

City of Lowell Bicycle Parking Design Guidelines

On August 11, 2015 Lowell became the first city in Massachusetts to adopt a Complete-Streets Policy. The Lowell Bike Coalition, in partnership with the City of Lowell, and the Lowell National Historic Park, want to encourage more people to come to downtown Lowell on their bikes. In fact, many of the challenges that the downtown faces (vehicle circulation, parking, and pedestrian/car conflicts) could be solved if more people rode their bikes. This project seeks to address one of the major obstacles to attracting cyclists to the downtown area: the lack of adequate bicycle parking.

The lack of a secure parking space keeps many people from using their bikes for basic transportation. Leaving a bicycle unattended, even for short periods, can easily result in damage or theft. Finding a bike rack that doesn't work or isn't conveniently located makes for a frustrating experience. The purpose of this document is to assist with the selection and placement of appropriate bicycle racks for short term parking. Four major components will be discussed.

- 1) The rack element. This device supports the bicycle.
- 2) The rack. It is important to understand how bikes interact with each other when rack elements are assembled together.
- 3) Combining of multiple racks into a bicycle parking lot.
- 4) Locating the rack, and the relationship of the rack to the building entrance it serves and the cyclists' approach to that entrance.

Features of a good bike rack include:

- Stable structure and permanent foundation that is securely anchored in the ground
- Support for an upright bicycle by its frame in two (2) places
- Design that prevents the bicycle from tipping over
- Ability to support a variety of bicycle sizes and frame shapes
- Space to secure the frame and one or both wheels to the rack
- Keeps bike wheels on the ground

Bicycle racks must NOT:

- Support the bicycle at only 1 point
- Allow the bicycle to fall, which can damage the bike and block pedestrian right-of-way
- Have sharp edges, that can be hazardous to the visually impaired
- Support the bicycle by one wheel
- Connect to each other with a bar across the top (that blocks certain handlebars and baskets)
- Suspend any part of the bike in the air

The rack should be easily and independently accessible and accommodating for a bicycle at least six feet in length and two feet wide while still allowing access to each space when parking area is full.

Choosing a Location:

Location is factor in the utility of a bike rack. The rack should be safe and accessibly located.

Safe locations:

- In full view, maximizing visibility and minimizing vandalism, near pedestrian traffic, windows, and/or well-lit areas
- Under cover, to protect bikes from inclement weather
- Far enough away from the street or parking spaces so that bikes will not be damaged by automobiles, on a setback if possible not obstructing pedestrian traffic

Accessible locations:

- Between the road/path that cyclists use 30' or less to the main entrance that cyclists use for the building
- Not upstairs or large curbs, preferably near handicap accessible ramps
- Spacious enough to allow room for bikes of all shapes and sizes to use the racks to their fullest capacity.

Locking

The rack must allow for the convenient securing of the bicycle frame and both wheels using a chain, cable or U- lock. Chains and cables vary in length from 2' to 6'. U-locks, which cyclists frequently use to attach their frame and one wheel to a rack, are usually between 3.25" and 5" wide and vary in length from 5.5" to 12". The locking surface on the rack must be thin enough for cyclists to use these popular locking mechanisms, yet thick enough not to be cut by hand tools, such as bolt cutters, pipe cutters, pry bars and wrenches.

Aesthetic

- Use of local found materials is encouraged where possible.
- The bike rack may be located in a designated historic district. The designs should fit in with the local theme, with area architecture, and historical features.
- Public safety must be kept in mind. Designs with potentially hazardous features or possible interference to pedestrian flow of traffic will not be accepted.

Surface finish

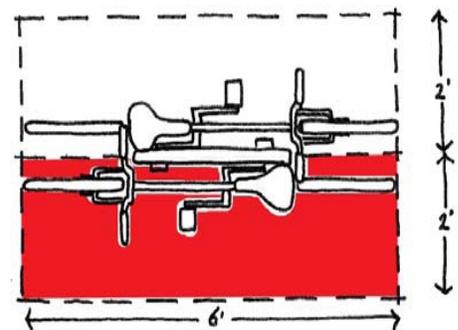
- Finish should be expected to last 20 or more years.
- Maintenance should not be exceeded the value of the rack in 5 years
- The location will be outside and expected to handle weather.

Dimensions

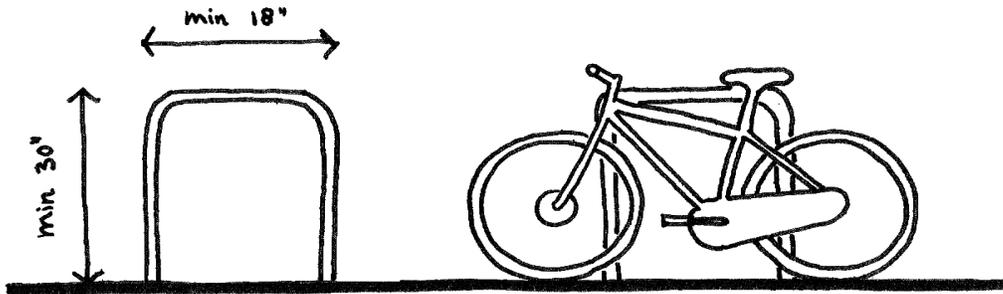
Distances between the bike rack and objects nearby vary depending on the context and the type of rack. Some racks have only one vertical component, such as the pole and ring rack, whereas others have two, such as the inverted-U rack. Measurements must be taken from the nearest vertical component of the rack to the object. Surfaces should be round to 0.5" inch or larger. Holes should be at least 10" diameter.

The following is a list of minimum space allowances to consider:

- 72" for the length of the bicycle
- 30" width for each bicycle. (48" for two bicycles side-by-side)



- 18" rack width
- 30" rack connection-point height



Distance to other Racks:

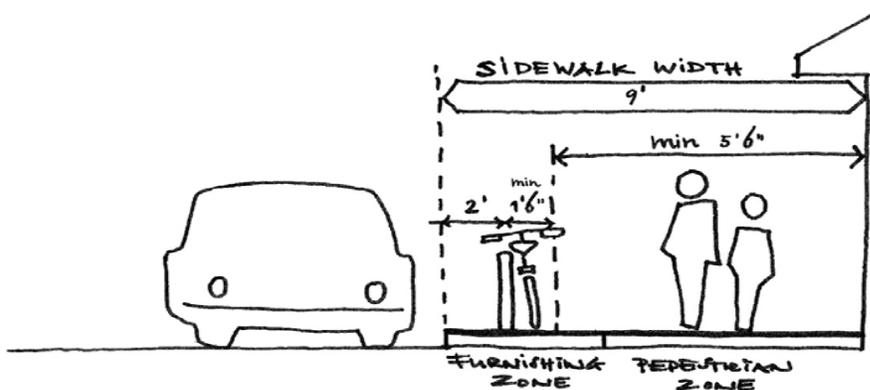
- Rack units aligned parallel to each other (side by side) must be at least 36 inches apart. This includes racks that are sold as multiple rack units attached together.
- Rack units aligned end to end must be at least 96 inches apart.
- Rack units placed perpendicular to a wall must be at least 48 inches from the wall to the nearest vertical component of the rack.
- Rack units placed parallel to a wall must be at least 36 inches from the rack to the wall.

Distance from a Curb:

- Rack units placed perpendicular to the curb must be at least 48 inches from the curb to the nearest vertical component of the rack.
- Rack units placed parallel to the curb must be at least 24 inches from the curb to the rack.

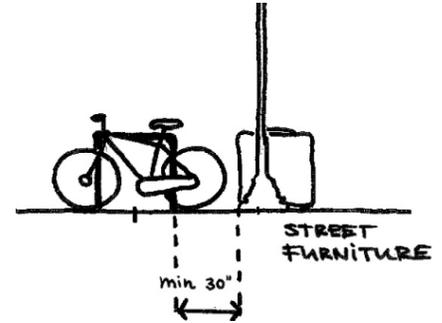
Distance from a Pedestrian Aisle:

- Rack units perpendicular to a pedestrian aisle must be at least 48 inches from the rack to the edge of the aisle, and the aisle should be at least 60 inches wide.



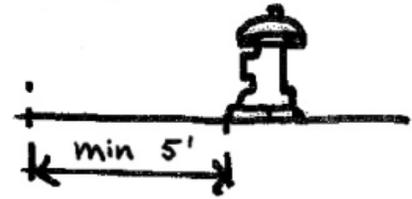
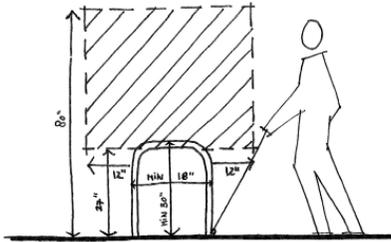
Distance between rack and any existing street furniture

There shall be a minimum of 30 inches between street furniture and the bike rack. trees, sign poles, mailboxes, corner curb cuts, light poles, mailboxes, trash cans, newspaper racks, tree wells



Other Distances:

- Allow at least 4 feet for safe pedestrian clearance
- Racks should be no more than 30 feet from the building entrance that they serve.
- 5 feet from a wall or street fire hydrant
- Protrusion limits of the American with Disabilities Act include if a protrusion is between 27" and 80" above a surface, make a 12" overhang.



- Racks should be a minimum of 30 feet from a bus stop, and not block the entrance/exit paths for any public transit.

