

SkyTrain Noise Study: Project Update (Q2 2020)

BACKGROUND

In response to noise concerns from residents along the Expo and Millennium Lines, TransLink conducted a multi-step [SkyTrain Noise Study in 2018](#). We want to be good neighbours, so we engaged an internationally recognized acoustic engineer to assess noise levels along the Expo and Millennium Lines and to evaluate potential noise mitigation options.

This work is more important now than ever before as Metro Vancouver continues to grow and more people choose to live near rapid transit lines. The results of the study will help us identify noise reduction measures for our over 30-year-old system and inform future designs and investments.

ABOUT THE PROJECT

Following the 2018 SkyTrain Noise Study, TransLink was advised to undertake further investigations of the feasibility and effectiveness of six mitigation measures:

1. Improvements to switch maintenance practices
2. Investigation of harder rail steel as a measure to improve long-term rail condition
3. Re-introduction of top-of-rail friction modifiers to improve long-term rail condition
4. Improvements to rail grinding practices to improve long-term rail condition
5. Rail dampers to reduce noise radiated from the rails and hence reduce overall noise
6. Development of guidelines for new developments near SkyTrain

These investigations have been divided into two phases. **Phase 1** involves studying all mitigation measures except for the top-of-rail friction modifiers and improvements to grinding practices, which require more time to investigate and will be addressed in **Phase 2** (through 2020 and beyond).

Q2 2020 UPDATE

In early Q2, we finalized the Phase 1 Recommendation Report and Implementation Plan, which outlines findings and recommendations for future consideration by TransLink. We also continued to make progress on data collection for Phase 2 of the mitigation study. This phase includes examining rail grinding practices and trialing top-of-rail friction modifiers.

Due to the major financial impacts that TransLink, like many transit agencies across the country, has incurred due to the COVID-19 pandemic, a decision on the budget approval for implementing the Phase 1 recommendations was postponed. Updates on the Phase 2 investigations can be found below.

[Harder Rail Steel Update](#)

Following the completion of the harder rail steel investigation, we began implementation in Q2. All running rail replacements from 2020 onwards will utilize the recommended harder rail steel. The areas where harder rail will be progressively installed over coming years are on the Expo Line between Waterfront Station and New Westminster.



Rail Grinding Update

Since November 2019, we've been analyzing surface roughness and measuring rail roughness growth rates at multiple trial sites that were acoustically ground. Acoustic grinding produces a smoother, more polished surface finish than typically required. Data collection for this aspect of the study was ongoing throughout Q2.

Rail Friction Modifier Update

In Q2, baseline measurements of rail roughness growth rates without friction modifiers were completed at the friction modifier trial site. We're on schedule to begin the friction modifier trial in Q4 2020. We also began the procurement process to identify the supplier of the friction modifier applicator and product to support the upcoming trial.

Rail Damper Update

An outcome of the Phase 1 investigations was a recommendation to implement rail dampers on 3.2 km of the Expo Line track in high priority areas. Due to the major financial impacts that TransLink, like many transit agencies across the country, has incurred due to the COVID-19 pandemic, a decision on the approval of the rail damper implementation budget has been postponed.

NEXT STEPS

- Obtain funding approval for rail damper implementation, which we expect will take place in Q4 2020
- Resource planning and allocation for initiating switch maintenance procedures

Learn more at translink.ca/noisestudy.