Trolley Overhead Limits of Approach

Safety Requirements for Work Near Trolley Overhead Infrastructure

Trolley Overhead Risk Profile

Overview

The Trolley Overhead (TOH) infrastructure spans across Burnaby and Vancouver, enabling 262 trolley buses to transport thousands of passengers each day. Twenty (20) rectifier stations supply 600 volts of direct current to 320 kilometres of overhead wires. Poles or light standards support feeder cables above sidewalks and connect to the running wires over roadways from which the trolley buses receive power to operate.

Potentially Hazardous Work

Work activities occurring close to the TOH infrastructure can increase risk to public and worker safety, energized line integrity and bus operations. Of particular concern are activities that might:

- Result in a collision with TOH's lines, poles, and buses.
- Involve equipment or other work activities reaching within 3 metres (10 feet) of the TOH infrastructure.
- Lead to unauthorized persons entering or reaching within 1 metre (3.3 feet) of the wire territory either inadvertently or purposefully.

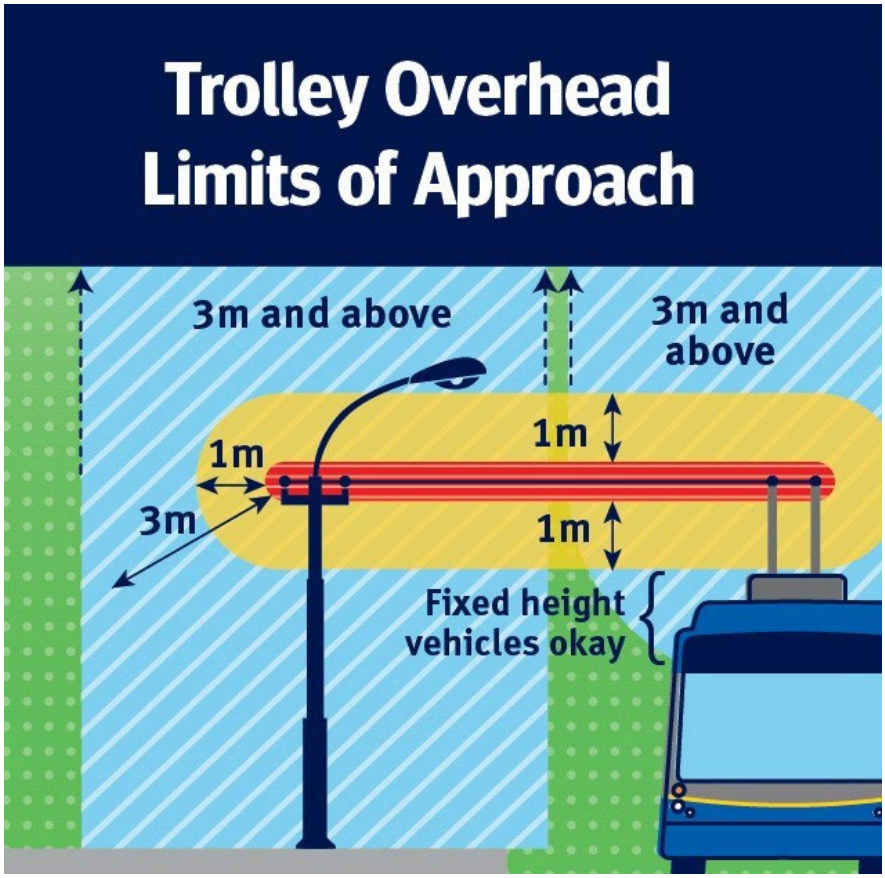
Examples include:

- Scaffolding erected adjacent to TOH poles or wires.
- Tall equipment (such as cement pump booms or bucket trucks) next to the infrastructure.
- A new building that provides easy access or results in material(s) falling onto the infrastructure.
- Cranes working near or above the infrastructure.

Prior to any work commencing in the vicinity of the TOH infrastructure, the responsible parties planning their work must contact TransLink at TOHReview@translink.ca to identify the risks and determine the appropriate work precautions, based on the following information.

TOH Limits of Approach Boundaries

The closer the planned work is to the TOH infrastructure, the greater the potential risk. There are four limits of approach (LOA) boundaries as shown in the following diagram. Each limit warrants slightly different precautions and authorization requirements to undertake work or activities within them. These limits also apply to all parts of the TOH infrastructure, including poles, guy wires and overhead wires.



GENERAL APPROACH
BEYOND 3 METRES WITH
REACH POTENTIAL TO
TOH INFRASTRUCTURE
INFORM TRANSLINK

LIMITED APPROACH
3 METRES TO 1 METRE
INDEPENDENT
QUALIFIED SAFETY
WATCHER REQUIRED

RESTRICTED APPROACH
1 METRE TO 0.3 METRE
SPECIAL PERMISSION
REQUIRED

PROHIBITED APPROACH
CLOSER THAN 0.3 METRE
CMBC AUTHORIZED
WORKERS ONLY

General Approach Boundary

When Working Outside 3 m With Equipment Having the Potential to Reach Within 3 m of the TOH Infrastructure

This area is a **low** risk to work safety and transit service but increases to a **high** risk when reaching within 3 metres without an Independent Qualified Safety Watcher (IQSW) present. The following applies when reach potential exists.

Precautions

1. When work activities in this area have the potential to reach into the adjacent boundary areas, contact TOHReview@translink.ca for awareness.
2. For work planning, contact the Manager, Trolley Overhead Power Distribution at 604.561.9363 in advance of work activities.

Limited Approach Boundary

When Working Within 3 m to 1 m of the TOH Infrastructure

This area is a **moderate** risk to work safety and transit service but increases to a **high** risk without an IQSW present. The following applies when you are within 3 metres to 1 metre.

Precautions

1. Ensure TransLink is aware of your work at the planning phase and prior to commencement. Visit the TransLink Real Estate – Working Near Trolley Overhead Lines webpage for more guidance and information.

   translink.ca/aboutus/doingbusinesswithtranslink/realestateworkingneartrolleyoverheadlines
2. A detailed Safe Work Plan (SWP) must be submitted for acceptance by TransLink. The SWP shall describe the hazards and risks involved in the work activities and mitigations specific to the hazards to/from the TOH infrastructure. The SWP shall anticipate all failure modes and shall demonstrate sufficient controls to protect the public, its workers and the TOH infrastructure.
3. Ensure that all employees are made aware of the TOH LOA. Additional TOH LOA orientation may be required by TransLink or Coast Mountain Bus Company (CMBC).
4. The Owner shall ensure that an IQSW is always physically onsite while equipment is operating, or activities are occurring in the limited approach boundary area.
5. When considering any work activities within 3 metres (10 feet) of a pole that can potentially present a risk to its integrity or stability, contact the Manager, Trolley Overhead Power Distribution at 604.561.9363.

Restricted Approach Boundary

When Working Within 1 m to 0.3 m of the TOH Infrastructure

This area is a **high** risk to work safety and transit service. In addition to the precautions for the Limited Approach Boundary, the following applies when you are within 1 metre.

Precautions

1. Only under special circumstances shall work activities be permitted up to 0.3 metre (1 foot). Prior special permission is required from the Manager, Trolley Overhead Power Distribution at 604.561.9363.
2. An IQSW must be on site.
3. All temporary or permanent structures adjacent to TOH poles shall be erected no closer than 0.3 metre (1 foot) surrounding 3 sides and open top to bottom on the street side.

Prohibited Approach Boundary

Working Closer Than 0.3 m of the TOH Infrastructure

This area is a**n extreme** risk to work safety and transit service. NOTE: Only qualified CMBC TOH workers are **permitted** to work **in the prohibited approach boundary**. If relocation of TOH wires is required for the project, please contact the Manager, Trolley Overhead Power Distribution with at least 2 months' notice.

Precautions

1. If contact has been made with any pole, guy wire, running wire or feeder cable, immediately stop work activities and contact CMBC Transit Communications (TCOMM) at 778.593.5524.

In case of an emergency or unexpected imminent hazard, call:
CMBC Transit Communications (TCOMM) 778.593.5524