TRANSIT VISION 2040 defines a future in which public transit maximizes its contribution to quality of life with benefits that support a vibrant and equitable society, a complete and compact community form, a dynamic and efficient economy, and a healthy natural environment.
Strategic Direction 2.2: Emphasize transit priority solutions

Rapid transit services cannot cater to every trip, and the expansion of surface transit operations in deteriorating mixed traffic conditions will highlight the urgent need to maximize the priority that regular transit vehicles receive on congested roads. Measures such as reserved bus lanes, queue jumps and dedicated phases at traffic signals can provide many of the benefits of rapid transit investments at a fraction of the cost, particularly where ridership levels are too low to justify a dedicated transit right-of-way. While successful transit priority strategies require close cooperation among transit and road authorities and a willingness among practitioners to adopt new practices, they help to make best use of transit operating resources and maximize the qualities of transit service that attract new customers.

Traffic control and legislative measures such as transit signal priority and Yield to Bus programs are simple and cost effective ways to improve transit service in relation to personal vehicle efficiency. These measures should be used where resources are limited, or in combination with other transit priority measures to maximize their effectiveness.

Where general traffic is a major threat to transit service, existing roads should be retrofit to segregate transit vehicles from general traffic. This can often be carried out at a low cost and gives transit vehicles high priority.

A variety of transit priority measures can be implemented throughout a community in order to make best use of the resources available. Specific high priority transit corridors can be targeted to maximize efficiency along key routes. Creative and innovative transit priority techniques can be developed and tailored to individual communities that face unique challenges to transit efficiency.
PERFORMANCE INDICATORS AND TARGETS

Indicator 1: Implementation of Transit Priority Measures

**Transit Priority Implementation Target:**
By 2040, priority will be provided to transit vehicles over other motorized traffic. Indicators of transit priority include:

- Policy statements supporting transit priority in official plans;
- The inclusion of specific transit priority corridors in Transportation Master Plans;
- Rationale for decisions to introduce measures such as bus lanes, queue jumps and traffic signal priority measures;
- The extent to which transit priority measures are in place where general traffic congestion is experienced; and
- The degree to which city transit and traffic continuously work together to identify the need for and implement transit priority measures.

Indicator 2: Average Transit Vehicle Speed

**Average Speed Targets:**
By 2040, all Canadian transit systems will increase their average transit vehicle speed by 10% from 2010 values.

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**INITIATIVES AND BEST PRACTICES**

**Legislative Tools** can be used to control how personal vehicles interact with transit vehicles. They can ensure that right of way is given to transit vehicles under certain circumstances, or allow buses to bypass traffic where possible.

**Yield to Bus legislation** in place in several provinces across the country. This provincial legislation gives buses right-of-way when leaving stops (often bus bays) and merging back into the main travel lane.

**Voluntary Yield to Bus programs** in place. A number of municipalities, including Calgary, Winnipeg, and Edmonton, have implemented these programs to encourage drivers to yield the right-of-way to buses merging with traffic. Transit vehicles can be equipped with signage at the rear reminding drivers to yield.

**Legislative Tools** can be used to control how personal vehicles interact with transit vehicles. They can ensure that right of way is given to transit vehicles under certain circumstances, or allow buses to bypass traffic where possible.

**Traffic Control** measures involve the manipulation of traffic signals to give transit vehicles priority at intersections. Many Canadian municipalities have implemented these measures as a low-cost transit priority method that allows transit vehicles to stay on schedule without requiring any major retrofits to existing infrastructure. Communities of all sizes and budgets can make use of traffic control measures; these measures can additionally be used as an interim method before more intensive transit priority measures are implemented.

**Toronto, Ontario**

**Transit signal priority** involves equipping traffic signals with bus detection technology. Many of the Toronto Transit Commission's (TTC) streetcar and bus routes use transit signal priority, emitting electrical signals when approaching a signal priority-equipped intersection. When a transit vehicle is detected, a green light can be extended or a red light can be truncated to ensure that a green signal is displayed upon arrival at the intersection. The TTC is currently undergoing a major expansion of its signal priority routes and intersections, as it recognizes the potential to improve service, reducing the need to add additional transit vehicles to routes: its installation of 1150 new transit priority intersections between 2009 and 2013 will have a similar effect to adding up to 53 new buses to the transit system.

**Montreal, Quebec**

**Bus priority signals** are exclusive signals given to transit vehicles at intersections. The signals allow buses to cross the intersection ahead of regular traffic. This is useful in circumstances where buses are transitioning from a transit-only lane or segment into regular traffic. **White cigar signals** or **white bars** can be installed above regular traffic signals.

In Montreal, the use of white cigar signals is widespread. Other Canadian communities that have implemented this transit priority measure include Toronto, Calgary and Gatineau.

**Vancouver, British Columbia**

Transit vehicles can be **exempt from prohibitions applying to regular traffic**. Vancouver uses **turn exemptions** at certain intersections, allowing buses to make turns that other vehicles are denied. Turn exemptions create more direct transit routes, helping buses to stay on schedule, particularly during peak travel periods.

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**Ontario, Quebec, British Columbia, and Nova Scotia**

Several provinces across the country have **Yield to Bus legislation** in place. This provincial legislation gives buses right-of-way when leaving stops (often bus bays) and merging back into the main travel lane.

A number of municipalities, including Calgary, Winnipeg, and Edmonton, have **voluntary Yield to Bus programs** in place. These programs encourage drivers to yield the right-of-way to buses merging with traffic. Transit vehicles can be equipped with signage at the rear reminding drivers to yield.

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In Montreal, the use of white cigar signals is widespread. Other Canadian communities that have implemented this transit priority measure include Toronto, Calgary and Gatineau.
Segregation of transit from regular traffic can be implemented through many different methods and to varying degrees. Segregation typically requires some retrofits to existing infrastructure, which can vary widely in complexity and cost: adding bus only turning lanes at intersections, converting entire existing traffic lanes to designated transit lanes, or constructing grade-separated busways. These measures can give transit vehicles high priority over regular traffic.

**Ottawa, Ontario**

The City of Ottawa has equipped several freeway intersections with **ramp connections**. These ramps are intended for use by transit vehicles only. They allow buses traveling on the freeway to exit and enter the freeway in order to make stops and pick up passengers. Additionally, they can be used to bypass congestion on the freeway.

Some ramp connections in Ottawa are used in conjunction with a **Demand for Service Indicating System (DSIS)**. DSIS allows transit riders to push a button that indicates to buses traveling on the freeway that a pick up is needed. The bus will then use the ramp connection to exit the freeway. If the signal is not received, the bus will continue traveling on the freeway, allowing for more rapid service.

**York Region, Ontario**

York Region Transit’s **Viva** system aims to provide rapid transit service throughout the Region’s nine municipalities. Viva employs many transit priority measures, including **bus only lanes and roads**, which allow buses to bypass regular traffic congestion. This allows Viva to provide a variety of types of services including express routes and shuttles that link the Region’s major nodes and corridors with Toronto’s subway system. Viva continues to expand, with plans to provide new dedicated bus lanes along several major corridors such as Highway 7 and Yonge Street. These new “**Rapidways**” may eventually be converted into a light rail transit (LRT) system.

**Gatineau, Quebec**

Gatineau’s transit system successfully uses **contraflow bus lanes**. During peak travel times, the direction of the centre lane of a three-lane roadway can be reversed for designated bus use. This increases transit flow into the downtown area during the morning commute, and away from downtown during the evening. Signage and traffic signals are used to clearly indicate the direction of travel.

**Calgary, Alberta**

The City of Calgary has implemented a number of transit priority initiatives, as illustrated below:

A **queue jump** is a bus-only turning lane that allows buses to bypass long queues of turning traffic.

**Bus only crossings** provide transit vehicles with direct links between communities. **Bus “traps” and automated gates** ensure that the crossings are not used by personal vehicles.

**Bus only shoulder lanes** are used in Calgary as a highly effective way to ensure that peak hour traffic does not inhibit transit service.

**Queue jumps**, **bus only crossings** and **bus only shoulder lanes**, among other transit priority measures, have been implemented in different areas of the City to target a variety of traffic issues that threaten transit efficiency, giving buses priority.
INITIATIVES AND BEST PRACTICES

Transit Priority Corridors can be designated throughout a community to identify and target areas where transit service should be improved. Several Canadian cities have designated such corridors, implementing a number of transit priority measures that work in coordination to maximize efficiency and reliability.

Winnipeg, Manitoba

Winnipeg’s Transit Improvement Program involves a Quality Corridor Initiative that aims to improve the speed, reliability, comfort and accessibility of transit service along a number of major arterial roads. The City’s Transportation Master Plan identifies a total of 10 Transit Quality Corridors, and between 2007 and 2012 a variety of on-street transit priority measures were implemented: bus-only “diamond” lanes, queue jumps, transit signal priority, and geometric improvements at intersections.

Combined, these transit priority measures provide fast, reliable and frequent transit service. They are intended as a first step towards Winnipeg’s future widespread implementation of rapid transit.

Ottawa, Ontario

The City of Ottawa’s Transportation Master Plan identifies three types of “Network Corridors”: Primary Rapid Transit Corridors, Transit Intensive Corridors that directly link to the rapid transit system, and Transit Priority Corridors. Transit Priority Corridors are areas that have various transit priority measures in place working in combination. Depending on the specific corridor, these measures can include peak period transit only lanes, dedicated lane segments, transit signal priority, and queue jumps.

The Transportation Master Plan includes a chart (Annex B) that clearly outlines specific actions to be taken for each Transit Priority Corridor. For example, on Bank Street from Wellington Street to Highway 417, the Plan calls for peak period bus-only lanes to be provided through prohibiting on-street parking during certain time periods, transit signal priority, and queue jumps.

The City currently exhibits the greatest transit modal share of all North American cities of comparable population, and aims to continue to increase transit ridership from 23% to 30% of motorized morning peak hour trips by 2031.

Right: Winnipeg Transit Quality Corridors, in green, as identified within the City’s Transportation Master Plan.

Ottawa’s proposed rapid transit network plan for 2031.
TRANSIT PRIORITY CHECKLIST

☐ Is a proportion of funds in the transit budget specifically dedicated to transit priority measures?

☐ Do local transportation plans include specific policies supporting transit priority?

☐ Are by-laws in place requiring drivers of personal vehicles to give right-of-way to transit vehicles leaving bus bays and merging into travel lanes?

☐ Have efforts been made to promote:
  • An appreciation of the rationale and need for transit priority measures among municipal traffic engineers; and
  • Strong working relationships between transit and traffic staff?

☐ Are on-going procedures being used to identify locations where transit delays are being experienced (e.g. reporting system for operators/supervisors, scheduling workshops)?

☐ Is the effectiveness of transit priority measures that are in place being regularly monitored? Are transit priority measures adapted if they are not contributing to overcoming conflicts with regular traffic and improving transit efficiency?

This guide is one in a series designed to assist CUTA members with implementation of Transit Vision 2040 strategic directions for which they are in a leadership role. It incorporates performance indicators used in annual reporting at a national level to track progress towards 2040 targets. While CUTA is taking the lead for ten of these 27 strategic directions, the remaining 17 fall within the responsibility of other stakeholders, and these guides have been developed in order to provide support to CUTA members and encourage progress toward the Vision. The guides summarize the goals and objectives of each strategic direction, propose performance indicators and targets, illustrate best practices from transit systems across the country and provide a checklist to assist members in reviewing their progress.