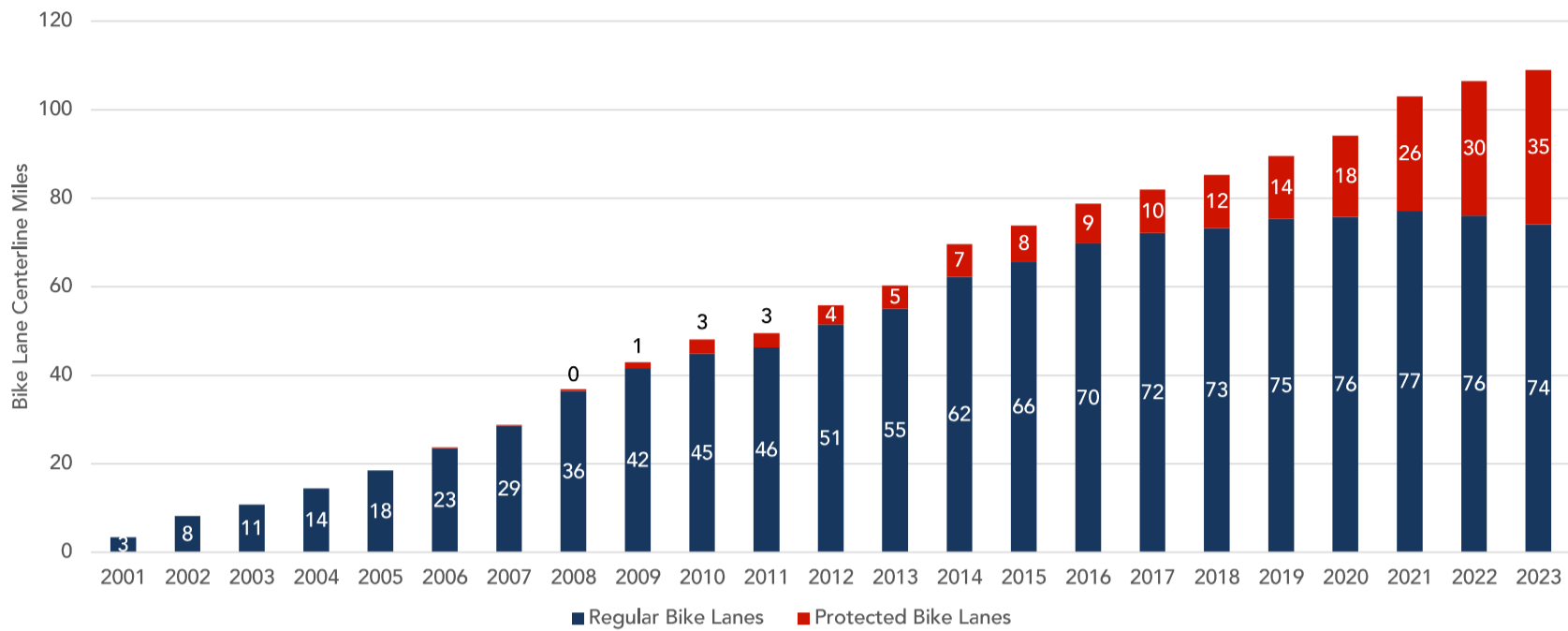


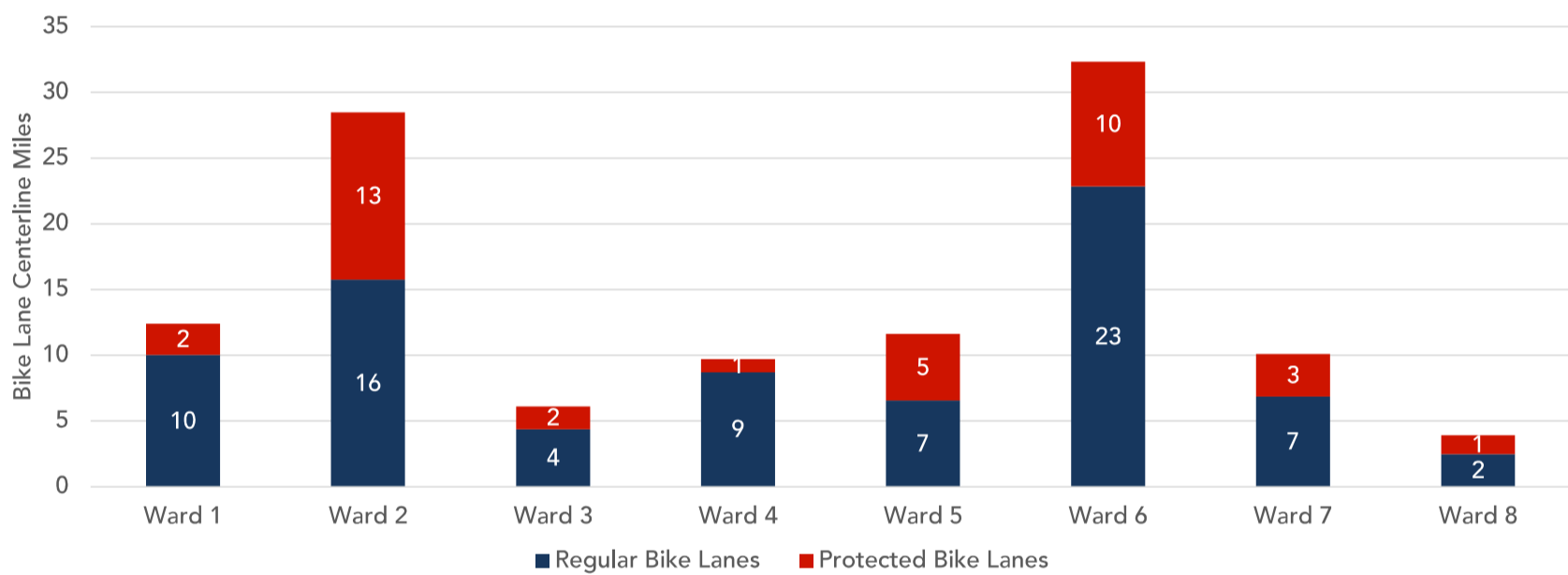
STATION 1 STATE OF BICYCLING IN DC

BICYCLE INFRASTRUCTURE

Installed Bike Lanes Over Time



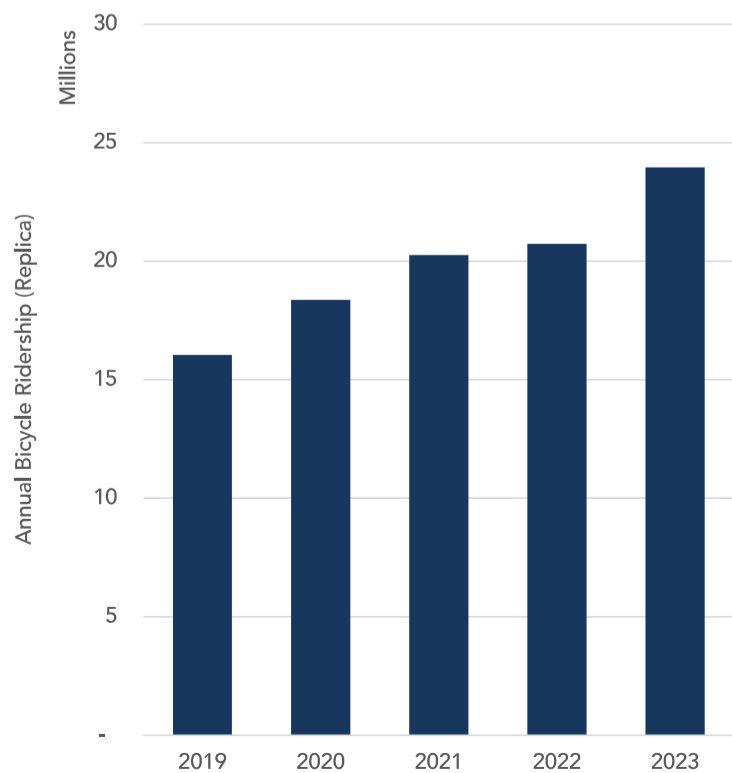
Installed Bike Lanes by Ward



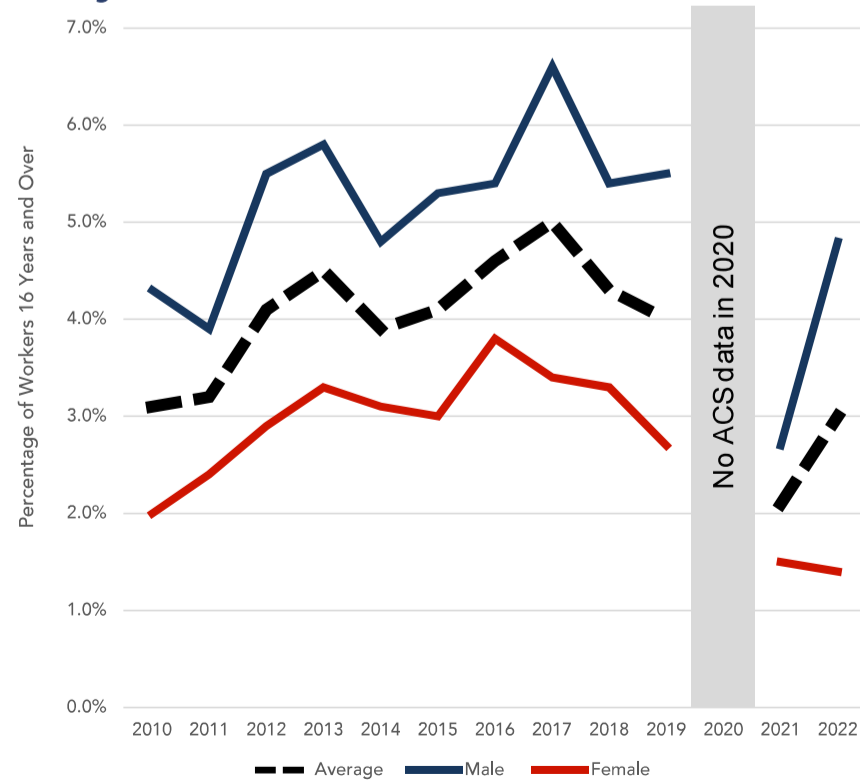
BICYCLE RIDERSHIP

Annual Bicycle Ridership

Replica is a 'Big Data' service that uses smartphone location-based services and other data sources to model transportation activity. Replica has medium confidence on bike trips. Year-to-year comparison is more valuable.



American Community Survey Bicycle to Work Rate

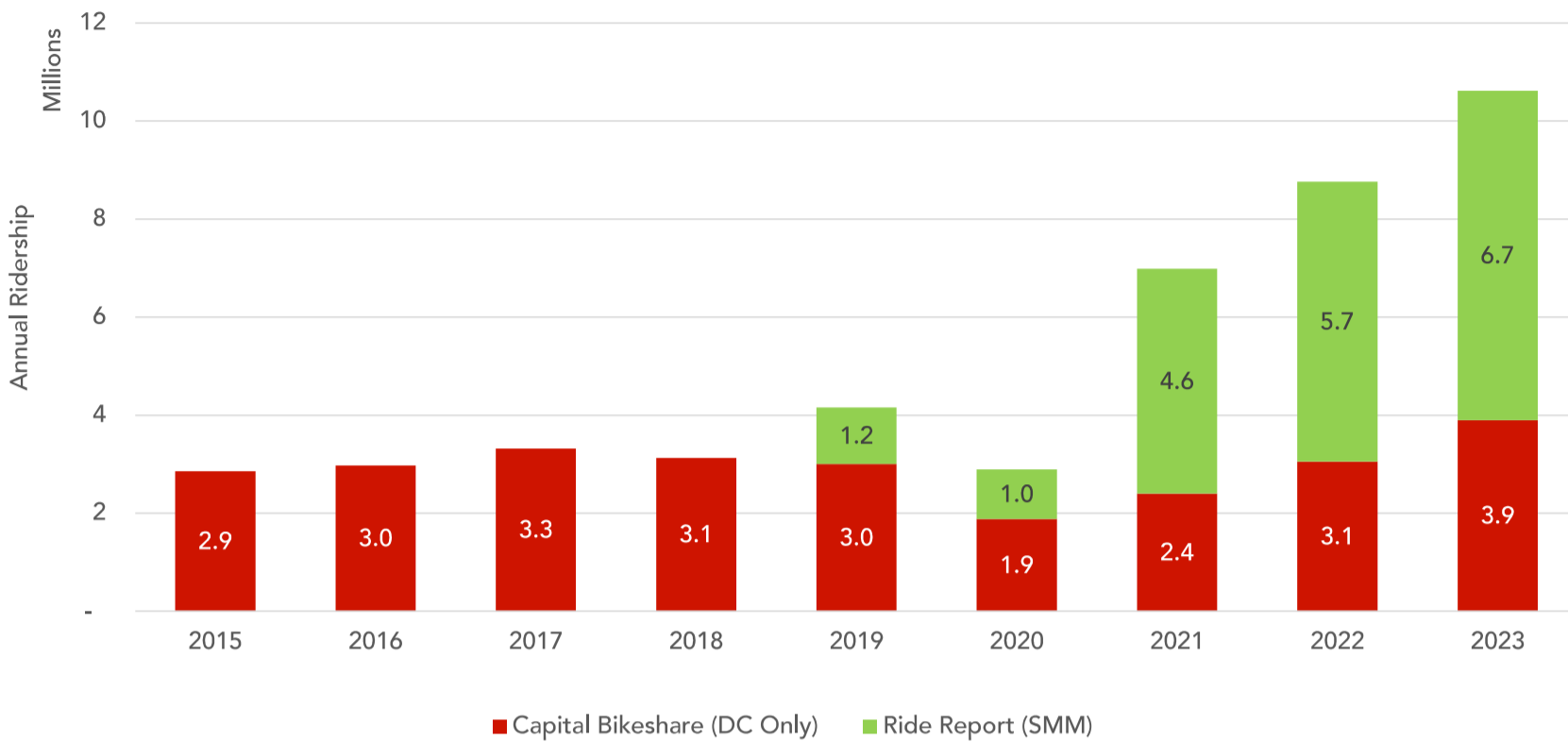


Source: US Census Bureau American Community Survey 1-Year Estimates (2010-2023)

SHARED MICROMOBILITY RIDERSHIP

Capital Bikeshare + Shared E-Bikes and Scooters

Capital Bikeshare trips show trips traveling in D.C. Ridership counts do not count trips happening exclusively outside of D.C. Rider Report (SMM) is aggregated data from dockless bike and scooter companies.

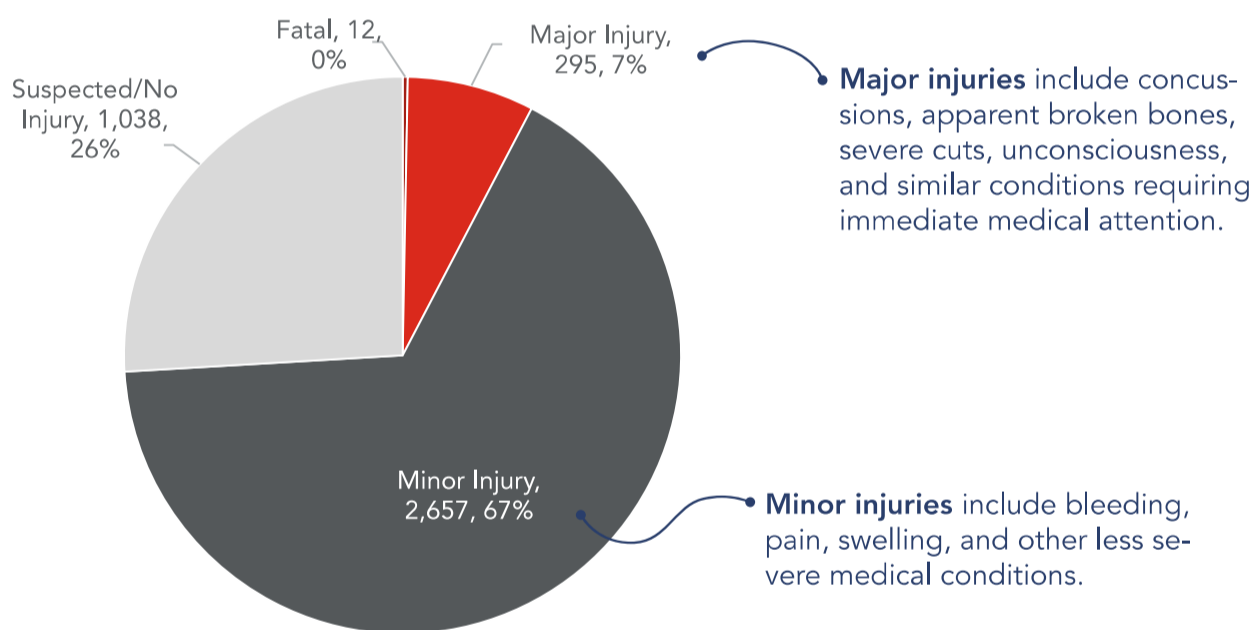


BICYCLE CRASHES

Crashes by Severity

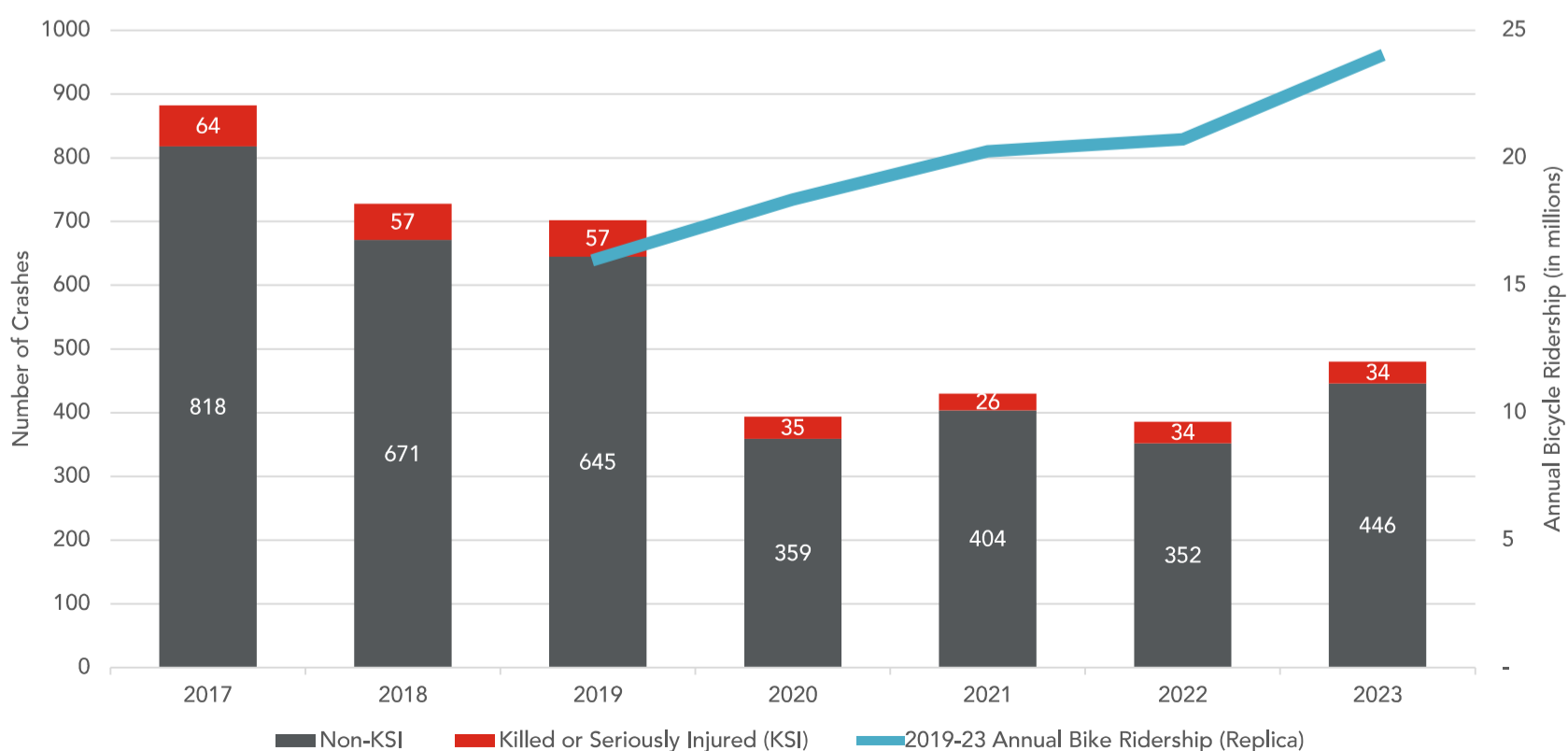
4,002
reported bike crashes
in DC (2017-2023)

307
killed/seriously injured
(KSI) bike crashes in DC
(2017-2023)



Source: Open Data DC

Crashes by Year vs. Annual Bicycle Ridership



STATION 2 BICYCLE CRASH FACTORS

DAY OF WEEK AND TIME OF DAY

| Day of Week | 3-6 AM | 6-9 AM | 9 AM-12 PM | 12-3 PM | 3-6 PM | 6-9 PM | 9 PM-12 AM | 12-3 AM ² | Total |
|--------------|-----------|-----------|------------|------------|------------|------------|------------|----------------------|------------|
| Monday | 6 | 5 | 6 | 17 | 12 | 20 | 26 | 17 | 99 |
| Tuesday | 7 | 4 | 7 | 20 | 22 | 14 | 34 | 20 | 125 |
| Wednesday | 8 | 4 | 5 | 18 | 15 | 36 | 33 | 18 | 139 |
| Thursday | 7 | 3 | 7 | 31 | 18 | 34 | 38 | 25 | 156 |
| Friday | 13 | 8 | 9 | 15 | 17 | 22 | 26 | 30 | 135 |
| Saturday | 14 | 5 | 5 | 8 | 11 | 18 | 23 | 21 | 114 |
| Sunday | 8 | 2 | 3 | 4 | 12 | 28 | 20 | 7 | 98 |
| Total | 63 | 31 | 42 | 113 | 107 | 172 | 200 | 138 | 866 |

ROADWAY CHARACTERISTICS

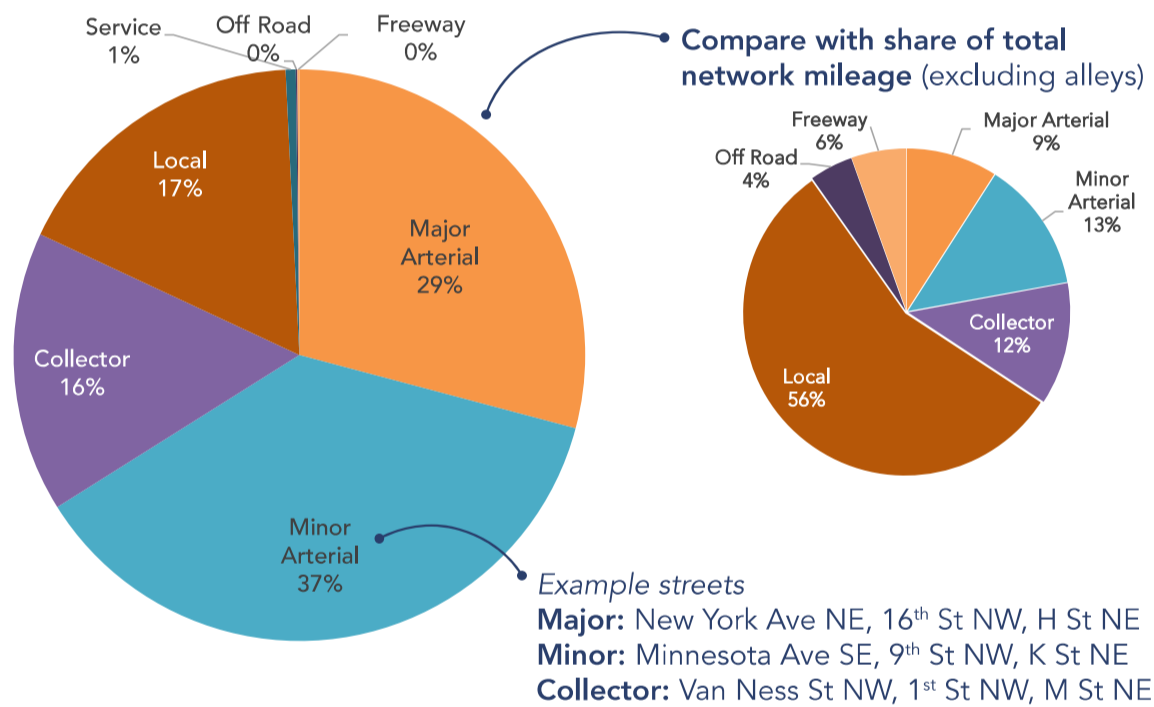
Location

65%
of bike crashes occur at intersections

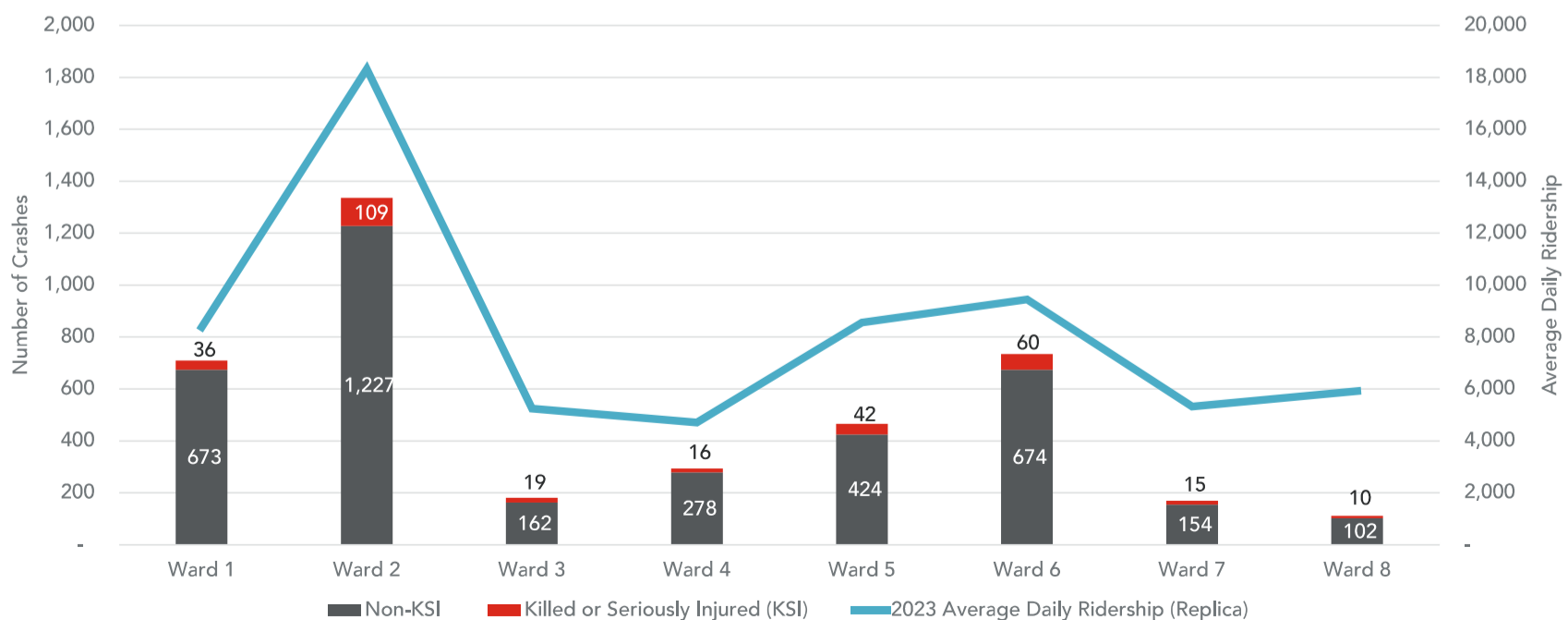
35%
of bike crashes occur midblock

Source: Open Data DC

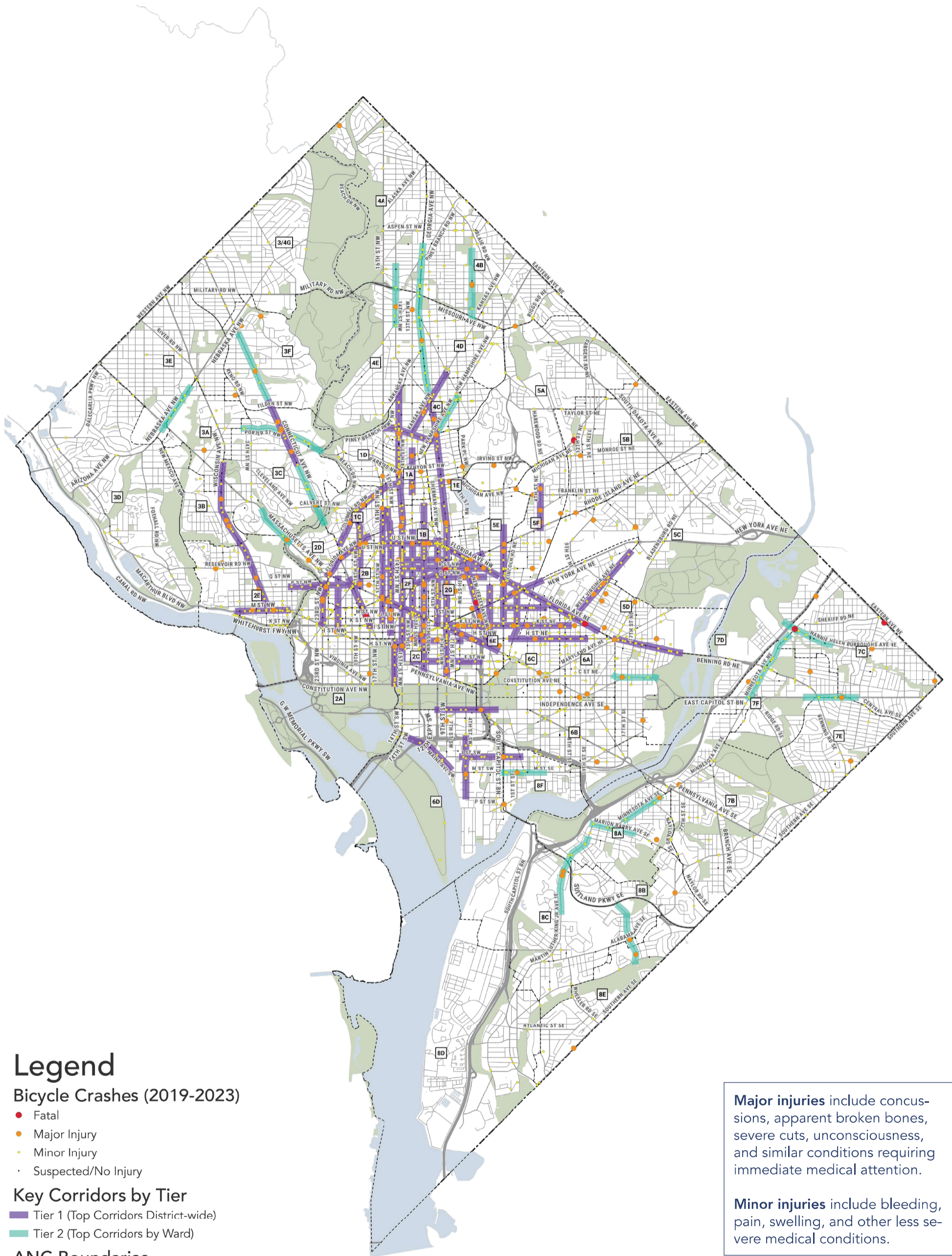
Roadway Type (Functional Class)



WARD AND RIDERSHIP



CRASH LOCATIONS + KEY CORRIDORS BY TIER



Legend

Bicycle Crashes (2019-2023)

- Fatal
- Major Injury
- Minor Injury
- Suspected/No Injury

Key Corridors by Tier

- Tier 1 (Top Corridors District-wide)
- Tier 2 (Top Corridors by Ward)

ANC Boundaries

- ANC Boundaries

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Major injuries include concussions, apparent broken bones, severe cuts, unconsciousness, and similar conditions requiring immediate medical attention.

Minor injuries include bleeding, pain, swelling, and other less severe medical conditions.

0 1 2 mi



CASE STUDY

KENYON STREET NW

11th St NW to
Warder St NW



Basics

Ward: 1
ANCs: 1A, 1E
Neighborhoods: Park View, Columbia Heights

Type of Street:
1-way (WB) Minor Arterial

Type of Bikeway:
Two-way protected in road-bed, south curb

Planning Years: 2016-2021
Construction Year: 2022
Est. Construction Cost:
\$1 million/mile

Bikeway Length: 0.4 miles
Curb to Curb Width: 30 feet

Travel Lanes Before/After
Before: 1, with 2nd rush hour lane, 11ft each
After: 1, 11ft

Parking Lanes Before/After
Before: 1 residential permit parking (RPP) lane and 1 off-peak lane (72 full-time, 62 part-time spaces)
After: 1 RPP lane (65 spcs.)

PLANNING AND DESIGN

| 2005 | 2015-2016 | 2020 | 2020-2022 | 2022 |
|---|---|--|--|--|
| Kenyon St NW included in Bi-cycle Master Plan | Crosstown Multimodal Transportation Study | Crosstown PBL built (Irving Street NW) | Public demand to extend crosstown bikeway; add'l meetings held | Kenyon St NW protected bike lane extension installed |

PUBLIC INPUT

- Crosstown Study held large public open houses and meetings with ANCs, Washington Area Bicycle Association, Bicycle Advisory Council, and other groups.
- Irving St Crosstown PBL project included further public meetings, Park View United Neighborhood Coalition meeting, and in-road "pop-up bike lane" one-day demo.
- Kenyon St project outreach included further meetings with ANCs and ANC Transportation Committees.

Typical Section



KEY STATISTICS

↓70%
fewer vehicle crashes after construction (2021 vs. 2023)

No change
in already near-zero bike/ped crashes and average vehicle speeds

Up to 2X
increase in bicycle ridership after construction (2020 vs. 2023)

LESSONS LEARNED

- **Success builds support.**
The Irving Street protected bike lane project was built first, in part because it would not require parking reductions. As soon as it was complete, community asked for an extension to the west.
- **Demonstrate new concepts.**
DDOT implemented a temporary pop-up bike lane, which allowed both riders from across the city and neighbors from across the street to see how a protected bikeway would work on the street.
- **Flex posts are flexible.**
DDOT is currently considering swapping the parking and travel lanes based on feedback received from community stakeholders. The materials used in this project, like flex posts and concrete barriers, make it easier to improve on the design.



CASE STUDY

9TH STREET NW

Pennsylvania Ave NW to T St NW



Basics

Wards: 1 & 2
ANCs: 1C, 2B, 2G
Neighborhoods:
 Downtown, Shaw

Type of Street
North of Mass. Ave:
 2-way Minor Arterial
South of Mass. Ave:
 1-way (SB) Principal Arterial

Type of Bikeway:
 Two-way protected in road-bed, east curb

Planning Years: 2015-2017, 2021-2022
Construction Year: 2022-3
Est. Construction Cost:
 \$1 million/mile

Bikeway Length: 1.9 miles
Curb to Curb Width: 50-56'

Travel Lanes Before/After
North of Mass. Ave
Before: 4, 10 ft each
After: 3, 10 ft each
South of Mass. Ave
Before: 3, 11 ft each
After: 2, 10 ft each

Parking Lanes Before/After
Before: 2 lanes (380 spcs.)
After: 2 lanes (270 spaces)

PLANNING AND DESIGN

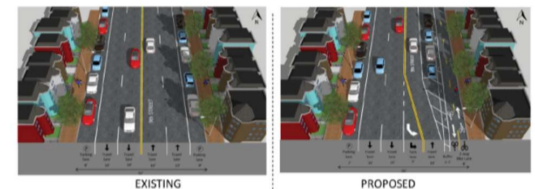
| 2005 | 2014 | 2015-2017 | 2021 | 2022-2023 |
|---|--|---|---|--|
| 6th & 7th St NW included in Bicycle Master Plan | MoveDC recommends two-way PBL on 6th St NW | Eastern Downtown Protected Bike Lane Feasibility Study | 9th St NW selected for PBL; additional outreach | 9th St NW Protected Bike Lane installed |

PUBLIC INPUT

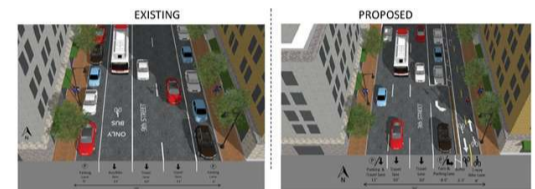
- Eastern Downtown Study included two large public meetings and multiple smaller meetings with groups including churches, Howard University, WABA, and the BAC; DDOT received nearly 5,000 comments.
- In 2021, when 9th St NW was selected, DDOT held additional meetings with ANCs, churches, business organizations, residents.

Typical Section

North of Massachusetts Ave



South of Massachusetts Ave



KEY STATISTICS

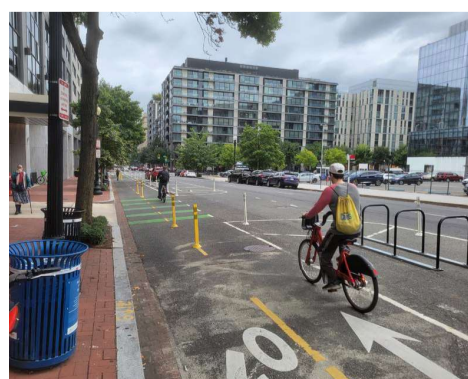
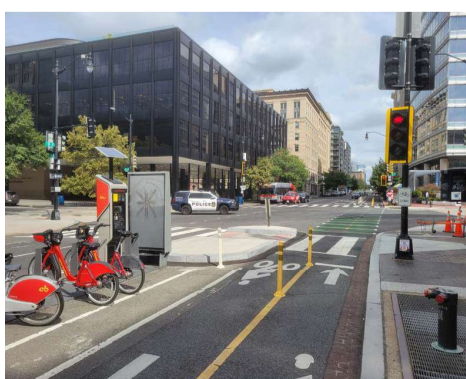
↓22%
 fewer vehicle crashes after construction
 (2021 vs. 2023)

3x
 increase in bike crashes after construction
 (2021: 4 vs. 2023: 12)

7.2x
 increase in bicycle ridership after construction
 (2019 vs. 2023)

LESSONS LEARNED

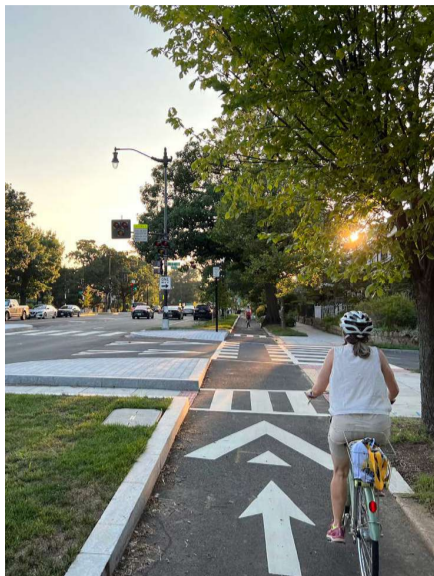
- **Consistent communication.**
 There were gaps in communication with the community during planning process. It's important to keep the public up-to-date with the status of the project, especially when there are gaps in the timeline. DDOT's new bike lane project website will help improve communication on future projects.
- **Acknowledge other concerns.**
 On 6th Street and other parallel streets, there were concerns about sidewalk conditions and speeding. Concerns that may be outside the project scope should be noted and possibly addressed through other DDOT projects or efforts. For example, on 9th Street, DDOT added pedestrian refuge islands to improve safety.
- **Be flexible during public engagement.**
 The first public meeting was contentious and overcrowded for the open house format. DDOT was able to pivot to a listening session and scheduled a new meeting for a later date in a larger venue.



CASE STUDY

C STREET NE + N.C. AVE NE

14th St NE to 22nd St NE



Basics

Wards: 6 & 7
ANCs: 6A, 7D
Neighborhood: Capitol Hill

Type of Street
C St NE west of N.C. Ave:
 1-way (WB) Minor Arterial
North Carolina Ave NE:
 2-way Minor Arterial
C St NE east of N.C. Ave:
 2-way Principal Arterial

Type of Bikeway:
 Separated bike lanes on each side of roadway separated by landscaping and diverging at C St NE at N.C. Ave, with additional SW-bound painted bike lane on N.C. Ave

Planning Years: 2006–2010, 2015–2020
Construction Year: 2021–23
Est. Construction Cost:
 \$17 million/mile

Bikeway Length: 1.0 mile
Curb-to-Curb Width:
 90 feet → 50–65 feet

Travel Lanes Before/After
C St NE west of N.C. Ave:
 1 lane, WB only (no change)
North Carolina Ave NE:
 4 with brick median →
 3 (2 WB) with brick median
C St NE east of N.C. Ave:
 5 lanes (3 WB) with median
 → 3 lanes (2 WB) w/median

Street Parking Before/After
Before: 82 full-time spaces
After: 72 full-time spaces

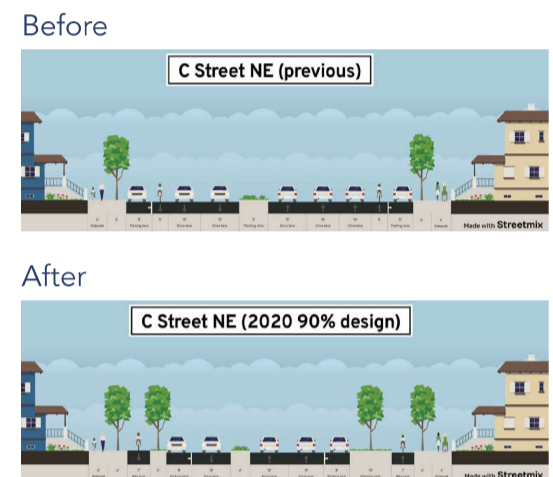
PLANNING AND DESIGN

| 2005 | 2006 | 2007 | 2010 |
|---|--|--|---------------------------------------|
| C St NE included in Bicycle Master Plan | Capitol Hill Transportation Study | Painted bike lane installed | Capitol Hill Traffic Calming Study |
| 2015-16 | 2017-18 | 2018-20 | 2021-23 |
| C St NE Multimodal Corridor Study | C St NE Streetscape Project initial design | C St NW Streetscape Project design revised | C St NE Protected Bike Lane installed |

PUBLIC INPUT

- Capitol Hill Traffic Calming Study (2010) encountered community concern and C St NE project was not implemented.
- For the C St NE Streetscape Project (2018), the community pushed for traffic calming elements, which DDOT incorporated into the design.

Typical Section



KEY STATISTICS

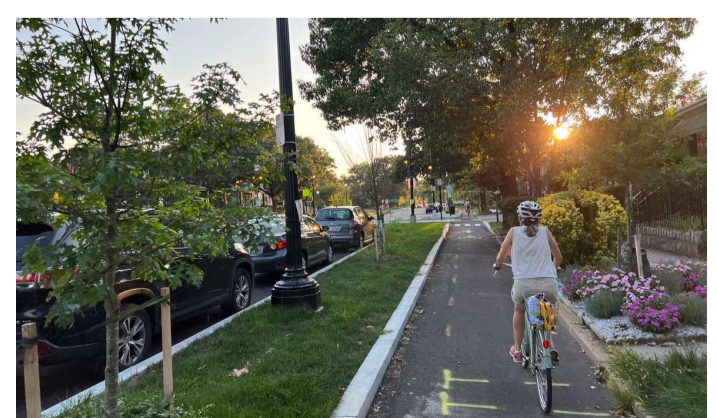
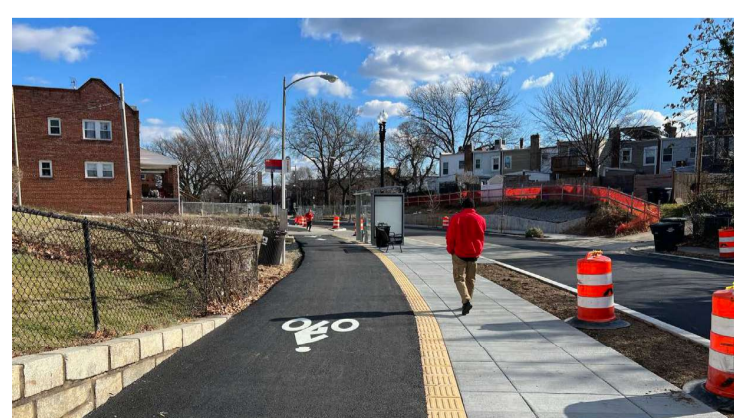
↓13%
 lower vehicle speeds after construction (WB only, 2021 vs. 2023)

Nominal change
 in bike crashes after construction (2021: 1 vs. 2023: 3)

3-7x
 increase in bicycle ridership after construction (2021 vs. 2023)

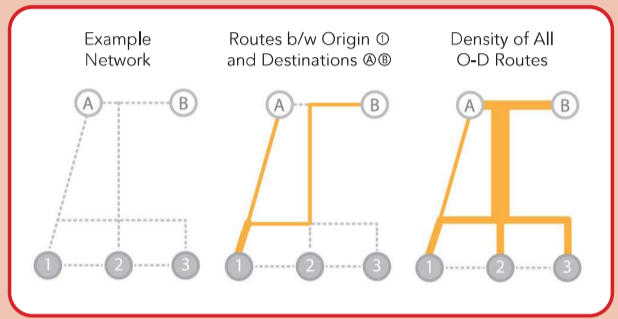

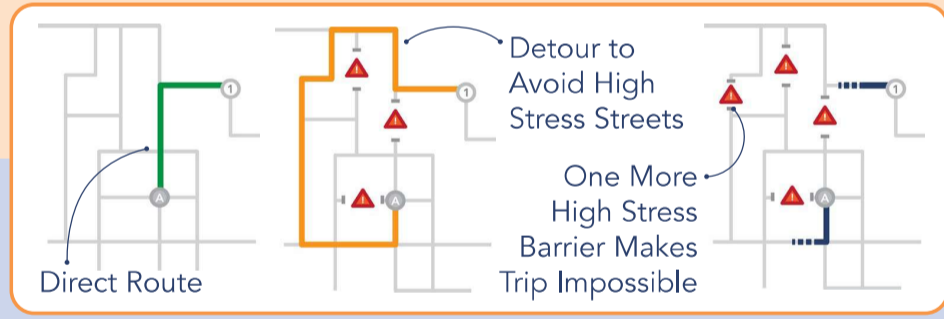
LESSONS LEARNED

- **More than bike lanes.**
 This was a full roadway reconstruction project which included pedestrian safety improvements, traffic calming, utility upgrades, landscaping, and bike lanes.
- **Higher quality, longer time horizons.**
 Integrating bikeways into roadway reconstruction projects yields a high-quality result, but in a longer timeframe, and the number of projects each year is limited.
- **Delays affect project support.**
 There were several delays in the delivery of the C Street project. It is important to keep people informed during the course of planning and design and be transparent about project timelines and delivery schedule.



STATION 4 BICYCLE NETWORK ANALYSIS

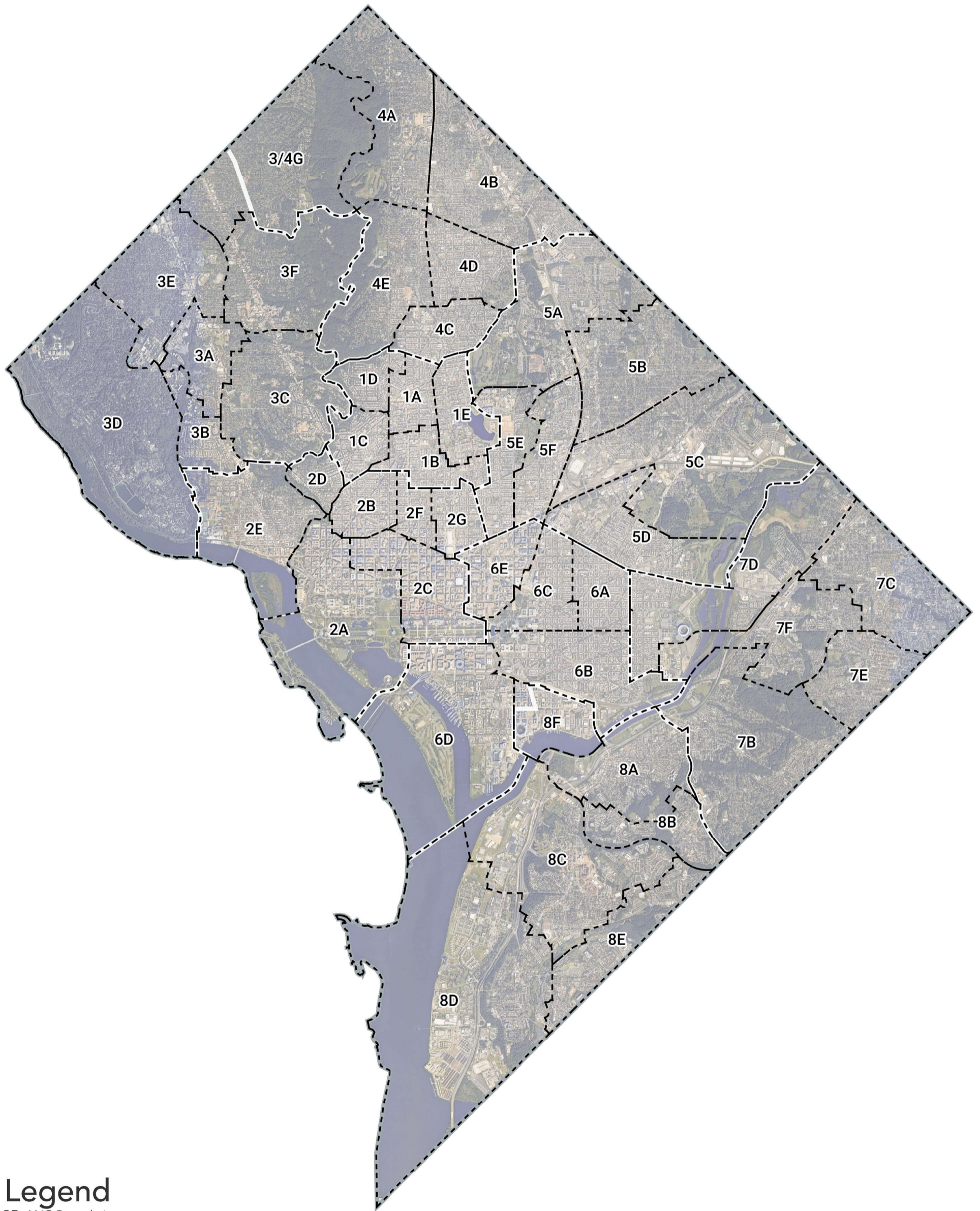
TYPES OF ANALYSES

| | |
|--|---|
| <h3>Trip Potential</h3> | <p>Where do people want to go by bike?</p> <p>Trip Potential analysis measures the potential for increased bicycle trips regardless of the current bike network, favoring places with more concentrated active land uses.</p> |
| <h3>Centrality</h3> | <p>What streets can serve the most bike trips?</p> <p>Centrality measures how many shortest paths travel through it relative to other streets.</p>  |
| <h3>Level of Traffic Stress (LTS)</h3> | <p>What streets are most comfortable to bike on?</p> <p>LTS is an industry-standard rating system given to a road indicating the traffic stress it imposes on bicyclists.</p>  |
| <h3>Indirectness</h3> | <p>What areas require long detours if you only felt comfortable biking on low-stress streets?</p>  |
| <h3>Disconnect- edness</h3> | <p>What areas are more disconnected if you only felt comfortable biking on low-stress streets?</p> |
| <h3>Access</h3> | <p>Where can I go on low-stress streets?</p> <p>Access analysis compares low stress-only access vs. access if all streets were low stress within one mile of select destinations (e.g., libraries, schools, grocery stores, Metro stops).</p> |
| <h3>Equity</h3> | <p>Is it better or worse in disadvantaged areas?</p> <p>Using MWCOG's Equity Emphasis Areas, we can compare whether the measures above are better or worse in historically disadvantaged areas in the District.</p> |

*How does your neighborhood fare?
Let us show you on the interactive map!*

STATION 5 YOUR FEEDBACK

Which ANC District do you represent?



Legend

ANC Boundaries

Ward Boundaries

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What project types should be our top priority?

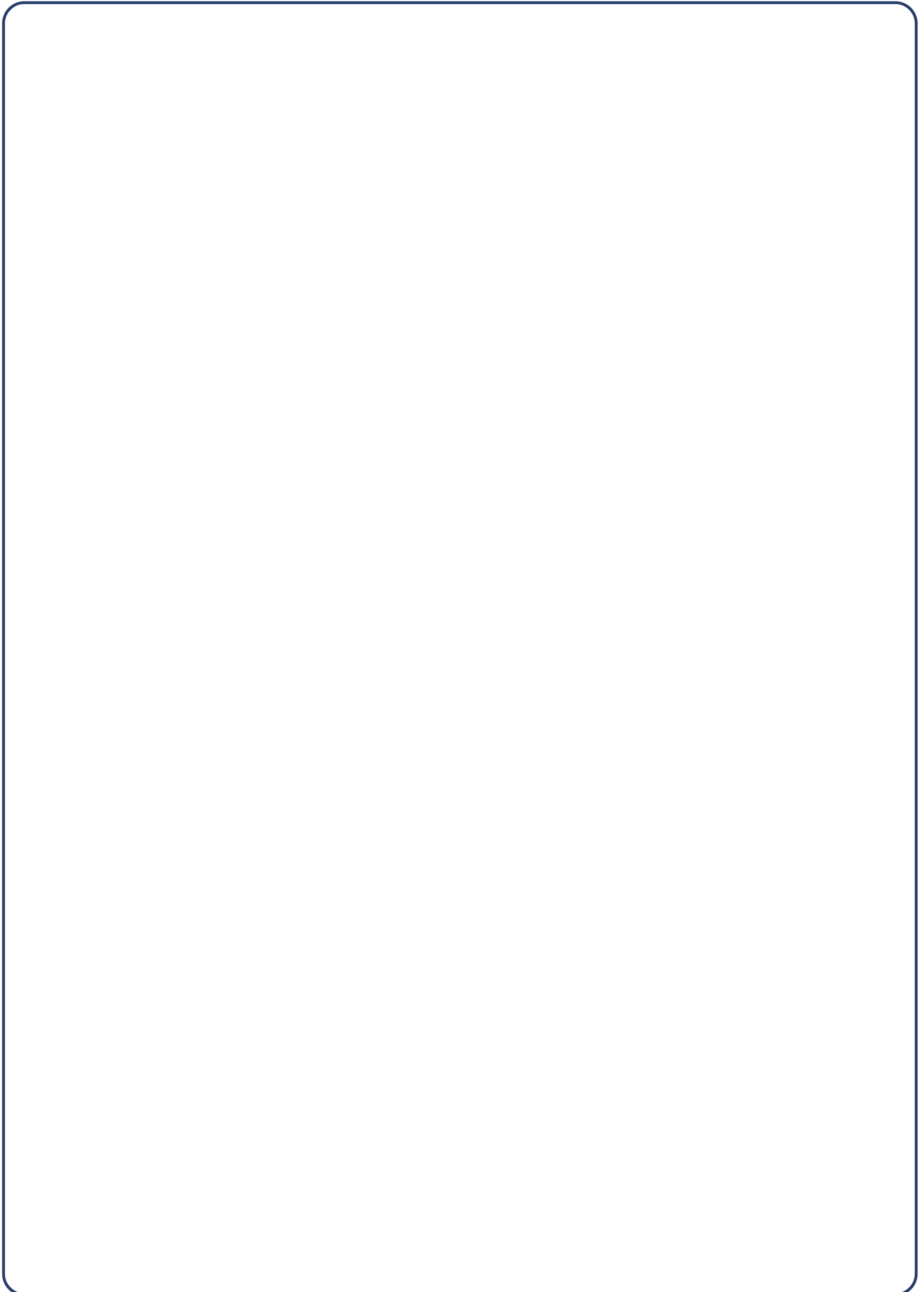
Creating New Links in the Bicycle Network

Closing Gaps Between Existing Facilities

Upgrading Regular Bike Lanes to Protected Bike Lanes

Hardening Protected BLs with Permanent Infrastructure

How should DDOT measure **SUCCESS** of the bike network?



Anything else you'd like to share?