Bicycle Parking Guidelines: Bicycle Parking

An APBP Webinar Series

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City and local programs

• Where many cities start formal bicycle programming
• High symbolic and functional value
• Flexible and economical program
Today

- We’ll look at programs in Boston and Portland
- Review sidewalk and bike corral designs
- Codes and policies
Best Practices - Boston
Sidewalk parking principles

• Where most cities begin their parking programs
• Wide variety of approaches
• Generally considered cost-effective starting point
Short-term rack layout – Min.
10’ sidewalk width

Note: Wherever possible, racks should be located between parking spaces, to avoid conflicts with opening car doors.
Short-term rack layout – Sidewalk 10’ + width

• Locate in furniture / landscape zone
• Align racks to not interfere with parked car doors
• Align parallel to street in constrained areas
Note: Wherever possible, racks should be located between parking spaces, to avoid conflicts with opening car doors.

132" recommended

36" min (48" recommended)

48" (36" min)

36" (24" min)

48" (36" min)
Sidewalk Bike Racks and ADA

Source: Improving Pedestrian Access to Transit: An Advocacy Handbook
Facilities – maintenance best practices

• Short-term Parking:
  – Use “spike” anchors (tamper-proof)
  – Inspect racks/anchors for damage
  – Method for repaintng/touch-ups
  – Abandoned bike removal
Facilities – maintenance best practices

• Long-term Parking:
  – Check functioning of moving parts
  – Change keys or codes periodically
  – Check condition of enclosures
  – Security lighting and cameras are working
Policies and Codes

• Recommended parking policy or code should…
  – Specify number of bike spaces by land use
  – Require long-term parking for all workplaces, transit stations and multi-unit residential
  – Require adequate short-term parking for other land uses
  – Provide site planning requirements
  – Provide rack/locker design requirements
## Requirements - Residential

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Long-Term Bicycle Parking Requirement</th>
<th>Short-Term Bicycle Parking Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-Family Dwelling</td>
<td>No spaces required.</td>
<td>No spaces required.</td>
</tr>
<tr>
<td>Multifamily Dwelling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) With private garage for each unit*</td>
<td>No spaces required.</td>
<td>0.05 spaces for each bedroom. Minimum is 2 spaces.</td>
</tr>
<tr>
<td>b) Without private garage for each unit</td>
<td>0.5 spaces for each bedroom. Minimum is 2 spaces.</td>
<td>0.05 spaces for each bedroom. Minimum is 2 spaces.</td>
</tr>
<tr>
<td>c) Senior Housing</td>
<td>0.5 spaces for each bedroom. Minimum is 2 spaces.</td>
<td>0.05 spaces for each bedroom. Minimum is 2 spaces.</td>
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</table>

* Private locked storage units may be considered as private garage if can fit bicycle.
## Requirements – Civic

### Civic: Cultural/Recreational

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<tr>
<td>Non-Assembly Cultural (Library, government buildings, etc.)</td>
<td>1 space for each 10 employees. Minimum requirement is 2 spaces</td>
<td>1 space for each 10,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>Assembly (Church, theaters, stadiums, parks, beaches, etc.)</td>
<td>1 space for each 20 employees. Minimum requirement is 2 spaces.</td>
<td>Spaces for 2% of maximum expected daily attendance.</td>
</tr>
<tr>
<td>Health Care/Hospitals</td>
<td>1 space for each 20 employees or one space for each 70,000 s.f. of floor area, whichever is greater. Minimum is 2 spaces.</td>
<td>1 space for each 20,000 s.f. of floor area. Minimum is 2 spaces.</td>
</tr>
<tr>
<td>Rail/Bus Terminals and Stations/Airports</td>
<td>Spaces for 5% of projected A.M. peak period daily ridership.</td>
<td>Spaces for 1.5% of A.M. peak period daily ridership.</td>
</tr>
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### Requirements – Civic (con’t)

#### Civic: Cultural/Recreational

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<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Public, Parochial, and Private Day-Care Centers for fifteen (15) or more children</td>
<td>1 space for each 20 employees. Minimum is 2 spaces.</td>
<td>1 space for each 20 students of planned capacity. Minimum is 2 spaces.</td>
</tr>
<tr>
<td>b) Public Parochial, and Private Nursery Schools, Kindergartens, and Elementary Schools (1-3)</td>
<td>1 space for each 10 employees. Minimum requirement is 2 spaces.</td>
<td>1 space for each 20 students of planned capacity. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>c) Public Parochial, and Elementary (4-6), Junior High and High Schools</td>
<td>1 space for each 10 employees plus 1 space for each 20 students of planned capacity. Minimum requirement is 2 spaces.</td>
<td>1 space for each 20 students of planned capacity. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>d) Colleges and Universities</td>
<td>1 space for each 10 employees plus 1 space for each 10 students of planned capacity; or 1 space for each 20,000 s.f. of floor area, whichever is greater.</td>
<td>1 space for each 10 students of planned capacity. Minimum requirement is 2 spaces.</td>
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# Requirements - Commercial

## Commercial

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<tbody>
<tr>
<td>Retail</td>
<td>1 space for each 12,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
<td>1 space for each 2,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>General Food Sales/ Groceries</td>
<td>1 space for each 12,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
<td>1 space for each 5,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>General retail</td>
<td>1 space for each 12,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
<td>1 space for each 20,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
</tr>
<tr>
<td>Office</td>
<td>1 space for each 10,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
<td>1 space for each 20,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
</tr>
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## Auto Related

1) Automotive Sales, Rental, and Delivery  
2) Automotive Servicing  
3) Automotive Repair and Cleaning  
4) Off-Street Parking Lots and Garages available to the general public either without charge or on a fee basis  
   - 1 space for each 20 automobile spaces. Minimum requirement is 2 spaces. Unattended surface parking lots excepted.  
   - Minimum of 6 spaces or 1 per 20 auto spaces. Unattended surface parking lots excepted.
Requirements - Industrial

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<tr>
<td>Manufacturing and Production</td>
<td>1 space for each 15,000 s.f. of floor area. Minimum requirement is 2 spaces.</td>
<td>Number of spaces to be prescribed by the Director of City Planning. Consider minimum of 2 spaces at each public building entrance.</td>
</tr>
</tbody>
</table>
Bicycle Parking Programs

• Develop Fixture Specifications
• Identify Locations
• Install Fixtures (racks)
• Maintain
• Repeat (ongoing)
Develop Specifications

• Rack designs
  – Materials
  – Finishes
• Placement guidance
• Agency buy-in
Identify Locations

- Request-based
  - Mail-in cards
  - Online
- Land use-based
  - Transit
  - Schools
  - Parks
- Visible demand
Identify Locations
Install Fixtures

- Either:
  - In-house
  - Contractor
- RFP(s) for racks and installation
- Install
- Inspect
Maintain

- Remove abandoned bikes
- Replace damaged racks
- Replace loose anchors
- Maintain finishes, if needed
Celebrate!
In-Street Bike Parking
In-street bicycle parking

- Removes bicycles from pedestrian sidewalks
- Increases overall parking capacity (1 car space = 8-12 bikes)
- Increases visibility of cycling
- Improves sightlines at corners
Selecting locations

• **Cyclist safety**
  – Setback from travel lanes
  – Low speed limit
  – Low truck or bus traffic
  – Low parking turnover

• **Adjacent land use**
  (sidewalk café?)

• **Side Street?**

• **Traffic Operations**
Design – best practices

• Parallel or Diag Space
• Locate Parking Spaces
• Rack Placement
  – Perpendicular for wide streets
  – Angled racks for narrow streets
• Basic bike racks
  (example: inverted U)
Design – best practices

Minimum $:
  Demarcate area

More $$:
  Rubber curb, reflectors, delineators, temporary planters

Highest $$$$:
  Expensive bollards, concrete pad, permanent planters
Design – best practices

• Convenient circulation/access
• Visibility: signage
• Costs vary widely
  – Low end: $1,000
  – High end: $50,000
Short-term rack layout – On-street parking (8ft. wide)
Short-term rack layout –
On-street parking (6.5 ft. wide)
On-street parking (diagonal)

Note: In-street parking established in 20' red zone at corner adjacent to existing diagonal parking stalls. Shape of bike parking stall layout is more angular in the field.
‘Supporting Business’

(1000 NE Main St.)

Adjacent business and property owners
should agree to corral installation.

F. City standard staple racks
are welded to steel tracks in clusters of 3 and bolted to
asphalt street surface.

Racks angled at 60
degrees for greater
buffer between
edge of bike and
travel lane.

E. Existing bicycle
racks on the sidewalk
are removed in order
to maximize
pedestrian space.

D. Recycled rubber
parking block is placed on
the side of the corral
adjacent to parallel parking
vehicles to avoid
accidental damage to
bicycles or racks.

C. Surface mounted
candlestick delineator adds
another visual warning for
drivers. Also deemed
necessary as cyclists said
that the rubber curb was
not visible at night.

A1-2. 8 in.
white thermo
plastic tape

B. Bicycle pavement
markings indicate
‘maneuvering zone’

Add white reflective tape to bike
rack leg adjacent to travel lane.
Berkeley, CA
Montreal
Montreal
Arlington, Virginia
Baltimore, Maryland
Chico, California
Columbia, Missouri
Palo Alto, CA - Hamilton Ave
Seattle, Washington
Seattle, Washington
Santa Cruz, Pacific Ave
San Luis Obispo, California
San Francisco, CA
Public Library Main Branch
Warrington, UK
Brussels, Belgium
Copenhagen
Implementation - making it happen

- Adopt design guidelines (Best Practices)
- Create city policies (maintenance and liability)
- Business community outreach - identify locations
- Identify funding
- Carefully choose pilot locations which will succeed
Implementation – making it happen

• Document success/failure
  – Getting used? How much? (bike counts)
  – Survey cyclists
  – Survey patrons of business district
  – Survey business owners
Next up in series:

March 13 - Transit Systems

April 10 - Colleges and Employment Centers