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May 15, 2008

MH Ref: 5085282.00

The Owners, Strata VR 2472  
c/o JP Dame, Property Manager  
Strataco Management Ltd.  
4171 Dawson Street  
Burnaby, BC V5C 6B7

Fax: (604) 294-8956

**Re: Two-Year Building Envelope Deficiency Review - "Mayfair House", Vancouver, BC**

Morrison Hershfield (MH) was retained by the Owners of Mayfair House (Strata Plan VR 2472) to undertake a visual review of the common property and building envelope of their building complex located at 2200 Highbury, 3760-6<sup>th</sup> Avenue and 3769-7<sup>th</sup> Avenue in Vancouver, BC. The review was performed to precede the end of the two-year warranty provided by the contractor and Willis Canada.

This letter report documents the results of our review. The results reported herein are based on information provided by the Strata and Property Manager, warranty provider, and on-site visual review of common property.

**Building Description**

The complex consists of three 3-storey residential building with a total of 78 units. The complex is wood framed; the cladding is a drained stucco assembly with decorative EIFS trims below the roof soffit and windows; the above grade units are provided with balconies and/or decks; the glazed systems consist of thermally broken aluminum framed windows.

**Scope of Review**

Our scope of services was defined in our proposal of May 13, 2008, and herein referred to as follows:

1. *Review the drawings, maintenance manual and any material or construction warranties prior to visiting the site. We will also review copies of maintenance records, any repair records from our previous warranty reviews, and records of any other building envelope issues, as provided by the owners. We will require this documentation prior to commencing our fieldwork.*
2. *A general visual review (from ground, roof and podium levels, if accessible) of the building complex, including the following components included in the rehabilitation:*
  - *Wall cladding and associated components (trims, flashings)*

- *Window and door elements*
  - *Balconies and roof decks*
  - *Roofing and associated tie-ins with wall systems*
3. *Conduct a visual review of suite interiors on sample suites, which will be selected upon review of building envelope documentation. Assistance will be required for access to specific suites and should be arranged by the Strata.*
  4. *Prepare and submit two copies of a professional signed and stamped letter report, which summarizes the review. The letter report will list observed deficiencies (with sample photographic examples) and recommended actions to correct any identified deficiencies.*

### **Limitations**

This review is based on a review of available documents and visual inspection of accessible areas. Our review did not include exploratory investigation, in terms of removing sections of cladding, drywall, roofing or landscaping for evaluation of the hidden systems beneath.

Any comments or conclusions within this report represent our opinion, which is based upon our field review of physical conditions and our past experience. This review is limited to technical, construction and performance items.

The findings herein are based on a random sampling and/or on a visual review of the surface conditions. Deficiencies, which may exist but were not observed and recorded in this report, were not apparent given the level of study undertaken.

Owners, prospective purchasers, tenants or others who use or rely on the contents of this report do so with the understanding as to the limitations of the documents reviewed, the general visual inspection undertaken and understand that MH cannot be held liable for damages which may be suffered with respect to the purchase, ownership or use of the subject property.

### **Field Review Work**

The review was conducted by Matthew Pel on May 13 and 14, 2008. The weather conditions at the time of the site work were rainy and cool. The review was conducted from the ground level, and all main roof areas focusing on building envelope elements. We also accessed 3 suites, the interior amenity facilities located on the ground floor, the entrance lobbies and hallways. MH reviewed and verified items noted in an RDH report identifying several concerns. The RDH items are addressed in Table 1.

We have summarized our observations in Table 1 below, and have provided recommendations for addressing deficiencies under the "Corrective Action" column. Each item has been categorized according to the type of problem as follows:



- **Category D** – A construction defect or deficiency exists, in our opinion, when the observed conditions in the building complex differ from the intent of the documentation provided for review, from the applicable codes and standards, or from good construction practice. Such deficiencies are warranty items and should be brought to the attention of the appropriate company for correction.
- **Category M** – A maintenance defect or deficiency exists, in our opinion, when the observed conditions in the building complex are caused by general wear and tear on building components and equipment, or when they concern an item that has not received routine service, adjustments and/or cleaning. Such maintenance deficiencies should be corrected as part of the maintenance program.
- **Category I** – A defect or deficiency exists, in our opinion, where no clear decision can be made as to whether the problem is a construction or maintenance deficiency. Repairs to correct the deficiency or further investigation, e.g., test openings or material/component testing, is generally required.

The suite numbers listed in the report do not represent a total listing of all locations with deficiencies nor do they imply all similar locations or items to be deficient. Therefore as a general rule, we recommend that the site be reviewed and the extent of the deficiencies be confirmed.

We have included in Appendix A, sample photographs taken during our review.

**Table 1: Summary of Observations**

Ph	Sample Location	Deficiency Description	Category	Corrective Action
1	Unit 213	The drain appears blocked and ponding water observed on balcony.	M	Review balcony drain and remove any blockages
2	3 <sup>rd</sup> floor roof – 6 <sup>th</sup> Ave.	One vent screen is dislodged on the 3 <sup>rd</sup> floor roof area outside the elevator (6 <sup>th</sup> Ave. building)	M	Review vent screens and ensure screens are properly secured.
3	Sloped Roofs	Cracked ridge cap shingles were observed. This is a typical deficiency for all roof areas	D	Review sloped roof areas and replace cracked or damaged shingles.
4	Flat Roofs	Debris (leafs, branches.etc.) on flat roof areas.	M	Remove all debris from flat roof areas and ensure drains are free of debris.



Ph	Sample Location	Deficiency Description	Category	Corrective Action
5	Elevator Roof – 6 <sup>th</sup> Ave.	Exposed self adhesive membrane at scupper penetration. Membrane will degrade with UV exposure.	<b>D</b>	Trim exposed self adhesive membrane and re seal scupper to ensure membrane is protected from UV rays
6	Mechanical Penetration – 6 <sup>th</sup> Ave.	The air handling penetration detail at the building is not sealed. Exposed plywood was observed.	<b>D</b>	Install adequate penetration detail to prevent water ingress.
7	Sloped Roof – 6 <sup>th</sup> Ave.	The sloped roof extension adjacent to the fire wall on the 6 <sup>th</sup> Ave. building (courtyard side) is sagging.	<b>I</b>	Contractor and MH to review and repair as required.
8	Sloped Roof Vents – 6 <sup>th</sup> Ave.	One hood vent is missing on the western most sloped roof area (6 <sup>th</sup> Ave. building).	<b>D</b>	Contractor to provide and install hood vent.
9	Roof hatches	Existing metal roof hatches for flat roof areas are corroded. However, no water ingress was observed (not included in rehabilitation)	<b>M</b>	Clean and repair as required.
10	Skylights - Highbury	Condensation was observed within a number of skylights on the Highbury flat roof area	<b>D/M</b>	The location of the condensation is unknown. If condensation is occurring between glazing, it suggests the seals are broken and the contractor should replace skylights. If condensation occurs on the interior face of the glazing the occupant should control the interior humidity levels.
11	Roof vent screens – All Roofs	Several debris screens are dislodged. This was a typical condition noted on all roof areas.	<b>D/M</b>	Review roof vents and ensure debris screens are adequately secured.
12a 12b	Stucco finish coat – Highbury	The stucco finish coat on the base of one chimney of the Highbury building (northwest corner) is delaminating.	<b>D</b>	Repair stucco acrylic finish as required.



Ph	Sample Location	Deficiency Description	Category	Corrective Action
13	Highbury building – Flat roof	A hairline crack was observed in the stucco assembly installed to one chimney column at the northwest corner of the Highbury building.	<b>D</b>	Currently the crack is less than 1/16". The crack should be monitored and repaired if size increases.
14	7 <sup>th</sup> Ave. roof	Moss was observed growing along several sloped skylights.	<b>M</b>	Review roof regularly and remove any vegetation.
15	7 <sup>th</sup> Ave Chimney Stacks	The paint is peeling off several chimney stacks. Chimney caps are also stained with bird debris.	<b>D/M</b>	Clean and repaint chimney caps as required.
16	Exterior Light Fixtures	RDH identified the light fixtures as not being adequately sealed. The fixtures boxes are continuously waterproofed with self adhesive membrane and are fully caulked to the stucco J-trim. In some cases the light fixture is slightly smaller than the fixture box exposing the perimeter sealant. It was noted that several screws have become loose.	<b>D</b>	Fasteners for exterior light fixtures should be tightened as required.
17	Rainwater leader PVC caps	Paint is peeling off PVC rainwater leader caps at base of wall.	<b>M</b>	Repaint if required. This will not effect the building envelope performance.
18a 18b	Firewall Transitions 6 <sup>th</sup> and 7 <sup>th</sup> building	As noted in the RDH review, the sealant at the firewall transition at the 6 <sup>th</sup> Ave and 7 <sup>th</sup> Ave building entrances have separated from the stucco J-trim. This was confirmed during the review by MH.	<b>D</b>	Remove and reinstall new sealant.
19a 19b 19c	Window Sill Flashings	As noted in the RDH review, several metal sill flashing are back-sloped. Back-sloped flashings were observed at units 102, 103, 116, 121, 228, 303, 310, window at elevator 2 <sup>nd</sup> floor (Highbury building).	<b>D</b>	Contractor to readjust metal flashing as noted. Ensure all flashing have positive slope to the exterior.



Ph	Sample Location	Deficiency Description	Category	Corrective Action
20a 20b	Through wall flashings	RDH noted staining on the metal through wall flashings at various locations. During the review staining was observed on the flashing and it was noted that the staining was also observed during stucco application.	<b>D</b>	Staining should be removed by the contractor as required.
21	Unit 310	Blisters on the balcony membrane were noted during construction and has not been repaired to date. MH reviewed balcony during Nov. and Dec. but blisters were not observed due to cold weather.	<b>D</b>	Contractor to repair membrane blisters as required.
22	Unit 302	Membrane on balcony has been repaired.	<b>M</b>	Monitor and maintain membrane patch. Contact contractor if blisters reoccur.
23	Unit 322	Blisters on the balcony membrane were noted during construction and run the length of the balcony. MH reviewed balcony during Nov. and Dec. but blisters were not observed due to cold weather.	<b>D</b>	Contractor to repair membrane blisters as required.
24	Unit 322	The occupant notified the strata that water over flows from the rainwater leader connection.	<b>M/D</b>	Review connection rainwater connection and clean or repair if required.
25	Pipe penetration - 6 <sup>th</sup> Ave.	One pipe penetration at the breezeway between the 6 <sup>th</sup> Ave. and Highbury building is unsealed.	<b>D</b>	Contractor to install sealant to pipe penetration.
26	Stucco Cracking - Highbury	A small crack has developed above one window (unit 106) between the Highbury and 6 <sup>th</sup> Ave. building	<b>D</b>	Clean and seal crack as per manufacturer's recommendations.



Ph	Sample Location	Deficiency Description	Category	Corrective Action
27	Window Head - Highbury	One window located on the ground floor outside the Highbury elevator is incomplete. Exposed sheathing membrane was observed.	D	Contractor to complete wall assembly above window.
28	Stucco Efflorescent	Areas of efflorescent was observed as noted in the RDH report.	M	The efflorescent should be cleaned off regularly and should not effect the performance of the building envelope. Contact consultant if water ingress is reported.

### Summary

MH conducted a visual deficiency review of the common areas of the building prior to the expiration of the two-year warranty period. We reviewed the building envelope components, where accessible, including wall components, windows and main roof areas. Based on our observations and from the table above, we have identified the following items, which need to be confirmed or corrected to ensure that the performance of building is in accordance with the design intent:

- The walls, which include a drained stucco cavity assembly complete with EIFS trims, were reviewed from the ground level and from various balconies. In general, the walls appear to perform as intended. However, minor efflorescent and should be cleaned as required.
- Windows were reviewed from the outside and we observed back-sloped sill flashings at various locations which need to be sloped away from the building. Also condensation was observed within various skylights which require further review by the strata. We recommend that the Strata issue a memo requesting each individual owner to review their windows from the interior and to report any concerns (i.e. excessive condensation) prior to expiry of warranty period.
- The exterior sealant between the drained stucco assembly and the firewall is starting to fail and needs to be replaced.
- Balconies blisters repairs have not been completed at all areas. The strata should have the balconies reviewed in warmer conditions to reveal the full extend of the blisters. We recommend that the Strata issue a memo requesting each individual owner to review and to report any concerns (i.e. delamination or peeling off) with the balcony membrane.

With regard to the building maintenance, a building envelope maintenance manual has been provided to the Strata and it is unclear if a maintenance program has been established for the complex. We recommend that tracking of maintenance activities and whoever is performing the



activities be undertaken. This could be in the form of a logbook identifying the maintenance item, the date it was performed and the name of the maintenance service provider with contact name and telephone number. These records are useful in the evaluation of the warranties and also provide valuable information at the point the maintenance program will need to be updated and can be used to plan for renewals.

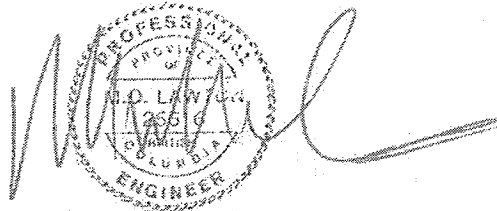
We trust the above meets the Strata query. Please do not hesitate to contact the undersigned should you have any questions.

Sincerely,

MORRISON HERSHFIELD LIMITED



Matthew Pel  
*Building Science Consultant*



Mark Lawton, P.Eng  
*Principal, Building Science Specialist*

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Cc: Mendel Vysholid      Email  
Andrew Eunson        Email





**APPENDIX A:**  
**Photographs**



Mayfair House - 2 Year Warranty Review

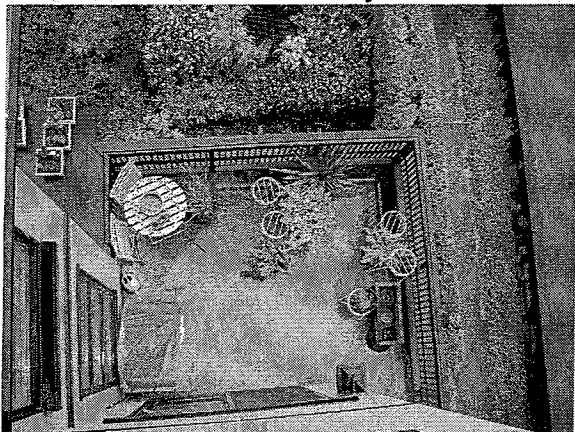


Photo 01.JPG

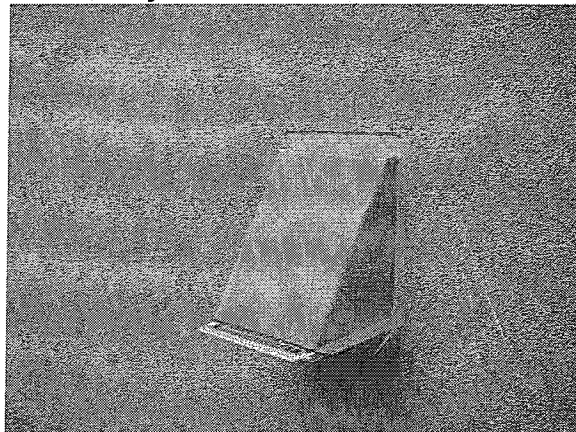


Photo 02.JPG



Photo 03.JPG

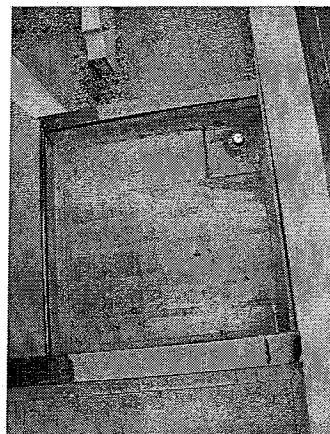


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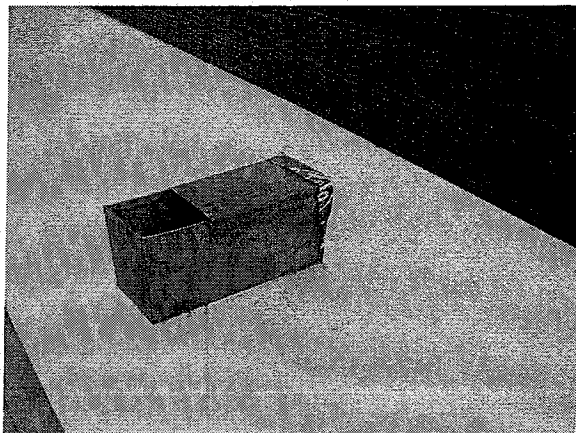


Photo 05.JPG



Photo 06.JPG

Mayfair House - 2 Year Warranty Review

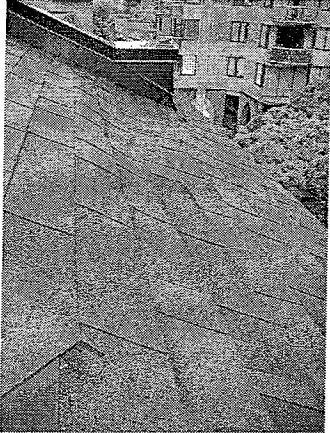


Photo 07.JPG



Photo 08.JPG

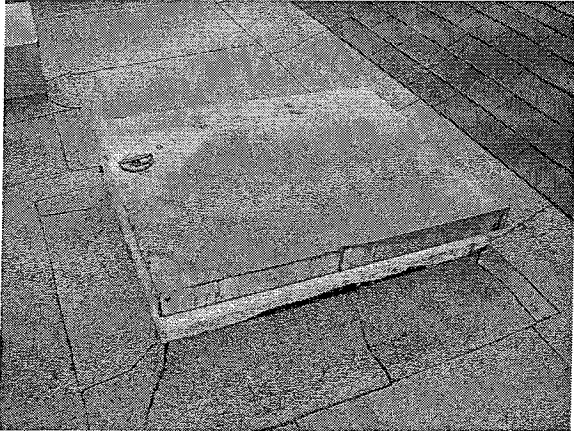


Photo 09.JPG

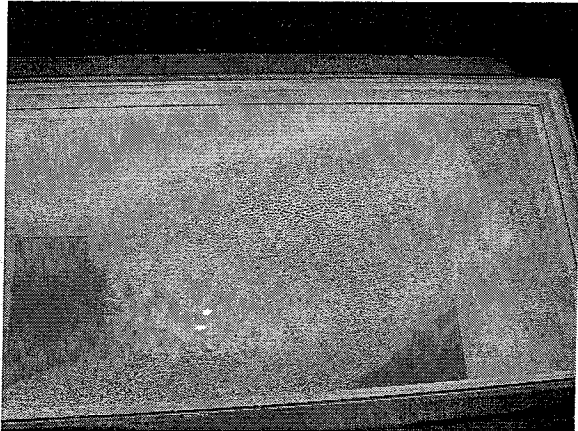


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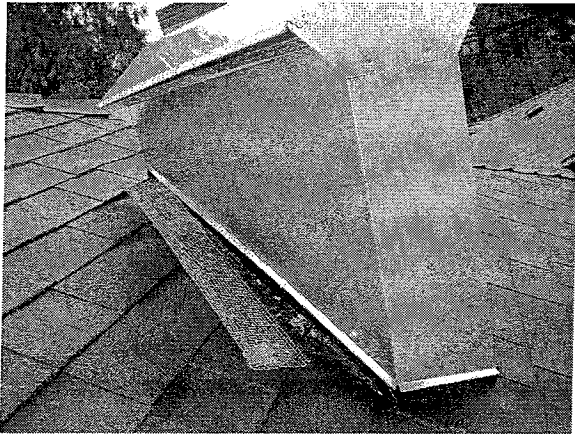


Photo 11.JPG

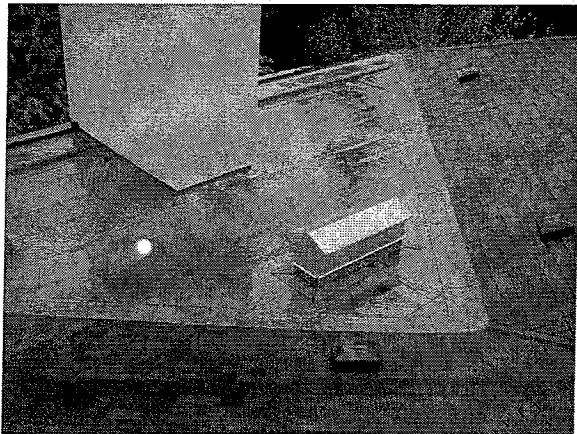


Photo 12a.JPG

Mayfair House - 2 Year Warranty Review

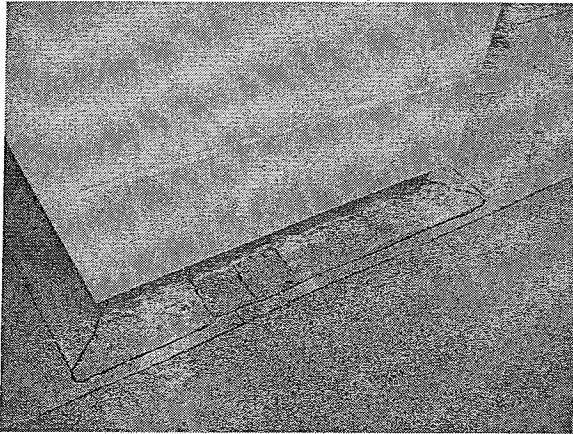


Photo 12b.JPG

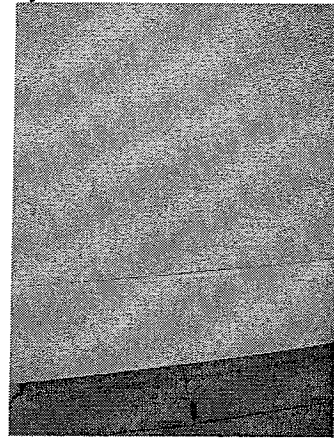


Photo 13.JPG

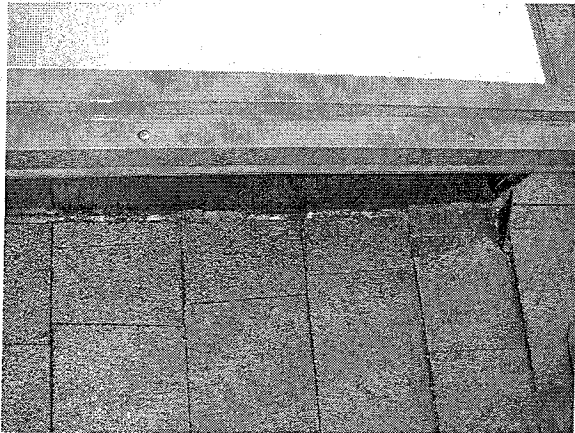


Photo 14.JPG



Photo 15.JPG

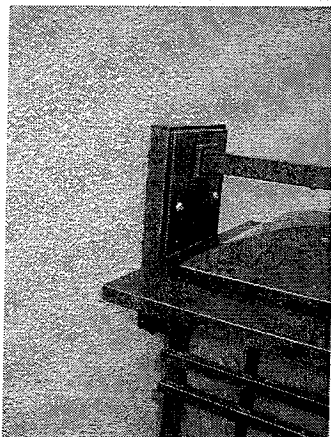


Photo 16.JPG



Photo 17.JPG

Mayfair House - 2 Year Warranty Review

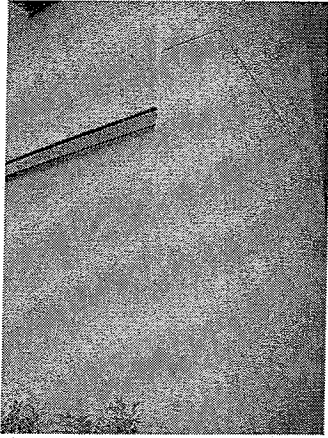


Photo 18a.JPG

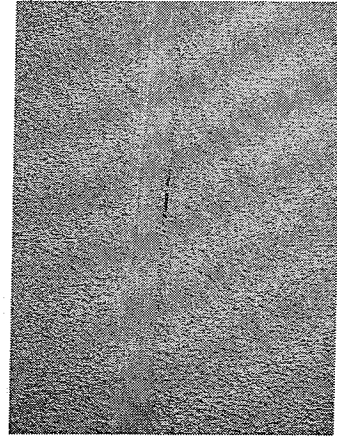


Photo 18b.JPG

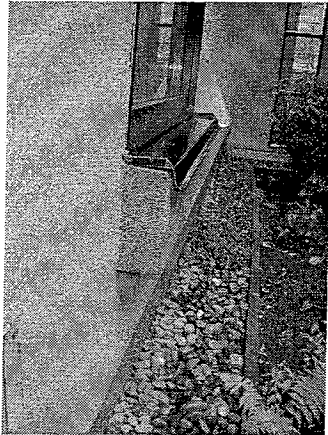


Photo 19a.JPG

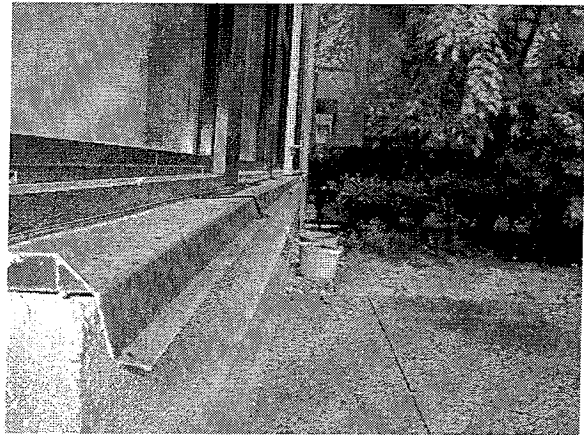


Photo 19b.JPG

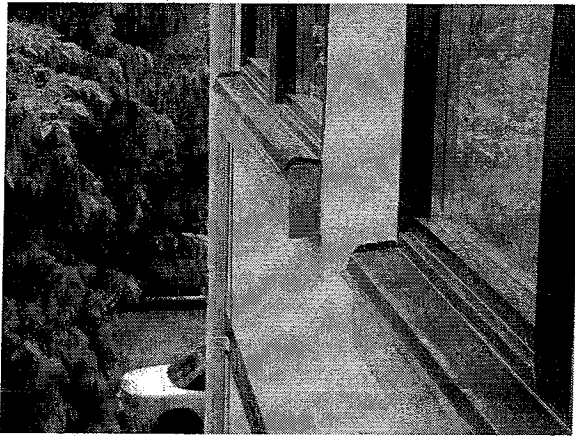


Photo 19c.JPG



Photo 20a.JPG

Mayfair House - 2 Year Warranty Review

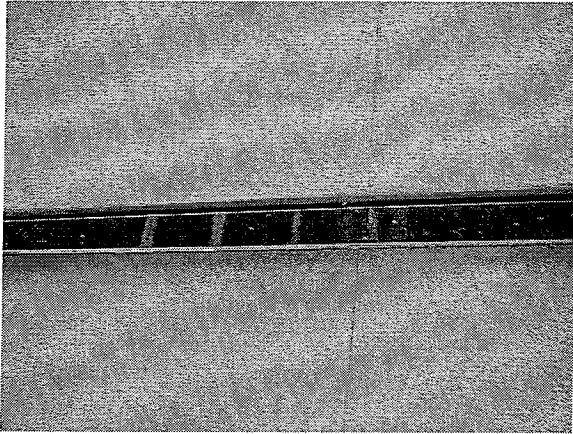


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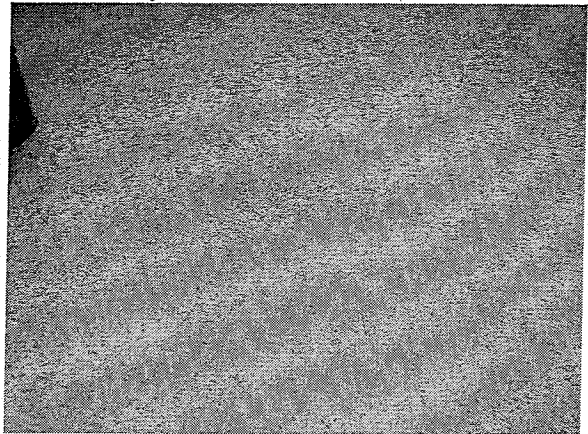


Photo 21.JPG



Photo 22.JPG



Photo 23.JPG

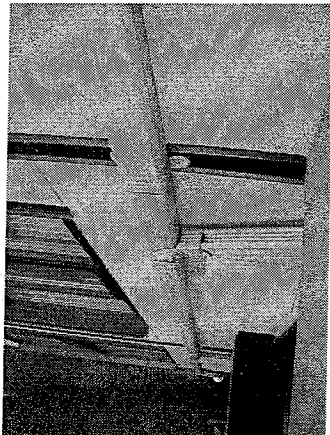


Photo 24.JPG



Photo 25.JPG

Mayfair House - 2 Year Warranty Review

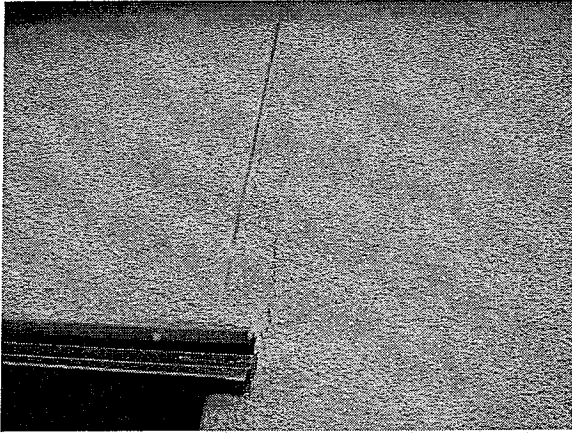


Photo 26.JPG



Photo 27.JPG

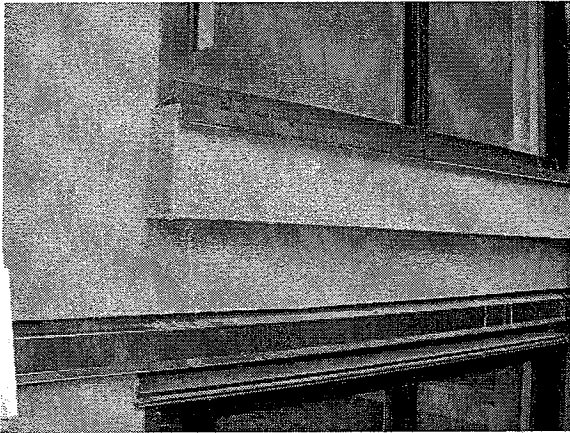


Photo 28.JPG