
Introduction

Purpose

This guide supports contractors and municipal reviewers in minimizing disruptions to bus service during construction. It supplements the *BC Ministry of Transportation and Transit's [2020 Traffic Management Manual for Work on Roadways \(TMM\)](#)* by outlining transit-specific considerations for Traffic Management Plans (TMPs) in Metro Vancouver.

Why This Matters

Bus passengers rely on safe, consistent service — including accessible stops, clear signage, and reliable schedules. Construction zones can disrupt these elements if not carefully planned. For many people, transit is their only way to travel, and disruptions can mean missed work, school, medical appointments, or other essential trips. These impacts frustrate riders, erode confidence in bus service, and may lead people to reconsider using transit. Protecting service is especially critical on the Frequent Transit Network (FTN), where high-frequency, high-ridership buses are prioritized.

Applicability

This guidance applies to projects that impact roadways with active bus routes in Metro Vancouver (including lanes, stops, turnarounds, and layover zones), temporarily disrupting bus service for any period of time (from <1 day to many months). It supports municipal construction permitting and TMP approval processes. This document complements — but does not replace — the expertise of Coast Mountain Bus Company (CMBC) planners, who can help identify the most appropriate solutions on a case-by-case basis.

Key Principles

- **Coordinate early** with Coast Mountain Bus Company (CMBC) planners.
- **Use the BC Traffic Management Manual for Work on Roadways (TMM)** as the base technical framework for Traffic Management Plans (TMPs).
- **Maintain bus access and continuity of service** wherever safely possible.
- **Minimize detours and stop closures** or relocations, especially on Frequent Transit Network (FTN) corridors.
- **Ensure accessibility** at all temporary stop locations.
- **Communicate with bus-riding customers**, to help them plan ahead and respond quickly to construction impacts.
- **Improve over time** by assessing and modifying temporary solutions.

Notification & Planning

Step 1: Submit a Temporary Transit Changes Request to CMBC

Before any work that may impact bus stops, route alignments, or layovers, proponents must complete the Temporary Transit Changes Request Form. Find the form and details [here](#).

Major road closures (90+ days) must submit this form at least 5 months in advance of the expected impact start date. Long-term road closures (30-89 days) must provide at least 20 business days notification. Short-term requests and bus stop closures must provide at least 3 business days notice.

Requested information includes:

- Work schedule and duration
- Company contact and billing information
- Description of work (including potential impact on trolley buses or trolley overhead power lines)
- Traffic Management Plan (TMP)
- Approved work permit (when available)

Fees will be administered based on the impact of the project. See website for more details.

The Temporary Transit Changes Request Form is the best initial point of contact with CMBC. This process connects the proponent directly with CMBC planners, who are responsible for reviewing and coordinating operational changes to bus service.

Step 2: Collaborate with CMBC Planners to Identify Impacts

CMBC planners will:

- Assess nearby bus routes, stop-level activity, and infrastructure (including bus turning radii for proposed detours).
- Flag high-impact locations (e.g., transfer stops, express routes, trolley wire impacts).
- Recommend detour options or temporary stop locations.
- Coordinate internal bus operator communications and public rider alerts.

Step 3: Integrate Transit Considerations into Traffic Management Plan (TMP)

In addition to the strategies outlined in the BC Traffic Management Manual for Work on Roadways (TMM), consider the best practices and examples, below, to ensure transit is not an afterthought in construction planning.

Best Practices by Category

Note: Dimensions in this section follow TransLink's Bus Infrastructure Design Guidelines (BIDG), which is the key point of reference, including Table 1.2.2 "Critical vehicle dimensions."

Bus Stops

Avoid:

- Simultaneous closure of adjacent stops.
- Closure of accessible stops without providing a suitable alternative.
- Relocation to non-accessible or unsafe locations (e.g., steep slopes, low visibility, inadequate space.)
- Operations that involve crane lifts over bus stops.

Mitigate:

- Place temporary stops as close as safely possible to the original stop. High-impact stops (such as those serving key connections) should be relocated within 50 m.
- Temporary stops should be placed away from conflict zones (e.g., driveways, loading zones), protect merging sightlines, and ensure buses can pull in/out without being delayed by queues. Stops at the far-side of intersections minimize conflicts with right-turning vehicles.
- Maintain minimum functional dimensions for buses to access a stop, as per TransLink's Bus Infrastructure Design Guidelines (BIDG), including:
 - Landing pad ≥ 1.5 m wide and ≥ 9 m long (≥ 15 m for articulated buses). *If stop is a timing point, space for more than one bus may be required.*
 - Minimum 3.1 m pull-in clearance (3.3 m preferred) – measured from the outside edge of the gutter, if present – and taper ratios based on road speed (<50 km/h: 1:6 pull-in, 1:3.3 pull-out).
- Ensure temporary stops include:
 - Clear boarding/alighting space along the bus zone (generally ≥ 3.0 m depth clear of obstacles).
 - Firm, stable, and slip-resistant boarding surfaces that can support wheelchair ramps: an area ≥ 2.75 m wide and ≥ 2 m long without obstacles like utility poles; with overhead clearance ≥ 2.7 m; and <8% slope.
 - Minimum 1.5 m clear sidewalk access.
 - Adequate lighting for early morning and evening service. Lighting should angle downward to avoid glare into drivers' and pedestrians' eyes.

- For temporary stops that will be in operation 90+ days, aim to meet accessibility standards in CSA/ASC B651:23 Accessible Design for the Built Environment (especially section 8.5.3 “Boarding or alighting areas”)
- Where a cycle track exists at the curb, provide a minimum 3.1 m bus operating envelope and maintain ramp deployment clearance across the bike facility, with temporary markings and traffic control devices to manage bicycle-bus conflicts.
- Separate work zones from bus passengers using fencing or cones. Use anti-trip fence feet to reduce tripping hazards from hoarding bases or other construction obstructions.
- Provide safe pedestrian connections between the closed and temporary stops; avoid unsafe crossings and blind corners.
- Post signage a minimum of 48 hours in advance of closures. This should communicate when a stop is to be deactivated and where the nearest stop is. If the temporary stop is not close or clearly visible, provide additional wayfinding (e.g., arrows every 20-50 m). (Note that CMBC will post information at closed stops themselves, when given proper advance notice.)

Bus Lanes and Queue Jumps

Avoid:

- Blocking bus lanes or queue jumps.
- Scheduling any road closures during peak transit hours (6-9 AM or 3-6 PM, Monday-Friday) if possible.

Mitigate:

- If a bus lane must be closed, convert a general-purpose lane to a temporary bus-only lane using cones and/or signage – wherever there is more than one remaining travel lane.
 - Bus lanes should generally be ≥ 3.3 m, per TransLink’s BIDG and the Transportation Association of Canada’s (TAC) Geometric Design Guide for Canadian Roads (2017).
 - Travel lane widths of 3.1 m (measured from the outside edge of the gutter, if present) may be acceptable over short and straight segments, with reduced speeds and site-specific review. Consider the clearance needed for buses’ side-mirrors, approximately 1.8 m to 2.1 m above ground.
- Remove parking or extend rush-hour regulations to maintain bus throughput. (Note that municipal by-law officers are needed to enforce parking bans.)
- Have Traffic Control Persons (traffic flaggers) prioritize bus movements when managing Single-Lane Alternating Traffic (SLAT) setups, materials deliveries, and other site traffic.

Curbside Lane Closures and Road Narrowing

Avoid:

- Narrowing lanes below 3.3 m without review.
- Creating merge conditions that trap buses in blocked curb lanes

Mitigate:

- Maintain minimum lane width of 3.1 m (measured from the outside edge of the gutter, if present), ideally 3.3 m, for shared travel. Narrower lanes may be temporarily permitted in specific cases, notably short and straight segments and with mitigations such as active traffic control.
- Ensure temporary configurations accommodate bus turning radii (as per BIDG Table 1.2.2), particularly for articulated buses.
- Ensure curbside working areas are clearly coned off from adjacent travel paths.
- Consider using vertical STOP LINE signs at pedestrian crossings near construction sites to prevent encroachment into travel lanes.
- Use advance signage to direct buses into unobstructed lanes. Mount reflective signs/stickers at height of approximately 1.5-2.1 m on any objects that are within 1 m of bus travel lane, so operators can see them in dark conditions.
- Avoid mounting construction flood lights in a way that blinds bus operators.
- Remove parking or extend rush-hour regulations *on adjacent roads*, to encourage traffic to bypass the construction zone.
- Have Traffic Control Persons (traffic flaggers) prioritize bus movements when managing Single-Lane Alternating Traffic (SLAT) setups, materials deliveries, and other site traffic.

Signage Placement Near Bus Zones

Avoid:

- Mounting construction signs that protrude into curbside lanes, especially near bus stops or merge zones.
- Using oversized signs that reduce lane clearance or visibility for bus operators.

Mitigate:

- Use compact, reflective signage mounted to align with bus mirror sightlines.
- Ensure signs are placed outside the travel lane, avoiding any protrusion into the bus path, especially at the height of bus mirrors (1.8–2.1 m).

- Instead of mounting construction signs centered, consider mounting with $\frac{1}{3}$ sticking out in roadway and $\frac{2}{3}$ curbside or sidewalk.
- Use cones or fencing to clearly delineate construction zones without encroaching into bus paths.
- Include signage audits in pre-construction site reviews, especially for high-frequency bus corridors.

Sidebar: Mirror Contact Incidents

Damage to right-side bus mirrors is a significant and disruptive construction-related issue for TransLink operations. Buses can be up to 3.1 m at their widest, so even a small encroachment into the lane at mirror height can cause a strike. When a mirror is damaged, the bus must stop running—leaving passengers stranded—and TransLink incurs \$3,000–\$5,000 in repair costs.

But this costly issue can often be avoided by simply placing signs more carefully, as detailed in the guidance above. Small adjustments—like relocating signs or adding reflective markers—can prevent damage, improve safety, and avoid disruptions to customers.

In the example at right (EB Cordova at Carrall Street) a slight repositioning of a sign was enough to prevent damaging contact with buses.

Before



After



Trolley Buses and Overhead Wires

Trolley buses operate using overhead power lines and require unobstructed electrical continuity. Impacts to these systems can be more complex to manage than standard diesel or hybrid buses. Early and detailed coordination with CMBC is critical.

Avoid:

- Closing trolley bus routes, or interfering with trolley overhead wires (TOH) without prior approval.
- Operating cranes, lifts, booms, or scaffolding within 3 m of energized TOH. A designated safety watch must be present at all times during work near trolley overhead wires.
- Scheduling work near TOH without clearances, even if work is below the wires — arcing risk exists.

- Assuming TOH are insulated — they are energized and *extremely dangerous*.

Mitigate:

- Coordinate early with CMBC. Requests involving TOH may require 2–5 weeks’ lead time depending on scope and availability of pole pullers or alternative diesel-hybrid buses.
- Provide project details in the Temporary Transit Changes Request Form, in particular clearly describe vertical clearance, horizontal reach of equipment, and timing.
- If work interferes with trolley wire continuity:
 - CMBC may de-energize the overhead wires during scheduled off-peak periods, subject to feasibility and lead time.
 - CMBC may dispatch “pole pullers” (CMBC staff responsible for manually detaching and reattaching trolley poles) to enable short detours around construction zones while remaining on trolley power.
 - For larger or long-duration impacts, CMBC may temporarily dieselize the route — substituting trolley buses with diesel-hybrid buses to bypass the need for overhead power. This requires additional planning and fleet coordination.
- Use signage, fencing, or spotters to enforce no-go zones under and near wires for tall equipment.
- Consult WorkSafeBC and BC Hydro’s “Limits of Approach” for safe working distances from energized lines.
- Consider alternate equipment or staging to reduce overhead conflicts (e.g., low-reach platforms, staged crane lifts).
- Include TOH infrastructure in all site drawings and TMPs, with clearly marked minimum clearance envelopes and designated no-equipment zones.

Layover Zones and Terminal Stops

Avoid:

- Any closure without prior coordination with CMBC planners, who will advise on what infrastructure may be impacted.
- Blocking layover space, which is needed for operator recovery and schedule reliability.

Mitigate:

- Relocate to nearby suitable location in coordination with CMBC.
- Ensure continued operator access to washrooms or facilities.

General Mitigations for All Projects

- Monitor conditions for bus delay, and adjust site setup accordingly. Ride on buses and talk with bus operators to see the drivers' perspective. Use group site-visits to facilitate quick identification and implementation of adjustments, and aim to fix problems before they linger.
- Post public signage that (a) explains the purpose of disruption (b) estimates the duration of impact and (c) provides contact information to report unsafe conditions.

Contacts & Resources

- **CMBC** – [Temporary Transit Changes Process](#)
- **BC Ministry of Transportation and Transit (MOTT)** – [Traffic Management Manual for Work on Roadways](#) (2020)
- **TransLink** – [Frequent Transit Network Map](#)
- **TransLink** – [Bus Infrastructure Design Guidelines \(BIDG\)](#) (2018)
- **Transportation Association of Canada (TAC)** – [Geometric Design Guide for Canadian Roads](#) (2017)
- **CSA Group** – [CSA/ASC B651:23 Accessible Design for the Built Environment](#) (2023)

This best practices guide is a living document. Feedback is welcome from contractors, municipal staff, and transit stakeholders to ensure ongoing improvement.