

Improving Bike Lanes

Fort Collins already has many miles of bike lanes throughout the city. Nearly 60% of arterial roads have bike lanes, ranging from five to eight feet wide. Next steps include making these lanes wider, safer and better connected to the low-stress network.



Bike Lane Connectivity

There are critical gaps in the current Fort Collins bike lane network.

Plan recommendations:

- Complete bike lane network on arterials and collectors
- Do not drop bike lanes approaching intersections and shorten merge areas for motorists where appropriate



Buffered Bike Lane

Widening bike lanes with a buffer to traffic reduces the stress of riding on busier or higher speed roadways.

Plan recommendation:

- Narrow automobile travel lanes to the minimum necessary to add buffers to as many bicycle lanes as possible throughout Fort Collins



Unsafe gutter pan Safe gutter pan

Bike Lane Width

Bike lanes less than 5 feet wide or including a gutter pan joint can be uncomfortable or unsafe.

Plan recommendation options:

- Widen bike lanes adjacent to gutter pans
- Install widen gutter pans that extend across the entire bike lane width
- Removing the gutter

Options for Managing Conflicts

Shared Right Turn Lane



Alerts drivers to through bicycle movement at locations where the bicycle lane must be dropped to add a right turn lane

Conflict Zone Markings



Highlights bicyclist's space where motorists merge and are expected to yield

Bicycle Box



Gives bicyclists a head start at signalized intersections

Two-Stage Turn Queue Box



Provides waiting space to bicyclists, making two-stage left turns across wide roads easier

Intersection Improvements

These treatments are proposed to help improve crossings of arterial roadways and create critical connections between low-stress local and collector streets. Additional engineering study may be required prior to implementation.



Median Crossing and Advanced Yield Line

Enables bicyclists to cross the roadway in two steps at unsignalized intersections



Two-Way Sidepath Crossing

Provides a connection for crossing an arterial street at an offset local street intersection (Photo: NACTO)



Traffic Signal

Requires drivers to stop, increasing safe crossing opportunities for bicyclists and pedestrians



Jughandle Left Turn Pocket

Provides a place for bicyclists to safely wait to make a left turn across an arterial intersection

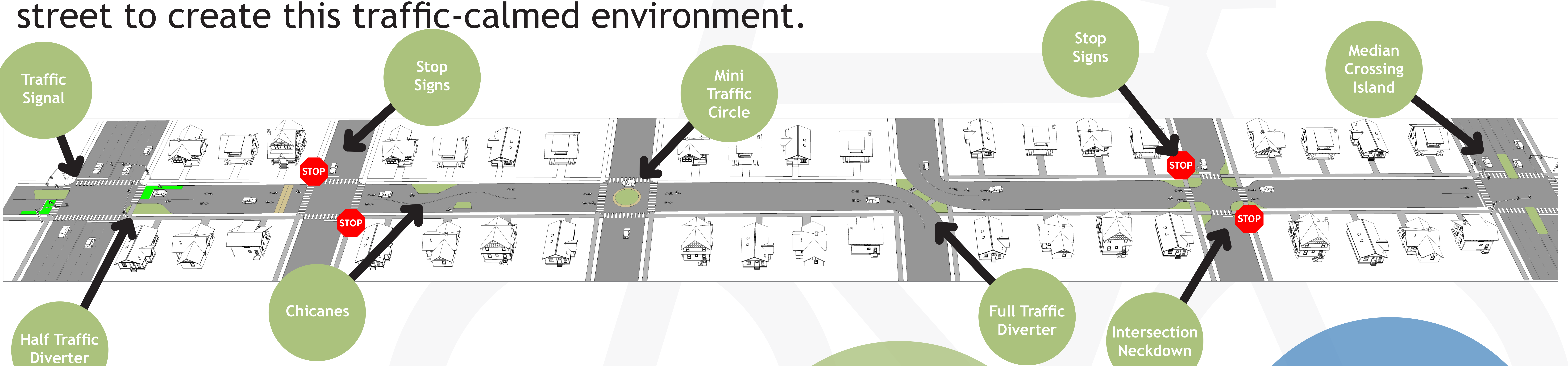


Rectangular Rapid Flashing Beacon

Activated strobe light notifies motorists of pedestrian and bicyclist intent to cross, increasing yielding rates

Neighborhood Greenways

These low speed and volume streets prioritize bicyclist and pedestrian travel and provide safe crossings of large arterial roads. A number of roadway elements combine along the street to create this traffic-calmed environment.



Comfort

- Low-stress LTS 1 facility
- Gives priority to bicyclists in mixed traffic
- Reduces stopping at local streets
 - Reduces delay at arterial crossings
- Provides alternative to arterial routes

Pedestrian Risk From Vehicular Impact		
VEHICLE IMPACT SPEED	SHARE OF REPORTED INCIDENTS ¹	PROBABILITY OF PEDESTRIAN DEATH OR SERIOUS INJURY ¹
20 MPH	37%	☠ = 1% + = 30%
30 MPH	27%	☠ = 6% + = 50%
40 MPH	19%	☠ = 30% + = 45%
50 MPH	10%	☠ = 78% + = 20%
60 MPH	7%	☠ = 98% + = 2%

¹ Based on "Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants" by D. C. Richards published by UK Department of Transport, September 2010. Death is fatality within 30 days. Serious Injury is a condition requiring hospitalization.

Credit: Urban Indy

Safety

- 2 to 8 times lower bicyclist crash rate than parallel arterials
- Safe arterial crossings provided
 - Traffic speeds reduced to 20 mph or less

Equity

- Attracts ages 8 to 80
- Woman prefer 3 times over arterials
- Improves neighborhood livability
 - Creates opportunities for green infrastructure

Neighborhood Greenway Elements

Combing a selection of these choices creates a calm, low-traffic environment on a neighborhood greenway that is more comfortable for through bicycle traffic and for neighboring residents.

Low Volume



Full Traffic Diverter

Slow Speeds



Neckdown and Speed Hump

Green Street



Landscaped Chicanes

Arterial Crossings



Median Crossings

Branding



Branding and Wayfinding



Half Traffic Diverter



Mini Traffic Circle



Rain Garden Neckdown



Pedestrian and Bicycle Only Signal



Pavement Markings



Skinny Streets



Neckdown Intersection



Community Composting/Planting Strip Gardens



Raised Crosswalks



Street Art

Protected Bike Lanes

These bike lanes are separated from both automobile and pedestrian traffic. They are also known as “cycle tracks” or “separated bike lanes.”

Midblock



Sidewalk Level, One-Way
Landscape separated with
differentiating materials



Street Level, One-Way
Parking and flex post separated



Street Level, One-Way
Planter separated



Street Level, One-Way
Parking separated

Intersections



Dutch Intersection
Manages conflicts between modes



Two-Stage Queue Box
Waiting space for left turns



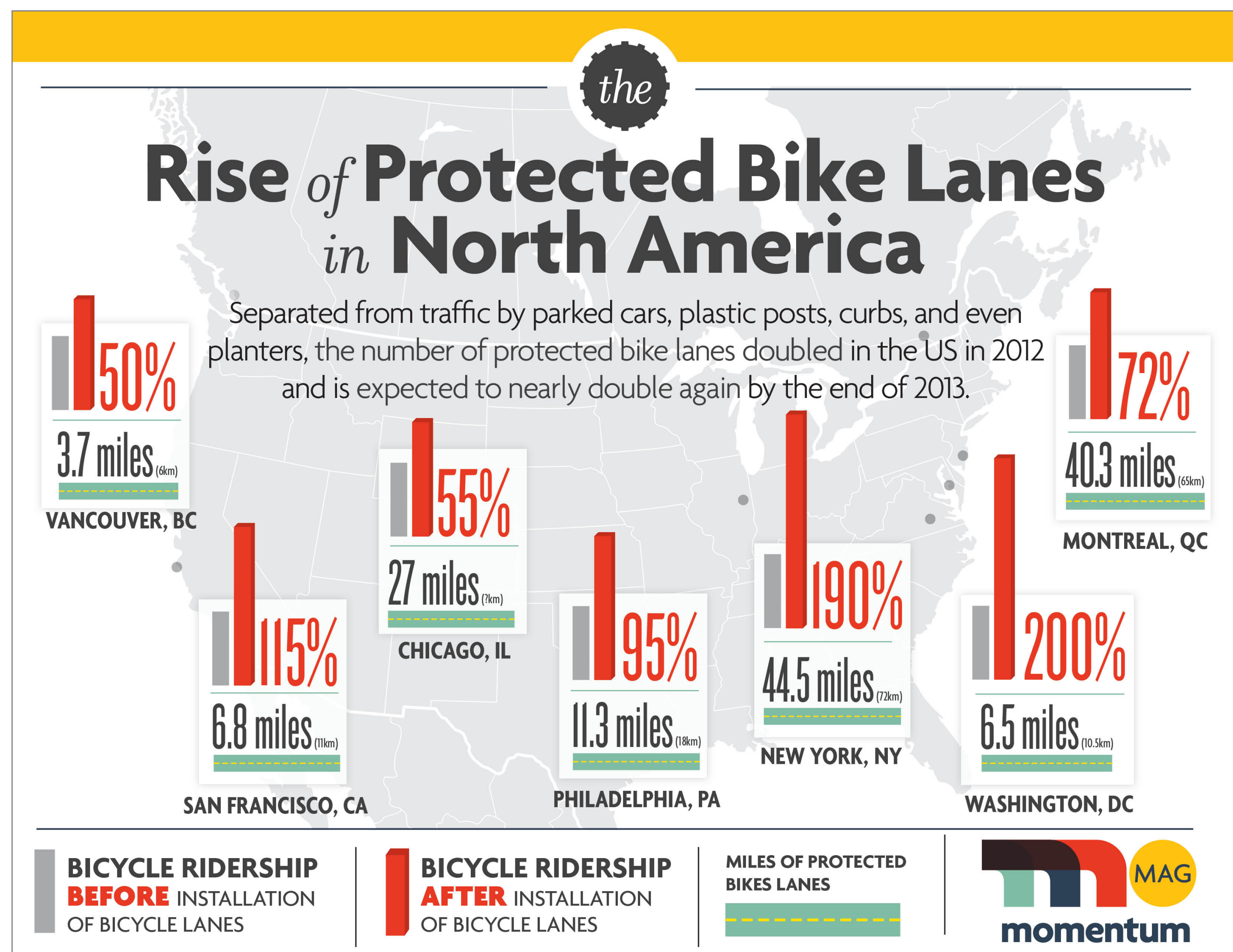
Colored driveway crossing
Alerts users of conflicts



Bike signals
Separates conflicts

Why Protected Bike Lanes?

These separated facilities provide a low-stress riding environment that attracts a wide variety of riders of all ages and abilities.



Comfort

- Low-stress LTS 1 facility
- Path-like experience
- Separates bicyclists from other traffic

Safety

- 89% fewer bicyclist injuries compared to streets without bike facilities
- Shown to reduce sidewalk riding 57 to 84%
- Minimizes intersection exposure to traffic
- Eliminates obstructions in bike lane

Equity

- Attracts riders ages 8 to 80
- Women, children, and elderly prefer over bicycle lanes



Boulder



Washington, DC



New York City



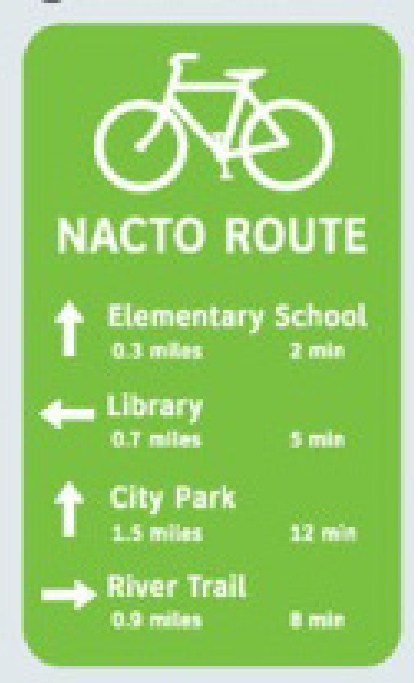
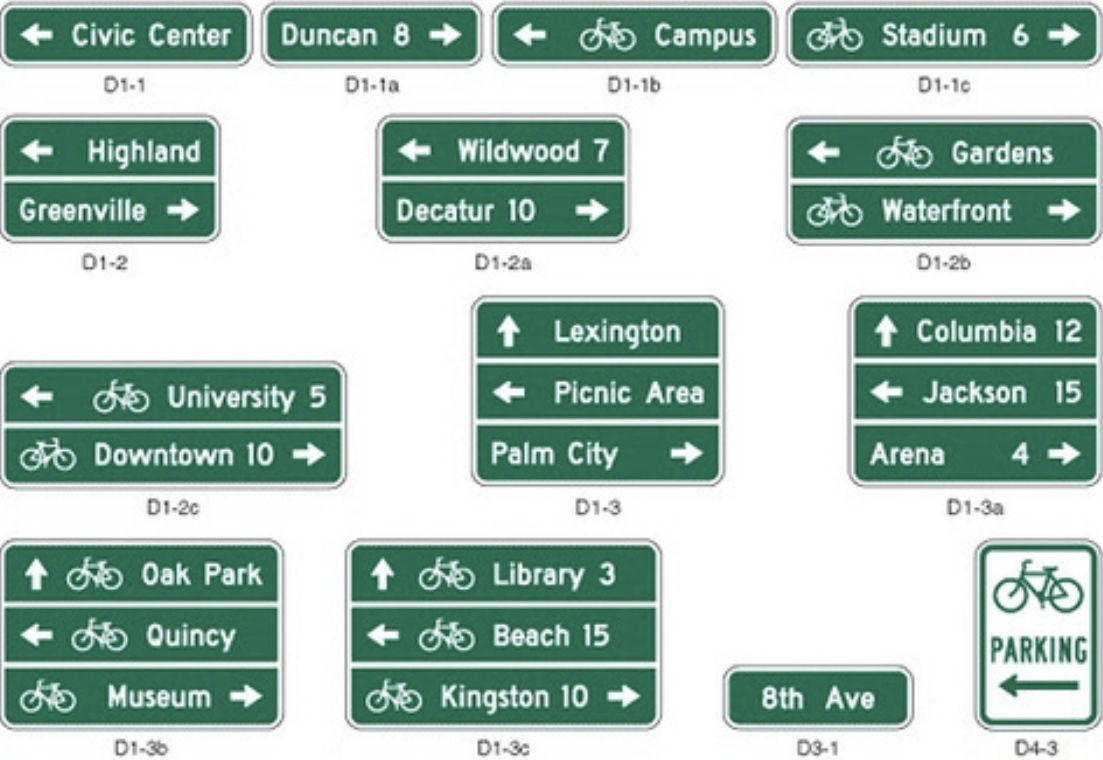
Chicago



Toronto

Wayfinding Sign Examples

Figure 9B-4. Guide Signs and Plaques for Bicycle Facilities (Sheet 1 of 2)



Oakland, CA



Portland, OR



Berkeley, CA



Chicago, IL



San Francisco, CA

