July 13, 2012

VIA EMAIL

Strata Plan LMS 4456
938 Nelson Street
Vancouver, BC V6Z 3A7

Attention: Mr. Philip Jhin

Subject: One Wall Centre, 938 Nelson Street, Vancouver, BC
Elevator Repair Project

Dear Mr. Jhin,

We have reviewed the equipment and background information for the two (2) residential elevators at the above property, and provide the following summary and recommendations for your consideration.

Background

The equipment consists of Two (2) gearless overhead traction elevators (R5 and R6), (originally) rated at 3500lbs, with a contract speed of 1000 fpm, serving parking and the residential floors. The equipment was installed in 1999 by Richmond Elevator Maintenance (REM) and appears to be original equipment except for recent modifications by ThyssenKrupp Elevator (TKE). After installation, the equipment was maintained by REM for several years, after which maintenance was switched to TKE who have maintained it for the past several years.

Elevator R6 was recently altered by TKE in order to transport glass panels to upper floors for window replacement repairs. The alteration required an inspection by the BC Safety Authority (BCSA) who identified code deficiencies which prevented use. REM was contracted to correct, following which a mandatory safety test was performed. Approximately 2 weeks later the Owner's complained of a rough ride, which was diagnosed to be caused by misaligned rollers and concurrently it was discovered that the safety brakes were damaged, presumably during the recent safety test. TKE was contracted to replace the safeties, after which the new safeties were again damaged during the safety test. TKE investigated further and discovered that the car weight was 1,019 lbs heavier (23%) than the 4,431 lbs shown on the original design layout and determined that larger safeties were required. Subsequently TKE replaced the safeties with a larger capacity model and the safety test was completed successfully.

The more urgent issue related to the safeties delayed the correction of an originally identified code deficiency, namely the need for a true car door interlock or hoistway facia (both are acceptable solutions). The Owner has chosen to install drywall facia, for which a drywall contractor has been retained, and for which TKE was installing a car top platform as of our last site visit. The Owner has arrangements with TKE both REM for operating the car while this work is being performed. This work is currently pending while a structural engineer reviewed the support requirements for the drywall.

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Review of Key Issues

There are three key issues that have arisen during this project:

1. **Requirement for guiding member restraints** – These components are part of seismic safety and were not required by the code at the time of installation. The upgrade was triggered by the alteration done to the cab. This is the responsibility of the Owner, and was contracted to, and completed by, REM. There is no open issue about this item.

2. **Requirement for a true car door interlock or facia** – There are no true car door interlocks currently installed. REM has stated that they provided true car door interlocks at the time of installation and there is a letter from the BCSA confirming that they had inspected same. Presumably interlocks were provided originally and have been removed during the intervening years though it is not possible to confirm if they were originally installed or whether they were removed, and if so whether removal was by TKE or REM (or other). Therefore, it would appear the Owner will have to be responsible for correcting this deficiency.

3. **Excess weight of cab** – The weight of the cabs for both R5 and R6 exceed the design weight of 4,431 lbs by more than 10%. (GUNN only verified the weight of R5 but we have no reason to believe the numbers reported by TKE for R6 to be incorrect). Empirical evidence shows that that the safeties of R6 were undersized for the increased weight; however as the weight increase for R5 was less, it is not yet known whether the same is true for R5. By both the current code and the code at time of installation, weight increase requires a design review which should be completed. The outcome of that review will determine what changes are required. Any deficiencies in the original installation should be the responsibility of REM to correct.

   The increase in cab weight would be evaluated as an alteration under B44-07 section 8.7.2.15.2, and therefore the engineering review should include:
   - 2.15 – car frame
   - 2.16 – capacity and loading
   - 2.17 – safeties
   - 2.18 – governors
   - 2.20 – ropes
   - 2.21 – counterweight
   - 2.22 – buffer
   - 2.23 – guide rails
   - 2.24 – driving machines and sheaves
   - 8.7.2.9 – building structure

Work Priority

The initial priority should be to verify the safety of the elevators. Though the failure mode of the safety brakes was non-critical (they were damaged but successfully stopped the elevator) it is imperative that all equipment that may be affected by an increased cab weight be reviewed and confirmed adequate. This will confirm whether the safeties of R5 need to replaced, and also if any other equipment needs to be upgraded.

Secondly, the equipment upgrades required should be completed. We do not recommend proceeding with drywall installation or use of elevators for transporting glass until after the elevator code-related work is

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complete. Having R6 occupied with repairs or transport will seriously interfere with resident's access to their suites if R5 needs to be taken out of service.

Finally, the drywall facia should be installed in the hoistway. The facia should be constructed to the same standards, including structural rigidity and fire rating, as would a hoistway wall and we understand that a structural engineer has been engaged to design it as such. In addition, we note that facia is required in the express zone and between every entrance which does not currently have facia. Although most upper floors do have metal facia between entrances, it is missing at some of the higher floors including between 31 and 32, near the 14th floor, and between the parking levels.

Discussion and Recommendations:

It is not ideal that two different elevator contractors are involved on one group of elevators; however in this case REM is the original designer and may be responsible financially for some of the deficiencies. Furthermore the Owner should anticipate that REM may resist accepting responsibility, and that this resistance may increase if they are asked to pay for work performed by TKE rather than doing it themselves. Conversely, TKE is likely to charge for any costs incurred as a result of REM doing work on site, including correcting additional deficiencies. Finally, there is the issue of cost which can vary greatly between contractors, and whether or not there might be competition for the work.

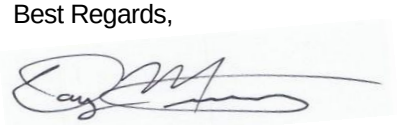
Our recommended approach is to halt all work on the elevators and take the following steps:

1. Request REM to do an immediate and thorough review of the engineering design at REM cost and provide a written report. At a minimum the report should include a review of the items listed above and a list of equipment and work that needs to be performed.
2. Request REM to perform the repairs required at REM's cost.
3. Award contract for operating car for installation of facia and proceed.

Following the above steps in a sequential manner it will avoid possible unnecessary repairs, and confusion over responsibility for costs. Please consider and advise whether you would like us to proceed with discussions with both REM and TKE to implement.

If you have any questions regarding this matter, please contact the undersigned.

Best Regards,



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