



March 20, 2023

MEMO TO : Park Board Commissioners  
FROM : Donnie Rosa - General Manager, Parks and Recreation  
SUBJECT : **Status of Stanley Park Train – Board Briefing Memo**

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Dear Commissioners,

The purpose of this memo is to provide an update on the status of the work to re-open the Stanley Park Train.

### **Background**

The train assets consist of a fleet of 4 locomotives and 13 passenger carriages, including 2 wheelchair-accessible carriages, and 2 kilometers of 20 gauge track. The trains are maintained by the Fleet Operations team of the City of Vancouver's Fleet & Manufacturing Services (COV FMS) and the track is maintained by a contractor. The equipment is inspected annually by Technical Safety BC (TSBC) to ensure compliance with safety regulations. Other train structures, i.e. trestle bridges and tunnel, are included in the Park Board bridge inspection program, overseen by Park Development staff and performed by a contracted structural engineering firm at regular intervals.

The 2022 TSBC inspection was scheduled for early September, after summer operations closed for the season and prior to commencing preparations for Ghost Train. The equipment failed to pass inspection and the safety officer suspended the Train's operating permit, noting that the condition of safety-critical components of the locomotives and carriages was poor. The report listed a number of non-compliances, some of which were addressed in the 30 day window following the inspection. However, the safety officer imposed a requirement to engage a third party contractor with knowledge of the specific manufacturing standards of the equipment to provide a comprehensive assessment and condition report with a remediation plan to return the fleet to the manufacturer's minimum operating standards. This report was to be submitted to TSBC prior to a request for re-inspection.

### **Follow up**

There were significant challenges locating a contractor with the specific expertise required to assess the trains. With TSBC's assistance, staff connected with a consultant, who worked with both full-size and miniature railways and was familiar with the type of trains operated by Stanley Park Railway, though this individual ultimately could not meet the COV's general liability insurance requirement. In response to this setback, with the imminent set-up of Bright Nights and minimal staffing resources due to the operational suspension, staff paused their work of procuring a consultant to focus on providing the extensive support required to deliver a revamped holiday lights fundraiser for the BC Professional Fire Fighters' Burn Fund that would open December 1.



Once event planning and set-up were completed and Bright Nights was successfully underway, staff resumed their search, exploring offers of assistance from the community and meeting with TSBC and Fleet Operations to plan a path forward. TSBC would not lift the requirement for an external consultant but agreed to accept a P. Eng (Professional Engineer) stamped conditional assessment report.

In January, immediately after Bright Nights closed, staff engaged an engineering consultant, Hedgehog Technologies, to provide the conditional assessment and remediation plan. Their inspection began the week of January 19, with interim findings showing:

- A need for the implementation of a comprehensive preventative maintenance program;
- Significant issues with the two accessibility carriages
- The 1965 custom-built black locomotive had been well maintained
- Some corrosion on the trains that will need to be addressed
- Further work on some parts of the track is required.

Staff provided access to FMS maintenance records from the past decade and all manufacturer's technical documentation for review. The consultant also required staff to engage a contractor to perform specialized diagnostic non-destructive testing (NDT) for structural deficiencies and to determine the extent of the noted damage from corrosion and wear. The findings provide a baseline for future testing, as there are no prior records of NDT to provide a benchmark.

Technicians tested the fleet the week of February 27, deferring the track testing due to the poor weather. Track testing has been rescheduled for the end of March, though the results will not impact the plan for the trains and any required work on the tracks will be performed by the usual contractor. The consultants are now reviewing the fleet findings, which will inform their recommendations and remediation plan. Overall, they found the results to be better than anticipated:

- The locomotives and a majority of the passenger carriages have no significant issues although all are in need of some repairs.
- Structural deficiencies were noted in the two accessibility carriages and three others and the report will include recommendations regarding these assets.



### Next Steps

With the assessment completed, the consultants are finalizing their report for delivery the week of March 20. They met with train staff to provide an overview of the findings and their impact on the operating schedule for 2023. The feasibility of an Easter Train event was ruled out, though a recommissioning plan putting a single train into service for late spring or early summer will follow shortly.

FMS will review the report and provide estimates of the likely timelines and cost implications. The one train recommissioning plan will be prioritized and that work will be done under the oversight of Hedgehog Technologies so that TSBC can be confident that the work aligns to the original manufacturer's operating standards. Timelines will be contingent on FMS' staffing levels and the type and availability of the parts required, though the consultants will be selecting those assets which can be returned to service most easily.

Staff will submit the conditional assessment report to TSBC and will work with the safety officer, FMS and the consultants to schedule a re-inspection of the prioritized train. Upon a successful inspection and a resumption of regular train operations, staff will address the remainder of the 2023 operating schedule, including the Ghost Train and Bright Nights events.

Regards,

A handwritten signature in black ink, appearing to be "Donnie Rosa", written over a white background.

Donnie Rosa *(they/she)*  
General Manager - Parks and Recreation

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Copy to: PB Leadership Team  
Rosemary Yip, Mandeep Shergill, John Pezzolesi  
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