

**DRAFT**

# Bicycle Parking Handbook



A Developer's Guide

# Bicycle Parking Handbook



THE CITY OF  
**CALGARY**

PLANNING & TRANSPORTATION POLICY

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# Introduction

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Cycling is an increasingly popular mode of transportation in Calgary, and cyclists require dedicated parking facilities at their destination. Bicycles locked to trees, posts, fences, or other stationary objects, are evidence of the need for bicycle parking. Rarely used bicycle parking may be of a type that offers little security or an indicator of poor location.

This guide provides information on the proper design and placement of bicycle parking and provides tips for planning new parking or improving existing parking.

## Background

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In 1992 The City of Calgary began requesting the provision of bicycle parking facilities in specific types of new developments at the applicant's expense and on a voluntary basis.

Improper bike racks deter cyclists from using them, which may ultimately lead to a reduced usage of the bicycle as an alternative mode of transportation. Developers, architects, and building owners needed information to assist in making an informed decision on adequate parking facilities. As recommended in the Calgary Cycle Plan (1996), The City has been developing bicycle parking requirements for inclusion in the City of Calgary Land Use By-law.

These guidelines have been developed to assist developers on choosing the **type and location** of bicycle parking facilities. Draft requirements for the **amount** of bicycle parking are provided to support the increasing usage of bicycles for both recreation and utilitarian purposes.

# Bicycle Parking Classes

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## CLASS 1

Class 1 facilities are lockers or controlled areas where a bike can be stored. These facilities will protect bikes from adverse weather conditions, vandalism and theft by enclosing them in secure places. They are suitable for long-term parking at key cycling destinations, such as high-density residential complexes, employment centres and schools. Examples include the “Bike ‘N’ Ride” lockers provided at LRT stations and bike “cages” in select downtown parkades. Protection from inclement weather is an important amenity for cyclists.



CANYON MEADOWS LRT LOCKERS



BIKE CAGE AT CITY HALL

## CLASS 2

Class 2 facilities include any device that is specifically designed to park bikes. The preferred “bike racks” allow cyclists to secure both wheels and the bike frame to the rack. These facilities are primarily for short term use at a variety of destinations, including commercial and recreation centres, shopping centres, restaurants and schools.



BICYCLE PARKING AT  
EAU CLAIRE YMCA

Most land uses require a combination of Class 1 and Class 2 parking spaces.



U-RACKS AT CANYON  
MEADOWS LRT STATION

## Class 1 Facilities

### LOCKERS

Lockers provide a very high level of security as well as protection from the elements. This type of secure bike parking is particularly suitable for locations where there is no indoor secure parking available for commuters. Lockers are important to commuter cyclists who may have expensive bicycles and require secure storage all day long. The lockers should be designed for long life, low maintenance and easy replacement and repair. They should be totally enclosed and finished to prevent weathering and deterioration.

To prevent vandalism, lockers should be made of sturdy materials that can handle abuse. Plastic lockers are more expensive than metal lockers, but they offer better security. Hinges should run the full length of doors to prevent lockers from being broken into. Locking mechanisms should be located at three points on the locker door: the top, bottom and the middle. In addition, lockers must be opaque so that thieves cannot target expensive bikes and accessories left in lockers.



LONG TERM RENTAL  
LOCKERS AT CANYON  
MEADOWS LRT STATION



DAY-USE BIKE LOCKERS AT  
ANDERSON LRT STATION

All lockers should have a high quality built-in locking mechanism. This provides several benefits:

- Lockers can be rented out for a nominal monthly fee;
- Locker availability is guaranteed for users; and
- Better security is provided than that offered by personal combination locks. With personal locks, lockers are open when not in use which could result in the vandalism of locker interiors.



**BIKE LOCKERS AT  
FISH CREEK LRT STATION**

Cyclists typically pay a key deposit and rent a locker by the month or for longer periods. Rental fees are generally set at a level to fund long-term administration and maintenance costs over several years. Typical rental fees range from \$10 to \$15 per month, with a \$20 to \$40 refundable key deposit.

## **INSTALLATION GUIDELINES**

Lockers should:

- be situated to allow easy access for bicycles;
- have a 2.0 m clearance between the locker doors and any barriers;
- have an aisle width of 2.0 m between locker units; and
- be anchored with bolts to either concrete or asphalt surfaces. With a concrete surface, preferably have a concrete pad mount; with an asphalt surface, preferably have an aluminum floorplate.

To ensure proper installation, please check with the manufacturer prior to installation.

## CONTROLLED ACCESS PARKING AREAS

A cost effective alternative to individual bike lockers is a controlled access area offering a high level of security for cyclists. Controlled access areas may include dedicated rooms in a building or a fenced-off area only accessible to the bicycle owners. Access can be controlled by magnetic card readers, passwords, other electronic access control systems or attendants. For maximum security, an attendant can monitor and check-in bikes. A form of identification would be presented to the attendant in order to retrieve a bike.



BIKE CAGE AT CITY HALL



BIKE ENCLOSURE AT CENTENNIAL PARKADE

The room or cage should also contain bike racks to support the bicycles and to provide extra security against theft. Vertical wall-mounted racks may be used to increase space efficiency.

To reduce the potential for automobile/bicycle conflicts in parking structures, controlled access rooms or cages should be located no lower than the first level below grade. Due to the size of bicycles compared with automobiles, bike parking can be provided with minimal sacrifice of automobile spaces. Bicycle parking can also be located in spaces not suitable for automobile parking such as under stairs, under ventilation ducts and in the corners of parking areas.

**BIKE ENCLOSURE AT  
MONENCO BUILDING**



Again, cyclists typically pay a key deposit and rent a space by the month or for longer periods. The Calgary Parking Authority, for example, charges \$30 for the key deposit (refundable) and \$10 per month at the Centennial Parkade and City Centre Parkade bike enclosures.

## **LOCATION**

Class 1 parking facilities should be located on site or within 250 metres of the site. Daily bicycle commuters are generally willing to walk a short distance if they are confident the parking is secure.



**BIKE PARKING AT CITY  
CENTRE PARKADE**

## Class 2 Facilities

### **RACK SELECTION**

All bicycle racks are not created equal. The old style “wheel-bender” racks only hold the front or rear wheel of the bicycle and can cause significant damage to bicycles that do not remain upright. Bicycles attached to a “wheel-bender” rack are more easily stolen because only the front wheel can be locked to the rack. This section of the guide is intended to identify the preferred type of Class 2 bicycle racks for use in the City of Calgary.

U-racks are the preferred type of bike rack. They offer several advantages over other styles:



**U-RACKS AT FISH CREEK  
LRT STATION**

- U-racks allow the cyclist to secure the frame and both wheels to the rack, providing more security and deterrent against theft and vandalism;
- A standard U-lock can be used to secure a bicycle to the U-rack;
- Bikes are less likely to fall down since U-racks are large enough to support the frame and both wheels in an upright position;
- Each U-rack can accommodate two bicycles, one on each side; and
- U-racks do not have any sharp edges or projections where clothing can be caught or where users may suffer injury.

U-racks with creative artistic design elements maintain the functionality while at the same time improving street aesthetics. Examples of artistically designed racks in Calgary include those on Stephen Avenue Mall and the “Bike” bike racks in Kensington.



U-racks with square tubing are preferred to U-racks with circular tubing because square tubing provides better protection from cutting with pipe tube cutters. Flat steel U-racks should not be allowed because they are easier to cut.

U-RACKS ON  
STEPHEN AVENUE MALL



Ribbon or wave racks are not preferred because it is difficult to secure bicycles onto the racks, and it provides only one point of contact for stability and locking. Many of these racks are popular because they are aesthetically pleasing, however, they provide poor safety and security.



MULTIPLE ATTACHED RACK  
AT GROCERY STORE

## INSTALLATION GUIDELINES

The type of U-rack mounting used is dependent on the situation:

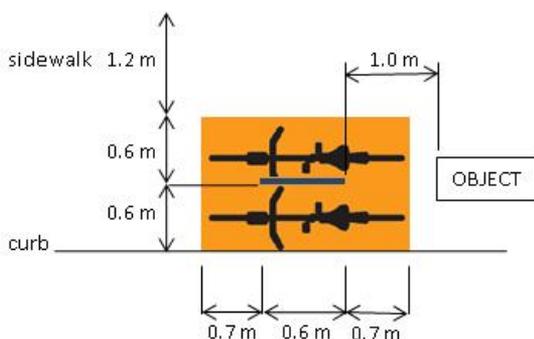
- Bolted mounting is recommended for U-racks installed in concrete
- Concrete bases are recommended for U-racks installed in dirt or asphalt.
- U-racks should not be fastened to interlocking pavers, stones or other easily removable surfaces.



U-racks should be installed so that they do not interfere with pedestrian or traffic flow. Dimensions include:

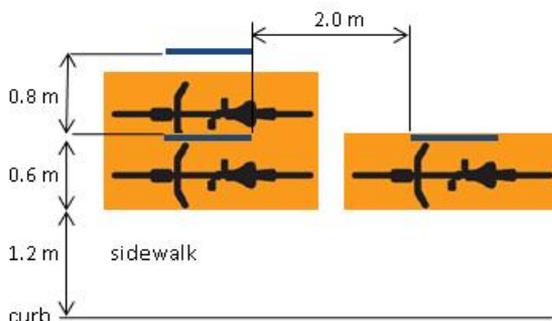
- 0.6 metres min clearance from U-racks for bicycles,
- 1.2 metres pedestrian carriageway
- 1.0 metres length-wise clearance to obstructions
- 0.8 metres between adjacent parallel U-racks

This will ensure that the parked bicycles do not become an obstruction to pedestrians.



#### PERPENDICULAR INSTALLATION

If U-racks are installed in parallel, one in front of another they should be spaced a minimum 2.0 metres apart.



#### MULTIPLE PERPENDICULAR INSTALLATIONS

## LOCATION

Bike parking should be located in well-lit and highly visible locations to ensure security and personal safety. Bike parking facilities that are visually or physically isolated from public view will be underused and more prone to vandalism and theft. For convenience, bike parking should be located on the same site as the building. Parking spaces should be located within 15 m of the main entrance of a site and closer to the entrance than the closest car parking space. If there is more than one building on a site or more than one main entrance, parking spaces should be provided to serve all main entrances.

Class 2 parking should be protected from the weather where possible. Covered parking can be in the form of an overhang, an awning, a covered walkway or a freestanding roof. The cover should extend at least 0.6 m beyond the parking area to prevent the wind from blowing rain and snow onto bikes. In addition, parking should be located away from roof drip areas to prevent discomfort and harm to cyclists from dripping rain and falling icicles.

Bicycle parking located within the street allowance should be placed adjacent to the curb in the utility right-of-way where the street furniture, light poles and trees are located. Bike racks should be oriented so that when placed in the rack, bikes are parallel the sidewalk. Bike parking on curb extensions reduces bike/pedestrian conflicts on sidewalks and enhances the traffic calming effects of curb extensions.

On-street bike parking reduces the competing uses for sidewalk space and recognizes the bicycle's role as a vehicle.

## By-law Requirement (draft)

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The City of Calgary is in the process of updating its Land Use By-law. In the interim, bicycle parking can be made a condition of development permit approval for applicable types of development. As part of this update, the need for bicycle parking is being reviewed. The following table should be used as a guideline to determine the amount of bicycle parking to provide.

In addition, some Class 2 parking spaces should be reserved for couriers in the downtown. Parking for couriers should be clearly marked so that long-term parking does not occupy courier parking spaces. These dedicated spaces should be located within 10 m of the main entrance used by couriers.

Refer to Land Use Bylaw 1P2007 for  
“bicycle parking requirements”  
Division 6 - Requirements for Motor  
Vehicle Parking Stalls, Bicycle Parking  
Stalls and Loading Stalls.

Land Use Bylaw 1P2007

<http://lub.calgary.ca/>

## Bicycle Rack Distributors and Manufacturers

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Habitat Systems Inc. - [www.habitat-systems.com](http://www.habitat-systems.com)  
Distributor for Dero Bike Racks [www.dero.com](http://www.dero.com)  
Urban Racks - [www.urbanracks.com](http://www.urbanracks.com)

Custom Park & Leisure - [www.custompark.com](http://www.custompark.com)

For additional information or guidance, please contact

Transportation Solutions Group  
Transportation Planning  
The City of Calgary

For more info go to:

[http://www.calgary.ca/Transportation/TP/Pages/Cycling/  
Bicycle-Parking/Bicycle-parking.aspx](http://www.calgary.ca/Transportation/TP/Pages/Cycling/Bicycle-Parking/Bicycle-parking.aspx)

or contact 3-1-1.

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