DougLes Consulting Services Incorporated

Building Envelope Condition Assessment

Strata Plan 2720

Hampton Court 545 Manchester, and

Churchill Place 520 Dunedin

Victoria British Columbia

Presented to:

Owners of Strata Plan VIS 2720
C/O Roger Taylor

Prepared By:

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INTRODUCTION

1.1 GENERAL

DougLes Consulting Services Inc. has been engaged to complete a Building Envelope Condition Assessment for the Owners of Strata VIS2720's buildings located at 545 Manchester and 520 Dunedin Victoria BC. The buildings are situated on the site facing their respective street fronts and backing onto a common a green space between them. The two buildings are joined underground with a common parking area that also houses utilities, garbage, storage lockers etc.

We are pleased to submit this report with our findings related to the design, construction, and overall condition of each of the individual building components that comprise the overall envelope of the entire structure. We have compiled the results of the owner's survey, building scans, visual review, moisture testing, and intrusive investigation to the exterior wall system.

The observations of those individual components, the results of the testing, the data recovered, and the conclusions with recommendations are detailed in this report.

1.2 LIMITATIONS

The information in this report is an assessment of the current condition of the buildings as of the date of the report. The opinions and recommendations in the report are limited the following:

- visual review of exterior components where accessible,
- IR scan of exterior and interior components where accessible,
- exploratory openings and testing,
- design review,
- owners surveys,

The conclusions are based on the best information presently known to us combined with professional judgment. No investigative method can eliminate the possibility of obtaining incomplete or partially imprecise information; it can only reduce the possibility to an acceptable level.

In exercising our professional judgment of analyzing the information obtained and providing opinions we do not act as insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

1.3 Scope of work

As per our proposal dated July 30, 2013 we have completed the following scope of work.

A questionnaire was circulated to each unit and the results compiled and used to identify owner observed issues and concerns. We received 43 responses of the 108 units approximately 40%. Appendix C is a copy of the questionnaire with a summary of the results obtained. All concerns reported were followed up with a visual review.

The exterior of the buildings and the exterior walls & ceilings of all units accessed through the course of the work were scanned with a high performance infra-red camera.

The exterior of the buildings and the exterior walls of the units accessed through the course of the work were visually reviewed.

Exterior walls were opened to allow a visual review of the envelope system and moisture content readings of the building materials.

Data collected, scan results, and visual reviews are included in this report.

1.4 Building Description:

Construction	Two 4-storey wood frame residential condominium buildings constructed over a shared reinforced concrete below grade parking garage.
Year build	+/- 1993
Architect	Herbert H. Kwan
No. of Units	108 residential suites
Exterior Wall Cladding	Stucco
Roof Membranes	2 ply SBS Modified Bitumen Membrane
Balcony Membrane	Vinyl sheet membrane
Exposure	Medium exposure: Most walls High exposure: South west corners (Based on Figure 5.1 Exposure Category Nomograph from Best Practice Guide for Wood Frame Envelopes in the Coastal Climate of B.C.)

1.5 Review structure

Field work was conducted Nov. 22 2013 and Dec 20, 2013. Further supplemental testing was completed in the field during January 2014. The weather was a mix of drizzle, sun, overcast, and rain with temperatures ranging from -2 to 10 degrees Celsius.

The review has been broken down to the individual envelope components. For each component we have included observations, noted deficiencies, overall condition, discussions, and recommendations. In each case the observations and recommendations are based on the representative samples reviewed, our experience, and overall condition. The deficiencies include physical damage, requirement of maintenance, age related issues, and poor workmanship or design. The deficiencies noted are not intended to be a complete list of deficiencies but rather a sampling to allow an overall condition assessment.

ENVELOPE COMPONENTS

BELOW GRADE REINFORCED CONCRETE PARKADE

2.1 CONCRETE WALLS

Observations:

Below grade reinforced concrete walls are painted to increase light for visibility. Cracking was observed in the parkade walls. The cracks in these concrete walls are consistent with normal cracking related to the curing and shrinkage of concrete. See photos parkade 4, 5, and 26 in Appendix E

Noted Deficiencies:

Some of the cracks on the exterior concrete walls under the south west stairs of CP (photo parkade #8) and in stalls #18 & 19 (photo parkade #11) show signs of efflorescence and moisture indicating water ingress.

Overall Condition:

Good to excellent

Discussion:

The cracks identified observed are hair line and or slightly larger. These cracks are normal resulting from the shrinkage of the concrete during curing and possibly some slight building movement. There are no indications of any structural concerns.

The water ingress is caused by hydrostatic pressure against the exterior of the wall. This is a result of the exterior wall not having a waterproof membrane but rather a damp proofing or no sealer installed. This is common place and not a concern.

Recommendations:

Clean and wire brush all cracks exhibiting signs of moisture then treat with a Xypex coating. This is best done while the crack is seeping water and or moist.

2.2 CONCRETE SLAB (PARKADE ROOF) AND WATERPROOF MEMBRANE

Observations:

The underground parking extends in front of Hampton Court, between the buildings, and to the west side of Churchill place.

Below grade reinforced concrete slab is painted and uninsulated. Cracking was observed in the slab above the parkade. The cracks in the concrete are consistent with normal cracking related to the curing and shrinkage of concrete.

Noted Deficiencies:

There are several areas where water has come through the slab either at cracks or penetrations. There is staining and efflorescence that indicates this is an ongoing issue.

There is one recent active leak noted in the parkade in the south west corner. See appendix e photo parkade 13.

There are several other areas leaking that have been addressed in the past and still show some signs of water ingress.

Cracks in the Concrete Slab Exhibiting Signs of Water Ingress

Location of crack (approximate)	Condition	Photo
In front of parking stalls 99 -100	No indication of current water ingress	1 & 2
Above garbage bins	Membrane above repaired ingress greatly reduced	3
South side rt of driveway ramp	No indication of current water ingress	6
South side rt of driveway ramp	No indication of current water ingress	7
Under west stairs CP	Roof drain above repaired ingress reduced	9
Area close to sump	No indication of current water ingress	10
Slab above Upper corner of ramp	No indication of current water ingress	12
In front of parking stall 18 & 19	Recently identified repairs approved for future	13
In front of parking stall 150	Area above repaired ingress stopped	14
In front of parking stall 145, 146	Area above repaired ingress greatly reduced	15
In front of parking stall 56 & 57	Area above repaired ingress greatly reduced	16
In front of parking stall 142-144	Area above repaired ingress stopped	17-20
In front of parking stall 135-136	Area above repaired ingress stopped	21-24
Around drain in front of stall 81	Recently identified repairs approved for future	25

Overall Condition:

The overall condition of the concrete slab is good. The overall condition of the membrane is difficult to determine as it is below grade. Past excavation exposing the membrane for repair have been inspected and the membrane condition found to be fair to good.

Discussion:

There have been attempts in the past to repair damaged sections of the plaza membrane. The waterproofing of a plaza slab is a system that relies on a membrane and various details regarding penetrations, transitions, and drainage. As a system, patch work type repairs are difficult with varying degrees of success. To date the water ingress has not caused any significant structural damage and is more consistent with a nuisance concern than a structural issue. Structural damage through this type of ingress takes years to manifest itself and is fairly inexpensive to repair.

Many of the leaks in the membrane can be traced back to small holes being opened by roots and deficiencies in the membrane installation rather than a complete breakdown of the membrane.

The plaza roof membrane failures noted are typically for the age of the building and type of membrane. The water is seeping through the cracks in the plaza slab is not a structural concern at this point.

Recommendations:

1. I recommend excavation and repairing the area above the new leak in an attempt to stop or reduce the water ingress. This would also enable a closer look at the membrane once the soils have been removed. The Owners have already approved this recommendation with a targeted start date in the spring or summer of 2014.
2. I recommend a biennial inspection to monitor and record the extent of the water ingress. Recording the length and width of the cracks with water ingress and the extent of staining around the area show the degree or change in the amount of water ingress.

Exterior Walls

3.1 Stucco Cladding

Observations:

The buildings are constructed with stucco cladding. The stucco has been recently painted with a latex stucco coating.

Noted Deficiencies:

Small hair line cracks have been observed in several of the balcony corner columns

Overall Condition:

The stucco is in good condition with no signs of significant cracking or failures.

Discussion:

The stucco is performing well.

Recommendations:

1. I recommend that the small cracks in the balcony column be caulked. This should take place in the late summer or early fall allowing any moisture that entered the cracks to be removed during the drying cycle of the building.

3.2 Flashings

Observations:

There are several different types of flashings related to the building envelope. There are the window & door flashings, the decorative band flashings, the cap flashings on the roofs and parapet wall \ cap flashings on the decks.

As each flashing relates to a component of the envelope I have addressed each in this report with the component that it supports. For the wall flashings I'm reporting on the decorative band flashings. These flashings were installed with lap joints that had failed and had been repaired with a Belzona membrane.

Noted Deficiencies:

- The color of the Belzona membrane at each joint in the flashing has aged differently than the flashing and stands out as a dark or dirty spot. This is a cosmetic concern only.
- There are areas where the flashings slope back towards the wall instead of away. This is a particular concern at the bottom of the second and fourth floor windows as the design leaves little room between the window and the flashing. Some of the flashings had to be cut down in the original construction to accommodate the window and rely more on the caulking than the flashing to ensure a seal.

Overall Condition:

The flashings and the Belzona membrane are in good condition. The metal is in good condition and the caulking is in fair to good condition.

Discussion:

The Belzona membrane is a cosmetic concern and as such I have made no recommendations on painting it and or the flashing. Painting would give it a consistent appearance if this was a concern.

Recommendations:

1. Continue the ongoing maintenance.
2. Re inspect the caulking in two years

3.3 Wall Penetrations

Observations:

There are four main types of penetrations to the wall system other than windows and doors. They are ducted exhaust vents (bath fans and dryers), fire place exhaust vents, sprinkler heads, and electrical fixtures.

Noted Deficiencies:

- The flat metal exhaust vents are of poor design. The configuration of the vent reduces the flow of air and allows them to become blocked easily particularly in the case of the dryer vents.
- Some of the dryer vents have been broken. This is an expected result of additional cleaning due to the design.
- Several of the dryer vents are partially blocked and need to be cleaned.
- The fire place exhaust vents (B Vent) are corroding causing a portion of the protective cover support to become partially detached.

- Not all of the electrical outlets \ lights have a membrane or seal between the electrical box and the fixture.

Overall Condition:

Exhaust Vents are in poor to fair condition

Fireplace b-vents are in poor to fair condition.

Sprinkler heads and electrical fixtures are in fair to good condition.

Discussion:

The fireplace b-vents will require replacement in the next few years. The b-vents are becoming obsolete in the industry and may not be available to purchase off the shelf.

Given the design of the exhaust vents there is and will continue to be ongoing maintenance in removing lint and other obstacles to air movement. This will add to the wear and tear of the vent and reduce their life expectancy

It appears the building maintenance has been diligent

Recommendations:

1. Investigation into a replacement fireplace B vent is recommended. The longer this is put off the less likely it will be to find a replacement without having it custom built.
2. Continue the scheduled cleaning of the dryer and fan vents and ensure the contractor takes care not to damage the vents further with aggressive cleaning.
3. Check all unsheltered electrical outlets and fixtures and ensure they are sealed to prevent water infiltration.

3.4 Balconies

Observations:

The balconies are a combination of several systems working together. A vinyl membrane protects the floor of the balcony and continues up the walls. There are drains installed both to drain the balcony and as a penetration for rainwater leaders. Stucco columns and parapet walls go around the perimeter with aluminum framed glass railing or guards. Finally there is the exterior wall system including a sliding glass patio door. The design is poor as it traps water allowing for ponding, has poor drainage, and incorporates an excessive amount of flashing and construction details that increase risk of water ingress.

Noted Deficiencies:

We noted a combination of deficiencies on the membrane as follow:

- Design is complicated and inefficient
- Physical damage including tears, cuts, abrasions, burns or melted vinyl, and holes.
- Wear and age damage including blisters,
- There are several areas where there is loose or blistered membrane
- Aged and failing caulking to the metal flashings.
- Cracks in the corner column of the stucco.
- Floors that slope away from the drains.

Deficiencies found during review

Deficiency Noted	Location	Photo		Priority
Loose and blistered membrane	HC 410	Balcony 1	Appendix E	Next summer
Hole in Membrane	CP 302	Balcony 2	Appendix E	Immediate
Loose and blistered membrane	CP 204	Balcony 3	Appendix E	Next summer
Crack in stucco of column	CP 410	Balcony 4	Appendix E	End of next summer
Ponding in corner of balcony	CP 410	Balcony 5	Appendix E	Next summer
Melted membrane	CP 407	Balcony 6 & 7	Appendix E	Immediate
Caulking failure on flashing	CP 204	Balcony 8	Appendix E	End of next summer
Caulking failure on cap flashing	CP 204	Balcony 9	Appendix E	End of next summer

Overall Condition:

Vinyl membrane is in poor to fair condition.

Glass guards are in fair to good condition.

Sliding glass doors are in good condition.

Stucco parapet walls and columns are in fair condition.

Flashings are in good condition.

Discussion:

The balcony membranes are in need of some repairs now and showing signs of being near the end of their life expectancy. With no further preventative maintenance or action the estimated life expectancy is three to five years.

Given that replacement of the membrane using today's best practices would involve the other components of the balconies (guards, walls, doors, etc.) it may be better to consider an alternate option. The second option would be to extend the life of the existing membrane for five to ten years using a liquid applied membrane over the existing vinyl one.

Recommendations:

1. Clear and survey every deck to create a prioritized inventory of the deck deficiencies. Repair the deficiencies inventoried by priority.
2. Install a liquid applied vinyl membrane over the existing membrane to extend its life. The liquid applied membrane could be installed on a priority basis as well to allow the work to be separated into more than one year.

The above work would extend the life expectancy of the deck membranes from three to five years to seven to ten years.

3. When the deck membranes are replaced, redesign the balconies to modernize and improve upon the current design

3.5 Windows and Patio sliding glass doors

Observations:

The windows are non-thermally broken aluminum sliders with double glass thermal glazing.

Noted Deficiencies:

- Thermal units have failed

• CP 212	• HC 105	• HC 312
• CP 304	• HC 115	• HC 408
• CP 409	• HC 117	• HC 417

- The weather-stripping on the windows is aged and in need of replacement on some of the windows.
- We found water ingress behind the stucco and building paper at the lower corners of the window in two locations (HC 217 test area #2and HC 314 test area #16)
- Window miter corners of HC 217 and HC 314 were tested and found to be failing
- Additional interior testing was conducted and five more windows were found to be wet at the lower corner(s).
- All areas where water ingress was noted on the interior sill testing corresponded with windows that had both water sitting in the bottom drainage track and a sill that was not caulked.

Overall Condition:

Fair.

Discussion:

Failed thermal units is more of a cosmetic concern that a window failure concern. The failed unit will not result in water ingress to the unit or significantly reduced R-value of the window. As such it is more of an issue to be decided by the owners on how to best address it. These units can be easily replaced.

The weather-stripping affects the efficiency of the window and should be addressed.

The water ingress in the corners of the two windows was a concern for two reasons. We could not determine if the miter of the window was failing. As two of the eight opened two had an issue the percentage was high. In my opinion this was a false high percentage due to a small sample group. Aluminum windows are prone to have this type of failure and it could have been an indication that the windows are moving into the second half of their life expectancy.

We conducted further testing of another forty one windows from the inside of the building to form a better assessment of the window miters. Five of the forty one windows reviewed (12%) recorded high moisture or wetness on the framing below the window and in the corners. Careful observation provided four common traits with these windows that the other thirty six did not have. 1) The drainage tracks were all holding water. This could be from a number of reasons, the drains could be blocked or partially blocked, the owners may not keep them as dry as the other windows tested, or there may be significantly more water in those tracks. 2) The window sills were not caulked around the three inside edges allowing water from above seep under the sill onto the frame more readily. 3) The caulking on the miter at the corner of the drainage track did not extend along the entire miter. 4) There was a build-up of mould in the window track indicating that the water sat for long periods of time.

Most of the windows showed some sign of water under the sill that had dried and was not an issue.

The window manufacture did not extend the caulking up the back of the miter inside the lower track. The result is that if the track becomes full water can seep through the miter onto the framing below. The positive side to this issue is that it can be easily sealed and maintained without the removal of the window.

Some of the moisture is likely contributed from condensation on the window frames running down between the window frame and sill. It may be significant that three of the five areas of water ingress identified on the interior tests and one of the two areas of water ingress identified on the exterior tests were located on the same section of wall on the Hampton Court east facing elevation. Given that the water ingress is only partially from an exterior source and that the miter appears to be failing predominately on the inside of the drainage track this issue becomes less of an overall concern. Keeping the drains clear, caulking the inside of the window drainage track, and caulking the sill to the window is fairly easy maintenance and should reduce the risk of water ingress below the window sills to an acceptable amount.

Recommendations:

1. Council to decide on course of action for thermal unit replacement.
2. Start a weather stripping replacement schedule as part of the regular maintenance of the building. The units could be inspected in conjunction with the balconies and prioritized in the same way.
3. Inspect, clean, and caulk all window drainage track miters. This could be completed in conjunction with the window weather stripping replacement.
4. Further testing of window corners including an IR Scan and invasive testing in two years' time to determine if the areas found are an indication of the windows being closer to the end of their life expectancy.

3.6 Doors

Observations:

There are three types of exterior doors in the common areas of the building. The store front style aluminum and glass entrance doors, the steel clad man doors, and the overhead garage door.

There are two types of doors servicing the individual units, sliding glass doors and steel clad entrance doors.

Noted Deficiencies:

- No noted deficiencies other than normal adjustment issues with the common doors.
- We noted some of the patio sliding glass doors are in need of weather stripping and one required the frame to be adjusted

Overall Condition:

Good condition

Discussion:

The doors are an item that appears to be dealt with well under the normal building maintenance. Issues are resolved as they present themselves.

Recommendations:

1. Continue addressing door issues as they present themselves.

ROOFS

4.1 Roofing Membrane

Observations:

The roofing membrane is a two ply modified bitumen system commonly referred to as torch on.

Noted Deficiencies:

- There are some wrinkles in the membrane consistent with the age of the roof and normal structural movement. Appendix E photo Roof 1
- We noted signs of moss, algae, lichen and other debris. Appendix E photo Roof 3, 5, & 9
- There are some areas where seams are starting to open. Appendix E photo Roof 7

Overall Condition:

The roofs are in fair to good condition and I would expect that they have another seven to ten years of life with proper maintenance.

Discussion:

The membrane is performing as expected.

Recommendations:

1. Treat roof to kill moss and lichen.
2. Remove debris from roof.
3. Repair all open seams and re-granulate any bare areas of the cap sheet.

4.2 Roofing Drains

Observations:

The drains are in the center portion of the roof and plumbed internally through the buildings. There are sections of roofs at different levels. These sections rely on scupper drains to drain the raised areas onto the main roof.

Typical to wood frame buildings there are areas that do not slope fully to the drain causing pooling of water.

Noted Deficiencies:

- There is some debris around the drain screens.

Overall Condition:

The drains are in good condition

Discussion:

Pooling is typical and not an issue at this point.

Recommendations:

1. Clear debris from around drains and ensure all scuppers are cleared

4.3 Roofing Penetrations

Observations:

The roofs have penetrations for skylights, mechanical, access, vents and drains. All of the penetrations have been detailed with either sheet metal vents, built up curbs stripped with the membrane cap sheet, or lead plumbing flashings.

Noted Deficiencies:

- There are areas of the vents that are starting to corrode at the base above the membrane. Appendix # photo Roof 8
- One of the skylights is failing and another has been damaged by a rock or shell likely being dropped by a bird. Appendix # photo Roof 6

Overall Condition:

The penetration details are good to excellent.

Discussion:

The normal maintenance is performing well.

Recommendations:

1. Extend the membrane on the vents with signs of corrosion to stop the deterioration of the vents.

4.4 Roofing Flashing

Observations:

The roof has sheet metal flashing on all of the parapet walls with either standing or "S" style seams where the flashing is joined.

Noted Deficiencies:

- Some of the caulking for the flashing is beginning to come apart and or fail.

Overall Condition:

The flashing is in good condition.

Discussion:

The flashing is performing as expected. The issue with the caulking is not wide spread and easily repaired

Recommendations:

1. Go over all areas of the flashing and repair or replace the caulking as required.

5.0 A QUESTION OF REMEDIATION

In completing this report I'm often asked the same question; *does this building need to be remediated?* In the context of the question they mean to ask; does this building need a complete envelope remediation including removal and replacement of the roof, exterior cladding, and plaza membrane? In my opinion the answer is no, not at this time. The maintenance on this building has been very proactive, the results of which can be seen in this report. With continued maintenance a full remediation may never be required with areas of the building envelope being addressed selectively over time. I found no pressing envelope or structural issues that would trigger concern for the entire envelope to be completely remediated.

6.0 BECA Summary

DougLes Consulting Services Inc. completed an extensive review of the building envelope. During the course of the review testing was completed visually, with specialized equipment and invasively both to the interior and exterior.
The conclusion drawn from the findings is that the building envelope is preforming properly and is not in need of replacement. Recommended maintenance and deficiency repairs are summarized below.

Envelope Component	Recommendation	Priority /Time
Below grade concrete walls	Clean and wire brush all cracks exhibiting signs of moisture then treat with a Xypex coating. This is best done while the crack is seeping water and or moist.	Low priority Next few years
Parkade roof and waterproof membrane	Excavation and repairing the area above the new leak	Scheduled for this spring
	Biennial inspection to monitor and record the extent of the water ingress	Low priority Start in two years
Stucco Cladding	Caulk small cracks in the balcony	Med. priority Before fall
Flashings	Continue the ongoing maintenance.	N\A
	Re inspect the caulking in two years	Med. priority Two years
Wall Penetrations	Plan to replace B vents for fireplaces	Med. Priority Next year or two
	Scheduled cleaning of dryer vents	In progress
	Check all unsheltered electrical outlets and fixtures to ensure they are sealed properly	High priority Before fall
Balconies	Survey and prioritize work to each deck	High priority Before fall
	Apply a liquid membrane to extend life of vinyl decking	3 to 5 years
Windows and Patio doors	Replace thermal units where failing	Low priority
	Replace weather stripping	Med. priority Before fall
	Caulk lower window track miters	Med. priority Before fall
	Future testing of a sample of windows	Med. priority Two years
Doors	Continue maintenance on an as needed basis	N/A
Roofs	Treat to kill moss and lichen	Low priority Before fall
	Remove all debris	Low priority Before fall
	Minor repairs of open seams and re-granulation.	Low priority

		Before fall
Roof drains	Keep clear	High priority Twice a year
Roof Penetrations	Extend membrane around bottom of vents	Low priority Before fall
Roof flashing	Re caulk as required	Low priority Before fall

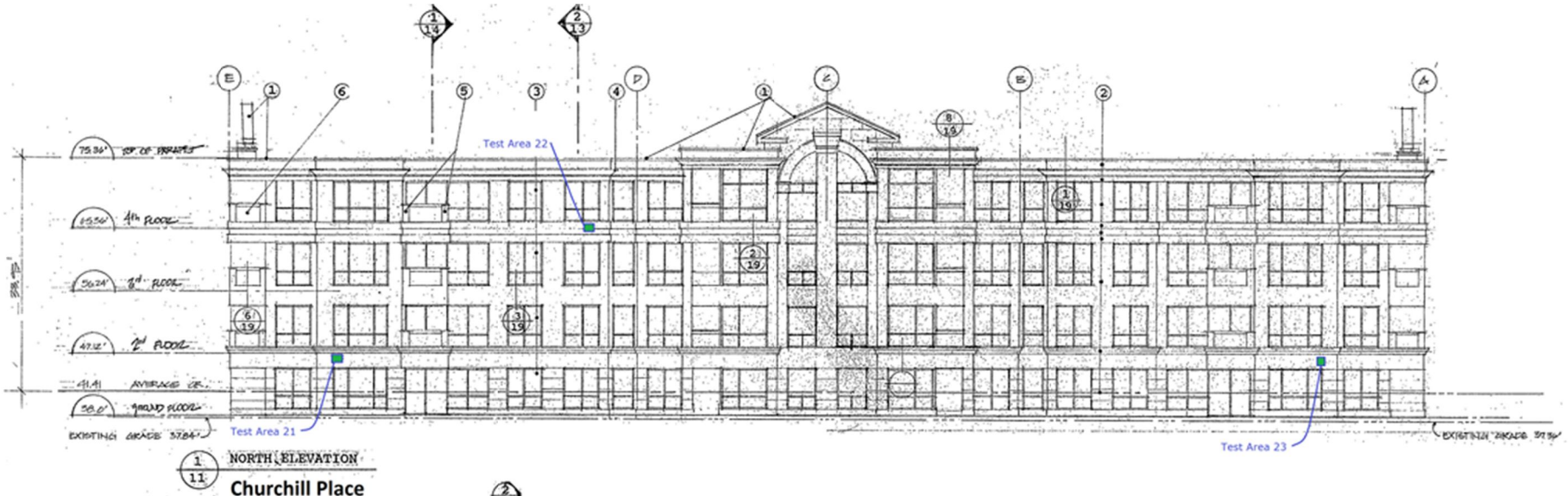
Low priority = not a significant issue at this time, if not completed in recommended time line this should not have significant consequences.

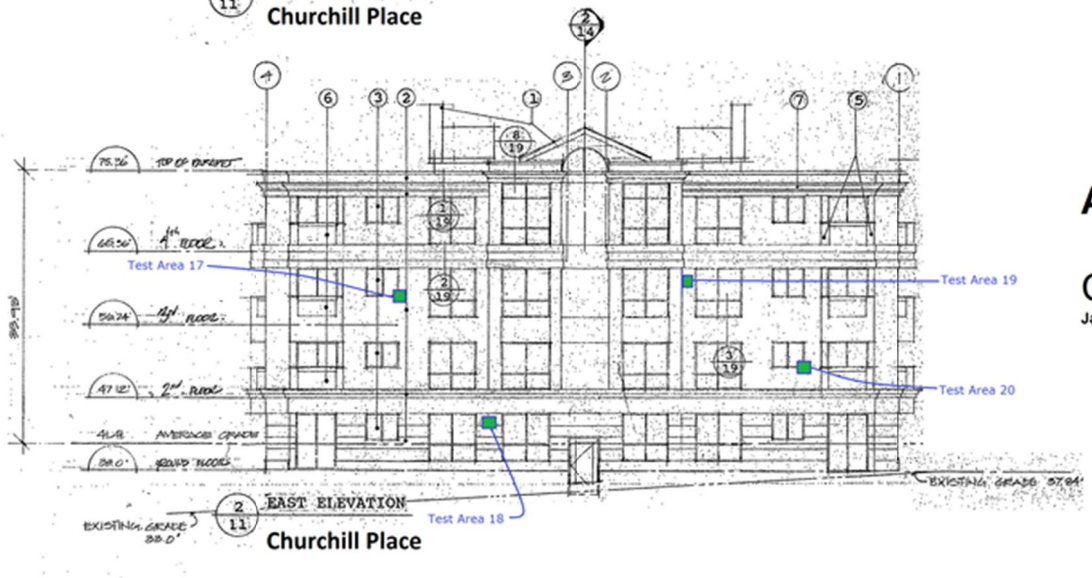
Med. Priority = an issue worth addressing to ensure it does not become a high priority or water ingress issue.

High Priority = failure to complete could allow water ingress into the building and cause more significant damage

APPENDIX A

ELEVATIONS SHOWING LOCATION OF EXTERIOR TEST SITES





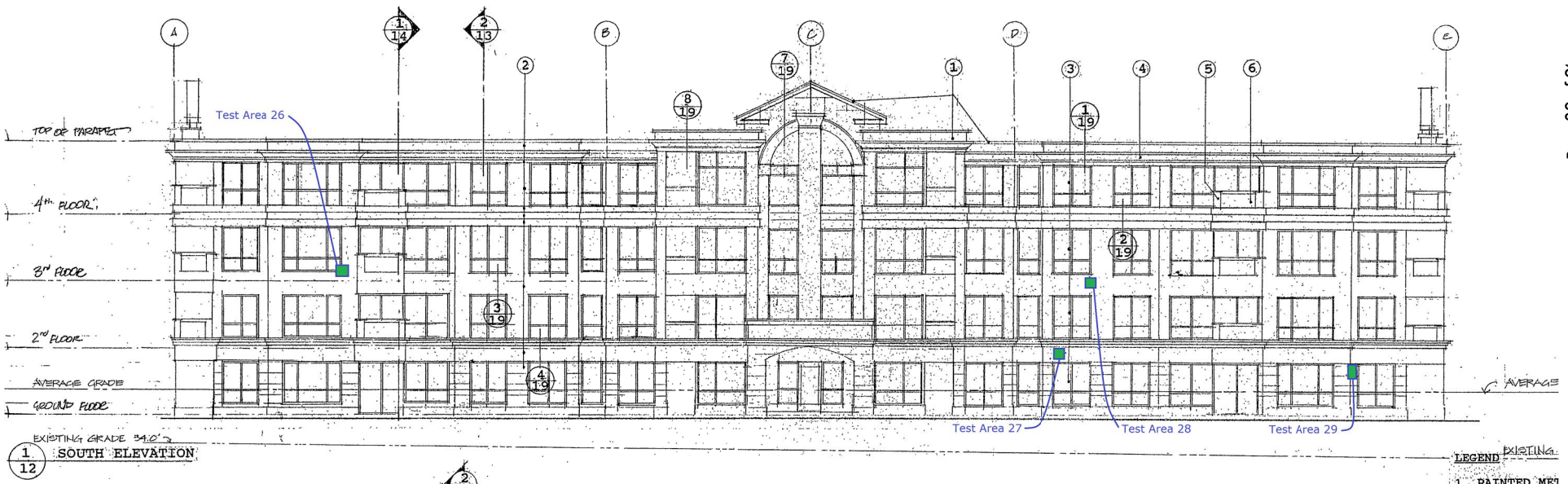
LEGEND

1 PAINTED METAL FLASHING
2 PAINTED STUCCO - SAND FLOAT FINISH
3 ALUMINUM WINDOWS
4 PAINTED WOOD TRIM
5 STUCCO BALCONY POSTS
6 GLASS BALUSTRADE

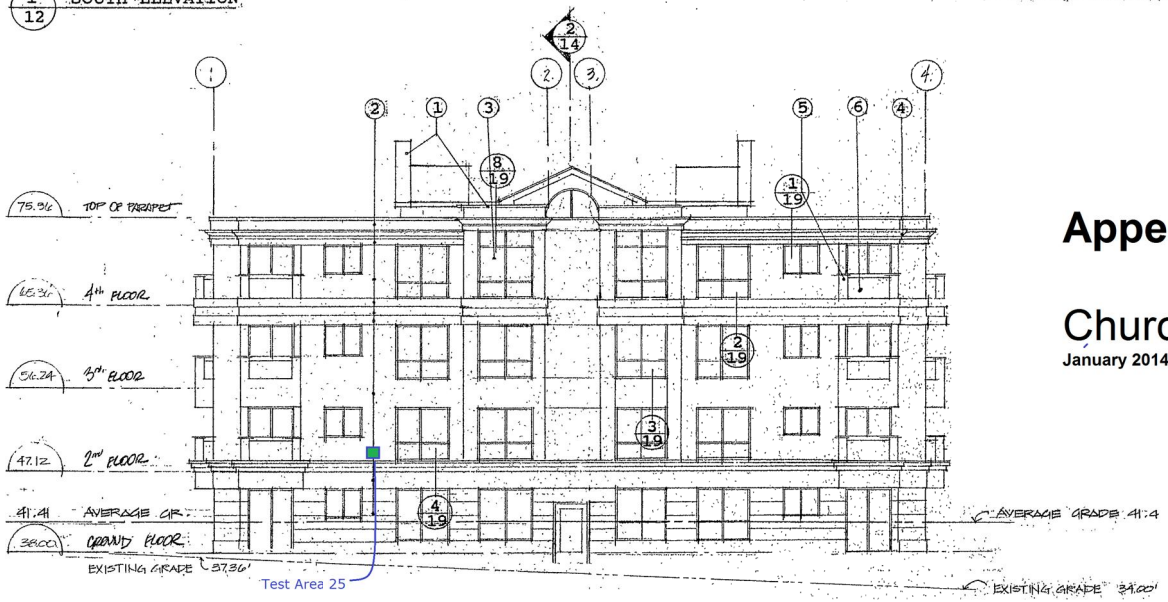
Appendix A

Churchill Place North and East Elevations

January 2014



1/12 SOUTH ELEVATION



2/12 WEST ELEVATION

Appendix A

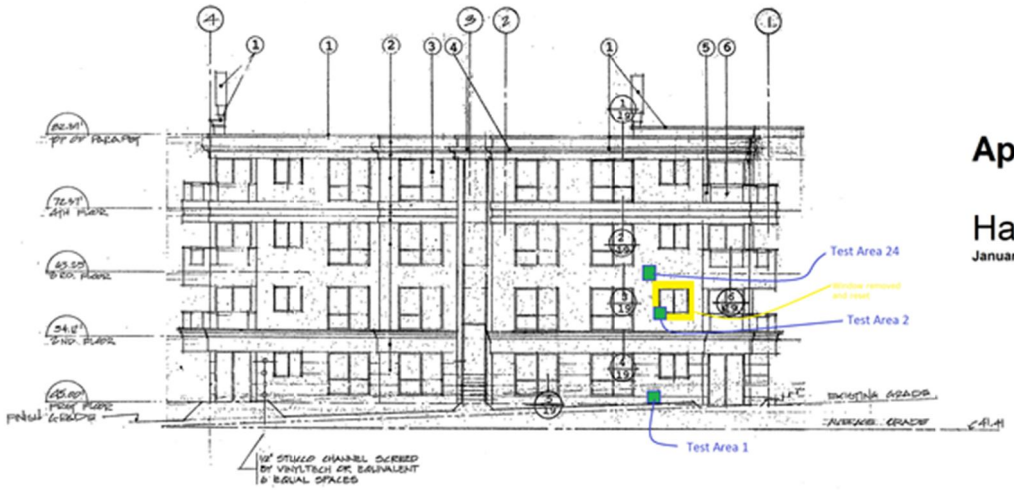
Churchill Place South and West Elevations

January 2014

Appendix A

Hampton Court North and East Elevations

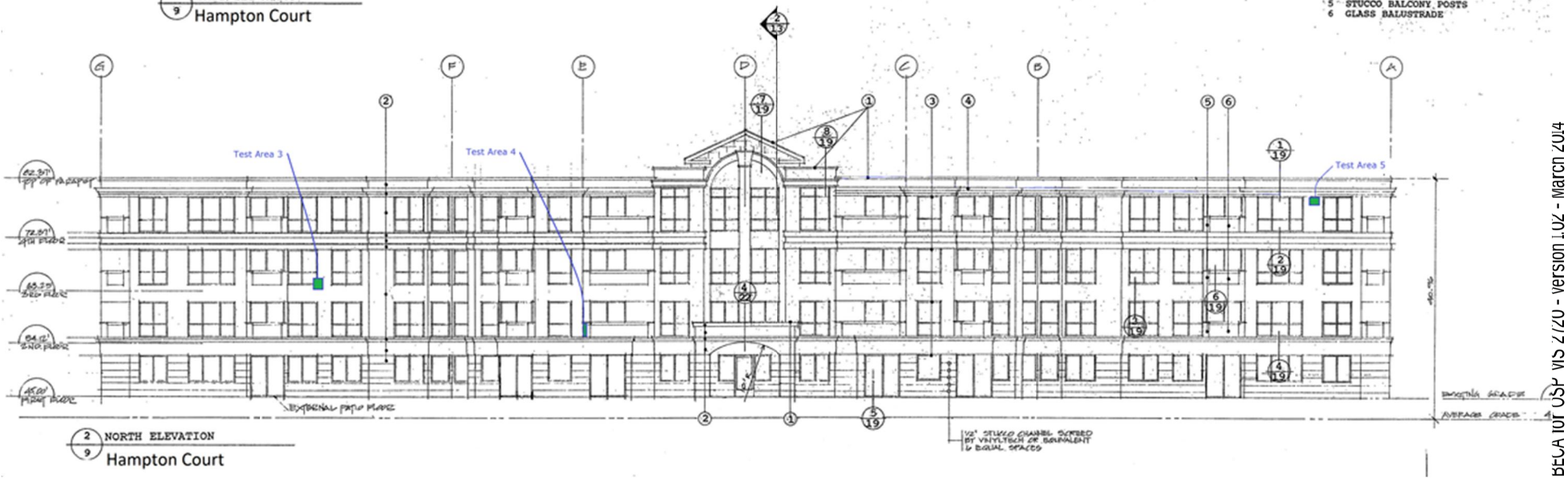
January 2014



1/9 EAST ELEVATION
Hampton Court

LEGEND

1 PAINTED METAL FLASHING
2 PAINTED STUCCO - SAND FLOAT FINISH
3 ALUMINUM WINDOWS
4 PAINTED WOOD TRIM
5 STUCCO BALCONY POSTS
6 GLASS BALUSTRADE



2/9 NORTH ELEVATION
Hampton Court

Appendix A

Hampton Court West and South Elevations

January 2014

Herbert H. Kwan Architect
705-1483 Douglas Street, Victoria BC V8W 3K4

LEGEND

1 PAINTED METAL FLASHING
2 PAINTED STUCCO - SAND FLOAT FINISH
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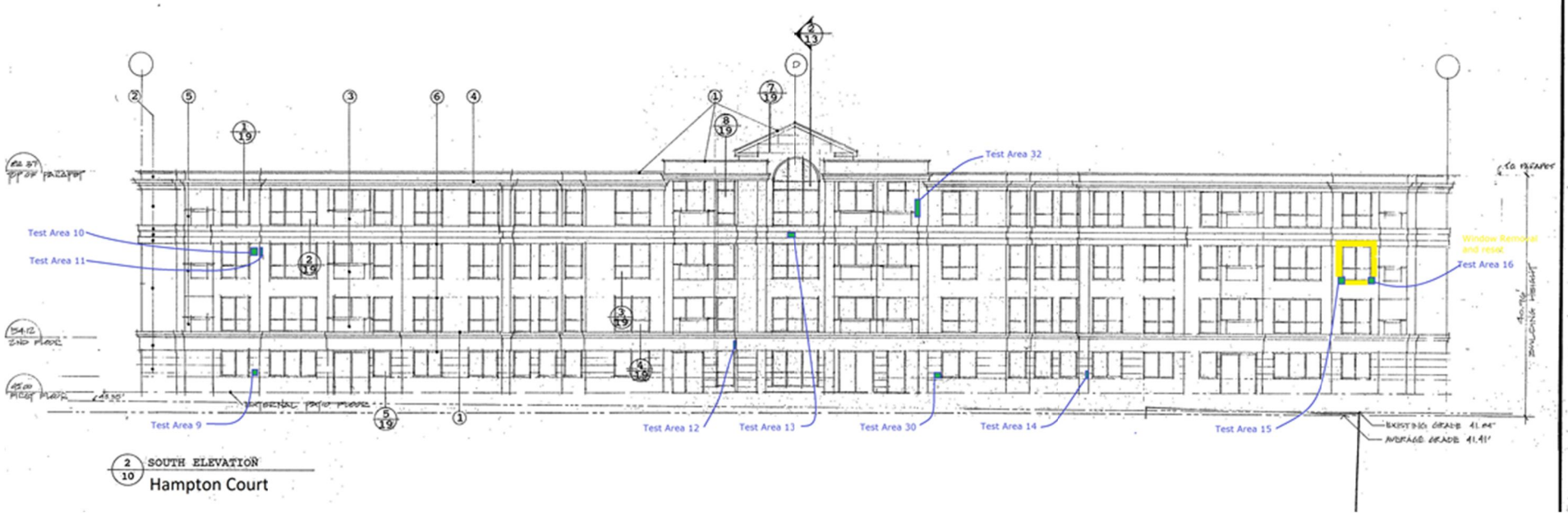


APPENDIX B

TEST RESULTS

2.1 MOISTURE READINGS EXTERIOR

Test Area	Reason for test	M C BP	M.C. OSB ext.	M.C. OSB int.
Test area 1	IR Scan Recommendation	7.8	10.0	9.4
Test area 2	IR Scan Recommendation	10.9	15.8	18.0
Test area 2b	Recommended related to Test 2	17.4	16.4	48.8
Test area 3	IR Scan Recommendation	12.5	16.0	16.8
Test area 4	Visual Review Recommendation	10.0	15.6	15.3
Test area 5	Random Selection	11.2	15.4	15.6
Test area 6	IR Scan Recommendation	9.4	7.6	7.4
Test area 7	Visual Review Recommendation	7.3	12.7	11.9
Test area 8	Visual Review Recommendation	7.8	11.2	12.1
Test area 9	IR Scan Recommendation	8.6	10.3	12.5
Test area 10	Visual Review Recommendation	9.4	17.8	13.5
Test area 11	Visual Review Recommendation	10.5	13.8	11.8
Test area 12	Random Selection	14.6	13.9	15.4
Test area 13	Random Selection	7.5	9.9	
Test area 14	Random Selection	8.5	9.6	9.4
Test area 15	Random Selection	7.9	16.3	12.2
Test area 16	Visual Review Recommendation	9.1	49.3	20.4
Test area 17	Visual Review Recommendation	15.3	17.3	14.5
Test area 18	IR Scan Recommendation	14.3	12.3	9.3
Test area 19		15.0	14.3	16.8
Test area 20		13.8	15	10.5
Test area 21	Visual Review Recommendation	9.9	12.5	11.4
Test area 22	Visual Review Recommendation	16.0	15.9	
Test area 23		12.5	12.8	11.9
Test area 24		17.5	15.9	
Test area 25		10.5	15.0	15.4
Test area 26		13.6	17.4	10.8
Test area 27		7.5	8.6	8.1
Test area 28		6.9	16.2	9.5
Test area 29		10.2	13.4	16.8
Test area 30		14.7	13.7	17.6
Test area 31		12.7	14.7	17.6
Test area 32	Visual Review Recommendation	12.3	10.9	10.6

APPENDIX C

OCCUPANT SURVEY

QUESTION	ANSWERED YES	ANSWERED NO	% RECEIVED
Are there any indications of water leaks on walls?	3 (7%)	40 (93%)	40
Are there any indications of water leaks on ceilings?	3 (7%)	40 (93%)	40
Are there any indications of water leaks on windows?	7 (16%)	36 (84%)	40
Is there condensation between the sealed glass panes?	8 (18%)	35 (82%)	40
Are there any indications of water leaks on doors?	0	43 (100%)	40
Are your windows or doors drafty or allowing cold air in?	8 (18%)	35 (82%)	40
Is there any water damage on your floors?	0	43 (100%)	40
Is there any condensation at windows or doors?	15 (35%)	28 (65%)	40
Do you notice any moldy odors?	1 (2%)	42 (98%)	40
Is mould or mildew visible anywhere?	7 (16%)	36 (84%)	40
Does your suite contain ceiling or wall cracks?	11 (25%)	32 (75%)	40
Are the cracks hairline width?	11 (25%)	32 (75%)	40
Are the cracks credit card width?	4 (9%)	39 (91%)	40
Is any damage currently evident on the balcony membrane?	1 (2%)	42 (98%)	40
Is ponding evident on the balcony?	11 (25%)	32 (75%)	40
Does the balcony floor have soft spots in the decking?	2 (5%)	41 (95%)	40

APPENDIX D

1.1 MOISTURE READINGS INTERIOR

Unit Number	Reason for test	Room	M.C. OSB int.	M.C. Drywall
CP 205	Visual Review Recommendation	Kitchen	9.4	9.5
		Bed rm	13.4	9.0
CP 207	Random	Kitchen	10.6	10.2
		Living rm	10.6	10.3
CP 212	Visual Review Recommendation	Kitchen	7.8	10.8
		Bed rm	6.8	12.3
CP 309	Random	Bed rm	8.4	11.9
		Living rm	13.1	9.3
CP 312	Visual Review Recommendation	Bed rm	13.8	9.19.3
		Living rm	15.6	13.5
HC 104	Review of HC 204	Living rm	10.2	9.8
		Kitchen	8.4	7.5
HC 202	Visual Review Recommendation	Kitchen 1	6.9	8.3
		Kitchen 2	9.4	8.5
		Bedroom	9.6	8.5
HC 211	Random	Kitchen	9.8	8.2
		Bedroom	7.9	8.9
HC 302	IR Scan Recommendation s	Bedroom	6.2	7.9
		Living rm	6.2	9.3
HC 417	IR Scan Recommendation	Bedroom	17.4	14.2
		Living rm	12.4	8.5
		Kitchen	10.5	11.7

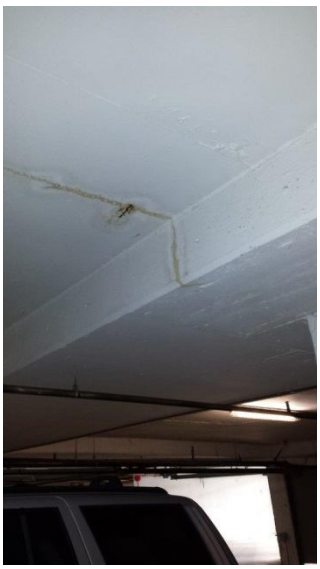
1.2 MOISTURE READINGS INTERIOR WINDOW SILLS

Unit Number	Room	M.C. Left Corner	M.C. Right Corner
HC 301	Living rm	8.7	9.1
	Dining rm	10.3	9.3
	Kitchen	8.4	8.1
	M Bedroom	8.2	17.8
	Bedroom	9.1	16.5
HC 302	Living rm	11.5	13.8
	Kitchen	10.9	9.7
	Kitchen above sink	7.1	8.1
	M Bedroom	7.5	8.9
	Bed rm	9.1	8.1
HC 317	Living rm	11.8	13.9
	Kitchen	16.9	16.2
	Kitchen above sink	12.9	26.8

	M Bedroom	62.1	35.4
	Bed rm	12.4	16.6
HC 401	Living rm	8.6	8.9
	Dining rm	13.9	10.9
	Kitchen	9.2	7.2
	M Bedroom	10.7	10.1
	Bedroom	11.9	8.1
HC 417	Living rm	9.2	8.2
	Kitchen	6.1	8.0
	Eating nook	8.2	9.2
	M Bedroom	16.5	37.2
CP 301	Living rm	10.4	10.3
	M Bedroom	10.2	23.1
	Bedroom	10.2	45.6
CP 402	Living rm	7.2	9.1
	Dining rm	8.6	8.7
	Kitchen	8.1	8.0
	M Bedroom	12.1	11.2
	Bedroom	12.5	10.9
CP 410	Living rm	8.8	7.7
	Dining rm	6.4	8.0
	Kitchen	8.6	9.6
	M Bedroom	8.4	7.8
CP 411	Living rm	12.7	9.1
	Dining rm	10.2	59.1
	Kitchen	9.5	11.5
	M Bedroom	14.9	12.3
	Bedroom	8.5	7.9

APPENDIX E PHOTOS

Parkade Photos



Parkade 13

Parkade 14

Parkade 15

Parkade 16

Parkade 17

Parkade 18

Parkade 19

Parkade 20

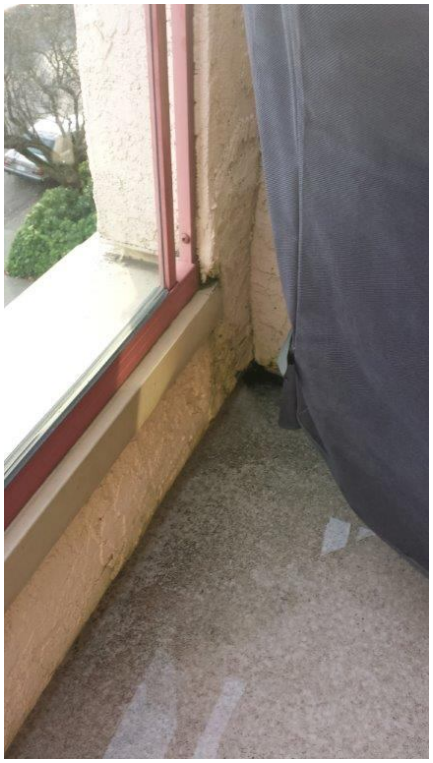
Balcony Photos

Balcony 1

Balcony 2

Balcony 3

Balcony 4



Balcony 5

Balcony 6

Balcony 7

Balcony 8

Balcony 9

Roof 1 Wrinkled membrane

Roof 2 Missing granulars on membrane surface

Roof 3 Debris around drain

Roof 4 Hole in caulking

Roof #5 Debris

Roof 6 Damaged Skylight

Roof 7 Open seam

Roof 8 corrosion of sheet metal vent

Roof 9 Moss & Lichen