



# Bicycle Parking, Storage and Security

*Thursday, July 14th, 1-2PM EDT*

Safe Routes to School National Partnership



# Agenda, July 14<sup>th</sup>, 2011

## **Welcome, Administrative Details and Introduction**

Dave Cowan, Safe Routes to School National Partnership

## **Bicycle Parking, Storage and Security**

Robert Ping, Safe Routes to School National Partnership  
Dave Cowan, Safe Routes to School National Partnership

## **Bicycle Parking Policies**

Sara Zimmerman, Public Health and Law Policy

## **Question and Answer**



# Why is Adequate Bike Parking Important?

- **Safe Routes is building more bicyclists**
- **Kids won't ride without a safe and obvious place to park**
- **Helps promote Safe Routes program**
- **Quick engineering improvement to show progress**
- **Demonstrates school support for bicycling**





# Strategies for Improving Bicycle Parking

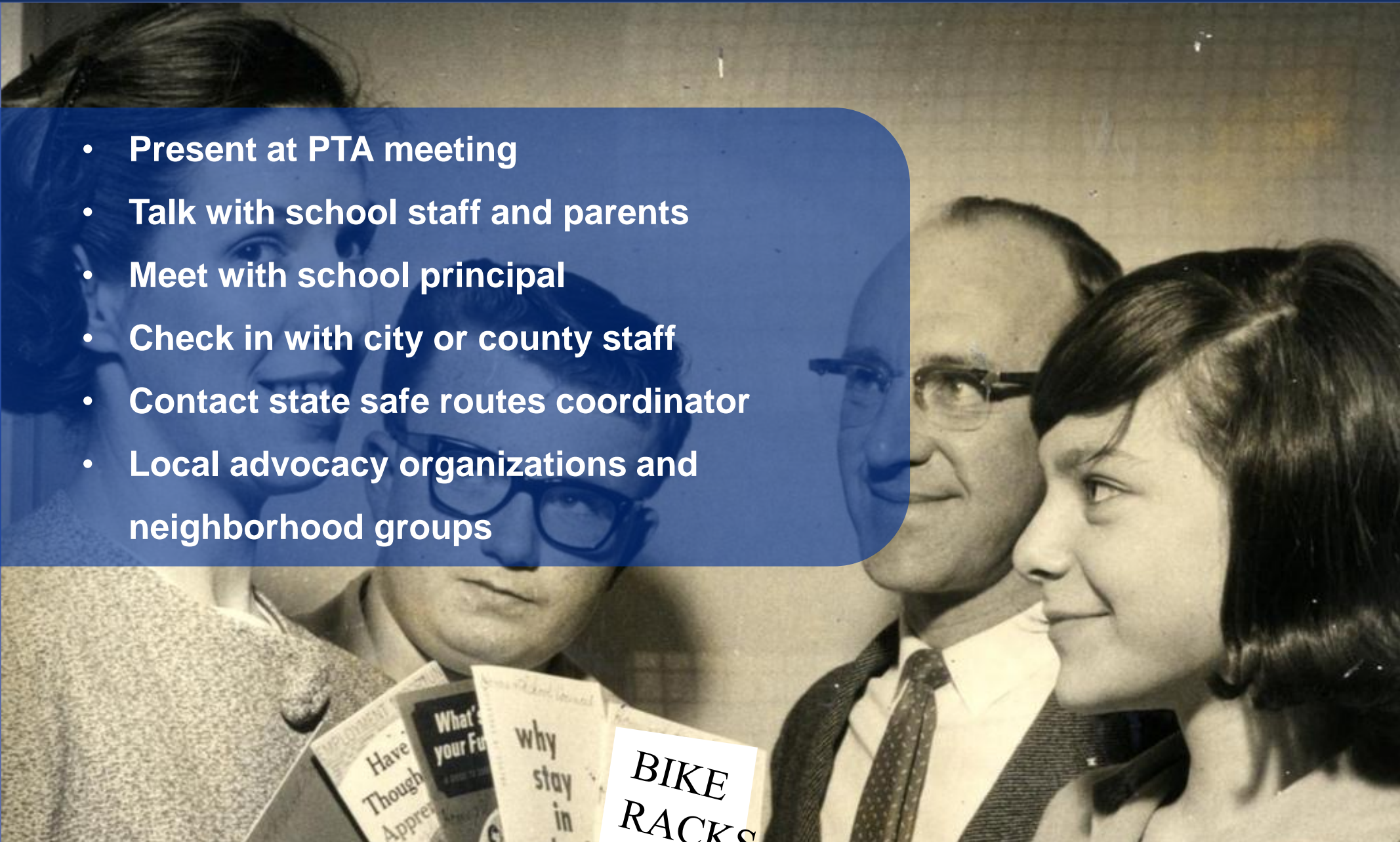
- Talking with power people
- Building support
- Funding for bicycle racks
- Siting for racks
- Choosing the right number of racks
- Choosing the right type of racks
- Rack installation
- Rack maintenance and education
- Scooters and skateboards





# Talk with your Power People

- Present at PTA meeting
- Talk with school staff and parents
- Meet with school principal
- Check in with city or county staff
- Contact state safe routes coordinator
- Local advocacy organizations and neighborhood groups





# Funding for Bicycle Racks or Storage

- SRTS, TE, other..
- City or County programs
- Foundations
- Parent-led fundraising events
- The school district or transportation departments
- Volunteers
- Individual donors
- Local corporations or retail businesses
- Work creatively with community groups to fund and/or build racks
- Consider funding the donation of locks for low-income students, or a long cable to secure an entire rack



# Siting Racks

## Common Issues:

- Located out of normal sight
- No entryway access
- Near obstacles (bushes, walls, etc..)
- On grass or dirt
- Not secured to ground
- Don't promote bicycling





# Siting Racks







# Siting Racks – Positive Example:

- High visibility area
- Near entrances
- Out of the way of foot traffic
- Away from walls, bushes, or obstacles
- Plenty of space around racks
- On a hard surface
- Racks can be in multiple locations

Benjamin Franklin high school, Portland, OR



## Siting Racks – Signage

**Cycle Rack**

**far end  
of building**



# Choosing the Right Number of Racks

- City ordinances or district policies may already outline a minimum formula
- Number of racks should exceed demand

$$\frac{1}{V} \int z dV = \frac{\pi r_1^2}{V H^2} \int_0^H (z^3 - 2z^2 H + z H^2) dz$$
$$= \frac{\pi r_1^2}{V H^2} \left[ \frac{z^4}{4} - \frac{2z^3 H}{3} + \frac{z^2 H^2}{2} \right]_0^H$$
$$= \frac{\pi r_1^2 H^4}{V H^2} \left[ \frac{1}{4} - \frac{2H}{3H} + \frac{H}{2H} \right]$$



# Beach Elementary, Portland, OR

- 2007-08 had no bicycling policy
- Joined Safe Routes in 2008-09
- School had nowhere to park bicycles





# Beach Elementary, Portland, OR

- PTA requested racks from City
- Concord Neighborhood Greenway
- Bike train





# Beach Elementary, Portland, OR

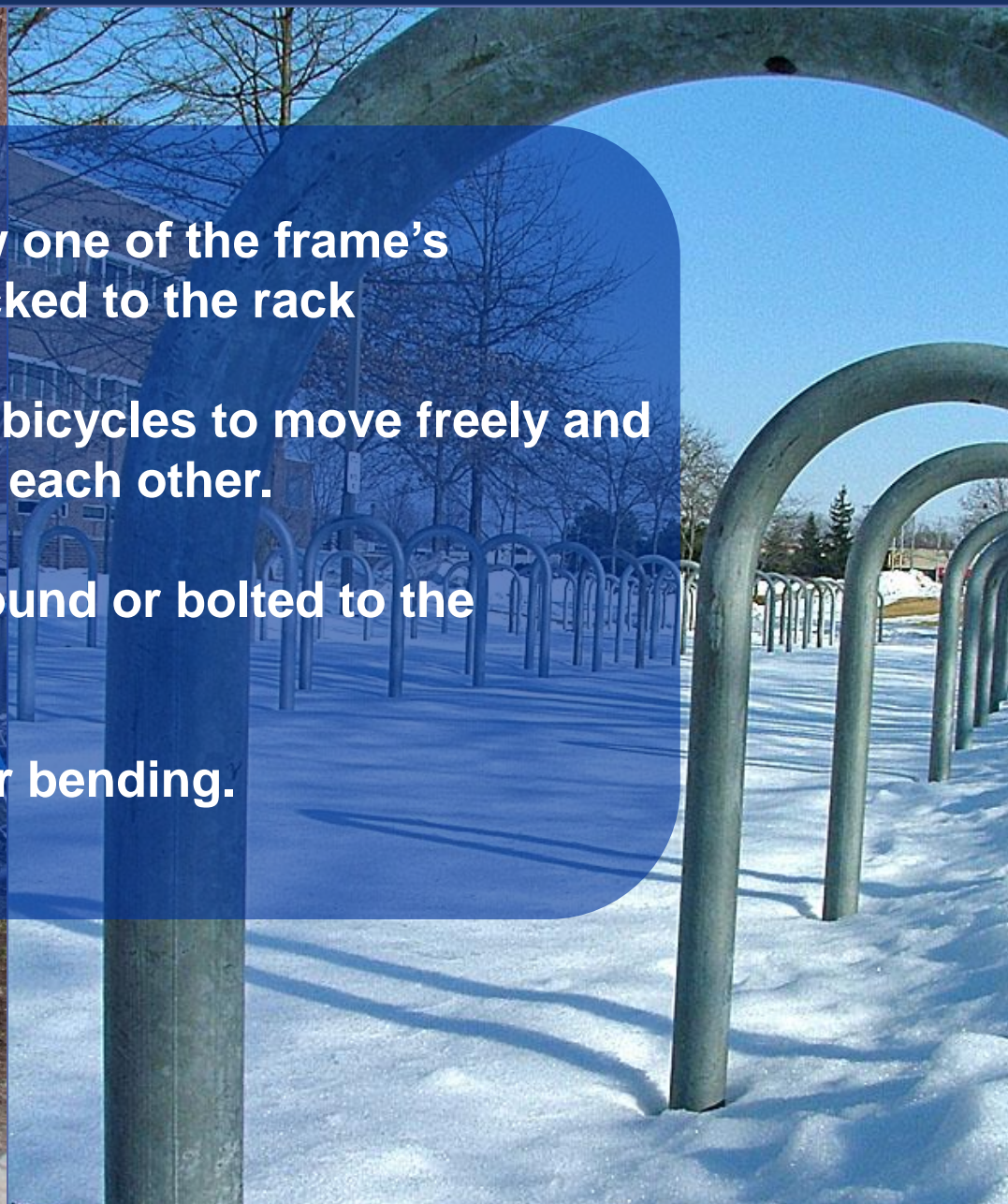
- 20 staple racks installed
- Bicycles use all capacity





# Choosing the Right Type of Racks

- Support frame at two points, allow one of the frame's triangles and front wheel to be locked to the rack
- Have space in between racks and bicycles to move freely and to prevent bicycles from touching each other.
- Are securely mounted into the ground or bolted to the sidewalk or concrete slab
- Are resistant to cutting, rusting, or bending.





# Choosing the Right Type of Racks

## Grid Racks:

- **Easy to insert bike (intuitive)**
- **Lowest cost**
- **Very difficult to lock frame**  
(only locks one wheel)
- **Bicycles fall down easily**
- **Bicycles often too close together**







# Choosing the Right Type of Racks

## Wave Racks:

- Attractive
- Allow multiple parking spots
- Don't have two support points
- People often misuse
- Often placed poorly

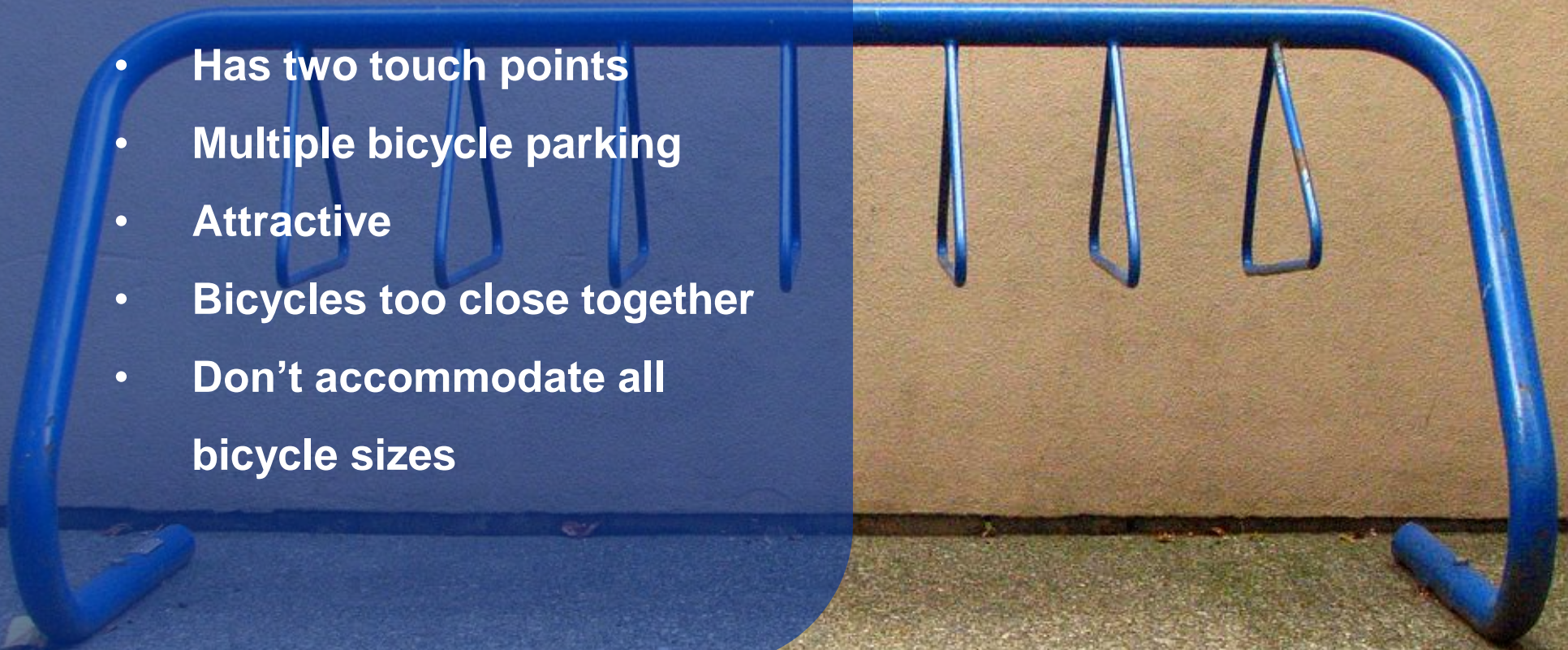




# Choosing the Right Type of Racks

## Hanger Racks:

- Has two touch points
- Multiple bicycle parking
- Attractive
- Bicycles too close together
- Don't accommodate all bicycle sizes





# Choosing the Right Type of Racks

## Staple Racks/U-Racks:

- Has two touch points
- Multiple bicycle parking
- Can be spaced easily
- Can lock front wheel and frame





# Artistic/Creative Rack Solutions

- Attractive and more appealing
- Creation process can be “fun”
- Need to be careful to create two touch points
- Doesn't always accommodate all bicycles
- People don't always know it is a bike rack
- May take more time, energy and/or money



Photos by: Spacing Magazine



Pedbikeimages.org/Dan Burden





# Covered Bicycle Racks



Belleview Elementary  
Ashland, OR  
Photo by: Derek Severson



# Casey Middle School, Boulder, CO

- School bond
- 50 staple racks
- Photovoltaic cover
- Bicycle coverage





# Roosevelt Middle School, Eugene, OR

- Pilot Safe Routes school
- 15-20 Grid racks
- Applied for infrastructure funding
- Infrastructure costs too high





# Roosevelt Middle School, Eugene, OR







# Rack Installation

Who is authorized to install the rack?

How will the rack be installed?





# Rack Maintenance and Education

## Educate with:

- Signage near racks
- Staff/parents teaching at racks
- Part of education class
- Frequent reminders





# Scooters and Skateboards

- Locking mechanism
- Covers chuck screws
- Placed near bicycle racks
- Improves skater behavior!





# Security





# U-Locks

- **More robust**
- **Heavy**
- **Work with only some racks**
- **Relatively expensive**





# Cable Locks

- Works with all rack styles
- Light and easier to carry
- Less secure
- More affordable





# Combination U-lock and Cable

- Helps secure front wheel
- Robust
- More expensive than just cable





# Securing the Bicycle to a Rack

When locking bicycle with a cable or U-lock ensure lock goes through:

1. Frame
2. Front wheel
3. Rack







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# Security in Low Income or High Crime Areas

- Bicycle cages
- Indoor parking
- Community cable lock
- Ensure high visibility racks





# Bicycle Parking, Storage and Security

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# Bicycle Parking Policies: Using Policy to Make Bike Parking Multiply

Sara Zimmerman,  
Senior Staff Attorney



# Public Health Law & Policy

**We partner with state and local leaders to improve health in communities, especially the underserved.**

**We research legal and policy questions, draft policy language, and train community leaders to put these ideas to work.**



# What are our goals for bike parking?

- Plentiful bike parking
- Convenient to find and safely access
- Easy to use
- Theft resistant & safe for bicyclist



# We've got two choices to achieve our goals:

EITHER:

We struggle to get each bike rack installed.

OR

We pass a policy.



secure protection from theft, and (v) opens sufficiently to allow easy access.

[Comment: If improper use of lockers is a concern in a particular community, this definition could be amended to expressly allow for an optional opening of up to 9 inches at the base of the locker to allow for security inspections]

c. "Bike Rack": A device consistent with industry standards that (i) is capable of supporting a bicycle in two places, (ii) is made of durable materials, (iii) is no less than [36] inches tall (from base to top of rack) and no less than [2] feet in length, and (iv) permits the securing of the bicycle frame and one wheel with a U-shaped lock

[Comment: U-shaped locks are the most effective bike locks. Eike racks that only support the bicycle in one place make it easy for bicycles to fall over.]

d. "Short-Term Bicycle Parking": Bicycle parking primarily intended for bicyclists who need bicycle parking for 3 hours or less

e. "Short-Term Bicycle Parking Space": A Bicycle Parking Space that provides Short Term Bicycle Parking.

f. "Long-Term Bicycle Parking": Bicycle parking that is primarily intended for bicyclists who need bicycle parking for more than 3 hours and is fully protected from the weather.

g. "Long-Term Bicycle Parking Space": A Bicycle Parking Space that provides Long Term Bicycle Parking.

...at bicycle parking laws recognize the need to distinguish ...needs of community residents out| ...term bicycle

# What is a policy?

## A policy is:

- a statement in writing
- binding
- setting out a general approach to be applied broadly

## Some examples

- School board policy
- Local or state law
- Resolution
- Zoning language





# Why is policy important?

## Policies can:

- Increase effectiveness of campaigns by institutionalizing change
- Ensure consistent implementation
- Provide incentives & encourage innovation
- Allow for enforcement
- Get people engaged!



# *School Policies*



**Install ample bicycle parking** whenever a new school is built, major renovations are made, or existing racks are replaced.



pedbikeimages.org/Duncan Green



pedbikeimages.org/Chris Metka

**Seek funding** to install or upgrade bike racks for **existing schools**

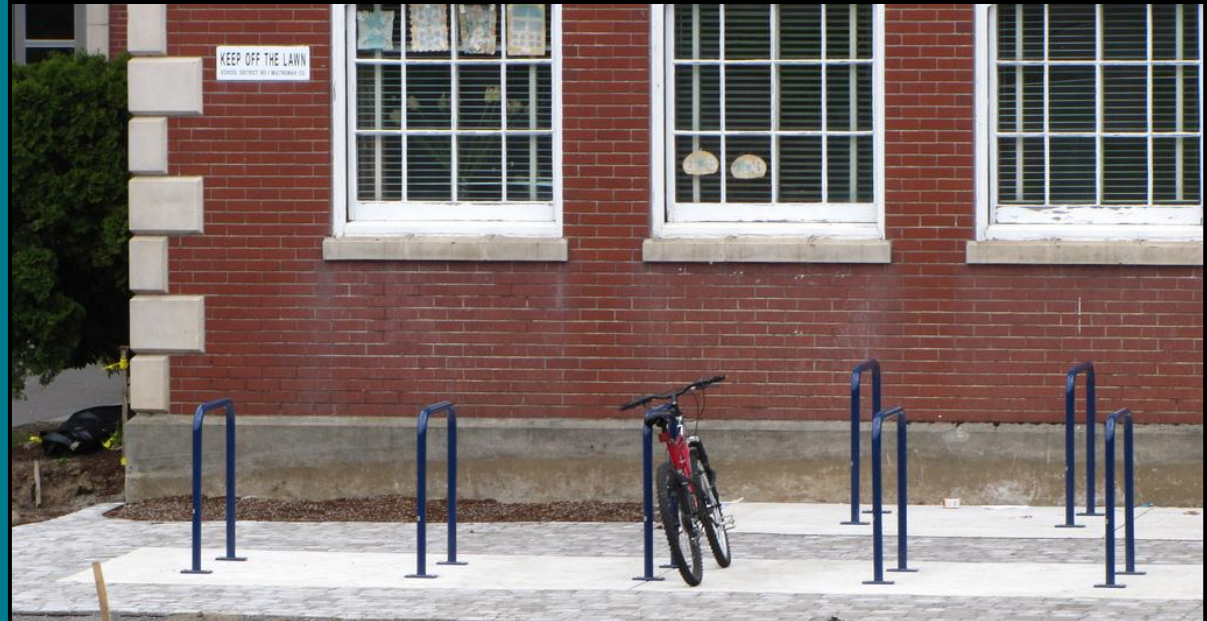
**Require weather protection for bicycle parking when building new schools**



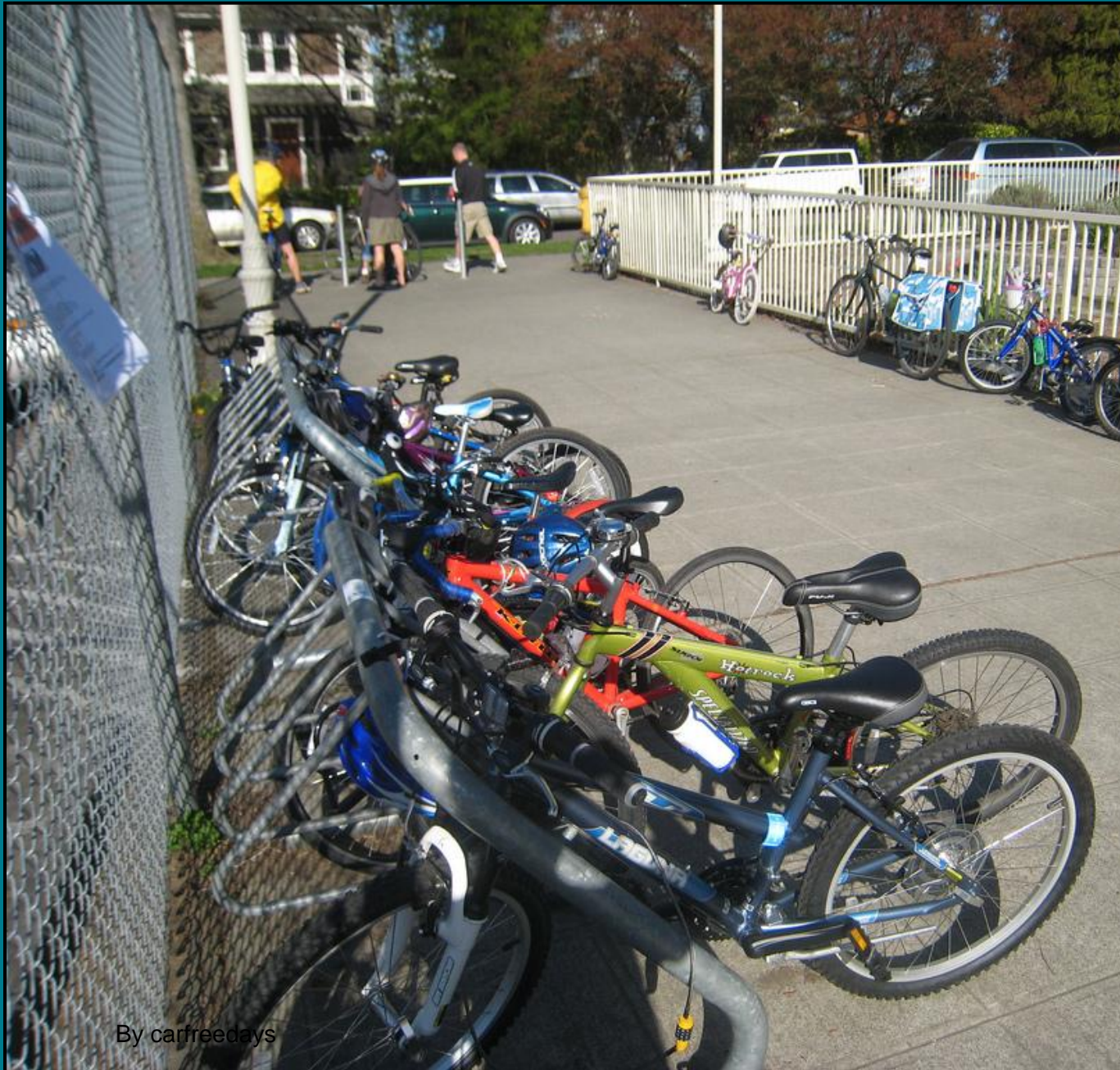
By herrdoktorc



Provide convenient,  
central, secure locations  
for all racks



pedbikeimages.org/Mike Cynecki

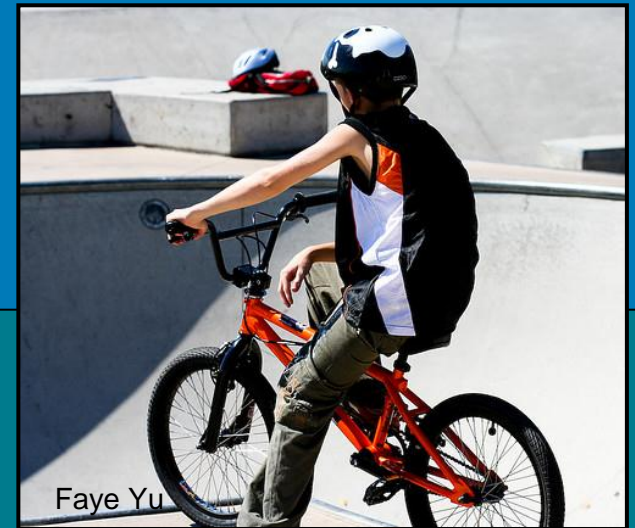


By carfreedays

**Provide convenient access routes to bike parking that minimize conflict with vehicles and pedestrians**

**Coordinate with the local municipality around funding, bike parking placement, etc.**

# Destinations



# Beware Bad Bike Parking Policies!

Not all bike parking policies are good.

Occasionally, policies:

- Make it illegal for bikes to park anywhere but authorized bike racks
- Penalize bicyclists & impound bikes parked in the wrong places





# *Municipal Policies*



# Cities and towns can pass bike parking ordinances

Over 200 already have!

- Philadelphia, PA
- Atlanta, GA
- Boise, ID
- Charleston, SC



[pedbikeimages.org/Laura Sandt](http://pedbikeimages.org/Laura Sandt)



# What can good bike parking policies do?





*Impose Requirements*



## Policies can require:

- Bike parking in all new developments

*Fort Worth, TX*

- Bike parking when there's a major remodel

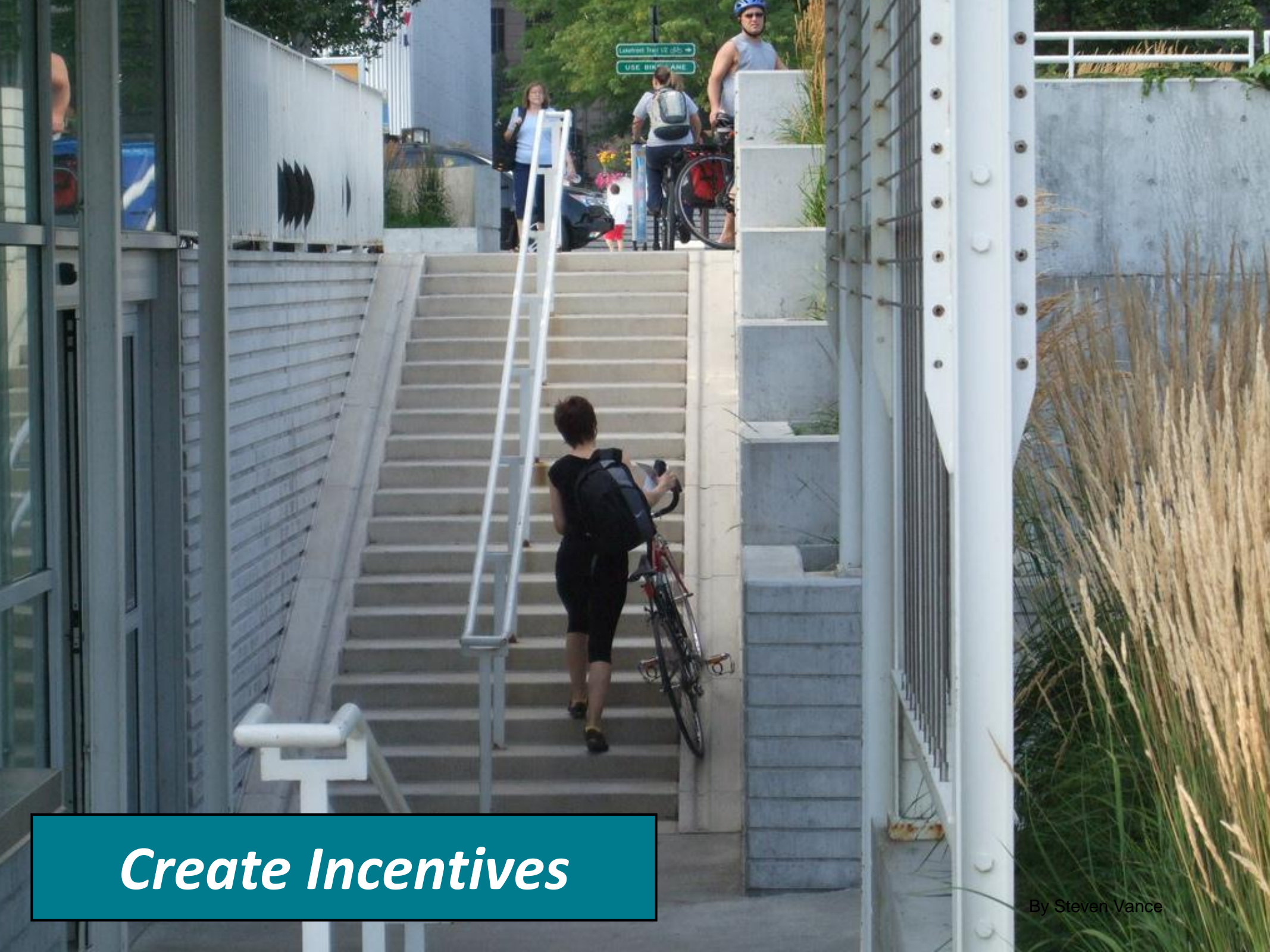
*Oakland, CA*

- Parking garages to provide bike parking

*Cleveland, OH*

- Large events to provide temporary, monitored bike parking

*Alameda, CA*



***Create Incentives***

By Steven Vance

# Policies can use incentives:

- Provide rewards

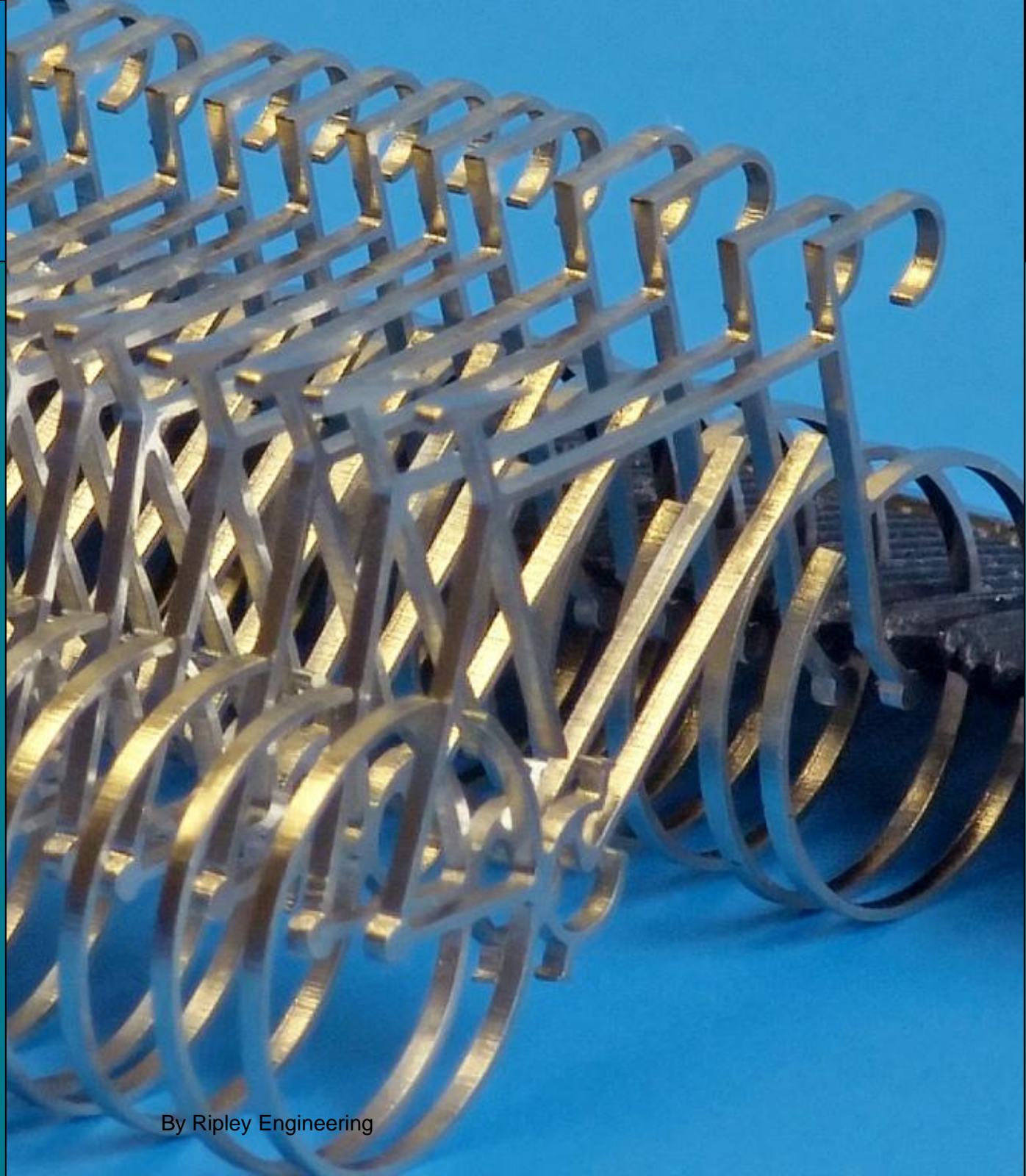
*When developers provide required bike parking, let them build less car parking.*

- Encourage more novel or burdensome approaches

*If developers provide showers, let them build less car parking.*

**Coming  
Soon**

PHLP Model  
Municipal  
Bike Parking  
Policy coming  
soon!



By Ripley Engineering



# Disclaimer



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*Senior Staff Attorney*



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## Q & A

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## Closing

- Tip sheet “Bike Parking, Storage and Security”
- Webinar recording
- PDF of PowerPoint slides
- Questions and answers from the webinar

<http://www.saferoutespartnership.org/mediacenter/SRAM-Bicycling-Webinars/SRAM-Bicycling-Webinar3>

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