

File #06096

To: The Owners, LMS 2329, Star of Kitsilano      Date: September 6, 2006

Attention: Andrew Seaton  
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From: Paul Surgeson, AScT

Re: Maintenance Review of LMS 2329, Star of Kitsilano, Vancouver BC

Following is a brief summary of the findings of a maintenance review that was performed at The Star of Kitsilano, 2680 W 4<sup>th</sup> Ave., Vancouver BC. The on site portion of the review was carried out on August 28, 2006. The focus of the review was to comment on the condition of the typical weather resisting elements of the structure and make recommendations on maintenance tasks.

A photo compendium is attached and any photos referenced in the body of the report will be shown in brackets, [x] signifying that the numbered photo should be referred to.

### **Background**

CSA Building Sciences Western Ltd. was retained by the Property Manager & Strata Council of LMS 2329 to carry out the maintenance review. It was understood that the complex is approximately 10 years of age. The building is four storeys, mixed use residential/commercial with the main floor being commercial space.

One section of the building had undergone a siding replacement early in 2006. The southeast corner of the building, units #222, 322 and 422 had siding, trim, windows and flashing removed and new materials installed over a ventilated cavity construction, "rainscreen". A defective flashing had allowed water to enter unit # 222. As a precaution all units within the same section of the building were remediated.

### **Limitations of Maintenance Review**

1. The Maintenance Review is based on visual review of the subject property only.
2. Test holes and/or exploratory work were not performed.
3. CSA has no knowledge of the condition of the building sheathing and/or structural framing and makes no representations as to same.
4. Any comments or recommendations provided by CSA represent CSA's opinion, which is based upon a field review of physical conditions alone.

5. Any deficiencies that may exist undiscovered and which are not recorded in any report prepared by CSA are not apparent given the level of review undertaken.
6. CSA does not assume and is not responsible for any of the duties or liabilities of the original designers, builders or owners of the subject property. Owners, prospective purchasers, tenants or others who use or rely on the contents of CSA's reports (attached or otherwise) are hereby given express notice that such reports and any comments or recommendations made by CSA are based on limited exterior surface visual review for the exclusive purpose of defining maintenance services to be provided by others. CSA is not making any representation or warranty regarding the condition of building sheathing or structural framing which could give rise to liability for any loss or damage which may be suffered in connection with the purchase, ownership or use of the subject property.

### **Observations**

The complex was visually reviewed on August 28, 2006 and was found to be in good condition generally. The combination of cladding materials, (horizontal cedar siding, cedar shake, and vinyl siding) have been installed over spun bonded polyolefin (Tyvek). Some sealant failures, wood trim deterioration, loose roof top vents, a leak through a planter, and pooling of water on balconies were noted. Other than specific problems as noted throughout the report, the associated cladding and roofing materials were seen to be performing as intended.

### **Main Roof**

The main roof of the building is two ply, torch welded, SBS elastomeric sheet membrane. The roof application and drainage characteristics are very good. The membrane is in good condition. Vents, duct work, and flashing are in fair condition, properly installed and performing as intended. During dryer duct cleaning the crews did not re-install all of the fasteners after the vent hoods were removed and at least one vent has blown off completely [9, 10, 11]. Screws are left scattered throughout the roofing area, causing a concern of accidental membrane damage.

Painted wood trim decay was discovered in 8 locations on the main roof, stemming from constant water run off from the B vent cap aprons that allow water to run down the face of the painted trim, contacting corner miter joints of the trim which absorb water and cause the deterioration.

Roof drains need to be cleared of debris [4, 5]. Three bubble dome skylights have been altered to incorporate a crank system so that they will provide ventilation for the unit. The modifications have been professionally done with a PVC curb piece to protect the tops of the wood curbs and screw jacks to protect against wind uplift. One has been altered without either, which could cause a problem if a wind storm causes the skylight to blow off. [16]

1. Drain wells and baskets need to have debris removed. The entire roof should be swept or vacuumed clean of debris and bird droppings. All debris collected

- should be removed from the roof, so it will not be washed back to the drains.
2. Re- fasten all dryer duct vent hoods using all fasteners as originally installed.
  3. Consider installing painted aluminum corner pieces (4" X 4" L shaped) at all painted trim corners exposed to rain water run off to protect against further deterioration.
  4. Continue with annual roofing maintenance and roof walkovers to inspect for weather damage.
  5. Ensure owners with roof top "bubble dome" skylights have only professional modifications carried out on skylight units, to prevent wind uplift and rain damage occurring.

### **Balcony/Patio Membrane and Railings**

Balcony and patio membrane is a liquid applied polyurethane membrane. It has been applied over concrete slab on the second floor and over plywood on the upper floors. Of the balconies and patios visually removed, membrane failure was not observed. Pooling water was reported on several patios and balconies as proper slope to drain was not provided during the original construction.

One owner reported a soft spot on an upper balcony, which had been reviewed in years past. The soft spot appears to be a filler material, likely installed to fill a defect in the plywood. The spot has not grown, and is not caused by wood deterioration.

Another tenant had reported paint flaking off of the membrane. This balcony was viewed from the roof and dark coloured patches of material could be seen. The coating is not original to the building and is likely flaking off as it is not compatible with the liquid applied membrane that was installed during the original construction.

All of the aluminum railings at balconies reviewed were solidly attached to their mounting points. Other than surface scratches on the railings and rust on the lag bolts no deficiencies were noted.

### ***Recommended Action***

6. Monitor balcony and patio membrane condition and report any deficiencies.
7. Encourage residents to clean the balcony membrane periodically with mild household cleaner and water.

### **Cladding, Sealant and Wood Trim**

There is an abundance of soft wood (combface) trim on the complex. Fascias, windows, features, and floor lines are all covered with painted trim. As can be seen from the main roof photos the trim is susceptible to deterioration in areas where rainwater runoff contacts a corner or joint in the material[18,19]. Trim on the building in other areas is beginning to deteriorate as well. Sections of trim will require replacement in the near future. Some corners may be repaired with flashing. In any instance that trim replacement is made necessary by deterioration from rain runoff, it is suggested that a metal flashing be installed to prevent it from re-occurring.

Sealant joints are beginning to fail[1,26] and new sealant application will have to take place very soon in these and other areas. It is important to replace the sealant at #211 windows and the sealant at the concrete wall between #211 and 212 immediately.

Wood siding and painted shingles appear to be in good condition and no obvious defects were found. The south elevation is clad mostly in vinyl siding and it appears, also, to be in good condition generally.

### **Recommended Immediate Action**

8. Remove completely and re-apply sealant at window jambs of #211 and at the concrete divider wall between #211 and 212.
9. Replace or repair decayed wood trim, install protective flashing as necessary.

### **Doors and Windows**

The windows are double glazed PVC units. Two residents mentioned problems with operability of window or sliding doors. Sliding doors were informally tested during the balcony review and appear to be functioning adequately. No Leaks or glazing failures were reported or observed.

### **Questionnaires**

A survey sheet was distributed to residents so that any known problems or items of concern could be reported and be included in the maintenance review. 45 surveys were returned with ten reporting some type of problem or concern. All ten were investigated and most were found to be minor deficiencies to do with pooling water, paint application etc. the most serious items was evidence of a leak from a planter at # 218.

### **General Items**

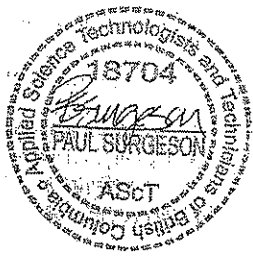
Two leaks were reported prior to the maintenance review. One is in the underground mechanical room[22,23]. Pooling water in the driveway and stairwell above the room is entering through cracks and cold joints which were not effectively sealed during the original construction. The wall bases, cracks and stair landing should be cleaned and sealed with a traffic membrane applied in a similar manner to the patios on the south elevation. A large heel bead of sealant at upturns and traffic coating application after crack sealing to the edge of the slab.

#218 reported stains, plant roots and damaged carpet when they pulled up the carpet in the bedroom to replace flooring. The area was indicated by a red arrow under the carpet which signifies the area was leaking during construction, and likely repaired, albeit temporarily. The bedroom is adjacent to a planter that is lined with liquid applied membrane applied directly to wood sheathing[24].

The planter has irrigation pipes and a drain. It is suggested that the planter be dismantled, repaired and filled with styrofoam and gravel ballast without planting material or irrigation. A flashing should be installed between the building cladding and the top edge of the planter to eliminate runoff from getting behind the wood trim.

10. Seal cracks, joints and stair landing above mechanical room with construction grade sealant and membrane over properly prepared substrate.
11. Remove contents of planter completely, disconnect irrigation, make repairs to membrane and install properly formed flashing at the full length at the building side of the planter.

If you have any questions or concern, please contact the writer.



Paul Surgeson, ASCT