BENCHMARKING BIKE NETWORKS

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» Since 1880
  » OUR MISSION is to lead the movement to create a Bicycle Friendly America for everyone.

» EVERYONE is incredibly important and cannot be achieved without equity
CDC’s Active People Healthy Nation Initiative
   • Get 27 million people more physically active by 2027

Strategy:
   • Create Activity-Friendly Routes to Everyday Destinations

More at data.bikeleague.org
Transportation Alternatives
• $7.2 Billion in contract authority in next 5 years

Highway Safety Improvement Program
• $16.8 Billion in contract authority in next 5 years

Safe Streets and Roads for All Grants
• $1 Billion in next 5 years

RAISE Grants
• $7.5 Billion in next 5 years
Sec. 11129 Standards
• Use your own design guide

Sec. 11111. Highway Safety Improvement Program
• Every state MUST do a VRU assessment
• Protected bike lanes are defined as “highway safety improvement projects”

Sec. 24012. Highway Safety Programs
• Strike “accident” and replace with “crash”
Plan

Maximize **Repaving**

Change Culture

Invest in Data

Know Your Why

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**REPORT TAKEAWAYS**

**Incorporating On-Road Bicycle Networks into Resurfacing Projects**

Over the last 12 years, the City of Boston has significantly changed the type of bike facilities that are built in the city. Starting in 2014, separated bike lanes began to be built and there has been a strong shift to them as a preferred facility.

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</thead>
<tbody>
<tr>
<td>Sharrow Lane Markings</td>
<td>48%</td>
<td>47%</td>
<td>46%</td>
<td>45%</td>
<td>44%</td>
<td>43%</td>
<td>42%</td>
<td>41%</td>
<td>40%</td>
<td>39%</td>
<td>38%</td>
<td>37%</td>
</tr>
<tr>
<td>Mixed Facilities</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
<td>12%</td>
<td>13%</td>
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<tr>
<td>Cycle Tracks</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Bike Lanes</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Bike Lanes in Cycle Tracks</td>
<td>0%</td>
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<td>Shared Live Paths</td>
<td>0%</td>
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**Change in type of Bike Facilities built per year in Boston**

Note: Sharrow Lane Markings and mixed facilities are almost the same. Bike Lanes were generally the same as Sharrow Lane Markings.

Context Guide

Network Principles

Case Studies
BENCHMARKING BIKE NETWORKS AND THE SAFE SYSTEM APPROACH

League of American Bicyclists
February 8, 2022
Our Current Reality

Traffic fatalities are a public health crisis affecting all road users.

1.3M
Lives lost globally each year from traffic crashes
Source: UN Decade of Action for Road Safety 2021-2030

31,720
Lives lost on US roads from January to September 2021
Source: NHTSA early estimate of traffic fatalities for the first nine months of 2021

↑21%
Increase in pedestrian fatality rate per VMT from 2019 to 2020
Source: GHSA Pedestrian Traffic Fatalities by State: 2020 Preliminary Data
## Adopters of the Safe System Approach

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>Vision Zero</td>
<td>60-70%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Sustainable Safety</td>
<td>50-60%</td>
</tr>
<tr>
<td>Australia</td>
<td>Safe System</td>
<td>50-60%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Safer Journeys</td>
<td>50-60%</td>
</tr>
</tbody>
</table>

Source: World Resources Institute
Thousands of Lives are Lost Each Year

U.S. Traffic Fatalities Climbed In 2020 Despite The Pandemic

Total U.S. traffic fatalities by year and fatality rate per 100 million vehicle miles traveled*

106/day
3,223/month

* Data for 2020 is an early projection and final figure may be further refined.
Source: U.S. Department of Transportation's National Highway Traffic Safety Administration
The 6 Safe System Principles

1. Death/serious injury is unacceptable
2. Humans make mistakes
3. Humans are vulnerable
4. Responsibility is shared
5. Safety is proactive
6. Redundancy is crucial
Where are You on the Safe System Journey?

**Traditional**
- Prevent crashes
- Improve human behavior
- Control speeding
- Individuals are responsible
- React based on crash history

**The Safe System Approach**
- Prevent death and serious injuries
- Design for human mistakes and limitations
- Reduce system kinetic energy
- Share responsibility
- Proactively identify and address risks
Anticipate Human Error

- Separating Users in Space
- Separating Users in Time
- Increasing Attentiveness and Awareness

Indianapolis Cultural Trail separating in space.
Source: Toole Design

Moody Ave in Portland separating in time.
Source: Dylan Passmore Flickr

Hennepin Avenue anticipating human error.
Source: Toole Design
Accommodate Human Injury Tolerances

- Reducing Speeds
- Reducing Impact Forces
If you build it SAFELY, they will come

Source: Lorena Abad, Westfälische Wilhelms Universität Münster
% Dataset: US Census Bureau American Community Survey 2016
Bike Networks and the Safe System Approach

- Think about ways to implement the Safe System Approach in your bike network planning.
- Overlay your high injury network, especially bike crashes, over your planned bike network.
- Be sure to separate users in space and time based on kinetic energy forces.
- Redundancy is critical and safety is proactive!
Some Resources

BIKEWAY SELECTION GUIDE

The goal of a Safe Systems approach is to design and operate our vehicles and infrastructure in a manner that anticipates human error and accommodates human injury tolerances with a goal of reducing fatal and serious injuries. The following framework is intended to assist the vehicle and infrastructure communities in making decisions in alignment with Safe System principles. Consistently selecting safe system designs will incrementally improve safety and over time result in the widespread implementation of safe systems practices.

Creating Safe Systems will involve both traditional and new approaches. We must embrace and expand the use of Safe Systems practices that we know work, while being willing to try and evaluate new or non-traditional approaches, particularly when it comes to protecting vulnerable users.

Adopting a Safe Systems approach necessarily means adopting a safety culture. Steady progress can be made by putting safety first and following Safe Systems principles in each of the large and small decisions that confront us every day.

Adopting a Safe Systems approach does not absolve users of responsibility. Programs such as education and enforcement will remain essential. Providing effective emergency response when crashes do occur is also a critical element of a safe system. However, safe systems design choices recognize that road users make mistakes, or bad decisions, and seeks to reduce the opportunities to do so or mitigate the consequences.

Reducing speed is not a direct prerequisite of a safe system, but will certainly be necessary to achieve alignment with Safe Systems principles. In locations where vehicles interact with vulnerable road users, speeds should be controlled to a level at which a collision is unlikely to result in a fatal or serious injury.

When we choose a Safe Systems approach, we must accept that doing so may result in a decrease in vehicle throughput and may limit the range of behavioral choices for users. However, such decisions are part of responsible system stewardship. As transportation professionals we have a moral obligation to protect lives while creating a reliable transportation system.

1. Anticipating Human Error

Recognizing that humans are human and that they will continue to make errors when traveling, one way to implement a Safe Systems strategy is to reduce the opportunity for error by adhering to the following:

- **Separating Users in Space** - This approach segregates the physical space to provide travelers with a dedicated part of the right-of-way. Typically, travelers moving at different speeds - pedestrians, bicycles, etc. (i.e., sidewalks, cycle tracks) or different directions (e.g., turning vehicles in separate turn lanes) are separated in space to minimize conflicts with other users.

- **Separating Users in Time** - This approach assumes that users will need to occupy the same physical space on the roadway, but creates a safer environment by separating the users in time and reducing vehicle...
Thank you

www.tooledesign.com

Sarah Abel, SEED, RSP₁
Sustainable Safety Practice Lead
sabel@tooleddesign.com
Oakland’s Bikeway Network & Data Management
Building Momentum for a Bike Network

<table>
<thead>
<tr>
<th>Bike Mode Share</th>
<th>Date</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1972</td>
<td>East Bay Bicycle Coalition founded / bicycles allowed on BART</td>
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<tr>
<td></td>
<td>1976</td>
<td>First bikeways installed</td>
</tr>
<tr>
<td>1.1%</td>
<td>1990</td>
<td>46 miles of bikeways (6% paths, lanes) / no known bicycle parking spaces</td>
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<tr>
<td></td>
<td>1994</td>
<td>First annual Bike to Work Day</td>
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<tr>
<td></td>
<td>1995</td>
<td>Bicycle &amp; Pedestrian Advisory Committee formed</td>
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<tr>
<td></td>
<td>1999</td>
<td><strong>First Bicycle Plan adopted</strong>: proposed basic policies and a citywide network</td>
</tr>
<tr>
<td>1.2%</td>
<td>2000</td>
<td>56 miles of bikeways (23% paths, lanes) / 649 bicycle parking spaces</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>Walk Oakland Bike Oakland founded</td>
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<td></td>
<td>2007</td>
<td><strong>Second Bicycle Plan adopted</strong>: refined the network through a data-driven process</td>
</tr>
<tr>
<td>1.9%</td>
<td>2010</td>
<td>117 miles of bikeways (49% paths, lanes) / 4,772 bicycle parking spaces</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>First annual PedalFest – bike-themed family festival attracting 20,000 attendees</td>
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<tr>
<td></td>
<td>2014</td>
<td>LAB recognizes Oakland as a <strong>Bronze Bicycle Friendly Community</strong></td>
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<tr>
<td></td>
<td>2016</td>
<td>Oakland voters pass 10-year bond with $350 million for paving &amp; transportation</td>
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<td></td>
<td>2017</td>
<td>Oakland establishes a Department of Transportation</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>LAB recognizes Oakland as a <strong>Silver Bicycle Friendly Community</strong></td>
</tr>
<tr>
<td></td>
<td>2019</td>
<td><strong>Third Bicycle Plan adopted</strong>: commits to equity + all ages &amp; abilities</td>
</tr>
<tr>
<td>3.1%</td>
<td>2021</td>
<td>192 miles of bikeways (73% paths, lanes, blvds) / 11,719 bicycle parking spaces</td>
</tr>
</tbody>
</table>
Asset Management

- Access databases: bikeway segments, bikeway projects, bikeways timelapse
- GIS feature classes: bikeway segments, bikeway projects, bikeways timelapse (geodatabase)
- Line segments based on the City of Oakland’s streets feature class

Workflow

- Split segments as needed to capture changes to the existing bikeways
- Add or revise projects linework
- Twice yearly data updates of segments and projects data
- Annual updates to timelapse data

Communications

- Shared publicly on web map (http://arcg.is./1PvC1) and with links to raw data on Open Data Platform
- Twice yearly newsletter on Bike Plan Implementation
- Annual “By the Numbers” reporting on bikeway mileage bike parking spaces, and guide signs
NEIGHBORHOOD BIKE NETWORK PROCESS

League of American Bicyclists
February 8, 2022

David Smith, AICP – CDOT
Jeremy Cuebas – NW Center
Stages of Bike Network Development

1. GROWING INTEREST
   INTEREST
   There is a growing interest in biking in neighborhoods not well served by bikeways

2. EMERGING NETWORK
   SOCIALIZATION
   Biking becomes more visible as facilities are built and more people try biking

3. ESTABLISHED NETWORK
   ENTHUSIASM
   Biking grows in popularity & utility as the network expands.

INTRODUCTION
   Implement quick wins to create a network backbone

SATURATION
   Expand the network to meet growing demand

STRENGTHEN
   Continue to enhance the bikeway network
Goals of the Neighborhood Bike Network Process

- Better understand the role of biking in ongoing community efforts
- Empower community members to lead the planning & implementation process
- Identify network projects that can be implemented in Year One
- Identify mid/long-term needs

This is not just another Planning Process, it’s about Implementation!
EXPANDING THE NETWORK

- Divvy bikeshare is expanding citywide and experienced record breaking ridership in 2021
- There is a growing interest and need for bikeways in several neighborhoods not well served by the bikeway network
- Biking won’t be a useful transportation option until it provides convenient access to all the places people want and need to go.

Belmont Cragin
- Low density of bikeways
- High population under the age of 18 years old
- Growing enthusiasm for biking
- Divvy introduced in 2021
# Neighborhood Bike Network Task Force

## Phase 1
**Partner & Data Collection**
- Aldermanic Coordination
- Identify Neighborhood Taskforce
- **Taskforce Meeting #1**
  - Bikeways 101 & tradeoffs
  - Perceptions of biking
  - Destinations & barriers

## Phase 2
**Listen & Learn**
- Online Survey
- **Taskforce Meeting #2**
  - Review survey results
  - Discuss draft network
- Map of Draft Network

## Phase 3
**Quick Build Network**
- Review comments from online map and finalize network
- **Taskforce Meeting #3**
  - Finalize network
  - Discuss individual routes
- Potential Community Meeting
- Install Quick-Build Network
▸ What are the perceptions of biking?
▸ What are challenges/opportunities?
▸ How would you benefit from a connected network?
▸ Where should a network connect you to?

Destinations First, Streets Second

WE WANT TO HEAR FROM YOU!

The Chicago Department of Transportation (CDOT) is partnering with community members to identify and build a connected bicycle network in 2021 in the Austin, Belmont Cragin, and North Lawndale neighborhoods. Take a short online survey to help us understand how you choose to get around in your neighborhood, how bicycling is perceived in the community, and how a network of bike routes may impact you. This survey is your first opportunity to get involved in this exciting effort.

The survey will be available in English and Spanish and will remain open until May 31, 2021.

For questions related to the project or online survey, visit the project website chicagocompletestreets.org/projects/active-projects/ or email CDOTbikes@cityofchicago.org.
TIMELINE

- January: Taskforce Meeting #1
- February: Online Survey
- March: Taskforce Meeting #2
- April: Online Map
- May: Taskforce Meeting #3
- June & Beyond: Install Projects
- Quadrupled neighborhood bike network in one year
  - Installed 13.5 miles of bikeways in 2021
  - 5.0 additional miles planned for 2022
- Installed over 100 bike racks
- Expanded bike share into the neighborhood
  - Highest ridership of any community within expansion area
- Organized bike rides
- Empowered young people
- Built community relationships that will last!
JOIN US
for a community bike ride & celebrate our biking campaign victories—Use Divvy and new bike lanes coming to Belmont Cragin

Bikes available to borrow for ride

REGISTER
nwshc.org/events

CONTACT
zouelab@nwshc.org
773-690-8553

Photo: Sun Times
THANK YOU!
Amelia Neptune
Bicycle Friendly America Program Director
League of American Bicyclists
Bicycle Friendly Communities
BY RANK
As of Fall 2021, 496 communities are currently recognized as a Bronze, Silver, Gold, or Platinum Bicycle Friendly Community. See the full list of BFCs at bikeleague.org/community.

347
Bronze

109
Silver

35
Gold

5
Platinum
Continue to expand the bike network and ensure that your community follows a bicycle facility selection criteria that increases separation and protection of bicyclists based on levels of motor vehicle speed and volume. On roads where automobile speeds regularly exceed 35 mph, it is recommended to provide protected bicycle infrastructure such as protected bike lanes/cycle tracks, buffered bike lanes or parallel 10th wide shared use paths (in low density areas). In slower speed areas such as quiet neighborhood streets, develop a system of bicycle boulevards that create an attractive, convenient, and comfortable cycling environment welcoming to cyclists of all ages and skill levels.

### Key Outcomes

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<thead>
<tr>
<th>Key Outcomes</th>
<th>Portland</th>
<th>Peoria</th>
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</thead>
<tbody>
<tr>
<td>Active Bicycle Advisory Group</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Active Bicycle Advisory Committee</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Bicycle-Friendly Laws &amp; Ordinances</td>
<td>EXCELLENT</td>
<td>EXCELLENT</td>
</tr>
<tr>
<td>Bike Plan is Current and is Being Implemented</td>
<td>YES</td>
<td>SOMEWHAT</td>
</tr>
<tr>
<td>Bike Program Staff to Population</td>
<td>PER 10K</td>
<td>PER 23K</td>
</tr>
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</table>

### Key Scores

<table>
<thead>
<tr>
<th>Category</th>
<th>Portland</th>
<th>Peoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIDERSHIP</td>
<td>Percentage of residents who bike</td>
<td>20%</td>
</tr>
<tr>
<td>CRASHES</td>
<td>Crashes per 10k bicycle commuters</td>
<td>50</td>
</tr>
<tr>
<td>FATALITIES</td>
<td>Fatalities per 10k bicycle commuters</td>
<td>0.2</td>
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</tbody>
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### Additional Information

- **Bicycle Safety Education:** Should be a routine part of education for students of all ages, and schools and the surrounding neighborhoods should be particularly safe and convenient for biking and walking. Work with local bicycle groups and interested parents to create Safe Routes to School programming for all schools.

- **Bicycle Parking:** Consider the use of bike corrals, bike valets, and incentives or requirements for bike parking in buildings.

- **Bicycle安全**: 20% | 6% |
BFC AWARDS CRITERIA

The Five E’s:
» Engineering
» Encouragement
» Education
» Evaluation & Planning
» Equity, Diversity & Inclusion (EDI)
NEWS from THE LEAGUE

August 9, 2021

UPDATING WHAT IT TAKES TO BE A BICYCLE FRIENDLY COMMUNITY
BICYCLE FRIENDLY AMERICA
BICYCLE FRIENDLY COMMUNITY
by Aminta Neptune

Since the Bicycle Friendly Community program originally launched in 1995 and then relaunched in 2003, our application has consistently evolved to reflect our collective understanding of what makes streets safer and more comfortable and accessible to more people who bike. Many communities use the program application itself as a guide to building a Bicycle Friendly Community inclusive of the 5 Es of engineering, encouragement, education, evaluation, and equity.

Over time, as national standards and guidelines have been revised to reflect latest best practices, or as technology has opened up new possibilities on topics like online bike education or automated bike counts, the BFC application has grown and evolved to reflect these incremental changes.

Amenities like bike share programs and protected bike lanes were barely a concept when the BFC program started but have become standard in many U.S. cities today. This is part of why awarded BFCs are required to renew their designation every four years — the program criteria are evolutionary by design, and communities must keep up with the program to maintain their designations.

Similarly, we recognize that every so often the program itself is in need of deeper re-evaluation, and so, over the next year the League will be taking some time to do just that.
RETHINKING HOW WE EVALUATE NETWORKS

B2. Does your community have bicycle facility selection criteria that increases separation and protection of bicyclists based on levels of motor vehicle speed and volume?

☐ Yes*
☐ No

*B2a. Please describe.

B4. Does your community currently have any of the following street design policies in place that promote a more comfortable cycling environment? Check all that apply.

☐ Design manual that incorporates the NACTO Urban Bikeway Design Guide
☐ Design manual that incorporates the NACTO Urban Street Design Guide
☐ Design manual that incorporates the FHWA’s Small Town and Rural Multimodal Network Guide
☐ Streetscape design guidelines
☐ None of the above
### B16a1. On streets with posted speeds of ≤ 25mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards? (in centerline miles)

- Bike boulevards _______
- Shared lane markings (not counted under Bicycle Boulevards) _______
- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) _______
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) _______
- Buffered bike lanes _______
- Protected bike lanes or cycle tracks (one-way or two-way) _______
- Raised cycle tracks (one-way or two-way) _______

### B16b1. On streets with posted speeds of > 25mph and ≤ 35mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards? (in centerline miles)

- Shared lane markings _______
- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) _______
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) _______
- Buffered bike lanes _______
- Protected bike lanes or cycle tracks (one-way or two-way) _______
- Raised cycle tracks (one-way or two-way) _______

### B16c1. On streets with posted speeds of > 35mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards? (in centerline miles)

- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) _______
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) _______
- Buffered bike lanes _______
- Protected bike lanes or cycle tracks (one-way or two-way) _______
- Raised cycle tracks (one-way or two-way) _______

### B15. How many miles of road network fall within the following posted speed limits? (in centerline miles)

- ≤ 25mph _______
- >25mph and ≤35mph _______
- >35mph _______
- Unknown _______

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**RETHINKING HOW WE EVALUATE NETWORKS**

*B13a. How many miles of the following off-street accommodations that can be legally used by bicyclists are within your community’s boundaries? (in miles)*

- Paved shared use paths (≥10 feet) _______
- Paved shared use paths (≥ 8 and <10 feet) _______
- Natural surface shared use paths (≥10 feet) _______
- Natural surface shared use paths (≥ 8 and <10 feet) _______
- Singletrack _______

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**B13b. How many miles of the following off-street accommodations that can be legally used by bicyclists are within your community’s boundaries? (in miles)**

- Paved shared use paths (≥10 feet) _______
- Paved shared use paths (≥ 8 and <10 feet) _______
- Natural surface shared use paths (≥10 feet) _______
- Natural surface shared use paths (≥ 8 and <10 feet) _______
- Singletrack _______

---

**B13c. How many miles of the following off-street accommodations that can be legally used by bicyclists are within your community’s boundaries? (in miles)**

- Paved shared use paths (≥10 feet) _______
- Paved shared use paths (≥ 8 and <10 feet) _______
- Natural surface shared use paths (≥10 feet) _______
- Natural surface shared use paths (≥ 8 and <10 feet) _______
- Singletrack _______

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**B13d. How many miles of the following off-street accommodations that can be legally used by bicyclists are within your community’s boundaries? (in miles)**

- Paved shared use paths (≥10 feet) _______
- Paved shared use paths (≥ 8 and <10 feet) _______
- Natural surface shared use paths (≥10 feet) _______
- Natural surface shared use paths (≥ 8 and <10 feet) _______
- Singletrack _______
B16a1. On streets with posted speeds of ≤ 25mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards? (in centerline miles)

- Bike boulevards __9.2____
- Shared lane markings (not counted under Bicycle Boulevards) __12.4____
- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) __0____
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) __37____
- Buffered bike lanes __16.4____
- Protected bike lanes or cycle tracks (one-way or two-way) __0.7____
- Raised cycle tracks (one-way or two-way) __0____

B16b1. On streets with posted speeds of > 25mph and ≤ 35mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards? (in centerline miles)

- Shared lane markings __2.2____
- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) __0____
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) __8.6____
- Buffered bike lanes __2.8____
- Protected bike lanes or cycle tracks (one-way or two-way) __0.3____
- Raised cycle tracks (one-way or two-way) __0____

B16c1. On streets with posted speeds of > 35mph, how many miles of each of the following bicycle facilities are there that meet or exceed current AASHTO or NACTO standards?

- Wide paved shoulders (ridable surface ≥4 feet, and minimum clear path of ≥4 feet between rumble strips) __0____
- Bike lanes (incl. standard, contra-flow, left-side) (ridable surface ≥4 feet) __3.8____
- Buffered bike lanes __0____
- Protected bike lanes or cycle tracks (one-way or two-way) __0____
- Raised cycle tracks (one-way or two-way) __0____

B15. How many miles of road network fall within the following posted speed limits? (in centerline miles)

- ≤ 25mph __760____
- >25mph and ≤35mph __154____
- >35mph __5____
- Unknown _______
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Continue efforts to improve data-driven road safety operations and Vision Zero activities. Develop a coordinated and comprehensive Vision Zero policy and plans to create engineering, education, and enforcement strategies to reduce traffic crashes and deaths for all road users, including bicyclists and pedestrians. Road diet, lane diet, and traffic calming treatments are important engineering components for addressing safety.

LEARN MORE ▷ WWW.BIKELEAGUE.ORG/COMMUNITIES

OAKLAND, CA

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

| Engineering | | Engineering |
|-------------||----------------|
| High Speed Roads with Bike Facilities | 56% | 76% |
| Total Bicycle Network Mileage to Total Road Network Mileage | 80% | 80% |
| Bicycle Education in Schools | 100% | 100% |
| Share of Transportation Budget Spent on Biking | 14% | 14% |
| Bike Month and Bike to Work Events | VERY GOOD | VERY GOOD |
| Active Bicycle Advocacy Group | YES | YES |
| Active Bicycle Advisory Committee | MEETS AT LEAST ONCE A MONTH | MEETS AT LEAST ONCE A MONTH |
| Bicycle-Friendly Laws & Ordinances | VERY GOOD | VERY GOOD |
| Bike Plan is Current and is Being Implemented | YES | YES |
| Bike Program Staff to Population | 1 PER 15,000 | 1 PER 100,000 |

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

<table>
<thead>
<tr>
<th>Category Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGINEERING</td>
</tr>
<tr>
<td>Bicycle Infrastructure</td>
</tr>
<tr>
<td>EDUCATION</td>
</tr>
<tr>
<td>Motorist Awareness &amp; Bicycling Skills</td>
</tr>
<tr>
<td>ENCOURAGEMENT</td>
</tr>
<tr>
<td>Promoting Cycling Culture</td>
</tr>
<tr>
<td>ENFORCEMENT</td>
</tr>
<tr>
<td>Enforcing Traffic Laws for Bicyclists</td>
</tr>
<tr>
<td>EVALUATION &amp; PLANNING</td>
</tr>
<tr>
<td>Campaigns and Long Term Goals</td>
</tr>
</tbody>
</table>

KEY OUTCOMES

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIDERSHIP</td>
</tr>
<tr>
<td>Percentage of commuters who bike</td>
</tr>
<tr>
<td>CRASHES</td>
</tr>
<tr>
<td>Crashes against bicyclists</td>
</tr>
<tr>
<td>FACILITIES</td>
</tr>
<tr>
<td>Number of bicycle lanes</td>
</tr>
<tr>
<td>Number of bike racks</td>
</tr>
</tbody>
</table>

SUPPORTED BY THE LEAGUE MEMBERS

RETHINKING HOW WE EVALUATE NETWORKS
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Continue efforts to improve street-level bicycle safety, parking, and traffic calming treatments. Develop a coordinated and comprehensive Vision Zero policy and plan to implement educational, enforcement, and engineering strategies to reduce traffic crashes and deaths for all road users, including bicyclists and pedestrians. Road diets, lane diets, and traffic calming treatments are important engineering components for addressing safety.

Learn more at [www.bikeleague.org/communities](http://www.bikeleague.org/communities)

**10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY**

<table>
<thead>
<tr>
<th>Category</th>
<th>Average</th>
<th>Platinum</th>
<th>Brilliant</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Speed Roads with Bike Facilities</td>
<td>80%</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Total Bicycle Network Mileage to Total Road Network Mileage</td>
<td>80%</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Bicycle Education in Schools</td>
<td>100%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>Share of Transportation Budget spent on Biking</td>
<td>10%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Bike Month and Bike to Work Events</td>
<td>VERY GOOD</td>
<td>VERY GOOD</td>
<td>VERY GOOD</td>
</tr>
<tr>
<td>Active Bike Advocacy Group</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Active Bike Advisory Committee</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Bicycle-Friendly Laws &amp; Ordinances</td>
<td>VERY GOOD</td>
<td>VERY GOOD</td>
<td>VERY GOOD</td>
</tr>
<tr>
<td>Bike Plan is Current and is Being Implemented</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Bike Program Staff per Population</td>
<td>1 PER 21K</td>
<td>1 PER 17K</td>
<td>1 PER 12K</td>
</tr>
</tbody>
</table>

**CITY OF OAKLAND BIKES**

- **Population**: 425,000
- **Total Area**: 55.8 sq. miles
- **Total Bicycle Network Mileage**: 350 miles
- **Bicycle Education in Schools**: 100%
- **Share of Transportation Budget spent on Biking**: 10%
- **Bike Month and Bike to Work Events**: YES
- **Active Bike Advocacy Group**: YES
- **Active Bike Advisory Committee**: YES
- **Bicycle-Friendly Laws & Ordinances**: VERY GOOD
- **Bike Plan is Current and is Being Implemented**: YES
- **Bike Program Staff per Population**: 1 PER 21K

**CATEGORY SCORES**

- **ENGINEERING**: 5.1/10
- **EDUCATION**: 4.9/10
- **ENCOURAGEMENT**: 5.5/10
- **ENFORCEMENT**: 2.8/10
- **EVALUATION & PLANNING**: 6.0/10

**KEY STEPS TO PLATINUM**

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**Figure 1: Oakland Bike Network Growth Over Time**

<table>
<thead>
<tr>
<th>Year</th>
<th>Bike Path (Class 1)</th>
<th>Bike Lane (Class 2)</th>
<th>Bike Route (Class 3)</th>
<th>Arterial Bike Route (Class 3A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2015</td>
<td>13.6%</td>
<td>100%</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>2018</td>
<td>1.2%</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>2020</td>
<td>1.2%</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**City of Oakland Bikeways - 2020**

City of Oakland has a rich dataset of bike facilities over time. Bike lanes have expanded significantly since the year 2000 and protected/bike lanes have expanded only recently.
RETHINKING HOW WE ADVOCATE FOR NETWORKS

- Advocating for connected networks
- Advocating for the Safe System Approach
- Advocating for context-appropriate facilities for all ages and abilities
- Advocating for equitable facilities
- Advocating for inclusive planning processes
- Advocating for data