Canadian Transportation Agency

Office des transports du Canada

Removing Communication Barriers for Travellers with Disabilities

Code of Practice

Available in multiple formats

Canada

This document and other Canadian Transportation Agency publications are available on our website at **www.cta.gc.ca**.

For more information about the Agency, please contact:

Canadian Transportation Agency
Ottawa, Ontario K1A 0N9
Telephone: 1-888-222-2592
TTY: 1-800-669-5575
Facsimile: 819-997-6727
Email: info@otc-cta.gc.ca
Website: www.cta.gc.ca

Catalogue No. TT4-4/2016E-PDF

ISBN 978-0-660-04896-3

Table of Contents

Purpose of this Code

This Code contains accessibility standards developed to improve the communication of transportation-related information for persons with disabilities on a systemic basis as they use the federal transportation network.

While this Code focuses on the information needs of persons with disabilities while they travel, the provisions contained in the Code will benefit most travellers.

The Agency emphasizes that this Code presents minimum standards that those subject to the Code are expected to meet and urges them to strive to exceed these standards wherever possible. The Agency also encourages those subject to the Code to consult with persons with disabilities or disability associations when purchasing or testing new equipment and when developing policies and procedures related to the communication of information.

Scope

The Code covers three main aspects of communicating transportation-related information to persons with disabilities:

1. General provisions
2. Terminal provisions
3. Provisions regarding onboard communication

Who is covered by this Code

The Code applies to:

Air carriers:

Canadian[1] air carriers that provide passenger services and operate fixed-wing aircraft with 30 or more passenger seats.

Air terminal operators:

Operators of terminals within the National Airports System.

Rail carriers:

Rail carriers under federal jurisdiction operating passenger rail services in Canada, except for commuter or tourist services.

[1] As defined in the *Canada Transportation Act*

Rail terminal operators:

Operators of terminals with 10,000 or more passengers embarking and disembarking in each of the two preceding calendar years, excluding those terminals used principally for commuter or tourist services.

Passenger ferry operators:

Operators of passenger ferry services using vessels of 1,000 gross tonnes or more between provinces or territories, or between Canada and the United States.

Ferry terminal operators:

Canadian ferry terminals with 10,000 or more passengers embarking and disembarking in each of the two preceding calendar years; and at which ferries of 1,000 gross tonnes or more operate between provinces or territories, or between Canada and the United States.

Although other transportation service providers in Canada are not subject to this Code, they are encouraged to implement its provisions.

Technical specifications for accessibility

The Agency recognizes the expertise of the Canadian Standards Association (CSA) in establishing appropriate specifications for the placement and design of equipment and signage that are meant to ensure access and use by persons with disabilities.

The CSA is an association engaged in the development of standards and certification activities. CSA standards reflect a national consensus of producers and users, including consumers, retailers, unions, governmental agencies, and manufacturers. The standards are used by industry and have been adopted by all levels of government in their regulations, particularly in the fields of health, safety, building and construction, and the environment. Approximately one-third of the CSA standards have been referenced into law by provincial and federal authorities.

The CSA's CAN/CSA-B651, *Accessible Design for the Built Environment* (CSA design standard) is a national, technical standard that can be referenced in whole or in part by adopting authorities.

The Agency's codes of practice incorporate CSA standards that are applicable to the accessibility of the federal transportation network.

Section 1: General provisions

1.1 Provision of transportation-related information in multiple formats

Multiple formats are formats that substitute or complement conventional print and video products and that address the communication needs of persons with visual, hearing or cognitive disabilities. These can include, but are not limited to: accessible electronic text formats, large print, audio formats, braille, scan techniques (e.g., QR codes), live online sign language, captioned video, sign language video and described video.

1.1.1 Transportation service providers should develop and follow a multiple format policy to ensure that information related to the successful execution of a trip is available to all travellers in a format that is accessible to them. The Agency has developed a Generic Multiple Format Policy in consultation with representatives of the transportation industry, which includes key policy elements for transportation service providers to include in their own policies.

Section 1.1 – Implementation tips

1.2 Website accessibility

Websites should be made accessible to persons with disabilities by following the accessibility guidelines from the World Wide Web Consortium (W3C). Web-based information related to the successful execution of a trip should also be made available by other means of communication upon request. The Agency has published useful information on website accessibility.

1.2.1 Transportation service providers should have an email address, that is easily found on their website, where persons can communicate any issues they have encountered related to the accessibility of the transportation service provider's website.

1.2.2 Where transportation service providers have a contract for the creation, maintenance and updating of a website, the contract should specify that the accessibility guidelines from the W3C are to be followed.

Section 1.2 – Implementation tips

1.3 Automated self-service kiosks

Automated self-service kiosks are devices that are provided by carriers and terminal operators and offer independent access to travel-related services such as check-in and ticketing. It is important that persons with disabilities are able to independently, safely and securely access travel-related services in the federal transportation network,

including travel-related services offered using automated self-service kiosks. To this end, all carriers and terminal operators that own, lease or control automated kiosks used to perform customer service functions relating to check-in, ticketing and choosing travel-related amenities (such as seating and meal upgrades and Internet access) should ensure that they meet minimum accessibility standards.

Where dispensing machines or computerized information kiosks are used to provide a transportation-related product or service, at least one of those machines in each separate service area should allow a person who uses a wheelchair, is blind or visually impaired, has a speech impairment or is Deaf or hard of hearing, to use the machine independently and securely.

Accessible dispensing machines and information kiosks are to be appropriately identified with the international symbol of access.

Prior to introducing any transportation-related dispensing machines or information kiosks, consultations with organizations of and for persons with disabilities should be held to make it as accessible as possible. Adoption of the technical specifications in the Canadian Standards Association's B651.1-01 Barrier Free Design for Automated Banking Machines will also ensure that new equipment is accessible and is encouraged.

Where a transportation-related dispensing machine or information kiosk has not yet been made accessible to persons with disabilities, then an equivalent level of service is to be provided to those persons who are unable to use the dispensing machine or information kiosk independently.

As of December 31, 2016

The following will replace the information above:

The Canadian Standards Association's[1][2] (CSA) CAN/CSA-B651.2-07 *Accessible design for self-service interactive devices* (B651.2), which was published in 2007 and reaffirmed in 2012, contains minimum accessibility standards for self-service kiosks. The B651.2 is comparable to the accessibility standard that currently applies to the latest generation of accessible automated teller machines featuring audio and display capabilities and tactile input control, all of which are critical to support and enhance independent access within the federal transportation network for persons with disabilities.

Note: This section should be read in conjunction with the *Implementation Guide Regarding Automated Self-Service Kiosks*.

Implementation

Key design specifications contained in the B651.2 and U.S. Department of Transportation, 14 CFR Part 382 (Nondiscrimination *on the Basis of Disability in Air Travel)*, § 382.57 (What accessibility requirements apply to automated airport kiosks?) and 49 CFR Part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance), § 27.71 (Airport facilities) rule published on October 29, 2013 are very similar, and, where different, the differences are minor. Therefore, transportation service providers subject to this Code can install automated self-service kiosks that meet the standards of either section 1.3 of this Code (and the accompanying implementation guide) or 14 CFR Part 382 (Nondiscrimination *on the Basis of Disability in Air Travel)*, § 382.57 (What accessibility requirements apply to automated airport kiosks?) and 49 CFR Part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance), § 27.71 (Airport facilities), as it pertains to automated kiosks at U.S. airports. This option will facilitate compliance and enable transportation service providers that operate both in Canada and the United States to install the same kiosk types and compatible software in both countries.

Carriers and terminal operators should ensure that at least 25 percent of automated self-service kiosks located in each service area of an airport, rail or ferry terminal meet the standards in section 1.3 of this Code and the accompanying implementation guide by December 31, 2022.

Carriers and terminal operators should ensure that all automated self-service kiosks installed on or after December 31, 2016, meet the design and functional specifications set forth in section 1.3 of this Code and the accompanying implementation guide, until at least 25 percent of kiosks provided in each service area of an airport, rail or ferry terminal meets this specification.

Note: Until such time as an accessible kiosk has been installed, an equivalent level of service is to be provided to those persons who are unable to use the inaccessible kiosks independently.

In locations or service areas where a single automated self-service kiosk is installed, carriers and terminal operators should ensure that the kiosk meets the standards in section 1.3 and the accompanying implementation guide.

Note: A service area refers to an area where kiosks, intended for public use, have been installed to enable travellers to perform travel-related functions at airports, rail and ferry terminals. A service area includes any distinct, public location within an airport, rail and ferry terminal where a single kiosk or cluster of kiosks has been installed.

Where automated self-service kiosks perform more than one travel-related function (for example: printing boarding passes, upgrading seats, meals, and choosing Internet

access), then the accessible automated self-service kiosk must offer all of the same functions as the inaccessible kiosks in that service area.

Accessible automated self-service kiosks should be appropriately identified with the international symbol of access (see the implementation tips for an example).

Carriers and terminal operators should ensure that all accessible automated self-service kiosks are properly maintained. If an accessible kiosk is damaged or requires servicing, transportation service providers should ensure that the customer is directed to the nearest available accessible kiosk, or that an equivalent level of service is available.

Note: The availability of accessible automated self-service kiosks should not, in any way, preclude a passenger's option to seek assistance from an employee.

Other Self-Service Kiosks

Carriers and terminal operators covered by the Communication Code are encouraged to meet the accessibility standard of the CAN/CSA B651.2 with respect to other dispensing machines and travel-related information kiosks (e.g., parking ticket and ground transportation kiosks).

Where other self-service kiosks have not yet been made accessible to persons with disabilities, then an equivalent level of service is to be provided to those persons who are unable to use the self-service kiosk independently.

Other self-service kiosks should be appropriately identified with the international symbol of access.

Section 1.3 – Implementation tips

1.4 Telecommunication systems for reservations and information

Transportation service providers who use telephone lines for reservations, information or any services related to the successful execution of a trip are to provide an equivalent level of service to passengers with disabilities through the use of alternative communication systems, such as teletypewriters, "text phones" or a TTY line.

Ground transportation service providers are also to provide alternative communication systems to ensure equal access to reservation and information lines. It is the responsibility of the terminal operator to ensure that ground transportation service providers provide these facilities by specifying these requirements in the terms of their contracts or by other means.

Information on how to access alternative communication systems is to be clearly indicated in all publications, promotions, advertisements, websites or other information products where telephone numbers are listed.

When automated voice messaging systems are used on reservation or information lines, a readily accessible link to a live operator should be prominently featured and/or the option of leaving a message to have the call returned should be provided. The option to have automated messages or menus repeated should also be provided. Automated voice messaging systems are not accessible to TTY users. As such, all information and services available through these systems are to be available by using an alternative communication system.

Alternative communication systems are to be properly maintained and kept in good working order. Personnel responsible for reservations and providing information (through an alternative communication system) should be trained on the proper use of this equipment.

Section 1.4 – Implementation tips

Section 2: Terminal provisions

2.1 Telecommunication systems in terminals

Where public telephones are provided, terminal operators are to ensure that there are an adequate number of accessible public telephones that allow a person who uses a wheelchair, is blind or visually impaired, has a speech impairment, or is Deaf, deafened or hard of hearing, to use the machine independently. At least one accessible public telephone (including a TTY or other alternative communication system) is to be provided in each separate unrestricted and restricted departure and arrival area, 24-hours a day. At a minimum, accessible public telephones and alternative communication systems are to be located in each of the following areas if public telephones are provided: arrival and departure areas, boarding gate or track areas, baggage claim areas and corridors leading to each of these areas.

Accessible telephones and alternative communication systems are to be clearly identified using the international symbol of access or the appropriate identification symbol. Signs providing direction to public telephones are also to provide direction to the nearest alternative communication system using the appropriate symbol. Also, where a bank of regular telephones is not equipped with an alternative communication system, directional signage indicating the location of the nearest device is to be placed adjacent to this bank, using signage clearly identifying the appropriate symbol.

Terminal operators are to ensure that alternative communications systems are properly maintained and kept in good working order.

Section 2.1 – Implementation tips

2.2 Signage

Carriers should refer to the relevant code of practice for additional provisions related to signage:

- Air Code: Section 2.1
- Rail Code: Section 1.2.2
- Ferry Code: Section 1.0

Signage that is provided in all public areas of terminals is to be accessible to all passengers. Safety and crew signage are regulated by Transport Canada and therefore are not covered by these specifications.

2.2.1 Where there is no impediment, signage should be positioned at key decision-making points, such as washrooms, emergency exits, elevators, doors, departure areas and stairs or passageways off main corridors. A sign should be positioned over the path of travel well above head level (at least 230 cm from the floor) so it can still be seen by a person in a wheelchair if there is a lot of pedestrian traffic. Signage should be positioned to avoid shadow areas and glare.

2.2.2 Where an impediment is present, signage is to be placed in the nearest logical alternative place.

2.2.3 If signage is located at a doorway, it should be on the wall to the right of the door, with its centre at a height of 150 cm (1500 mm) plus or minus 2.5 cm (25 mm) above the floor. If there is no door, signage should be placed on each side of the opening.

2.2.4 Letters, numbers, symbols and pictographs should be glare-free and presented in high contrasting colours (e.g. a light colour on a dark background or a dark colour on a light background, with light on dark being preferable for signage). There should be at least a 70% contrast between the letters, numbers, symbols or pictographs and the background.

2.2.5 Illuminated signs where the text is lighted through a dark background should not be used.

2.2.6 Letters and numbers should be sans serif[3] and numbers should be Arabic. Letters and numbers should have at least a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10. Fonts that use bold, rounded, very thick, very thin or condensed styles should be avoided. Upper- and lower-case lettering

[3] Arial, Universe, Helvetica and Zurich are examples of sans serif fonts.

is encouraged and the use of all caps (except when tactile signs are used) should also be avoided.

2.2.7 For general orientation and specific information signage, letters, numbers, symbols and pictographs should be at least 20 cm (200 mm) high for a maximum viewing distance of 600 cm (6000 mm), 10 cm (100 mm) high for maximum viewing distance of 250 cm (2500 mm), and 5 cm (50 mm) high for a maximum viewing distance of 150 cm (1500 mm).

2.2.8 Regulatory signs, warning signs and identification signs should include tactile markings to supplement the text. When tactile signage or markers are used, letters, numbers, symbols and pictographs should be raised at least 0.08 cm (0.8 mm) and should be between 1.6 cm (16 mm) and 5.0 cm (50 mm) high. If a tactile sign is mounted on a wall, its centre should be at a height of 150 cm (1500 mm) plus or minus 2.5 cm (25 mm) above the floor.

2.2.9 If signage is supplemented with braille, it should be located at the bottom of the sign and presented in Grade One Braille that meets the standards of Braille Literacy Canada in English and in *Braille intégral* that meets the standards of the *Code braille français uniformisé pour la transcription des textes imprimés* (CBFU) in French.

2.2.10 If electronic signage is used, letters, numbers, symbols and pictographs should be slowly scrolled across the screen. Red letters on a black background should not be used.

2.2.11 Where glass door markings are used, they should include contrasting decals and etching.

Section 2.2 – Implementation tips

2.3 Arrival/departure monitors and other electronic signage

Some or all monitors are to be installed at eye level (150 cm above the floor plus or minus 2.5 cm) in each area where monitors are used. Where monitors are placed above eye level, they are to be placed at a height of 203 cm plus or minus 2.5 cm so that they can be seen easily by a person in a wheelchair. The information displayed on the monitors is to be in plain language that is easy to read, avoiding acronyms where possible.

When monitors or other electronic signs are used, good colour contrast is to be provided, such as a light colour on a dark background or a dark colour on a light background, with light on dark being preferable. Monitors are to be positioned to avoid glare. Red lettering on a black background should not be used. Scrolling, flashing or dot matrix text also create accessibility barriers for some users and are to be avoided,

where possible. Where scrolling is used, letters, numbers, symbols and pictographs should be slowly scrolled across the screen.

Section 2.3 – Implementation tips

2.4 Public announcements in terminals

Public announcements related to the successful execution of a trip are to be provided in both audio and visual formats in all passenger service areas inside terminals. These announcements include, but are not limited to: information concerning departure delays, gate or track assignments and schedule or connection changes.

Public announcements are to be of good quality, in plain language, with clear enunciation and spoken slowly enough to be easily understood. Messages should be repeated. Prerecorded messages are to be used as often as possible to improve the clarity of announcements.

Section 2.4 – Implementation tips

2.5 Information on ground transportation

Where there's a contract with a ground transportation service provider, the terminal operator should ensure that:

1. accessible directional signage is placed at the arrival area indicating the location of each type of available ground transportation;
2. information is made available in multiple formats about the choices of ground transportation available at the terminal, including schedules and prices.

Section 2.5 – Implementation tips

2.6 Designated seating at boarding gates and departure areas

Where seating is provided, designated seating for passengers with disabilities should be identified by the universal symbol of access. Designated seating is to be provided at boarding gates and departure areas within viewing distance of communication boards and/or personnel.

Section 2.6 – Implementation tips

2.7 Security at airports

Security personnel should be in constant communication with passengers throughout the screening process (i.e., to ensure that passengers are aware of the location of their belongings and what is being done with them).

Personnel should use both audible and visual means to advise passengers:

- when to proceed into the security area;
- how to place carry-on baggage and other materials on the belt for x-ray;
- when they can proceed through the magnetometer or body scanner; and
- when the security inspection is complete and they can proceed to the secure area.

Audible and visual communication is especially important when procedures such as an additional hand search of carry-on baggage or a secondary search of the person is required. Should a secondary search be necessary, security personnel should offer the option of it being performed in a search area that is not open to public viewing.

Section 2.7 – Implementation tips

Section 3: Provisions regarding onboard communication

3.1 Communication of equipment features

Upon request, crews onboard aircraft, rail cars and ferries are to give oral, written or visual information about the equipment features (such as the location and function of call or control buttons at the seat, the location of washrooms and exits, and washroom features) to passengers with disabilities. This information should also be made available in multiple formats, where possible.

> See Section 2.8 of the Air Code and Section 3.4 of the Ferry Code for the provisions related to supplemental passenger briefing cards to be provided in Braille and large print.

Section 3.1 – Implementation tips

3.2 Safety videos

Carriers are to ensure that all information presented in onboard safety videos in a visual format is described verbally and that all audible information is presented visually.

Carriers are to provide individual safety briefings to passengers upon request.

Section 3.2 – Implementation tips

About the Agency

Our role in accessible transportation

The Canadian Transportation Agency is a quasi-judicial administrative tribunal and regulator of the Government of Canada.

Under Canadian legislation, the Agency has the responsibility for ensuring that persons with disabilities obtain access to this country's federal transportation network by eliminating unnecessary or unjustified barriers. One way to achieve this goal is to develop and administer accessibility standards covering the transportation network under federal jurisdiction. Other ways include resolving disputes through facilitation, mediation or adjudication and by consulting with stakeholders.

Under subsection 170(1) of the *Canada Transportation Act*, the Agency may make regulations to eliminate undue obstacles in the transportation network under federal jurisdiction. For example, the Agency may regulate:

- the design, construction or modification of means of transportation and related facilities and premises and their equipment;
- signage;
- the training of personnel interacting with persons with disabilities;
- the tariffs, rates, fares, charges and terms and conditions of carriage of persons with disabilities; and,
- the communication of information for persons with disabilities.

Note: The Agency has developed a resource tool that provides information on how to file a complaint experienced by a person with a disability and that also explains the approaches the Agency uses in resolving accessible transportation complaints.

How we monitor compliance

The Agency will monitor compliance with this Code using a variety of means. For example, the Agency may monitor via site visits, discussions with transportation service providers, information available on transportation service providers' websites, or other methods deemed appropriate to obtain information. In addition, the Agency will undertake periodic reviews of the Code. Any problems identified will be addressed by the Agency.

How this Code was developed

Consultations

This Code has been developed and updated in consultation with representatives of the Agency's Accessibility Advisory Committee, including transportation service providers and associations representing persons with disabilities.

Research and additional resources

Accessible Transportation Complaints: A Resource Tool for Persons with Disabilities

This Resource Tool provides information on how to file a complaint regarding an "undue obstacle" experienced by a person with a disability in the federal transportation network.

Accessible Transportation Complaints: A Resource Tool for Service Providers

This Resource Tool provides information on how to resolve a complaint from a person with a disability who believes they have encountered an undue obstacle with respect to transportation-related services in the federal transportation network.

Carriage of Mobility Aids On Board Planes, Trains and Ferries

This Resource Tool will assist passengers and ferry operators in the planning of and preparation for travel involving mobility aids, and includes a new reservation checklist that can facilitate the planning of carriage of mobility aids.

Travelling with an Attendant in the Federal Transportation System: A Resource Tool for Persons with Disabilities and Carriers

This Resource Tool provides information to assist passengers with disabilities who either wish or require to travel with an attendant, to do so while understanding their rights and responsibilities.

This Resource Tool also provides information to help ferry operators facilitate travel for their passengers with disabilities when this may entail travel with an attendant.

Travelling with Animals that Provide Disability-Related Assistance: A Resource Tool for Persons with Disabilities, Carriers and Terminal Operators

This Resource Tool contains information about:

- Canadian standards for the carriage of assistance animals;
- How assistance animals help persons with disabilities;
- Factors for carriers to consider when determining under what conditions assistance animals may be accepted for carriage;

- How persons with disabilities should plan their travel with an assistance animal; and,
- Relieving areas for assistance animals at terminal facilities.

CSA's CAN/CSA-B651, Accessible Design for the Built Environment

The CSA design standard is a national, technical standard covering a broad range of building and environmental facilities that can be referenced in whole or in part by adopting authorities.

Best Practices for Providing Assistance to Customers with Disabilities: A Resource Tool

This resource tool contains quick reference pages to assist transportation service provider staff.

Universal design

While universal design is most commonly referenced in relation to the design of products and environments, the principles of universal design also apply to communications.

Universal design is a design concept that recognizes, respects, and attempts to accommodate the widest range of users, not only persons with disabilities. For example, a washroom door that has a male or female sign allows it to be identified by individuals that have an intellectual disability and cannot read, as well as children and individuals who speak a foreign language. Additionally, if that same sign also contains tactile symbols and/or Braille it also allows individuals who are blind or partially sighted to identify the washroom. Universal design benefits all travellers, and may result in an increased use of public transportation as transportation becomes more accessible for all.

Consideration should be given to these design principles whenever transportation service providers are planning any type of renovations, retrofitting or changes in policies and procedures relating to communicating information to travelers.

Additional information can be found on the Centre for Excellence in Universal Design website, which includes a list of the Principles of Universal Design and examples of their implementation.

Implementation tips

1.1 Provision of transportation-related information in multiple formats

Formats

Formats that substitute or complement conventional print and video products and that address the communication needs of persons with visual and hearing disabilities and persons with cognitive disabilities. These can include, but are not limited to: accessible electronic text formats, large print, audio formats, braille, scan techniques, live online sign language, captioned video, sign language video and described video.

Rationale

Not everyone is capable of reading traditional print. For instance, many Canadians require large print to be able to read written documents. For others, the only way to access information independently is by using formats such as an electronic copy or Braille. Creating your own multiple format policy will tell travellers and personnel what information is available in which format and how much time is necessary to obtain a copy.

Canadian guidelines

- The *Manager's Guide to Multiple Format Production* was produced for the Government of Canada through the Assistive Devices Industry Office of Industry Canada. It was created as a guide to make government publications easier to understand for persons who are print-disabled. It answers many questions about multiple formats and gives practical reasons why they should be provided. This guide emphasizes creating a "full text template" of the original document.
- *Plain Language Clear and Simple* contains tips on producing clearly written documents. To request this or any other federal publication electronically, go to www.publications.gc.ca.
- The Braille Literacy Canada website contains information on the *UEBC* (Unified English Braille Code) *Format Guidelines* for producing Braille documents.

Guidelines from other countries

- The American Access Board's *Telecommunications Act Accessibility Guidelines* discusses the steps involved in producing many multiple formats and also includes costing information. For more details, see the regarding Subpart C, Section 1193.33 of this document.

Technical information

Electronic formats are the most frequently requested type of multiple format. Refer to Section 1.2 on "Website accessibility" for details about making your website even more accessible.

- Any information conveyed in pictures or graphics should be accessible to persons with visual impairments. This can be done by providing a brief description of the image.
- The Canadian National Institute of the Blind's (CNIB) website contains a link called "Technical Aids" that includes information about how machines that produce Braille (called Braille embossers) and computer screen reading technology operate. This site also includes references to companies that provide this equipment.

Tips for creating large print documents

- Set columns at a width between 3 to 7 inches
- Use a combination of upper and lowercase letters
- Use dark lettering on a white or yellow background
- Simple sans serif fonts should be used. Arial, the font used throughout this guide, is an example of a sans serif font.

Tips for ordering or producing documents in multiple formats

When ordering or producing documents in multiple formats in an effective manner, consider these five tips suggested by Diane Croft of the National Braille Press:

1. **Think about the life span of the document.** Is it a "throw away" or does it have lasting value? Making every document available in Braille or large print is not practical. It makes more sense to invest your time and effort producing multiple formats for resources that will be used primarily for long-term purposes.
2. **Consider the content of the information.** Some types of information are conveyed better in different formats. Travellers may only want to access information randomly when searching for specific details about their trips. For such cases, electronic copy, diskettes, large print and Braille are highly accessible formats. For large easy reading documents, however, audio cassettes may be a better alternative.
3. **Consider the privacy needs of the individual.** Reading information aloud may sometimes be an effective means of communicating. However, you must ensure you do not embarrass travellers or read confidential information when conveying information verbally.

4. **Think about whether it is necessary to access the information immediately.** Ensure you know which materials are required right away so that they can be supplied on demand.
5. **Think through all options.** Be creative and realistic in thinking about the most effective ways to provide multiple formats for your customers.

REMEMBER: When a travel document is first produced, it is a good idea to create a plain text version of the document, which includes a description of all pictures and graphics. This version can be used to convert the text into other formats such as large print or Braille. (Manager's Guide to Multiple Formats)

Manufacturers

To find a list of companies that produce communication products in multiple formats, go to Industry Canada's website and click on "Assistive Device Companies".

Checklist: Make sure guidelines discussing the following items are included in your multiple format policy:

- Individual travel information requested by travellers and general travel information to the general public are available in multiple formats.
- A reasonable and consistent time frame is specified for providing documents requested in multiple formats.
- Personnel are informed about which formats are available so they can be provided when requested.
- Personnel are informed about the amount of time required to produce different formats.
- Adequate substitutes are suggested if a requested format is unavailable.
- Requests for more than one format and/or more than one copy of any available format are honoured.
- Plain language and appropriate terminology for persons with disabilities is used.
- All multiple formats are priced the same as printed materials.
- Graphic materials (i.e. charts and graphs) are described in text. (See the examples in this guide.)
- Multiple formats maintain the same quality as printed materials.
- The availability of multiple formats is promoted.

REMEMBER: By consulting with members of the disability community, you will be able to learn which formats are the most useful and practical.

Return to Section 1.1

1.2 Website accessibility

Rationale

Creating an accessible Web site will provide access to on-line information to a greater number of travellers. For example, persons with visual impairments who use screen readers or large print will be able to access Web sites to obtain frequently updated information that they may not be able to access in print formats.

World Wide Web Consortium (W3C) guidelines

The W3C is an organization that creates universal guidelines to help make the Internet accessible to any online user. The W3C offers various levels of guidelines to make Web sites accessible throughout the different stages of Web site design. Refer to their website for the current applicable guidelines to be followed.

Technical information

- A collection of information about evaluation, repair, and transformation tools to make Web sites more accessible is available.
- A-Prompt is another software that evaluates webpages for accessibility barriers and provides fast and easy ways to make the necessary repairs. A-Prompt is developed and made available by the Adaptive Technology Resource Centre of the University of Toronto and is available free of charge.
- The Treasury Board Secretariat's CLF Self-Assessment Guide is another useful tool that has been developed for Government of Canada departments and agencies to determine the compliance level of their Internet websites with the Common Look and Feel Standards.

Tips for building accessible websites

- Provide information such as schedules, available services, maps, and contact numbers on the website.
- Use cascading style sheets when possible.
- Avoid using a lot of graphics or provide the option of viewing a text- only version.
- Use plain text and a simple format.
- Discuss accessibility features with persons with disabilities who are most likely to use the website.

Manufacturers

Industry Canada has a list of companies that consult on website accessibility on its website.

Best practices

The Toronto Transit Commission (TTC): The TTC's website identifies "accessible bus stops" and wheelchair accessible buses. This site includes a link to the TTC online brochure "Easier Access Information" which discusses the accessibility of terminals and carriers, important telephone and TTY numbers, safety tips, and schedule information.

NOTE: Not all of the TTC's terminals and vehicles are completely accessible. By informing passengers about which terminals and vehicles do have accessibility features, the TTC allows travellers to plan their trips with full information and with greater confidence.

Return to Section 1.2

1.3 Automated self-service kiosks

Rationale

Automated information kiosks and ticket dispensers speed the flow of travel through the terminal. Accessible design allows persons with disabilities to use these machines to purchase tickets and find information about the facility individually and at their own pace. As a result, more travellers will have the confidence to use these machines to receive the information or documentation they require.

- To learn more about the accessible feature required for automated self-service kiosk, you can refer to the Canadian Standards Association's14 (CSA) CAN/CSA-B651.2-07 Accessible design for self-service interactive devices
- The U.S. Department of Transportation has very similar standards set out in 14 CFR Part 382 (Nondiscrimination on the Basis of Disability in Air Travel), § 382.57 (What accessibility requirements apply to automated airport kiosks?) and 49 CFR Part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance), § 27.71 (Airport facilities)

Best practices

Florida Tri-Rail Stations: In many Florida Tri-Rail stations, automated ticket dispensers have been installed which are accessible to persons with visual impairments. As well as providing tactile and Braille markings on the keypad, these

machines also incorporate audio output. Pressing a button activates a recorded message which states the location of different rail stations and the different methods of payment accepted for ticket purchases. See the press release on "Evaluation of Audio/Tactile Instructions for Tri-Rail Ticket Vending Machines."

Return to Section 1.3

1.4 Telecommunication systems for reservations and information

Rationale

Due to the various telecommunication tools used by different travellers, alternatives to a voice telephone line such as a TTY line, e-mail or web-based reservation or information systems are often prerequisites for direct communication with some travellers with disabilities.

TTY numbers need to be publicized wherever voice telephone numbers are printed so that travellers who are Deaf or hard of hearing can also take advantage of promotions and specials available to other travellers.

An automated messaging system may be a quick and convenient way to book a trip or provide information, but can also create barriers to effective communication for travellers with hearing, speech or cognitive disabilities and for many seniors. Travellers with disabilities may also have questions or reservation requirements that cannot be addressed within the standard options provided. Communicating with a live operator will assure travellers that their questions are answered adequately and that their reservations have been completed successfully.

Guidelines from other countries

The *Train and Station Services for Disabled Passengers: A Code of Practice for England* states that a reservation system for travellers with disabilities must be supplied by rail operators. Rail operators must promote the reservation system. TTY numbers should be offered so persons with hearing impairments can make reservations. To access this information, you can refer to the Strategic Rail Authority's (SRA) General Publications Web site www.dft.gov.uk, click on " Publications ", then click on "Consultation Documents ".

Technical information

There are softwares such as SimpliciTTY that integrates seamlessly with existing office or call center equipment, putting you in touch with your clients or customers immediately. For more information, you can explore the NXi website.

Tips on TTY etiquette

("TTY Etiquette" Get Connected to Your TTY. The Canadian Hearing Society.)

- If you contact the customer, let the TTY ring at least 10 times. When it is answered, tell the customer why you are calling and provide them with your own name as well as your company's name.
- Use "xxx" when you make an error instead of trying to re-type the word. Type at the same speed as the customer. Use abbreviations only if the customer does.
- Write "hold please" while putting a customer on hold so they know what is happening.
- After each message type "GA" for "Go Ahead". This tells people that you are done typing your message.
- "SK" means "Stop Keying". It expresses that the conversation is about to end. Type "SK" when you want to end a message.
- Common ways to say goodbye include "bye for now","bfn" "or "bye-bye".

Tip from the Agency

To make sure that all services requested in the reservation stage are passed on, terminal operators can use the reservation checklist supplied by the Agency. This checklist allows employees to record the services needed as well as the date on which it was requested, the traveller's name and the carrier number.

Manufacturers

- A Kanata, Ontario company, Sinclair, Nicholson and Associates, (SNA) has been working with an American company, NXi Communication, to incorporate the NTSsystem into Canadian organizations.
- The Canadian Hearing Society offers an online store that includes pictures as well as product information and prices. This information is available by clicking on "Text Telephones TTYs/TDDs" in the "Technical Devices" subcategory in "Product Categories".

Best practices

VIA Rail and Bell's Visual Ear: VIA Rail Canada informs travellers about the availability of its TTY reservation line by providing the number on their website and other travel documentation. VIA Rail also provides the option to make a Telephone Relay Service call.

Return to Section 1.4

Section 2.1 Telecommunication systems in terminals

Rationale

Accessible public telephones are essential to allow all passengers to communicate delays, cancellations, or the time of their arrival to other people. Persons with hearing or speech impairments require public TTY's. Persons using wheelchairs require telephones placed at lower levels, so that coin slots and other controls are within reach. When installing any new public phones, choosing equipment with the most accessible features will allow a broader diversity of travellers to use this equipment.

Canadian standards

Section 6.6.2 of the CSA B651Barrier Free Design discusses the requirements for installing accessible public telephones and TTYs.

Guidelines from other countries

- The Americans with Disabilities Act *Accessibility Guidelines for Buildings and Facilities* set out regulations concerning volume control, floor space, and installation requirements for TTYs and accessible public phones in American facilities.

Technical information

- The international symbol of access and the international symbol for TTYs are provided in C.
- Section 5.4 of *Going Places Access Needs of Visually Impaired Travellers in Transportation Terminals: Design Guidelines* by the CNIB states that installing a 'direct line' telephone near the entrance lets travellers with visual impairments discover information about the facility more easily.
- Sections 3 and 4 of *Comments by the RNIB: Public Payphones – OFTEL Consultation, November 2001*, by the Royal National Institute for the Blind explains why accessible public telecommunication equipment is still required in spite of the widespread use of wireless equipment.

Manufacturers

- The Canadian Hearing Society makes the international symbol for hearing accessibility sign available in their online store.
- The American company NexTalk is an example of a company which supplies various communication software, including TTY software that integrates with existing call center equipment, designed specifically for person who are Deaf, deafened or hard of hearing.

Return to Section 2.1

2.2 Signage

Rationale

Accessible signs improve access to key orientation information for all travellers, and particularly persons with disabilities. Placing signs at eye-level allows passengers who have low vision to read the signs at close range and provides a better viewing angle for persons who use wheelchairs. Proper colour contrast improves signage visibility for all users and is critical for persons with low vision or colour-blindness. Signs supplemented with Braille or tactile symbols allow more blind passengers to travel independently. Clear signage is also of great importance to persons have difficulty communicating verbally or who cannot hear public announcements.

This is a picture of a bilingual sign for a washroom that includes Braille and tactile pictograms and lettering. The sign says TOILET/TOILETTE.

Canadian standards

- The Canadian Standards Association's (CSA) CAN/CSA B651 *Barrier Free Design Standard* states all signage must use contrasting colour and be glare free. It also specifies acceptable viewing distances and font size and styles that are to be used. See the CSA's online Information Product Store.
- Section 4.3 B "Tactile Signage: Sign System and Installation Guide" of the *Federal Identity Program Manual* describes how to install effective tactile signage. It describes the installation procedure for different wall surfaces and specifications for signage companies when purchasing tactile signs. This document applies to installing tactile signage in Government buildings, but it is a useful resource for everyone.

Technical information

- The ideal contrast between two colours is 70 percent. You can refer to the CNIB's Clearing Our Path website which contains information in this regard as well as additional advice on creating accessible signage.

- Many electronic LED signs come with a "tricolour" option which allows red, green, or amber to be used to represent the sign's text or symbols. Altering the colour from red to amber and avoiding scrolling or flashing text will make the text much easier to read for travellers with visual impairments, including colour blindness.

The following chart shows accessible viewing distances for signs using lettering of different font sizes:

Lettering minimum character height (in mm):	**Maximum viewing distance (in metres):**	**Sample sign location:**
200mm	6 metres	terminal entrance
150mm	4.6 metres	station name, line name (for trains and subways)
100mm	2.5 metres	vehicle name (subways and buses)
75mm	2.3 metres	line transfer information
50mm	1.5 metres	route information, display publication/maps
25mm	.75 metres	doors, rooms
20mm	.75 metres	washrooms with universal symbol

Tips for creating accessible signage

- Consistent symbols, colours, and formats on signs makes it easier for people to understand where they need to go.
- Colour combinations of yellow/grey, yellow/white, blue/green, black/violet, and red/black do not provide an adequate contrast. Red and black is the most difficult colour combination for people with any type of visual impairment to interpret. (Going Places Access Needs of Visually Impaired Travellers in Transportation Terminals: Design Guidelines by the Canadian National Institute for the Blind, Aug. 1997 Page 15 and 41-42.) Amber and black is the preferred colour combination for electronic signs with LED readouts.
- When tactile signs are installed in an entrance with no doorway, they should be located to the right of the entrance, not in the interior of the entrance. It can be

awkward and embarrassing for persons with visual impairments to enter the wrong washroom before reading the tactile or Braille sign.

Manufacturers

- The Canadian company Eye Catch Signs is a supplier of signs that include Braille and tactile markings.
- Adaptive Micro Systems Incorporated supplies Alpha LED signs that come with the "tri-colour" option. PCM Electronic Signs is a Canadian company that sells Alpha equipment.

Best practices

Marine Atlantic: One company that realizes the importance of signage is the Canadian ferry company Marine Atlantic. Accessible signage is installed both in its terminals and on its ferries. This company uses its Web site to promote this feature and many other services for persons with disabilities. By describing accessible services, Marine Atlantic reduces the anxiety that some people may feel about taking a trip, and people who visit their Web site will feel more assured that they will be able to navigate the terminals and ferries.

Return to Section 2.2

2.3 Arrival/departure monitors and other electronic signage

Rationale

Placing monitors at eye level allows people using wheelchairs to see this information at a better viewing angle and allows people with low vision to read the screen at very close range. Proper colour-contrast for text improves clarity for all passengers and is especially important for passengers with low vision or colour-blindness. Clear visual information is also critical for people who cannot hear spoken announcements. Incorporating these universal design features gives everyone the opportunity to navigate a terminal independently where some people might otherwise require assistance from personnel.

Canadian guidelines

The *Workplace Accommodation Toolkit* contains specifications made by the CSA for installing computer monitors in an accessible format. The *Toolkit* discusses brightness and contrast levels. It states screens should be placed in people's line of vision. 'Glare screens' should be used to help minimize the amount of glare on the monitor. While the *Toolkit* discusses how to make office environments more accessible, this information can also be used to make arrival and departure monitors more accessible also.

Return to Section 2.3

2.4 Public announcements in terminals

Rationale

Providing both visual and verbal announcements is beneficial to all travellers, as travel information will be understood better when repeated and confirmed visually.

Comments from the public

- Travellers with disabilities indicated that they are anxious while waiting to depart from the terminal because they fear that they are going to miss information spoken over the public address system.

Guidelines from other countries

Terminal rail operators in Britain must install speakers so announcements can be heard comfortably in major sections of terminals. Public address systems must also be connected to assistive listening systems in these areas. Announcements must give people enough time to make any necessary changes to their travel schedules. Pages 90-91 of Train and Station Services for Disabled Passengers: A Code of Practice contains further details.

Tips for creating clear public announcements

- Speak slowly.
- Repeat messages to allow people to remember them more easily.
- Use pre-recorded messages which are clearer to understand.
- Reinforce the verbal announcement with a textual message on a display board.
- Try to minimize background noise in areas where announcements are made.
- Provide pens and paper at key points throughout the terminal to allow personnel to communicate announcements to travellers with hearing impairments.
- Ensure that all languages used to make verbal announcements means the same thing

Suggestions for communicating information to passengers

In addition to making verbal and visual announcements in terminals, transportation service providers could use more modern technologies, such as smart phones, to provide the information to all its passengers. In this regard, information could be sent by way of text messages or even ASL/LSQ videos.

Manufacturers

- 'Audiostat', by the Canadian company Smart Speaker, is an example of a product that can make public announcements clearer for all travellers. This technology changes the speaker volume depending on the current noise level in the terminal.
- Another example is the American company Innovative Electronic Designs. This company supplies public address systems that monitor noise in the facility, can "self test" to correct any errors that may exist in the system, and supply the announcement through a visual as well as verbal means. ("IEDs' Transit Public Announcement System. Computer managed Public Address System (PAS) provides centralized management." Products of IED Innovative Electronic Designs Web site, January 12, 1998, www.iedaudio.com.)
- With the current popularity of wireless technology, automated messaging is an excellent way to tell people about important travel details. 'Tel Alert UMS', created by the American company Vytek, allows messages to be sent to or received from travellers who have cellular equipment.
- Centrum Sound is an example of an American company that makes loudspeakers, amplifiers, and mixers which help create clearer announcements.

Best practices

Canadian airports making accessible public announcements: Many Canadian airports such as the Calgary, Dorval, Toronto, and Vancouver airports have installed public address systems created by Innovative Electronic Designs. These systems monitor noise levels to ensure verbal announcements are always spoken at a suitable volume for all travellers. The "monitor test system" promptly tells a terminal personnel that the system is not operating properly.

Return to Section 2.4

2.5 Information on ground transportation

Rationale

If a traveller requires communication tools such as accessible signage when dealing with carriers and navigating terminals, they will need to access those same tools when finding and arranging for ground transportation as well. Ensuring that travellers with disabilities can find ground transportation (where it is available) and can access key information about services and costs will help prevent travellers from feeling stranded at a terminal.

Guidelines from other countries

- The *Best Practice Manual for the Publication and Display of Public Transport Information* was created by the NSW (New South Wales) Ageing and Disability Department. It states the importance of using many tools such as colour contrasting, consistent and clear information, tactile markings and plain language. See www.adhc.nsw.gov.au.

REMEMBER: The Internet is a useful way to provide ground transportation scheduling and pricing information.

Return to Section 2.5

2.6 Designated seating at boarding gates and departure areas

Rationale

Designating seating within viewing distance of communication boards or personnel will allow travellers with disabilities to monitor changes to their travel itinerary or to contact personnel when they require assistance. Creating a designated seating area will also allow personnel to locate people who require additional assistance when boarding or who need to be informed of schedule changes.

Comments from the public

Complaints filed with the Agency reveal that many persons with mobility impairments believed that when they are left in an unmarked area of a terminal, personnel remain unaware that they need assistance. As a result, many experienced a long wait before being helped and feared that they might not make it to the boarding gate on time.

Guidelines from other countries

"Seating" in section B 4.4 of *Train and Station Services for Disabled Passengers: A Code of Practice* states that designated seats should be installed at different height levels. To accommodate people in wheelchairs, a space of 900 x 1350 mm per wheelchair is required. Their travelling companions should also be permitted to sit beside them. Seating areas must also be located in key areas of the building.

REMEMBER: There are many ways to promote the availability of designated seating for persons with disabilities. Depending on the amount of space in the terminal, signs can be placed on the wall, on a standing board, or even stickers on the back of each chair.

Here is an example of a designated seating sign, which shows a person with a cane at a seat, and says "Priority seats". Please offer these seats to disabled people.

Return to Section 2.6

2.7 Security at airports

Rationale

Supplying both audible and visual cues allows persons with visual impairments and persons with hearing impairments to understand what is expected of them during the security check. Clear instruction is likely to reduce the anxiety passengers feel about this process, allowing the security checks to proceed in an efficient manner.

Return to Section 2.7

3.1 Communication of equipment features

Rationale

Some travellers require extra assistance in locating the call buttons, the on-board washroom features or the safety briefing material. Taking the time to provide a thorough orientation to passengers who require it may prevent confusion about how to use the features on-board during the trip. To make use of these on-board features, passengers also require information about the equipment in a format that they can understand.

Tips for facilitating effective on-board communication

- Using the latest technology is not always the best way to facilitate better communication with passengers with disabilities. For example, pen and paper is an acceptable way to converse with travellers with hearing impairments.
- When discussing on-board equipment, be sure to speak directly to travellers and not to their attendants.
- Providing information about on-board equipment in the pre-travel period can give passengers a general understanding of equipment features.

- Many formats such as large print and Braille can be used to describe on-board equipment features. Refer to section 1.1 to learn about companies that produce Brailled documents.

Best practices

KLM Royal Dutch Airlines: To improve on-board communication, KLM flight attendants use "embossed floor plans" to inform passengers with visual impairments about the location of on-board features (i.e. the galley and the washroom) in relation to their seats. This airline also supplies booklets that give an in-depth description of on-board safety features in both Braille and large print formats. This document allows travellers with visual impairments to understand what a verbal description might not have adequately conveyed.

Return to Section 3.1

3.2 Safety videos

Rationale

By presenting safety information visually and verbally, the risk of misinformation regarding safety features and procedures is greatly reduced. One way to do this is to ensure that the audio component of the safety message is represented in visual images by checking that the safety message is complete when either the audio or the video image is turned off. This presentation of information can help all passengers remember and understand the instructions in the safety video and is critical to passengers with hearing impairments. Another way this can be accomplished is by captioning safety videos. Captioning is particularly helpful to travellers with hearing impairments and reassures them that they have not missed any critical safety information.

Guidelines from other countries

Captioning Key: Guidelines and Preferred Techniques was created by the Captioned Media Program to assist American captioning agencies in creating high quality captioned products. This guide states how text should appear on the screen, the font styles to use, when editing is acceptable, and how to determine the length of time text should remain on-screen.

Manufacturers

- To find a list of specialized companies for various types of assistive devices, go to Industry Canada's website, Assistive Device Companies.
- Line 21 Media Services Limited, of Vancouver, British Columbia, offers closed captioning services for videos. Line 21 uses a "multi-pass" approach in which

they carefully consider the timing element to ensure that the captioning flows smoothly with the rest of the video.

Return to Section 3.2