# METRACLogo

# Street furniture and public transit:

# The importance of using transparent transit shelters (June 2013)

A number of reports and studies have been conducted in Toronto and across North America that assess the design and safety of public transit shelters. Below are a number of recommendations around the need to use fully transparent transit shelters.

* APTA (2010) states that transit shelters are often one of the first points of contact for passengers when they are accessing public transit. The design of transit waiting areas that enhance security is said to play a significant role in a person’s decision to use transit (APTA, 2010, 3).
* Brennan (2011) reports in the Juristat article *Canadians’ perceptions of personal safety and crime, 2009* that 58% of Canadians feel less safe when using or waiting for public transit at night. This issue is gendered because while 73% of male identified respondents report being not at all worried when waiting for public transit at night, only 42% of female respondents say that they are not at all worried at night-time. Fully transparent shelters help to ease these fears while persons wait for public transit, particularly at night.

**Previous Guidelines on Transit Shelters and Safety in Toronto**

* METRAC’s (1989) *Moving forward: Making transit safer for women* report on its audit of the TTC subway and bus system was a seminal study that created specific guidelines to address safety concerns on public transit. This report has been used internationally as a best practice tool to assess safety on public transit systems. The report clearly states the importance of having clear sightlines and lighting on public transit, including at shelters, to assist in creating a safer environment for women transit users.
* The report states the need to use transparent material such as glass to increase and improve sightlines at transit shelters (p. 29).
* The report includes guidelines for future construction and renovation on the TTC of transit shelters as follows:
  + Guideline A-71- the walls of a shelter should have the transparency of glass, ideally from floor to ceiling, since this provides for good sightlines.
  + Guideline A-72 - If for structural reasons there needs to be a partition midway up the walls of a shelter, it should be transparent, if possible to not interfere with the sightlines of passengers sitting in the shelter.
  + Guideline A-73 - The placement of advertising, telephones and stairways should not interfere with sightlines into or out of the shelter.
  + Guideline A-75 - If the shelter itself is going to be lit at night, this can cause the Fish Bowl effect – the situation where people outside the shelter can see a person waiting inside perfectly, but the person inside may not be able to see out as well, to the extent it is relatively dark outside the shelter. The lighting level outside the shelter should be improved to that this effect, and the attendant discomfort of patrons, can be minimized.
  + Guideline A-76 - The use of glass or other transparent materials should be considered for construction of shelter ceilings. At night this would let in overhead street lighting which may help to avoid the Fish Bowl effect. During the day transparent ceilings let in natural light.

The *Vibrant Streets: Toronto’s Coordinated Street Furniture Program Design and Policy Guidelines* states at point 6.4 that “the design of street furniture elements must incorporate safety and security features” (p. 21).

The Vibrant Street Guidelines also include the following notes under section 6.4:

* All street furniture elements must use safe materials and design details to prevent injury.
* Street furniture and its placement must consider visibility and sightlines, lighting, barrier-free accessibility and ingress/egress issues as they relate to women, children, the elderly and the disabled
* To maintain visibility at night, it is critical that sufficient lighting be incorporated into the interior of transit shelters.
* Where appropriate, street furniture should incorporate provisions for panic alarms /communications.

**Crime Prevention through Environmental Design (CPTED)**

* Crime Prevention through Environmental Design (CPTED) is an internationally recognized crime prevention strategy used by planners, architects, police, security professionals, schools, transit authorities and others to ensure that public spaces are designed in ways that deter crime and unsafe activities.
* Two of CPTED’s main principles are: 1. to ensure the natural surveillance of public spaces; that is, persons can see into and out of a space; the second principle is to provide clear, unobstructed sightlines. Applying CPTED principles to the design and placement of a transit stop or shelter is essential to identifying safety issues and concerns (APTA, 2010).

**Design of Transit Shelters**

**Sightlines and Visibility**

* Universal design guidelines state that transit shelters should be constructed of materials that “allow clear, unobstructed visibility of and to patrons waiting inside” (25). The APTA states that there should be 360-degree visibility in and around bus shelters at all times (2010). Kimley-Horn and Associates Inc. (2004) agree with these stipulations and state that there should be “clear visibility of, through, and around the bus stop for both passenger surveillance of environment and for police surveillance” (p. 77).
* Additionally, the view of walking routes around transit stops and waiting areas, should not be blocked by walls, other structures and design features that hinder security and access that isolate passengers should be avoided (Kimley-Horn and Associates Inc., 2004, 77).

**Location of Advertising**

* Many transit agencies have paid advertising on transit shelters to reduce costs and to provide other benefits. Passenger and pedestrian safety and security are of greater concern at shelters with advertising. The advertising panels may limit views in and around a bus stop, making it difficult for transit operators to see patrons, especially if persons are seated and/or using a wheelchair or scooter.
* Such panels can also reduce incidental surveillance from passing traffic. To prevent restricted sight lines, advertising panels should be placed downstream of the traffic flow, to assist an approaching transit operator’s view of the interior of the shelter. Indirect surveillance from passing traffic should be preserved through proper placement of the panels (Nelson\Nygaard Consulting Associates, 2011)

**Reference List**

American Public Transportation Association (APTA). *Bus stop design and placement security considerations* Washington, DC: APTA, June 26, 2010.

<http://www.apta.com/resources/standards/Documents/APTA-SS-SIS-RP-008-10.pdf> June 3, 2013

Brennan, S. “Canadians perceptions of personal safety and crime 2009.” In *Juristat*

*Article December 1*, Statistics Canada Catalogue No. 85-002-X, 2011.

Kimley-Horn and Associates, Inc. *Bus stop safety and design guidelines,* Orange

County: Orange County Transportation Authority, March 2004. <http://cccta.org/wp-content/uploads/2010/06/OCTA-Bus-Stop-Guidelines-2004.pdf> June3, 2013

Nelson\Nygaard Consulting Associates. *Toolkit for the assessment of bus stop*

*accessibility and safety.* Washington: Easter Seals Project ACTION, August 2011. <http://www.oregon.gov/ODOT/PT/docs/ada/ada-bus-stop-toolkit-aug2011.pdf> June 3, 2013.

Millward, R.E. Associates Ltd. *Vibrant streets: Toronto’s coordinated street furniture*

*program design and policy guidelines.*  Sept 2006. <http://www.toronto.ca/involved/projects/streetfurniture/pdf/vibrant_streets.pdf> June 3, 2013.

Metropolitan Action Committee on Violence Against Women and Children (METRAC).

*Moving forward: Making transit safer for women.* Toronto: Toronto Transit Commission, 1989.