RDH | Building Engineering Ltd.

224 WEST 8TH AVENUE
VANCOUVER BC V5Y1N5
TEL 604 873 1181
FAX 604 873 0933
VAN@RDHBE.COM
WWW.RDHBE.COM

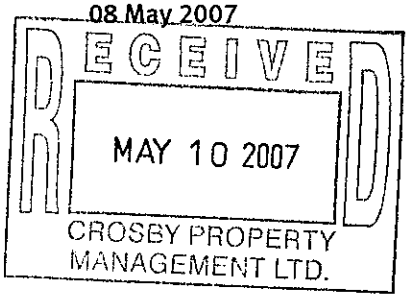
TO **Strata Plan BCS 1399**
c/o Crosby Property Management Ltd.
600 - 777 Hornby Street
Vancouver, BC V6Z 1S4
Attn: Ms. F. Barker

FAX 604 689 4829

REGARDING **2-Year Warranty Review**

1844.40
The Bentley – Warranty Review

08 May 2007



Dear Ms. Barker,

Polygon Construction Management Ltd. retained RDH Building Engineering Ltd. (RDH) on behalf of Strata Plan BCS 1399 (The Bentley) to perform a 2-year warranty review of the building enclosure. Specifically, our scope of work included:

- → Visual review from ground, roof, decks, and balconies
- → 2 boson's chair drops
- → Visual review of parking structure

The purpose of this letter is to document our observations and comment on the visible issues that should be corrected as warranty items. This letter is intended for an audience that is familiar with the building, the design intent, and standard construction practices.

Our review was conducted on April 27, 2007. It was approximately 12°c and raining at the time of the review. It had rained for several days prior.

We were unable to obtain access to a reasonable number of suites. Therefore, four boson's chair drops were made as opposed to the two included in our proposal.

Owners, prospective purchasers, or others who use or rely on the content of this report do so at their own risk. RDH cannot be held liable for damages that may be suffered with respect to the purchase, ownership, or use of the subject property based on the content of this report.

Questionnaires

Questionnaires were issued to the occupants of each suite/unit. Fifteen completed questionnaires were returned to RDH. The following comments pertain:

- → A number of owners complained about plugged dryer vents and dripping dryer vents.
- → The owner at Suite 303 reported moisture stains on the exterior walls. This should be reviewed (we were unable to gain access). It is possible that the staining is associated with the plugged dryer vents that were also reported. When the dryer vents are plugged water accumulates in the ducts and can stain the walls and ceilings.

→ Suite 2502 reported water staining on the ceiling. RDH, Polygon, and Intertech Construction (ITC) are all aware of this problem and corrective steps will be taken when the weather improves.

Report Organization

This report is organized in accordance with the following elements of the building enclosure:

→ Walls, Windows and Vents

→ Balconies

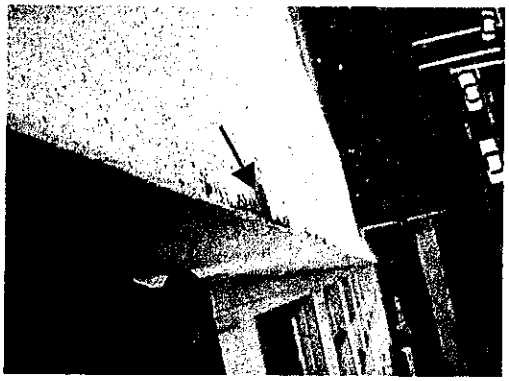
→ Roofs and Decks

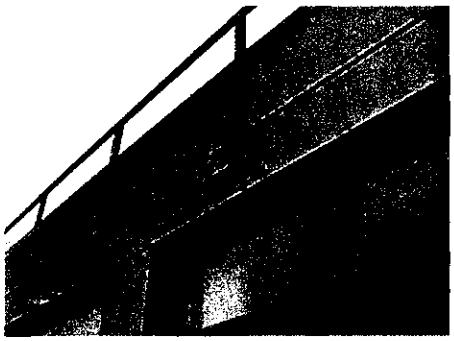
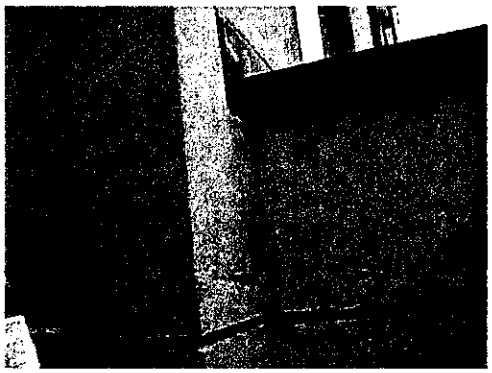
→ Parking Garage and At-Grade Assemblies

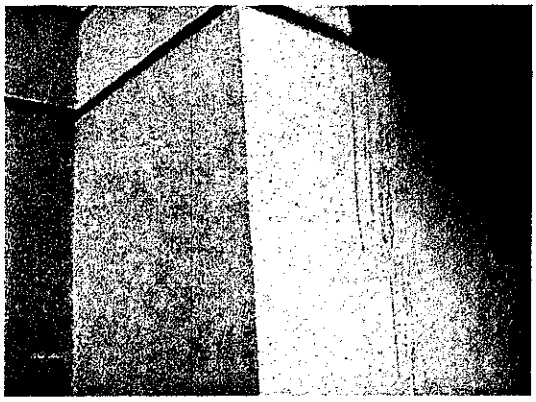
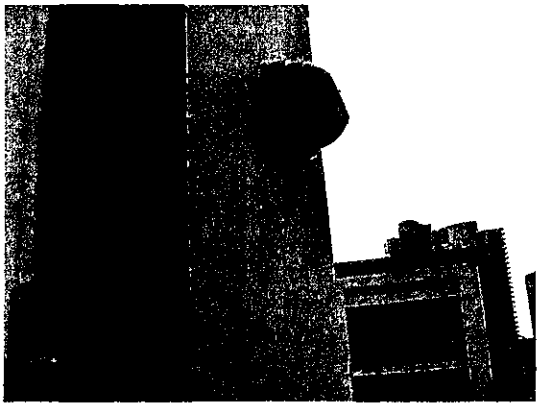
The observed conditions are documented in the following section. A photograph of each condition is provided along with the significance of the condition, and the action(s) required in addressing the condition.

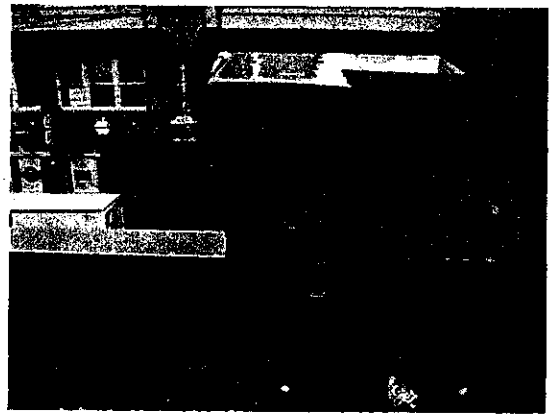
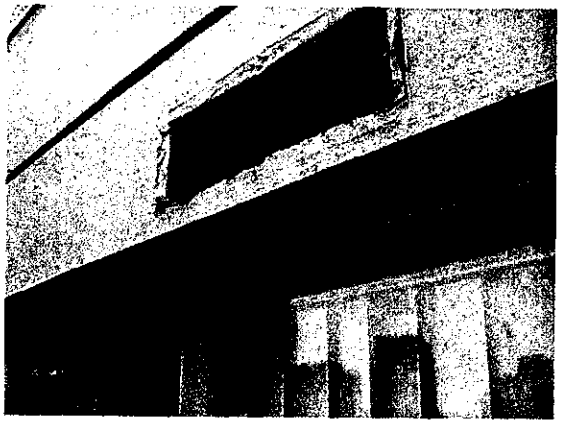
Walls, Windows and Vents

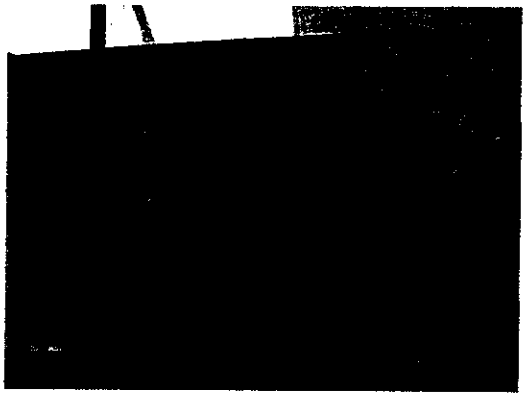
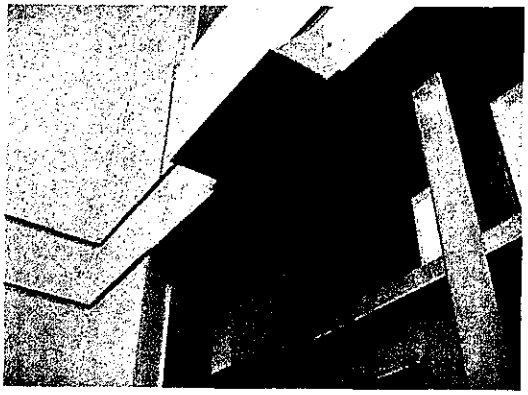
Our observations and the required actions are documented in the following table.

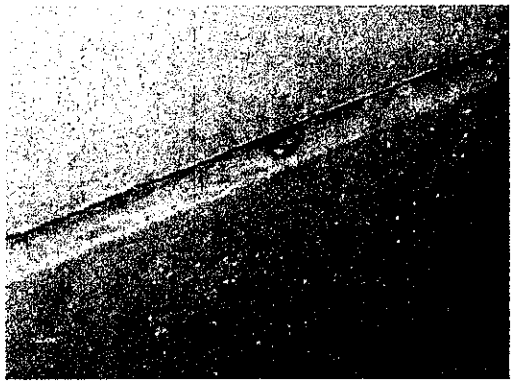
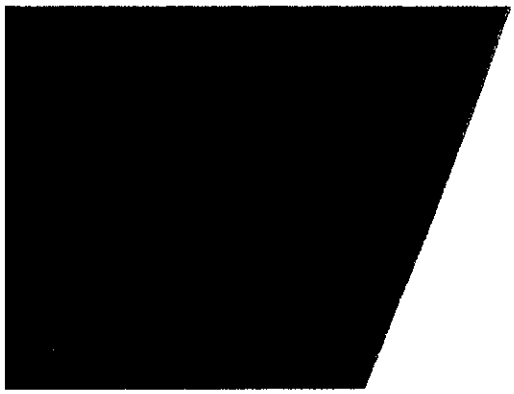
Photograph 1.1	Photograph 1.2
	
Observation: Sealant is missing from the reveal – SE corner of Suite 2502 adjacent to eyebrow.	**Observation:** The Dow Allguard is not continuous in several locations. The greatest number of discontinuities in the paint were observed on the south and north ends of the east elevation.
Action Required: Install sealant per original architectural details.	**Action Required:** Touch-up areas of missing paint.

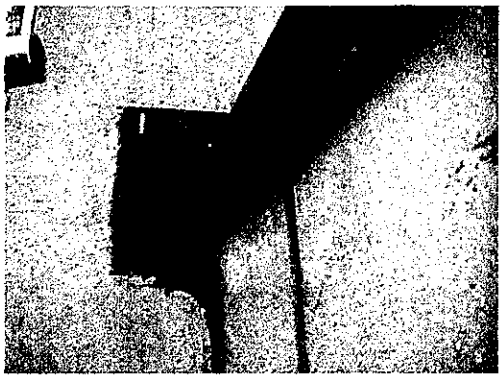
Photograph 1.3	Photograph 1.4
	
Observation: Vent hood is missing – Suite 2403	**Observation:** The parging has failed – Suite 2403, S.E corner
Action Required: Install vent hood per original details.	**Action Required:** Grind off Allguard – patch concrete – reapply Allguard.

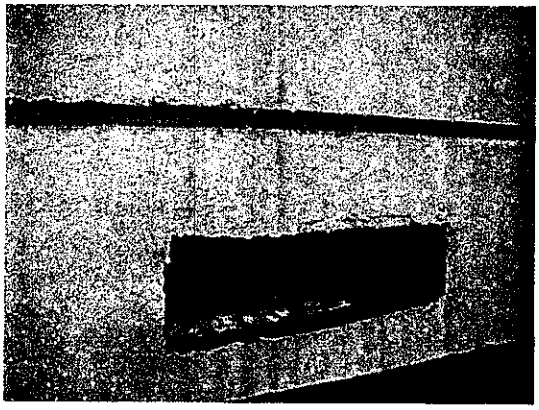
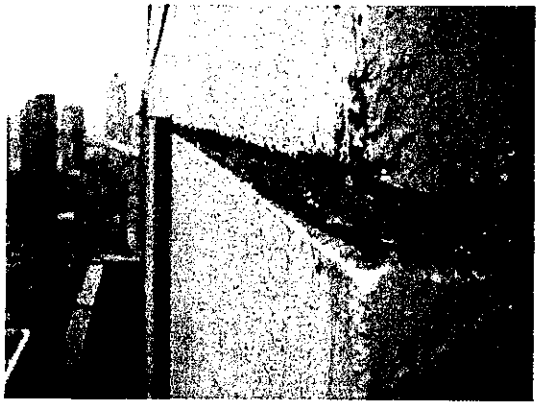
Photograph 1.5	Photograph 1.6
	
Observation: The urethane balcony membrane was not removed before the Allguard was installed. The Allguard is not bonded to the runs of urethane deck membrane.	**Observation:** Sealant was not installed above the light – Suite 406.
Action Required: Grind off excess urethane – reapply Allguard.	**Action Required:** Apply a bead of neutral cure silicone sealant above the light – leave weep hole at base.

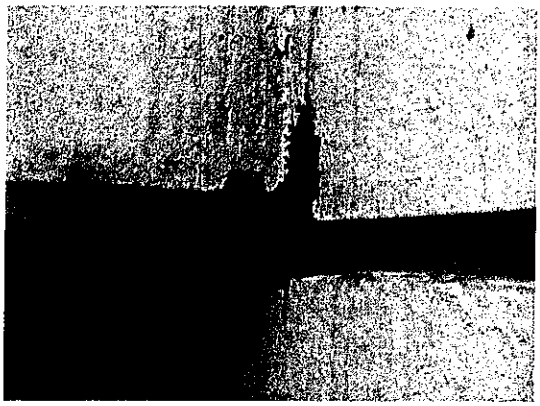
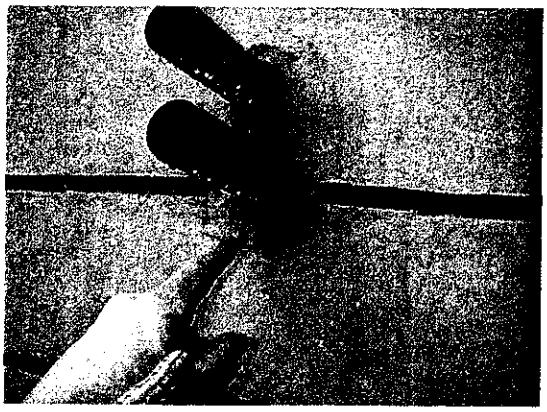
Photograph 1.7	Photograph 1.8
	
Observation: Sealant missed between brick and concrete – above TH 3.	**Observation:** Vent hood has been removed – Suite 2307. It is evident that the vent hood had been installed at one time – not clear who removed the vent.
Action Required: Install backing rod and neutral cure silicone sealant per project specifications.	**Action Required:** Install vent hood per original details.

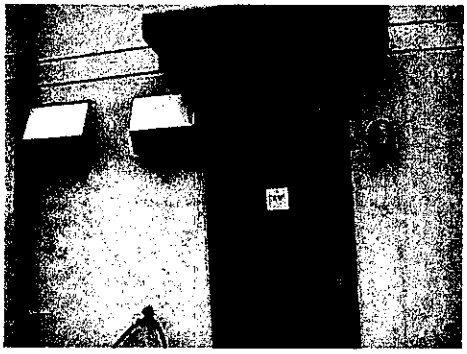
Photograph 1.9	Photograph 1.10
	
Observation: Allguard paint is discontinuous	**Observation:** Numerous vents are plugged.
Action Required: Ensure all areas are painted per project specification.	**Action Required:** Owners should be cleaning vents regularly as outlined in Maintenance Manual.

Photograph 1.11	Photograph 1.12
	
Observation: Sealant has not been adequately installed in several locations. The sealant should be ramped per architectural details. This condition was noted in numerous locations.	**Observation:** Vent grill is partially plugged and water is dripping from grill – Suite 1605.
Action Required: Install sealant in reveals per architectural details. Check all areas to ensure that the sealant was properly installed.	**Action Required:** The Owners must have the ducts cleaned per the Maintenance Manual. If water dripping from the vents continues it may be necessary to install a booster fan to the dryer exhaust.

Photograph 1.13	Photograph 1.14
	
Observation: Discontinuous Allguard paint. NE corner of project.	**Observation:** Discontinuous Allguard paint. NE corner of project.
Action Required: Ensure Allguard paint is continuous over all concrete areas per project specifications.	**Action Required:** Ensure Allguard paint is continuous over all concrete areas per project specifications.

Photograph 1.15	Photograph 1.16
	
Observation: Vent hood is missing – Suite 2402	**Observation:** The sealant in the reveal should be ramped to cover the bottom of the reveal.
Action Required: Install vent hood per original details.	**Action Required:** Install sealant per the architectural details.

Photograph 1.17	Photograph 1.18
	
Observation: The sealant in the reveal is not adequately installed at the interface with the balcony edge. It appears that the surfaces were not adequately installed at the time of application. This condition is common on the north end of the east elevation.	**Observation:** The sealant is debonded from the drainpipe, Suite 305.
Action Required: Remove sealant, clean surfaces and reinstall sealant. Ensure sealant is ramped to cover the bottom of the reveal. This is a systemic condition. All locations to be reviewed and corrected as necessary.	**Action Required:** Remove sealant and replace per good practice.

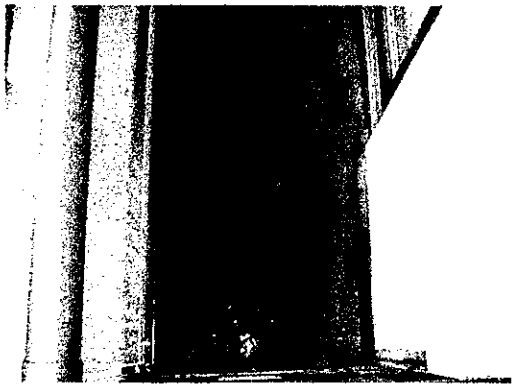
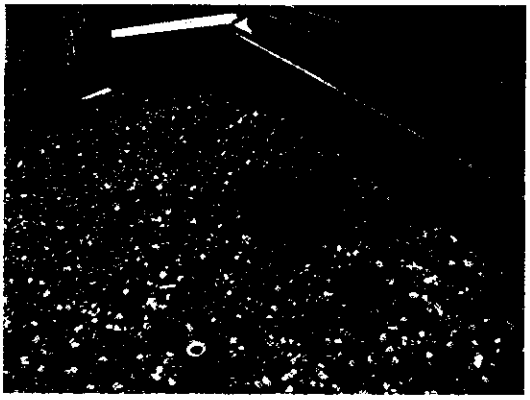
Photograph 1.19

Observation: The discharge from the duct has damaged the paint finishes on the door. The door will corrode prematurely.
Action Required: Maintain the paint finish on the door so that it does not deteriorate prematurely.

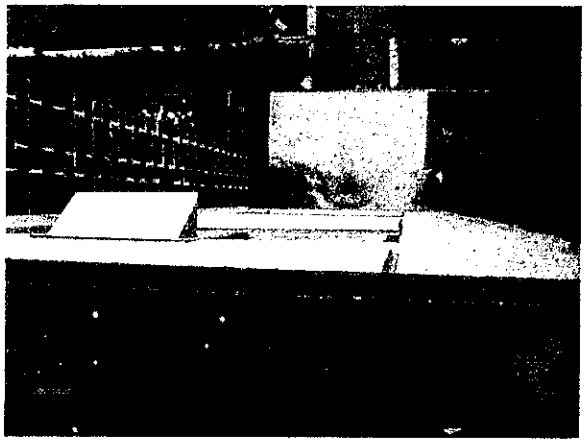
Balconies

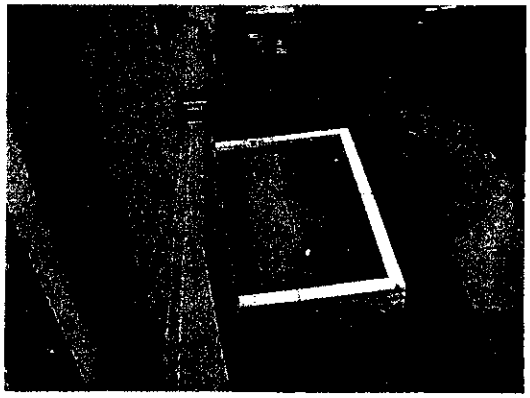
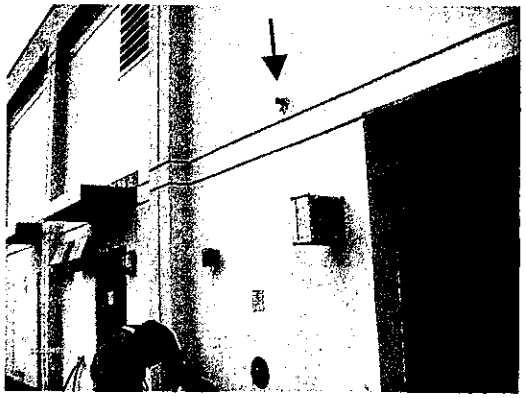
No problems were observed with the balconies.

Roofs and Decks

Our observations and the required actions are documented in the following table.

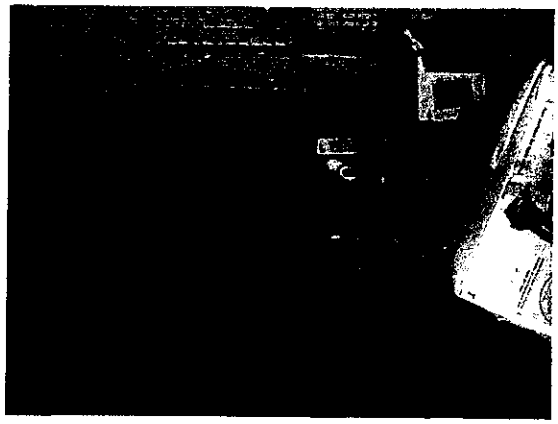
Photograph 2.0	Photograph 2.1
	
Observation: Excessive ponding on deck at Suite 305.	**Observation:** There were plants growing out of the drain on the roof over TH#4
Action Required: Check to determine cause of ponding. If the drain is not plugged, reslope the deck to obtain better drainage.	**Action Required:** The Owners must review the roofs at least every 6 months to ensure there are no plants growing on the roof assembly and that the drains are clear.

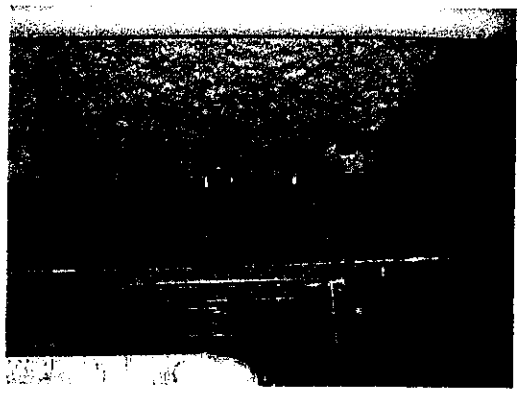
Photograph 2.2	Photograph 2.2
	
Observation: The drain in the canopy roof above the entrance to TH#1 is plugged.	**Observation:** The screens are missing from the drains in the canopy roofs at the townhouse entrances.
Action Required: The drain should be cleared by Owners to ensure there are no restrictions.	**Action Required:** Install screens.

Photograph 2.3	
	
Observation: There is debris on the roof over the main entrance.	**Observation:** A rainwater leader is required for the drainpipe.
Action Required: The Owners should clean roof areas per Maintenance Manual.	**Action Required:** Install rainwater leader and splash pad.

Parking Structure and At-Grade Assemblies

Our observations and the required action are documented in the following table.

Photograph 3.0	Photograph 3.1
	
Observation: Water staining on floor at P2 level storage room (Service Room 2).	**Observation:** Leakage into garbage room at P1 level.
Action Required: The source of the water needs to be determined. The leakage is possibly coming from the make-up air shaft.	**Action Required:** The source of the water needs to be determined. The leakage is likely coming from the make-up air shaft.

Photograph 3.2	Photograph 3.3
	
Observation: Residual staining at penetration through slab above the townhouse storage room. It was reported by the caretaker that Polygon/ITC had corrected this problem. No leakage was occurring at the time of the review even though it was raining.	**Observation:** The caretaker reported that water had been dripping from the pipe penetration above the garage entrance. No leakage was occurring at the time of our review even though it was raining.
Action Required: The Owners should monitor this location to ensure that the leakage has been corrected.	**Action Required:** The owners should monitor this location to ensure that the leakage has been corrected.

Commentary

In general, the building enclosure is performing as anticipated. A number of construction deficiencies were identified; however, it is unlikely that any of the noted concerns will result in water ingress over the short-term.

The issues that should be corrected by the Owners as part of their regular maintenance have been identified as such. All other items should be reviewed by Polygon and ITC.

A few of the identified issues appear to be systemic, specifically:

- → The sealant at the reveals is not consistent
- → The Allguard paint is not continuous in all areas.
- → The dryer vents are plugged (to be corrected by Owners)

The sealant in the reveals and the paint application should be reviewed at all areas of the building. Fortunately, this work is relatively easy to correct but will likely require swing stage access in some areas.

The "Action Required" for each of the issues identified does not constitute a repair specification. Rather, the "Action Required" is a general statement about the necessary work. All remedial work should be performed in accordance with good practices and the original project specification.

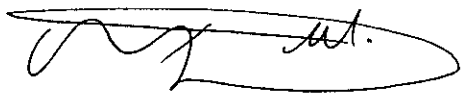
Closure

RDH has reviewed select areas of the building enclosure to identify general issues that should be repaired/corrected under the terms of the project warranty. Our review has not included all areas of the building enclosure so it is possible that some issues have been missed.

Please contact the undersigned if you wish to discuss this letter.

Yours truly,

RDH Building Engineering Ltd.



Marcus Dell, P.Eng.
Senior Building Science Specialist
mdell@rdhbe.com

cc Cliff Talerico, Intertech Construction Group TEL 604 685 0111 FAX 604 685 0112
Clinton Wong, Polygon Construction Management Limited 604 877 1131 604 871 4180