



Construction of the Valley Line LRT – Noise and Vibration

TransEd approaches construction along the Valley Line LRT Stage 1 route with great care and regard for the amount of noise and vibration caused by construction activities. While noise and vibration are unavoidable in any construction project, TransEd is committed to minimizing noise and vibration impacts along the corridor during construction and operations.

If you have any concerns about noise or vibration, please call 780-224-0964.

Noise:

The City of Edmonton's Community Standards Bylaw 14600 describes noise control. It identifies that hours of work for construction are Monday to Saturday, from 7:00 a.m. to 9:00 p.m., and on Sundays, from 9:00 a.m. to 7:00 p.m.

Sometimes, TransEd must apply for a permit to allow work outside of the regulations of the Noise Bylaw. The most common reason for this is to allow for overnight work to occur. Such necessary work can involve continuous or lengthy processes such as concrete pours and utility work -- or work in roadway areas during low traffic conditions. TransEd incorporates noise mitigation in its work planning and construction activities where possible. For example, we try to schedule noisier work for daytime hours, limit the size of equipment where feasible, ensure regular equipment inspections and proper mufflers, adjust work methods, change back-up alerts to strobe lights instead of beeping, and more. TransEd tailors noise mitigation to the location and the kind of construction activity.

All project personnel have been trained in the importance of noise control, and it is discussed during "Tool Box Talks" at the start of work shifts. Project engineers and scientists monitor sound levels and evaluate nuisance noise conditions, important for adjacent residents and impacted communities but also for construction staff working nearby.

How do different levels sound?

85 dB(A) is comparable to a power lawnmower or motorcycle at 7.5m.

80 dB(A) is comparable to a busy traffic intersection at 15m.

70 dB(A) is comparable to a passenger car at 105 kph at 7.5m; a freeway at 15m from pavement edge.

65 dB(A) is comparable to an urban environment during the day.



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Vibration:

Vibration resulting from construction activity is measured at nearby building foundations or in the adjacent ground. The measurements identify the level of vibration being generated and help to assess construction impacts and applicable mitigation techniques



Monitoring equipment has built-in notification system that is programmed to alert crews when vibration approaches the threshold set for that area of work. Thresholds are based on nearby buildings, structures and utilities.

The notification allows the crew to assess the current operation and safely make adjustments, whenever possible.

Vibration levels can be impacted by a combination of local conditions, including the type of structure and foundation, distance from the work activity, soil conditions, and type of construction activity.

Examples of construction activities that can cause vibration include:

- Equipment used in piling activities
- Movement of heavy equipment
- Excavation of harder materials, such as concrete
- Placement of heavy loads and materials
- Demolition of existing structures (buildings, foundations, utilities, etc.)

Public Commitment:

TransEd is committed to minimizing noise and vibration impacts along the corridor during construction and operations, especially in community areas. If you have any concerns, please call 780-224-0964.