Appendix 2-1
City of Calgary: Access Design Standards
(Pages 8-9)

7. The operable parts of ParkPlus machines shall be 900 to 1,100 mm above ground and shall be accessible from a barrier-free path of travel.

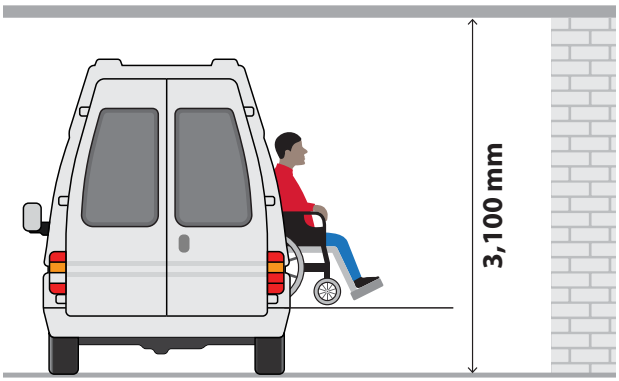
   Explanation: Universally designed ParkPlus machines ensure everyone can pay for parking easily and conveniently.

8. A barrier-free path of travel must be provided from a barrier-free entrance to all levels of a parking structure.

9. If oversized vehicles are required to drop off passengers in a parking garage, a minimum 3,100 mm vertical clearance shall be provided.

   Explanation: 3,100 mm of vertical clearance ensures that Calgary Transit Access, Calgary Transit and other vehicles that persons with disabilities frequently use have access to parkades.

Figure A.9



VERTICAL CLEARANCE

10. If "staff only" and "visitor only" parking stalls are provided, barrier-free staff parking and/or barrier-free visitor parking stalls must be equally distributed in the development.

    Explanation: The allocation of parking to staff and visitors with disabilities ensures equal access to parking stalls. The Alberta Building Code 2014 3.8.2.2.(2) contains the requirements for the number of barrier-free parking stalls that must be provided in a development.

11. Street parking stalls for people with disabilities shall be arranged so that people with disabilities do not have to disembark the vehicle in an area that is not protected from vehicular traffic.

    Explanation: a parking stall located on the left-hand side of a one-way street (for example) would require someone with a disability to disembark the vehicle in traffic. This represents a hazard. If a barrier of some kind is installed between the parking stall and the street, it may be acceptable.

Passenger loading zones

12. Passenger loading zones shall be provided where it is not feasible to position all of the barrier-free parking stalls within 50 metres of the barrier-free entrances.

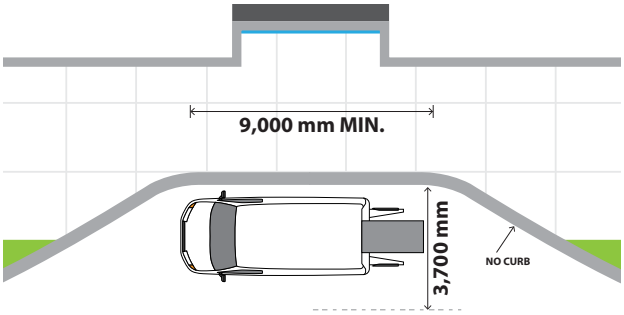
    Explanation: Loading zones are roadside drop-off areas, separated from the flow of vehicular traffic and usually located in front of buildings along busy streets or roads. Their main function is to allow passengers to get in and out of vehicles safely and conveniently. They are especially beneficial for people with mobility limitations, seniors, persons with strollers or those loading or unloading large or heavy items. Where possible, it is recommended that building entrances adjacent to passenger loading zones be covered to provide protection from precipitation and to maintain a slip-free barrier-free path of travel.

13. If provided, passenger loading zones shall be located within 50 metres of a building's main entrance. These loading zones shall have a minimum width of 3,700 mm and a minimum length of 9,000 mm.

14. If one or more passenger loading zones are provided, at least one shall be clearly marked for use by people with disabilities.

    Explanation: Passenger loading zones provide safe and easy access for persons with disabilities. Please refer to the most recent Barrier-Free Design Guide for diagrams of passenger loading zones. The signage requirements of the Alberta Building Code 2014 3.8.2.2.(4) also apply.

Figure A.14



15. Where Calgary Transit Access or Calgary Transit vehicles stop near a building entrance, at least one passenger loading zone shall be designed in accordance with the Alberta Building Code 2014 3.8.2.2.(3), Calgary Transit requirements and these standards.

    Explanation: It is essential that parking areas be accessible to vehicles that people with disabilities may use (e.g. adapted vans, accessible taxis, Calgary Transit Access vehicles and Calgary Transit vehicles). Loading zones must have barrier-free access to exterior barrier-free paths of travel. The Alberta Building Code 2014 3.8.2.2.(3) discusses the requirements for access aisles, curb ramps and clearance. A curb ramp allows for safe and easy passage to and from barrier-free paths of travel for people with a mobility disability. The curb ramp shall be designed in accordance with section B 34-41 of these standards.

Signage

16. The international symbol of access shall be painted on the pavement of all off-street barrier-free parking stalls with non-slip paint and displayed with a vertically mounted sign conforming to the height requirements of Alberta Building Code 2014 3.8.2.2.(4).

    Explanation: Proper signage ensures that parking stalls are easily identifiable and accessible to persons with disabilities. It is important that the international symbol of access painted on the stall does not occupy the entire area. The more painted surfaces there are, the more likely the parking stall may become slippery.

Figure A.16

17. If the location of designated parking stalls is not obvious or is not visible from a distance, directional signage shall be provided.

    Explanation: Directional signage ensures safe and convenient navigation to accessible parking spots. Directional signage that conforms to the Alberta Building Code 2014 Figure A-3.8.3.1.(1) shall be placed along the route to accessible parking stalls.

Appendix 2-2
City of Winnipeg: Accessibility Design Standards
(Pages 102-103)

2.3.2 Passenger Loading Zones

RATIONALE

Passenger loading zones are important features for individuals who may have difficulty walking distances or those who use parallel transit systems. *Accessible* transit vehicles typically require *space* for the deployment of lifts or *ramps* and overhead clearances. Protection from the *elements* will be beneficial to all users and particularly those that may have difficulty with mobility.

It is beneficial to provide interior and exterior waiting areas adjacent to passenger loading zones, preferably with *clear* sight lines to approaching vehicles.

APPLICATION

Accessible passenger loading zones shall be identified with *signage* complying with 'Provincial Highway Traffic Act' loading zone signage.

Where passenger loading zones are provided, at least one shall comply with this section.

If the passenger loading zone is a designated Handi-Transit stop zone, it shall comply with all relevant municipal bylaws.

DESIGN REQUIREMENTS

Passenger loading zones shall:

- be on an *accessible route* complying with Section 1.1.3 Accessible Routes, Paths and Corridors;
- provide an *access aisle* at least 2000 mm (78-3/4 in.) wide and 7000 mm (23 ft.) long, adjacent and parallel to the vehicle pull-up *space*;
- have a *curb ramp* complying with 2.1.5 where there are curbs between the *access aisle* and the vehicle pull-up *space*; and
- have a minimum vertical clearance of 3600 mm (11 ft. - 10 in.) at the loading zone and along the vehicle access route to such areas to and from the *site entrance*s.

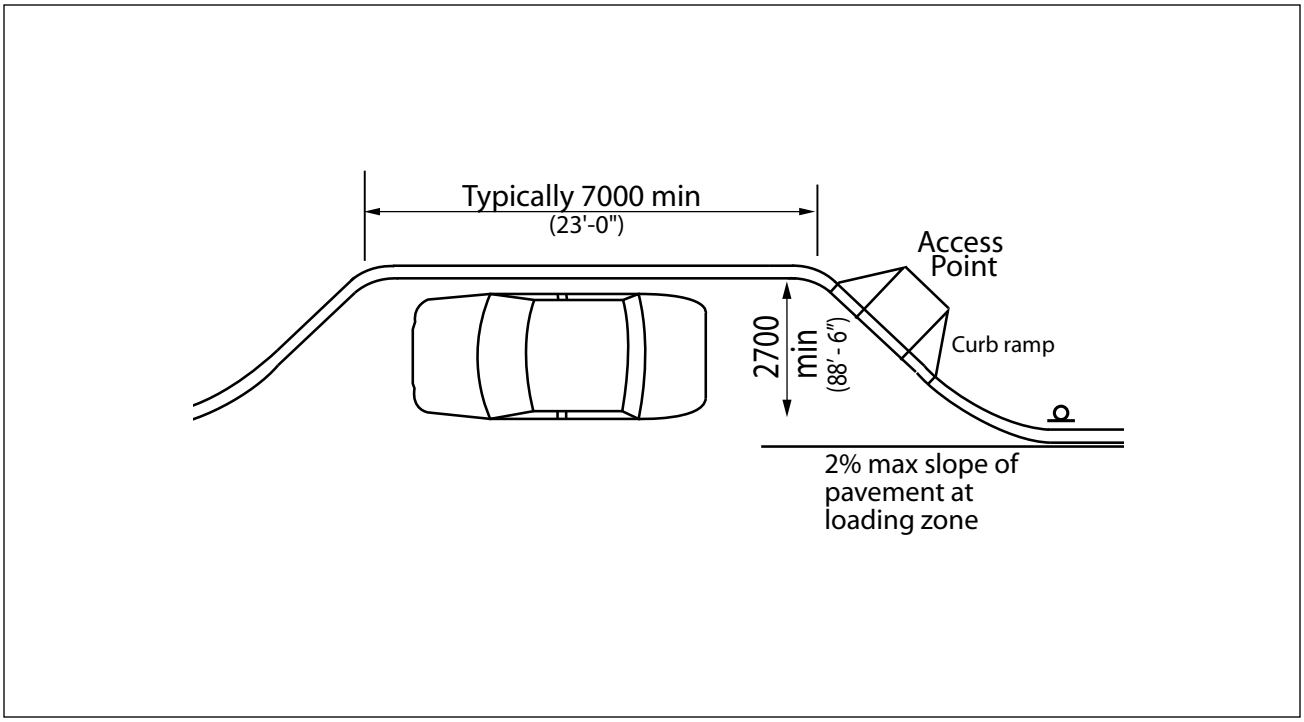


Figure 2.3.2.1 Off-*Street* Lay-by Passenger Loading Zone

2.3.2 Passenger Loading Zones (continued)

RELATED SECTIONS

1.1.1 Space and Reach Requirements
1.1.2 Protruding and Overhead Objects
1.1.3 Accessible Routes, Paths and Corridors
1.2.1 Texture, Finishes and Colour
1.2.4 Signage
1.2.6 Detectable Warning Surfaces
2.1.1 Exterior Ground Surfaces
2.1.2 Exterior Lighting
2.1.3 Streetscape
2.1.5 Curb Ramps and Truncated Dome Detectable Warning Surfaces

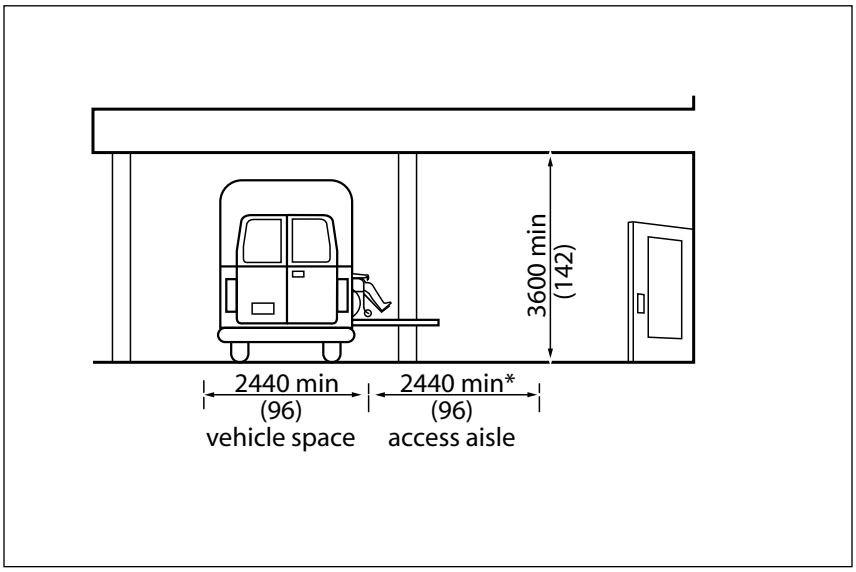


Figure 2.3.2.2 Height Clearances at Passenger Loading Zone

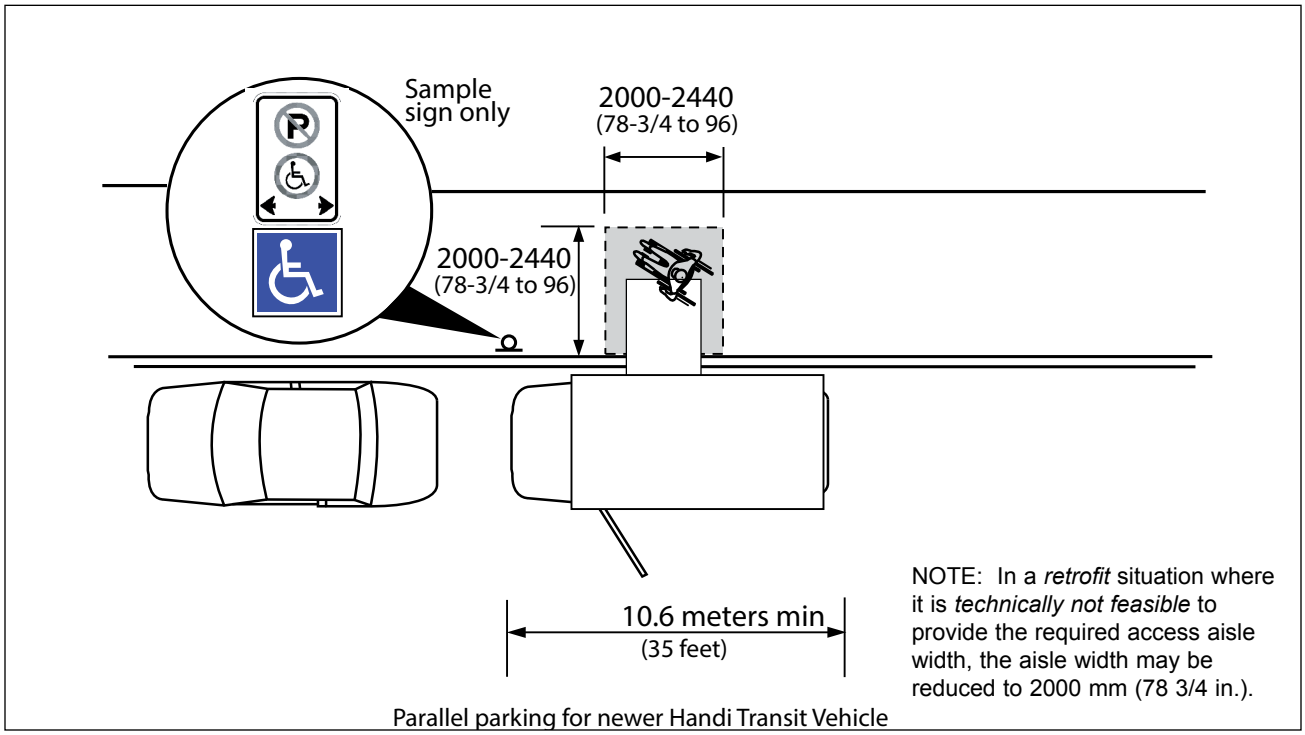


Figure 2.3.2.3 On-*Street* Passenger Loading Zone

Appendix 2-3
City of Ottawa: Accessibility Design Standards
(Pages 66-68)

Passenger Loading Zones

3.2

Application

This section applies to exterior passenger loading and drop-off zones where passengers transfer from vehicles to a pedestrian area which provides an accessible route to a facility.

Passenger loading and drop-off zones are important features for:

- people who have difficulty walking long distances or have limited stamina;
- users of mobility aids; and
- people who travel with companions or caregivers (e.g., person with vision loss or cognitive disability, the very young, and seniors).

Reference

Sec. 2.7	Tactile Walking Surface Indicators
Sec. 3.3	Exterior Paths of Travel
Sec. 3.4	Curb Ramps and Depressed Curbs
Sec. 5.7	Lighting
Sec. 5.8	Signage and Wayfinding

Note

Transit stops, shelters and related amenities are not classified as part of passenger loading zones.

Refer to Section 6.20 Public Transit for more details.

3.2.1 Design and Layout

a. locate the Passenger Loading Zone (PLZ) as close as possible to the nearest accessible entrance or within 30 metres (maximum);
b. locate the PLZ away from any traffic flow and design so that users avoid entering any adjacent vehicular routes and drive aisles;
c. where practical, provide overhead protection (e.g., a canopy to protect users from weather conditions) with clearance (i.e., vertical dimension) of 3600 mm (minimum) throughout vehicular pull-up space and passenger loading zone;
d. include a side access aisle that **(Figure 28)**:
    i. is adjacent, parallel and at the same level as the vehicular pull-up space;
    ii. is 2440 mm wide by 7400 mm long (minimum);
    iii. provides a clearance height of 3600 mm (minimum) at the vehicle pull-up space and along the vehicle access and egress routes; and
    iv. provides diagonal pavement markings (e.g., yellow or white colour and are clearly visible through use of high tonal contrast compared to surface), extending the full length of the space;
e. provide at least one curb ramp, for users of mobility aids, where there is a change in level; and
f. where the accessible route and the access aisle are not separated by a curb, consider installing tactile walking surface indicators (TWSIs) or other warning features (e.g., bollards). If using TWSIs, ensure that they:
    i. are detectable by foot or cane;
    ii. are clearly visible through the use of high tonal contrast compared to adjacent mounting surface; and
    iii. extend across the full length of the space.

3.2.2 Vertical Signage

a. mark with the International Symbol of Accessibility to formally designate passenger loading and drop-off zones;
b. ensure size of 300 mm wide by 600 mm high (minimum) **(Figure 29)**;
c. mount at height of 1500 mm to 2000 mm (centre) (e.g., wall or post-mounted), from ground / floor; and
d. provide information text, compliant with City By-law requirements (e.g., “Accessible Loading Zone / Zone D‘Embarquement Accessible”).

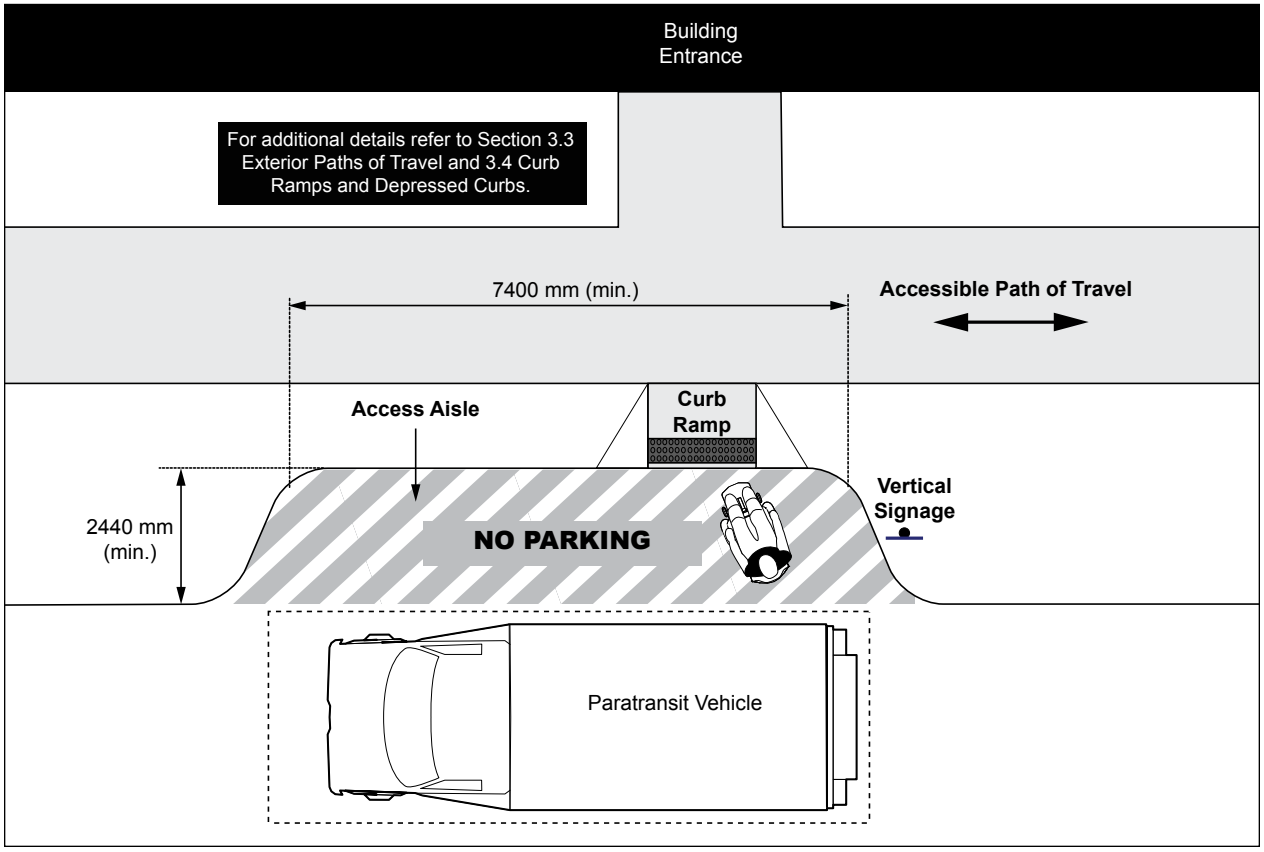


Figure 28: Passenger Loading Zone - Plan View

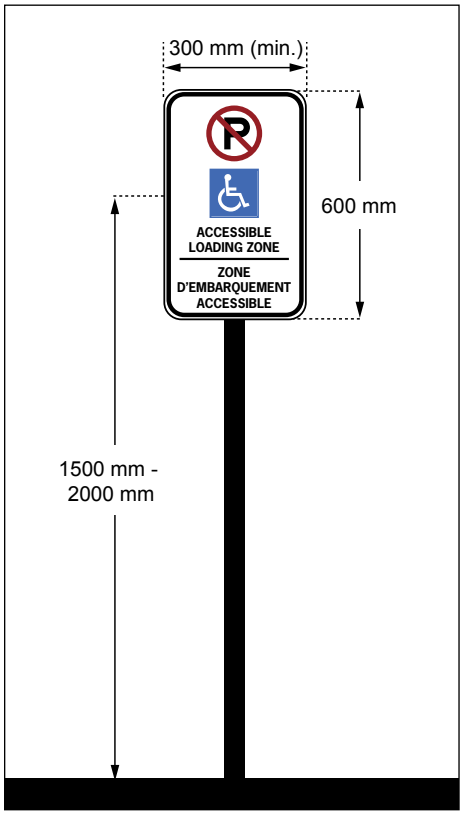


Figure 29: Accessible Loading Zone Vertical Signage

Appendix 2-4
City of Edmonton: Access Design Guide
(Pages 15-17)

C.2. ON STREET PARKING AREAS

C.2.1 On street parking stalls for people with *disabilities* shall be arranged so that they can exit the vehicle in an area that is safe from vehicular traffic.

C.2.2 *Barrier-free* and courtesy parking stalls in parking lots and streets shall be located adjacent to sidewalk *curb ramps*, which are located in a 'no parking' zone.

Note: A *curb ramp* allows for safe and easy travel in a *barrier-free path of travel*.

C.2.3 EPark machines shall be located on a *barrier-free path of travel* and adjacent to parking stalls (designated or public). The operable parts shall be between 800 and 1200 mm above ground.

Note: Universally designed EPark machines ensure everyone can pay for parking easily and conveniently.

C.2.4 Ensure that EPark machines are not placed on raised platforms or obstruct the path of travel along sidewalks.

C.3. PASSENGER LOADING AND DROP OFF ZONES

C.3.1 A dedicated passenger loading zone/lay-by that doesn't conflict with the drive aisle, parking stalls and other loading zones shall be provided for support vehicles.

Note: Design of this space shall consider the use of facility and different types of vehicles (buses, DATS – Disabled Adult Transit Service, rear/side loading vehicles) that will be used for drop off.

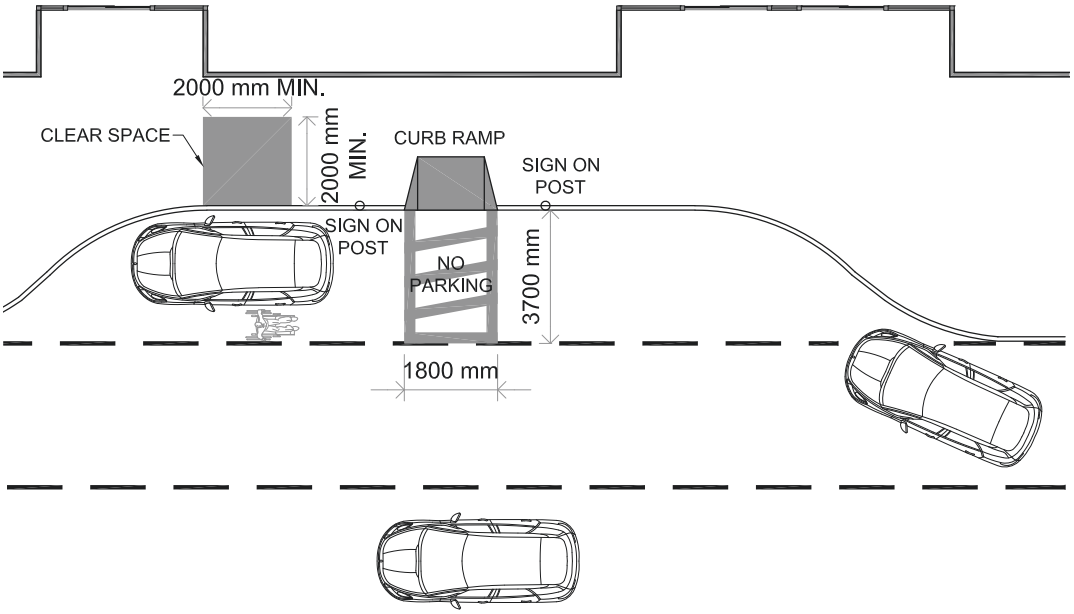


Figure C.3.1

C.3.2 The loading and drop off zone shall be minimum 3700 mm wide, 9000 mm long and located within 50 m of a building's *barrier-free* entrance. Provide *curb ramp* to access sidewalk from the dedicated loading zone and a *Tactile Walking Surface Indicator* with *colour contrast*.

Note: Loading zones are roadside drop-off areas, separated from the flow of vehicular traffic and usually located in front of buildings along busy streets or roads. Their main function is to allow passengers to get in and out of vehicles safely and conveniently. They are especially beneficial for people with mobility limitations, persons with strollers or those loading or unloading large or heavy items.

C.3.3 Where possible, it is recommended that building entrances adjacent to passenger loading zones be covered to provide protection from precipitation and to maintain a slip-free *barrier-free path of travel*.

C.3.4 All loading and drop off spaces dedicated for use by people with *disabilities* shall be clearly marked.

C.3.5 A minimum 3200 mm vertical clearance shall be provided in drop off zones to accommodate oversized vehicles.

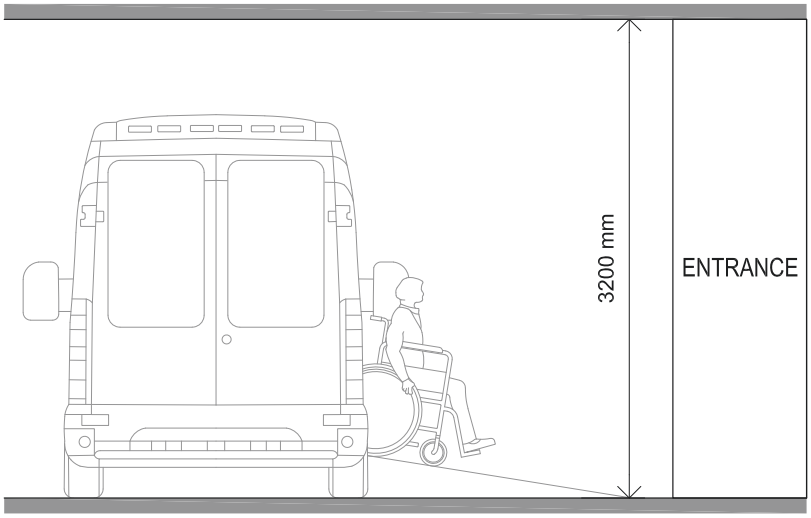


Figure C.3.5

C.3.6 Seating areas with views to drop off/pick up areas, *accessible* to those with limited mobility, shall be provided adjacent to the barrier-free entrance. Best practice is to provide protection from sun, snow, rain and wind.

C.4. PEDESTRIAN INTERFACE BETWEEN PARKING AND BUILDINGS

C.4.1 A *barrier-free path of travel* must be provided from a *barrier-free* entrance or lobby to all levels of a parking structure and shall have *colour contrast* and distinctive patterns where there are changes in level and surface material.

C.4.2 Lighting shall be provided around key areas such as entrances, *shared pathways* and access to parking.

C.5. PARKING SIGNS

Content developed in conjunction with Safety Codes Council - Barrier-Free Design Guide - Fifth Edition - Summer 2017

C.5.1 Parking stalls dedicated for use by persons with *disabilities* shall be clearly identified using the International Symbol of Accessibility. Signage shall include the words "Permit Required".

Note: The vertical sign shall be located so that it is visible to the driver of a vehicle approaching the space, but does not create a protrusion or a sightline or viewing hazard.

C.5.2 International Symbol of Accessibility shall be marked on the pavement of all barrier-free parking stalls using non-slip paint. The painted pavement signs shall be close to the drive aisle to ensure they are easily visible.

Appendix 2-5
City of Toronto: Accessibility Design Guidelines
(Pages 121-125)

1.3.2. Passenger Pick-Up and Drop-Offs

Rationale

Passenger pick-up and drop-offs (PPUDO), provide designated areas for vehicles to safely stop for a limited amount of time and allow persons to board onto or disembark from the vehicle. They are typically designed with *curb ramps* or *depressed curbs* to allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between the *access aisles* and the exterior *accessible path of travel*, or *pedestrian clearway*.

Application

The scope of this section applies to *passenger pick-up and drop-offs (PPUDO)* provided for personal vehicles, public transit vehicles such as TTC Wheel-Trans bus, taxis or ride-shares, and valet or service parking.

Related Sections

- "1.1.1. Exterior Accessible Paths of Travel"
- "1.1.4. Exterior Paths of Travel to Entrances and Exits"
- "1.2.4. Curb Ramps"
- "1.2.5. Depressed Curbs"
- "3.2.1. Signage and Wayfinding Systems"

Related References

- [Reserved]

Key Considerations

Location

PPUDO's should be located within close proximity to an *accessible entrance* to ensure persons can access the building safely and efficiently.

Accessible Path of Travel

An exterior *accessible path of travel* should be provided at *PPUDO's* to allow for a continuous, unobstructed route providing exterior access to elements and spaces.

Slopes

Where slopes are provided at *PPUDO's,* they should be designed to have a *gradual transition* as they allow for better control and ease of movement for persons using *mobility devices*.

Surfaces

A level ground surface should be provided to reduce the risk of tripping hazards and the potential discomfort experienced by persons using *mobility devices* or a *white cane*.

The discomfort experienced is typically caused by vibrations when rolling over surface openings such as gratings, grilles, expansion joints, paved or interlocking stones, and/or ground upheaval and settling. Where gratings and grilles are provided, the openings should be reduced in size to prevent canes, crutches or the wheels of *mobility devices* from becoming trapped within and creating a tripping hazard.

Access Aisles

PPUDO's should provide an *access aisle* to allow for a designated area where a person using a *mobility device* can safely transfer from their parked vehicle.

Pavement Markings

PPUDO's should provide pavement markings to identify the *access aisle* from the vehicle pull-up space.

Dropped Curbs

PPUDO's should provide *curb ramps* or *depressed curbs* to allow persons using *mobility devices* to overcome the transition between levels at grade and elevation changes between an exterior *accessible path of travel* and the *access aisle*. Some *accessible* vehicles require curbs to have an area to deploy their *ramp*. Designers should consult their clients when designing a *PPUDO* to understand if a *curb ramp* or *depressed curb* should be provided.

Bollards

Bollards should be provided at *depressed curbs* to protect persons on an exterior *accessible path of travel*.

Signage

PPUDO's should provide *signage* that identifies the area as an area for vehicles to safely stop for a limited amount of time to allow persons to disembark from the vehicle. *Signage* should also identify emergency routes that are connected to the area.

Emergency Routes

Where emergency routes designed for emergency vehicles are provided, they should not obstruct an exterior *accessible path of travel* to *accessible entrances*.

Design

The design should provide space for larger vehicles such as a TTC Wheel-Trans bus, *accessible* taxi or van to access the *lay-by* space and include overhead clearance for all *accessible* vehicles from the ground to any overhead objects, such as trees, *signage* and/or canopies.

Requirements

(1) Location:

PPUDO's should be located:

(a) Within 30 metres from the main *accessible entrance* and/or any other *accessible entrances*; and

(b) Within close proximity to a *ramp*, when a *ramp* is a part of the *entrance*.

(2) Accessible Path of Travel:

PPUDO's should provide an *accessible path of travel* that:

(a) Meets the criteria in section "1.1.1. Exterior Accessible Paths of Travel".

(3) Slopes:

Where slopes are provided at *PPUDO's,* they should have:

(a) A 1:20 (5%) maximum *running slope*; and

(b) A 1:50 (2%) maximum *cross slope*.

(4) Surfaces:

PPUDO's should provide surfaces that:

(a) Are level, firm, stable and slip-resistant; and

(b) Have openings that:

(i) Are located outside of the *PPUDO* and *access aisles*;

(ii) Allow for drainage;

(iii) Are oriented perpendicular to the direction of travel where elongated; and

(iv) Do not allow passage of an object that has a diameter of 13 mm maximum.

(5) Access Aisles:

PPUDO's should provide an *access aisle* that:

(a) Is located adjacent and parallel to the vehicle pull-up space;

(b) Connects to an exterior *accessible path of travel*;

(c) Is 2440 mm wide minimum and extends the full length of the *PPUDO*;

(d) Is marked with slip-resistant, high *colour/brightness contrast* diagonal lines; and

(e) Has an overhead clearance that is 5000 mm minimum.

(6) Pavement Markings:

PPUDO's should provide pavement markings that:

(a) Have painted lines and/or distinctive paving surfaces that have:

(i) 150 mm thick lines; and.

(ii) 400 mm of space between the center-line of diagonal lines for the *access aisles*; and

(b) Are exempt in locations where there is not a paved or poured surface, such as in parking lots found in the *trail* systems or parks.

(7) Dropped Curbs:

PPUDO's should provide *dropped curbs* with *tactile attention indicators*, "Figure 1.3.2-C Dropped Curbs", that include:

(a) Curb ramps that meet the criteria in section "1.2.4. Curb Ramps"; and/or

(b) Depressed curbs that meet the criteria in section "1.2.5. Depressed Curbs".

(8) Bollards:

PPUDO's should provide bollards that:

(a) Are provided at *depressed curbs*;

(b) Have a clear width of 1500 mm minimum between bollards; and

(c) Are removable for ongoing *maintenance* operations.

(9) Signage:

PPUDO's should provide *signage* that:

(a) Identifies the *PPUDO* and that:

(i) Has the International Symbol of Access; and

(ii) Has text that states, "Passenger Pick-Up and Drop-Off Only, No Parking";

(b) Identifies emergency routes; and

(c) Meets the criteria in section "3.2.1. Signage and Wayfinding Systems".

(10) Emergency Routes:

Where emergency routes are connected to *PPUDO's,* they should:

(a) Not obstruct an exterior *accessible path of travel* to *accessible entrances*.

(11) Design:

PPUDO's, "Figure 1.3.2-A PPUDO - Design" and "Figure 1.3.2-B Overhead Clearance", should be designed to have:

(a) Overhead clearance that is 5000 mm minimum, "[R-1.3.2. (11)(a)]";

(b) An *access aisle* that:

(i) Is 7925 mm long by 3400 mm wide minimum;

(ii) Is located adjacent and parallel to the vehicle pull-up space; and

(iii) Does not overlap the exterior *accessible path of travel* on the *sidewalk*; and

(c) A vehicle pull-up space that:

(i) Is 7925 mm long by 3400 mm wide minimum; and

(ii) Is located adjacent and parallel to the *access aisle*.

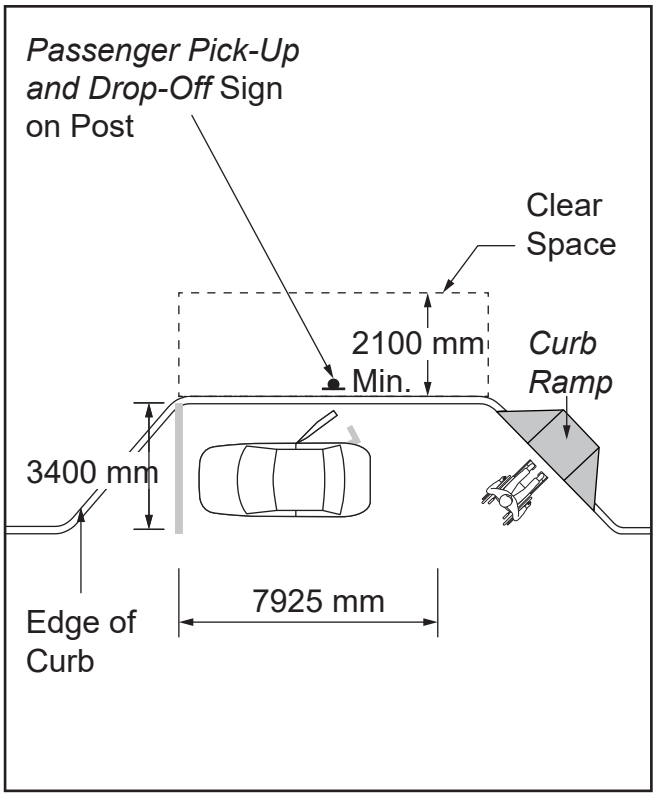


Figure 1.3.2-A PPUDO - Design

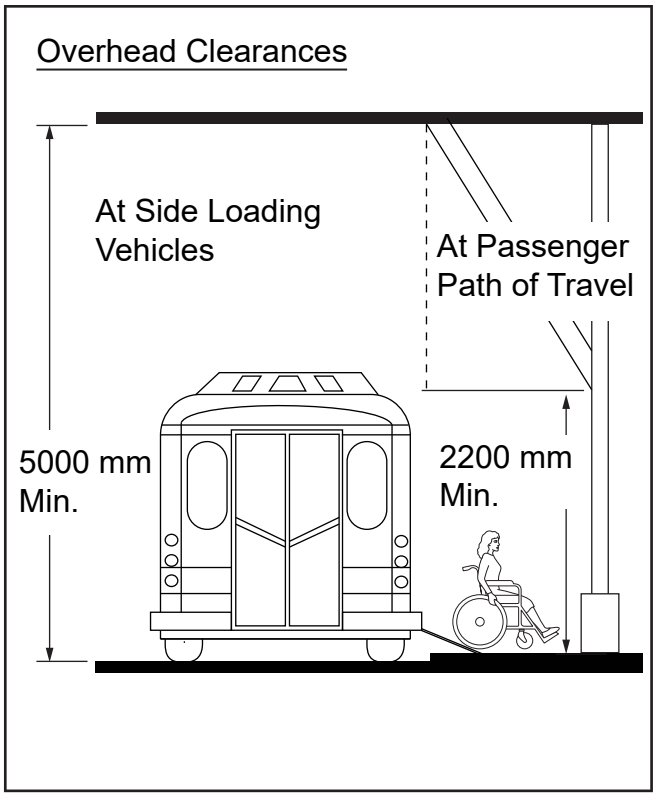


Figure 1.3.2-B Overhead Clearance

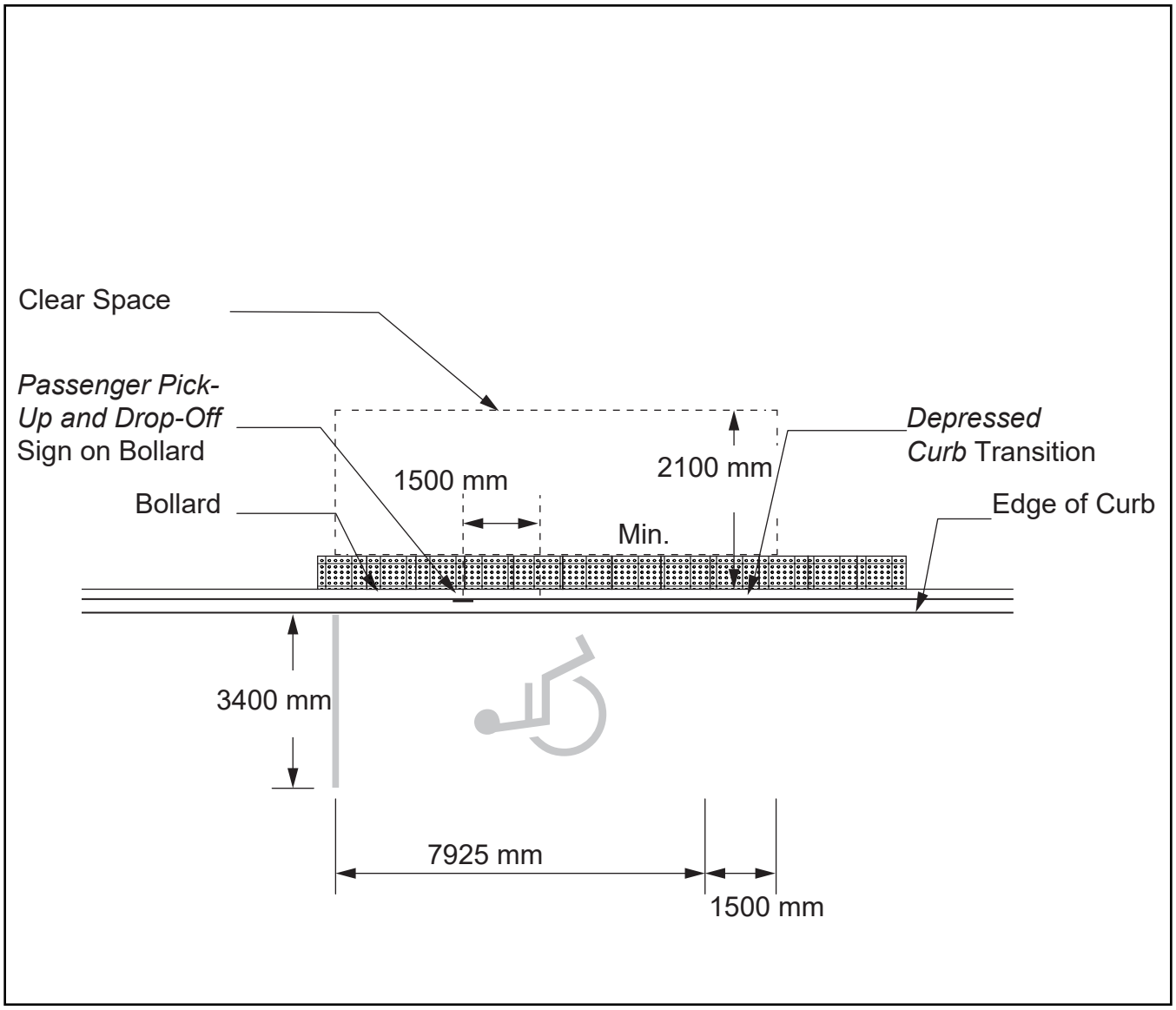


Figure 1.3.2-C Dropped Curbs