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# **ACKNOWLEDGEMENTS**

This plan would not be possible without contributions from many people and organizations who are working toward a better transportation system for all people in Columbus.

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# A MESSAGE FROM MAYOR ANDREW J. GINTHER

In our community, no one's opportunity should be limited by their transportation. No matter how they travel, residents need safe access to jobs and school, to the grocery and pharmacy, and amenities like parks.

This City of Columbus Bike Plus Plan lays the groundwork for connections to make it safe, comfortable and convenient for people of all abilities, ages and backgrounds to bike for transportation or for fun. The plan supports infrastructure and policies for getting around by bike and similar forms of transportation, like e-bikes, scooters, skateboards and rollerblades. These travel options are inexpensive, result in fewer vehicles on our roadways and reduce unhealthy emissions in our growing city.

Bike Plus will assist in expanding opportunity for all in coordination with other initiatives including LinkUS, Vision Zero Columbus and the city's Climate Action Plan. These efforts are aligning to transform our transportation system for safe, accessible and healthier travel that doesn't rely on just owning or needing to use a car.

Bike Plus identifies a Vision Network for future bikeway development. It outlines policies and programs that support achieving the goals to create safe streets, get more people biking, and plan and design for equity by prioritizing investments in neighborhoods where people have fewer choices about how they travel, putting them at greater risk as they move around.

Robust community engagement included thousands of residents giving input and feedback during the 18-month Bike Plus planning process, including marking maps to identify where bikeway infrastructure would create safe and needed connections.

As we implement Bike Plus over the coming years, the city will keep working with the community and our partners to ensure Columbus has a bikeways network for safe biking, scooting and rolling.





# EXECUTIVE SUPPLY SUPPLY AND ADDRESS OF THE PARTY AND ADDRESS OF THE PAR

Bike Plus is a plan to make it safe and convenient to use bicycles, scooters, e-bikes, skateboards, e-scooters, roller blades and other similar modes of transportation to get around Columbus. We want Columbus to be a city where people of all ages, abilities and backgrounds feel safe and comfortable using these travel modes for transportation or recreation trips.

## **OUTREACH AND ENGAGEMENT Highlights**

11,000+

engagement touch points

85

in-person events

6,100

online surveys and map inputs

## **BIKING AND ROLLING** in Columbus Today

81

miles of onstreet bikeways 159

miles of shared use paths

1.8

miles of protected bike lanes

65,000+

CoGo Bike Share rides in 2023

912,000+

e-scooter trips in 2023

# **VISION NETWORK**

The Bike Plus Vision Network is the city's long-term plan for bikeways. Ideas presented in this plan are planning-level concepts; however, the locations of some projects, the type of bikeway that is implemented, or details of policy/program strategies may change as more information becomes available over time.

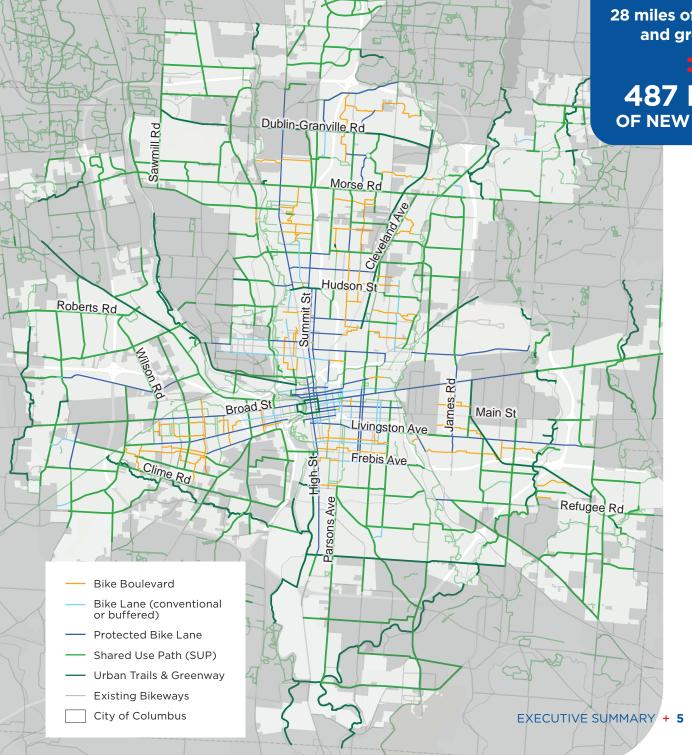
# THE VISION NETWORK ADDS:

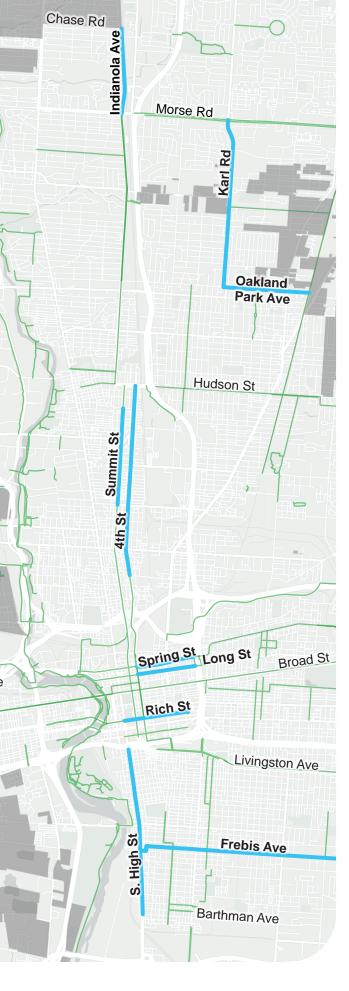
189 miles of on-street bikeways

270 miles of shared use paths

28 miles of urban trails and greenways

487 MILES
OF NEW BIKEWAYS





# NEAR-TERM CONNECTIONS

Bike Plus also identifies **20 miles of bikeways** that will be prioritized for further planning, design and implementation **over the next five years.** 

Implementing Bike Plus will be a phased, multi-year process that hinges on collaboration, funding, feasibility and ongoing performance tracking. In addition to the nearterm connections shown on the map, the City of Columbus will implement some Bike Plus Quick Build projects. Quick Build uses low-cost, semi-permanent materials that allow for faster implementation, monitoring and adjustment over time. Some potential projects that will be explored for Quick Build implementation, starting with outreach and engagement, include:

- Protected bike lane on North 4th Street from Warren Avenue to Hudson Street
- Protected bike lane on Frebis Avenue from Lockbourne Road to Alum Creek Drive
- Protected intersections along the existing protected bike lane on Summit Street from E 11th Avenue to E Hudson Street

The 2030 Expected Network includes existing bikeways and upcoming projects that are anticipated to be completed by 2030.

For more information: <a href="https://www.columbus.gov/">https://www.columbus.gov/</a> Community/Mobility-Getting-Around/Biking

- Near-Term Connections
- 2030 Expected Network
- City of Columbus

# POLICY AND PROGRAM HIGHLIGHTS

Building more bikeways will encourage people to get on two wheels for quick trips around Columbus. Related policies and programs that are critical to achieving the goals of Bike Plus include:



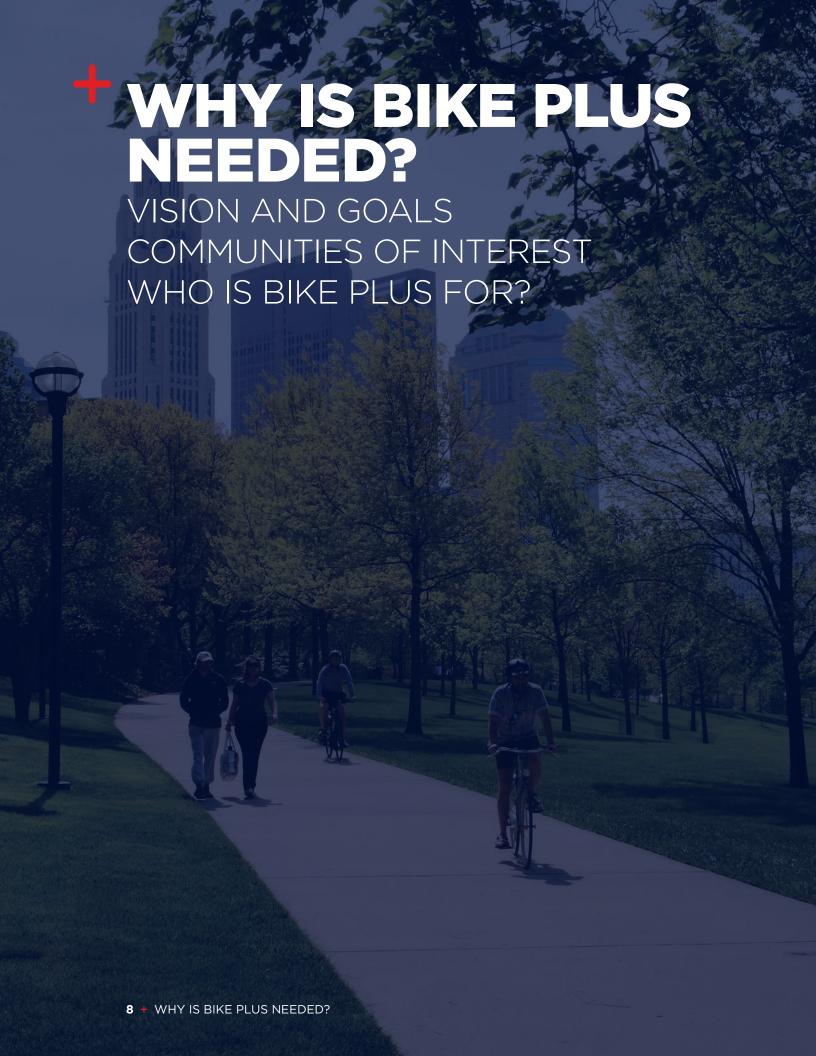
## **IMMEDIATE STRATEGIES**

The immediate strategies identified through Bike Plus engagement include:

- Adopt a Complete Streets Policy for the Department of Public Service, to ensure
  roads and streets are designed, built and maintained equitably so that people of all
  ages, incomes and abilities can use them safely, whether they are walking, biking,
  rolling, driving or using transit.
- Create a **Bikeway Maintenance Policy** including dedicated funding for sweeping and plowing bikeways, maintaining trails and prioritizing Communities of Interest.
- Update the **Regional Bike Map** and make available online and in print.
- Develop an **Open Streets Program** of mobility-focused events where streets are temporarily closed to cars.
- Collaborate with City departments to **Align Design Requirements** for public streets and bikeways in order to remove barriers to bikeway construction.

See page 39 to review all of the Bike Plus policy and program strategies.



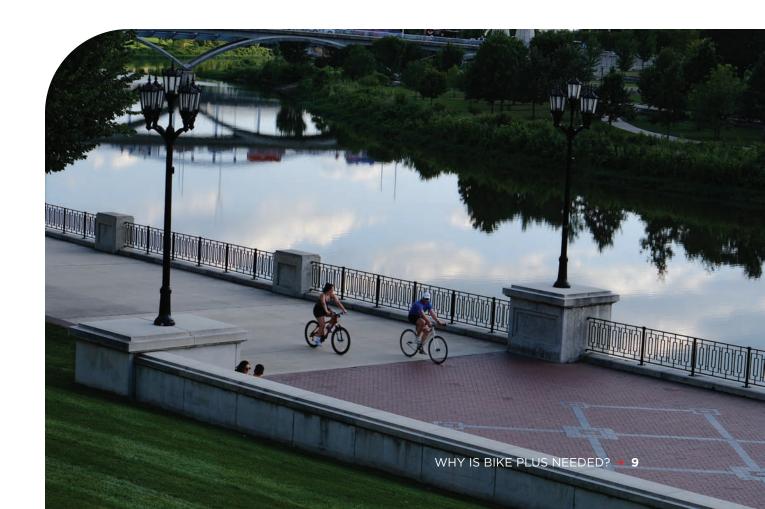


# VISION AND GOALS

Columbus is a city defined by many things: the scenic Scioto Mile, a rich and multicultural heritage, a spirited community that takes deep pride in our city, and much more. Because Columbus is a great place to live and work, another defining aspect of our city over the years has been growth. Much has changed since the 2008 Bicentennial Bikeways Plan, and central Ohio is anticipated to add nearly 1 million people by 2050. Bike Plus is one of many strategies the city is using to make sure that Columbus is a healthy, fair, resilient and economically strong community.

Our vision is for Columbus to be a city where people of all ages, abilities and backgrounds are able to bike safely and comfortably for any transportation or recreation need. Bike Plus aligns with other important initiatives that promote safe and sustainable transportation options, such as Vision Zero, LinkUS, Zone In and the Columbus Climate Action Plan.

Columbus is growing into a great city for biking. The city is flat and has an extensive trail system. Many people already bike, scoot and roll for fun and to get around. These modes are cheap and produce low emissions. Because of this, Bike Plus can help address challenges like traffic safety, congestion, climate change and socioeconomic inequity.



## **BIKE PLUS VISION:**

Columbus is a city where people of all ages, abilities and backgrounds are able to bike or roll safely and comfortably for any transportation or recreation need.

#### **GOALS:**



#### **Create Safe Streets**

People who walk and bike are at greater risk for serious or fatal injuries when involved in a crash. As a complement to Vision Zero Columbus, Bike Plus prioritizes safe street design and programs to reduce crash injuries and deaths, and increase comfortable access for people who bike, scoot and roll in the city.



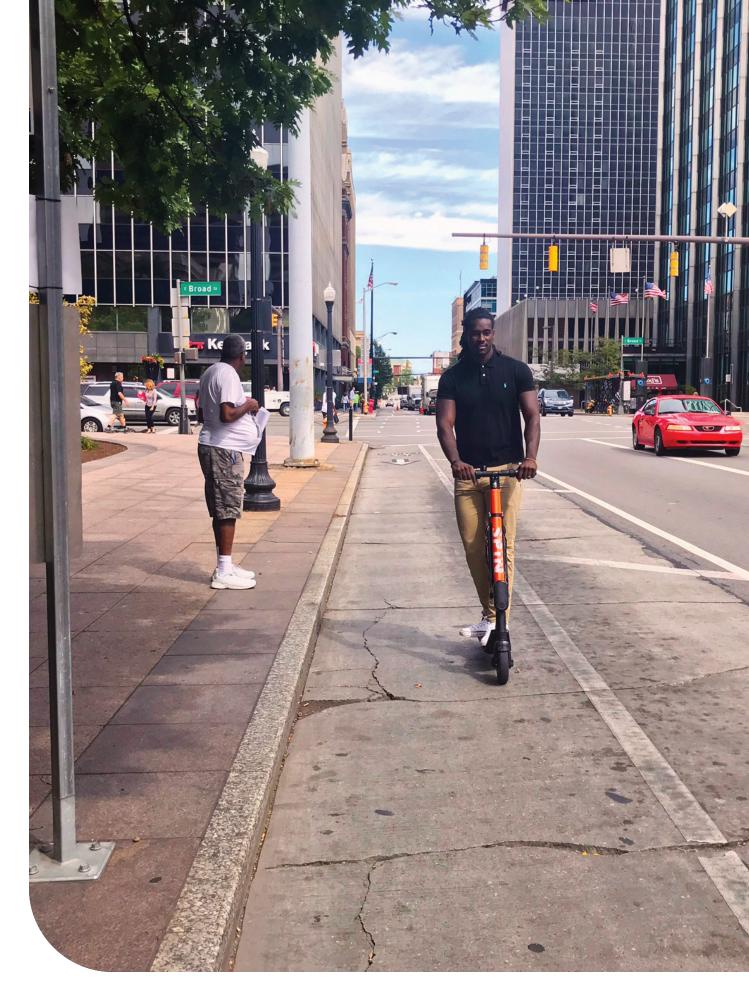
#### **Get More People Biking, Scooting and Rolling**

Bike Plus prioritizes infrastructure and programs to encourage more people to bike, scoot and roll around Columbus. Creating a safe network that reduces car dependence and promotes active transportation will help manage congestion and lower emissions in our growing city.



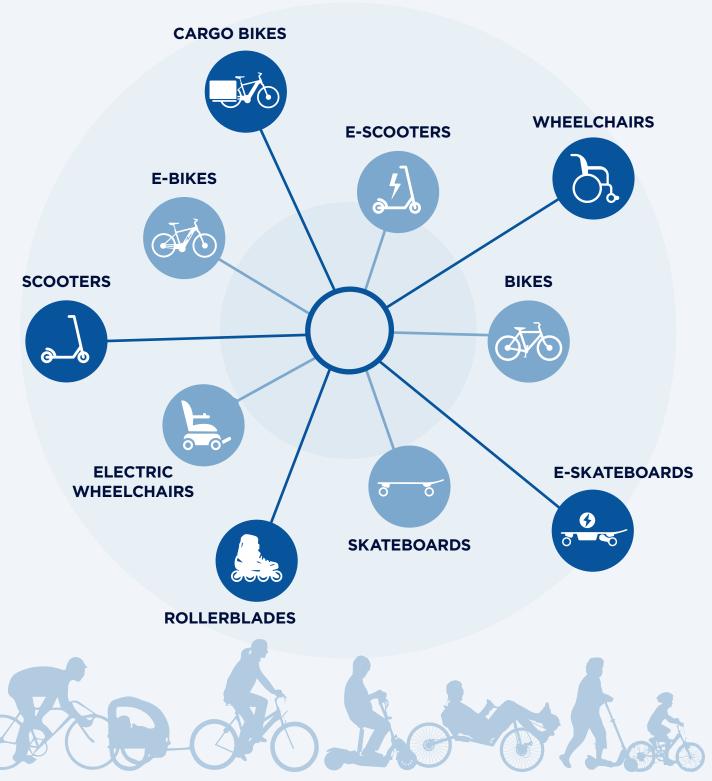
#### Plan and Design for Equity

Bike Plus is designed with an equity focus, aiming to listen to and meet the needs of people who may have fewer travel options and are at greater risk as they move around. The Plan prioritizes investing in neighborhoods that need safe, accessible and affordable transportation options the most.



## **BIKE PLUS DEFINED**

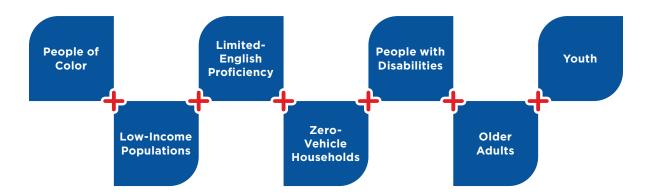
In this document, "Bike Plus" refers to not only conventional bicycles, but also other lightweight and low-speed personal or shared mobility devices without internal combustion engines such as e-bikes or e-scooters, rollerblades, and other similar modes of transportation. This category of mobility devices is commonly called "micromobility."



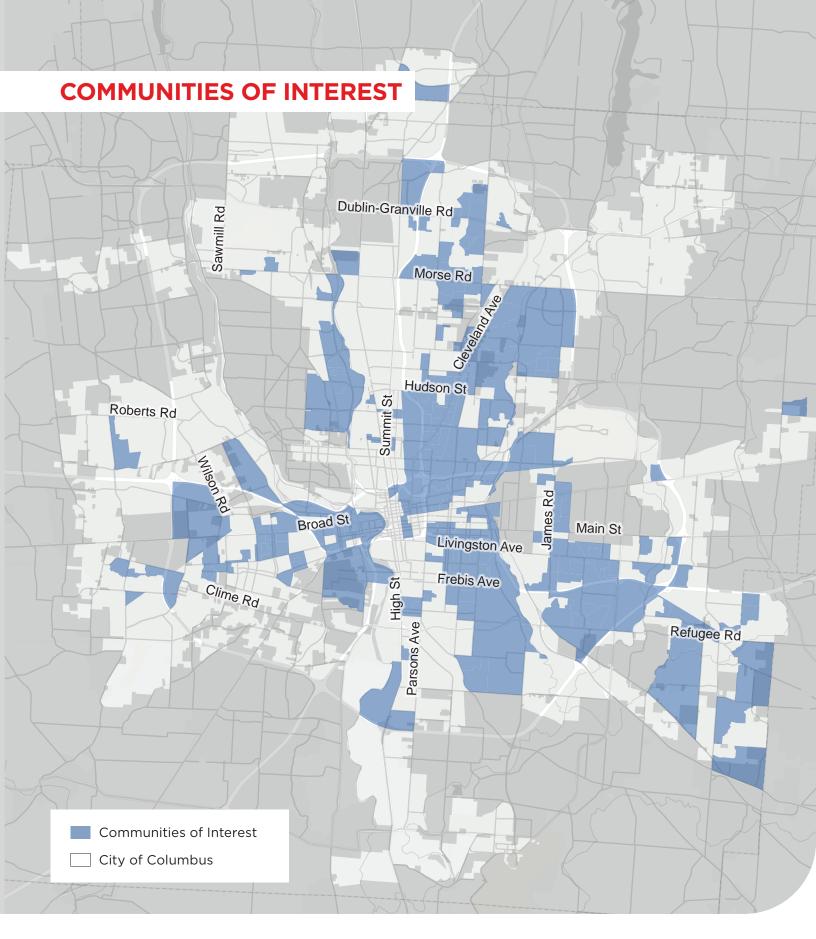


# COMMUNITIES OF INTEREST

Bike Plus is for everyone. To improve options for people facing the most transportation challenges or risks, Bike Plus focuses on the **Communities of Interest**, or COI, identified during the <u>Vision Zero Columbus</u> planning process. These are areas or neighborhoods with a higher density of certain factors that may impact people's transportation experience, including their access to biking, scooting and rolling.



Columbus' Opportunity Rising defines equity as when **your identity does not determine your life outcomes.** Looking at Columbus' transportation network through an equity lens allows Bike Plus to invest in communities marginalized in the past and which most need safe access to biking and rolling.



From planning through implementation, Bike Plus aims to equitably engage and invest in Communities of Interest.

# WHO IS BIKE PLUS FOR?

Bike Plus is designed to meet the needs of the biggest group of potential users — the majority of everyday people. These people, referred to as "Interested but Concerned" riders, might bike, scoot or roll more often if there was a connected network of comfortable bikeways that provided safe separation from fast-moving traffic and connected them directly to their daily destinations. Bike lanes and routes that are appealing to Interested but Concerned riders are referred to throughout this plan as "Low-Stress Bikeways."

Research<sup>1</sup> has shown that more than half of us are interested in riding a bike more often. Many of us rode bikes when we were young or occasionally ride now, but only on trails or in places where we feel safe. This research suggests that over 500,000 people in Columbus may want to bike, scoot or roll more often but only on trails, separated bikeways or calm streets with little to no fast-moving traffic.<sup>2</sup> In contrast, highly confident bicyclists who will ride in mixed traffic, even on roadways with higher vehicle speeds and volumes, only make up 4 to 7 percent of the population. If we build a transportation system that only appeals to the most confident bicyclists, only a small fraction of trips will be taken by bike.

The target audience for Bike Plus includes families, youth and older adults, people from all backgrounds and a wide range of new, novice and nervous bike riders.





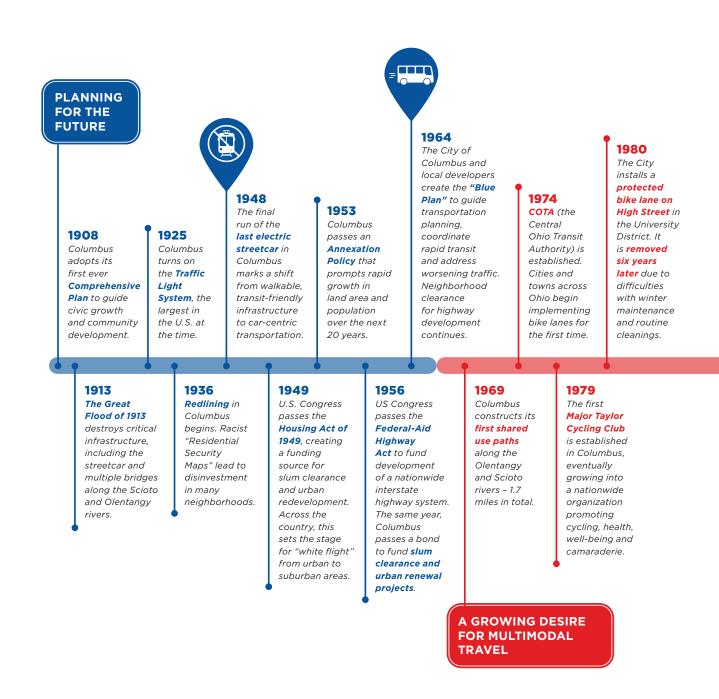


<sup>1</sup> Mineta Transportation Institute, Low-Stress Bicycling and Network Connectivity, Maaza C. Mekuria, PhD, P E, PTOE, Peter G. Furth, PhD, and Hilary Nixon, PhD (2012)

<sup>2</sup> Ibid.

# HISTORICAL MILESTONES THAT INFORM BIKE PLUS

This timeline shows important milestones in Columbus' development. A long history of **policies, plans and events have influenced where people live and how they travel** through Columbus today. Looking beyond bike-specific milestones in our history allows Bike Plus to work from a comprehensive understanding of our community.







2004 COTA buses add bike racks.

2013 CoGo bike share system is launched by the City of Columbus with 30

stations and

300 bikes.

#### 2015

Mid-Ohio Regional Planning Commission establishes Central Ohio Greenways

(COG) to

coordinate expansion of the trail system and increase accessibility of trails to everyone. MORPC also projections that Central Ohio will grow to a region of over 3 million

people by 2050.

#### 2019

Columbus and other regional partners launch LinkUS as a coordinated effort to address the land use, transportation and infrastructure needs of our rapidly growing region.

#### 2022

The City begins updating its 70-year-old zoning code with a focus on major corridors.

#### 2024

Bike Plus is adopted (pending) and implementation begins. Columbus voters pass the LinkUS tax levy.

#### 1981

Olentangy and Scioto Bikeways are designated as National Recreational Trails by the U.S. Departmentof Interior.

1992

Columbus

Bikeway

Advisory

**Committee** is

established.

#### 1998

The Olentangy Trail between Tuttle Park and Clinton Como Park opens.

#### 2008

Columbus City Council adopts the Bicentennial Bikewavs Master Plan. The same year, Council adopts a Complete Streets Resolution.

#### 2014

Columbus installs its first protected bike lane in over 30 years on Summit Street between Hudson Street and 11th Avenue.

#### 2018

Rentable electric scooters are introduced on local streets by multiple private vendors.

#### 2020

The Covid-19 pandemic shifts how people across the globe interact within the public realm and transportation systems. Columbus launches its Vision Zero initiative and in 2021 adopts a

Climate Action

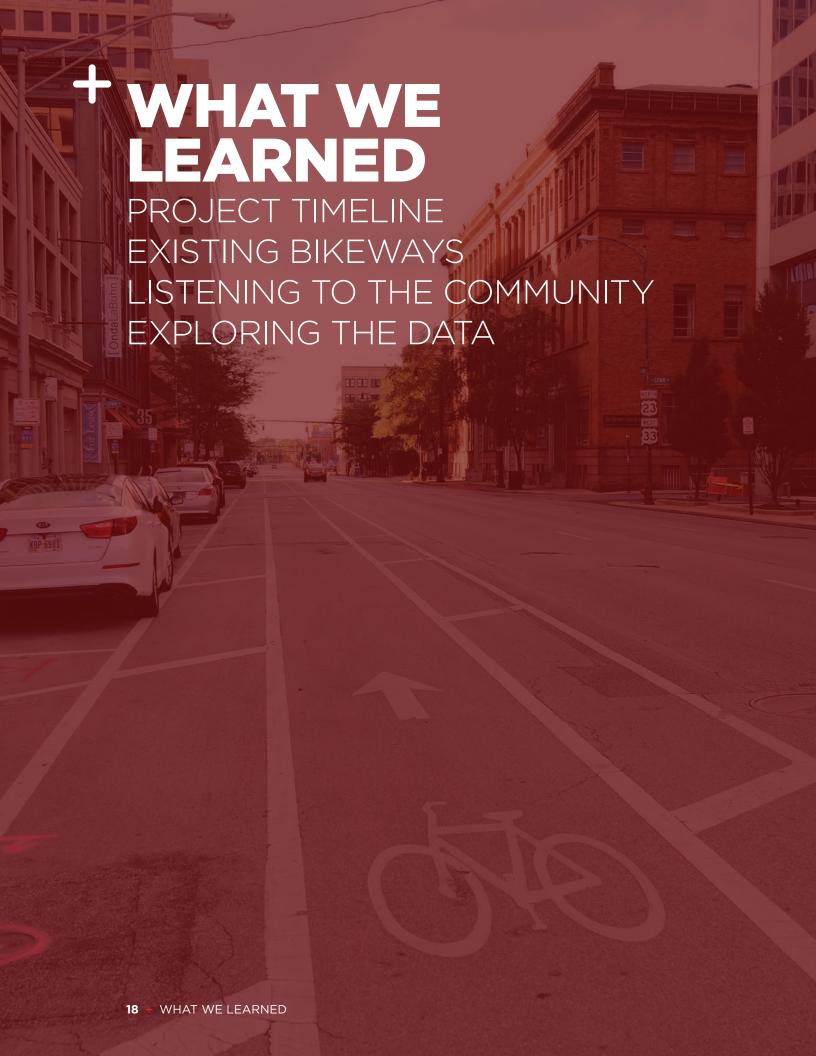
Plan.

#### 2023

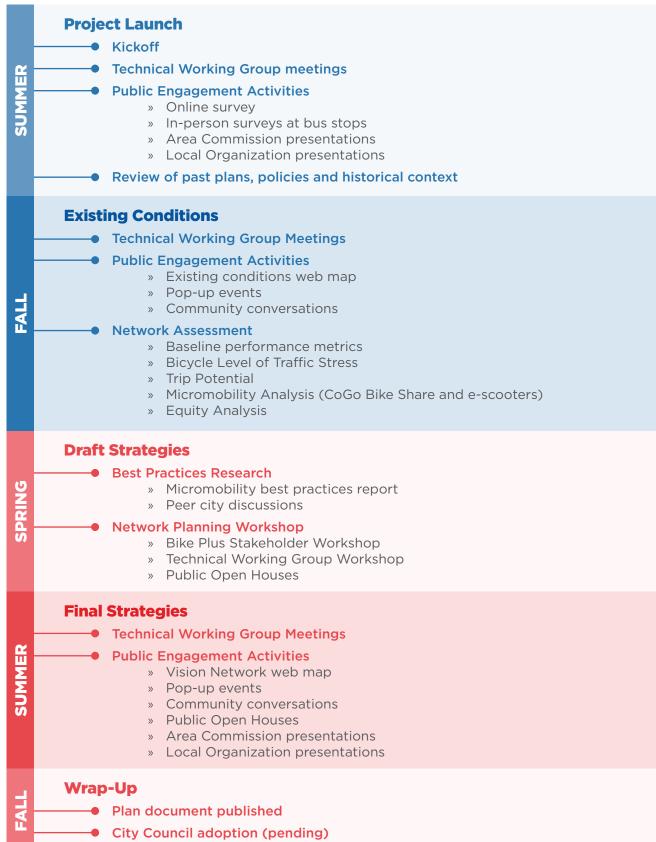
Columbus's bikeway network reaches a total of 240 miles. The City launches its **Bike** Plus planning effort.

**MEETING THE NEEDS OF TODAY** 





# **PROJECT TIMELINE**



2023

2024

# **EXISTING BIKEWAYS**

To achieve the Bike Plus vision of the future, we need to know where we are today. As part of the Bike Plus process, we conducted research, community outreach, stakeholder engagement and analysis to understand the existing conditions for biking, scooting and rolling in Columbus. Information that was gathered during this process has been used to develop the Vision Network as well as the policy and program strategies outlined in this Plan.



#### In Columbus, bikeways are grouped into 5 categories:











#### 1. Bike Boulevard

A **bike boulevard** is a low-volume, low-speed neighborhood street designated for bicycles to share with motor vehicle traffic, typically identified by bike boulevard pavement markings, signage and traffic calming treatments.

#### 2. Bike Lane

A **bike lane** is a portion of the roadway designated by striping, signage and pavement markings for bicycle use. Bike lanes are separated from other parts of the road using striped lines or a striped buffer that adds more space between the bike lane and the adjacent motor vehicle lanes or parking lanes.

#### 3. Protected Bike Lane

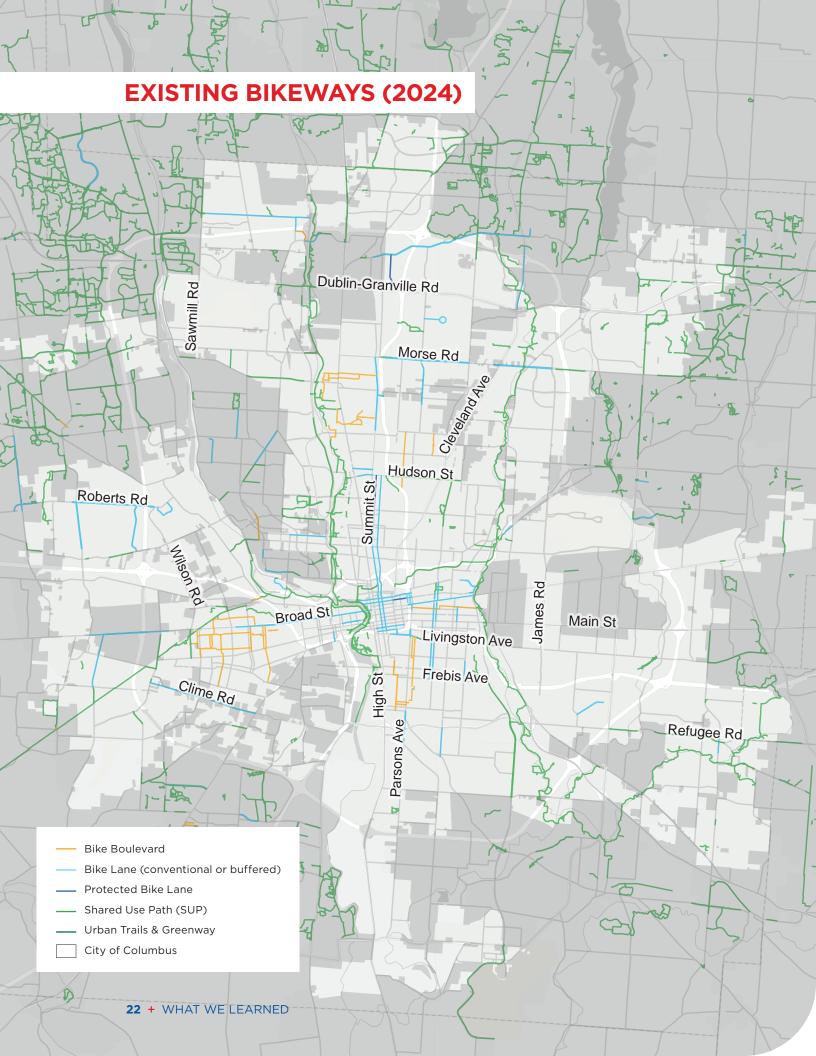
A **protected bike lane** has physical separation from motor vehicles such as a parking lane or barrier. The barrier must include a vertical element or the lane must be raised to sidewalk level. Protected bike lanes are the preferred bikeways on roadways with higher traffic volumes and/or higher vehicle speeds, especially if the road also has regular pedestrian activity.

#### 4. Shared Use Path

A **shared use path** typically runs alongside a road and is physically separated from motor vehicle traffic by an open space or barrier. Shared use paths may be used by people walking, biking, scooting, skating, using wheelchairs, or other forms of micromobility.

#### 5. Urban Trails and Greenways

Urban trails and greenways are also shared between people walking, biking, scooting, skating, using wheelchairs, jogging or using other forms of micromobility. Urban trails and greenways are designed to connect parks, neighborhoods, rivers, businesses, and cultural attractions. Unlike shared use paths, urban trails and greenways are often located off-street and may be striped like roads to designate two-way non-motorized traffic.



# DIFFERENT BIKEWAYS FOR DIFFERENT ROADWAYS

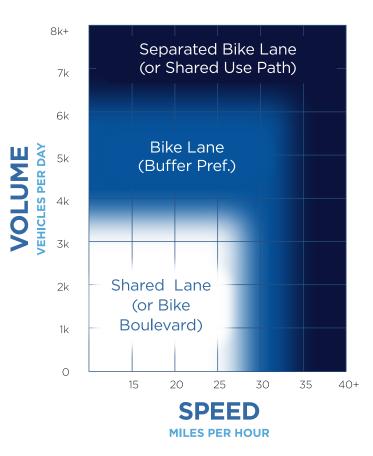
Bike Plus is designed to serve people of various ages, abilities and experience levels, including new and novice riders. The Federal Highway Administration (FHWA) developed guidance for selecting bikeways that are appropriate for these riders, based on roadway characteristics like vehicle speeds, traffic volumes and land use context. This guidance is based on extensive research on the comfort and safety of bicycle riders.

Columbus used this guidance to develop the Bike Plus network and incorporated it into the City Design Memo on Bicycle Facilities (Section 6.00). The key takeaways from this guidance are:

- Shared lanes and bike boulevards are only appropriate on roadways with traffic volumes less than approximately 3,500 vehicles per day and/or operating speeds less than approximately 25 MPH.
- On roads with traffic volumes of more than 6,500 vehicles per day and/or operating speeds of approximately 35 MPH or higher, a separated bikeway – such as a protected bike lane or shared use path – is appropriate.

"I'm excited for the potential to have a well-connected bike network in the Columbus region for practical purposes. As of right now it's good for recreational purposes, but as a bike commuter I have to find creative routes in order to feel safe on the way to my destination and they end up taking me longer."

-Bike Plus Participant



# LISTENING TO THE COMMUNITY

Bike Plus included a broad effort to gather residents' input about how bicycle and micromobility infrastructure, programs and policies impact their quality of life. Throughout each stage of the project, community engagement played a pivotal role in guiding discussions and ensuring that the process stayed on track.

Community engagement was guided by goals including using an equitable and accessible process that also prioritized interaction with historically underrepresented and underserved stakeholders, and that respected multiple languages and cultures.





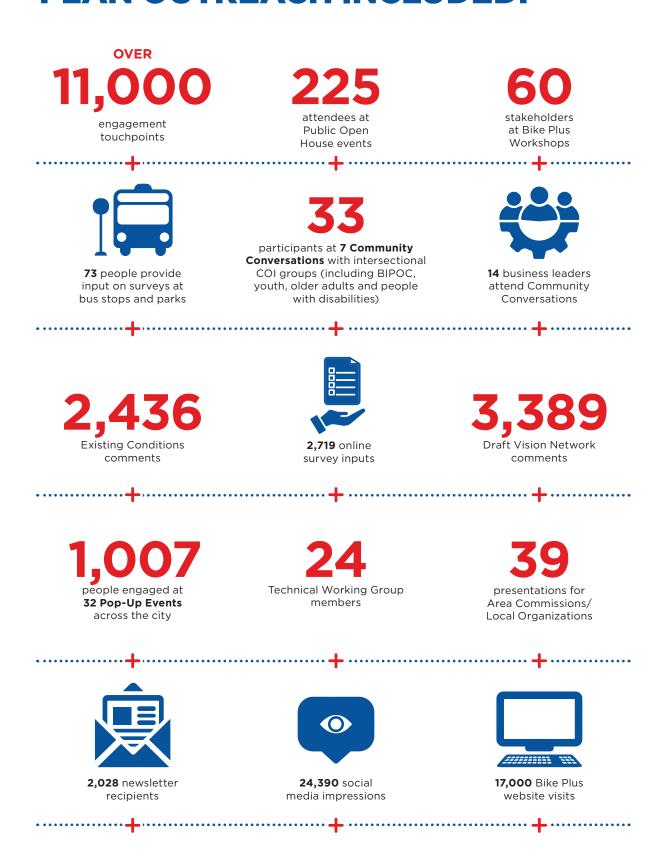








## **PLAN OUTREACH INCLUDED:**



#### WHAT WE HEARD

The network assessment, community engagement and stakeholder outreach revealed the following key challenges for Columbus to achieve the Bike Plus vision and goals.

#### We Need More Low-Stress Infrastructure

Columbus needs more low-stress infrastructure that is safe and comfortable for Interested but Concerned riders.

#### + The Network Must Be Well-Connected

Columbus needs a well-connected network of bikeways to link destinations and make biking, scooting and rolling safe and convenient options for Columbus residents.

#### **+ Bike Culture** is Key

Columbus needs to grow its bike culture, making all those who roll feel welcomed and safe when traveling around the city. Culture change includes everything from policy changes within city government to bike bus commutes for elementary school students.

#### + Equity and Accessibility Should Drive Decisions

Columbus needs to be intentional about including communities of color, low-income residents, unhoused residents and people with disabilities in the planning and implementation of bikeways, policies and programs.

#### + We Expect Fair Treatment as Users of Public Streets

Columbus needs consistent enforcement matching Bike Plus' goals, which will require confronting harmful biases, acknowleding unfair treatment of riders, and counteracting aggressive driver behavior toward riders.

#### + Bike Parking is Essential

Columbus needs to provide convenient and adequate storage options for bikes and scooters. These parking options should support local businesses and improve accessibility on sidewalks and at bus stops.

#### + People Want to See Changes Now

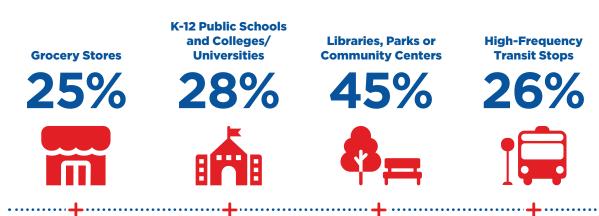
Columbus needs to keep the momentum going. When implementation of planned bikeway infrastructure moves very slowly, community members lose trust.

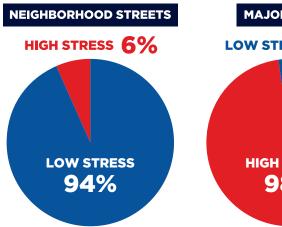
# **EXPLORING THE DATA**

Alongside listening to the community, analyzing quantitative data is another important step in developing a bikeway network. Bike Plus evaluated data on traffic crashes, CoGo bike share and dock-less scooter trips, and demographics. An Equity Analysis and an assessment of short trips (2 miles or less) were conducted, which help explore places and neighborhoods most likely to generate more bike or micromobility trips if proper bikeways are available. Lastly, a Bicycle Level of Traffic Stress analysis was generated, which assigns streets and intersections a score based on how comfortable they would be for a novice, younger or older person biking, scooting or rolling. Comfortable routes for Interested but Concerned users are called "low-stress," whereas routes that would not appeal to this group are called "high-stress."

# BIKING, SCOOTING AND ROLLING IN COLUMBUS TODAY

In 2024, most people in Columbus do not have a way to comfortably bike, scoot or roll to access key destinations. The percent of Columbus households that can access the following key destinations via a 1-mile ride (or less) along a low-stress bikeway is:







In 2024, most neighborhood streets are considered low-stress and most major roads are considered high-stress, which means they are not comfortable for the average person biking, scooting or rolling.

See Appendix F to review the full Performance Metrics.

## TRIP POTENTIAL ANALYSIS

An estimated 1 in 3 trips taken in Columbus have the potential to be taken by bike, scooter or other forms of micromobility, based on the distances people travel today. Knowing short trip locations throughout the city helps identify where the Bike Plus Vision Network can serve to replace automobile trips.

**32%** 

**HIGH ST** 

of trips in 2023 were 2 miles or less

place with the most short trips in Columbus

......

See Appendix F to review the full Trip Potential Analysis.

### **COLUMBUS SAFETY STATISTICS**

Compared to people driving, **people biking are more likely to be seriously injured or killed when crashes occur.** This highlights the need for a safe and connected network in achieving our Vision Zero goals.

661

crashes in Columbus involving people biking, scooting or rolling and resulting in fatality or serious injury (2018 – 2022) 95%

of the City's most high-risk roads identified through Vision Zero do not include a separated place for people to bike, scoot or roll

**Most traffic crashes occur at intersections.** How stressful or comfortable an intersection feels for riders is influenced by the number of lanes crossed, traffic speeds, traffic volumes and the type of traffic control present (e.g., stop sign or traffic signal). Specific crash and stressful locations can be used to correct problem areas and inform future intersection designs.

3,500

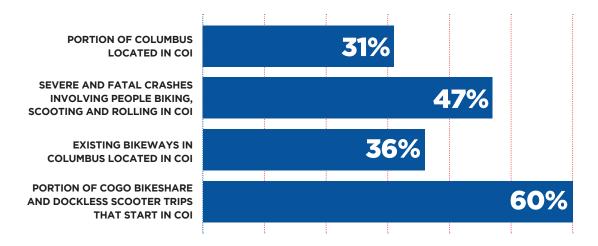
intersections were identified as high-stress for people biking, scooting and rolling **63**%

of severe and fatal crashes involving people biking, scooting or rolling occurred at intersections (2019 - 2023)

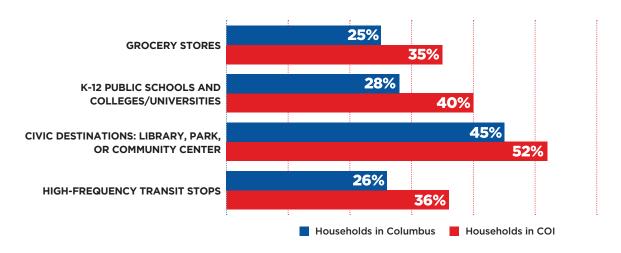
See Appendix F to review the full Level of Traffic Stress Analysis.

## **EQUITY ANALYSIS**

Bike Plus compared the access and safety in Communities of Interest (COI) to the rest of Columbus.



People in COI have equal or better access to bikeways compared to people living in other parts of the city, but they face a higher risk of severe and fatal crashes. The percent of households in COI that can access the following key destinations via a 1-mile ride (or less) along a low-stress bikeway is:



See Appendix F to review the full Equity Analysis.



# WHAT WE LEARNED FROM OTHER CITIES

When it comes to planning and implementing bikeways, Bike Plus is tapping into the expertise of other leading bike cities. As a member of the National Association of City Transportation Officials (NACTO), Columbus staff can access resources and opportunities for peer exchange with communities that have similar goals around transportation safety, access and equity. Bike Plus also included interviews with leaders from Minneapolis, MN; Indianapolis, IN; Montgomery County, MD; and Austin, TX. These communities have been implementing networks of protected bike lanes for over a decade, and have many lessons to share. Highlights from these discussions include:

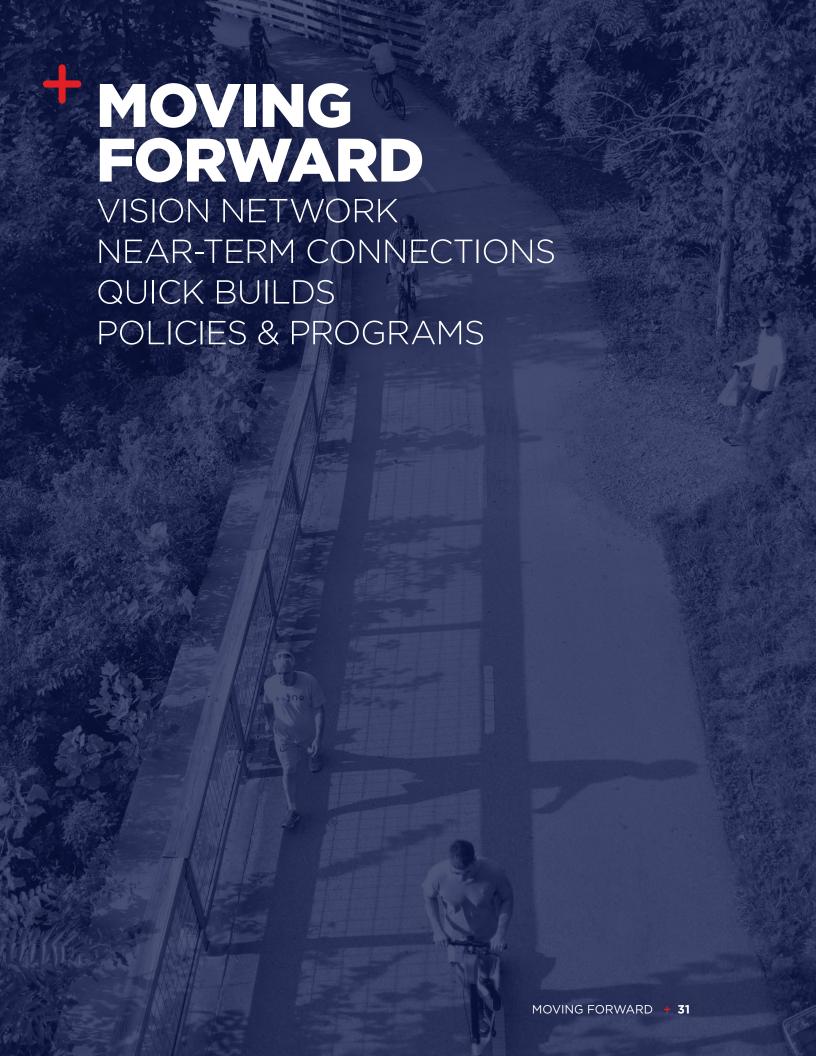
- **Bikeway maintenance** is a critical challenge to tackle. Peer communities have purchased narrow street sweepers and snow plows that work in protected bike lanes and shared use paths.
- Building bikeways usually involves **tradeoffs** for how public space is used. An ongoing, transparent dialogue with the public is essential to maintain trust and build support.
- Leading bike cities **dedicate a team** to bikeway planning, engagement, design, implementation and maintenance.
- Other cities have used **trial-and-error** to refine the methods and materials used to implement bikeways. A learning curve and some experimentation—and course correction—is a normal part of the process.

With extensive input from the community and rich insights from data analyses, Bike Plus is ready to lay out the projects, policies and programs that will get Columbus to a safe and convenient bikeway network for all.











The Bike Plus Vision Network is the city's long-term plan for bikeway development. The Vision Network is designed to support a range of trip purposes and provide safe, convenient options for people of all ages and abilities to bike, scoot and roll. The creation of the Vision Network was informed by community priorities, existing conditions analyses, inter-agency coordination and best practices in bikeway design.

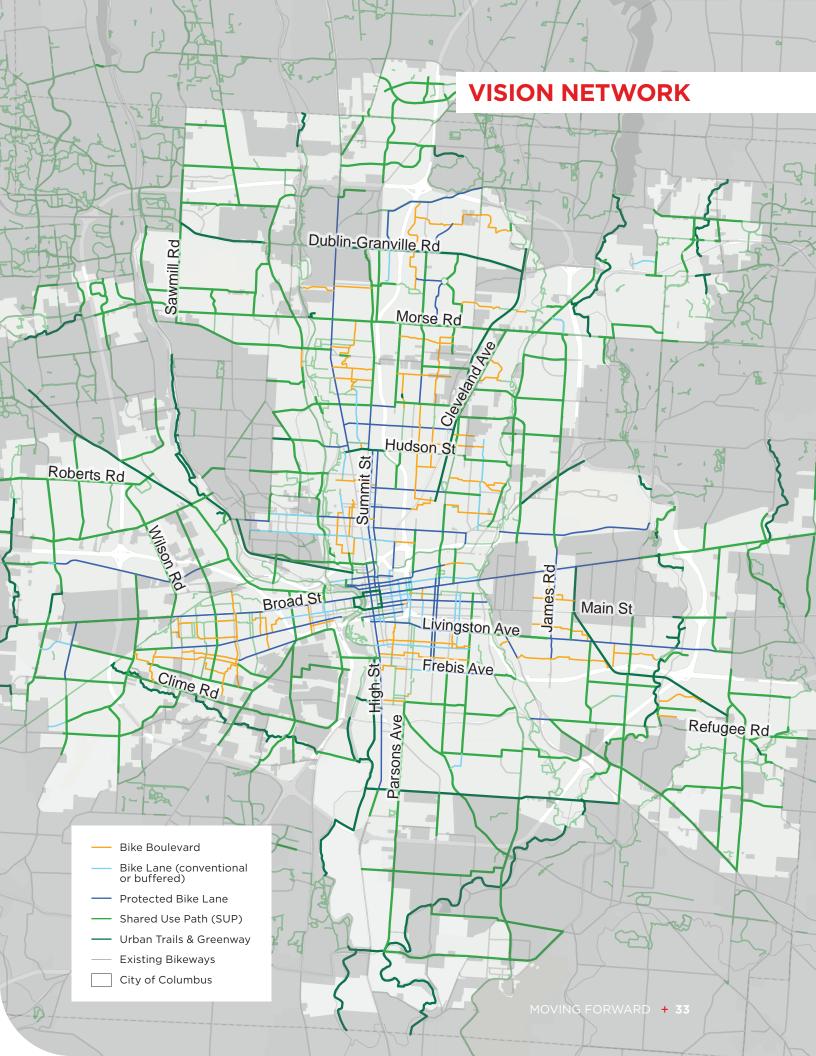
# The Vision Network includes **487 miles** of new bikeways and features:

- A combination of routes on major roads and local connections in neighborhoods, both of which are essential to getting around Columbus.
- Bikeways approximately every 1/2 mile citywide and every 1/4 mile downtown.

The Vision Network is complemented by the large network of Central Ohio Greenways that provide connections for commuting, recreation and fitness along routes like the Olentangy Trail, Alum Creek Trail and Camp Chase Trail.

The ideas presented in this plan are planning-level concepts. Bike Plus will guide project and program implementation; however, the locations of some projects, the type of bikeway that is implemented, or details of policy/program strategies may change as more information becomes available over time. Many projects need additional analysis before moving forward, which could lead to alternative routes or designs.

The primary goal of project implementation is intentionally building a bikeway network and meeting the density goal of having a bikeway within a half mile in the city and a quarter mile downtown.



## IN TOTAL, THIS VISION NETWORK WILL ADD OVER...

miles of protected bike + 89 lanes, nearly 10x more than we have today.



miles of shared use paths, **+ 298** trails, and greenways, a 190% increase from current conditions.



miles of other on-street improvements like buffered + 100 bike lanes or bike boulevards, a 120% increase from current conditions.



miles of **bikeways** to the city. = 487 a 200% increase from current conditions.



The Vision Network is an ambitious concept that will take decades to implement. It helps demonstrate how individual projects implemented in the near term are pieces of a broader network that will ultimately provide a high level of citywide connectivity. When a street's design is being reconsidered for other reasons (e.g., as part of redevelopment activities, routine resurfacing or reconstruction for another purpose) the Vision Network prompts city staff and partners to explore whether a bikeway can be incorporated.

# **BIKE PLUS PLAN INTERSECTIONS**

Intersections are critical to safe and comfortable bikeways networks. While there are many design treatments to make intersections safer for micromobility users, critical design considerations include:



Intersections with narrower lanes and tighter corners encourage slower driving and turning speeds for motorists, which can decrease the likelihood and severity of crashes.



Designated bikeways that continue through **intersections** can improve driver awareness in places with the most potential for conflicts between users.



For intersections with higher vehicle speeds and volumes, more targeted design treatments can provide a safe and comfortable experience for people biking, scooting and rolling.

# NEAR-TERM CONNECTIONS

As part of the Vision Network, the city has identified **10 Near-Term Connections** that will be prioritized for further evaluation and implementation in the next five years. The Near-Term Connections are critical pieces of the Vision Network. These connections include some costly and complex projects along key corridors that will need to be studied further. They also include simpler and lower cost projects that close existing gaps in the network or connect residents in Communities of Interest to local destinations.

By identifying Near-Term Connections, the city can focus on making smart, strategic investments to address pressing issues for residents, such as **affordability, job access and climate change.** This phased approach also allows the city to adapt how the Vision Network is implemented as the transportation field advances and new best practices emerge.

To align with the goals for Bike Plus and based on public input, the Near-Term Connections were selected using these criteria:



**Create Safe Streets -** Projects that are along or intersect with the Vision Zero High Injury Network.



**Get More People Biking, Scooting and Rolling -** *Projects that connect to existing bikeways and/or key destinations.* 



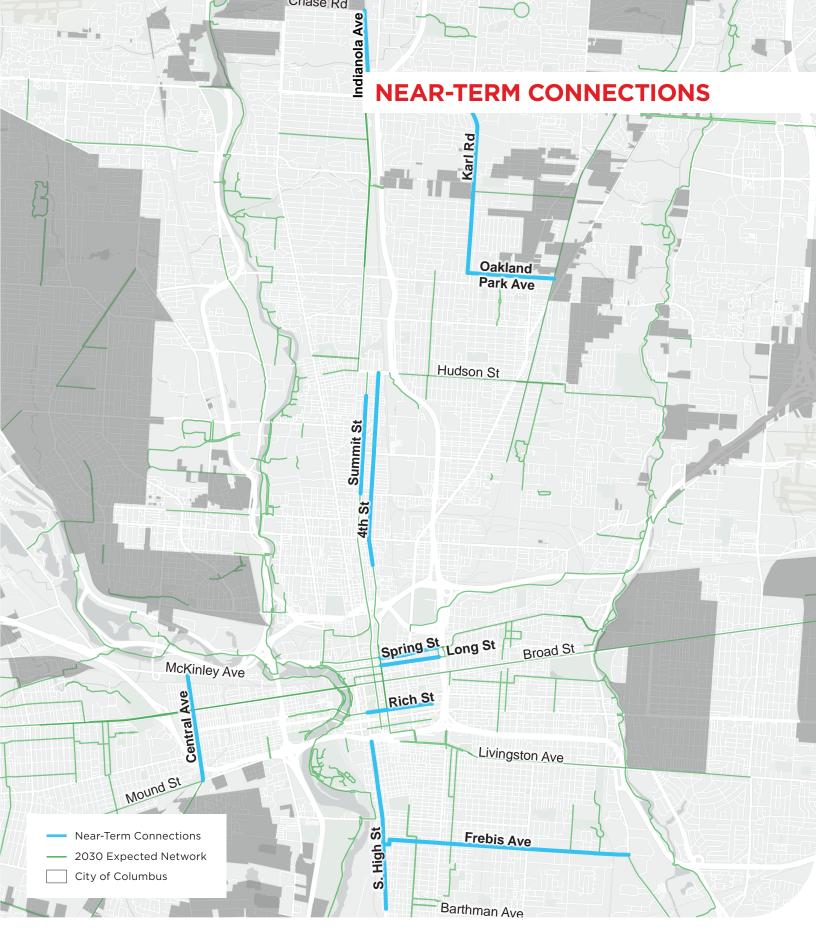
Plan and Design for Equity - Projects within COI or that improve access to key destinations for people in COI.







Frebis Ave Rich St Karl Rd



2030 Expected Network includes existing bikeways and upcoming projects that are anticipated to be completed by 2030.

# **QUICK BUILDS**

Bikeway projects, like all infrastructure projects, can take time to implement. Columbus is exploring implementation of some quick build projects using low-cost, semi-permanent materials that allow for faster implementation. In addition to being relatively quick to install, materials like flexible posts, bollards, parking stops, and pavement markings allow the city to evaluate people's experience using the bikeways and make changes as needed.

This quick build approach was utilized in spring of 2024 on East Broad Street. The city received grant dollars to improve safety on a high-injury network corridor. A one-day event was held to test materials and collect feedback. The input was used to inform a year-long demonstration project ahead of a longer-term design.



**One-day Event** 



**Year-long Demonstration** 

# The potential Bikeway projects that will be explored for potential quick build implementation, starting with outreach and engagement, include:



Protected bike lane on N 4th Street from Warren Avenue to Hudson Street



Protected bike lane on Frebis Avenue from Lockbourne Road to Alum Creek Drive



Protected intersections along the existing Protected bike lane on Summit Street from E 11th Avenue to Maynard Avenue

# **POLICIES & PROGRAMS**

Without supportive programs and policies in place, infrastructure projects can only go so far. These policies and programs are organized by the Bike Plus goal they help achieve. Case studies are shown on the bottom of each page corresponding to one of the program or policy strategies.



# **CREATE SAFE STREETS**

IMMEDIATE	SHORT-TERM	LONG-TERM
Ť	·····+	·
Within 1 Year	1 - 3 Years	4+ Years



# Adopt Complete Streets Policy IMMEDIATE

Create a policy for the Department of Public Service to ensure that roads and streets are designed, built and maintained equitably, making them safe for everyone - so that people of all ages, incomes and abilities can use them safely, whether they are walking, biking, rolling, driving or using transit.



# Create Bikeway Maintenance Policy IMMEDIATE

Develop a plan to keep bike paths and on-street bikeways clean and clear, including regular sweeping and snow removal. Respond to maintenance requests from the public and prioritize Communities of Interest. Dedicate funding for maintenance and review once a year to account for new bikeways. Check progress every three months to see if sweeping should occur more often. See the case study below for an example.



#### Collaborate with City Departments to Align Design Requirements IMMEDIATE

Assess standards within the various City departments that currently impact the design of public streets and bikeways, and which can sometimes create barriers to bikeway construction or create challenges to achieving preferred designs. Public Service should work both internally, and with staff from other departments such as Public Utilities, Public Safety, Recreation & Parks, Building & Zoning Services, and Development to update regulations better facilitating both on-street and off-street bikeway implementation.



# MINNEAPOLIS MAINTENANCE PROGRAM

Minneapolis, MN, has a comprehensive maintenance program for their 400+ mile network of bikeways. The goal is to provide the same level of sweeping, repairs and snow/ice control on the bikeways as on the street where the bikeway is located. The city has acquired the equipment and staff needed to sweep most on-street bikeways weekly, to conduct a more intensive cleaning of bikeway surfaces every summer and to clear snow/ice on the same schedule used for the roads. In 2024, Minneapolis estimated the annual cost of bikeway maintenance to range from 30 cents per linear foot for bike boulevard to \$6.40 per linear foot for protected bike lanes. Their approach to bikeway maintenance has been refined over a 20+ year period of trial and error.



# **Expand Safe Routes to School Program SHORT-TERM**

Coordinate with local schools to expand Safe Routes to School programming for biking, especially in Communities of Interest. Apply for funding from the Ohio Department of Transportation to help build bikeways and sidewalks, and fund educational programs that encourage biking and walking.



# **Evaluate Locations for Intersection Safety Improvements SHORT-TERM**

Assess and evaluate locations and roads to improve safety at intersections. This includes options like "no turn on red" restrictions, longer pedestrian crossing times, protected intersections and other safety measures. Use the Vision Zero High Injury Network and the current bikeway network to identify the most dangerous intersections. Evaluate these locations for safety improvements, and then make improvements using quick-build materials or add them to the budget for future projects.



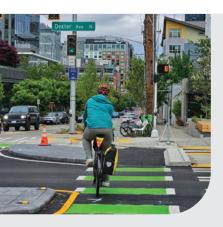
# Create a Bikeways Implementation Team LONG-TERM

Create a team of planners and engineers to design and quickly build bikeways projects, including the near-term connections. This group will work together to improve processes, design standards and construction methods, making it faster and easier to add protected bike lanes and other low stress bikeways. The team includes staff from different parts of the Department of Public Service and regularly works with other departments and regional agencies to coordinate efforts.



# Create Multimodal Planning Guide for Project Development LONG-TERM

Develop a project development guide that supports the existing Columbus Bikeway Design Memo. This guide should include criteria for deciding when to remove travel lanes or on-street parking, how to handle trade-offs, and best practices for intersections and construction detours. Include a long-term budget and phasing of bikeways projects.



# PROTECTED INTERSECTIONS

A **protected intersection** is a design treatment that many U.S. cities use to improve safety and comfort at intersections for people using bikes, scooters and micromobility. Protected intersections physically separate people biking from motor vehicles for most of the crossing. The design significantly reduces the crossing time and distance for people on bikes and can also improve yielding, encourage slower turning speeds for drivers and improve sightlines for everyone using the intersection.





# **Update Regional Bike Map IMMEDIATE**

Create an updated regional bike map that will be available online and in print. Promote and provide the map widely as a free resource online and at community locations, such as libraries, recreation centers, tourist hubs and local businesses. Update the virtual map annually to reflect any new bikeways.

# **Develop Open Streets Program IMMEDIATE**

Host regular, recurring events where streets are closed to cars and open for people to walk, bike, scoot or roll. See how other cities host open streets events in the case study below.

J

# Develop Bike-Friendly Businesses Partnership Program SHORT-TERM

Start a pilot program that includes creating branding guidelines and support tools, like a "bike to businesses" passport and promotional materials. Provide bike racks, advertising opportunities, educational group rides, and help for local businesses that join the program. Assist these businesses in applying for Bicycle Friendly Business Designation and track their revenue each year after they receive it.



# Update City Bikeways Ordinances SHORT-TERM

Update Columbus City Code to align with the Bike Plus Plan for sidewalks and bikeways in new development projects. The current language refers to the 2008 Plan, so it needs to be updated to guide developers when building new projects. This should include requirements for installing sidewalks, shared-use paths, or paying a fee that goes toward on-street bike bikeways.



# **OPEN STREETS AROUND THE U.S.**

Examples from around the U.S. can help us learn how to formalize an Open Streets program. For example, Charleston, SC, started their popular 2nd Sunday on King Street event as a pilot but now closes King Street (their Main Street) to cars on a monthly basis. Shops and restaurants extend their footprint into the street and additional vendors create a lively atmosphere. In Portland, OR, the Sunday Parkways program includes multiple street closures each year, with routes ranging from two to six miles. The program is delivered by the city department of transportation and sponsored by a regional healthcare provider. In San Francisco, the Sunday Streets program started in 2008 as a pilot and has grown into an annual season of street closures that included seven events in 2024. It is run by a regional nonprofit with funding and logistical support from the city's transportation and health departments.



# Develop Bike and Pedestrian Count Program SHORT-TERM

Install bike and pedestrian counters at several locations around the city. Target highly visible locations with real-time feedback displays to demonstrate the number of people riding. Routinely collect before and after counts as bikeways projects are completed. Use emerging technologies to expand capacity and frequency of data collection.



# Remove Codified Barriers to Biking, Scooting and Rolling SHORT-TERM

Update Columbus City Code to allow e-bikes, e-scooters and mobility devices on streets with speed limits over 35 miles per hour. Revise parking infraction loopholes currently allowing loading and delivery activity to occur within bike lanes.



# Install Bike and Scooter Parking SHORT-TERM

Add bike and scooter parking downtown and other destinations. Install dedicated bike parking areas at major transit stops and along Zone In corridors. Encourage accessible long-term parking with e-bike charging at major employers and apartment buildings. Set yearly goals for bike and scooter parking. Expand micromobility parking solutions with new technologies and infrastructure through the City's shared mobility program.



# Launch Culture Change Communications Campaign SHORT-TERM

Create a campaign to promote biking, scooting, and rolling as important parts of Columbus culture. Develop key messages and ways to share information that encourage and educate people about these activities. Plan events that focus on biking, scooting, and rolling. Develop a schedule and budget, and find partners to help carry out the campaign.



# **BIKE AND PEDESTRIAN COUNTERS**

Philadelphia's regional planning commission has installed 16 permanent **bicycle and pedestrian counters** on trails and on-street bikeways throughout the region. The data from these counters are available through an interactive website, which allows planners and policymakers to better understand how various factors influence cycling. The regional planning commission also maintains a centralized database of bike, pedestrian and vehicle counts collected through localized traffic studies, for the data to be used in efforts to understand how and where people travel. Learn more at: https://www.dvrpc.org/traffic/bikepedtravelmonitoring/

# D

# Assess Bike Repair Stations LONG-TERM

Inspect public bike repair stations to see if they need maintenance or replacement. Consider other options like mobile repair shops. Identify other places in the city where bike maintenance tools and education are needed.

# Q

# Standardize Process for Quick Build Projects LONG-TERM

Create a standard process and schedule for the Department of Public Service to make it easier to implement quick build projects. These projects include affordable, semi-permanent bikeways, such as adding physical protection to existing buffered bike lanes.

# R

#### Increase Access to Bike Share and Shared Micromobility Long-TERM

Create a more unified system of bike share, dockless e-scooters, and other device types to expand access and improve service for more people throughout the city. Develop a financially sustainable model for system management. Prioritize the placement of micromobility hubs along busy bus routes, Zone In corridors and in Communities of Interest.



#### Establish a Travel Training Program LONG-TERM

Create a travel training program that provides safety education for new cyclists through route planning assistance, group rides, one-on-one rides and training classes. The program will help Columbus residents of various neighborhoods, cultures and ages get more comfortable biking and planning trips using the easiest and safest routes to specific destinations. Training classes will include basics for beginner riders, simple maintenance, safe road riding tips, and experiences designed to help people learn to commute, run errands and have fun using different transportation modes.



# PUBLIC HEALTH TRAVEL TRAINING PROGRAM

In 2022, Columbus Public Health received grant funding for a **travel training program** called the Central Ohio Bicycle and Bus Ambassador Program. The one-year program trained Columbus residents of various neighborhoods, cultures, ages and experiences as coaches to help the broader community get more comfortable biking or taking the bus. The Ambassadors held community trainings, rides and experiences designed to help people learn to commute, run errands, and have fun using active modes of travel.





# Create Bikeways and Micromobility Opportunity Framework SHORT-TERM

Develop a framework that focuses on equity in transportation planning, design and maintenance for bikeways. Work with the Columbus Office of Diversity & Inclusion to include a review of local and national policies that have led to inequitable transportation outcomes in Communities of Interest. Write guidelines to ensure the benefits of transportation projects are shared equitably across the city. Review best practices for preventing displacement during and after improvements for bikes, pedestrians and public transit.



# Evaluate and Update Bike Plus Plan ON-GOING

The Department of Public Service should review the Bike Plus Plan, Vision Network, Near-Term Connections and Policy and Program Strategies annually, beginning in 2025. Evaluate progress using plan performance metrics. Standardize process for determining next priority projects, with a goal of intentional network building. Completely update plan every five years.



# Host a Bicycle and Pedestrian Forum SHORT-TERM

Host a quarterly forum, open to the public to discuss new and existing bikeways projects, and gather feedback during the planning, design and construction phases.



#### Align Bikeway Investments with Affordable Housing Goals LONG-TERM

Connect affordable housing with investments in bikeway infrastructure and vice versa. Add affordable housing locations to the project selection process for priority bikeways projects in order to support residents and access to affordable housing.



# **BIKEWAYS AND AFFORDABLE HOUSING**

The communities of San Pablo, Union City, Berkeley and Oakland, CA, provide some of the nation's leading examples of pairing investments in **affordable housing** with new, improved bikeways and trails. Funded through a statewide program designed to integrate affordable homes and sustainable transportation, these communities partnered to secure funds to construct over 400 new affordable homes and miles of protected bike lanes, trails, enhanced sidewalks and transit stations designed to provide safe transportation alternatives for residents. This unique effort is designed to address gentrification and meet overlapping needs related to affordable housing, mobility and climate.





# Fund Existing Bike Co-Op Programs LONG-TERM

Explore opportunities for existing bike co-ops to deliver low-cost repairs and replacement parts, teach maintenance skills and offer support for people who rely on biking for transportation. Partner with an existing local organization to pilot additional locations and mobile shops in areas without easy access to an existing bike shop.



#### Develop Family Riding Equipment Program LONG-TERM

Create a program that offers free or low-cost equipment to help families ride safely. This includes helmets, child bike seats, wagons, cargo bikes, locks and lights. The program should also provide resources and support, like bike safety training.

Z

# Expand Columbus' Resident E-Bike Subsidy Program LONG-TERM

Formalize Columbus' Resident E-Bike Subsidy Program into an official, sustainably funded citywide program. Increase marketing and promotion in Communities of Interest to allow for greater access to affordable transportation.



# **COLUMBUS E-BIKE SUBSIDY PROGRAM**

In July 2023, Smart Columbus, on behalf of Columbus City Council, started a pilot program to make e-bikes more affordable for more people. Thanks to Columbus' enthusiasm for e-bikes, the program received 3,739 applications in the first year, demonstrating demand and excitement for the program. The pilot program has expanded twice to distribute more incentives for more people. To date, the program has distributed nearly 300 e-bikes to Columbus residents, expanding transportation access and reducing car trips.

# HOW DO WE GET THERE? COLLABORATION AND TIMEFRAME FUNDING PERFORMANCE TRACKING 46 + HOW DO WE GET THERE?

# COLLABORATION AND TIMEFRAME

Implementing Bike Plus will be a phased, multi-year process that hinges on collaboration, funding, feasibility and ongoing performance metrics. The ideas presented are planning-level concepts. Bike Plus will guide project and program implementation; however, the locations of some projects, the type of bikeway that is implemented, or details of policy/program strategies may change as more information becomes available over time. Many projects need additional analysis before moving forward, which could lead to alternative routes or designs.

Although most of the Bike Plus Vision Network projects, policies and programs will be implemented by the City of Columbus, support from other agencies, stakeholders and community partners will be needed for successful implementation.

Bike Plus implementation will require collaboration with the diverse residents of Columbus. Just as Bike Plus was developed by and with people from a variety of backgrounds, its implementation depends on continued involvement and insights from people who identify as Black, Indigenous, or People of Color, people with disabilities, older adults, youth, low-income residents and other historically marginalized groups.

The next page presents the Bike Plus programs and policies described in Moving Forward and indicates the key partners who will lead next steps. It also shows the time frame for each strategy:



	<b>Create Safe Streets</b>	Partner	Time frame
A	Adopt Complete Streets Policy	Public Service	Immediate
В	Create Bikeway Maintenance Policy	Public Service	Immediate
C	Collaborate with City Departments to Align Design Requirements	Utilities, EPA	Immediate
D	Expand Safe Routes to School Program	Public Health, CCS	Short-Term
E	Evaluate Locations for Intersection Safety Improvements	Public Service	Short-Term
F	Create a Bikeways Implementation Team	Public Service	Long-Term
G	Create Local Multimodal Planning Guide for Project Development	Public Service	Long-Term

# **Partners**

CCS	Columbus City Schools
Public Health	Columbus Public Health
Development	Department of Development
Neighborhoods	Department of Neighborhoods
Public Service	Department of Public Service
Utilities	Department of Public Utilities
Rec and Parks	Department of Recreation and Parks
EPA	Environmental Protection Agency
Experience Columbus	Experience Columbus
MORPC	Mid-Ohio Regional Planning Commission
ODI	Office of Diversity and Inclusion
SMRT	SMART Columbus
Yay Bikes	Yay Bikes

**************************************	Get More People Biking, Scooting and Rolling	Partner	Time frame
Н	Update Regional Bike Map	MORPC, Rec and Parks	Immediate
I	Develop Open Streets Program	Neighborhoods	Immediate
J	Develop Bike-Friendly Businesses Partnership Program	Experience Columbus, Yay Bikes	Short-Term
K	Update City Bikeways Ordinances	Public Service	Short-Term
L	Develop Bicycle and Pedestrian Count Program	MORPC, Rec and Parks	Short-Term
M	Remove Codified Barriers to Biking, Scooting and Rolling	Public Service	Short-Term
N	Install Bike and Scooter Parking	Public Service	Short-Term
0	Launch Culture Change Communications Campaign	Neighborhoods, Public Health, Utilities	Short-Term
P	Assess Bike Repair Stations	Public Service	Long-Term
Q	Standardize Process for Quick Build Projects	Public Service	Long-Term
R	Increase Access to Bike Share and Shared Micromobility	Public Service	Long-Term
S	Establish a Travel Training Program	Yay Bikes	Long-Term

	Plan and Design for Equity	Partner	Time frame
T	Create Bikeways and Micromobility Opportunity Framework	Neighborhoods, Public Health, ODI	Short-Term
U	Evaluate and Update Bike Plus Plan	Public Service	Short-Term
V	Host a Bicycle and Pedestrian Forum	Neigborhoods, Rec and Parks	Short-Term
W	Align Bikeway Investments with Affordable Housing Goals	Development	Long-Term
X	Fund Existing Bike Co-Op Programs	Public Service	Long-Term
Y	Develop Family Riding Equipment Program	Public Health	Long-Term
Z	Expand E-Bike Incentive Pilot Program	SMRT, Utilities	Long-Term

# **FUNDING**

The City of Columbus will use a variety of funding sources to implement Bike Plus. Each type of funding has distinct requirements that relate to how funding is allocated, used and reported.

# THE **THREE MOST COMMON SOURCES OF FUNDING**FOR NEW TRANSPORTATION PROJECTS ARE:

# **Capital Improvement Budget**

Priority projects that have strong community support are typically funded through the City's Capital Improvement Budget.

# **State and Federal Grants**

Large-scale, multi-year projects may be candidates for state and federal grants, including those administered by the Mid-Ohio Regional Planning Commission, especially projects that are regionally significant.

# **Philanthropic or Private Funding**

There are several local and national organizations that fund active transportation projects and programs.







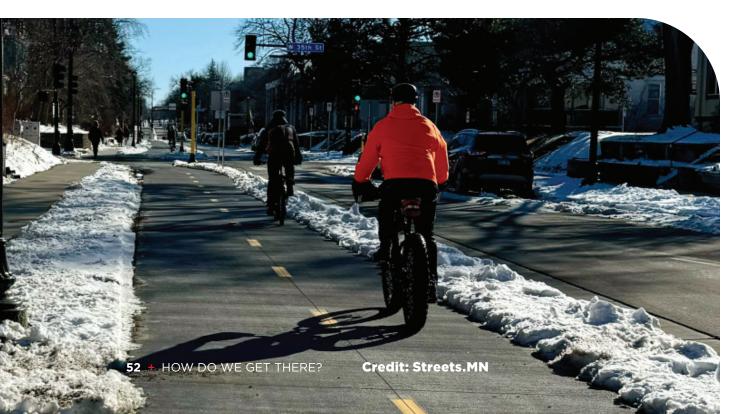
# MAINTENANCE FUNDING

Ongoing funding is necessary to maintain existing bikeways and to support building future bikeways. With new bikeways planned in the coming years, it is essential that the City dedicate additional funding to sweeping, plowing, pavement repairs and more. New equipment will be necessary to sweep and plow narrow protected bikeways. Ongoing funding for maintenance and operations will need to be allocated when new bikeways are constructed.

# A FRAMEWORK FROM MINNEAPOLIS

In Minneapolis, MN, funds are automatically added to the city maintenance budget when new bikeways are built. Minneapolis uses different rates, depending on type of infrastructure and the complexity of maintenance work. Pavement markings for bike boulevards and shared lanes receive the least amount of funding (under a dollar per linear foot), while protected bike lanes receive two dollars per linear foot of funding annually.

In order to prioritize sweeping and plowing of major bikeways, Minneapolis defines level of service for bikeways, similar to roadways. Level of service describes the quality of the operating conditions on a given roadway. This is achieved by designating on-street bikeways the same level of service as the street they are on. For instance, if a major route has a bikeway, the roadway and bikeway will be swept and plowed more frequently. Minneapolis also treats its protected bikeways similarly to trails and applies the same standards for maintenance.



# PERFORMANCE TRACKING

The City of Columbus will dedicate staff time, financial resources and political leadership to achieving the ambitious vision and goals of Bike Plus. To make this commitment with confidence, the City will continually evaluate progress, as measured by performance metrics and baseline data.

Performance metrics were identified based on public input in order to measure how well the existing and proposed network aligns with the Bike Plus goals. This approach creates a baseline that the City of Columbus can continually track and improve.

BIKE PLUS PERFORMANCE METRICS		Today	Bike Plus Vision Network
	Total miles of low-stress bikeways <sup>1</sup>	184	671
	Mileage of low-stress bikeways on the High Injury Network (as it exists in 2024)	13	159
•	Percentage of households that are within one mile of key destinations along a low-stress bikeway:  • Grocery stores  • Schools and colleges/universities  • High-frequency COTA stops  • Retail	26% 28% 26% 22%	47% 41% 33% 45%
<b>::</b> :	Percentage of long-term affordable housing locations <sup>2</sup> within a quarter mile of a low-stress bikeway	42%	88%
4)	Number of bike and scooter trips per year on shared mobility	<b>977,000</b> (2023)	<b>+5%</b> per year
+	Number of crashes that result in a fatality or serious injury involving people biking, scooting, or rolling in Columbus	<b>661</b> (2018-2022)	<b>Target: 0</b> by 2035

Low-stress bikeways include trails, calm neighborhood streets, and bike lanes with vertical separation between people biking and people driving, such as a curb, parked cars, or another type of vertical barrier. More details are provided on page 23.

<sup>&</sup>lt;sup>2</sup>"Long-term affordable housing sites" include land trust sites and Low Income Housing Tax Credit (LIHTC) locations that went into service 2015 or later. This assumes a 30-year period for LIHTC locations.



# A MESSAGE FROM DIRECTOR KELLY SCOCCO

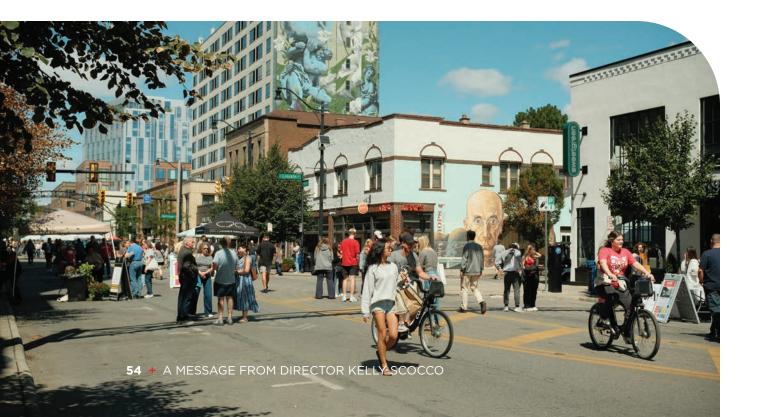
The City of Columbus Bike Plus Plan is a commitment to enhance our transportation system to safely serve all people who use and depend on it, especially those biking, scooting and rolling.

Bike Plus is for everyone. Whether you are interested in biking more or are an avid cyclist. Whether you don't own a vehicle or prefer to drive yours less frequently. Whether you are biking for transportation or for fun. This plan is focused on achieving the infrastructure, policies and programs to support people from all backgrounds and abilities getting around safely on two wheels.

Thousands of community interactions occurred during Bike Plus planning. The engagement was instrumental in shaping this plan and the bikeways Vision Network. As Bike Plus is implemented, we will keep evaluating our progress toward achieving its goals, and community collaboration will remain vital to regularly updating the plan to best meet our diverse and growing city's needs.

Willy Scocco

Director, Department of Public Service





A

Vision Network Quadrant Maps

B

**Peer City Discussion Summary** 

C

**Micromobility Best Practices Report** 

D

**Engagement Summary** 

**Network Assessment Methodology** 

F

**Network Assessment** 



Thank you to everyone who participated in Bike Plus!





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