

Hennepin County 2040 Bicycle Transportation

Appendix F — Bicycle Parking Guidelines



Secure, abundant, well-designed bicycle parking is a crucial element of bicycle friendly communities. Bicycle parking encourages people to ride to their destination knowing that they will have a safe and convenient place to lock their bike. It also ensures that bicycles will be locked up in an organized fashion; when bicycle parking is insufficient, bicyclists use trees, fences, and railings, which may damage trees, block sidewalks, or impede wheelchair access to a facility. Finally, the provision of bicycle parking outside businesses, schools, libraries, and other facilities demonstrates an understanding that bicycling is a healthy, environmentally friendly mode of transportation, and shows a commitment to sustainable transportation.

Hennepin County created these Bicycle Parking Guidelines to demonstrate a commitment to bicycling as a mode of transportation and to standardize and improve the quality and quantity of bicycle parking in Hennepin County. These guidelines are intended to be applied specifically to transit oriented development projects, transit and station area planning efforts, Hennepin County Property Services projects, road design or multi-use path projects, and any other site planning or construction efforts conducted by Hennepin County. Considering the need for bicycle parking early in project planning will ensure that bicyclists' needs are not overlooked and that Hennepin County residents have the opportunity to live a healthy, active lifestyle.



Part 1: Definition of long and short term parking



People biking have different parking needs depending on how long the bicycle will be parked and what level of security is needed.

Short term parking (less than two hours)

- Simple bike racks (see design guidelines in part 2)
- Unsheltered
- Accessible to the public (on-street, in public parking areas or other public areas)
- Typical locations include:
 - Commercial, entertainment and retail facilities
 - Medical / health care
 - Parks and recreation facilities
 - Libraries and civic buildings
 - Community centers
 - Schools and colleges



Long term parking (longer than two hours)

- Secured and limited access (fenced-in "cage," secure room or garage, locker)
- Sheltered from weather by at least a roof; shelters that protect from wind, rain and snow are preferable to fences
- Typical locations include:
 - Apartment buildings or multifamily residences
 - Places of employment
 - Transit facilities
 - Schools and colleges
 - Stadiums



Part 2: Bicycle rack design



While a wide variety of bicycle rack designs are available “off the shelf,” bike racks in Hennepin County should meet these basic minimum criteria:

- Support the bicycle in at least two places. This prevents the bike from falling over.
- Allow bicyclists to lock the frame and one wheel with a U-lock.
- Be securely anchored to the ground (see Part 3).
- Resist cutting, rusting, bending, or other deformation
- Provide enough space between bike positions to realistically accommodate a bicycle locked in every spot.



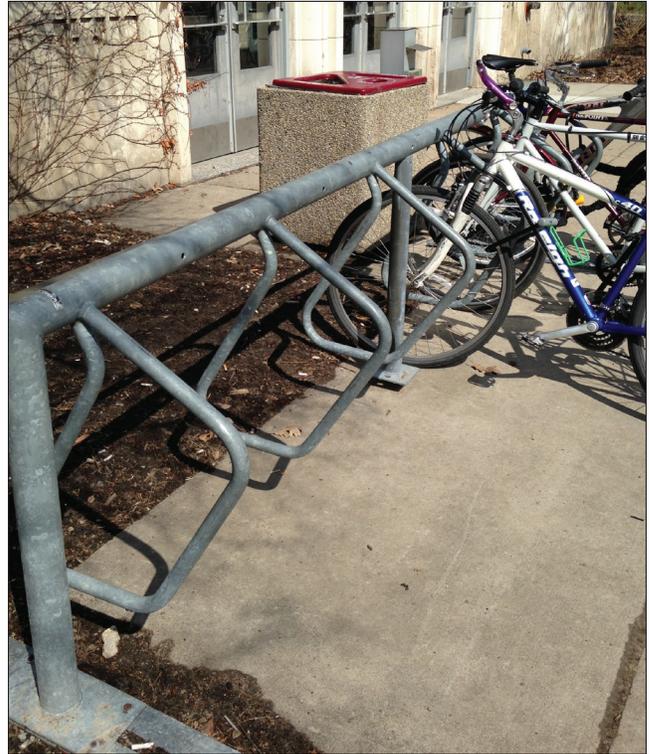
Recommended — Inverted U or arc: Can stand alone for curbside use or multiple racks can be installed for high density uses in bike corrals.



Recommended — D shaped or swerve racks: Can stand alone for curbside use or multiple parallel racks can be installed for high density uses in bike corrals. *Credit: Dero Bike Racks*



Recommended designs:



Recommended — Coat hanger or campus: Great for high-density use at businesses or schools.



Recommended — Post and ring or bike hitch: Great for curbside use and can be added to parking meters.



Recommended — Artistic or creative: Recommended only if they meet minimum criteria on page 6. These racks can be useful to draw attention to bicycling and improve a streetscape, but their limited capacity and expense limit their utility.

Recommended only for controlled access parking:



Recommended — Wall-mounted: Supports bikes in a hanging position. *Credit: nycbikestorage*



Recommended — Double decker: Space-efficient for large bike volumes. *Credit: bikerackshops.com*



Discouraged designs:



Discouraged — Undulating or snake: Provides only one point of contact and does not accommodate the intended number of bikes. It often is used incorrectly.



Discouraged —Toaster: These and other designs that support a wheel but not the frame may damage wheels and do not allow locking to the bike frame. *Credit: bikingintheav.com*

Discouraged designs:



Discouraged — Spiral: Same weaknesses as undulating racks but with greater likelihood bikes will fall over.



Discouraged — Comb or schoolyard: May damage front wheel and does not allow users to lock both frame and wheel to the rack.



Discouraged in many situations— Bike lockers: Inefficient in terms of both cost and space. Bike lockers may be appropriate in low density areas if fewer than six long-term bicycle parking spots are needed. If lockers are used, electronic lockers (first-come, first-served with key card access) are strongly preferred over lockers leased to individuals. Bike lockers should be within 100 feet of the main building entrance or destination.
Credit: Metro Transit



Part 3: Anchoring bicycle racks



Bike racks should be securely attached to the ground or a wall. For racks mounted on a rail, the rail should be secured to the ground. For post-tensioned concrete floors, bike racks may be anchored using industrial adhesive. In this situation, racks should be in controlled access areas (locked cage or room).

In typical situations, the base or legs of racks should be secured to the ground using wedge anchor bolts or tamper-proof spikes, or they should be embedded in concrete or bituminous.



Recommended: Bolt each leg or base securely using wedge anchor bolts or tamper-proof spikes (left); or embed legs or base in concrete or bituminous.

Part 4: Bicycle parking locations



Short term bike parking should be:

- No more than 50 feet from a main pedestrian accessible entrance. If multiple entrances exist, place signage at secondary entrances to direct bicyclists to bicycle parking or install bike racks at each location.
- Clearly visible from the destination (main entry).
- In a high traffic area.
- In a well-lighted area.
- If possible, protected by existing structures such as overhangs or awnings.

Long term bike parking should be:

- Controlled access (users need a key, fob, or pass code to get in)
- If located outside the building, should be less than 50 feet from a main pedestrian accessible entrance.
- Well lighted.
- Protected from weather by at least a roof; shelters that protect from wind, rain and snow are preferable to fences.
- If possible, visible surveillance cameras or nearby security guards greatly increase security.

Note: Bike lockers are discouraged for urban or suburban settings. They may be appropriate in rural or exurban settings where demand for long-term bike parking is fewer than six spots.

Part 5: Site layout



Short term parking

Short term bicycle parking is located near the curb or the main entrance of retail or commercial centers. Bike racks may be single (serving up to 2 bikes) or installed in series.

As seen in Figure 1 below, bike racks should be:

- At least 14 inches from the curb.
- Buffered from walls and trees by at least 2 feet in the front and back (recommended distance is 3 feet) and at least 2 feet on each side (recommended distance is 3 feet).
- Bike racks should be spaced at least 2.5 feet apart (recommended distance is 3 feet).

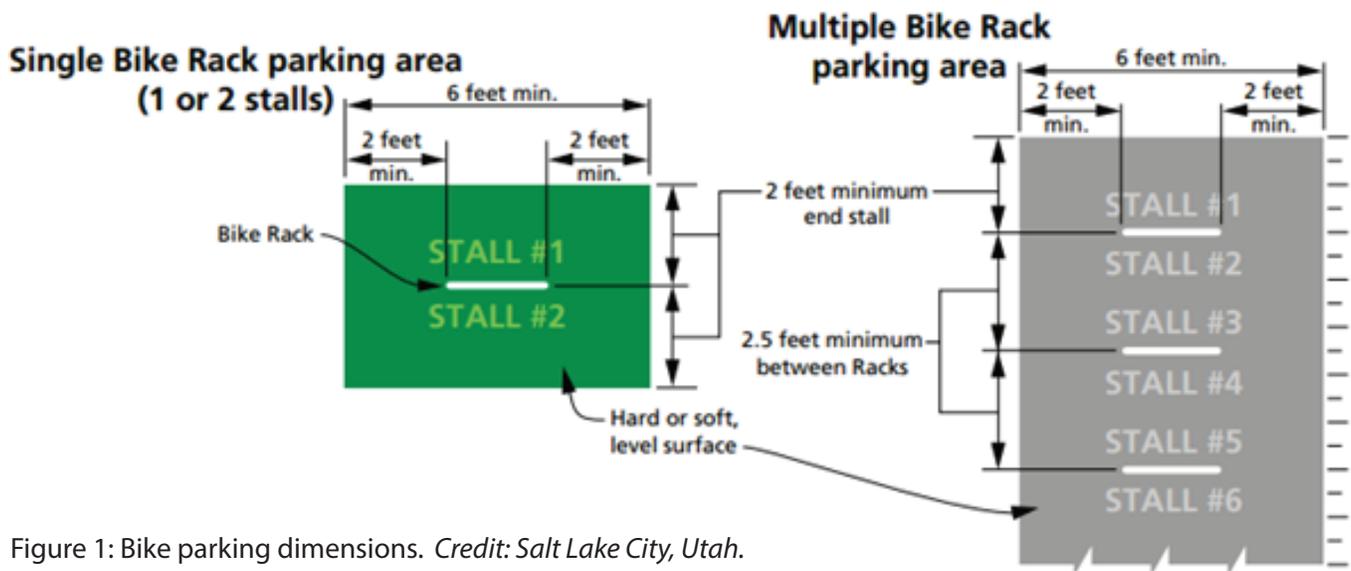


Figure 1: Bike parking dimensions. *Credit: Salt Lake City, Utah.*

Bike racks and bikes parked on them must not obstruct sidewalks, doorways, or bus stops. In situations where sidewalks are narrow, bike racks should be installed so bicycles must be parked parallel to the curb to ensure the sidewalk is not obstructed. With wider sidewalks, bike racks may be angled to fit more bikes, but in all cases a 5-foot minimum pedestrian zone should be maintained.



Long-term parking

Long term parking must be in a fenced corral, secure shelter, or room and will likely be high density. Flat high density bicycle parking should meet the minimum spacing requirements listed above under short term layout requirements.

- In high density settings, access aisles of at least 4 feet are recommended to facilitate access.
- Following these dimensions, on a flat surface as many as 40 bikes can fit in a space 25 feet by 16.5 feet (see Figure 2):

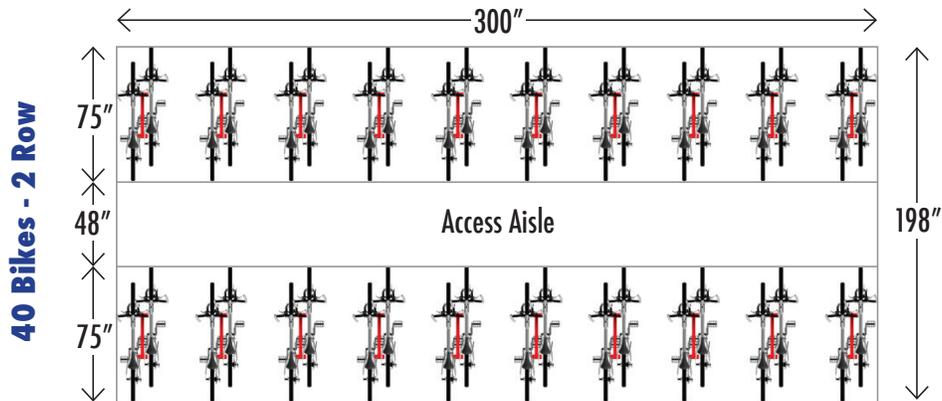


Figure 2: Sample layout for bike room or corral. *Credit: Dero Bike Racks*

Vertical bicycle racks allow greater density in bicycle parking and may be spaced closer together than the dimensions in Figure 1. If vertical bicycle racks are used, at 20 foot by 20 foot space can fit 60 bikes.

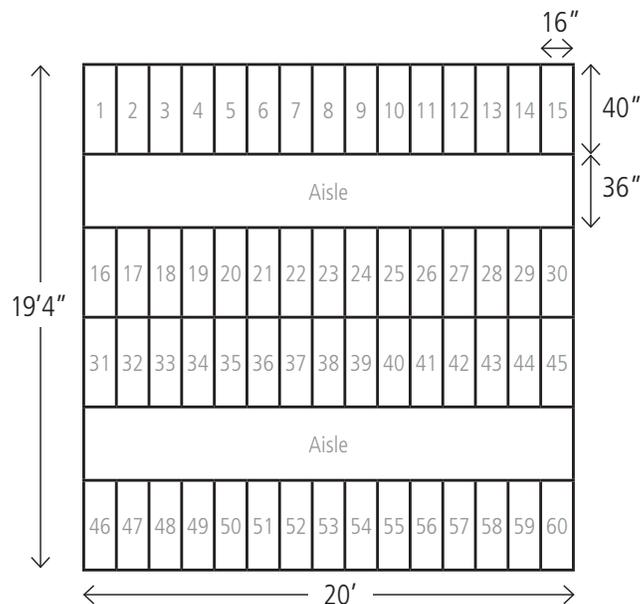


Figure 3: Sample layout for vertical bike parking. *Credit: Dero Bike Racks*

Part 6: Showers and changing facilities



Where possible, people commuting by bicycle should be provided with convenient access to showers, changing facilities, and lockers. These facilities promote employee health in the following ways:

- **Encourage bicycle commuting** — Employees who bicycle commute for longer distances, who encounter rainy or hot weather, or who need to change into formal attire will not bicycle commute without end of trip shower facilities.
- **Encourage daily physical activity** — Shower facilities allow employees to go jogging or walking before or after work. They are often offered in conjunction with fitness centers or workout rooms, increasing opportunities for many kinds of physical activity.

Employers can provide showers and changing facilities by:

- **Building showers and changing facilities** in new buildings and installing them in existing buildings.
- **Creating an agreement with a gym or recreational facility** to allow bicycle commuters access to their showers and changing facilities.
- **Supporting a central bicycle parking and commuter center** that provides bicycle parking and shower facilities to employees who work in the area.



Part 7: Minimum parking guidelines



Urban areas, first ring or dense suburbs or within 1/4 mile of a transit facility:

Type of use	Short term parking	Long term parking
Commercial	Office: 1 space for each 5,000 ft ² ; minimum 2 spaces	1 space for each 10,000 ft ² ; minimum 2 spaces
	Retail: 1 space for each 2,000 ft ² ; minimum 2 spaces	
Multifamily residential	0.1 for each bedroom; minimum 2 spaces	0.5 spaces for each bedroom
Institutional / public uses (e.g. museums, libraries, hospitals, religious uses, stadiums)	1 per 2,000 ft ² ; minimum 6 spaces	1 per 10,000 ft ² or 1 space per 20 employees; minimum 2 spaces
Manufacturing, industrial	None required; consider minimum 2 spaces at public building entrance	1 space per 10,000 ft ² ; minimum 2 spaces
Transit facilities	Space for 1.5% of daily a.m. boardings; as space allows at walk-up facilities	Space for 4% of daily a.m. boardings; as space allows at walk-up facilities

Low density suburban, exurban or rural areas:

Type of use	Short term parking	Long term parking
Commercial	Office: 1 space for each 20,000 ft ² ; minimum 2 spaces	1 space for each 12,000 ft ² ; minimum 2 spaces
	Retail: 1 space for each 5,000 ft ² ; minimum 2 spaces	
Multifamily residential	0.05 for each bedroom; minimum 2 spaces	0.5 spaces for each bedroom
Institutional / public uses (e.g. museums, libraries, hospitals, religious uses, stadiums)	1 per 5,000 ft ² ; minimum 4 spaces.	1 per 30 employees; minimum 2 spaces
Manufacturing, industrial	None required; consider minimum of 2 at public building entrance.	1 space per 15,000 ft ² ; minimum 2 spaces

Hennepin County bicycle parking checklist



- Does the site have at least the minimum amount of both short and long term parking? (see page 12)
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Do bicycle racks fit design guidelines? (see pages 3-7) Bicycle racks must:

- Support the bicycle in at least two places
 - Allow bicyclists to lock the frame and one wheel with a U-lock
 - Resist cutting, bending, or other deformation.
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Avoid spiral, wave, comb, and toaster bicycle racks.

- Are bicycle racks securely anchored to the ground? (see page 8)
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- Are bicycle racks located less than 50 feet from a main pedestrian entrance?
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- Are short term bicycle racks clearly visible from the main entrance and in a well-lighted, high traffic area? (see page 8)
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- Is the long term bicycle parking limited access, well-lighted, and protected from weather? (see page 8)
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- Are bicycle parking areas designed according to minimum spacing guidelines? (see pages 9-10)

