



CONSTRUCTION ON PEDESTRIAN FACILITIES GUIDE 2024

Supplement to the British Columbia Ministry of Transportation and Infrastructure's 2020 Traffic Management Manual for Work on Roadways

This is a reference guide for contractors and City of Penticton crews with planned construction within the City's pedestrian environment.

Pedestrians are amongst the most vulnerable road users. Special care and attention is needed to ensure they're safely accommodated.



Pedestrians in Work Zones

Pedestrians are amongst the most vulnerable road users. Specific care and attention is necessary for construction on pedestrian facilities to ensure they are safely accommodated.

General Requirements

- A Traffic Management Plan is required for any work that will impact a sidewalk, crosswalk or multiuse pathway and must be attached to any Road Closure Application.
- Pedestrians should be safely accommodated through or around work zones and impacts to pedestrian facilities should be minimized.
- Temporary pedestrian facilities should be accessible to all users. This includes people using wheelchairs, walkers, canes, and strollers and people with visual impairment.
- Efforts should be made to maintain pedestrian access to businesses and adjacent facilities.
- Without the use of temporary pedestrian provisions, only one sidewalk or crosswalk may be closed at a time. For example, the following closures are discouraged:
 - ⇒ Closure of two sidewalks on both sides of a roadway at the same time
 - ⇒ Closure of a sidewalk at the corner of an intersection, which closes two sidewalks and two crosswalks

Temporary midblock crosswalks are discouraged. They may only be implemented with enhanced Traffic Control in place after consulting the City Engineering Department.

Planning, Design and Construction

Pedestrians should be considered during:

- Project Planning and Design
- Traffic management planning. Planning involves:
 - ⇒ Identifying existing facilities
 - ⇒ Field review and context
 - ⇒ Planning for work duration
 - ⇒ Planning pedestrian provisions
- Traffic Management Plan and Traffic Control Plan design. Design should consider:
 - ⇒ Pedestrian provision requirements
 - ⇒ Width requirements
 - ⇒ Typical configurations
- Construction – when observations reveal a condition that requires additional measures be taken to ensure the public’s safety, efforts should be made to correct the situation.

This guide provides an overview of pedestrian related considerations during the planning and design phases.

Planning – Identify Existing Facilities

The first step in addressing pedestrian safety is to identify existing pedestrian facilities within your work zone including sidewalks, crosswalks and multi-use pathways. Priority should be given to maintain pedestrian facilities. Consider reducing construction impacts or phasing work to maintain space for walking.

Bus Stops – if you have identified a bus stop within your work zone that requires relocation or closure, please contact Berry and Smith during Traffic Management Plan Development at:

⇒ mikep@berryandsmith.com

⇒ (250) 487-2490

Planning – Field Review and Context

Conduct a field review to understand the facility and identify potential hazards. Examples of factors to observe and consider include:

- Pedestrian volumes during expected work hours and after work hours. Consider what can be maintained during work hours versus after work hours
- Adjacent pedestrian generators such as schools, transit stops, community centres and shopping areas. Determine the level of accessibility needed to maintain access into these facilities
- Accessible features that should be maintained or alternative provided
- Cyclist and vehicle volumes – consider potential conflicts that may arise
- Remaining road width – consider if there is space for a temporary pedestrian provision
- Hazards on the road surface such as loose gravel and uneven surfaces

Planning – Work Duration

Consider your work duration and how it will affect pedestrians. The most common work duration types include:

- Mobile work – intermittently moving work with short stops. Generally, two or more Traffic Control Persons or personnel can be used to stop and hold pedestrians for mobile work on pedestrian facilities.
- Short-duration work – work lasting more than 15 minutes during a single daylight period. The use of a pedestrian provision is preferred for short duration pedestrian facility closures.
- Long-duration work – work that lasts more than a single daylight period. The City discourages closure of pedestrian facilities over long durations. If long duration closures are required, closures should be re-opened after work hours.

Planning – Pedestrian Provisions

A pedestrian provision is a temporary pedestrian facility put in place during closure of a permanent pedestrian facility. Pedestrian provisions should generally be used when:

- Pedestrian volumes are moderate to high
- An adjacent facility is a significant generator of pedestrian traffic
- Work requires closure of more than one sidewalk or crosswalk at the same time
- Without a provision, a closure would encourage unsafe shortcuts or encourage jaywalking
- A sidewalk may be closed without a pedestrian provision when:
 - There is a sidewalk on the opposite side of the street where pedestrians can be detoured
 - There are crosswalks nearby at either ends of the sidewalk closure
 - There are no other sidewalks or crosswalks closed in or nearby the work zone

A crosswalk may be closed without a pedestrian provision only when there is another parallel crosswalk nearby.

Planning – Visually Impaired Persons

Warning signage alone is insufficient to protect all users. Visually impaired pedestrians rely on other physical indicators for navigation and to identify hazards. These measures must be included to help improve the safety and convenience of visually impaired pedestrians.

- Cues to highlight to pedestrians the most direct route through the affected area.
- Provision of a clear path of travel which is free from obstacles and surface irregularities.
- Measures to reduce vehicle speeds and to increase driver awareness of pedestrians.

Design – Pedestrian Provision Requirements

Pedestrian provisions should provide a safe, direct, and clearly marked pathway through or around a work zone.

- Provisions should separate pedestrians from vehicles and cyclists with clear delineation.
- Pedestrian provisions should replicate as nearly as possible existing facilities.
- Provisions which detour pedestrians on a route longer than existing facilities should be avoided to limit unsafe shortcuts.
- Pedestrian provisions should have a smooth hard walking surface and accessible features consistent with the affected facility.
 - ⇒ Fixed-in-place ramps with a tactile surface shall be provided at either end of the site allowing pedestrians to safely negotiate grade changes. Ramps must be of solid and sound construction, a minimum of 1.5 metres wide, less than 8% grade, and fixed in place with traction surface.
 - ⇒ All temporary traffic control devices should be detectable with a cane.
 - ⇒ No obstructions should protrude into the provision.
- Shared pedestrian/cyclist provisions should only be used where either:
 - ⇒ The provision is used to replace an existing shared pedestrian/cyclist pathway.
 - ⇒ When protected Cycling facilities are interrupted and a provision for that facility cannot be accommodated

Shared provisions can be considered only at the discretion of the City's Engineering Department

Design – Width Requirements

The City's provision requirements are as follows:

Pedestrians – 1.5m	Vehicle lane one way—3.0m
Bicycle one-way – 1.5m	Vehicle lane two way—3.2m
Bicycle two-way – 3.0 m	Truck/bus lane—3.5m

Shared pedestrian/bicycle provision – case-by-case basis, review with the City's Engineering Department

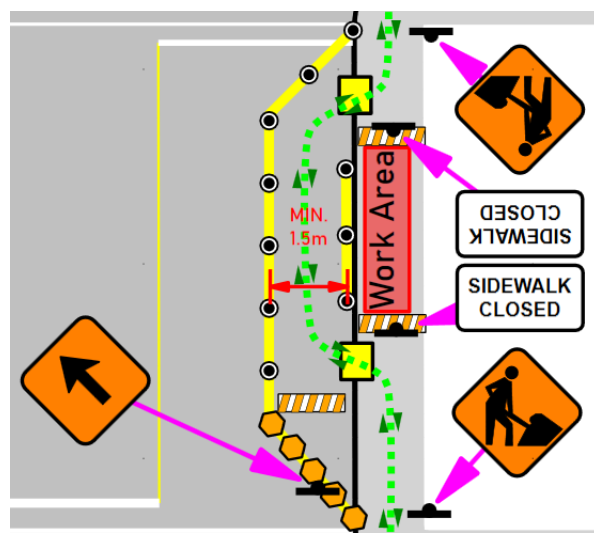
Sidewalk Closure Two Lane Two Way Road

- With Pedestrian Provision

The figure below shows a typical setup of a Two Lane, Two Way roadway for a Midblock Sidewalk closure with a pedestrian provision. Depending on vehicle, pedestrian and cyclist volumes, a parking lane or travel lane adjacent to the affected sidewalk may be used to provide a pedestrian provision.

KEY DESIGN FEATURES:

- The sidewalk is closed using barricades and “Sidewalk Closed” signs on either ends of the closure.
- “Crew Working” signs are placed in advance of the closure at crosswalks to advise pedestrians of suitable alternative crossings. Signs are placed so they do not block the sidewalk.
- Fixed-in-place ramps with a tactile surface are installed at either ends of the closure.
- Detour signage can be used to direct pedestrian into the provision.



Note: Concrete Barriers behind the Traffic Drums may be required for long duration work.

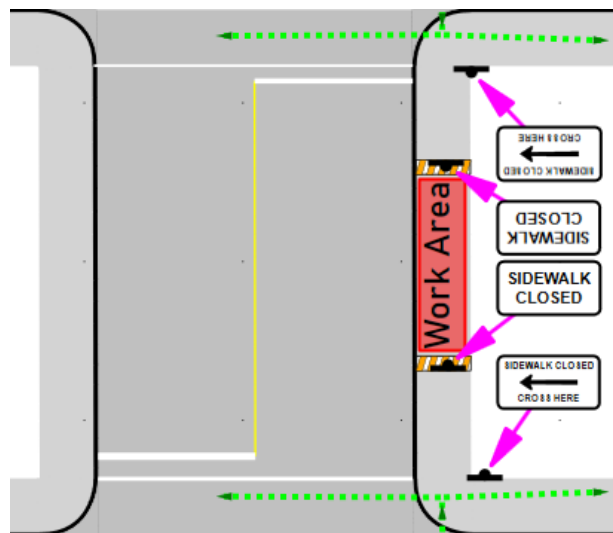
Traffic Drums separating vehicle traffic and pedestrian provision may be replaced with Cones for Short Duration Work

Sidewalk Closure - Without Provision

The figure below shows a typical setup for a midblock sidewalk closure that is not able to use the outside lane for a pedestrian provision. This layout is used where a sidewalk is closed and pedestrians are detoured to another pedestrian facility.

KEY DESIGN FEATURES:

- All adjacent crosswalks and sidewalks are opened and there is a sidewalk on the opposite side of the street where pedestrians can be detoured.
- The sidewalk is closed using barricades and “Sidewalk Closed” signs on either ends of the closure.
- “Sidewalk Closed – Cross Here” signs are placed in advance of the closure at crosswalks to advise pedestrians of suitable alternative crossings. Signs are placed so they do not block the sidewalk.



Note: these details only refer to sidewalk and crosswalk controls only.

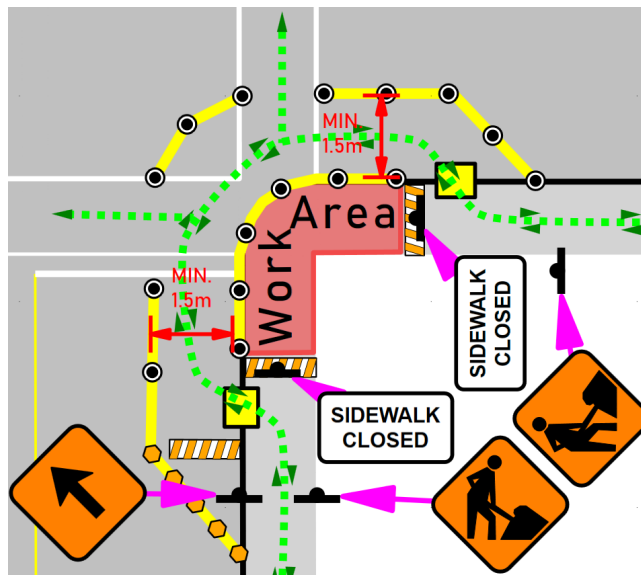
Vehicle controls must be implemented as per the BC MoTI Traffic Management Manual for Work on Roadways.

Intersection Corner Sidewalk Closure - With Provision

The figure below shows a typical setup for an intersection corner sidewalk closure with a pedestrian provision.

KEY DESIGN FEATURES:

- Both crosswalks at the intersection corner are opened.
- The sidewalk is closed using barricades and “Sidewalk Closed” signs on either ends of the closure.
- “Crew Working” signs are placed in advance of the closure at crosswalks to advise pedestrians of a suitable alternative crossing. Signs are placed so they do not block the sidewalk.
- Fixed-in-place ramps with a tactile surface are installed at either ends of the closure.
- Detour signage can be used to direct pedestrian into the provision.



Note: Concrete Barriers behind the Traffic Drums may be required for long duration work.

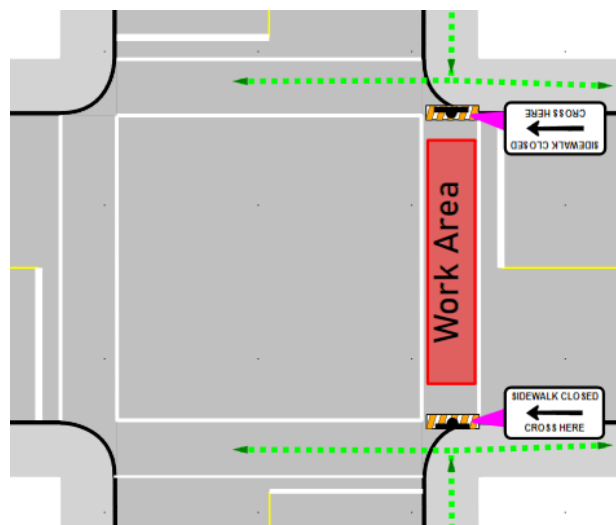
Traffic Drums separating vehicle traffic and pedestrian provision may be replaced with Cones for Short Duration Work

Crosswalk Closure - Without Provision

The figure below shows a typical setup for a crosswalk closure that is not able to use adjacent space for a pedestrian provision. This layout is used where a crosswalk is closed and pedestrians are detoured to another pedestrian facility.

KEY DESIGN FEATURES:

- All adjacent crosswalks and sidewalks are opened.
- There is a parallel crosswalk opened where pedestrians can be detoured.
- The crosswalk is closed using barricades and “Sidewalk Closed—Cross Here” signs on either ends of the closure.



Note: these details only refer to sidewalk and crosswalk controls only.

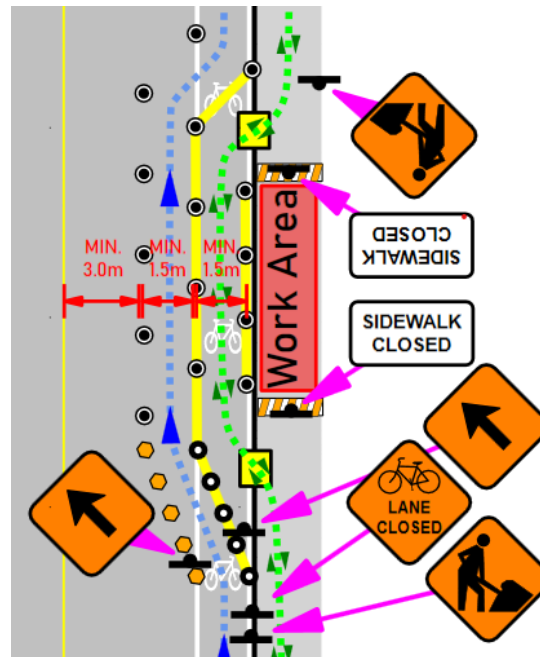
Vehicle controls must be implemented as per the BC MoTI Traffic Management Manual for Work on Roadways.

Sidewalk Closure – With a Pedestrian and Bicycle Provision

The figure below shows a typical setup for a midblock sidewalk closure with a pedestrian and bicycle provision.

KEY DESIGN FEATURES:

- Pedestrian and bicycle provisions are clearly delineated.
- The sidewalk is closed using barricades and “Sidewalk Closed” signs on either ends of the closure.
- “Crew Working” signs are placed in advance of the closure at crosswalks to advise pedestrians of a suitable alternative crossing.
- “Lane Closure Arrow” signs are placed where bicycle traffic is being shifted from the existing bicycle facility into the bicycle provision. Signs are placed so they do not block the sidewalk.
- “Bike Lane Closed Ahead” signs are placed in advance of the bicycle facility closure.
- Detour signage can be used to direct pedestrian into the provision.

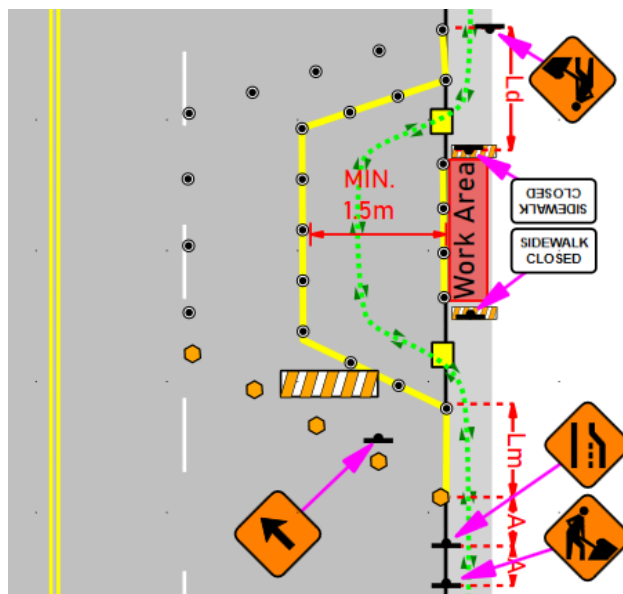


Sidewalk Closure Multilane Road – With Pedestrian Provision

The figure below shows a typical setup of a Multilane roadway for a Midblock Sidewalk closure with a pedestrian provision. Depending on vehicle, pedestrian and cyclist volumes, a travel lane adjacent to the affected sidewalk may be used to provide a pedestrian provision.

KEY DESIGN FEATURES:

- The sidewalk is closed using barricades and “Sidewalk Closed” signs on either ends of the closure.
- “Crew Working” signs are placed in advance of the closure at crosswalks to advise pedestrians of suitable alternative crossings. Signs are placed so they do not block the sidewalk.
- Fixed-in-place ramps with a tactile surface are installed at either ends of the closure.
- Detour signage can be used to direct pedestrian into the provision.
- Drum delineators must be equipped with Type A lights



Note: Concrete Barriers behind the Traffic Drums may be required for long duration work. Traffic Drums separating vehicle traffic and pedestrian provision may be replaced with Cones for Short Duration Work