BIKES MEAN BUSINESS: A MORE BIKE-FRIENDLY BERKELEY

STUDY AREA

How can we improve the Milvia Bicycle Boulevard to support businesses and improve safety & access for all users?

WHY MILVIA STREET?

Milvia Street provides bike access to key downtown destinations.

LEVEL OF CYCLIST COMFORT IN BERKELEY

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>3%</td>
<td>Strong and Fearless</td>
</tr>
<tr>
<td>16%</td>
<td>Enthusiastic and Confident</td>
</tr>
<tr>
<td>71%</td>
<td>Interested but Concerned</td>
</tr>
<tr>
<td>10%</td>
<td>No Way No How</td>
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71% of Berkeley residents are “interested but concerned” about bicycling.

PREFERRED CYCLING ENVIRONMENT

Berkeley residents are most comfortable riding on protected bike lanes.

FEASIBILITY STUDY & DESIGN METHODS

- Shopper Intercept: Assess economic impact
- Parking Study: Assess transportation impact
- Bikeway Design Based on Best Practices & Precedents

The first step in making Berkeley the world’s best city for biking is improving safety through design.
Milvia Street's high volume of bike and vehicle traffic creates congestion and conflicts for all travel modes.
Merchants’ perceptions of how customers reach downtown:

- **Drive:** 59%
- **Walk:** 19%
- **BART:** 14%
- **Bus:** 10%
- **Bike:** 9%

**SAN FRANCISCO: POLK STREET STUDY**

- **Walkers visit the area most often and spend the most money.**
- **12% bike to Polk Street warranting dedicated services to protect cyclists.**

**OTHER CITIES’ SHOPPING SURVEYS**

**TORONTO STUDY**

- **68%** walk or take public transit to Polk Street.
- **56%** live in the same zip code as the project area.

**BIKE EAST BAY SURVEY METHODS**

**DOWNTOWN BERKELEY SURVEY AREA**

- **128** city-collected surveys
- **67** surveys collected on 7/28
- **108** surveys collected on 8/1
- **29** surveys collected on 8/6
Despite merchant perceptions, people who drive only account for 28% of downtown visitors. To increase business, merchants should cater to people who bike, as they visit downtown the most often and spend the most money per month.
The goBERKELEY pilot program has improved parking conditions downtown. The area, however, has not met its targeted demand of 65%-85% utilization, nor has it been successful in changing the primary travel mode for commuters.
Vacant parking spaces can be found on-street and in nearby parking garages or lots. These facilities have the capacity to absorb the possible removal of on-street spaces for a proposed protected bike lane on Milvia Street.
People on bicycles need additional separation from vehicle traffic. Protected cycle tracks and bike lanes provide the room for a safer ride.
Milvia is a difficult street for people riding bicycles because of congestion, high traffic volumes and a lack of physical separation from cars.
Bikes Mean Business: Design Goals

SAFETY
Perceived Safety / Comfort
Traffic Calming
Intersection Design

Support Business
Bike Access to Downtown
Bike Parking
Parking Demand Management

Efficiency & Access
Reduce Congestion
Bike Access to School
Link Key Areas

Environmental Sustainability
Stormwater Management
Reduce Carbon Emissions

These interrelated goals are best addressed holistically with a protected two-way cycle track along Milvia Street.

- Dutch junctions and bike signals will reduce conflict and confusion at intersections.
- Physically separating the bike lane will reduce vehicle lane width, which will calm traffic.
- Supporting goBerkeley’s efforts can manage car parking demand in the area, freeing up bikeway space.
- Increasing bike parking will make it easier for cyclists to stop in the area to shop.
- Separating bikes from cars will allow both to travel more efficiently.
- Improving safety and comfort will encourage more children to bike to school, reducing congestion associated with pick-up and drop-off.
- Permeable pavers and bioswales will manage stormwater.
  Used in the school zone, permeable pavers can slow bike traffic, reducing conflict with pedestrians.
- Creating a safe, comfortable, and efficient cycling environment will encourage more people to bike, rather than drive, reducing carbon emissions.

Supporting goBerkeley’s efforts can manage car parking demand in the area, freeing up bikeway space.

Improving intersections will facilitate and encourage access to adjacent businesses.

Increasing bike parking will make it easier for cyclists to stop in the area to shop.

Separating bikes from cars will allow both to travel more efficiently.

Improving safety and comfort will encourage more children to bike to school, reducing congestion associated with pick-up and drop-off.

Permeable pavers and bioswales will manage stormwater.

Creating a safe, comfortable, and efficient cycling environment will encourage more people to bike, rather than drive, reducing carbon emissions.
BIKES MEAN BUSINESS: DESIGN ALTERNATIVE 1

MINIMAL PARKING IMPACT AND NO HARDSCAPE CHANGE TO STREET

A  MILVIA & HEARST

B  MILVIA & ALLSTON (at City Hall)

C  MILVIA & KITTREDGE
   (at Berkeley High School)

D  MILVIA & BLAKE

Milvia Street facing north toward Center Street

The first design alternative includes more prominent green striping for bike lanes, the introduction of bollards, and the creation of a super sharrow in Zone D.
PARKING REMOVAL FACILITATES PROTECTED BIKE LANES

**A** MILVIA & HEARST

**B** MILVIA & ALLSTON (at City Hall)

**C** MILVIA & KITTREDGE (at Berkeley High School)

**D** MILVIA & BLAKE

Milvia Street facing north toward Allston Way

The second design alternative includes more protected bike lanes in the place of parking spots, buffering cyclists from cars with bollards or other parked cars.
The third phase design sees a two-way cycle track built along the whole length of Milvia, buffered from cars by bollards or bioswales.
BIKES MEAN BUSINESS: IMPACT ON PARKING

**IMPACT BY DESIGN ALTERNATIVE**

**EXISTING PARKING**
- 115 parking spaces available on Milvia

**ALTERNATIVE 1**
- 13% of parking spaces on Milvia removed
- 100 parking spaces remain
- 14 parking spaces on Milvia
- 26 parking spaces on side streets
- 29 parking spaces on Milvia
- 30 parking spaces on Milvia

**ALTERNATIVE 2**
- 76% of parking spaces on Milvia removed
- 28 parking spaces remain
- No parking spaces on Milvia
- 15 parking spaces removed
- 56 parking spaces on side streets
- 30 parking spaces on side streets
- 42 parking spaces on side streets

**ALTERNATIVE 3**
- 76% of parking spaces on Milvia removed
- 28 parking spaces remain
- No parking spaces on Milvia
- 15 parking spaces removed
- 56 parking spaces on side streets
- 30 parking spaces on side streets
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*Just one block off of Milvia Street, there is an adequate supply of vacant parking spaces. These vacancies can absorb the impact of removing parking as described in each design alternative.*
**BIKES MEAN BUSINESS: CONCLUSION**

**DESIGN ALTERNATIVE 1**
- Super shawrs
- Painted bike lanes, some buffers & bollards
- Not enough physical separation from driving lanes
- No environmental improvements to hardscape

$870,000

**DESIGN ALTERNATIVE 2**
- Protected bike lanes, with bollards or parked cars
- Bike boxes at intersections to facilitate left turns
- Bollards create queue at high school drop-off
- No environmental improvements to hardscape

$1,000,000

**DESIGN ALTERNATIVE 3**
- Two-way cycle track
- Bioswales as buffer for cycle track
- Bike phases at intersections isolate bicycle movements
- Painted intersection at Blake, easing transition out of cycle track

$5,800,000

**REVENUE FROM BICYCLISTS**

To increase revenues, cater to high-spending bicyclists

<table>
<thead>
<tr>
<th>% shoppers using mode</th>
<th>Overall increase in monthly revenue</th>
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<tbody>
<tr>
<td>0%</td>
<td>$870,000</td>
</tr>
<tr>
<td>25%</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>50%</td>
<td>$5,800,000</td>
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</tbody>
</table>

**TWO-WAY CYCLE TRACK**

- Not enough physical separation from driving lanes
- No environmental improvements to hardscape

**PARKING IMPACTS**

- Only 10% of parking available within one block of Milvia is removed.

**A two-way cycle track on Milvia Street increases safety, improves efficiency, supports businesses, and provides environmental benefits.**