Siting Inverted U Standard Bike Racks

When surveying a site, one needs to decide if more bike parking is really needed at the location. We don't want to put in racks for which we can't demonstrate a need. In general, if bikes are locked to signs, garbage cans, trees, etc., that's a good argument for more bike parking. However, the location's peak hours should also be considered when deciding if more bike parking is warranted (e.g. bars won't have bikes parked at 10am; office buildings won't have bikes parked during evenings and weekends).

Bike Rack Specifications (see Appendix B for detailed specifications)

- Type B/Inverted-U: 2'-6" (30") wide, 3' (36") tall
- Base plates: 7" diameter; tubing: 2" X 2" X .5" thick

Spacing (how far the racks should be spaced from each other)

- When placing racks end-to-end, parallel to curb: minimum 5' (60"),
- When placing racks perpendicular to curb, parallel to each other: 3' (36")
- On concrete pad (5' X 10' or 7' X 10'): 2 or 3' from front, 14" from sides

Placement Guidelines (where the racks should and shouldn't be placed) [See attached diagram]

- **Public Property** - Bike racks can only be placed on public property (e.g. City, State, and Federal property). Specifically, bike racks can generally not be installed within strip malls or on plazas that aren't government-owned. They can be installed on CPS, City Colleges, CTA, Park District, etc. grounds, but coordination with the relevant agency is required.
- **Residential Buildings** - Bike racks should not be installed at private residential land uses (e.g. apartment buildings), given the limited number of racks available for installation.
- **Concrete Surface -** Bike racks can only be anchored on concrete. Other materials, like asphalt, do not allow racks to be anchored securely. Asphalt is soft and malleable, especially in the summer.
- **Quantity** - Two racks should not be installed when only one is necessary. Start by installing a conservative number of racks (usually 1-2 Type B racks depending on the location) and gradually install additional racks over time if there is a demonstrated need. During survey, look around the area to determine if there is already sufficient parking nearby (such as on the building's private property or within a requested park).
- **Vaulted Sidewalks** – In some cases, racks may not be installed on vaulted sidewalks because they are often too thin and may crack and allow leaking into the vaulted area. Additionally, concrete over a vaulted area may contain rebar which can damage rack installation equipment. Racks may be installed over vaults in the building engineer/manager/architect is able to verify that the vaulted area is at least 5 inches thick, that there are no utility lines or conduit directly beneath the area, and that drilling into the area will not cause damaging leaks into the vault. An example of an acceptable vault location would be one several feet thick containing no rebar, such as that over a CTA subway station. Additionally, in most cases of vault installation, alternative "sleeve anchor" fasteners no greater than 3" in length should be used to avoid penetrating the vault or damaging it with the impact of driving in traditional spike anchors.

- **Heated Sidewalks** - Bike racks should generally not be installed on heated sidewalks because they contain wiring or steam pipes which could be damaged during installation. Exceptions can be made when the building engineer/manager/architect can verify safe locations.
- **Proximity to Entrance** - Bike racks should generally be installed within 50 feet of the intended destination/building. However, bike racks should not be placed directly opposite a doorway or stairway leading to an entrance.
- **Disabled Parking / Loading Zones** - Bike racks should not block any section of a disabled parking area or loading zone. Exceptions for certain loading zones may be made with the agreement of the grantee of the loading zone and the local alderman.
- **Sidewalk Cafés** - To avoid conflicts with future or not-yet-installed sidewalk cafés, when possible, site bike racks outside of the property line of any restaurants; such businesses may be eligible for a sidewalk café, resulting in the need to remove the bike racks later. For an existing sidewalk café, site at least 6’ outside the edge of the sidewalk café.
- **Sufficient Clearance** from other street furniture should be ensured. These guidelines are as follows:
    - 10’ minimum sidewalk width on most sidewalks. Exceptions may be made in areas with low foot traffic – absolute minimum width is 8’. Follow these guidelines:
        - If sidewalk is less than 12’ wide, site bike racks parallel to curb.
        - If sidewalk is 12’ or wider, bike racks can be sited either parallel or perpendicular to curb. Perpendicular is generally preferred because it allows more bike racks to be installed in the same space, but in areas with high foot traffic it may be less desirable.
    - at least 5’ of clear sidewalk.[1]
    - at least 40', preferably 45', back from bus stop signs
    - at least 4' from general utilities, including fire hydrants and sewer covers
    - at least 3’ from curb, fence or wall
    - at least 2' from outside edge of tree planter basins
    - at least 5" from sidewalk cracks
    - at least 6’ from subway emergency exits/hatches (hatches in sidewalk are large metal plates that open on the side, opposite the text “subway exit – keep clear”)
    - at least 3’ from newsracks and newspaper boxes
    - at least 4’ from ramps, curb cuts, or crosswalk flares[2]
- **Corners** - When siting bike racks near corners, follow these guidelines (see Figure 1)[3]:
    - In the direction of travel, on the near side of a corner, bike racks should be sited 20’ away from the intersecting curb.
    - In the direction of travel, on the far side of a corner, bike racks should be sited 10’ away from the intersecting curb.

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[1] The Chicago Building Code requires 4’ – parked bikes are assumed to extend 1’ out from the rack. See Section 18-11-1112.2.1 in the Municipal Code of Chicago, “Clear width.”

[2] Included as per discussion with Mayor’s Office of People with Disabilities, June 4, 2009. Also, see Item 17 in Placement Criteria below.

[3] These guidelines concern visibility between drivers, bus operators, and bike riders in the roadway, and pedestrians and users with disabilities on the sidewalk.

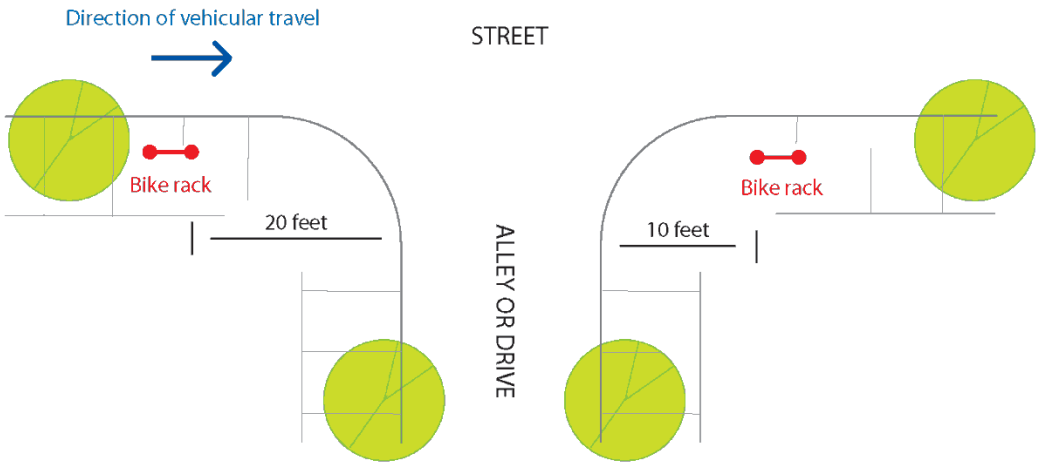

Figure 1. Siting of Bike Racks Near Corners

Bike racks should only be installed on the curb side of the sidewalk, where other street furniture (signs, newspaper boxes, light poles, street trees, etc.) is located, not the building side. Otherwise, parked bikes could force pedestrians to walk close to the street, which discourages foot traffic. Also, the presence of other street furniture provides a buffer—pedestrians are less likely to accidentally walk into racks placed on the curb side.

Though CDOT historically considered parking meters as legitimate bicycle parking fixtures—to the extent that we did not install bike racks at locations with ample parking meters—in 2009, most parking meters were removed and replaced with "pay and display" boxes that serve an entire block. In rare cases, parking meters may remain. You should assume that these may be replaced at any time and the area would then lose that object as a suitable and legal bike parking fixture.

Schools

When installing at schools, you may perform a simple survey of the site to locate possible good locations for bike racks. However, before committing to a place, you must consult with the school's principal or designee to obtain approval.

Remember to only locate bike racks on public right of way. It is appropriate to site bike racks on sites owned by Chicago Public Schools (CPS). Verify the school is owned by CPS by searching for it on the CPS website, http://www.cps.edu.

CTA/Parks/Other Government Agencies

Racks can be installed on the grounds of other public agencies – for example, on a City Colleges campus or within a public park – but these installations must be coordinated with the relevant agency. This only applies to racks installed within the other agency's right-of-way, not to racks sited on public sidewalks outside the other agency's grounds.

Siting Bike Corrals

1. **Site Review** – Perform field visit and document findings in *Bike Corral Design Checklist* (see Appendix D). General siting guidelines and considerations for bike corrals are:
    a. Can only be installed in existing parking lanes where no rush hour parking restrictions are in place.
    b. Displacement of metered parking will need offsets arranged though Alderman's office and coordinated with Beth Beatty in the Dept. of Revenue.
    c. Any change to parking restrictions (e.g. loading zones or RHPC's) will require an ordinance to be submitted by the Alderman.
    d. On streets where the parking lane and vehicle travel lane are directly adjacent, the maximum allowable ADT is 15,000. This does not apply to streets that have at least a 5' buffer between the parking and vehicle travel lanes (i.e. a bike lane).
    e. At least 20' from crosswalks (if upstream of the crosswalk)
    f. At least 30' from stop signs and traffic signals
    g. At least 15' from fire hydrants
    h. At least 5' from driveways and alleys
    i. At least 1' from manholes