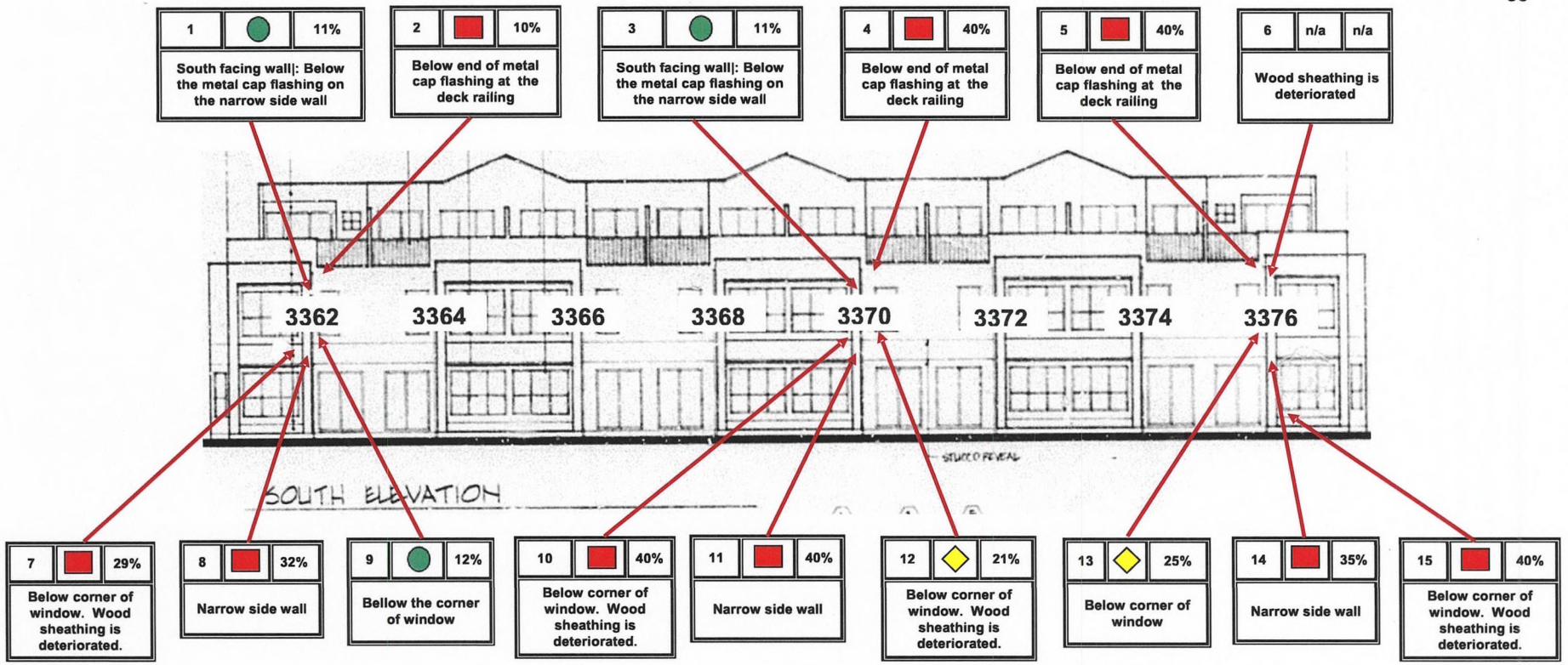
Town Homes

North Elevation
Moisture Content ("MC") Survey

Legend: Moisture Content ("MC") Survey		
Colour:	MC Symbol:	MC Range:
Green	●	0% to 19%
Yellow	◆	20% to 28%
Red	■	29% and Higher

MGH Consulting Inc.

Project Name:	Joyce Place 3362 to 3376 Vanness Avenue Vancouver, BC	Drawing Title:	Moisture Content Survey: Town Homes North Elevation	Project No:	2016.06.003
Owner:	Strata Plan LMS 992	Date:	January 3, 2017	Drawing No:	MC-001



Legend: Sample MC Reading		
Location MC#	MC Symbol	MC Reading
10		40%

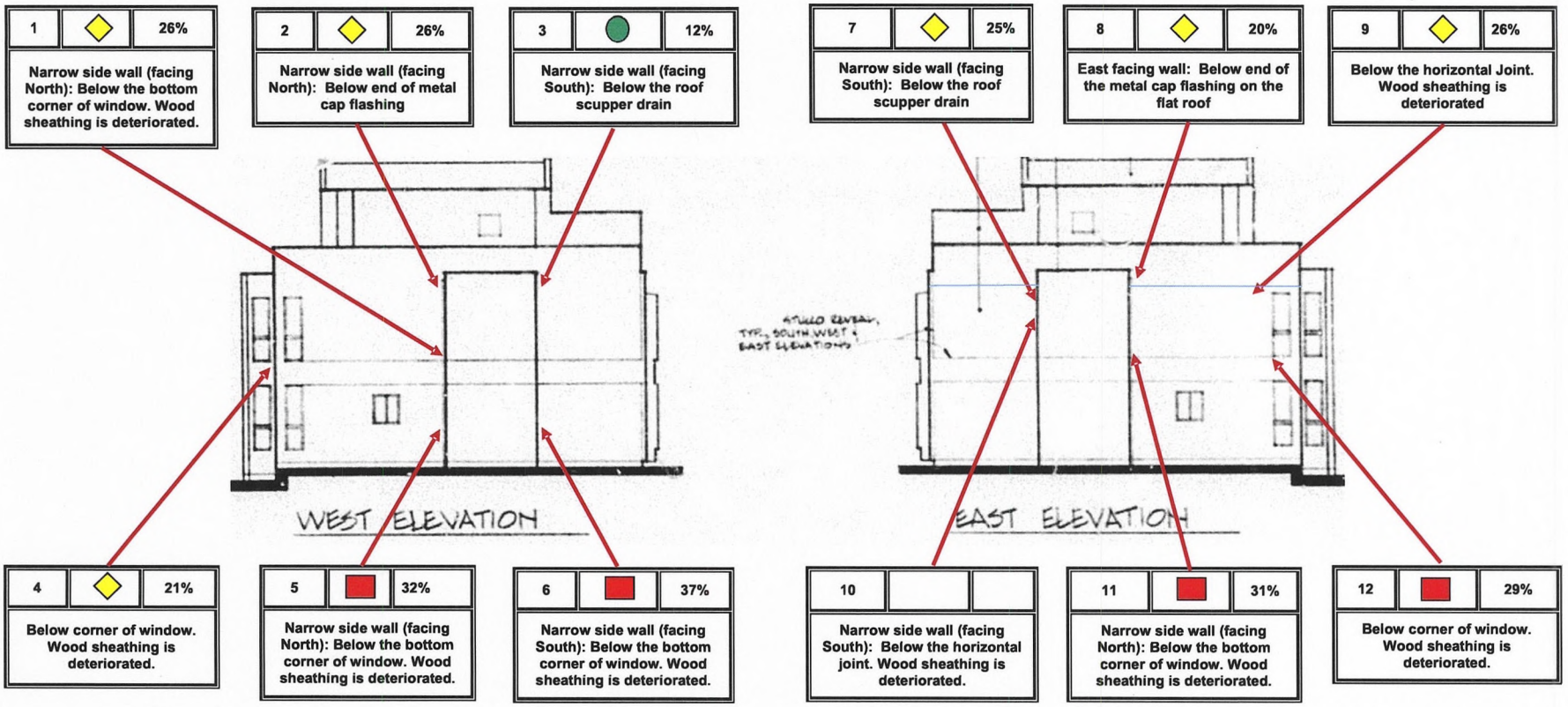
Figure 7 (MC):

Town Homes

South Elevation
Moisture Content ("MC") Survey

Legend: Moisture Content ("MC") Survey		
Colour:	MC Symbol:	MC Range:
Green		0% to 19%
Yellow		20% to 28%
Red		29% and Higher

MGH Consulting Inc.	Project Name:	Joyce Place 3362 to 3376 Vanness Avenue Vancouver, BC	Drawing Title:	Moisture Content Survey: Town Homes South Elevation	Project No: 2016.06.003
	Owner:	Strata Plan LMS 992	Date:	January 3, 2017	Drawing No: MC-002



Legend: Sample MC Reading		
Location MC#	MC Symbol	MC Reading
11		31%

Figure 8 (MC):

Town Homes

West & East Elevations
Moisture Content ("MC") Survey

Legend: Moisture Content ("MC") Survey		
Colour:	MC Symbol:	MC Range:
Green		0% to 19%
Yellow		20% to 28%
Red		29% and Higher

MGH Consulting Inc.	Project Name:	Joyce Place 3362 to 3376 Vanness Avenue Vancouver, BC	Drawing Title:	Moisture Content Survey: Town Homes West & East Elevations	Project No:	2016.06.003
	Owner:	Strata Plan LMS 992	Date:	January 3, 2017	Drawing No:	MC-003

APPENDIX - C

EXPLORATORY OPENINGS ("EO")

APPENDIX - C

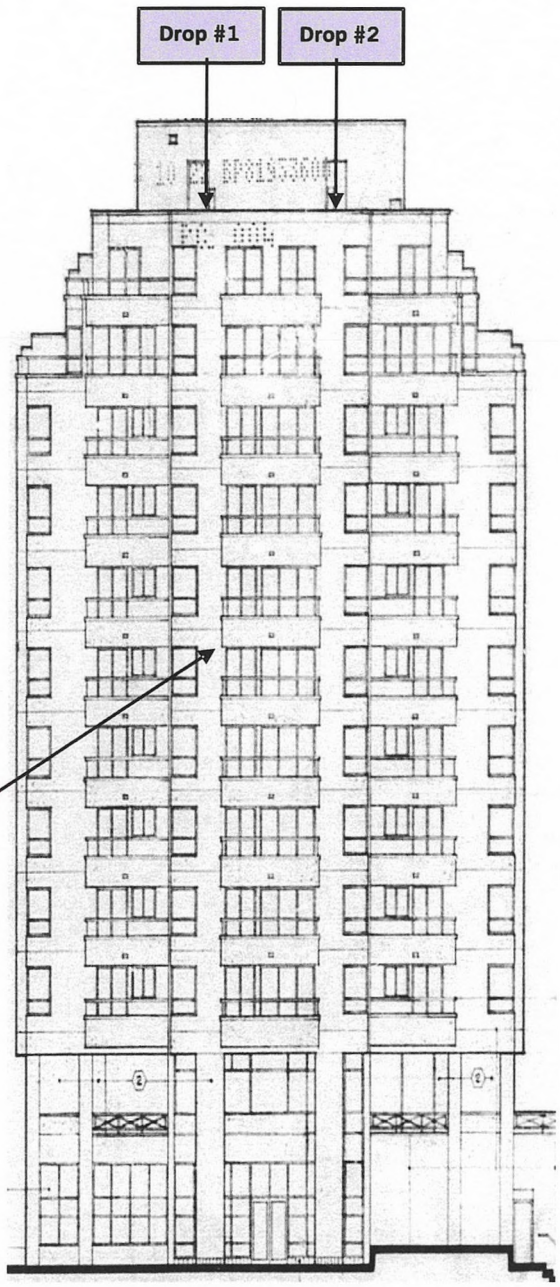
3380 VANNESS AVENUE
(TOWER)

EXPLORATORY OPENINGS ("EO")

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2016



EO #1	Below the back corner of the balcony	0.1%	

Gypsum exterior sheathing board appears in good condition. No evidence of previous water ingress.

Figure 3 (EO):

3380 Vanness Avenue

South Elevation
Exploratory Openings

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

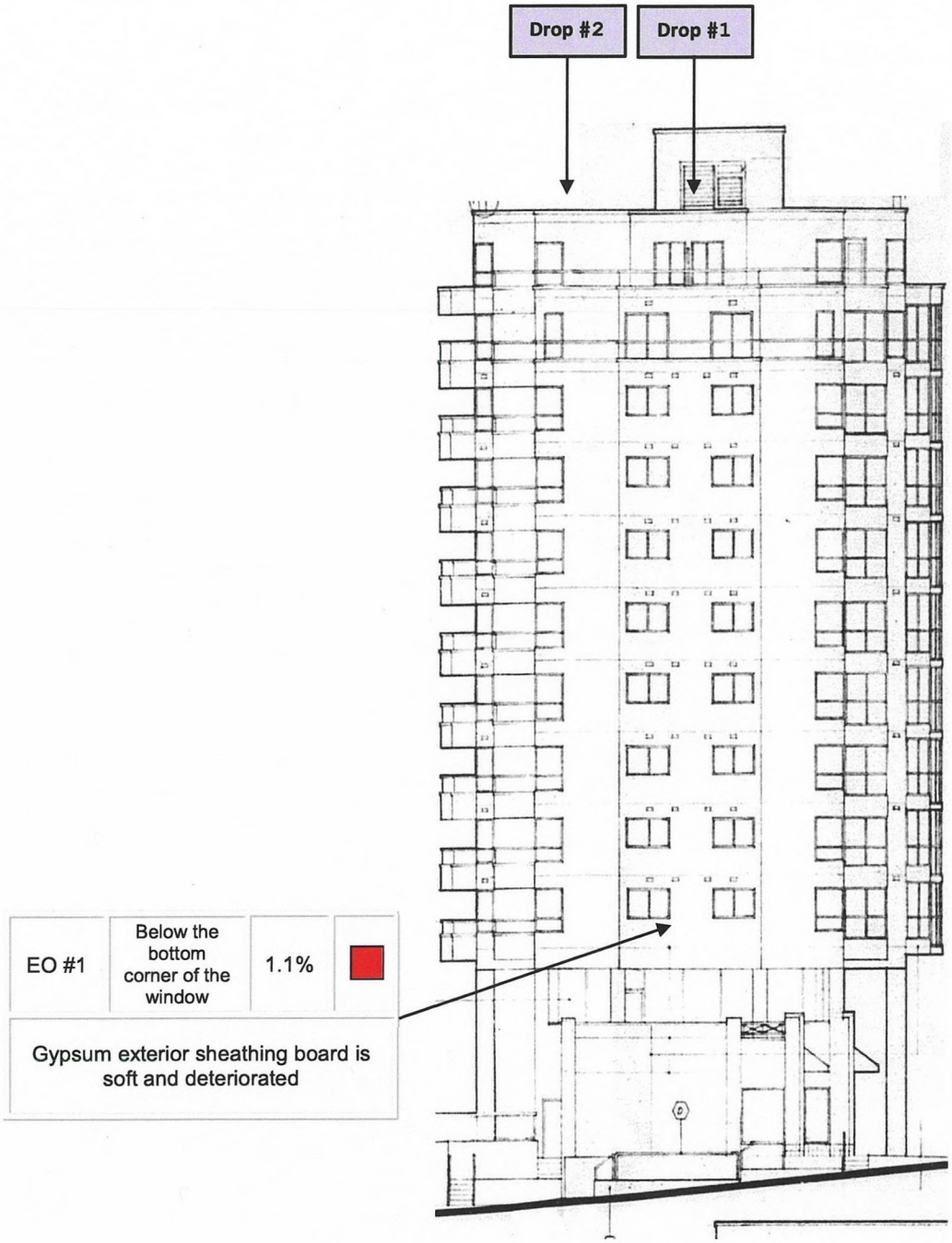


Figure 4 (EO):

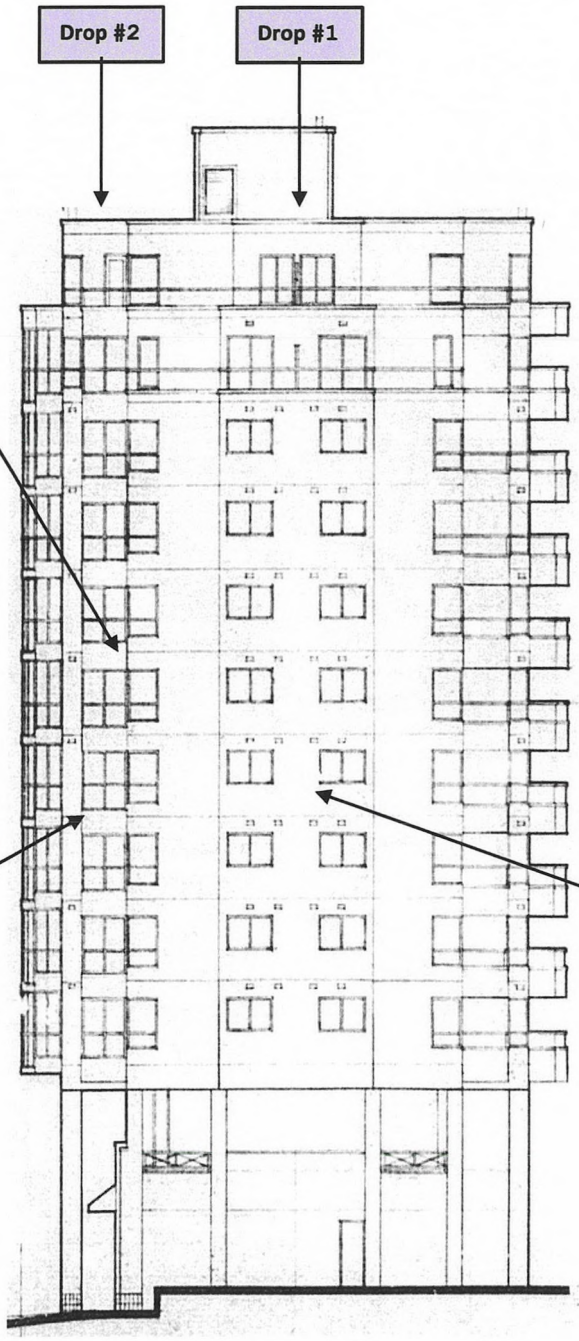
3380 Vanness Avenue

East Elevation
Exploratory Openings

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017



EO #2	Below the bottom right corner of window	0.8%	◆

Gypsum exterior sheathing board generally appears in good condition

EO #3	Below the bottom left corner of window	2.9%	■

Gypsum exterior sheathing board is soft and deteriorated.

EO #1	Below the bottom corner of the window	0.5%	◆

Gypsum exterior sheathing board appears in good condition

Figure 5 (EO):

3380 Vanness Avenue

West Elevation
Exploratory Openings

APPENDIX - C

3362 to 3376 VANNESS AVENUE (TOWN HOMES)

EXPLORATORY OPENINGS ("EO")

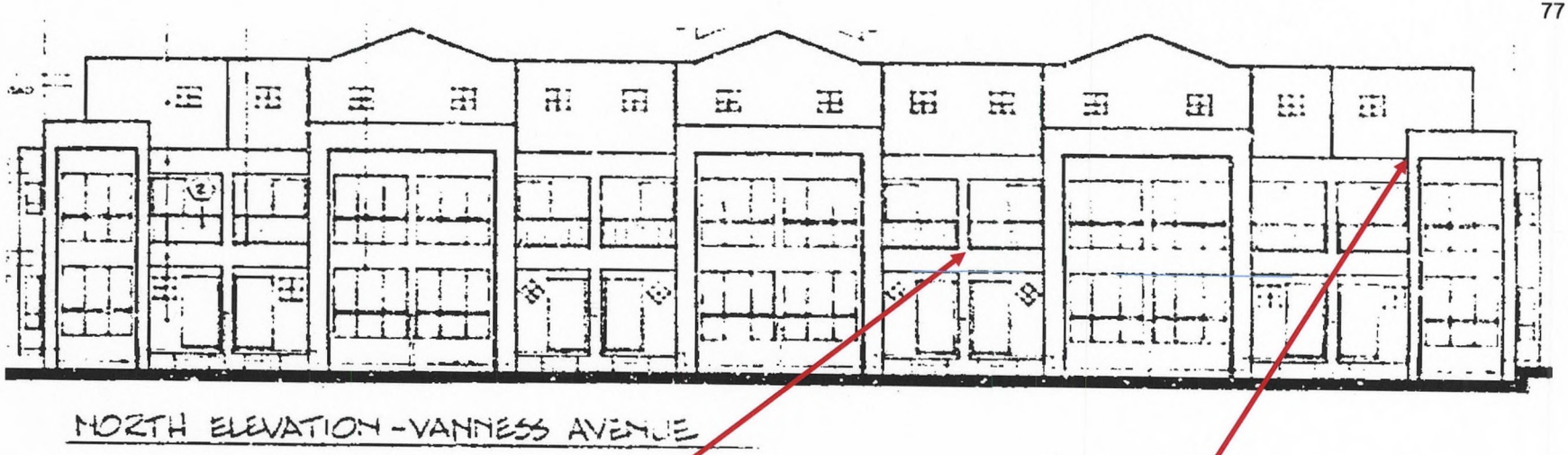
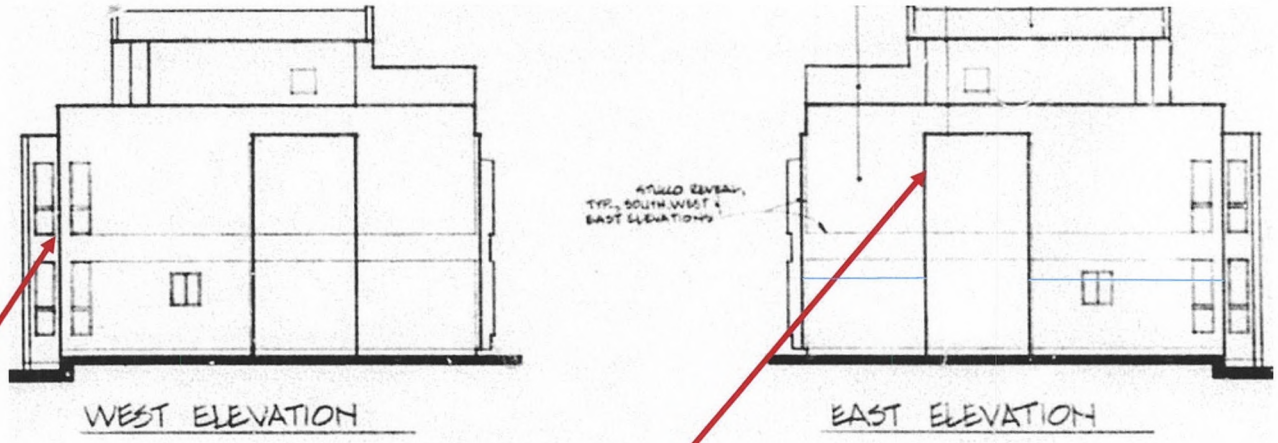


Figure 6 (EO):

Town Homes

North Elevation
Exploratory Openings

MGH Consulting Inc.	Project Name:	Joyce Place 3362 to 3376 Vanness Avenue Vancouver, BC	Drawing Title:	Exploratory Openings: Town Homes North Elevation	Project No:	2016.06.003
	Owner:	Strata Plan LMS 992	Date:	January 3, 2017	Drawing No:	EO-001



EO #1	Below the bottom corner of window
West facing wall: Wood sheathing board is deteriorated	

EO #2	Below a horizontal joint
South facing (narrow) wall: Wood sheathing board is deteriorated	

Figure 8 (EO):

Town Homes

West & East Elevations
Exploratory Openings

MGH Consulting Inc.	Project Name:	Joyce Place 3362 to 3376 Vanness Avenue Vancouver, BC	Drawing Title:	Exploratory Openings: Town Homes West & East Elevations	Project No:	2016.06.003
	Owner:	Strata Plan LMS 992	Date:	January 3, 2017	Drawing No:	EO-002

APPENDIX - D

DETAILED DESCRIPTION

OF

OBSERVATIONS AND FINDINGS

APPENDIX - D

3380 VANNESS AVENUE
(TOWER)

TABLE 1:

DETAILED DESCRIPTION of OBSERVATIONS & FINDINGS

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 1: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
A.	**3380 Vanness Avenue (Tower)**

North Elevation

ITEM	DESCRIPTION	DROP	LEVEL	PHOTO
1.	Caulking at the exterior joints at windows generally appear in good condition.	1 & 2	All Levels	43 44
2.	The "123 Silicone Seal" strips at the horizontal exterior joints generally appear in good condition.	1 & 2	All Levels	41
3.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was generally in the range between MC=0.5% to MC=1.0% at the majority of locations where a moisture reading was taken. This range of moisture content is considered borderline (i.e., higher than normal expected operating conditions).	1 & 2		
4.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=1.6% at level 7). This range of moisture content exceeds the acceptable range. Heavy condensation was observed at a window on Level 7. The MC reading was measured below the bottom corner of that window.	2	7	
5.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=2.1% at level 5). This range of moisture content exceeds the acceptable range. Heavy condensation was observed at a window at Level 6. The MC reading was measured below the Level 6 window (at the top corner of the window at Level 5).	2	5	
6.	The wood stool at the window sill was severely decayed. Level 4.	2	4	62

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 1: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
A.	**3380 Vanness Avenue (Tower) - Continued**

South Elevation

ITEM	DESCRIPTION	DROP	LEVEL	PHOTO
1.	Caulking at the exterior joints at windows generally appear in good condition.	1 & 2	All Levels	
2.	The "123 Silicone Seal" strips at the horizontal exterior joints generally appear in good condition.	1 & 2	All Levels	
3.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was generally in the range between MC=0.5% to MC=1.0% at the majority of locations where a moisture reading was taken. This range of moisture content is considered borderline (i.e., higher than normal expected operating conditions).	1 & 2		
4.	The ventilation hood at the building exterior (floor level 11) appears to have been previously removed (by other parties), and the wall opening has been fully sealed. The reason for removing the vent is not known at this time.	2	4	63

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 1: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
A.	**3380 Vanness Avenue (Tower) - Continued**

East Elevation

ITEM	DESCRIPTION	DROP	LEVEL	PHOTO
1.	Caulking at the exterior joints at windows generally appear in good condition.	1 & 2	All Levels	
2.	The "123 Silicone Seal" strips at the horizontal exterior joints generally appear in good condition.	1 & 2	All Levels	
3.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was generally in the range between MC=0.5% to MC=1.0% at the majority of locations where a moisture reading was taken. This range of moisture content is considered borderline (i.e., higher than normal expected operating conditions).	1 & 2		
4.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=1.1% at level 3). This value of moisture content exceeds the acceptable range. The MC reading was measured below the bottom corner of the window in the bedroom at Unit #303. An EO was made at the bottom corner of the window in the bedroom at Unit #303. The gypsum sheathing board was soft "punky".	1	3	
5.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=1.8% at level 6). This value of moisture content exceeds the acceptable range. Extremely heavy condensation was observed at a window at Level 6. The MC reading was measured below the bottom corner of this window.	2	6	
6.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=7.0% at level 4). This range of moisture content far exceeds the acceptable range. The MC reading was measured below the left corner of the window at level 4.	2	4	

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 1: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
A.	**3380 Vanness Avenue (Tower) - Continued**

West Elevation

ITEM	DESCRIPTION	DROP	LEVEL	PHOTO
1.	Caulking at the exterior joints at windows generally appear in good condition.	1 & 2	All Levels	
2.	The "123 Silicone Seal" strips at the horizontal exterior joints generally appear in good condition.	1 & 2	All Levels	
3.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was generally in the range between MC=0.5% to MC=1.0% at the majority of locations where a moisture reading was taken. This range of moisture content is considered borderline (i.e., higher than normal expected operating conditions).	1 & 2		
4.	The moisture content of the gypsum sheathing board (behind the stucco cladding) was greater than MC=1.0% (i.e., MC=2.9% at level 6). This value of moisture content exceeds the acceptable range. The MC reading was measured below the left bottom corner of the window. Heavy condensation visible at the window. An EO was made below the left bottom corner of the window. The gypsum sheathing board was damaged by moisture.	2	6	26
5.	Extreme condensation visible at the windows.	2	4	

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 1: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
A.	**3380 Vanness Avenue (Tower) - Continued**

Roof Levels (Tower)

ITEM	DESCRIPTION	DROP	LEVEL	PHOTO
1.	There are three separate areas of flat roofing (i.e., mechanical penthouse, top of the tower, and Level 2). The roofing membrane at all three locations generally appears in good condition.		Roof	13 to 16 45
2.	Metal debris on the flat roof of the mechanical penthouse should be removed.		Roof	45
3.	The roofing membrane does not extend up the vertical face of items that project above the roof surface (e.g., vent stacks, plumbing stacks, etc.)		Roof	46
4.	The open end of plumbing stacks does not have mesh screen. MGH recommends installing a mesh screen across the open end of the stack to prevent access to insects and rodents.		Roof	46

Per: _____

MGH Consulting Inc.

APPENDIX - D

3362 to 3376 VANNESS AVENUE
(TOWN HOMES)

TABLE 2:

DETAILED DESCRIPTION of OBSERVATIONS & FINDINGS

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

3362 Vanness Avenue

ITEM	DESCRIPTION	PHOTO
1.	Severe decay of the wood structural framing below the ground floor windows at the North exterior wall (i.e., columns at corners of wall, wall studs, exterior plywood sheathing, and wood plate along the window sill).	27, 28
2.	Severe decay of the plywood sheathing on the main (ground) floor. Decay of the floor joists on the main (ground) floor.	27
3.	Water ingress into the crawlspace. Point of water entry appears to be the base of the North exterior wall below the ground floor windows.	
4.	The sliding door on the upper floor that leads to the South outdoor deck is difficult to open/close. The sliding door is not properly seated on the track along the base of the door, and the door could not be lifted, moved, or adjusted to improve the sliding mechanism of the door.	
5.	A small circular area of stucco cladding was removed at 2 separate locations to make an exploratory opening ("EO") to reveal the underlying materials of the wall assembly. a. North exterior wall, narrow wall facing East, upper floor level. The underlying plywood sheathing board was decayed and the wood disintegrated (crumbled) easily when the wood was probed by hand using a sharp metal instrument. b. The West exterior wall, narrow wall facing West, below the bottom corner of an upper floor window. The moisture content of the plywood sheathing board was high (MC=21%). The wood disintegrated (crumbled) easily when probed by hand using a sharp metal instrument.	50 51

Per: _____

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

ITEM	DESCRIPTION	PHOTO
	3364 Vanness Avenue	
1.	Severe decay of the wood structural framing below the ground floor windows at the North exterior wall (i.e., wall studs, exterior plywood sheathing, and wood plate along window sill).	31
2.	Large-sized water droplets forming on the window metal frame along the head of the window. The source of moisture creating the water droplets appears to be condensation on the cold surfaces of the window glass and window frame.	
3.	Condensation on the window metal frame.	

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

ITEM	DESCRIPTION	PHOTO
	3366 Vanness Avenue	
1.	Severe decay of the wood structural framing below the ground floor windows at the North exterior wall (i.e., wall studs, exterior plywood sheathing, and wood plate along window sill).	
2.	Fungal growth on the interior drywall and wood surfaces surrounding the windows at the North exterior wall.	

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

3372 Vanness Avenue

ITEM	DESCRIPTION	PHOTO
1.	Severe decay of the wood structural framing below the ground floor windows at the North exterior wall (i.e., wall studs, exterior plywood sheathing, and wood plate along window sill).	48
2.	The exterior plywood sheathing easily disintegrated (crumbled) when probed by hand using a sharp instrument.	48
3.	Large-sized water droplets forming on the window metal frame. The source of moisture creating the water droplets appears to be condensation on the cold surfaces of the window glass and window frame.	49
4.	Fungal growth on the wood surfaces surrounding the windows at the North exterior wall.	49

Per: _____

MGH Consulting Inc.

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INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

3376 Vanness Avenue

ITEM	DESCRIPTION	PHOTO
1.	Severe decay of the wood structural framing below the ground floor windows at the North exterior wall (i.e., wall studs, exterior plywood sheathing, and wood plate along window sill).	29
2.	The exterior plywood sheathing easily disintegrated (crumbled) when probed by hand using a sharp instrument.	30
3.	A horizontal gap/void is visible between the bottom of the exterior plywood sheathing and the horizontal wood plate along the base of the North exterior wall. It appears the original plywood sheathing was not installed properly. The plywood should overlap and be nailed to the horizontal bottom plate to provide structural resistance to lateral loading (e.g., seismic loading), and to resist air infiltration through the exterior wall.	30
4.	Severe fungal growth on the majority of the surfaces on the interior drywall and wood surfaces surrounding the interior side of the windows at the North exterior wall.	29
5.	Water stains at various locations on the interior drywall (i.e., ceiling and walls) from previous water ingress. The leaks were not active at the time of MGH's site visit.	64 65

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

	TABLE 2: DETAILED DESCRIPTION of OBSERVATIONS and FINDINGS
b.	**3362 to 3376 Vanness Avenue (Town Homes)**

ITEM	DESCRIPTION	PHOTO
	Miscellaneous Topics	
1.	Drainage at the town home balconies (facing North) is comprised of a pipe drain that penetrates the balcony guard wall. The pipe drain is typically located at the bottom corner of the guard wall. MGH observed that the balcony floor is generally not properly sloped to drain away water on the balcony. MGH observed a large area of standing water surrounding the mouth of the pipe drain. This indicates that the pipe drain is not located at the low point of the balcony floor. MGH observed that the standing water had become frozen due to recent cold temperatures.	54
2.	MGH observed water stains on the interior drywall at the ceiling of selected town homes. One circular stain surrounds an electrical junction box. One stain appears as a straight line between a sprinkler head and the North exterior wall. The Owner / Occupant at the affected town homes were not able to verify to MGH when the water stains originated, or whether the leaks were still active. The water stains on the ceiling were not wet at the time of MGH's site visit. Further investigation would be required to verify whether the source of moisture that caused the stain at the underside of the ceiling is still active, or whether the leak is no longer active because the previous source of moisture has since been remedied by other parties. The town homes where MGH observed water stains on the ceiling include #3366 and #3376.	60 61

Per: _____

MGH Consulting Inc.

APPENDIX - E

OPINION OF PROBABLE COST ("OPC")

COASTPRO CONTRACTING LTD.

23195 96th Avenue
PO Box 1648
Fort Langley, BC, V1M 0E8
Tel: 604 881-7011 Fax: 604 881-7012
Email: info@coastpro.ca

Opinion of Probable Cost (OPC)

Project:	Joyce Place – LMS 992 (Building Envelope)	**Date:**	December 2016

Background:

MGH Consulting Inc. (MGH) is providing the owners with a building envelope conditional assessment (BECA). MGH has retained Coastpro Contracting Ltd. (CCL), to provide an Opinion of Probable Cost (OPC) to to complete the following scope of work:

1. Low rise
    a. Replace the existing building envelope with a new rain screen design wall assembly.
    b. Replace the existing patio decks with new sheathing and membrane
    c. Replace the existing guardrails
2. High rise
    a. Replace the existing windows with new
    b. Complete exterior and interior finishes to accommodate new windows

The level and detail of an OPC can vary. A detailed OPC would include an invitation to several trades to review drawings and specifications, and then provide a budget to complete their work. Coastpro has been given directions not to engage in a detailed OPC as noted above, but rather, submit a ball park figure based on current industry pricing. Therefore, this OPC will involve a general calculation of volumes and attaching prices.

Opinion of Probable Cost (OPC):

CCL has not received a formulated scope of work (specifications) for this OPC. However, the general scope of work is outlined above and below. The reader should be aware that an opinion of probable cost in this case is based on CCL's experience with previous work of a similar nature. It should also be noted that the OPC is not a quotation, but rather, what is a reasonable cost to complete a described amount of work. The reader should also be aware that there are factors that may vary and have an effect on the eventual price of bid submissions for the Work that cannot be determined at the time of the OPC. They may be:

.1 Economic factors and timing of the work. This OPC is based on current Industry prices in 2016, and the assumption that the Work will be proceeding within a short time period thereafter in 2016. The OPC has not included any provisions for changes in the economy, and therefore, the cost of the Work may rise or fall in time due to unpredictable economic factors. However, the cost of building envelope remediation projects tend to increase over time. Thus, it is reasonable to assume that the costs set out in this OPC are conservative for a 2016 building envelope remediation project.

.2) Changes in details of the work. The specific type of product and detail of the installation have not been specified. While the writer has relied on products and standard installation procedures in the building envelope industry today, it is possible that product type and details may vary, resulting in variance in the estimated cost of individual line items in this OPC. However, it is the opinion of CCL that the overall cost in this OPC is reflective of the current market place for a project of this size, scope and type, and is less likely to change significantly overall within the time period contemplated for this project.

.3) Working Hours, work restrictions, and time of year. This OPC has not factored any work restrictions imposed on the contractor. Such restrictions may occur as a result of work taking place around resident occupied buildings. In addition, it is assumed that the contractor will incur additional costs to complete the work during challenging weather months

.4) Phasing of the work into smaller sections. This OPC assumes that the work will be completed in one or two phases. Dividing the Work into small sections will increase the cost to the owners. Costs will occur when the contractor has to mobilize and demobilize more than once. Sub-trade costs will also generally be more expensive when the job is broken into phases. The final challenge with a multi-phase project would be to terminate the first phase of repairs in such a way that the subsequent repairs can be integrated with the preceding repair work.

General Scope of work:

Low rise

Remove existing stucco wall assembly
Remove existing windows and sliding doors
Prep patio decks
Remove existing patio railings

Replace with new rain screen wall assembly
Replace with new windows
New pedestrian membrane
Replace with new railings

High rise

Remove existing windows
Remove targeted stucco
Remove targeted interior finishes

Replace with new windows
Replace targeted stucco
Replace targeted interior finishes

Prices exclude professional services provided by a building envelope consultant

Building	Base	Contingency	Sub-total	GST	Total
Low rise	675,000.00 to 725,000.00	217,500.00 (30% of base)	942,500.00	47,125.00	989,625.00 (calc. on 725,000 base)
Hi rise	740,000.00 to 785,000.00	196,250.00 (25% of base)	981,250.00	49,062.50	1,030,312.50 (calc. on 785,000 base)
Totals:	**1,510,000.00**	**413,750.00**	**1,923,750.00**	**96,187.50**	**2,019,937.50**
Add Items	Please Note - (cooperation with neighboring properties required for scaffolding)				
High rise walls & patio decks	1,038,750.00	259,687.50 (25% of base)	1,298,437.50	64,921.87	1,363,359.37
High rise roofing	115,000.00	23,000.00 (20% of base)	138,000.00	6,900.00	144,900.00

Base & Contingency Explained:

Base work is described as work that is "known". For example the number of windows is a known amount. Therefore, the contractor can direct its budget to items and work detail that can be calculated. Contingency work is an unknown amount. The amount of damage in the wall assembly that needs to be repaired is unknown (i.e., rusted steel studs). This is a speculated number. For the purposes of this OPC, the contingency has been established at 20%, 25% and 30% of the base work. Work that is less than the contingency amount established will reduce the overall cost of the remediation.

Summary:

There will always be variables that may change the eventual price to the owners. Some simple factors may be to exclude some portions of the work, or whether some items are re-installed rather than replaced (i.e., railings, etc.). Regardless, it is reasonable to assume that the price for replacing the exiting building envelope with a new wall assembly will be within +/- 7 to 10% of the Opinion of Probable Cost.

APPENDIX - F

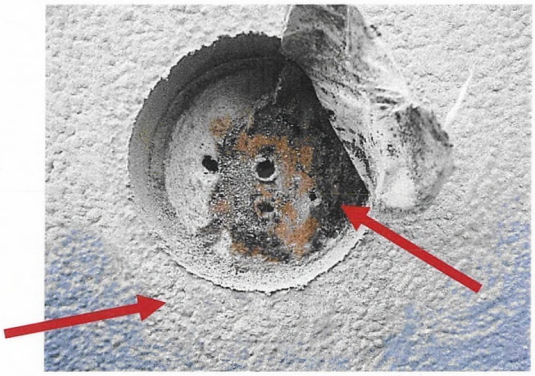
PHOTOGRAPHS

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS



Photograph 26: Tower
View of an exploratory opening ("EO") on the West elevation, Level 6. The left arrow points to the stucco cladding. The right arrow points to a darkened moisture stain on the paper face of the gypsum sheathing board.

Photograph 27: Town Homes (#3362)
The left arrow points to a hole after removal of some of the decayed plywood floor board . The right arrow points to a decayed floor joist.

Photograph 28: Town Homes (#3362)
The arrow points to a decayed column. The extent of decay continues higher than the arrow.

Photograph 29: Town Homes (#3376)
The left arrow points to fungal growth and severe decay of the wood stool plate. The right arrow points to the location of the EO in the interior drywall. See **Photograph 30**.

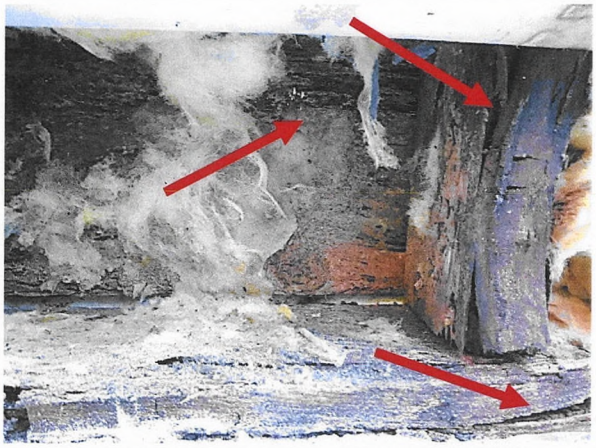
Per: _____
MGH Consulting Inc.

MGH Consulting Inc.

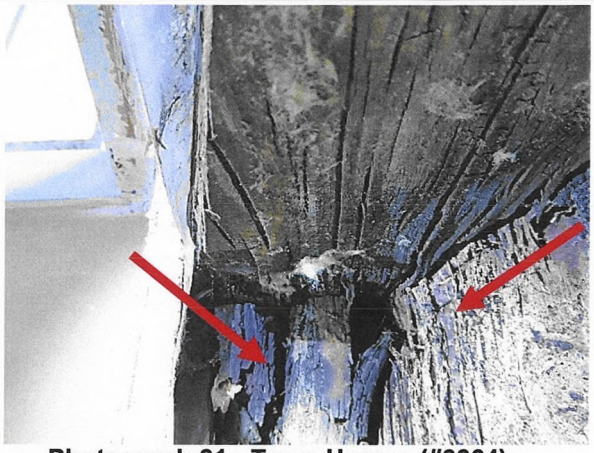
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

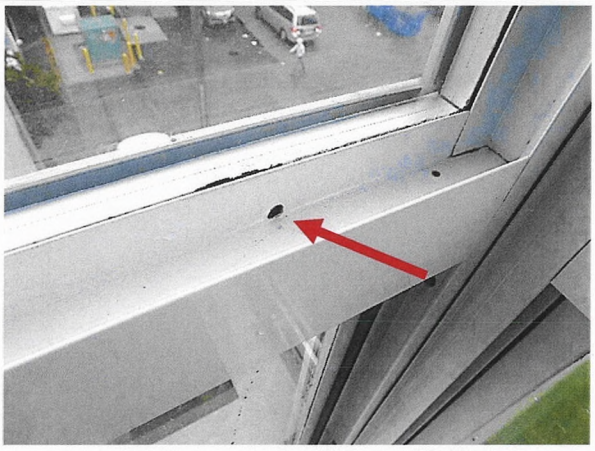
ITEM	PHOTOGRAPHS



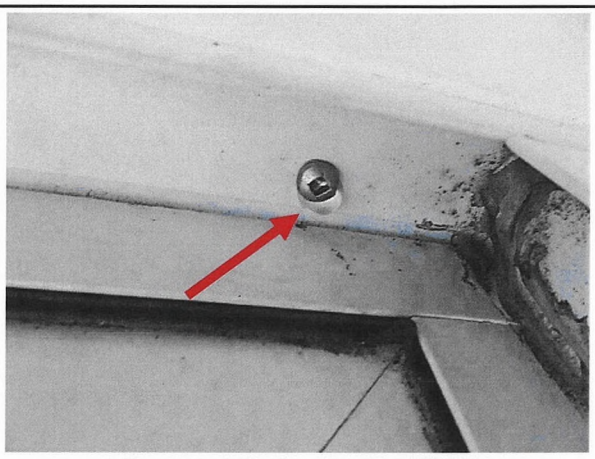
Photograph 30: Town Homes (#3376)
The top arrow points to the decayed wall stud. The middle arrow points to decayed plywood sheathing. The bottom arrow points to a decayed wall plate. See **Photograph 29**.



Photograph 31: Town Homes (#3364)
The left arrow points to severe decay at a corner column. The right arrow points to severe decay at the plywood sheathing board.



Photograph 32: Tower (#303)
The arrow points to an example of a weep-hole drilled (by other parties) into the window frame to drain water that accumulates in the upper horizontal trough of the frame. Simiular weep-holes were added to other window at other units in the tower.



Photograph 33: Tower (#502)
The arrow points to a large water droplet during an active leak at the head of the window frame. Many of the screws are severely corroded at this window and other windows in Unit #502.
See **Photograph 34**.

Per: _____
MGH Consulting Inc.

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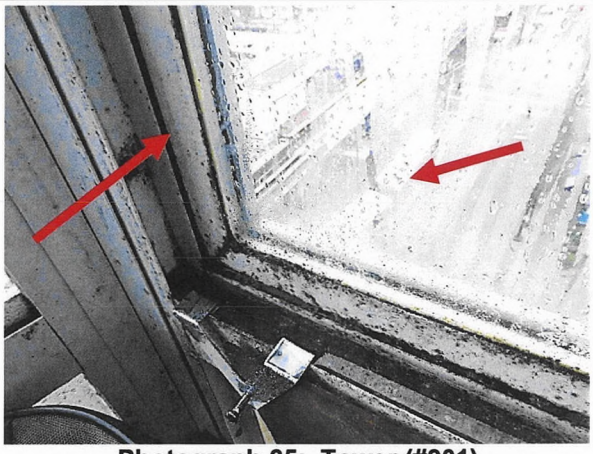
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS

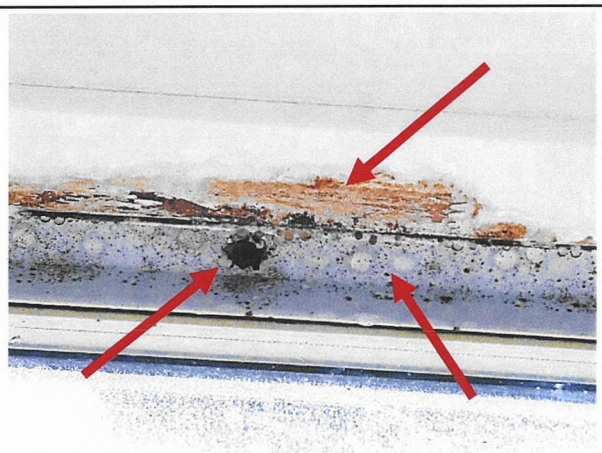
Photograph 34: Tower (#502)

The arrow points to a corroded screw that anchors the window frame to the building. Water actively leaks through these screw holes. See **Photograph 33**.



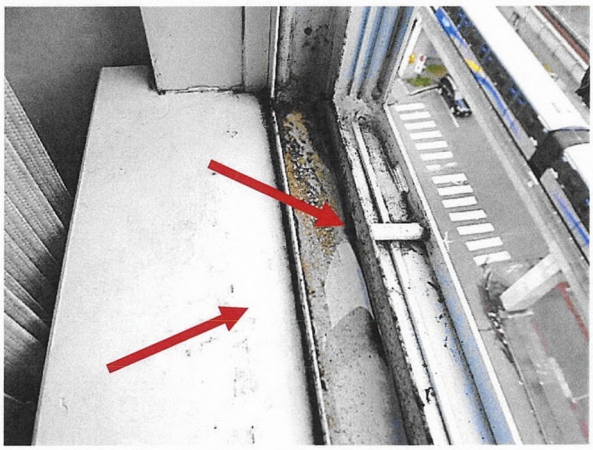
Photograph 35: Tower (#901)

The arrows point to severe condensation on the window glass and window frames. The water runs down the window and accumulates in the troughs of the window frame on the wood stool plate along the window sill.



Photograph 36: Tower (#901)

The left arrow points to a corroded fastener. The middle arrow points to saturated/decayed wood surrounding the window. The right arrow points to multiple large water droplets hanging along the head of the window frame.



Photograph 37: Tower (#901)

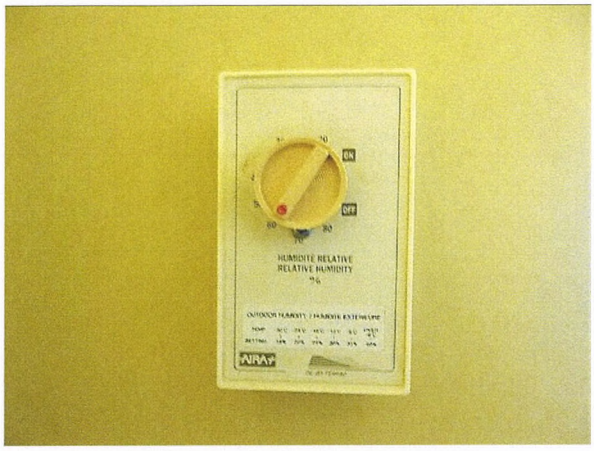
The left arrow points to water overflowing the top edge of the trough and spilling onto the wood stool plate. The right arrow points to a clogged weep-hole which prevents drainage of water accumulating in the trough.

Per: _____

MGH Consulting Inc.

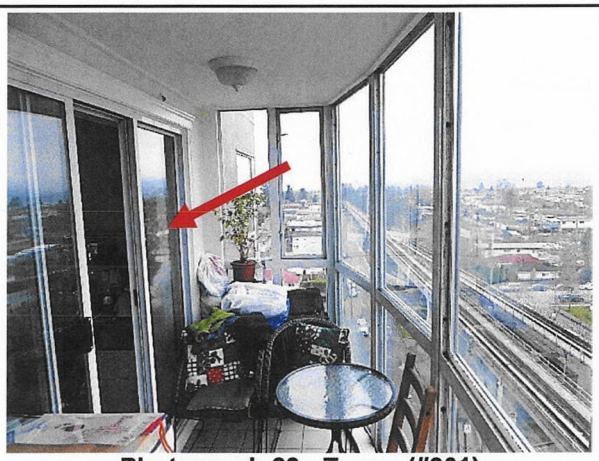
PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS



Photograph 38: Tower (#901)

View of the wall mounted humidistat control typically located in the living room.

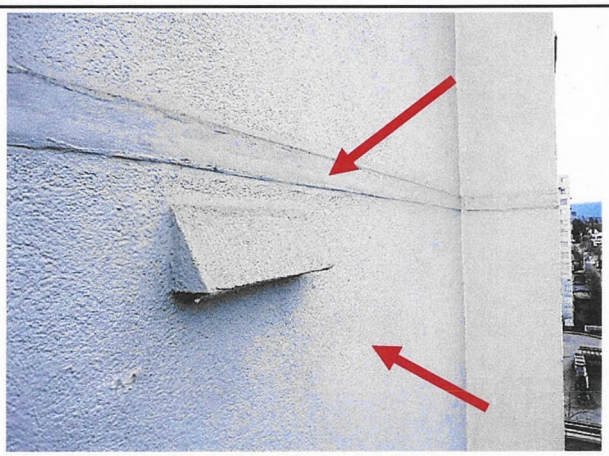


Photograph 39: Tower (#901)

View of a typical solarium at the North side of the tower. The arrow points to the sliding door that separates the solarium from the living room.

Photograph 40: Tower (#1006)

View at the ceiling above the windows in the enclosed balcony. The left arrow points to water stains from previous condensation along the head of the window frame. The right arrow points to corrosion on the metal components behind the interior drywall assembly.



Photograph 41: Tower

The lower arrow points to an example of the Dow Corning "AllGuard" silicone elastomeric coating on the stucco cladding. The upper arrow points to an example of the Dow Corning "123 Silicone Seal" strip applied over-top a previously caulked joint.

Per: _____

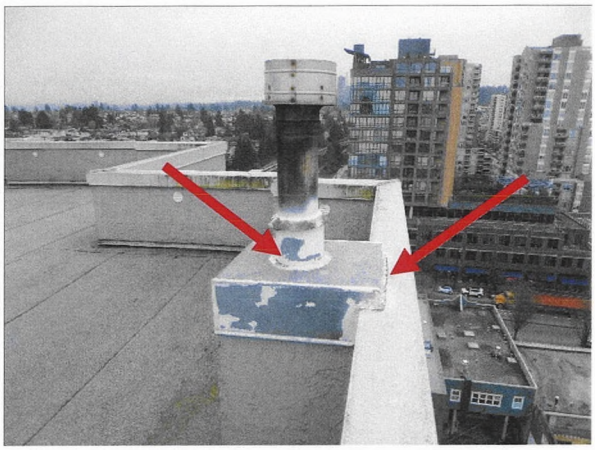
MGH Consulting Inc.

MGH Consulting Inc.

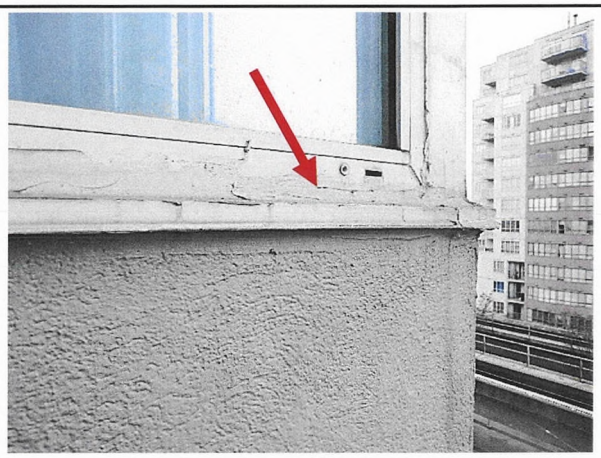
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

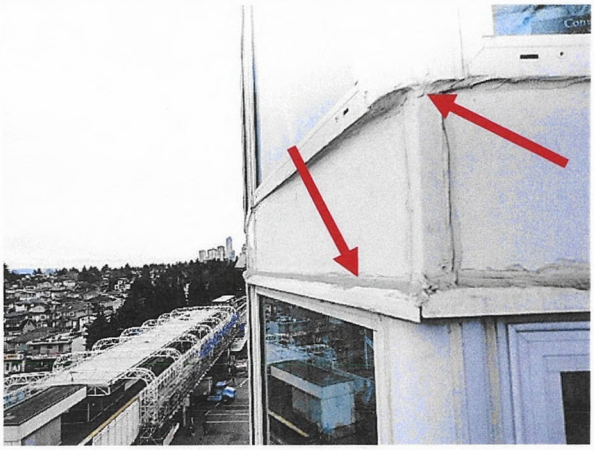
ITEM	PHOTOGRAPHS



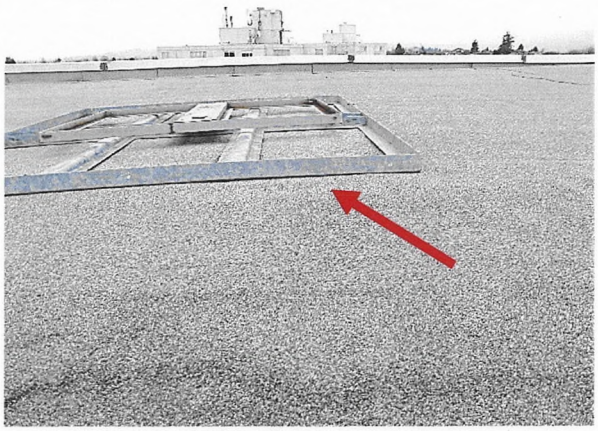
Photograph 42: Tower (Roof)
The arrow point to caulking at joints. The caulking appears weathered.



Photograph 43: Tower
.The arrow points to caulking at exterior joints of a typical window. The caulking appears weathered.



Photograph 44: Tower
The arrow points to caulking at exterior joints of a typical metal panel. The caulking appears weathered.



Photograph 45: Mechanical Penthouse
The arrow points to metal debris on the rooftop.

Per: _____
MGH Consulting Inc.

MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

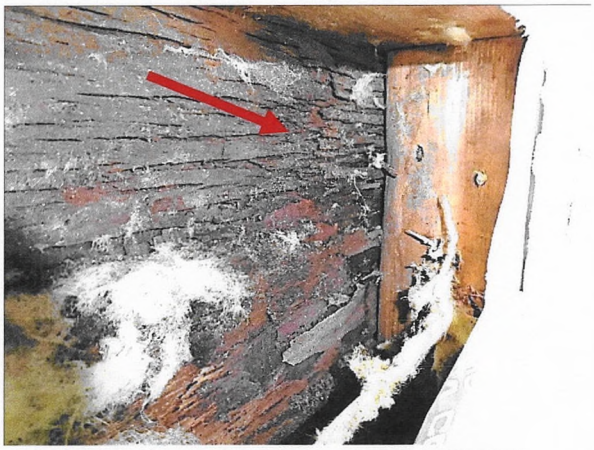
ITEM	PHOTOGRAPHS

Photograph 46: Tower

The arrow points to a typical plumbing stack at the upper flat roof. The end of the pipe is open to the air. Install a mesh screen across the open end to prevent access to insects and rodents.

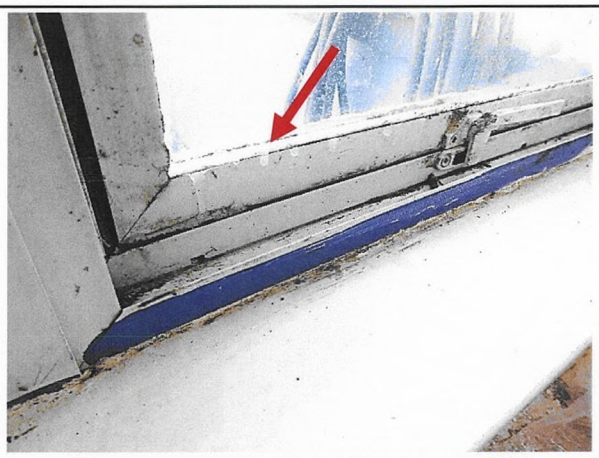
Photograph 47: Tower

The left arrow points to 1 of 2 roof drains on the lower flat roof (floor level 2). The right arrow points to the outline of one the two large areas of standing water surrounding the roof drains.



Photograph 48: Town Homes (#3372)

The arrow points to severe decay of the plywood sheathing board at the North exterior wall. The source of moisture is likely water from condensation on the window frame above the wall. See **Photograph 49**.



Photograph 49: Town Homes (#3372)

The arrow points to large water droplets originating from condensation on the window frame. This water is likely the source of moisture causing the damage shown in **Photograph 48**.

Per: _____

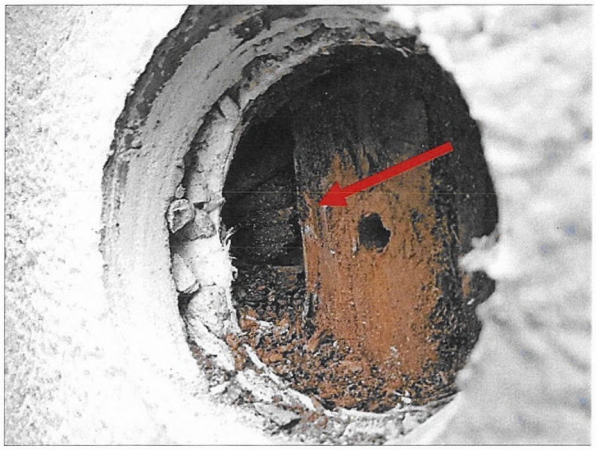
MGH Consulting Inc.

MGH Consulting Inc.

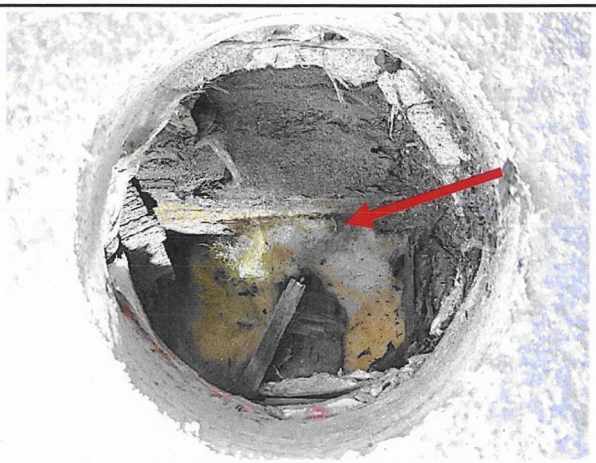
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS

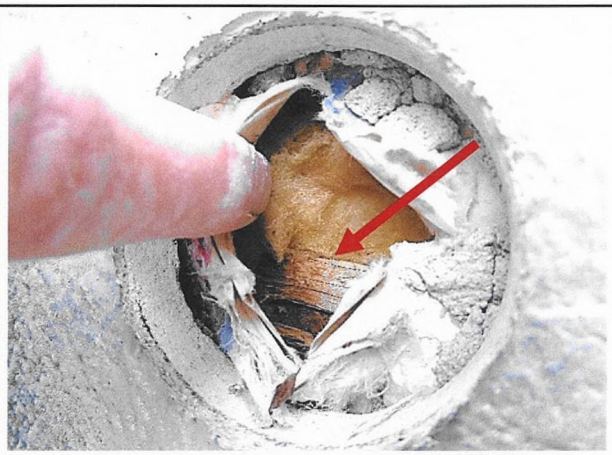


Photograph 50: Town Homes (#3362)
EO made at the North elevation, on a narrow East facing wall at floor level 2, below a horizontal joint. The arrow points to decayed plywood sheathing board.



Photograph 51: Town Homes (#3362)
EO made at the narrow West facing wall at floor level 2, below the bottom corner of a window. The arrow points to decayed plywood sheathing board.

Photograph 52: Town Homes (#3366 / #3368)
EO made at the narrow face of a wall that divides 2 adjacent balconies at floor level 2. The arrow points to decayed plywood sheathing board.



Photograph 53: Town Homes (#3376)
EO made at the narrow wall facing South at floor level 2, below a horizontal joint. The arrow points to decayed plywood sheathing board.

Per: _____
MGH Consulting Inc.

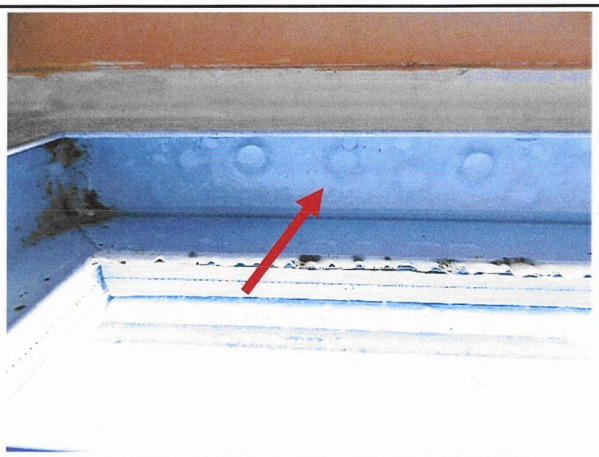
MGH Consulting Inc.

INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

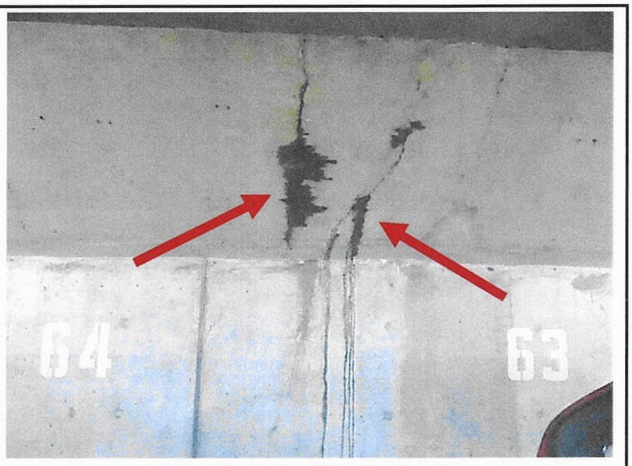
ITEM	PHOTOGRAPHS

Photograph 54: Town Homes
View of a typical balcony at the North side of the town homes. The left arrow points to the balcony floor drain (i.e., a hole through the guard wall). The right arrow points to the outline of a large area of standing water.



Photograph 55: Town Homes (#3364)
The arrow points to large water droplets originating from condensation along the head of the window frame.

Photograph 56: Parkade
The arrows point to active leaks through the foundation wall. West end of the parkade.



Photograph 57: Parkade
The arrows point to active leaks through the foundation wall. South-East end of the parkade.

Per: _____

MGH Consulting Inc.

MGH Consulting Inc.

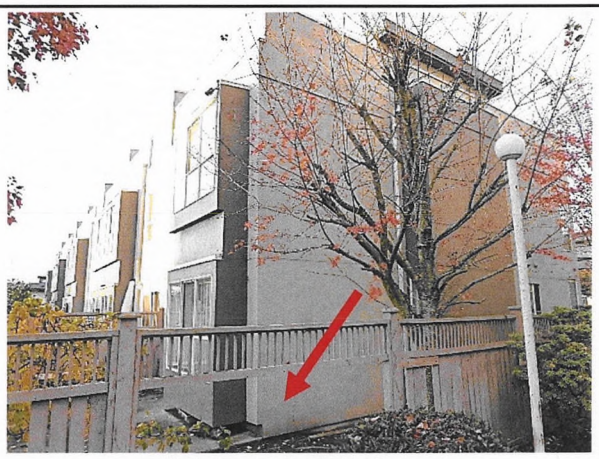
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS

Photograph 58: Parkade

The upper arrow points to a typical pan/tray at the underside of the parkade roof slab to catch water leaking through cracks in the slab. The lower arrow points to a drain pipe that discharges the water to the parkade floor.

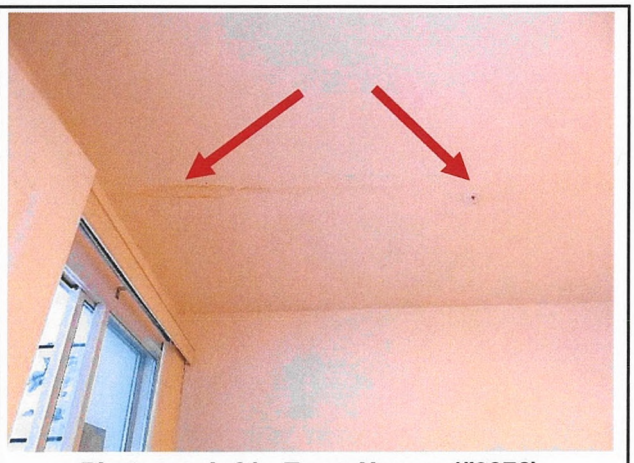


Photograph 59: Fence

View of the fence separating the tower and the town homes. The arrow points to 1 of 2 locations where large areas of the fence panels are missing.

Photograph 60: Town Homes (#3376)

The arrow points to a moisture stain surrounding the junction box for a light fixture. The stain was not wet at the time of MGH's site visit. The Occupant could not verify whether the leak was still active.



Photograph 61: Town Homes (#3376)

The arrow points to a linear stain on the ceiling at an upper floor. The right arrow points to a fire sprinkler head. The stain aligns with the sprinkler head. The stain was not wet at the time of MGH's site visit.

Per: _____

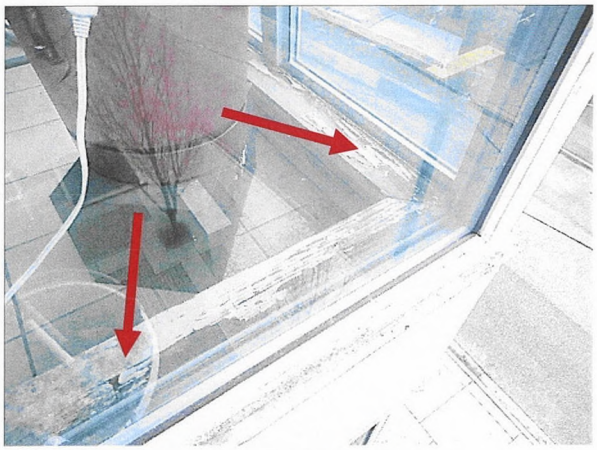
MGH Consulting Inc.

MGH Consulting Inc.

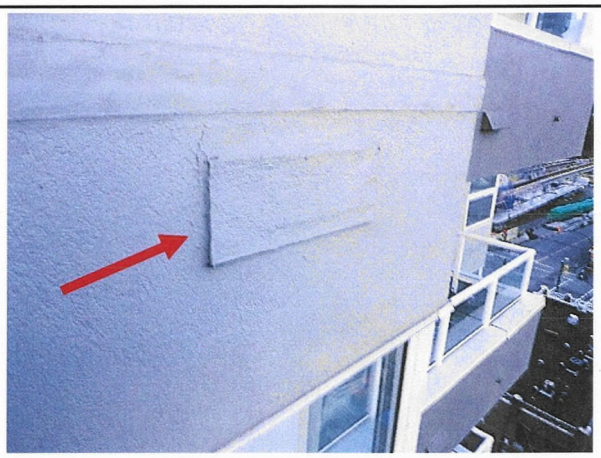
INVESTIGATION REPORT (Cont'd)

PROJECT: Joyce Place - Strata Plan LMS 992 Building Envelope Investigation	REPORT NO: **RE-01**	PROJECT NO: 2016.06.003	DATE: January 3, 2017

ITEM	PHOTOGRAPHS

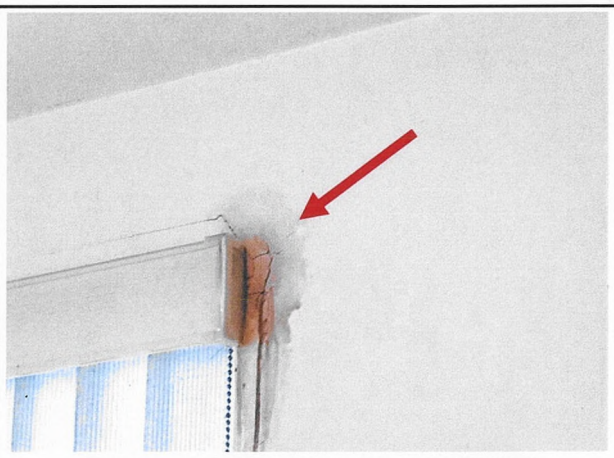


Photograph 62: Tower
The arrows point to decay of the wood stool plate at the window sills (North elevation, Level 4). The source of moisture is likely condensation on the interior side of the window frames.



Photograph 63: Tower
The arrow points to a vent hood that was previously removed (by other parties) at the South elevation and the hole was sealed. The reason for removing the vent hood is not known at this time.

Photograph 64: Town Homes (#3376)
The arrow points to a large moisture stain on the ceiling of the room on the main floor (nearest the North elevation). The stain was not wet at the time of MGH's site visit.



Photograph 65: Town Homes (#3376)
The arrow points to a large moisture stain on the wall of the room on the main floor (nearest the North elevation). The stain was not wet at the time of MGH's site visit.

Per: _____
MGH Consulting Inc.

This is Exhibit "B" referred to in the affidavit of Brett Johnston sworn before me at Coquitlam, this 5th day of June, 20 25

A Commissioner for taking Affidavits in British Columbia

Mechanical First Ltd.
HVAC Systems Specialists

Attn: Mr. John Dutt | dutt.cksmanagement@gmail.com
Firm: CKS Management
Phone: (604)862-8855

September 8, 2019

Re: Joyce Place – High Level Mechanical Assessment
Location 1: Tower - 3380 Vanness st.. Vancouver BC
Location 2: Townhomes – 3362 – 3376 Vanness st. Vancouver BC (Not Reviewed)

Overview:

The above-mentioned location is investigating building upgrades to the Envelope and Electrical / Mechanical systems intended to carry the building through the next 20+ years.

M1 – Mechanical was asked to review the Mechanical Systems from this perspective and make recommendations to suit the intent.

The site visit was roughly 1 hour in length however during this short period we had gathered enough information to confidently say that this building's mechanical systems have been very poorly maintained. With exception to the Domestic Hot Water System every system was either not to current code and/or inoperable.

It is important to understand that the pending envelope upgrade project will likely require a CoV Building Permit which will trigger Electrical / Mechanical Systems to be brought to current code standard.

The following is a high-level overview of the systems in question. A Fee Proposal for a more detailed report and budget can be provided upon request. It is important to note that we did not have any building mechanical drawings to review for this building so there may be items that have not been covered in this report. The townhouses were not part of this report.

Building Systems:

Booster Package (If Building Permit requires 2 pressure zone) $75,000

1. Water Entry Premise Back-flow protection - $25,000
    a. Twin Feed from the city is provided
        i. This is beneficial allowing the city to shut down one main without affecting the services
    b. Building utilizes a single pressure zone
        i. Typically, buildings over 10 floors use a dual pressure system
        ii. This current arrangement may leave tenants at the top of the building with low pressure
        iii. If the water entry pressure is compensated to accommodate those at the top then tenants at the bottom may experience over pressure
        iv. This can be reviewed and corrected but only if a major re-pipe is completed
    c. High/Low Volume Flow Pressure Regulator is in place
    d. Code will require this building to install a Backflow Device (RPBP)
        i. Recommendation would be to install parallel backflow devices to facilitate annual testing without water service interruption

2. Domestic Water System Re-pipe Domestic Water throughout. $450,000
    a. The piping is original and has been showing end of life cycle signs
    b. The building manager reported no shut off valves for individual suites nor valves to isolate floors were installed originally which means any issue throughout the building will result is an entire building shut down. Anytime the building is depressurized there is a high potential for new leaks to form.
    c. Alternative to re-piping there are treatment systems available to prolong the inevitable
    d. The building should take this opportunity to include a complete re-pipe in the capital project.

3. Domestic Hot Water System New Boilers and Storage Tanks $75,000
    a. Boilers
        i. Standard Atmospheric Boilers with short life cycle of 5-7 yrs are nearing the life expectancy
        ii. Higher efficient boilers or alternate fuel options are available both with Cash Back incentives to help cover capital costs.
        iii. This opportunity should be taken to review options for replacement
    b. Storage Tanks
        i. These are from original construction and must have been installed prior to the roof going on as there is no possibility to replace these like for like in the current arrangement due to size.
        ii. Tanks are now nearing their life cycle expectancy and will not be easily replaced without a major project taking place.
        iii. This opportunity should be taken to upgrade the tanks utilizing something that is easily replaced at a later date when required.

4. Building Infill
    a. Common Areas
        i. The building common areas were stuffy and should be reviewed from a ventilation standpoint
        ii. See Item #2 above
    b. Kitchen Exhaust fans No Action Anticipated / Allow $300/suite if required
        i. These fans were confirmed to be ducted which is advantageous
    c. Washroom Exhaust Upgrade or Replace Fans $10,000
        i. Installed and Vented to outdoors
        ii. Replacement fans may be available providing higher volume and quieter operation
    d. Ventilation Code requirements In suite HRV if required - $ 3,000/suite if required
        i. Review to ensure proper ventilation rates are met
    e. Spa No Action from Mechanical
        i. This area is currently abandoned and we are informed it is not likely to be put back into operation
    f. Main Floor Make Up Air Replace MUA unit with 7,500
        i. There appears to ductwork and an Electric duct heater either serving common spaces or possibly for the pool.
        ii. This should be confirmed and operation verified

5. Electrical Vault AC If replacement required $ 15,000
    a. This room was very warm.
    b. AC System installed was inoperable
    c. System is generally in place to ensure main building transformers do not overheat thus reducing life cycle

Mechanical First Ltd.
HVAC Systems Specialists

6. Parkade Exhaust Gas Monitoring and Fan Re-builds $ 15,000
   a. This fan was not operating when we were on site.
   b. The fan should be operating 24/7 unless a Properly Maintained Gas Detection System is in place to control the fan on demand. We did not see any sensors in the parkade to facilitate automation.

7. Building Make Up Air Replace existing MUA with new high efficiency $ 50,000
   a. This system was not accessible and building manager reported having never been in this room before.
   b. Since the intake was accessible from outside, we can report that this system is not operating
   c. It is imperative that this system runs 24/7 to mitigate odours from suites and provide ventilation air for occupant's health.

8. Elevator Machine Room Fan replacement - $2,000
   a. This room is equipped with a ventilation fan controlled by a cooling thermostat and used to maintain room temperatures at levels conducive to maintaining long life of the equipment in this room.
   b. This fan is not currently operable leaving room at an elevated temperature

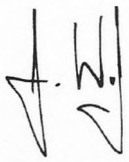
9. Energy Audit Audit Costs - $10,000- Grants may be available to cover cost of study
   a. It is recommended that the building perform an energy audit
   b. Initiating this audit will most likely qualify the building for 100% reimbursement of engineering fees provided a percentage of recommendations are undertaken.

IMPORTANT: Budgets do not include engineering services
Closing Estimated $40,000 for Engineering

As you can see from this report most mechanical systems in this building are either inoperable or nearing the end of its life cycle. M1 – Mechanical First would be happy to work with you to develop solutions that fit the building's budget and long-term needs.

When more detailed information is required, we would be happy to provide a Fee Proposal to move forward with the next step which we recommend to be an Energy Audit combined with Code Review and Consulting Services to develop a scope of work that can be priced for Engineering. Project Budgeting can be provided as the scopes develop.

Thank you for your consideration,



Jay Willows | Principal
Ph: 604 313 9846

This is Exhibit "C" referred to in the affidavit of Brett Johnston sworn before me at Coquitlam, this 5th day of June, 20 25

A Commissioner for taking Affidavits
in British Columbia

CAIRNS
ELECTRIC LTD.
SINCE1973
A Division of OZZ Group of Companies

3380 Vanness Ave, Vancouver

Electrical Budget Proposal from CAIRNS ELECTRIC LTD.

CAIRNS ELECTRIC LTD.
SINCE1973
A Division of OZZ Group of Companies

Cairns Electric Ltd
#2180 - 1368 Kingsway Avenue
Port Coquitlam, BC V3C 6P4
Phone: 604-468-0631
Fax: 604-468-0651
Website: www.cairnselectric.ca
Email: info@cairnselectric.ca

Friday, October 25th, 2019

LTR No.: 001

CKS Management
PO Box 36106 Hillcrest Village RPO
Surrey, BC
V3S 7Y0
Phone: 604-862-8855
Attn: John Dutt, Principal
Project: 3380 Vanness Avenue, Vancouver
Subject: Electrical Budget Proposal

Mr. John Dutt,

We hereby submit our budget for the electrical remediation work identified by our service department during the site walkthrough at 3380 Vanness Avenue.

Base Budget Price:

$ 5,250.00
FIVE THOUSAND TWO HUNDRED FIFTY DOLLARS

Quotation includes but is not limited to the supply and installation of:

General:

- Electrical work as per the attached itemized list.
- Please note the items which are noted as not included in budget price, or to be by others.
- As only a cursory walkthrough was conducted, items which may be present in multiple locations were only identified in one location at this time and only one location has been included in the budget price.
- Due to the nature of this work and potential for additional items to be found during the completion of the initial list, we would suggest this work be completed on a time and material basis.
    - Our service labour rate for this would be $95.00 per hour.

Taxes:

- 7% PST is included where applicable
- GST is excluded

Exclusions (not included in the above):

- Work outside of regular working hours.
- Non-electrical work including cutting or patching of drywall or supply or installation or ceiling tiles.
- Any mold remediation work necessary to facilitate the completion of the electrical work
- Any electrical work required to bring the building up to current building code standards.

We appreciate the opportunity to provide you with this budget proposal. If you have any questions please do not hesitate to contact us.

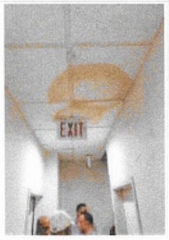
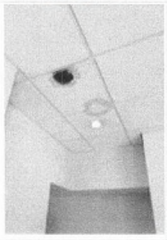
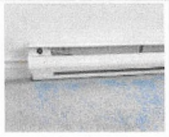
Sincerely,

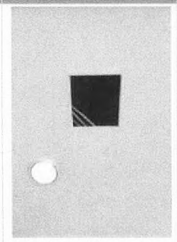
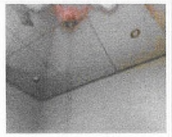
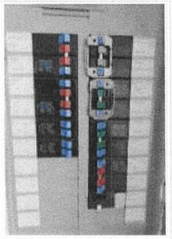
James Filippelli
Estimator
Cairns Electric Ltd
604-468-0631

Vaness - Punchlist

CAIRNS ELECTRIC LTD. SINCE1973

	Punchlist	System's Affected	Description	Location / Suite #	Priority	Entered By	Date Entered	Picture	Who is Responsible	Solution?	Status
1	*(**Please review the attached comment within this line with all leaders onsite**)*										
2	*Use the dropdown arrow and select the system affected. This row can be filtered.*		*Type a brief description of the issue in the row.*						*This row can be filtered.*	*Provide a Solution if one is available.*	
3		Common Area Finish	Lighting either burnt out in several areas of the parkade	Parkade	–	Brian Lawes	09/09/19 7:47 AM			Tubes to be replaced. Possible ballast replacements may be required. Would suggest recommending upgrade to LED fixtures with motion sensors for long term cost savings. Budget assumes the one location identified only, includes allowance to replace fixture or ballast if necessary	
4		Common Area Finish	Lighting inadequate in parts of parkade, mainly near building & stairwell entry/exits	Parkade	–	Brian Lawes	09/09/19 7:47 AM			Suggest re-evaluation of lighting layout & possible installation of new LED lighting Budget assumes the one location identified only, includes allowance to add two additional standard fixtures in area	
5		Mechanical	Exposed wiring & splicing	Sprinkler Room (Parkade)	–	Brian Lawes	09/09/19 7:47 AM			Re-wiring & installation of proper junction boxes Budget includes this item	
6		Mechanical	Messy wiring	Sprinkler Room (Parkade)	–	Brian Lawes	09/09/19 7:47 AM			Re-wiring & installation of proper junction boxes Budget includes this item	
7		Security	Lock on entry gate JB not functioning or not properly locked	Parkade	–	Brian Lawes	09/09/19 7:47 AM			Fix or replace to avoid possible tampering Budget includes Junction box/wiring remediation work, any issues with the garage door to be by others.	
8		Security	CO2 sensors possibly blocked or obstructed by residential garbage	Parkade	–	Brian Lawes	09/09/19 7:47 AM			Clean up & ensure proper operation of devices Not included in budget - to be by others	
9		Fire Alarm	No FA strobes installed	Townhomes	–	Brian Lawes	09/09/19 8:02 AM			Depending on scope of renovations, building permit requirements may trigger code upgrades - possibly including the requirement of visual fire alarm strobes Not included in budget - Budget does not include anything required to bring building up to current building code.	

	Punchlist	System's Affected	Description	Location / Suite #	Priority	Entered By	Date Entered	Picture	Who is Responsible	Solution?	Status
10		Suite Finish	Broken glass on entry fixture	Townhomes	–	Brian Lawes	09/09/19 8:02 AM			Repair or replace Budget includes allowance for replacement glass or replacement fixture if glass is not available	
11		Common Area Finish	Missing ceiling panels / exposed wiring	1st floor common area near back door / bottom of stiarwell	–	Brian Lawes	09/09/19 8:02 AM			Repair or replace Budget includes wiring remediation work. Ceiling tile supply and installation to be by others.	
12		Common Area Finish	Exit sign improperly installed	1st floor common area near back door / bottom of stairwell	–	Brian Lawes	09/09/19 8:02 AM			Repair or replace. Possible upgrade of ALL exits to LED units for long term cost savings. Budget includes allowance to replace exit fixture	
13		Common Area Finish	Possible water damage at or near electrical devices	Throughout entire building	!	Brian Lawes	09/09/19 8:02 AM			Check proper operation of life safety devices. Repair or replace devices / wiring as required. Budget includes allowance to check for water damage at this location only and replace fixture if necessary.	
14		Common Area Finish	Water damage / mold throughout entire building	Throughout entire building	!	Brian Lawes	09/09/19 8:02 AM			Possible major repairs required upon further inspection. Cannot ascertain the magnitude of possible damage at this time. Mold remediation work not included in budget.	
15		Common Area Finish	Thermostat knob missing	L2 Stairwell / possibly other areas	–	Brian Lawes	09/09/19 8:22 AM			Repair or replace Budget includes an allowance to replace the knob at this location.	

	Punchlist	System's Affected	Description	Location / Suite #	Priority	Entered By	Date Entered	Picture	Who is Responsible	Solution?	Status
16		Common Area Finish	Access panels missing - exposed wiring	L2 Entry / throughout building	-	Brian Lawes	09/09/19 8:44 AM			Repair or replace Budget includes an allowance to supply and install a regular access panel at this location.	
17		Suite Rough-in	Apparently the caretaker suite was converted into a sauna room?	?	-	Brian Lawes	09/09/19 8:22 AM	No access		No work associated with the sauna is included in this budget.	
18		Common Area Finish	Elevator lighting burnt out	Elevators	-	Brian Lawes	09/09/19 8:44 AM		Elevator Sub-contractor	Repair or replace Budget includes an allowance to replace bulbs at elevator only. Any other work on elevator to be by elevator contractor.	
19		Suite Rough-in	No Arc-Fault breakers	Suites	-	Brian Lawes	09/09/19 8:44 AM			Depending on scope of renovations, building permit requirements may trigger code upgrades - possibly including the requirement of arc-fault breakers Not included in budget - Budget does not include anything required to bring building up to current building code.	
20		Mechanical	Missing junction box covers / exposed wiring	Boiler room (Rooftop)	-	Brian Lawes	09/09/19 8:44 AM			Repair or replace Budget includes this item.	
21		Mechanical	Missing junction boxes / exposed wiring	Boiler room (Rooftop)	-	Brian Lawes	09/09/19 8:44 AM			Repair or replace Budget includes this item.	
22		Other	Outlet boxes not supported	Boiler room (Rooftop)	-	Brian Lawes	09/09/19 8:44 AM			Repair or replace Budget includes this item.	

	Punchlist	System's Affected	Description	Location / Suite #	Priority	Entered By	Date Entered	Picture	Who is Responsible	Solution?	Status
23		Other	Exposed wiring on rooftop	Rooftop	-	Brian Lawes	09/09/19 8:44 AM			Determine purpose. Possibly antenna equipment related? If required, properly support & secure. Budget includes allowance to re-route this in conduit.	
24		Mechanical	BX wiring run through shut off valve	Boiler room (Rooftop)	-	Brian Lawes	09/09/19 8:44 AM			Remove & replace with properly dressed & supported BX Budget includes allowance to re-route this.	
25		Common Area Finish	Cracked / Damaged device covers	Throughout building	-	Brian Lawes	09/09/19 8:44 AM			Repair or replace. More thorough walk-through will be required to determine magnitude of this scope Budget includes this location only.	
26		Other	Communications panel is a disaster & cover is missing	Main Electrical Room	-	Brian Lawes	09/09/19 8:44 AM		Telecom sub-contractor	Clean up wiring & replace cover Communications work not included in the budget.	

This is Exhibit "D" referred to in the affidavit of Brett Johnston sworn before me at Coquitlam, this 5th day of June, 2025

A Commissioner for taking Affidavits in British Columbia

CUSTOMER	DATE	CONTACT
Intracorp Homes	Wed, Sept 4th, 2024	Farouk Babul
BILLING ADDRESS	**CONTACT INFORMATION**	
Suite 600 – 550 Burrard St. Vancouver, BC	fbabul@intracorphomes.com	

3380 Vaness Ave., Vancouver Site Recommendations and Estimates

EQUIPMENT	AREA AFFECTED	URGENCY	RECOMMENDATION & VALUE
Generator	Tower / Townhome	Urgent (Overdue)	The current generator on-site which provides Emergency Generator Power to the entire facility has not been serviced or load tested since October of 2012. This equipment is required to be tested Semi-Annually by an ASTTBC certified Technician. In order to assess and determine the functionality of the unit, Woola Power was required to clean the internal components of the system, replace the batteries, fuel filters, and enclosure as the fallen debris was begging to wear and rust the exterior of the fuel storage unit. The remaining work is required to be performed in order to achieve a functional and passing Test Standard; • Perform Quinquennial Service as per CSA (5yr service) • Replace Belts / Hoses / Coolant • Replace Thermostats and Gaskets • Perform Valve Set • Perform Meggar Test • Remove and Dispose of old diesel • Refill Fuel Tank with fresh diesel • Perform Annual Generator Test • Perform Building Load Test • Exercise and confirm transfer switches Outstanding Repair Estimate to complete all work noted above $14,880.00 + GST

			Woola Power has completed $9600.00 worth of the initial scope in order to determine and prove that unit was functioning at all and the engine was not completely seized after sitting for 12 years. (Please note: Until tested, there is no guarantee that the buildings Transfer switch functions properly, however there was no visual indication that it would fail present either)
Elevator	Tower	Urgent	The Tower portion of the complex is currently serviced by 1 of 2 operational elevators. The Strata has a contract with Richmond Elevators in place (reports sent to Dwell according to Richmond Elevator) and a service of Elevator B was completed in August 2024. No reports, outstanding repair quotes, or service reports were provided from Richmond Elevator and an e-mail introducing Farouk Babul to Larry Ewanek of Richmond Elevator was sent Tuesday, September 3rd, 2024. In the event Elevator B is to fail, the entire tower will be without Elevator service. Attached Photo; 2A) Technical Safety BC Operating Permit (expires Oct 31, 2024) 2B) A posted notice on all Elevator A doors indicating past failures of Elevator A dating back to 2019 according to this internal communication. This has note been confirmed to be accurate yet by Richmond Elevator service records for confirmation.
Townhomes (Construction)	Townhomes	Urgent	Proposed Temporary Solution: The North Side remediation of all front townhouse "porch/2nd floor patio" sections are currently supported by temporary structural support internally that was completed several years back according to residents. This work is presumed to be done unpermitted. The proposed temporary solution subject to City approval would be to replace said sections of each of the front of all (8) townhomes.

			This would include; • Removal of all moisture soaked sections of front porch stucco and insulation • Removal of all cladding • Removal of all windows • Removal of structural surface rot as uncovered within said area • Re-installation of new insulation and vapor barrier • New Electrical in proposed space • New Cladding (Hardy board painted to match) • New Windows, baseboard, trim • New Interior Paint, Drywall, Patch • Removal and disposal of all garbage Without proceeding with this repair, a continued failure of the Fire Sprinkler System and or Structural degradation is a highly plausible continuation. This is subject to the COV accepting the minimum amount of rainscreening and moisture damage to be repaired within the townhome spaces to mitigate life safety and structural risks.
Fire Alarm System	Tower/ Townhomes	Urgent	The Fire Protection equipment is currently serviced by Community Fire Prevention and the tag on the Fire Alarm Control Panel indicates ASAP. After reviewing the supplied inspection report, the site has routine deficiencies found to to be addressed from the 2023 inspection that were not completed. A notice is currently posted of an upcoming Annual Inspection slated for Sept 9 of 2024. The estimated budget for Fire Protection repairs from 2023/24 according to the report supplied should be approximately budgeted for $35,000.
Fire Sprinkler System	Townhomes	Urgent	It was noticed during the townhome inspection that several porch bays are experiencing have installed temporary shoring on the Ground Floors and 2nd Floors. If the bays are not heated and insulated properly, the sprinkler piping within those spaces is HIGHLY susceptible to freezing and breaking during the upcoming winter months. A previous fire order

			found on-site indicates this has happened already once within the past 18 months. The front bays at a minimum, should be opened and insulated and re-drywalled as the previous report has indicated a high level of moisture content throughout. It should be noted, that should the Townhomes be deemed uninhabitable or slated for demolition that the Fire Sprinkler System feeding the Townhomes can be isolated from the Main Towers incoming Water Entry room.
Rooftop Mechanical	Tower	Urgent	The AO Smith Water Heaters require re-venting as the units currently have leaks or cracks in the piping that vent right back into the Roof Top Mechanical Room. The Water Storage tanks in the rooftop space are end of life and are at risk of failing. A failure of these tanks will cause an immediate flood of the rooftop mechanical room, which likely spills past the damaged curb stop and directly into the elevator room and shafts. A budget of $75-100k should be set aside to replace the rooftop Tanks, and repair/replace the mechanical Water Heaters.
Tower (General Construction)	Tower	Urgent	Multiple locations throughout the building were noticed to have holes within the drywall and or missing and damaged ceiling tiles. A budget of $20,000 was set aside to fix and repair the areas noted within the buildings main common areas
Parkade CO2 Gas Sensors	Tower	Urgent	The parkade CO2 Gas Sensors have no indication of last testing or calibration and appear to be original. A budget to replace the noted sensors parkade exhaust fans was set at $15,000.00

All photos sent as attachments to discuss for clearer visibility.

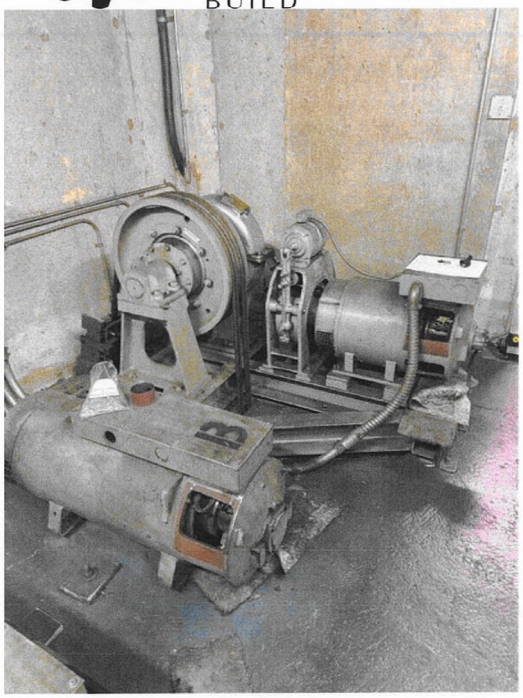


PHOTO 1

March 25, 2019

ATTENTION:

Council does not recommend using this elevator.

The MECHANICAL elements (cables, brakes, etc.) are regularly inspected and maintained. Our service company is responsible for keeping these elements working safely.

The ELECTRICAL elements are 30 years old, and do not always work properly. That means that the elevator may suddenly stop because it is receiving a false signal: for example, if one sensor for one of the outer doors isn't working, the elevator thinks the doors are open, and it stops for safety.

The problem is: the electrical system is old, and there is no central 'computer' that can tell the technicians EXACTLY which circuit isn't working properly. (The service company can try to maintain this system, but there is no warranty: if major repairs are needed, we pay the costs.)

This requires what is called a 'modernization' upgrade: technicians can check every single wire in the system, AND add in a 'computer' that can identify precise problems in the future.

Council has asked our current service company for a quote on this work, but we are also trying to get quotes from other service companies - we'd like a second opinion before committing a lot of money to fix this.

In the meantime, council has asked the service company to keep this elevator OUT OF SERVICE. People kept getting stuck, and it can be very stressful when that happens.

Unfortunately, one of the owners in the building complained to the Elevator Safety Branch of BC that our second elevator has been out of service for a long time. Our service company sent a technician out right away (without checking their file first…) to activate the elevator. Within ONE HOUR, someone was trapped inside.

Council is working with the elevator service company, as we consider this a SAFETY ISSUE. The elevator will not fall, because the mechanical systems are checked every month. But unless the entire electrical system is opened up and examined, it is very likely that this elevator will continue to get stuck. (Again, that's a safety feature: the system thinks something is wrong, so it stops operating. If you happen to be inside when that occurs, it's very scary, but you aren't going to drop. The system is locked down until it gets reset.)

Please: take the time to read this, and feel free to email questions to council. Tearing down safety posters doesn't help anyone. In fact, it puts others at risk. These signs are for owners and their guests. Please respect your neighbours. If you have a concern, use your words.Thank you for your understanding.

- Jamie, on behalf of council

PHOTO 2

TECHNICAL SAFETY BC

Operating Permit Number: 2041454
Expiry Date: October 31, 2024

ELEVATING DEVICES OPERATING PERMIT

TRACTION

September 16, 2023

Strata Plan LMS 992 - Joyce Place
ATTN c/o Dwell Property Management
170-4311 VIKING WAY
RICHMOND BC V6V 2K9

LOCATION OF OPERATION

JOYCE PLACE TOWER
3380 VANNESS AVENUE
VANCOUVER BC V5R 6B8

Permit Issued to:

Strata Plan LMS 992 - Joyce Place

Unit No.	Unit Type	Unit Class	Unit Name	Variance(s)
14275	ED	Passenger - B44 Electric	PASS ELEV #2	No

It is the role and responsibility of an asset owner to ensure that maintenance on this elevating device is performed by a licensed Elevating Device Contractor. All of the maintenance activities must be kept in a logbook that is available on site. Additionally, an asset owner is also responsible to ensure all periodic and safety tests are performed at the required intervals.

...e information about maintenance requirements and periodic tests can be found at ...technicalsafetybc.ca (search: "Information Bulletin IB-ED 2020-02")

Contact the responsible Elevating Device Maintenance Contractor for further information.

...Safety Authority is now **Technical Safety BC**. While we have changed our name, we remain committed to our mission of Safe Technical Systems Everywhere. Learn more about our evolving services and how we share safety knowledge at www.technicalsafetybc.ca

Suite 600 - 2889 East 12th Avenue Vancouver, BC V5M 4T5 T 1 866 566 7233 E ...@technicalsafetybc.ca W www.technicalsafetybc.ca

Page 1 of 2

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6

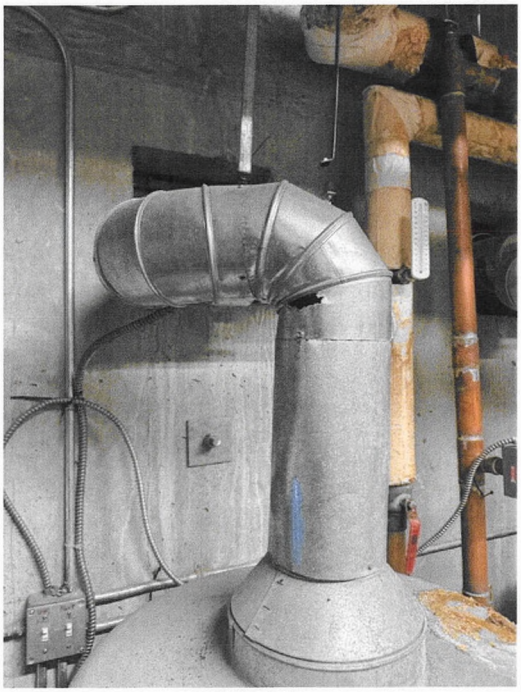


PHOTO 7

PHOTO 8

PHOTO 9

Quote Summary
Item 1- Generator. As outlined within Critical System Assessment report the outstanding repairs and services required to certify and complete the full repair is ***$14,880. + GST***
Item 2 - Elevator: As outlined within the Critical System Assessment report the repairs and or replacement costs from Richmond Elevator were not provided and an introduction to the Service Manager was initiated.
Item 3 - Townhomes North-side Remediation: As outlined within the Critical System Assessment Report, the budget to complete the minimum scope required to protect the Sprinkler System and noted structural support budget is ***$386,000. + GST.*** Please note, this is based upon the COV allowing this work to be completed as a Re and Re of existing as is construction maintenance repair.
Item 4 - Fire Protection System Equipment: As outlined within the Critical System Assessment Report, the budget to complete routine maintenance items from the outstanding 2023 and upcoming 2024 should be set at ***$35,000.00 + GST***
Item 5 - Fire Sprinkler System: It was not noted within the supplied report the age or last testing of the Fire Sprinkler heads with a ULC laboratory. It is worthy of note that should that test be required due to age of the heads, the repair would be significant given the amount of heads and installation style. A budget of no less than ***$600,000 + GST*** with construction finishing costs should be allotted for this scope of work if the ULC Testing was due and the heads were to fail. The heads available for installation within the Fire Sprinkler Mechanical Room were not consistent with heads noted within the property.
Item 6 - Rooftop Mechanical: As noted within the Critical System Assessment Report the budget to replace the roof top mechanical systems should be set at $94,000 + GST. Woola has not serviced the equipment previously, so this includes the potential replacement of the single Water Heating System, Water Storage Tanks and construction to repair and refinish the curbstop water protection surrounding the equipment.
Item 7 -Tower (General Common Area Construction) – Damage to the ceiling tiles, open sections of drywall throughout the facility should be addressed to maintain life safety throughout. **A budget of $20,000.00 + GST** was established to address the noted common space areas.
Item 8- Parkade CO2 Gas Sensors – As noted within the Critical System Assessment Report the Co2 Gas Sensors do not appear to have been tested or calibrated. The budget to replace the sensors noted within the parkade were **$15,000 + GST**
Date:
Customer Approval: