






CITY OF EUCLID
PEDESTRIAN & BICYCLE SAFETY ACTION PLAN

AN ACTIVE TRANSPORTATION PLANNING STUDY

County Planning

ACKNOWLEDGMENTS

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OUR VISION

Inspiring all of our communities to thrive

OUR MISSION

To advance Cuyahoga County's social, economic, and environmental health through equitable community planning

County Planning
FOR OUR COMMUNITY
FOR OUR REGION
FOR OUR FUTURE

Cover Image Source: Cuyahoga County; City of Euclid Ohio

Image Source: Bike Euclid

"More than half of all trips in the United States are within a 20-minute bike ride or less, and more than one in four trips are within a 20-minute walk or less.

Even so, the majority of these short trips are taken by automobile."

Rails to Trails Conservancy
Active Transportation Transforms America,
October 2019

SECTION 1
INTRODUCTION

Active transportation refers to human-powered modes of transportation—such as walking and biking—and places non-motorized travel options at the front of sustainable infrastructure policies. Currently, active transportation demands are continuing to grow revealing a critical strain on existing infrastructure and safety. While active transportation has been on the rise for years in the U.S., the COVID-19 pandemic drastically demonstrated how existing road networks fall short in meeting the mobility and accessibility needs of residents, especially the most vulnerable and in-need users.

The City of Euclid has long been a supporter of multi-modal and active transportation options throughout the community. In recent years the City has participated in numerous studies and partnerships, such as the Cuyahoga Greenways Plan; a plan for expanding mobility options available to residents and visitors throughout Cuyahoga County. These efforts have begun to manifest and create a pedestrian and bicycle network of safe and equitable connections into local neighborhoods, adjacent communities, and beyond.

While the City's existing street network is robust, the community is divided by I-90 and two active rail lines. These expansive pieces of infrastructure are critical for the movement of people and goods; however, they also have very limited underpasses spanned by major collector and minor arterial roadways to allow for easy passage of pedestrians and bicyclists. Additionally, the City's existing roadway network has few consistent east-west connections—making citywide connectivity a challenge.

In addition to physical infrastructure challenges, the City of Euclid has emphasized the importance of combating racism as a public health crisis. This Plan is a key initial step in creating an equitable quality of life for residents, especially in areas where historic disinvestment has occurred—providing non-vehicular transportation networks that connect residents with jobs, services, schools, parks, transit and other public assets.

1.1 WHAT IS ACTIVE TRANSPORTATION?

Active transportation envisions safe, comfortable, and connected networks that support multi-modal trips and human-powered mobility options throughout communities. This citywide Pedestrian & Bicycle Safety Action Plan focuses on human-powered mobility as a transportation method, both of choice or necessity— one that is safe, convenient, and available to everyone.

WHY IS THIS PLAN IMPORTANT?

Infrastructure impacts more than the built environment alone. The way structures and roads are built drastically alters the way people perceive and use public spaces. Streets are the foundation of local economies and active transportation is a critical component to healthy, safe, and livable communities with numerous benefits:

- **Mobility Benefits:** active transportation trips typically require less infrastructure than motorized vehicles and are among the most affordable options, providing many benefits to communities with socioeconomic barriers.
- **Economic Benefits:** active transportation drives economies by creating jobs through new infrastructure investments, helps attract and retain a talented workforce by providing a robust connectivity network, and can increase tourism, property values, and development.
- **Health Benefits:** active transportation provides the infrastructure necessary to bring meaningful change to residents by giving them a healthier choice in travel options.
- **Environmental Benefits:** active transportation provides an alternative to traditional vehicular travel and can reduce roadway congestion, air pollution, and green house gas emissions.
- **Quality of Life Benefits:** active transportation not only addresses the growing demand and cultural shift towards non-motorized mobility, it also addresses opportunity and access to facilities within historically disenfranchised neighborhoods where more homes without vehicles might be concentrated.

Walking and bicycling are the most affordable transportation options and benefit communities with socioeconomic barriers. Residents of these communities can have a higher quality of life with safe and accessible active transportation networks.

In general, the need and demand for active transportation is great—35% of Ohio residents live in high need areas where some of the state's most vulnerable populations call home, poverty rates are high, and residents tend to have limited access to motor vehicles. Within the City of Euclid nearly 7% of households do not have access to a vehicle, compared to 4.6% in Cuyahoga County. This Plan seeks to eliminate these and other obstacles facing active transportation as a mobility option of choice or necessity, both within the City of Euclid and beyond.

Source: Ohio Department of Transportation (ODOT), Walk.Bike.Ohio, 2021; American Community Survey (ACS), 5-Year Estimates, 2021, B08014

CURRENT TRENDS DRIVING ACTIVE TRANSPORTATION

From 1983 to 2014, the share of **16-year-olds in the U.S. with a driver's license dropped 47%** (46.2% to 24.5%); indicating a strong growing preference towards active transportation and shared mobility options among younger adults.

The share of **Ohio's population over the age of 65 is expected to increase from 15.9% in 2015 to 20.8% in 2045**; indicating the potential for large increases in demand for transit and active transportation facilities.

As a result of the COVID-19 pandemic, there was a **12% increase in the number of trips made by bicycle in the United States** between July 2019 and July 2020; indicating a growing interest in non-motorized transportation and alternative health initiatives.

As a result of the COVID-19 pandemic, there was a **15.3% increase in the number of pedestrian deaths in major American cities not accustomed to heavy foot-traffic**; indicating new demand for more opportunities to safely walk where people might not have before.

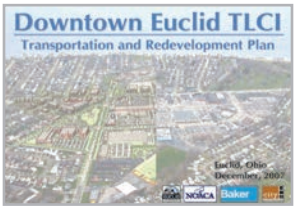
From 2000 to 2021, the share of **employees in Ohio working from home has increased from 2.8% to 14.9%**; indicating fewer vehicle miles traveled during normal peak commute times and a potential opportunity to attract new active transportation users.

As of 2019, **only 49.4% of adults in Cleveland report participating in regular physical activity**, compared to 75.5% in the State of Ohio as a whole; indicating a critical need for better access to safe and equitable recreation and active transportation facilities.

Source: Ohio Department of Transportation (ODOT), Walk.Bike.Ohio, 2021; Federal Highway Administration (FHWA); The disparate impact of COVID-19 pandemic on walking and biking behaviors, Transportation Research Part D: Transport and Environment, Volume 112, 2022; US Department of Transportation Bureau of Transportation Statistics, Commute Mode, 2000, 2021; Smart Growth America, Dangerous by Design, 2022; League of American Bicyclists, Healthy People Healthy Nation, Fact Sheet for Cleveland & Ohio

1.2 RECENT PLANNING INITIATIVES

This Pedestrian & Bicycle Safety Action Plan draws on previous planning efforts conducted both within the City of Euclid and adjacent communities. The City also has multiple ongoing projects and planning initiatives, which are at various stages of the planning process. These include the Euclid Avenue and Chardon Road Safety Study, the East 200th Street Streetscape Project, and the Lakeshore Boulevard Water Main and Walkability Project—all of which will contribute to the City's overall active transportation goals. A summary of these can be seen on the following pages.

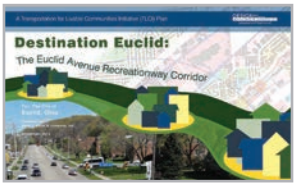


DOWNTOWN EUCLID TLCI TRANSPORTATION AND REDEVELOPMENT PLAN, 2007

This plan provided recommendations for strategic improvements in the City's Historic Downtown, located at the intersection of Lakeshore Boulevard and East 222nd Street. These include strategic traffic improvements, street reconfigurations, cyclist amenities, streetscape opportunities, and beautification efforts.

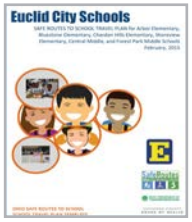
EUCLID WATERFRONT IMPROVEMENTS PLAN, 2009

This multi-phased project seeks to combine public access to the lakefront with erosion mitigation. Phases I and II, which include a new fishing pier and public access trail atop erosion mitigation infrastructure, are complete. Future phases will include additional upland bicycle and pedestrian trails, a transit plaza, and other lakefront amenities.



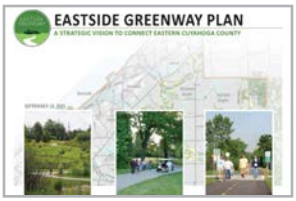
DESTINATION EUCLID: THE EUCLID AVENUE RECREATIONWAY CORRIDOR, 2013

This plan provided a strategy to revitalize Euclid Avenue. Specifically, it provides a strategic vision for reconfiguring Euclid Avenue as a linear park, reducing travel lanes, and incorporating an all-purpose trail along the full length of the corridor, as well as stormwater infiltration medians, transit shelters, and landscaping.



EUCLID CITY SCHOOLS SAFE ROUTES TO SCHOOL TRAVEL PLAN, 2015

This plan, developed under the Ohio Department of Transportation's Safe Routes to School program, outlines current and potential future Euclid City School programs to encourage safe travel. These include both non-infrastructure and infrastructure recommendations to address issues prohibiting safe biking and walking to City schools.

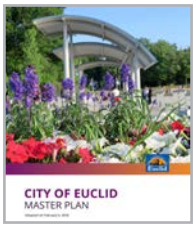


EASTSIDE GREENWAY PLAN, 2015

This plan outlined a framework of existing and potential greenway routes for communities on Cleveland's East Side. Included in this plan are Lakeshore Boulevard and East 222nd Street within Euclid, as well as various other regional routes in adjacent communities.

EAST 185TH STREET CORRIDOR PLAN, 2016

This plan provided recommendations for East 185th Street from Nottingham Road to Lake Erie. These include streetscape improvements such as street trees, curb bump-outs, and decorative crosswalks, as well as wayfinding and branding for the corridor. Additional traffic improvements, road repaving, and street reconfigurations were also recommended. Construction is currently ongoing.

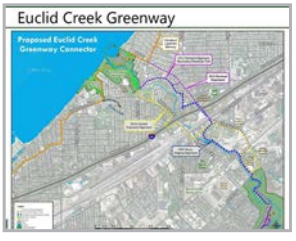


CITY OF EUCLID MASTER PLAN, 2018

This comprehensive plan outlined numerous goals and strategies for additional active transportation amenities and connections. It included a framework for additional streetscape improvements, trail connections, gateway improvements, transit waiting environments, off road trails, cycle tracks, and a water trail.

CUYAHOGA COUNTY LAKEFRONT PUBLIC ACCESS PLAN, 2022

This plan takes the public-private model developed in the Euclid Waterfront Improvements Plan and uses it to create a vision for public access to Lake Erie throughout Cuyahoga County. Within Euclid, the Lakefront Public Access Plan identifies recommended and alternative parallel routes to improve connections to and along the lakefront.



EUCLID CREEK GREENWAY EXTENSION, ONGOING

This is a multi-phased trail project that will connect the lower portion of Euclid Creek Reservation to the Lakefront. Phase I extends the all-purpose trail from Euclid Creek Reservation to Chardon Road. Phase II will extend the trail across Euclid Avenue through the former Euclid Central Middle School property. Future phases will extend the trail along Chardon Road and eventually connect the trail to Euclid Beach Park.

1.3 PLANNING PROCESS

This Pedestrian & Bicycle Safety Action Plan began in February 2023 when the City was awarded professional planning services through a competitive grant process from the Cuyahoga County Planning Commission (County Planning). In partnership with the City's Project Team—elected officials, administration, and staff—County Planning facilitated the process in the development of this Plan.

In addition to the Project Team, several Focus Groups were established to help provide more targeted feedback from across the community. These groups studied the existing conditions analysis and recommendations to help generate key ideas to be pursued in this Plan. In total, five (5) groups were created:

- Biking/Walking Advocates
- Youth/School Administration
- Seniors (65+ Years)
- Business Representatives
- Community Organizations

The result of this process is a comprehensive document that addresses policies, programs, and projects that can seek to improve active transportation infrastructure and policies within the City of Euclid.

PLANNING DOCUMENT & ZONING: WHAT'S THE DIFFERENCE?

A planning document is a policy tool for guiding communities in the decision making process—these documents can be comprehensive or targeted based on the overall objectives of the plan. In general, planning documents describe potential recommendations for change, it does not alter any zoning regulations or specific rules for development. The existing zoning remains unchanged until the City or a property owner seeks to change zoning through a rezoning application or an update to existing City ordinances is pursued.

PLANNING DOCUMENT

- A general plan for the future
- Describes recommendations for what should happen
- Includes recommendations that can be undertaken by the City, residents, or partners
- A flexible plan that is intended to be interpreted as conditions change

OR

ZONING ORDINANCE

- Specific rules for development
- Describes what is and what is not allowed today
- Includes mandatory regulations on development that are enforced by the City unless specifically waived
- Relatively rigid set of regulations that can only be changed by a legal process

This Pedestrian & Bicycle Safety Action Plan took a five-phased project approach in analyzing existing trends and networks, establishing a guiding vision, outlying action steps towards achieving the City's active transportation goals, and strategies for implementation. The project phases are outlined below.

START

CURRENT CONDITIONS

This initial phase involved collecting data on current bicycle and pedestrian infrastructure and, demographic data, as well as reviewing previous local and regional planning efforts, and identifying best practices around the county, state, region, and nation. This was used as a baseline for the City of Euclid and for the following phases of this Plan.

VISION

Based on input from residents, businesses, community groups, and leaders, County Planning helped articulate of a vision for how the City of Euclid would like to grow and change active transportation facilities in the future.

RECOMMENDATIONS

Based on feedback from the community and current best practices, County Planning provided targeted action steps and citywide recommendations to achieve the community's desired future of active transportation outlined in the Vision.

IMPLEMENTATION

In this phase, County Planning built upon the Vision and recommendations from previous phases to outline actionable strategies, partners, responsibilities, and priorities for undertaking improvements to active transportation throughout the City of Euclid and beyond.

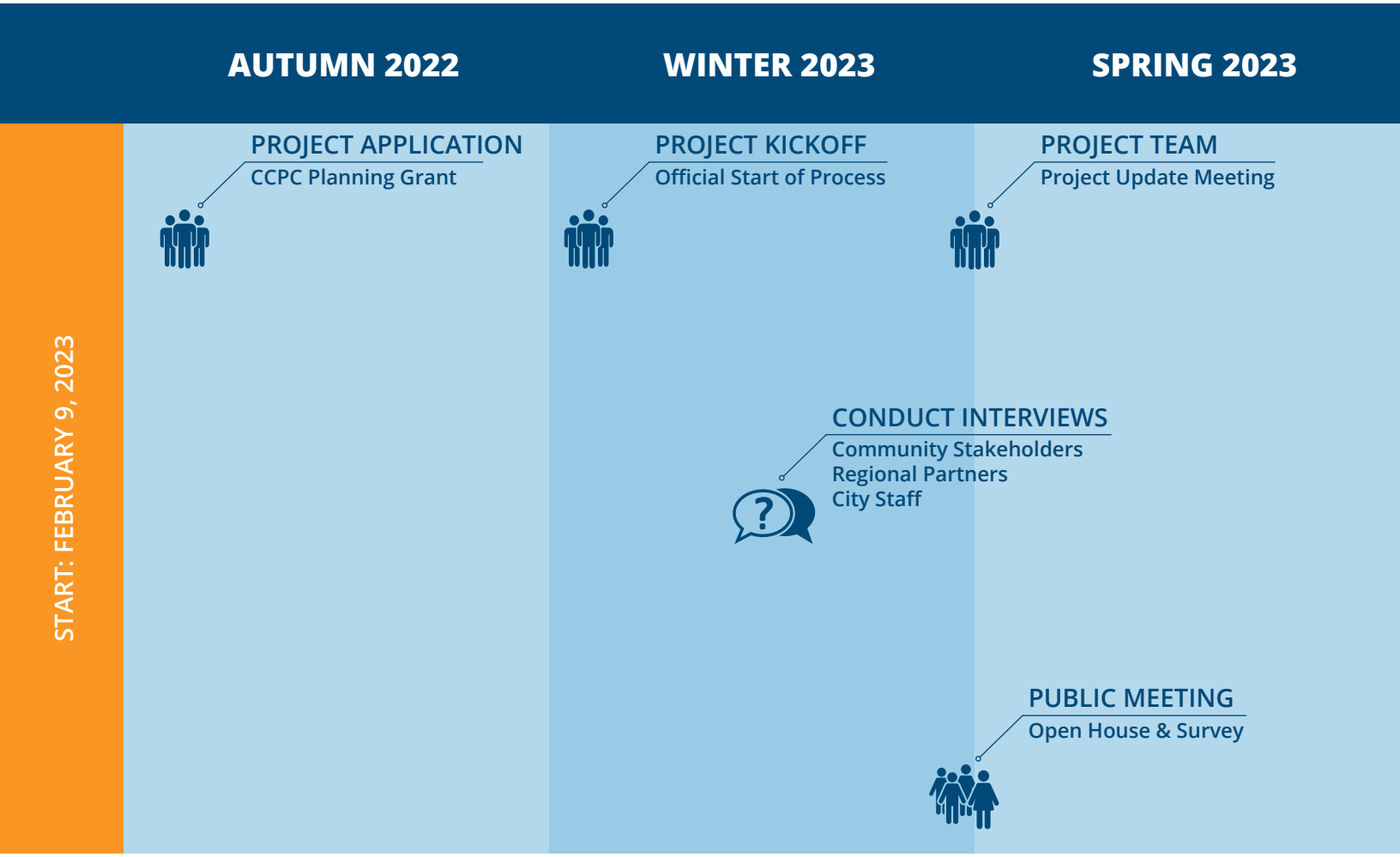
FINAL PLAN

In this final phase, County Planning combined all the previous phases into a completed Pedestrian & Bicycle Safety Action Plan document.

FINISH

1.4 PROJECT TIMELINE & COMMUNITY ENGAGEMENT

This Pedestrian & Bicycle Safety Action Plan took a unique and authentic approach on community engagement. Residents, business owners, bicycle advocates, students, and other key stakeholders brought their unique perspectives and ideas to the various feedback opportunities. In order to reach as many stakeholders and residents as possible, community engagement was diverse in both format and location. From traditional open houses and community surveys, to walking tours and virtual activities, the insight received throughout this process was imperative to the development of this Plan's vision and recommendations. A summary of meetings can be found in the timeline below.



SUMMER 2023

ENGAGEMENT
E. 200th Street Stroll

ENGAGEMENT
League of American Bicyclists Workshop

FOCUS GROUPS
Vision Activity

DRAFT DOCUMENT
Current Conditions

DRAFT DOCUMENT
Community Vision

AUTUMN 2023

PROJECT TEAM
Project Update Meeting

ENGAGEMENT
Bike with a Mayor

ENGAGEMENT
Senior Center Presentation

FOCUS GROUPS
Recommendations Walking Tour

DRAFT DOCUMENT
Recommendations

DRAFT DOCUMENT
Implementation

WINTER 2023-2024

PROJECT TEAM
Project Update Meeting

PUBLIC MEETING
Open House & Survey

ENGAGEMENT
Chardon Hills HOA Meeting

PROJECT TEAM
Project Update Meeting

PROJECT CLOSEOUT
Presentation to Planning & Zoning Commission

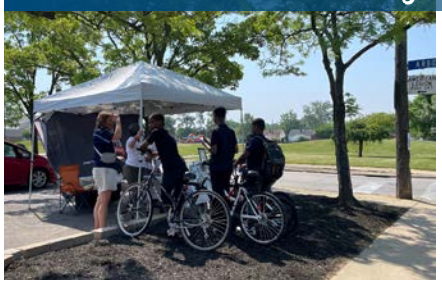
FINISH: FEBRUARY 13, 2024

PUBLIC OUTREACH SUMMARY

The following pages are a highlights of key community engagement opportunities and outreach conducted throughout this Plan's process, in addition to critical outreach methods—such as websites and various social media platforms (Facebook, X, and Nextdoor). The process also include two (2) in-depth surveys to solicit targeted feedback from the public through both online and paper formats.

Source: County Planning; City of Euclid; The Euclid Observer, Volume 15, Issue 5, Page 10, May 2023

E. 200TH STREET STROLL *(JUNE 3, 2023)*



LEAGUE OF AMERICAN BICYCLISTS WORKSHOP *(JUNE 6-7, 2023)*

BIKE WITH A MAYOR *(JULY 22, 2023)*

FOCUS GROUP WALKING TOUR *(OCTOBER 19, 2023)*

Image Source: Cuyahoga County

"Public transportation plays a pivotal role in accessibility for those who cannot or choose not to drive.

It is an essential factor in mitigating congestion—which resulted in 8.8 billion hours of wasted time and more than $166 billion in wasted money in the United States in 2017."

The American League of Cyclists
Bicycling and Walking in the United States:
2018 Benchmarking Report

SECTION 2

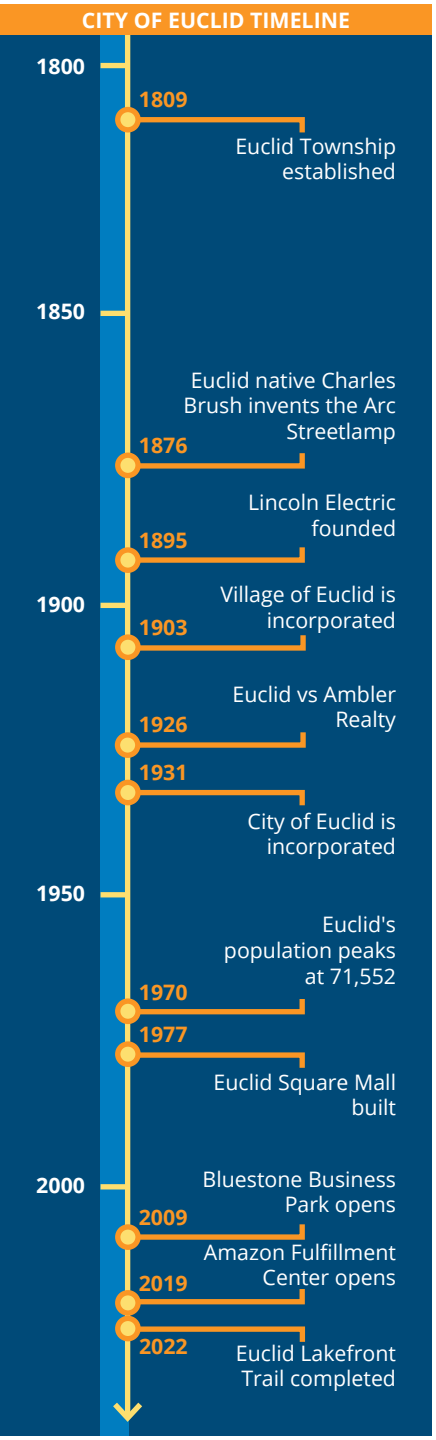
EXISTING COMMUNITY & TRANSPORTATION TRENDS

Those who call Euclid home represent a diverse cross section of demographic characteristics. Currently, the City of Euclid is seeing a resurgence in population growth and an accelerated increase in the number of senior residents—those over the age of 65. The City also has higher concentrations of residents that use public transportation, don't have access to motor vehicle, and rent their homes than Cuyahoga County as a whole. Additionally, the City has declared Racism a public health crisis within the community and strongly advocates for an equitable quality of life and transportation options across its many neighborhoods—especially for the most vulnerable residents and within areas where historic disinvestment has occurred.

This shift in population growth and demographic trends can have a significant impact on existing facilities, infrastructure, and services—thus being a critical driving force behind this Plan. While much of the community is built-out, the necessary infrastructure to encourage a safe alternative to driving, such as sidewalks or trails, are missing near prominent job hubs, schools, and other key destinations—potentially hindering workers and students arriving safely and on time to their jobs and classes. This issue is exacerbated by the City's finite number of consistent east-west connections, limited underpasses for non-motorized traffic to navigate railroads and I-90, and challenging on-road environments for bicyclists. However, given the City's immense potential and numerous regional amenities, the community is poised for new connections and expanded mobility options, both within Euclid and to surrounding communities.

Overall, there is an immense need and desire for improved active transportation networks, infrastructure, and policies throughout the City of Euclid. This section looks at existing trends surrounding community demographics, policies, and transportation networks within the City of Euclid—an important step towards understanding the City's assets, opportunities, and issues related to active transportation.

2.1 COMMUNITY OVERVIEW & STUDY AREA



EUCLID QUICK FACTS

11.48 SQMI
in overall size (SQMI = square miles)
10.63 SQMI of Land, 0.85 SQMI of Water (Lake Erie)

8 WARDS
of City Council areas

159+ MILES
of roadways

11 MILES
from Downtown Cleveland (CLE)

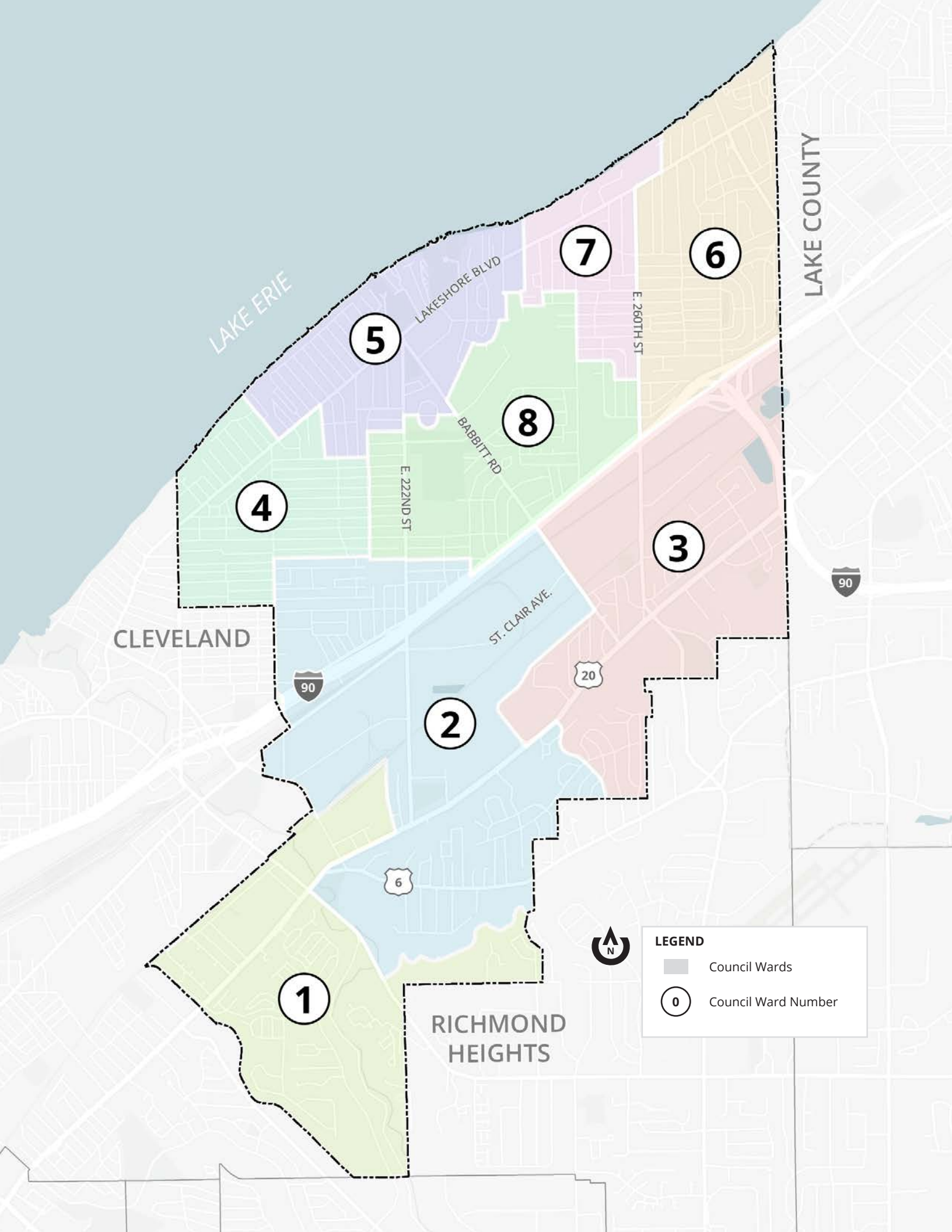
The Township of Euclid, was established in 1809. David Dille, a former lieutenant in the Revolutionary War, built a log cabin on the west bank of Euclid Creek, and is credited as the township's founder. In its early days, Euclid was a farming community producing wheat and grapes. Its earliest industries included salt, wood, grain, and ship production.

As the township continued to grow, the opening of two rail lines in 1850 helped spur additional industrial growth. This included several "bluestone" quarrying companies along Euclid Creek in the late 19th century. The township was incorporated as a village in 1903, and eventually incorporated as a city in 1931.

Euclid's flat topography in the north and rail access led to new industrial expansion during and after World War II. This post-war industrial boom led to significant population growth resulting in Euclid reaching its peak population of 71,552 in 1970. However, as industrial employment declined in the late 20th century, many existing industrial operations eventually closed or were redeveloped. The previous Euclid Square Mall—now an Amazon Fulfillment Center and former PMX Industries plant—now Bluestone Business Park, are examples of this redevelopment of former industrial sites.

Today, Euclid remains a large, inner ring suburb of Cleveland, with strong neighborhoods, lakefront amenities, numerous public facilities, commercial corridors, and industrial core.

Source: City of Euclid; Euclid Historical Society; County Planning


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
20
6
1
2
3
4
5
6
7
8
N
LEGEND
Council Wards
0
Council Ward Number

RESIDENTIAL CHARACTERISTICS

In 1970, both the City of Euclid (71,552 residents) and Cuyahoga County (1.7 M) as a whole saw their highest population totals. Both the City and County have been declining since that time; however, Euclid has begun to see population growth since 2010—an increase of 2% (772 residents) between 2010 and 2020. This indicates that more residents will likely be walking and biking throughout the community, and potentially increasing the demand for active transportation improvements to existing infrastructure.

In addition to a growing population overall, the City of Euclid is seeing its senior population (65 years+) growing at a faster rate than Cuyahoga County. Between the years 2016 and 2021, the City has seen a 12% increase (+965) in its number of senior residents, while Cuyahoga County has only seen a 9% increase (+21,467). As residents become older, the operation of a motor vehicle may not be an option, and will likely indicate an increasing need for alternative transportation options.

The City of Euclid has higher concentrations of minority populations, public transportation users, and residents without access to a motor vehicle than residents across Cuyahoga County as a whole. Additionally, the majority of Euclid residents (56%) rent their homes and have on average a lower median household income than residents across Cuyahoga County. This indicates a potentially critical need for active transportation options and infrastructure improvements where the City's most vulnerable populations live—so that all may have an equitable quality of life.

EUCLID RESIDENTS TODAY

18%
of Euclid households do not have access to a motor vehicle—compared to 13% of households in Cuyahoga County.

75%
of Euclid residents commute to work by driving alone, which is nearly identical to the 76% of residents in Cuyahoga County.

6%
of all Euclid residents commute to work via public transportation—compared to 4% of all residents in Cuyahoga County. This indicates there is higher concentration of public transportation users within the City of Euclid.

$42,056
was Euclid's median household income in 2021, which is 27% lower than Cuyahoga County's median household income of $55,109.

Source: American Community Survey (ACS), 5-Year Estimates, 2016 & 2021

64%
of Euclid's Population identify as black or African American alone—compared to 29% in Cuyahoga County as a whole. This indicates a large concentration of black residents within the City of Euclid.

56%
of Euclid's housing stock is comprised of renter occupied dwellings—compared to 42% in Cuyahoga County as a whole. This indicates that the majority of Euclid residents rent instead of own their homes.

38%
loss in Euclid's population has occurred from 1970 to 2010. However, between 2010 and 2020 the City has gained 8,296 residents (2%)—compared to Cuyahoga County, which continues to see population loss (31% decline between 1970 and 2020, a loss of 456,018 residents).

5%
loss in Euclid's homeownership has occurred between the years 2016 and 2021 (578) residents). However, the City has gained over 12% in those choosing to rent their homes (1,522 residents)—compared to a 2% increase in homeownership and 5% increase in renters throughout Cuyahoga County as a whole.

12%
increase has occurred in Euclid's senior population (over 65) between the years 2016 and 2021. This is slightly higher than Cuyahoga County's 9% increase during that same time. This indicates that the City's senior population is growing at a faster rate than the County.

29%
of Euclid residents earned at least an Associates Degree in 2021, which is a 3% decrease since 2016. However, Cuyahoga County saw a 13% decrease. This could be due to a number of factors—preference shifts, tuition costs, population loss, etc.

POPULATION DENSITY

With a population of 49,692, the City of Euclid is the 4th most populated community in Cuyahoga County. However, Euclid ranks 9th in population density with 4,664 people per square mile—indicating that while Euclid is mostly built out, it falls short when compared to similarly sized inner ring suburbs, such as Lakewood, Cleveland Heights, University Heights, and South Euclid in terms of density. Euclid as a whole is still significantly more dense than Cuyahoga County.

As seen on the map on the next page the highest density parts of the city are located within neighborhoods near the Cleveland border, north of I-90, east of East 222nd Street, and south of Lakeshore Boulevard. There are additional pockets of higher density census tracts north of Lakeshore Boulevard, as well in the southeastern part of the city between St. Clair and Euclid Avenues due to the presence of several high-rise apartment complexes in these areas.

The city's lowest population densities are in neighborhoods along I-90, as well as the southern part of the city near Euclid Creek. Much of these low-density areas are taken up by non-residential land uses such as the industrial corridor along I-90, Cleveland Metroparks Euclid Creek Reservation, and the municipal campus area between E. 222nd Street and Babbitt Road.

4TH

most populated city in Cuyahoga County

with a population of 49,692 as of the 2020 decennial census

9TH

most densly populated city in Cuyahoga County

with a density of 4,664 people per square mile as of the 2020 decennial census

CITY OF EUCLID

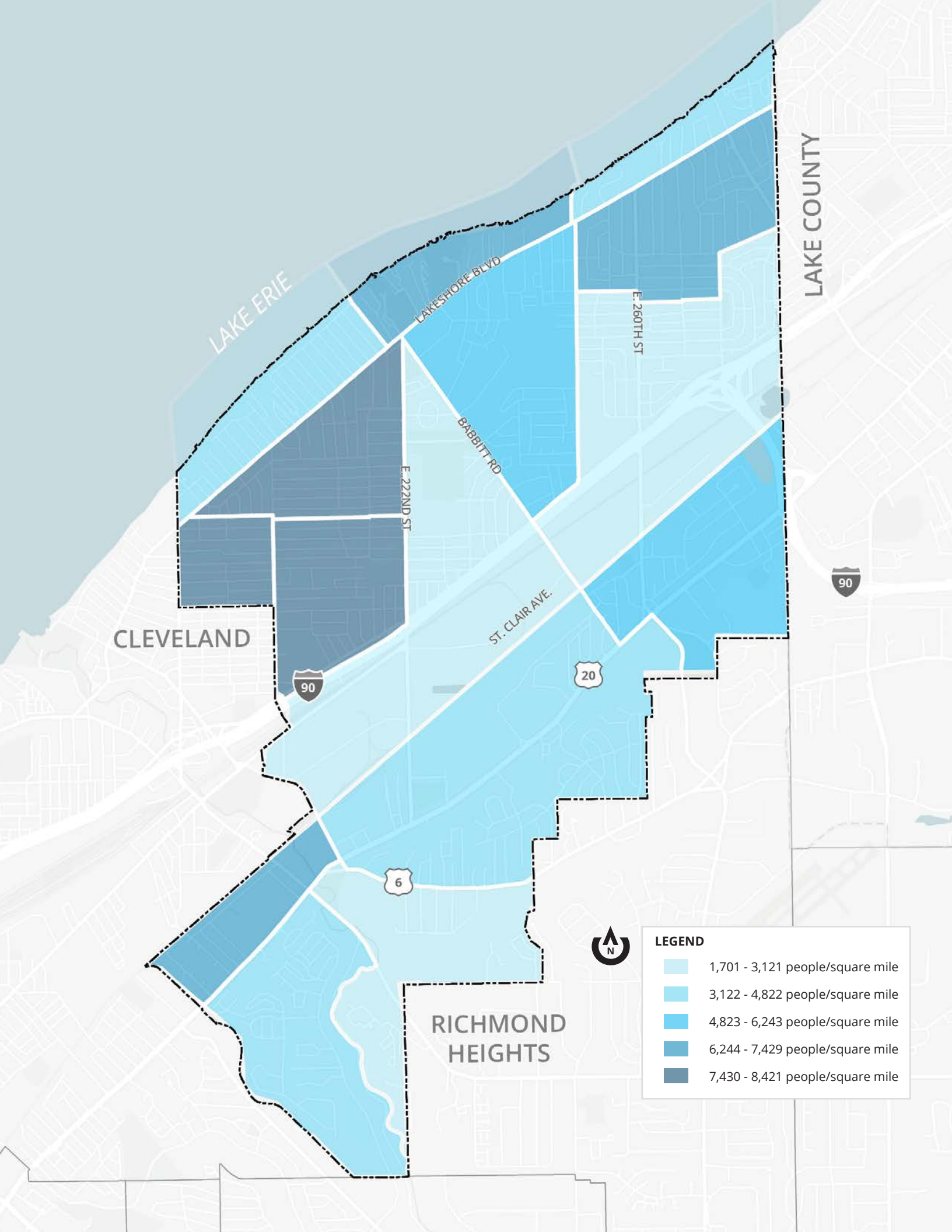
4,664 people/square mile

CUYAHOGA COUNTY

2,766 people/square mile

 *= 1,000 people/square mile*

Source: 2020 Decennial Census, 2017-2021 ACS 5-year Estimates

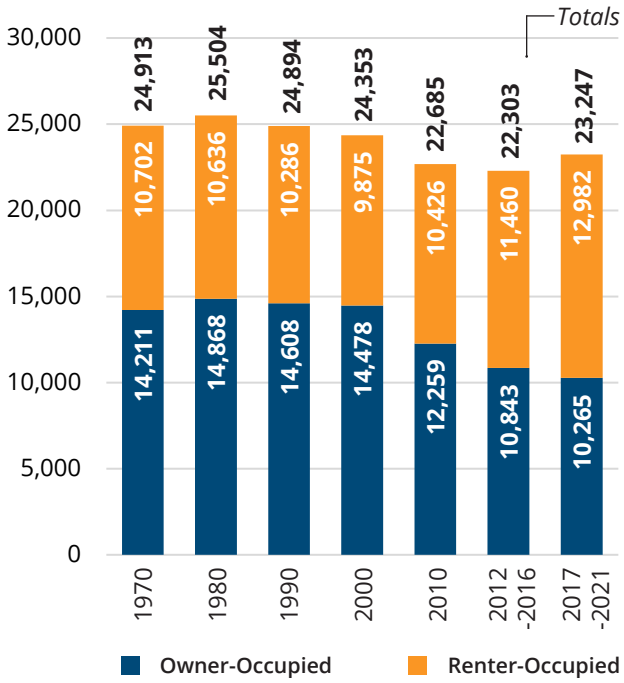

LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
90
20
6
N
LEGEND
1,701 - 3,121 people/square mile
3,122 - 4,822 people/square mile
4,823 - 6,243 people/square mile
6,244 - 7,429 people/square mile
7,430 - 8,421 people/square mile

RESIDENTIAL TENURE

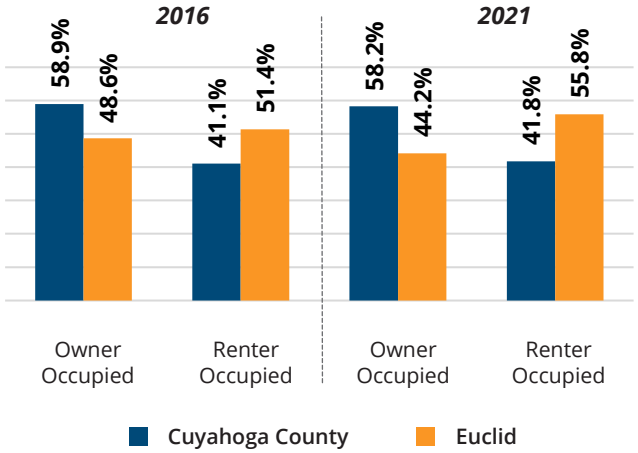
The City of Euclid's housing stock is comprised predominantly of rental units—55.8% are renter-occupied and 44.2% are owner-occupied as of 2021. This is a higher concentration of renters than Cuyahoga County as a whole in 2021, which has 41.8% renter-occupied housing and 58.2% owner-occupied housing. Additionally, this gap is continuing to increase. From 2016-2021 the City of Euclid saw its concentration of renter-occupied housing increase by 13.3% (1,522), and its owner-occupied housing decrease by 5.3% (578) during that same time period. When compared to the county's 4.9% (10,817) increase in renter-occupied housing and 1.9% (5,891) increase in owner-occupied housing over the same time period could indicate that the City of Euclid is seeing renter-occupied housing grow at a faster rate than the county as a whole. This increase in renter-occupied housing is most likely attributed to an increase in the number of single-family rental units, as Euclid has not seen a significant increase in new construction of apartment buildings.

Within the City of Euclid, rental units are more heavily concentrated north of Lakeshore Boulevard on the eastern lake shore, as well as along the industrial corridor in census tracts south of St. Clair Avenue, with most residential areas located along Euclid Avenue near the Richmond Heights border. Owner-occupied units are more heavily concentrated in the southernmost part of the city near Cleveland Metroparks Euclid Creek Reservation, north of Lakeshore Boulevard on the western lake shore, as well as in the eastern neighborhoods bordering Lake County.

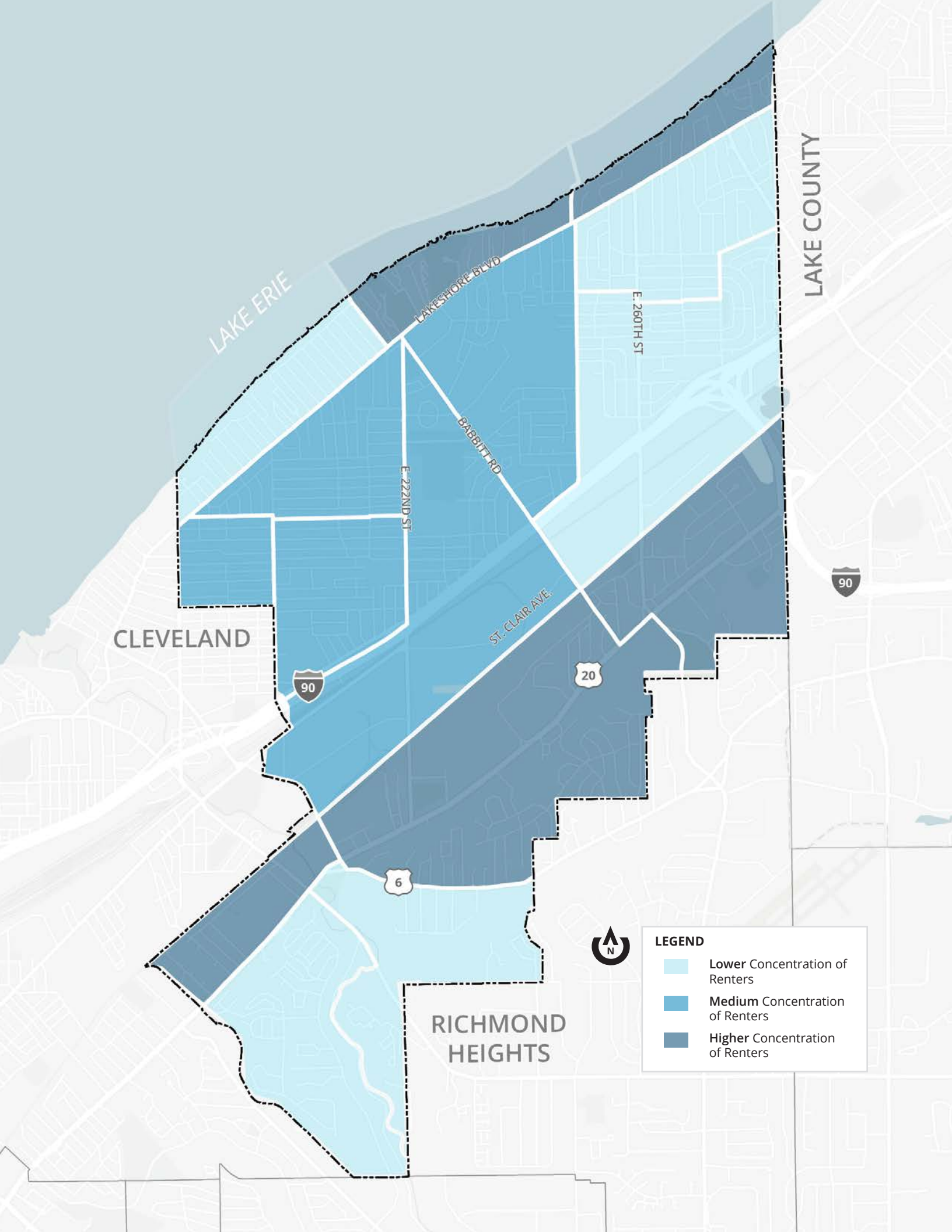
CITY OF EUCLID NUMBER OF HOUSEHOLDS, 1970-2021



RESIDENTIAL TENURE, 2016 & 2021



Source: 2017-2021 ACS 5-year Estimates, 2011-2016 ACS 5-year Estimates; Decennial census (1970-2010) via IPUMS NHGIS, University of Minnesota


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
20
6
N
LEGEND
Lower Concentration of Renters
Medium Concentration of Renters
Higher Concentration of Renters

MEDIAN HOUSEHOLD INCOME

The City of Euclid has a median household income of $42,056, which is lower than Cuyahoga County's median household income of $55,109. According to the U.S. Census Bureau, Euclid has the 6th lowest median household income in Cuyahoga County. Between the years 2016 and 2021, Euclid's median household income has increased by 17% ($6,107), however this increase is happening at a slower rate than Cuyahoga County—which saw an increase of 21.7% ($9,820) during the same time period.

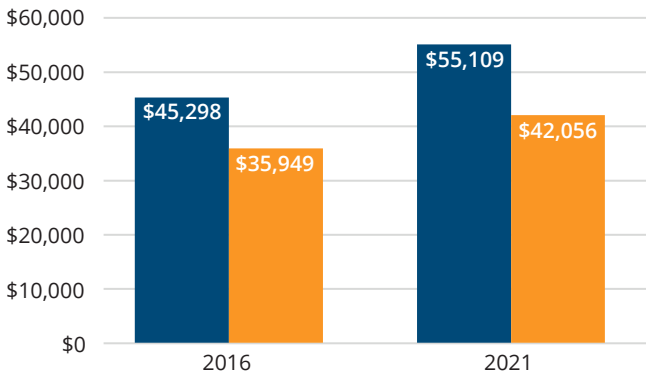
Within the City of Euclid, the neighborhoods with the highest median household income tend to coincide with neighborhoods with the highest percentage of owner-occupied housing units. The census block north of Lakeshore Boulevard nearest the border with Cleveland has the highest median household income, followed by neighborhoods near the Lake County border and near Cleveland Metroparks Euclid Creek Reservation.

The areas with the lowest median household income coincide with areas that have a higher concentration of renter-occupied housing units. Census tracts along the industrial corridor south of St. Clair Avenue, as well as the two census tracts north of Lakeshore Boulevard on the eastern part of the city tend to have lower median household incomes than the rest of the city.

6TH

lowest median household income in Cuyahoga County

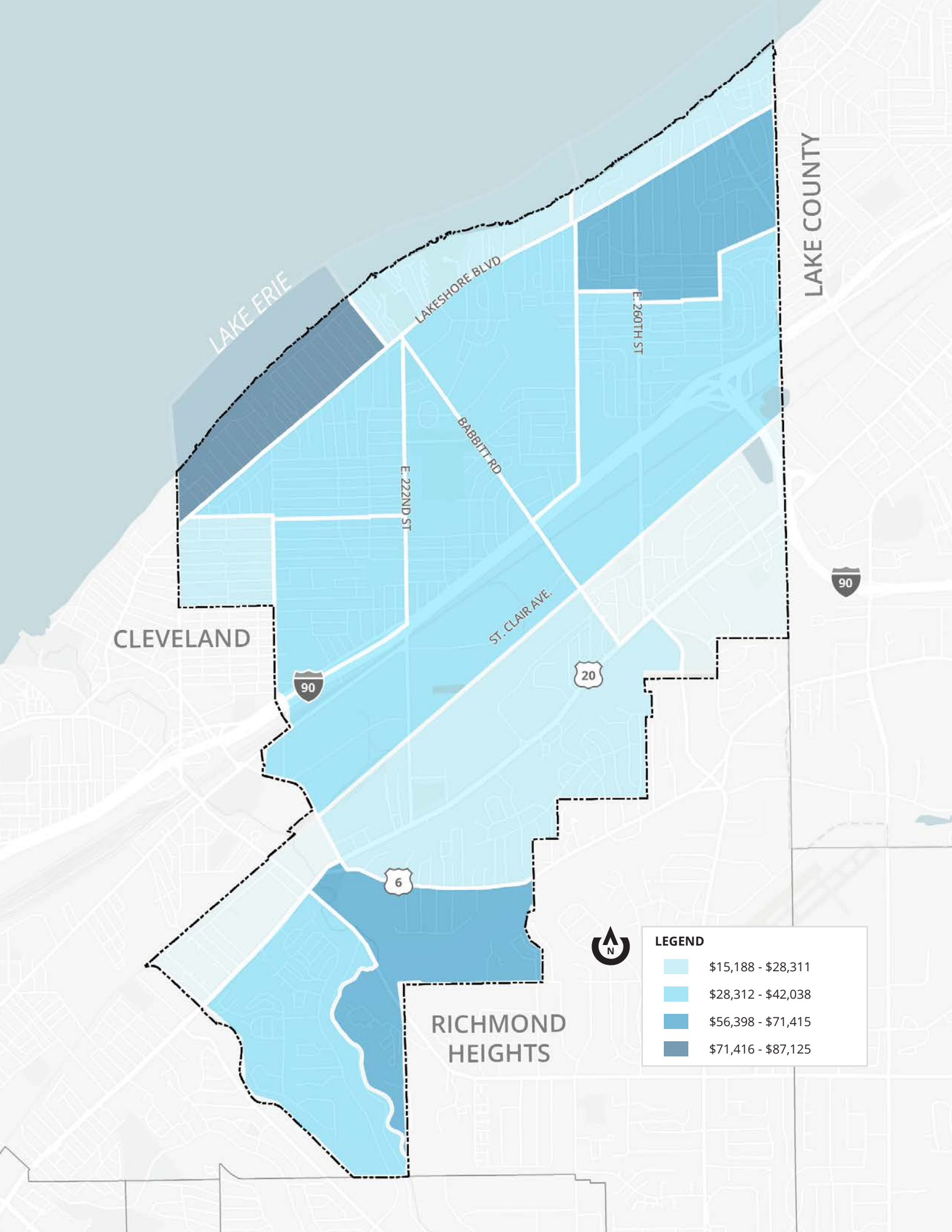
with a median household income of $40,342 per the 2022 Our Communities Data Book



Cuyahoga County *21.7% ($9,820) increase from 2016 to 2021*

Euclid *17% ($6,107) increase from 2016 to 2021*

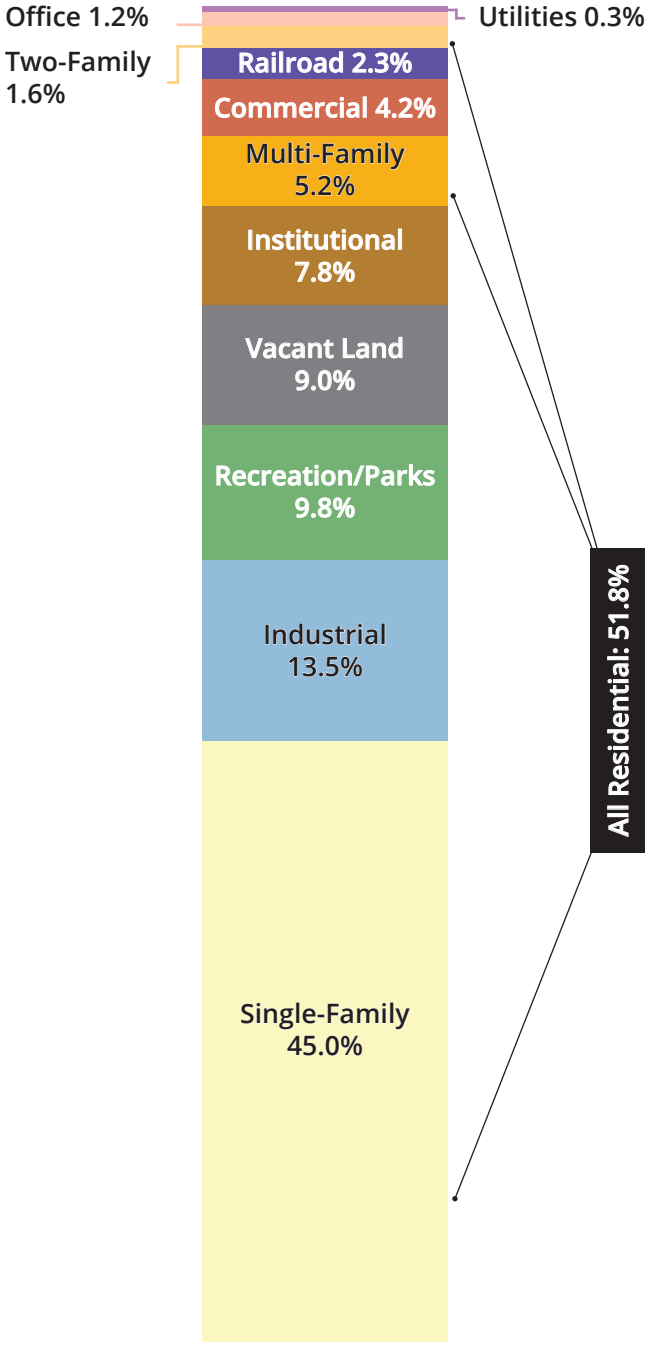
Source: 2011-2016 ACS 5-year Estimates, 2016-2020 ACS 5-year Estimates, 2017-2021 ACS 5-year Estimates; 2022 Our Communities Data Book, County Planning


LAKE ERIE
LAKESHORE BLVD
E. 260TH ST
LAKE COUNTY
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
90
20
90
6
RICHMOND HEIGHTS
N
LEGEND
$15,188 - $28,311
$28,312 - $42,038
$56,398 - $71,415
$71,416 - $87,125

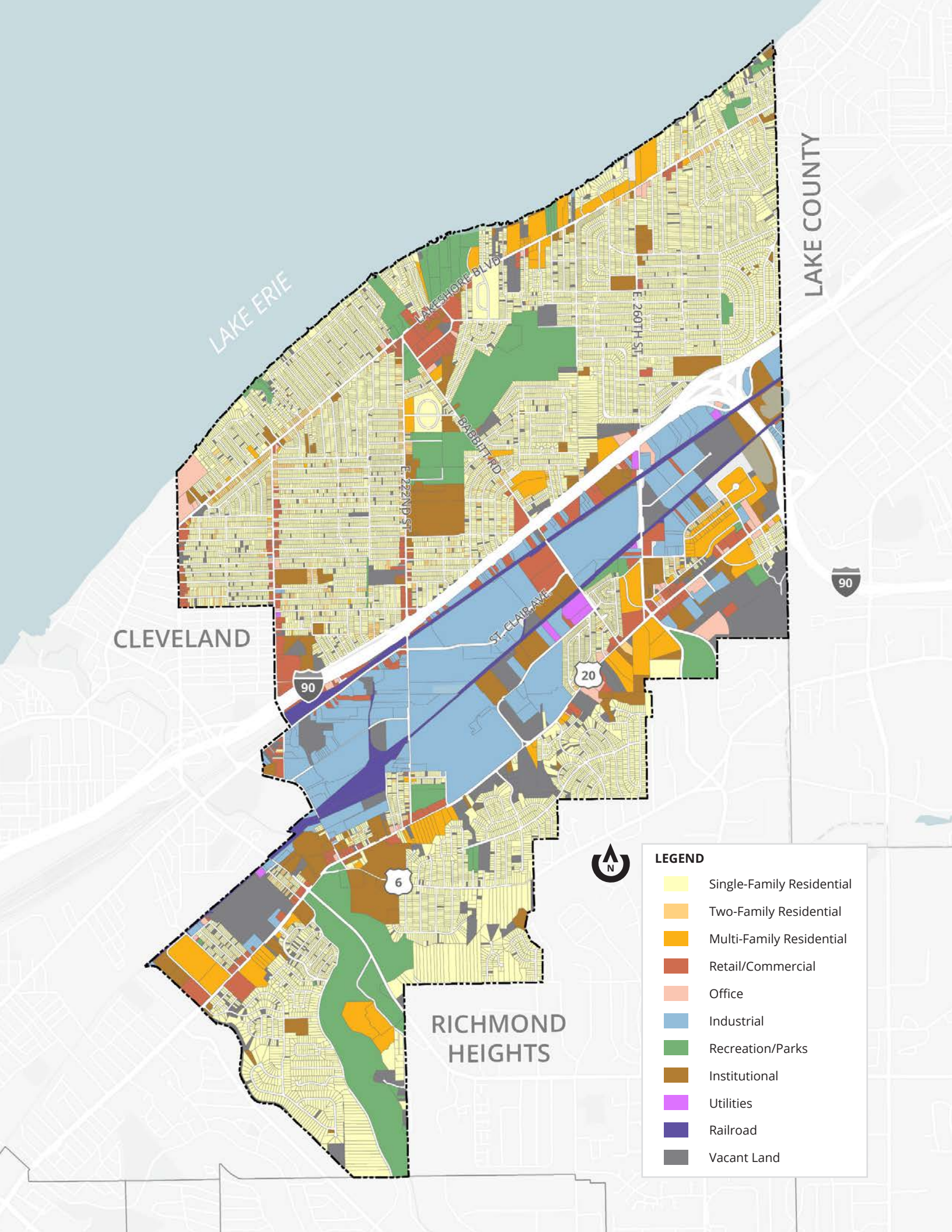
LAND USE

The City of Euclid comprises a total of 5,817 acres of land which have been categorized into 11 generalized land use types. Euclid's largest land use by a wide margin is Single-Family Residential, comprising 45.0% (2,621 Acres) of the city's area which are concentrated in neighborhoods in the north and south of the city. Euclid's next largest land use is industrial, comprising 13.5% (786 Acres) of the city's area. Industrial areas bisect the city, running between and parallel to I-90, St. Clair Avenue, and the CSX and Norfolk Southern rail roads, with some industry reaching as far south as Euclid Avenue. This industrial area, combined with I-90, creates a significant barrier separating Euclid's northern and southern neighborhoods.

Euclid's next largest land uses are Recreation/Parks (9.8%, 569 acres), Vacant Land (9.0%, 524 acres), Institutional (7.8%, 452 acres), and Multi-Family Residential (5.2%, 302 acres). Institutional areas are dispersed throughout the community, the largest of which is the civic center and high school between E. 222nd Street and Babbitt Road. Residential vacant lots are dispersed throughout Euclid's neighborhoods, however there are several larger vacant tracts within and adjacent to the industrial core along Euclid Avenue. The remaining 9.7% (564 acres) of land is comprised of five main land uses: 4.2% (247 acres) of land being used for Commercial; 2.3% (137 acres) for Railroads; 1.6% (94 acres) for Two-Family Residential; 1.2% (68 acres) for Office; and 0.3% (18 acres) for Utilities.



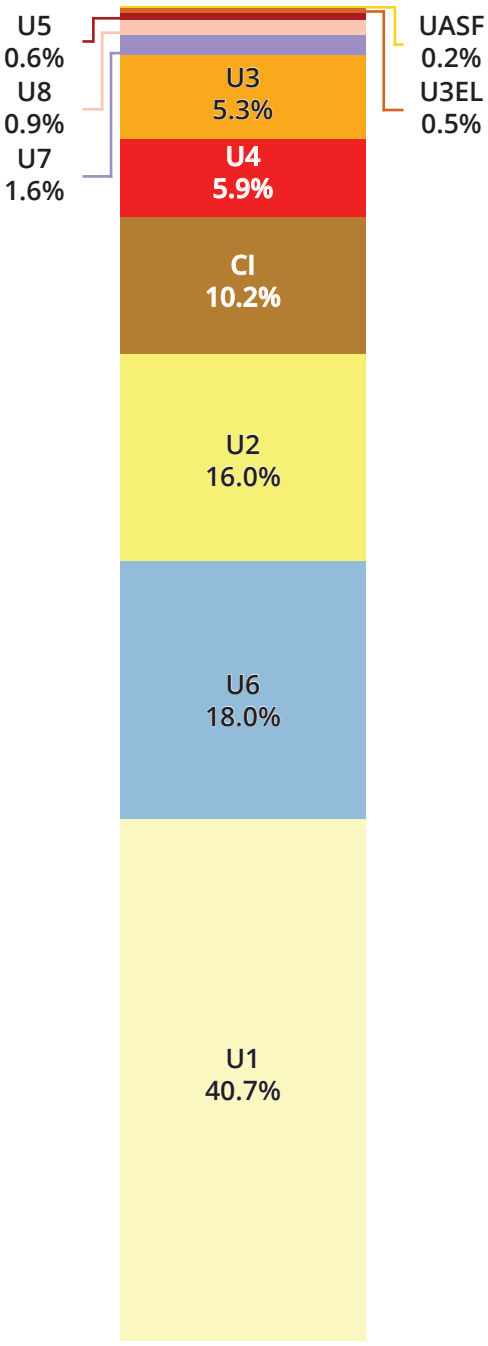
Source: County Planning; Cuyahoga County Fiscal Office, 2021


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST.
BABBITT RD
E. 222ND ST.
ST. CLAIR AVE
90
90
20
6
N
LEGEND
Single-Family Residential
Two-Family Residential
Multi-Family Residential
Retail/Commercial
Office
Industrial
Recreation/Parks
Institutional
Utilities
Railroad
Vacant Land

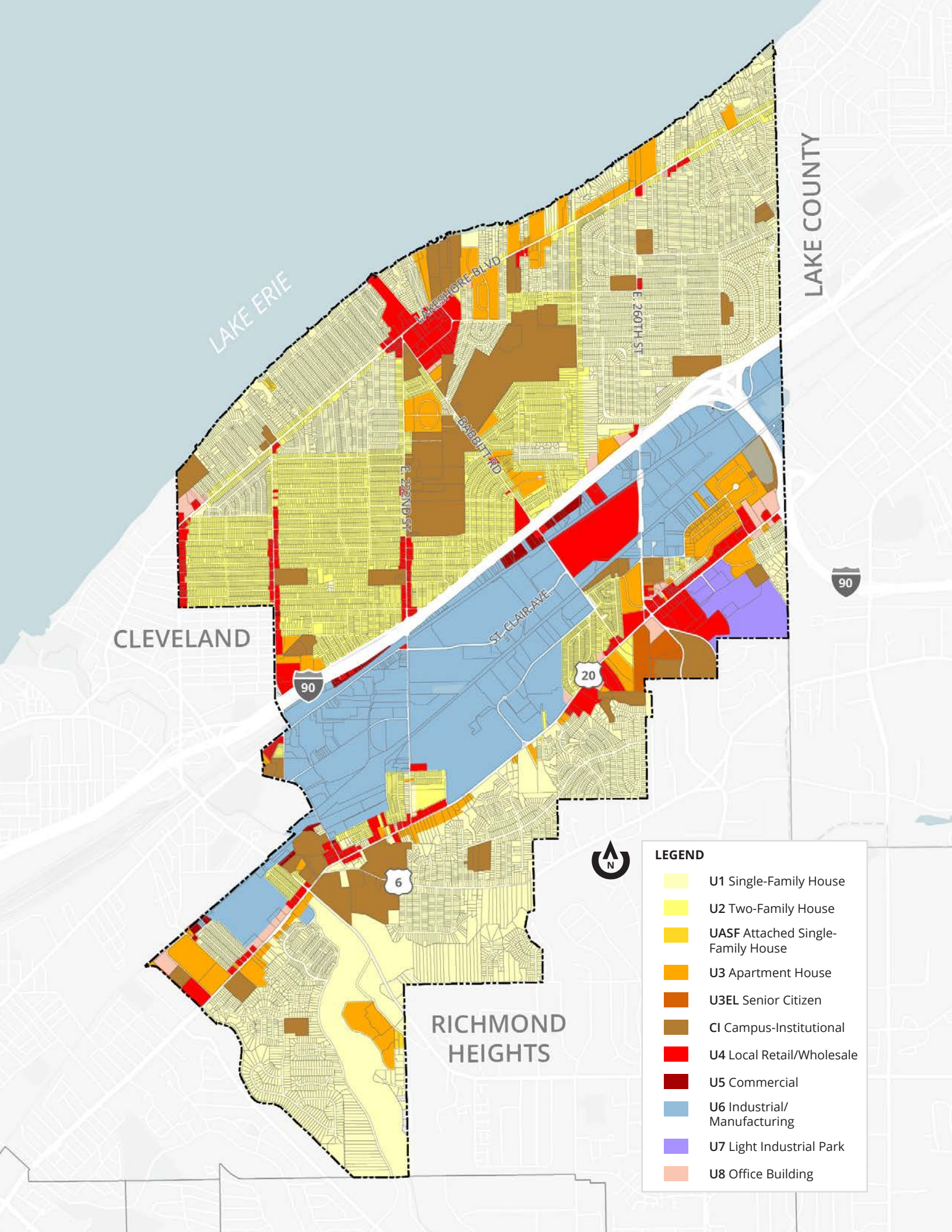
ZONING

The City of Euclid has an older zoning code, which includes many chapters dating as far back as 1922, before the landmark *Euclid vs. Ambler* (1926) Supreme Court Decision which upheld the constitutionality of zoning. The city is broken down into eleven use districts, three height districts, and four area districts. This larger volume of districts, coupled with the code's age can present additional complexity and limitations. Additionally, due to the age of the City's code, it lacks many modern zoning code provisions that can help facilitate active transportation such as mixed-uses, transit-oriented development, or bicycle parking amenities in retail zones. However, the city does have one Overlay District that seeks to promote vibrancy, mixed use, and an improved pedestrian environment in Downtown Euclid, but this overlay is limited to only the Downtown Area near the intersection of E. 222nd Street, Babbitt Road, and Lakeshore Boulevard.

Overall, Euclid's current zoning map coincides well with its overall land use map—with the general pattern of residential areas in the north and south being bisected by industrial areas along I-90 holding true. Euclid's single largest use district is U1 Single-Family House (40.7%), followed by U6 Industrial/ Manufacturing (18.0%), and U2 Two-Family House (16.0%). These three districts alone comprise nearly 75% of Euclid's land area. The majority of Euclid's U2 districts are concentrated in the City's northwest section, U6 districts bisecting the city along I-90, and U1 districts primarily located in the residential neighborhoods throughout the community.



Source: City of Euclid; County Planning


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST.
BABBITT RD
E. 222ND ST.
ST. CLAIR AVE.
90
90
20
6
N
LEGEND
U1 Single-Family House
U2 Two-Family House
UASF Attached Single-Family House
U3 Apartment House
U3EL Senior Citizen
CI Campus-Institutional
U4 Local Retail/Wholesale
U5 Commercial
U6 Industrial/ Manufacturing
U7 Light Industrial Park
U8 Office Building

COMMUNITY FACILITIES & AMENITIES

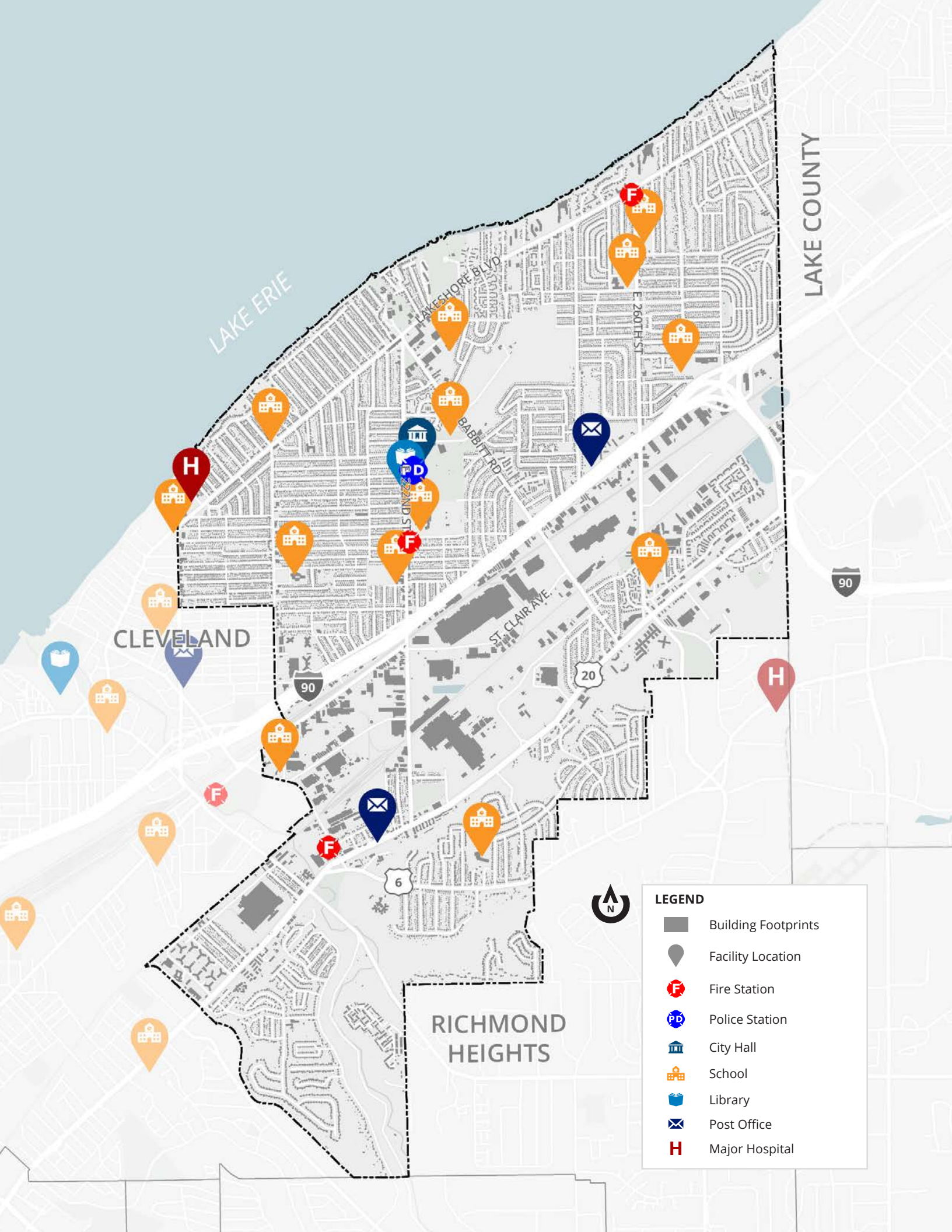
The City of Euclid has numerous community facilities and amenities that serve its residents. While these are spread out throughout the community, many are clustered in a civic center between E. 222nd Street and Babbitt Road—south of Downtown Euclid. The High School, Middle School, Memorial Park Elementary School, Euclid Public Library, and the Police and Fire Department headquarters are all located at this civic center, which is directly adjacent to Euclid Memorial Park. The City of Euclid also has two post offices and two additional fire stations.

The Euclid City School District educates approximately 5,000 students throughout its nine school buildings. The district includes the Early Learning Village, four neighborhood elementary schools (Arbor, Bluestone, Chardon Hills, and Shoreview), Euclid Middle School, Euclid High School, an educational options center, and a behavioral school. Euclid High School students also have access to 21 career technical programs through The Lake Shore Compact—a career technical consortium which serves the Euclid, Mentor, and Wickliffe school systems. Additionally, all of Euclid's public schools are housed in new or renovated facilities within the last 10 years.

In addition to public schools there are several private parochial school and charter school options. Our Lady of the Lake, located at Lakeshore Boulevard and E. 200th Street, and Ss. Robert and William, located on E. 260th Street, are two catholic elementary and middle school options. Additionally, Villa-Angela St. Joseph High School, located just across the Cleveland border on Lakeshore Boulevard, is also an option for older students.

In addition to numerous educational facilities, Euclid has one full service hospital within its borders, Cleveland Clinic-Euclid Hospital. This facility offers a complete continuum of care from emergency services and surgery, to outpatient rehabilitation and orthopedic care. Located on an adjacent property, the University Hospitals Euclid Health Center offers primary and specialty care services, as well as diagnostic radiology services. Both the hospital and medical center are located in the northwestern corner of the city, near E. 185th Street and Cleveland border.

Source: County Planning, Euclid City School District

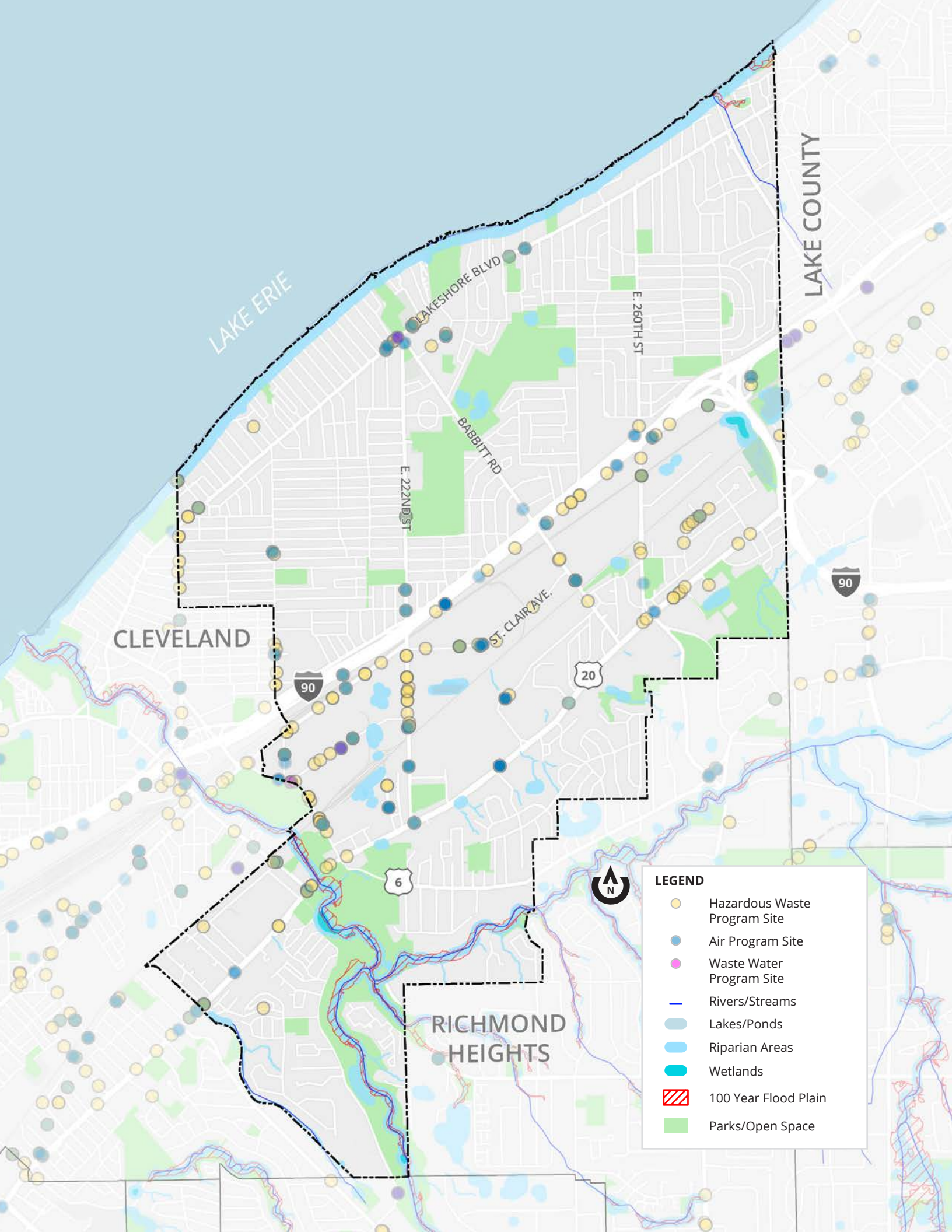

LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E 260TH ST
BABBITT RD
E 222ND ST
ST CLAIR AVE
CLEVELAND
RICHMOND HEIGHTS
90
20
6
N
LEGEND
Building Footprints
Facility Location
Fire Station
Police Station
City Hall
School
Library
Post Office
Major Hospital

ENVIRONMENTAL FEATURES & ISSUES

The City of Euclid has several critical environmental features within its boundaries—the most significant of which being Euclid Creek and its tributaries. This also includes FEMA designated flood plains. The majority of the land that falls within the 100-year flood plain in Euclid is located along Euclid Creek and its tributaries, most of which is located within the Cleveland Metroparks Euclid Creek Reservation in the southwestern portion of the community. Additionally, Euclid has several other small lakes, ponds, and subsequent riparian areas where natural flooding and overflow can occur. These features are mainly concentrated along the industrial corridor, as well as within the Briardale Greens Golf Course. The City of Euclid also has two wetlands in the National Wetlands Inventory, one of which is located within Euclid Creek Reservation, and the other is located near the border with Lake County and I90.

The United States Environmental Protection Agency (US EPA) has various programs that regulate and monitor different environmental issues and hazards. Shown in the map on the next page are facilities, sites, or other places subject to environmental regulations or environmental interest by the EPA. Many of these sites are concentrated within the industrial corridor, as well as the Downtown Euclid area near the intersection of E. 222nd Street, Babbitt Road, and Lakeshore Boulevard. In total, Euclid has 115 Air Program sites, 195 Hazardous Waste Program sites, and 5 Wastewater Program sites within its borders. However, some of these sites are regulated by several of these programs together. The location of these sites is significant, as these areas generally have large amounts of impervious surfaces and thus stormwater can accumulate pollutants as it runs through these areas into water bodies such as Euclid Creek, Lake Erie, and beyond.

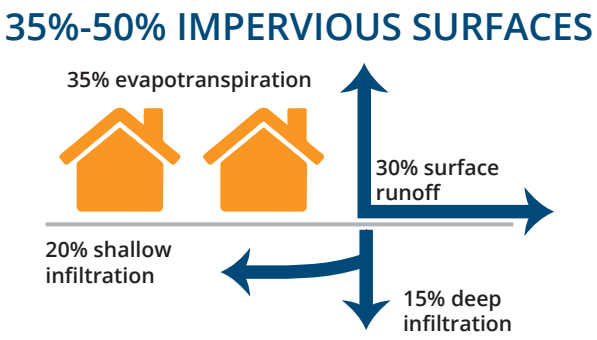
Source: County Planning, Greenprint Guidebook, Open Space Inventory; Cuyahoga County; Federal Emergency Management Agency (FEMA), National Flood Hazard Layer (NFHL); Ohio Environmental Protection Agency (EPA); Image: Cuyahoga County

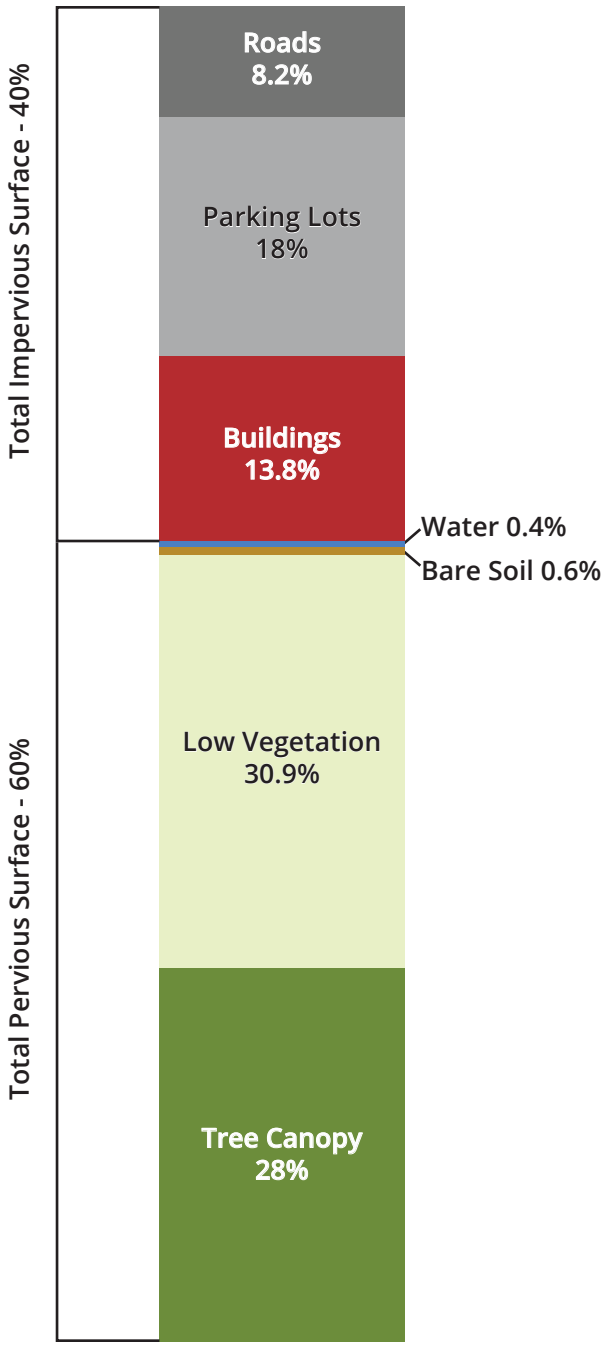

LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
90
20
6
N
LEGEND
Hazardous Waste Program Site
Air Program Site
Waste Water Program Site
Rivers/Streams
Lakes/Ponds
Riparian Areas
Wetlands
100 Year Flood Plain
Parks/Open Space

LAND COVER & IMPERVIOUS SURFACES

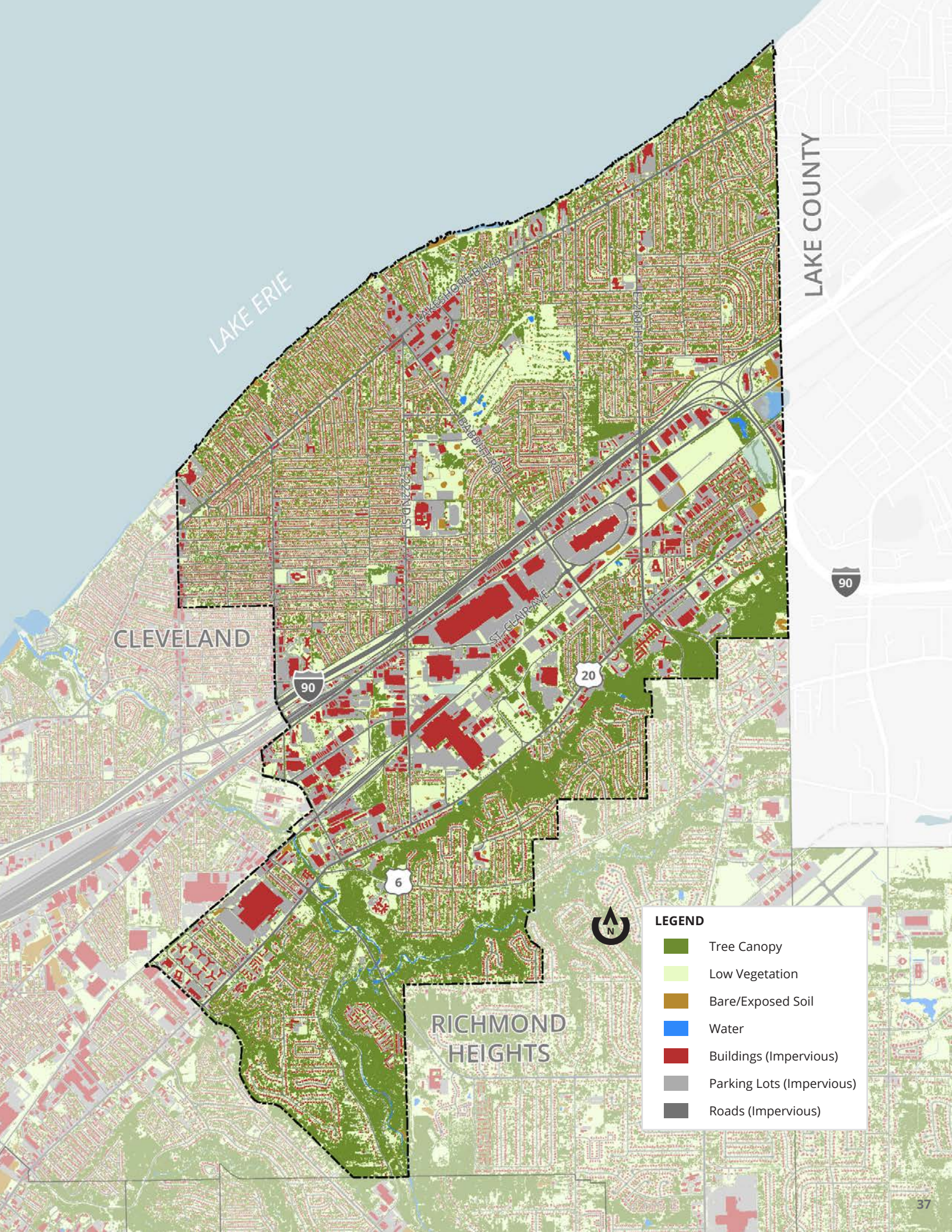
Impervious surfaces refer to hardscaped areas within a community which do not allow surface water to permeate into the ground. As impervious surfaces are added, less water can be absorbed naturally resulting in more stormwater runoff which can overwhelm storm sewers, adversely affect water quality, lead to increased erosion, and cause excess flooding, especially during heavy rain events. Currently, Euclid has the 14th highest impervious surface coverage out of Cuyahoga County's 59 individual municipalities.

In total, 40% of Euclid is covered by impervious surfaces (2,749 acres)—including buildings, roads, parking lots, and other similar paved surfaces. While the remaining 60% is covered by pervious or permeable surfaces (4,120 acres)—including grass, shrubs, low vegetation, tree canopy, bare soil, and surface water. According to the Federal Interagency Stream Restoration Working Group, 40% impervious surfaces indicate that during a heavy rain event around 35% of water will re-enter the atmosphere through evapotranspiration, 35% through infiltration, and 30% becomes surface runoff.





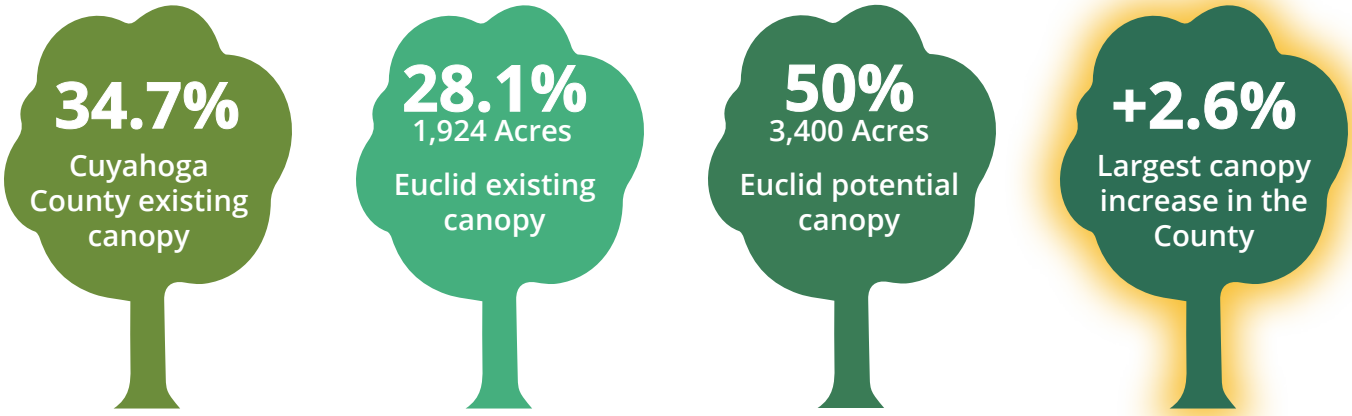
Source: "Stream Corridor Restoration: Principles, Processes, and Practices," pp. 3-23 Federal Interagency Stream Restoration Working Group; County Planning


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E 222ND ST
E 260TH ST
EASTBROOK RD
ST. CLAIR AVE
90
20
6
N
LEGEND
Tree Canopy
Low Vegetation
Bare/Exposed Soil
Water
Buildings (Impervious)
Parking Lots (Impervious)
Roads (Impervious)

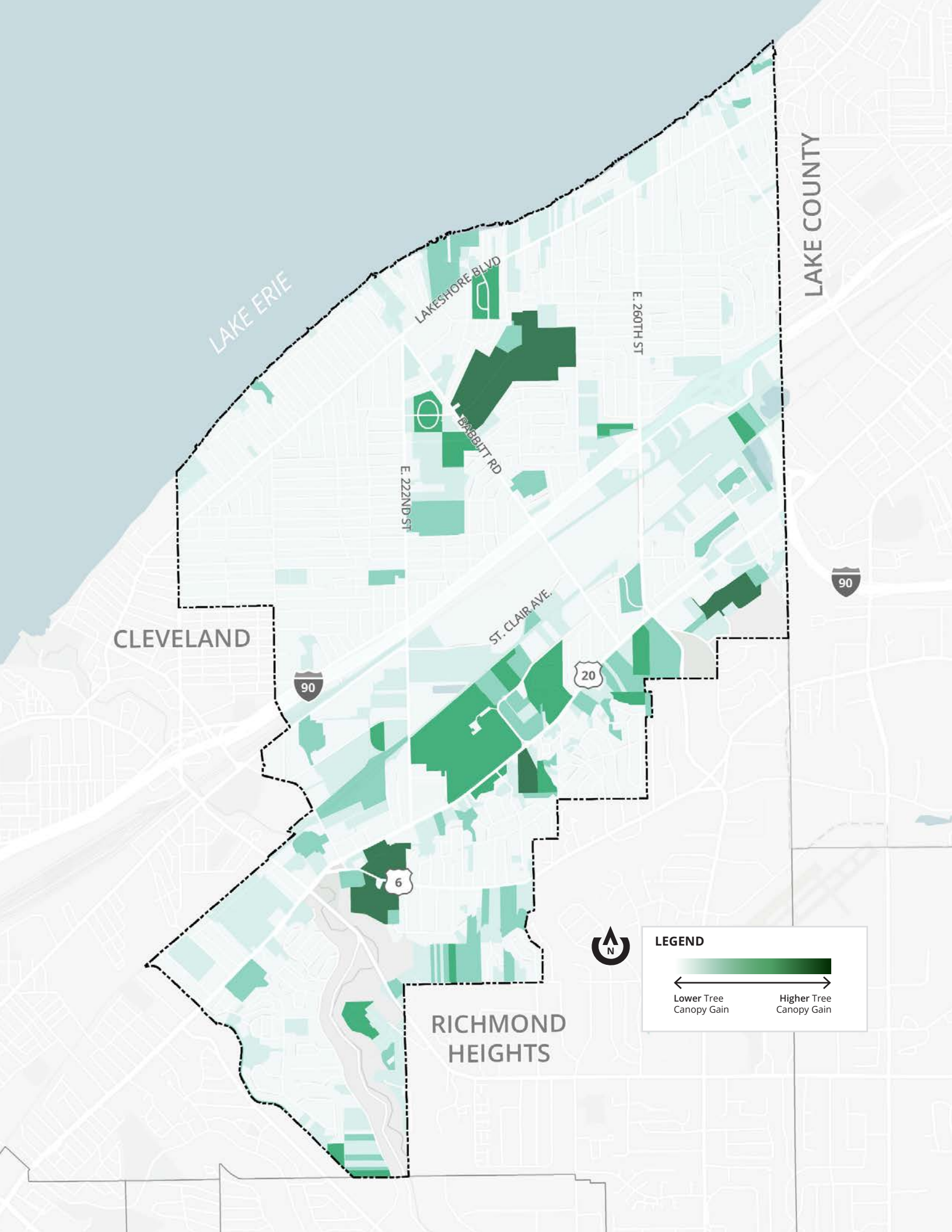
TREE CANOPY COVERAGE CHANGE

Trees have the ability to reduce the negative impacts of impervious surface by absorbing excess stormwater, reducing excess runoff, and mitigating the urban heat island effect through shade and evapotranspiration. The City of Euclid ranks 37th out of Cuyahoga County's 59 communities in terms of tree canopy coverage. When viewing the city from above, 28.1% or 1,924 acres of the city's land is covered by its tree canopy. While this is lower than the county-wide canopy coverage of 34.7%, it is higher than the inner ring suburb canopy coverage of 27.5%. Additionally, Euclid is one of five communities in Cuyahoga County that saw an increase in tree canopy coverage from 2011 to 2017—largely due to the work of the Euclid Shade Tree Commission. From 2011 to 2017, Euclid's tree canopy coverage increased by 48.2 acres or 2.6%, which is the highest percent increase of the five communities that saw canopy growth.

The map on the next page shows where the City of Euclid gained tree canopy coverage from 2011 to 2017. Within Euclid, this canopy growth is seen mainly in the industrial areas along St. Clair and Euclid Avenues, as well as Briardale Greens Golf Course, Sims Park, the Civic Center campus area, and areas directly abutting Cleveland Metroparks Euclid Creek Reservation. This canopy increase is significant as many of these areas, especially Euclid's industrial corridor, tend to have a large amount of paved impervious surfaces and small amounts of tree growth can have a much larger impact. In total Euclid still has the potential for 50% of its land area to be covered by its tree canopy, and the city is making progress to get there.



Source: County Planning, Urban Tree Canopy (UTC) Assessment, 2019


LAKE ERIE
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BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
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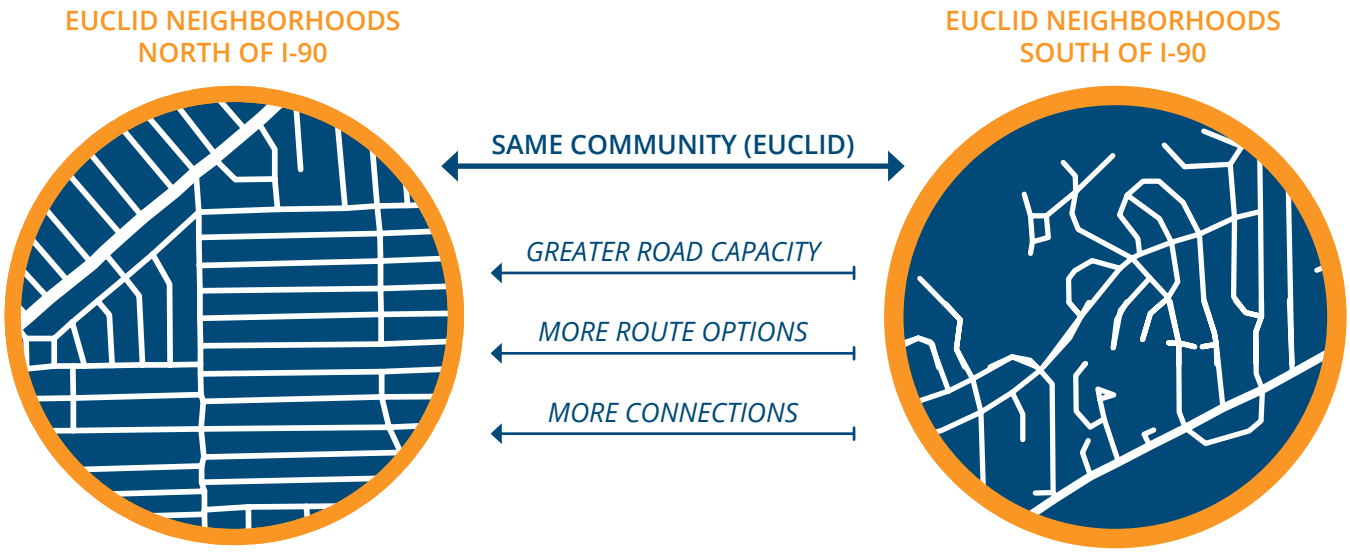
LEGEND
Lower Tree Canopy Gain
Higher Tree Canopy Gain

2.2 TRANSPORTATION NETWORK ANALYSIS

The City of Euclid is a largely built-out community that has been developed over many decades—including its road network. As personal preferences shift, new best practices are accepted, and development patterns change, so too does the pattern, accessibility, and connectivity of a community's streets. A well-connected trail or road network is one that provides many short linkages with numerous intersections and limited dead-end streets or cul-de-sacs. A safe, reliable, and seamless network of roads has numerous benefits:

- Fewer vehicles miles traveled by drivers
- Reduced travel times
- Improved emergency vehicle access
- More efficient public service access
- Improved bicycle and pedestrian routes
- Increased opportunities for mode sharing
- Overall safer roads for everyone

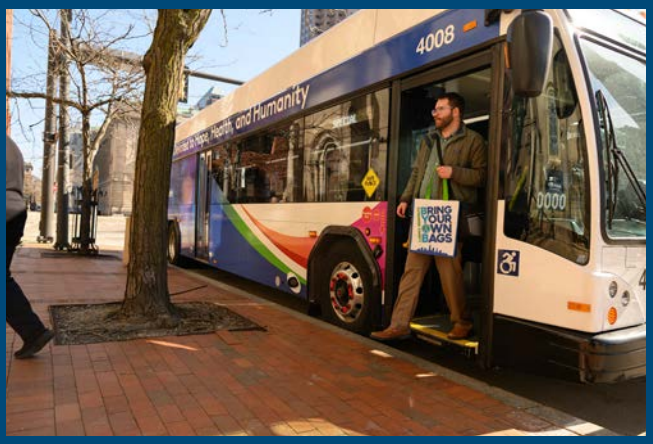
As seen in the images below, the City of Euclid has a wide spectrum of street patterns within its existing road network. In general, older neighborhoods located north of I-90 are organized in linear patterns with an elongated grid network of streets—making these areas more accessible. However, more recent residential developments in the southern portion of the community have curvilinear road networks with numerous dead ends and cul-de-sacs—which break up neighborhoods and can greatly impact non-motorized connectivity. These areas are especially challenging for bicyclists and pedestrians because they lack clear, direct access to main roadways and also increase travel times—often deterring residents from choosing walking or biking as a convenient transportation option.



WHY IS CONNECTIVITY IMPORTANT?

Connectivity refers to a continuous, unobstructed, reasonably direct network that is intended for non-motorized transportation. A seamless network of roads and/or trails are important components to the built environment. This is because the built environment, such as roads and buildings, ultimately dictate how people travel, where they travel, and how long it takes them to reach their destinations—greatly impacting the decisions people make on a daily basis regarding their mode of transportation.

Throughout history, road networks have become less and less accessible—shifting from pedestrian focused linear streets to automobile dominated, curvilinear streets. From 2010 to 2019, bicycle fatalities have increased 49% in urban areas, while pedestrian fatalities have increased by 62% during that same time period. Whether you drive a car, use public transportation, or ride a bike, at some point everyone becomes a pedestrian. It is important to consider the needs and safety of all users—both current and future—and plan roads and development accordingly.



ROADWAY DESIGNS THROUGHOUT HISTORY

TRADITIONAL GRID DESIGN
(PRE-1900)

CURVILINEAR LOOP DESIGN
(1930 - 1950)

BEGINNING OF CUL-DE-SAC
(1930 - 1950)

CONVENTIONAL CUL-DE-SAC
(1950 - TODAY)

Source: NCSA, 2021; Images: Cuyahoga County

INTERSECTION DENSITY

The City of Euclid is largely divided by I-90—which creates a unique barrier to safer connections and accessibility. With such a large obstacle, the community is divided into two very different road network configurations. Neighborhoods located north of I-90 tend to have linear street patterns with shorter block lengths and relatively flat terrain, while its neighborhood counterparts south of I-90 tend to have more cul-de-sacs, fewer intersections, longer distances to travel before accessing a main roadway, and more significant grade changes. This could potentially pose a significant challenge and limit mobility options for residents in these areas.

Intersection density is another measurement tool for better understanding the built environment, roadway efficiency, and connectivity—all of which impact walkability and bikeability. According to the Congress for New Urbanism (CNU), the standard for network density is 150 intersections per square mile. This number focuses on creating shorter blocks, which ultimately make roadway networks more densely compact to improve connectivity.

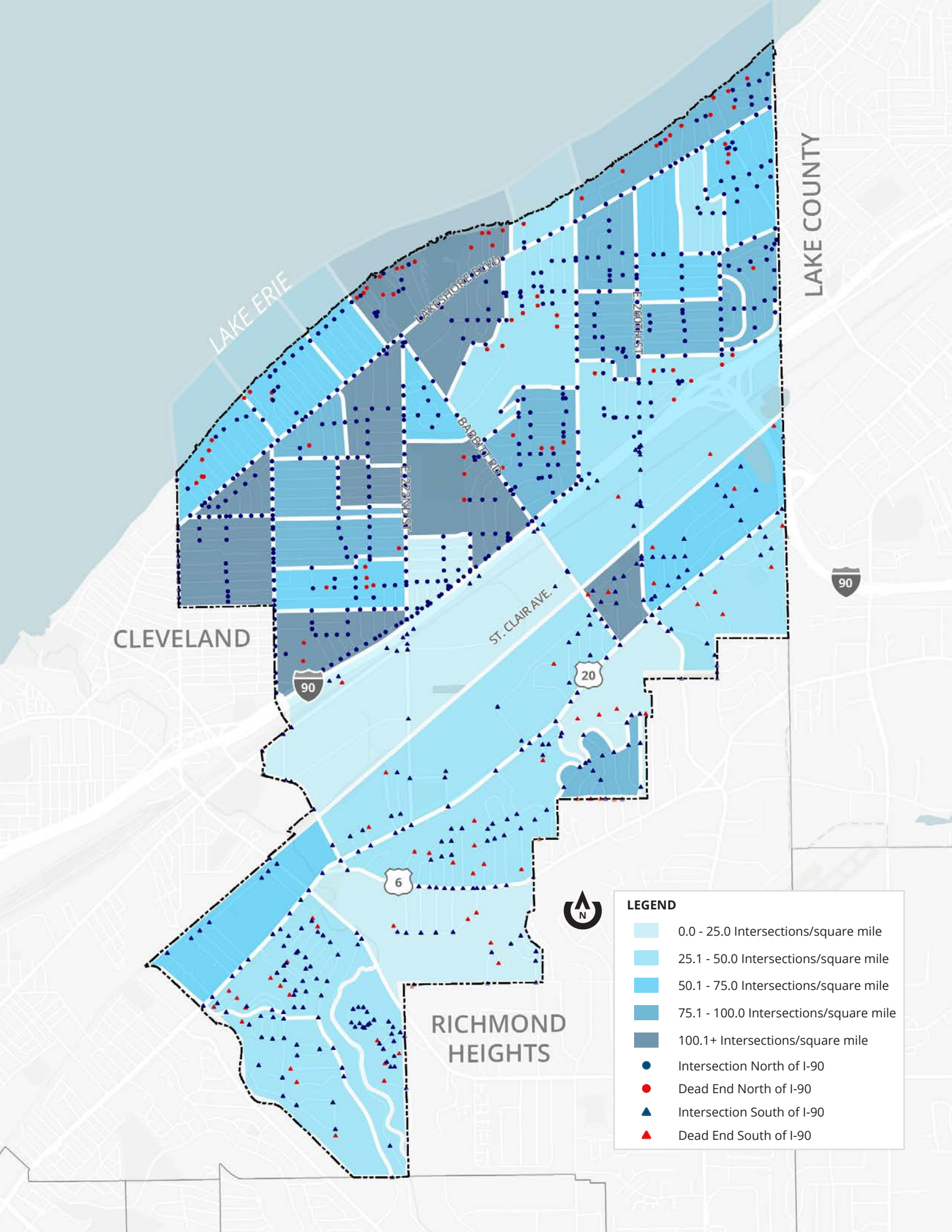
As seen in the map on the next page the U.S. EPA also calculates a number of walkability and intersection density indicators—which take into account auto-oriented, multi-modal, and pedestrian-oriented facilities for each Census Block Group within the community. Within the City of Euclid, the areas with the most intersections, and thus more walkable, are largely bound by Lakeshore Boulevard to the north, Babbitt Road to the east, I-90 to the south, and the City of Cleveland boundary to the west. These neighborhoods in particular have among the highest intersection densities within the entire community—making them the most accessible and walkable areas in Euclid.

In general, areas in Euclid north of I-90 have a significantly higher intersection density than areas south of I-90. Areas north of I-90 average 216 intersections per square mile, while areas south of I-90 average 96 intersections per square mile. This indicates that areas north of I-90 have a more compact roadway network and are better connected than areas south of I-90.

NORTH OF I-90	SOUTH OF I-90
TOTAL LINKS:* *919*	**TOTAL LINKS:*** *463*
TOTAL INTERSECTIONS: *1,089*	**TOTAL INTERSECTIONS:** *564*
TOTAL DEAD END STREETS: *72*	**TOTAL DEAD END STREETS:** *64*

**Links refers to the length of roadway found between two intersections.*

Source: County Planning; U.S. Environmental Protection Agency (US EPA)


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST.
BABBITT RD.
E. 222ND ST.
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
90
20
6
N
LEGEND
0.0 - 25.0 Intersections/square mile
25.1 - 50.0 Intersections/square mile
50.1 - 75.0 Intersections/square mile
75.1 - 100.0 Intersections/square mile
100.1+ Intersections/square mile
Intersection North of I-90
Dead End North of I-90
Intersection South of I-90
Dead End South of I-90

SIDEWALK CONNECTIONS

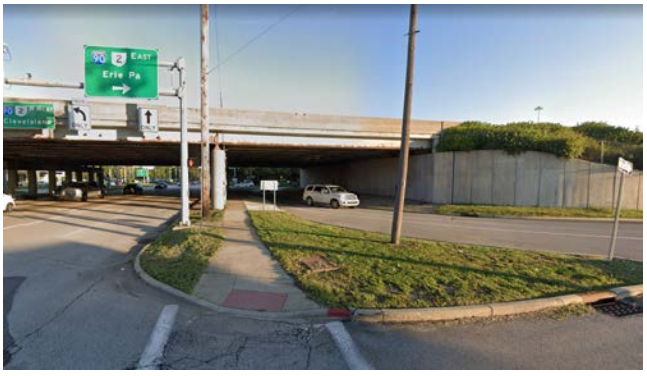
The City of Euclid has approximately 159 linear miles of paved roads—of which 113 miles or 71.1% have sidewalks on both sides of the street. However, there are a number of minor roadways and some local streets that only have sidewalks on one side or none entirely. Many of these are concentrated in the industrial corridor, which bisects the city along I-90, as well as some parts of the southern portion of the community in the Indian Hills Neighborhood east of Cleveland Metroparks Euclid Creek Reservation. Additionally, Lakeland Boulevard, the marginal road that runs parallel to I-90, only has sidewalks on one side and at times no sidewalks. There are also gaps in the sidewalk network along a portion of St. Clair Avenue, which has no sidewalks just west of Babbitt Road. These areas in particular are major job hubs within the City of Euclid and have a number of bus routes that transport workers to their employment destinations. Lacking important pieces of infrastructure on key roadways, such as sidewalks, can make arriving to work on time a daily challenge in some cases.

Lastly, while three of the city's main north-south thoroughfares—E. 222nd Street, Babbitt Road, and E. 260th Street—do have a complete sidewalk network on both sides of the street, the pedestrian experience is challenging. These corridors and sidewalks traverse the city's large industrial area and pass under I-90. The sidewalks that are present often run directly against the roadway, under train tracks, or force pedestrians to travel on small islands with few buffers between the I-90 off ramps and the roads themselves. These underpasses are dimly lit, and unkempt with significant amount of debris, standing water, and sediment present, making them feel unsafe and further discouraging pedestrians and cyclists from crossing in these areas.

"Providing walkways for pedestrians dramatically increases how well pedestrians perceive their needs are being met along roadways.

The wider the separation between the pedestrian and the roadway is, the more comfortable the pedestrian facility."

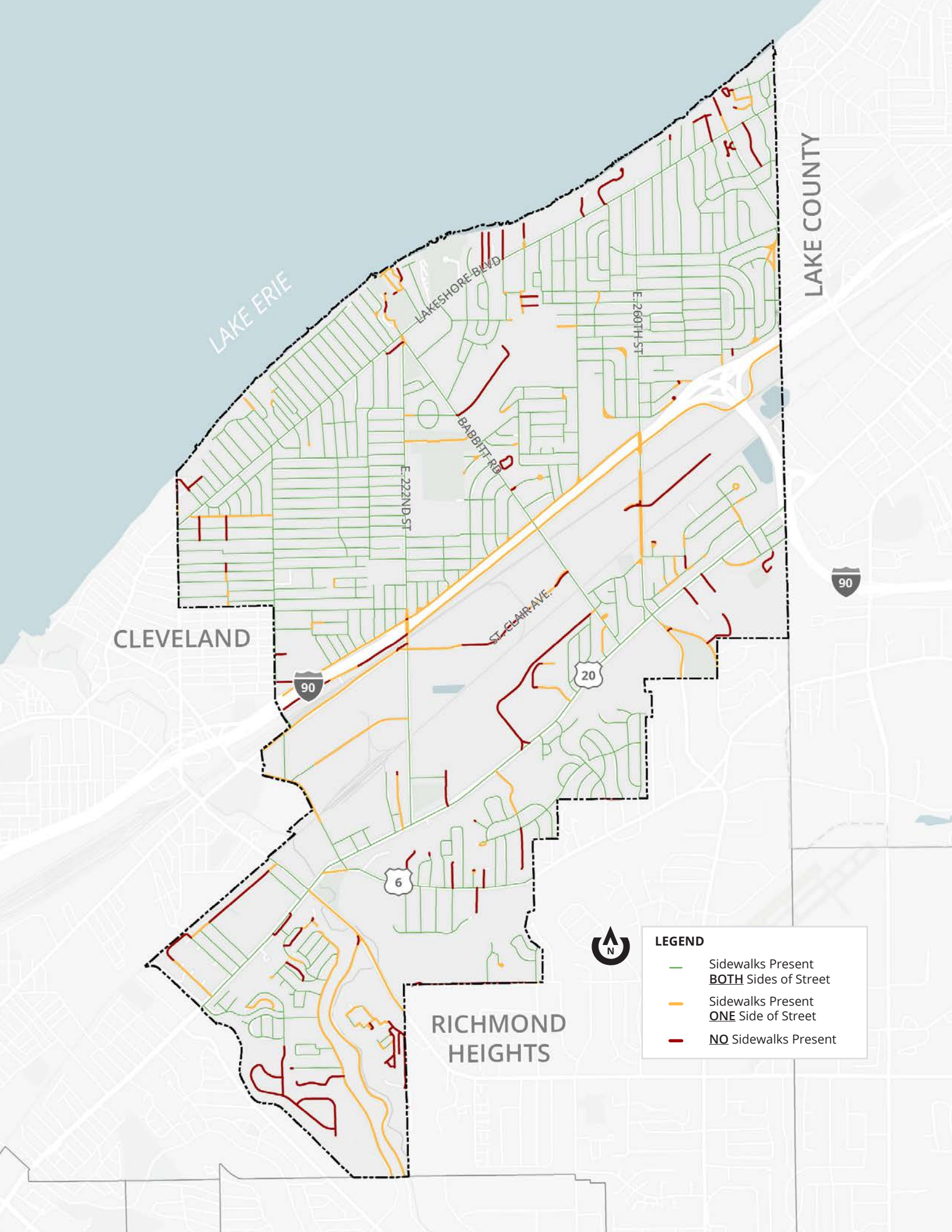
Federal Highway Administration
FHWA Safety Program, Benefits of Sidewalks



Many of the I-90 underpasses are stressful, uncomfortable, and potential safety hazards for pedestrians and bicyclists.

View: Lakeland Boulevard and Babbitt Road (looking north)

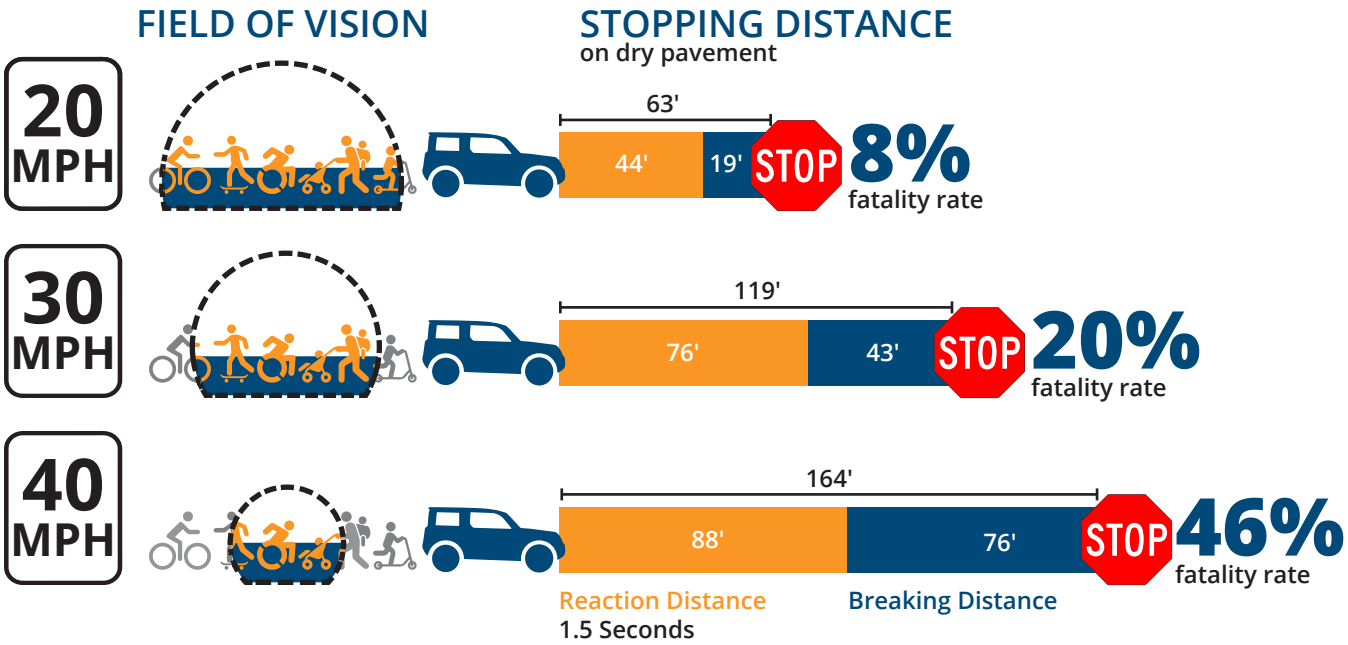
Source: County Planning; Federal Highway Administration; Google Maps


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
90
20
6
N
LEGEND
Sidewalks Present BOTH Sides of Street
Sidewalks Present ONE Side of Street
NO Sidewalks Present

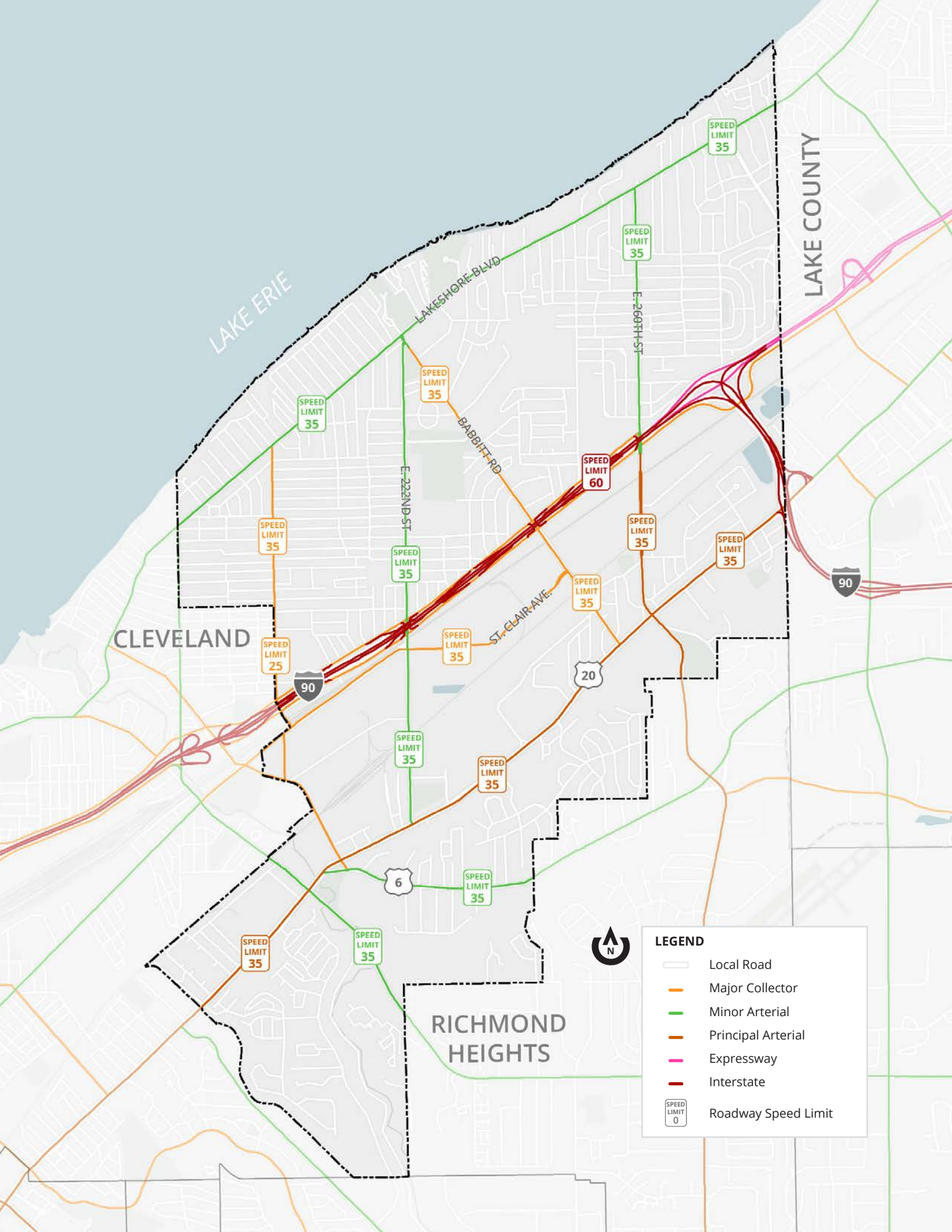
ROADWAY TYPOLOGIES & SPEED LIMITS

Euclid's roadways can be grouped into functional classes based on the type of service they provide and the characteristics they have. The Northeast Ohio Areawide Coordinating Agency (NOACA) classifies roads into seven functional classes, which are used as a management tool in transportation planning. The highest two functional classes, interstates and expressways, are present in Euclid—including I-90 and Lakeland Freeway. The next three functional classes include principal arterials, minor arterials, and major collectors. These roads are designed to connect local streets and residents to higher capacity interstates and expressways. Generally, collectors connect local streets—the lowest functional class—to arterials, which then connect to interstates and expressways.

Among Euclid's arterial and collector roads, the primary north-south connectors include E. 185th Street, Highland Road, E. 200th Street, E. 220th Street, Babbitt Road, and E. 260th Street—which all have a posted speed limit of 35 mph. Euclid's primary east-west connectors—Lakeshore Boulevard, St. Clair Avenue, Euclid Avenue, and Chardon Rd—also have a posted speed limit of 35 mph. Posted speed limits may differ from motorist's actual speed, but a motorist's speed is an important factor when planning for active transportation and pedestrian safety. As a car increases in speed, the driver's field of vision becomes smaller, it takes longer for the car to stop, and the chance of a pedestrian death if a crash were to occur increases.



Source: Northeast Ohio Areawide Coordinating Agency (NOACA), Functional Class, 2022, AAA Foundation, Tefft, B.C. (2011), National Highway Traffic Safety Administration (2015), NACTO Urban Street Design Guide (2013)


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E 260TH ST
E 222ND ST
BABBITT RD
ST CLAIR AVE
SPEED LIMIT 35
SPEED LIMIT 60
SPEED LIMIT 25
90
20
6
LEGEND
Local Road
Major Collector
Minor Arterial
Principal Arterial
Expressway
Interstate
Roadway Speed Limit

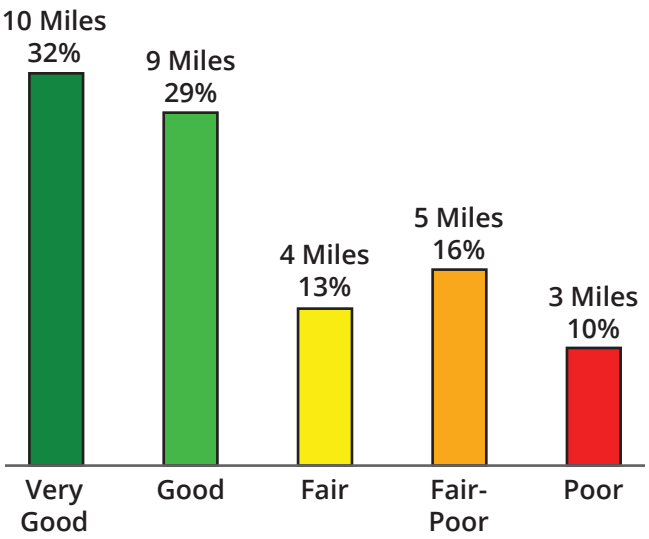
PAVEMENT CONDITION RATINGS (PCR)

Pavement Condition Rating (PCR) is an assessment tool based on the visual inspection of pavement distress that considers the various types, levels of severity, and extent of problems found on the road's surface. PCR ratings help with the prioritization of infrastructure improvements and the allocation of repair and rehabilitation funds. However, the PCR rating system can be subjective and is beginning to be phased out and replaced by more modern pavement rating methodology.

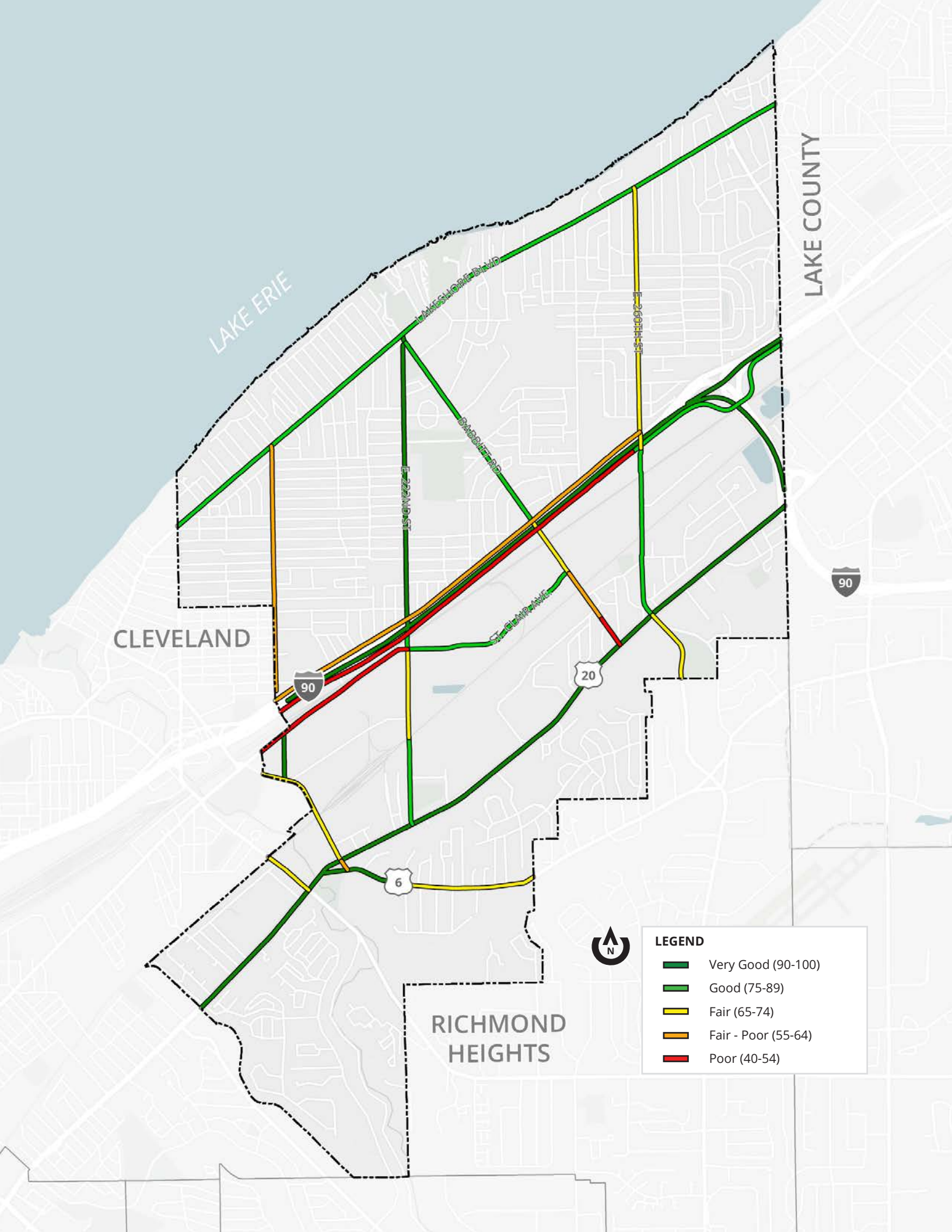
In general, most of Euclid's collectors, arterials, freeways, and interstates are rated Very Good (10 miles, 32%) and Good (9 miles 29%). However, 4 miles (13%) are rated Fair, 5 miles (16%) are rated Fair-Poor, and 3 miles (10%) are rated Poor—indicating that ongoing roadway maintenance still needs to be addressed in some areas. There is one key roadway within the community that is in need of the most attention and repairs—Lakeland Boulevard, the marginal road system that runs parallel to I-90, has a Fair-Poor rating on the north side of I-90 and a Poor rating the south side. This corridor in particular is ranks among the lowest in terms of PCR in the community.

Similarly, two of the city's most prominent east-west routes, Euclid Avenue and Lakeshore Boulevard, have ratings of Very Good and Good respectively. However, another key east-west route, St. Clair Avenue, has a Poor rating west of E. 220th Street. Additionally, of the City's key north-south routes, only a small portion of Babbitt Road near its intersection with Euclid Avenue has a Poor rating, however all of E. 200th Street north of I-90 has a Fair-Poor rating.

Overall, of the roadways that were classified as part of this analysis within the City of Euclid, 61.3% were classified as having Very Good or Good PCR ratings—indicating an opportunity to target improvements within critical areas of the community.



Source: Northeast Ohio Areawide Coordinating Agency (NOACA), Pavement Condition Rating (PCR), 2023


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E 260TH ST
E 222ND ST
SHAKER BLVD
ST. CLAIR AVE
CLEVELAND
RICHMOND HEIGHTS
90
20
6
N
LEGEND
Very Good (90-100)
Good (75-89)
Fair (65-74)
Fair - Poor (55-64)
Poor (40-54)

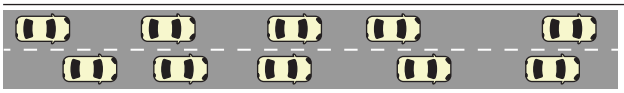
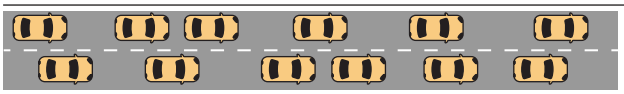
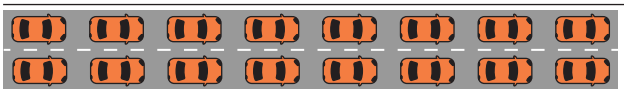
LEVEL OF SERVICE (LOS)

Level of Service (LOS) refers to the overall quality of motor vehicle travel on roadways, as it relates to factors such as vehicle speed and congestion. It is used as a measurement to understand how efficiently vehicular traffic moves along a road. However, LOS ratings only take into account vehicle delays and do not address other modes of transportation, such as bicycling, walking, and public transportation. If a road has a perfect LOS rating, it does not mean that it is accommodating and friendly to all users, just that motorized traffic moves mores quickly and freely.

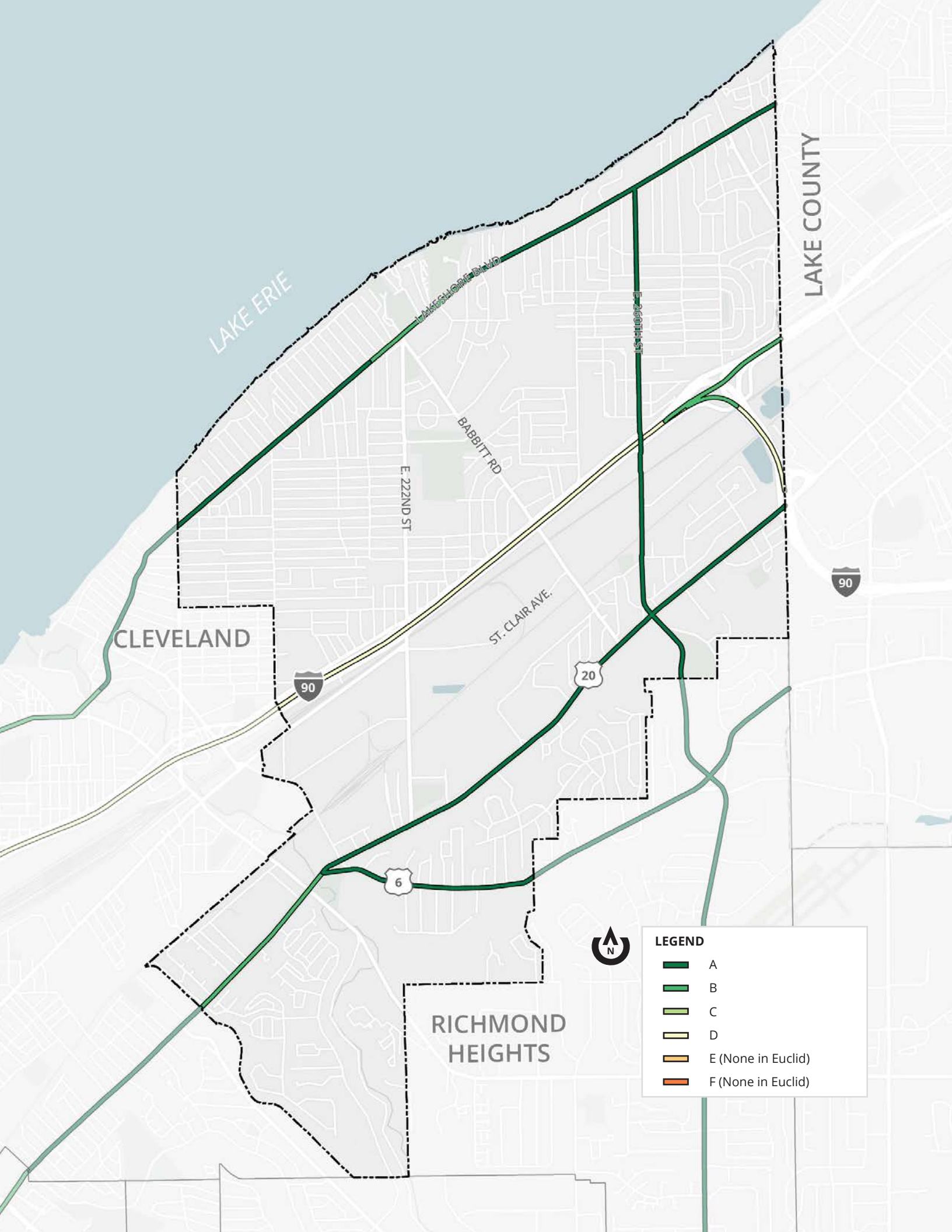
Within Euclid the majority of all non-highway arterials—Lakeshore Boulevard, E. 260th Street, Chardon Road, and Euclid Avenue— are rated with a LOS of A. However, a portion of Euclid Avenue west of the intersection with Chardon Road, and a portion of Lakeshore Boulevard near the downtown area are with rated a LOS of B. This indicates a good to excellent flow of vehicle traffic on Euclid's main arterial streets. Euclid's lower LOS ratings of C and D, which indicate that traffic is not free-flowing, are only seen on I-90 and the Lakeland Freeway. These roads generally have higher speeds with limited access to through routes.

The majority of Euclid's non-highway main corridors having high LOS ratings can indicate that some roadways are oversized for the community. This presents an opportunity for future streetscape and infrastructure improvements to address Euclid's active transportation goals, and support other modes of transportation in the process.

LEVEL OF SERVICE (LOS) RATINGS

	**LOS A**	**Free Flow Traffic:** choice of speed and ability for vehicles to maneuver freely is unaffected.
	**LOS B**	**Steady Traffic:** presence of other vehicles begins to impact driver behaviors and maneuverability is somewhat decreased.
	**LOS C**	**Steady Traffic but Limited:** presence of other vehicles affects driver behaviors and choice of speed and maneuverability requires vigilance.
	**LOS D**	**Steady Traffic at High-Density:** speed and maneuverability are severely reduced, and collisions with other vehicles must be constantly avoided.
	**LOS E**	**Traffic at Saturation:** speed is slow, but consistent with other vehicles and maneuverability is only possible under pressure from another vehicle.
	**LOS F**	**Congestion:** speed is unstable with cycles of waiting lines and a high level of vigilance is required; making users uncomfortable.

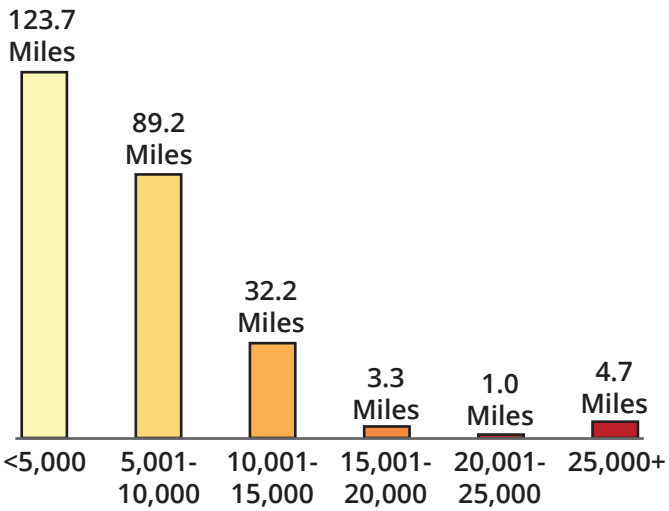
Source: ODOT Transportation Information Mapping System (TIMS), Road Inventory, 2022; County Planning; The Geography of Transport Systems, Levels of Service for Road Transportation


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
20
6
90
N
LEGEND
A
B
C
D
E (None in Euclid)
F (None in Euclid)

AVERAGE DAILY TRAFFIC (ADT)

Average Daily Traffic (ADT) refers to the average count of motor vehicles in a specified area, such as roads or intersections. In general, wider roadways with an ADT between 15,000 and 20,000 tend to have excess capacity and provide opportunities for potential infrastructure improvements such as Road Diets. A Road Diet seeks to reduce or reconfigure a road within it's existing right of way to improve roadway performance and support multi-modal or active transportation improvements. These can include all-purpose trails, bike lanes, larger pedestrian areas, and streetscape elements.

Within Euclid, Lakeshore Boulevard between E. 200th Street and E. 260th Street, and E. 260th Street south of I-90 are in the 15,000 to 20,000 ADT range—potentially making them strong candidates for Road Diet improvements. Additionally, Babbitt Road, Euclid Avenue, and Dille Road all share similar physical characteristics and have an ADT just under 15,000. This also indicates that roadway usage is lower than what the existing infrastructure could potentially support. These corridors in particular are potential candidates for additional traffic calming and intersection section interventions to better align existing infrastructure with roadway usage and demand, and strengthen active transportation connections.

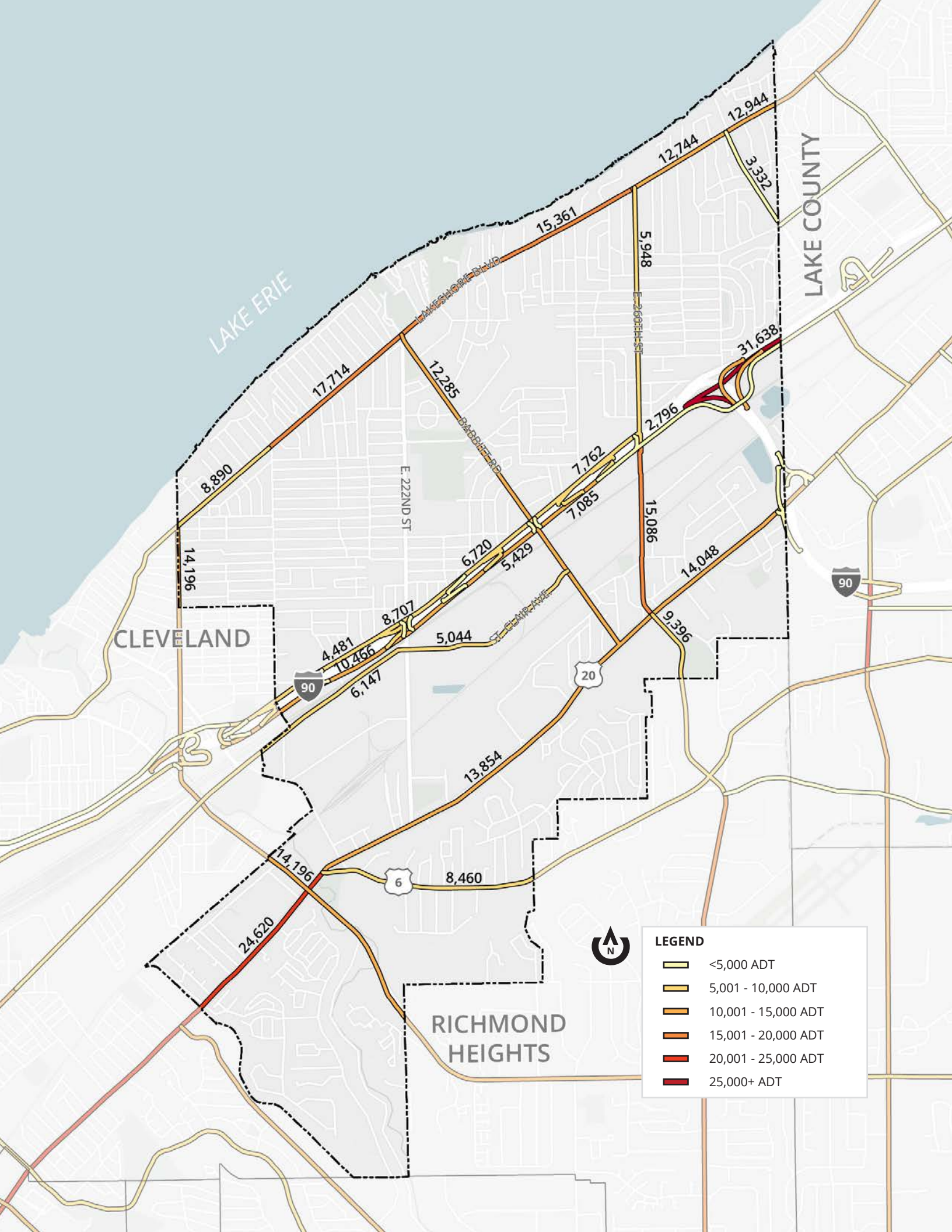


This analysis included highway ADT numbers, and roadway length totals in miles may be larger than numbers discussed in previous sections.

ROAD DIET TRAFFIC VOLUME CONSIDERATIONS

IDEAL	GOOD		UNFAVORABLE
LESS THAN 10,000 ADT Capacity should not be affected	**10,000-15,000 ADT** Intersection analysis and signal re-timing may be needed	**15,000-20,000 ADT** Corridor analysis is necessary to consider key intersection and other turn lanes	**20,000+ ADT** Feasibility study should be conducted to determine applicability

Source: ODOT Transportation Information Mapping System (TIMS), Road Inventory, 2022


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST
E. 222ND ST
BARKLEY RD
ST. CLAIR AVE
90
20
6
12,944
12,744
3,332
15,361
5,948
31,638
17,714
12,285
2,796
8,890
7,762
7,085
15,086
14,196
6,720
5,429
14,048
8,707
5,044
4,481
10,466
6,147
9,396
13,854
14,196
8,460
24,620
N
LEGEND
<5,000 ADT
5,001 - 10,000 ADT
10,001 - 15,000 ADT
15,001 - 20,000 ADT
20,001 - 25,000 ADT
25,000+ ADT

NUMBER OF TRAVEL LANES

The number of travel lanes, and consequently pavement and lanes widths, can impact the overall safety of roadways. According to the Federal Highway Administration (FHWA), four-lane, undivided roads have among the highest crash rates. For roads where collisions and speeding are common, or in sensitive areas near schools, parks, and residential neighborhoods, lane reductions provide significant benefits—including an overall crash reduction rate of 19% to 47%. They also experience a reduction in the likelihood of rear-end and left-turn crashes with the addition of a dedicated left-turn lane.

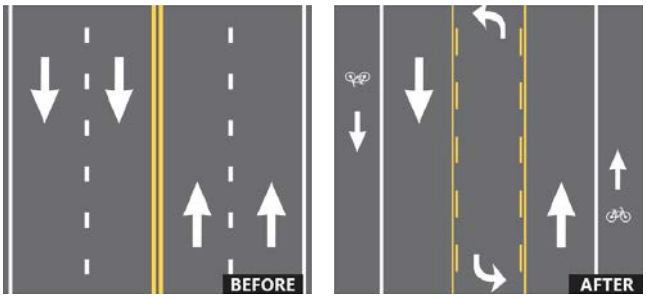
Within the City of Euclid, the majority of roadways have two travel lanes for vehicular traffic. These are primarily located within residential neighborhoods with 25 mph speed limits. However, some roadways outside of residential areas also have two lanes of travel, but with higher speed limits at 35 mph and often with a dedicated turn lane—such as E. 260th Street north of I-90. Additionally, some of the community's largest roadways—Euclid Avenue, Lakeshore Boulevard, Babbitt Road, and the Lakeland Freeway—have some of the widest pavement widths and number of travel lanes. These roadways in particular also account for some of the city's highest concentrations of vehicular crashes as well.

In general, wider pavement and lane widths, and a higher number of travel lanes can create an environment conducive for speeding—potentially increasing the likelihood of vehicular crashes.

"By reducing the number of lanes, you don't have through traffic mixing with turning traffic as much.

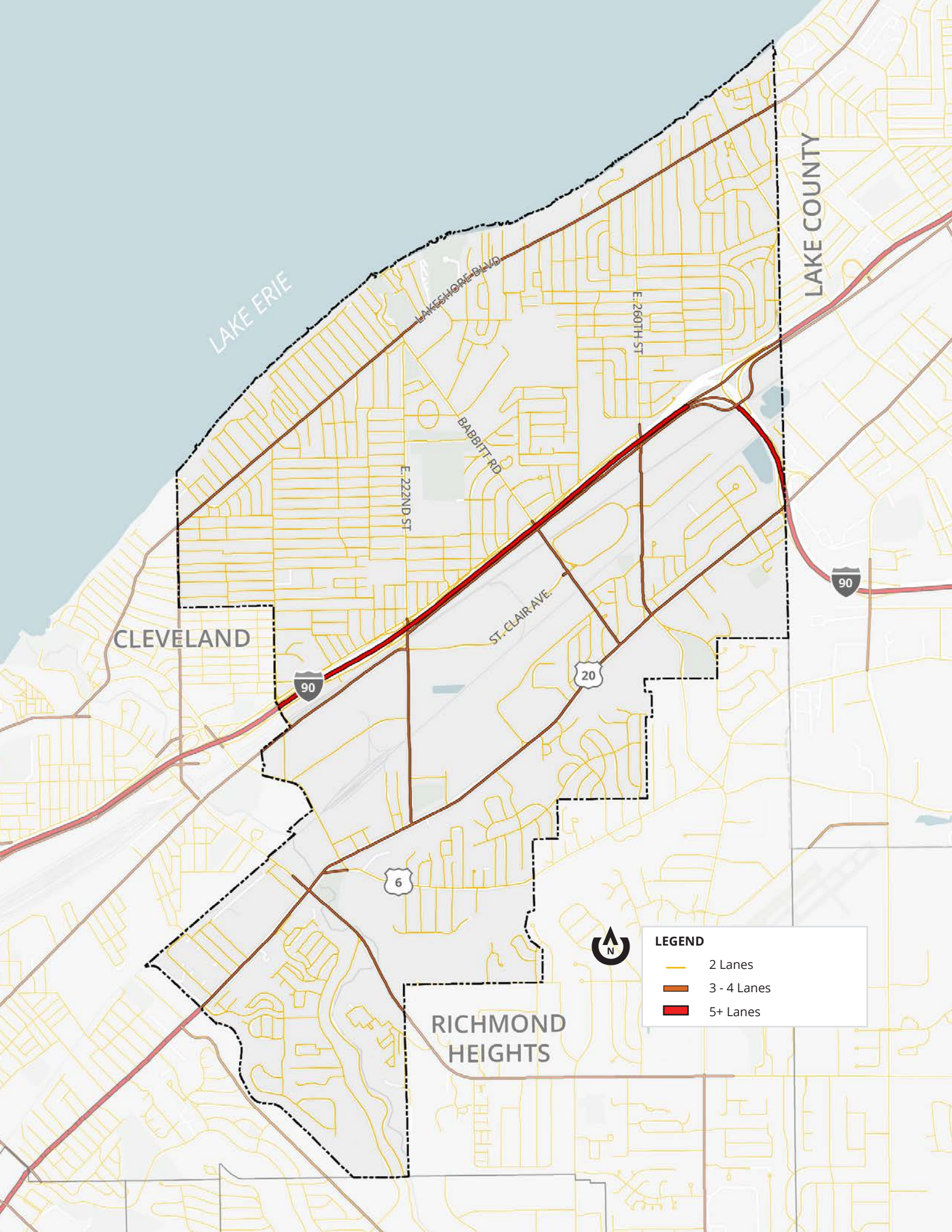
As a result, we often see a significant reduction in rear-end, side-swipe, and left-turn crashes."

Snyder & Associates
Improving Public Safety through Road Diets



A Road Diet, or roadway reconfiguration, can improve safety, calm traffic, provide better mobility and access for all road users, and enhance overall quality of life. A Road Diet typically involves converting an existing four-lane undivided roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane (TWLTL).

Source: Northeast Ohio Areawide Coordinating Agency (NOACA), Functional Class, 2022; Snyder & Associates, Improving Public Safety through Road Diets; U.S. Department of Transportation Federal Highway Administration (FHWA)

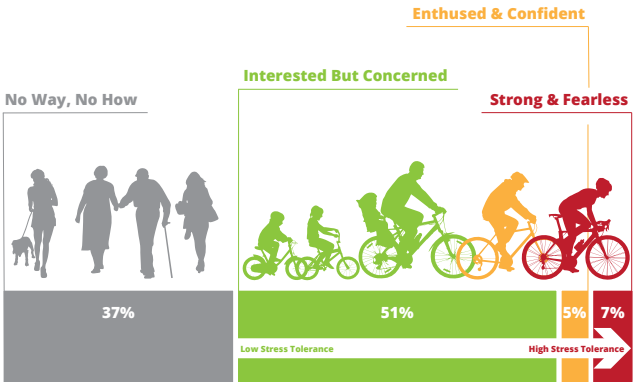

LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST.
BABBITT RD.
E. 222ND ST.
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
90
20
6
N
LEGEND
2 Lanes
3 - 4 Lanes
5+ Lanes

LEVEL OF TRAFFIC STRESS (LTS)

The comfort a user has on any route is directly related to the level of stress they feel from cars or traffic during their trip. Level of Traffic Stress (LTS) is a rating given to a road segment or crossing to evaluate the stress a bike rider will experience while riding on the road. LTS is a key factor in determining which type of facility should be installed and where. For example, if a roadway is considered to have a very high LTS a facility that provides more separation for users from vehicles would be the best solution. However, a roadway that has a lower LTS could warrant minor improvements to existing facilities, such as streetscaping or signage.

Within the City of Euclid 96 miles or 66.2% of roads are comfortable for all ages and abilities. However, these primarily only exist within existing neighborhoods, which are constrained by more stressful roadways—such as E. 200th Street, E. 222nd Street, Babbitt Road, E. 250th Street, and E. 260th Street. These roadways in particular have created pockets of non-motorized networks that ultimately do not connect. Additionally, the city's main east-west corridors—Lakeshore Boulevard, Lakeland Freeway, and Euclid Avenue—also create barriers to the majority of non-motorized users.

According to a 2015 national survey of cyclists, 51% of users are interested but concerned and if roads feel too stressful they are unlikely to ride in these areas. This is a critical target group for building and all ages and abilities network of safe, comfortable, and accessible connections throughout the City of Euclid.



LEVEL OF TRAFFIC STRESS CONSIDERATIONS

LTS 1

All ages and abilities network.

Strong separation from all except low speed, low volume traffic.

LTS 2

Comfortable for most adults and those riders classified as 'interested but concerned.'

Physical separation from traffic and cyclists have their own space that keeps them from interacting with traffic except at intersections.

LTS 3

An acceptable level of stress for 'enthused and confident' riders.

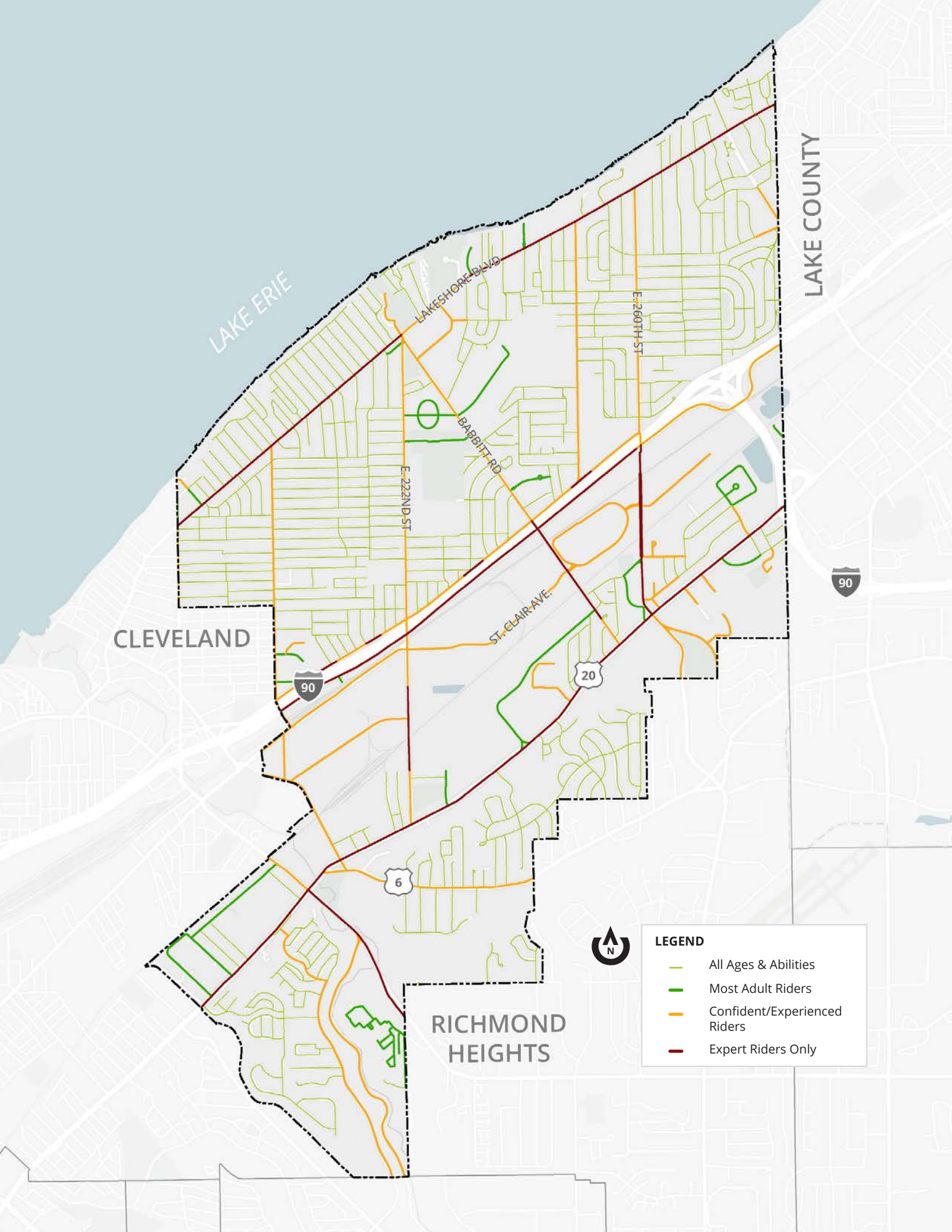
Limited separation from traffic, involves interaction or close proximity to traffic frequently having only traditional bike lanes as a dedicated space.

LTS 4

Uncomfortable for most riders and an acceptable level of stress to only those classified and 'strong and fearless.'

No separation from traffic and no existing bike facilities.

Source: Northeast Ohio Areawide Coordinating Agency (NOACA), Level of Traffic Stress (LTS), 2022; Jennifer Dill and Nathan McNeil, "Revisiting the Four Types of Cyclists: Findings from a National Survey"

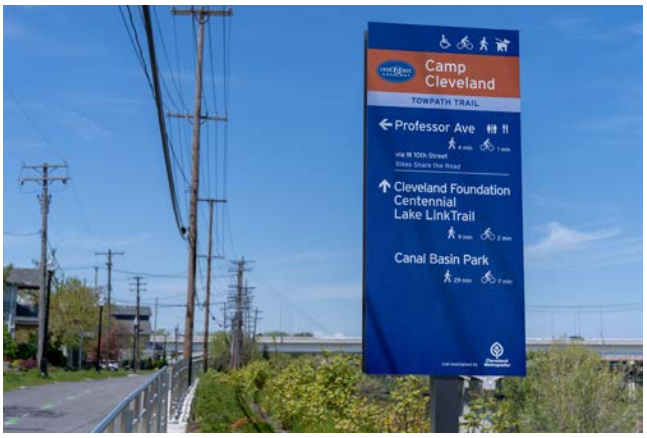

LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST.
BABBITT RD.
E. 222ND ST.
ST. CLAIR AVE.
90
90
20
6
N
LEGEND
All Ages & Abilities
Most Adult Riders
Confident/Experienced Riders
Expert Riders Only

BICYCLE & TRAIL NETWORK

The City of Euclid encompasses a number of regional destinations and amenities—including approximately four miles of waterfront areas along Lake Erie, historic Sims Park, and Cleveland Metroparks Euclid Creek Reservation. Additionally, U.S. Bike Route 30 (USBR 30) follows Lakeshore Boulevard and is part of an over 1,400 mile trail network that connects bicyclists to the rest of the country. Access for pedestrians and bicyclists is paramount for the continued longevity of these assets.

Currently, the City of Euclid has eight miles of existing all-purpose trails and multi-use paths. These are heavily concentrated within Cleveland Metroparks Euclid Creek Reservation, with some trails in Sims Park and Euclid Memorial Park. However, as part of the Cuyahoga Greenways project—a countywide vision for an interconnected system of on-road bicycle facilities and off-road, all-purpose trails—over 20 miles of all-purpose trails are proposed as part of these efforts. The largest proposed segments being along Lakeshore boulevard and Euclid Avenue.

Additionally, in partnership with the Cities of Euclid and Cleveland, Cleveland Metroparks is currently undertaking the construction of a new all-purpose trail that will ultimately close a critical transportation gap in the region. The 'Euclid Creek Greenway' will connect the lower portion of Euclid Creek Reservation to its northern portion at its Lakefront Reservation that includes Euclid Beach, Villa Angela, and Wildwood Park in the City of Cleveland. This connection in particular is an important facility that will provide residents a safe off-road alternative for navigating the community from north to south.

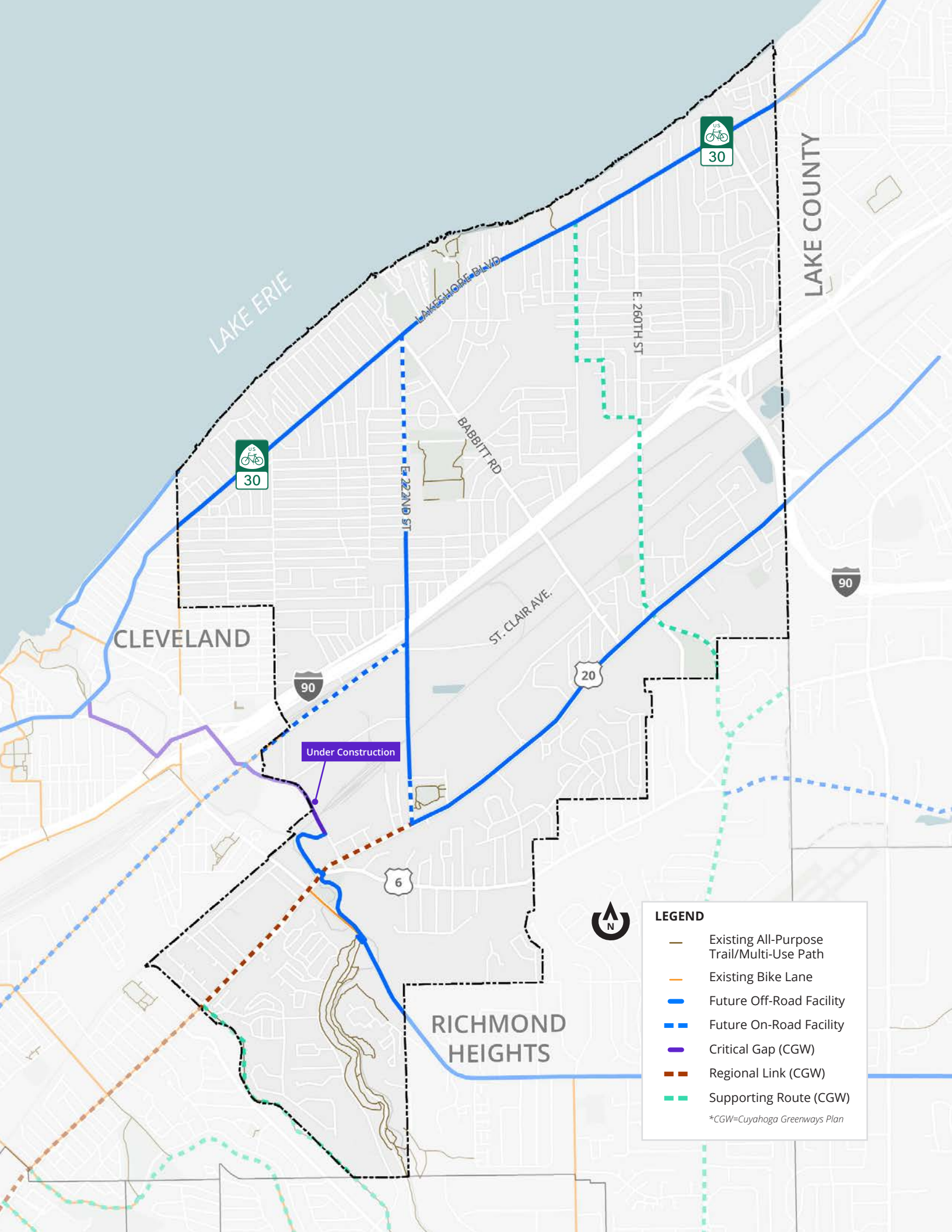


TOTAL NETWORK STATISTICS (WITHIN EUCLID)	
Future Off-Road Facility	20 miles
Existing All-Purpose Trail/Multi-Use Path	8 miles
Supporting Route (CGW)	4 miles
Future On-Road Facility	2 miles
Regional Link (CGW)	2 miles
Critical Gap (CGW, Under Construction)	1 mile

CUYAHOGA greenways

Cleveland Metroparks

Source: County Planning; Cuyahoga County; Cleveland Metroparks


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
Under Construction
30
30
90
90
20
6
N
LEGEND
Existing All-Purpose Trail/Multi-Use Path
Existing Bike Lane
Future Off-Road Facility
Future On-Road Facility
Critical Gap (CGW)
Regional Link (CGW)
Supporting Route (CGW)
*CGW=Cuyahoga Greenways Plan

ROADWAY CRASHES

Between 2017 and 2021, the City of Euclid saw a total of 5,687 vehicular crashes—28 being fatal car collisions. Of those total collisions, 159 involved a pedestrian or bicyclist. The majority of pedestrian- and/or bicyclist-involved crashes resulted in a possible or minor injury (110, 69.2%), while an additional 29 crashes (18.2%) resulted in serious injuries. Only 16 crashes (10.0%) involving pedestrians and/or bicyclists resulted in no injuries. However, during that same time period no fatalities were reported for any pedestrian or bicyclist involved in crashes.

Of Euclid's reported 5,687 vehicular crashes (2017-2021), nearly half (46.3%) occurred on eight main roadways:

- Euclid Avenue, 618
- Lakeland Freeway, 400
- Babbitt Road, 373
- E. 222nd Street, 311
- E. 200th Street, 299
- Lakeshore Boulevard, 286
- E. 250th Street, 183
- E. 260th Street, 162

Additionally, the highest reported crashes involving pedestrians were located on Euclid Avenue (16), Lakeshore Boulevard (14), Babbitt Road (10), and E. 222nd Street (10). The highest reported crashes involving bicyclists were located on Lakeshore Boulevard (4), Lakeland Boulevard (3), E. 222nd Street (3), and E. 250th Street (3). These roadways in particular are challenging for non-motorized users and are often described as 'hostile'—potentially deterring people from walking or biking.

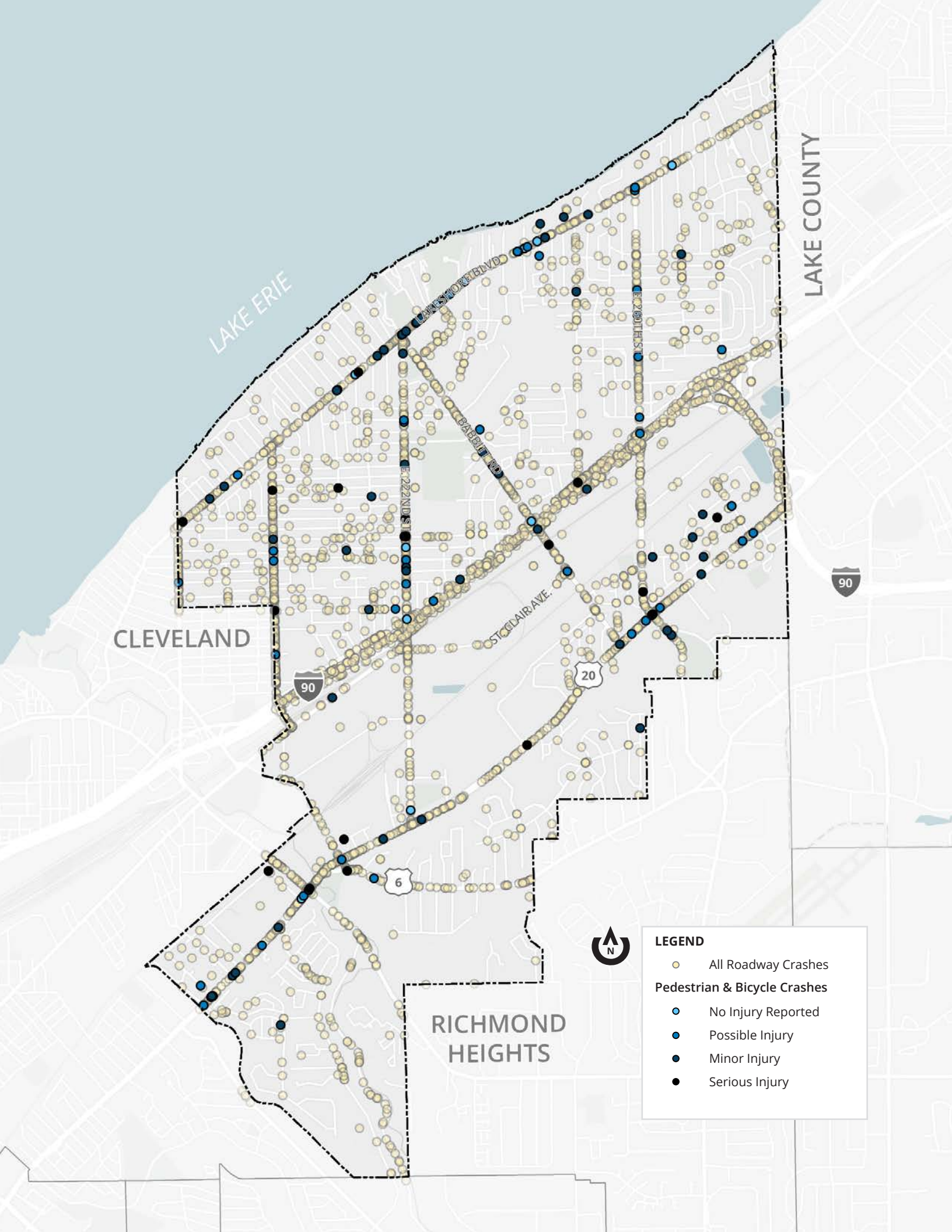
TOTAL BIKE/PED CRASH STATISTICS (2017-2021)	
Fatal Crashes	0
Serious Injury	29
Minor Injury	59
Possible Injury	51
No Injury/Property Damage Only	16

BIKE CLEVELAND

EUCLID

Bike Cleveland and its local affiliate chapter Bike Euclid are advocates for safe and equitable transportation for all, including support for Vision Zero— a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.

Source: ODOT Transportation Information Mapping System (TIMS), 2017-2021; Ohio State Highway Patrol Statistics, Operational Reports, 2017-2021; Bike Cleveland; Bike Euclid


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E 222ND ST
E 260TH ST
BABBITT RD
ST. CLAIR AVE.
90
20
6
N
LEGEND
All Roadway Crashes
Pedestrian & Bicycle Crashes
No Injury Reported
Possible Injury
Minor Injury
Serious Injury

TRANSIT NETWORK

The City of Euclid has a number of bus route options available to residents, visitors, and workers. In total there are eight Greater Cleveland Regional Transit Authority (GCRTA) bus lines that run through Euclid. While there are a number of route options for riders, all of the lines that run through Euclid have at least a 30 minute wait time or frequency and many of which do not have shelters available to riders. Additionally, GCRTA does have a 50 rider boarding requirement for shelters. However, shelters can be purchased privately and installed at stops along key routes. Longer wait times and lack of shelter facilities can deter users from choosing public transportation as a safe, comfortable, and convenient option for accessing their destinations.

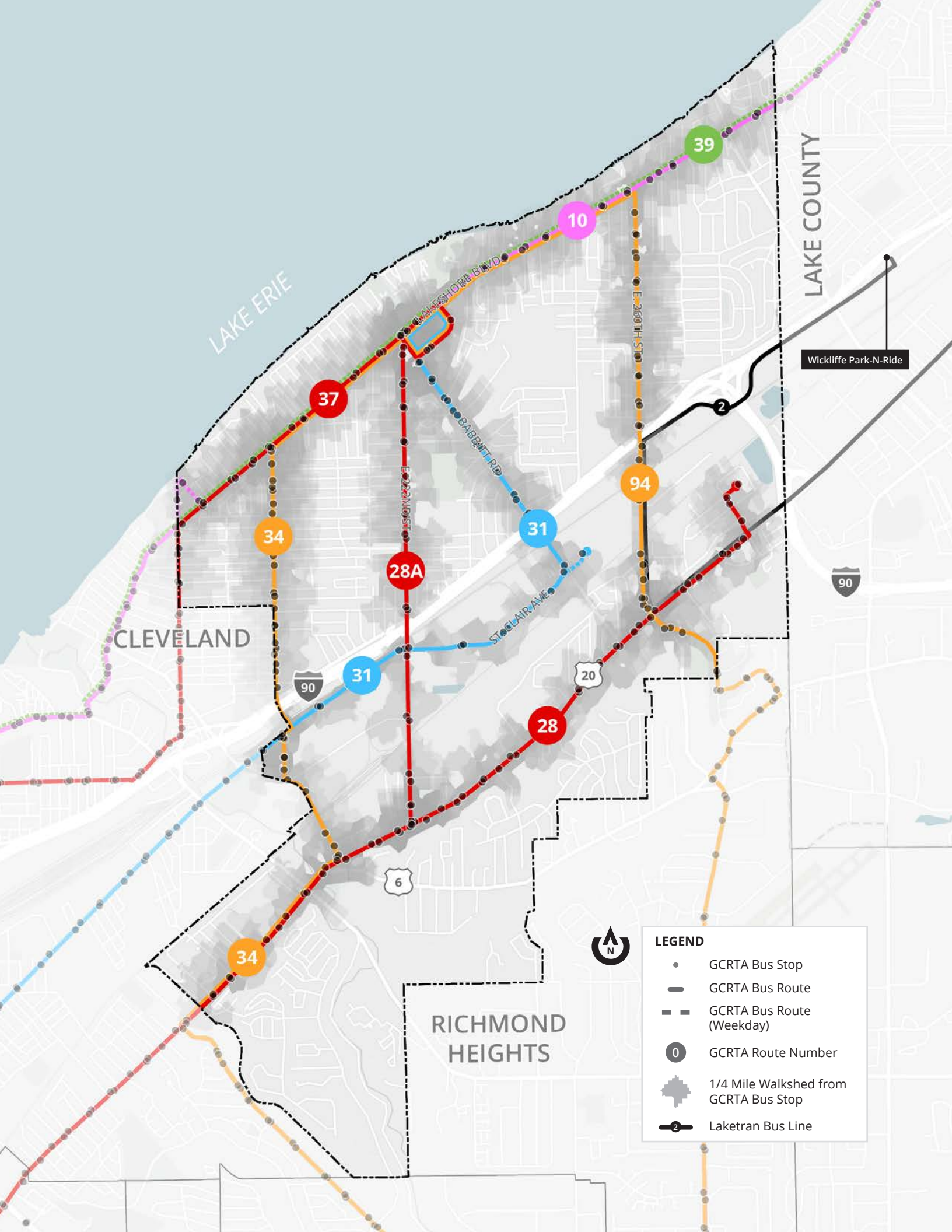
Additionally, Euclid's industrial, manufacturing, and logistics core—bounded by I-90 to the north and Euclid Avenue to the south—often rely on shift workers for their nearly 24/7 operations. Late-shift workers, or those that typically report to work between the hours of 9:00pm and 5:00am, on average have: 14% lower wages than their daytime peers; over half of all late-shift workers (52%) identify as black or African American; and often do not attend college or posses a higher-education degree.

Due to the high demand of logistical and business support services, many of these jobs are in rapidly growing sectors. Currently, there are only two routes that offer overnight service through Euclid: 10/East 105-Lakeshore and the 28 Euclid, each with a 60 minute frequency. It is important that the needs of Euclid's late-shift workforce are taken into consideration when decisions about accessibility and transportation options are being discussed.

TOTAL GCRTA NETWORK STATISTICS (WITHIN EUCLID)

ROUTE/LINE	FREQUENCY
10	30 minutes (15 minutes in Cleveland)
28-28A	30 minutes (15 minutes in Cleveland)
31	30 minutes
34	60 minutes
37	30 minutes
39	30 minutes (M-F, no midday)
94	60 minutes

Source: Greater Cleveland Regional Transit Authority (GCRTA), NEXTGEN, 2022; County Planning; American Public Transportation Association (APTA), Supporting Late-Shift Workers: Their Transportation Needs and the Economy, 2019

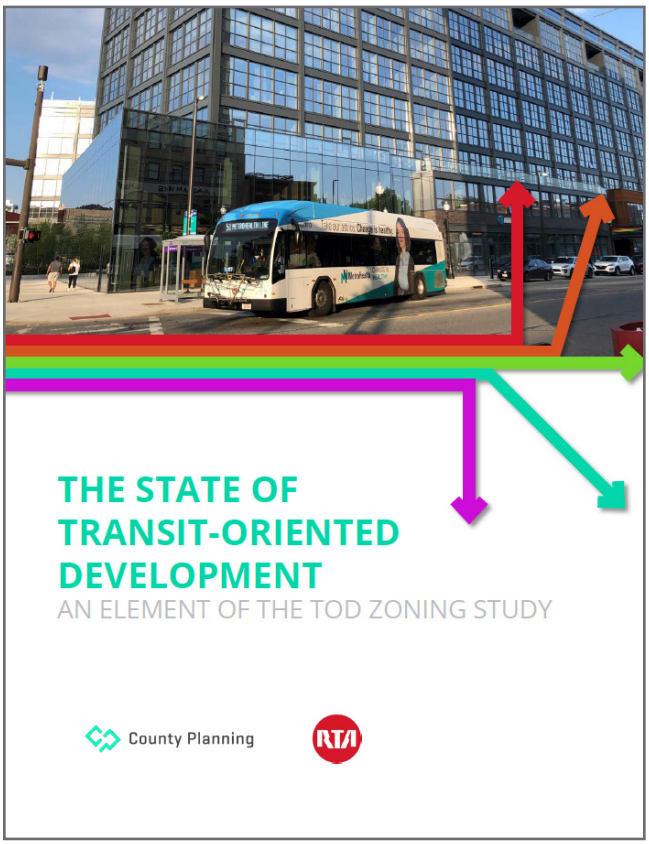

LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE
Wickliffe Park-N-Ride
39
10
37
34
28A
31
94
28
34
90
20
6
2
LEGEND
GCRTA Bus Stop
GCRTA Bus Route
GCRTA Bus Route (Weekday)
GCRTA Route Number
1/4 Mile Walkshed from GCRTA Bus Stop
Laketran Bus Line

TRANSIT ORIENTED DEVELOPMENT SUITABILITY

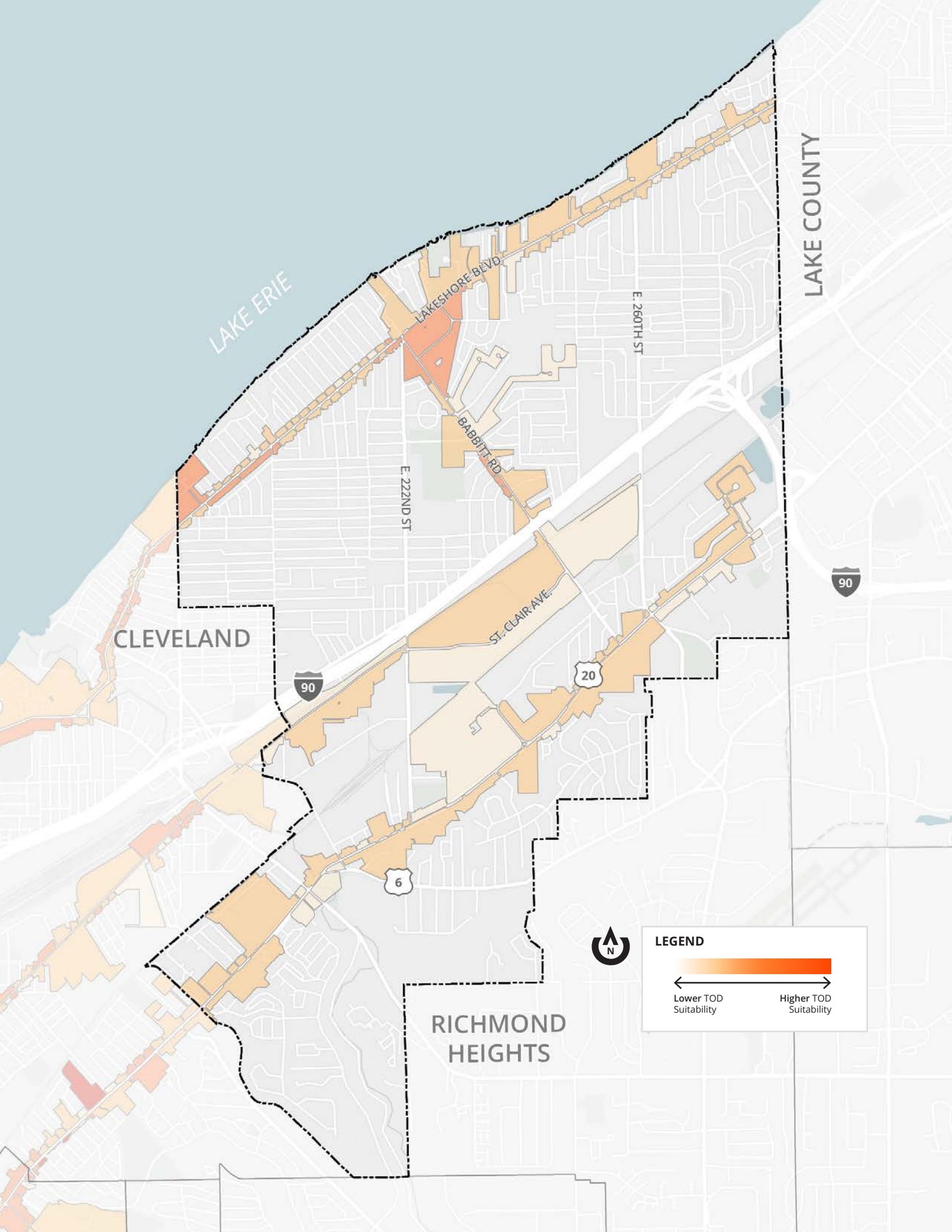
According to the Federal Transit Administration, Transit-Oriented Development (TOD) includes a mix of commercial, residential, office, and entertainment uses centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities. TOD can take many forms based on location, land use composition, community character, and architectural style; however, there are common elements that are typically included with TOD developments, including: density, a mix of uses, walkability, and a focus on transit.

In 2022, the Cuyahoga County Planning Commission and the Greater Cleveland Regional Transit Authority (GCRTA) partnered to study the state of TOD within Cuyahoga County. Numerous factors were taken into consideration to quantify TOD suitability. Critical features of the built environment—including intersection density and building setbacks, coverage, height, and age—heavily contribute to making places walkable and attractive. In general, areas that are more suitable for TOD will have higher intersection densities, have buildings closer to sidewalks, higher building densities, and taller building heights to support the mixing of uses.

Within the City of Euclid, the areas most suitable for TOD development are more concentrated along roadways north of I-90. The most suitable areas for TOD can be found along the western section of Lakeshore Boulevard near E. 185th Street, a portion of E. 222nd Street, and the intersection of Lakeshore Boulevard and E. 222nd Street near Shore Center Plaza. .



Source: County Planning, The State of Transit Oriented Development, 2022


LAKE ERIE
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BABBITT RD
E. 222ND ST
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CLEVELAND
RICHMOND HEIGHTS
90
90
20
6
N
LEGEND
Lower TOD Suitability
Higher TOD Suitability

RECENT MAJOR DEVELOPMENTS

From 2019 to 2021, the City of Euclid saw over $224 million in added taxable building value—impacting 849 parcels—each increasing by at least $10,000 in overall value from the previous year. The single largest investment within the City of Euclid was the recently completed Amazon fulfillment center, which added over $82 million in taxable building improvements within Euclid. Other major investments include Lincoln Electric ($9.4 million), The Sisters of St. Joseph of Mark Generalate ($9 million), and HBP Euclid I, LLC ($7 million).

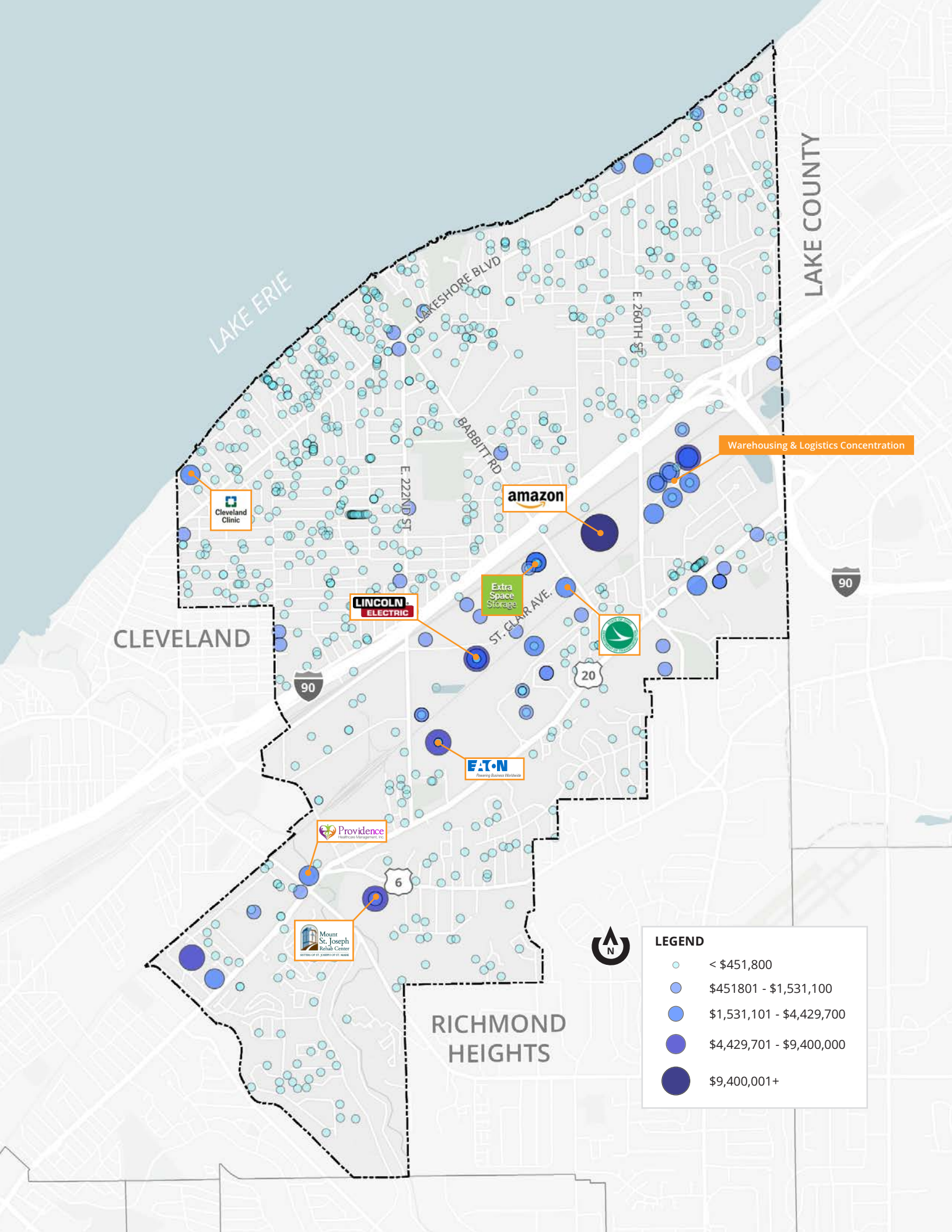
Additionally, demolition of the former General Electric (G.E.) site on Tungsten Road is currently underway. More than $46 million will be invested in environmental assessments, cleanup, and construction of a 430,000+ square foot light manufacturing/warehouse building on the 29-acre site. Land preparations are scheduled to be completed by the end of summer 2023—further strengthening the city's industrial core as a key job hub.

Euclid has seen a number of significant economic investments in recent years, with many being among the City's largest employers within its industrial, manufacturing, and logistics core. This is important because not only are new businesses seeing the community as an advantageous location to establish their operations, existing businesses are continuing to reinvest in the community as well—strengthening the tax base and creating new job opportunities in the process.

Officially opening its doors in September 2019, Amazon's new fulfillment center is 650,000 square feet and employs thousands of workers. The facility is located off Babbitt Road in the City's industrial, manufacturing, and logistics core— bounded by I-90 to the north and Euclid Avenue to the south.

Demolition of the 27 buildings at the former GE Tungsten facility began in early 2023 to make way for the construction of a new light manufacturing/warehouse building. Construction is expected to be complete Summer 2024.

Source: Cuyahoga County Fiscal Office, Delta Track Data, 2019-2021


LAKE ERIE
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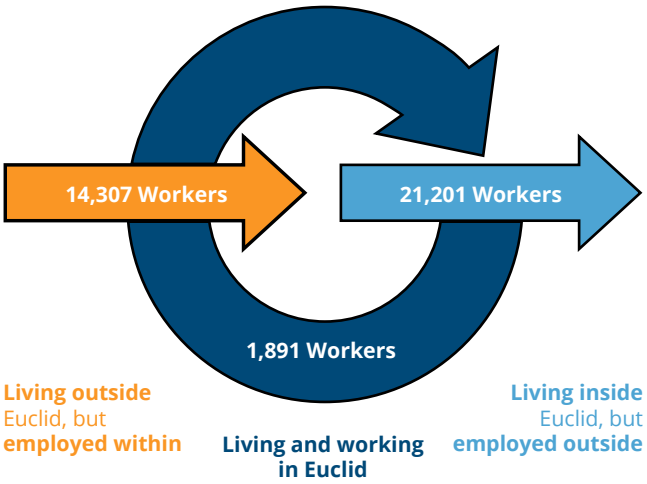
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE.
CLEVELAND
RICHMOND HEIGHTS
90
20
6
Warehousing & Logistics Concentration
Cleveland Clinic
amazon
Extra Space Storage
LINCOLN ELECTRIC
EATON
Providence
Mount St. Joseph Rehab Center
LEGEND
< $451,800
$451801 - $1,531,100
$1,531,101 - $4,429,700
$4,429,701 - $9,400,000
$9,400,001+

EMPLOYMENT DENSITY & COMMUTING PATTERNS

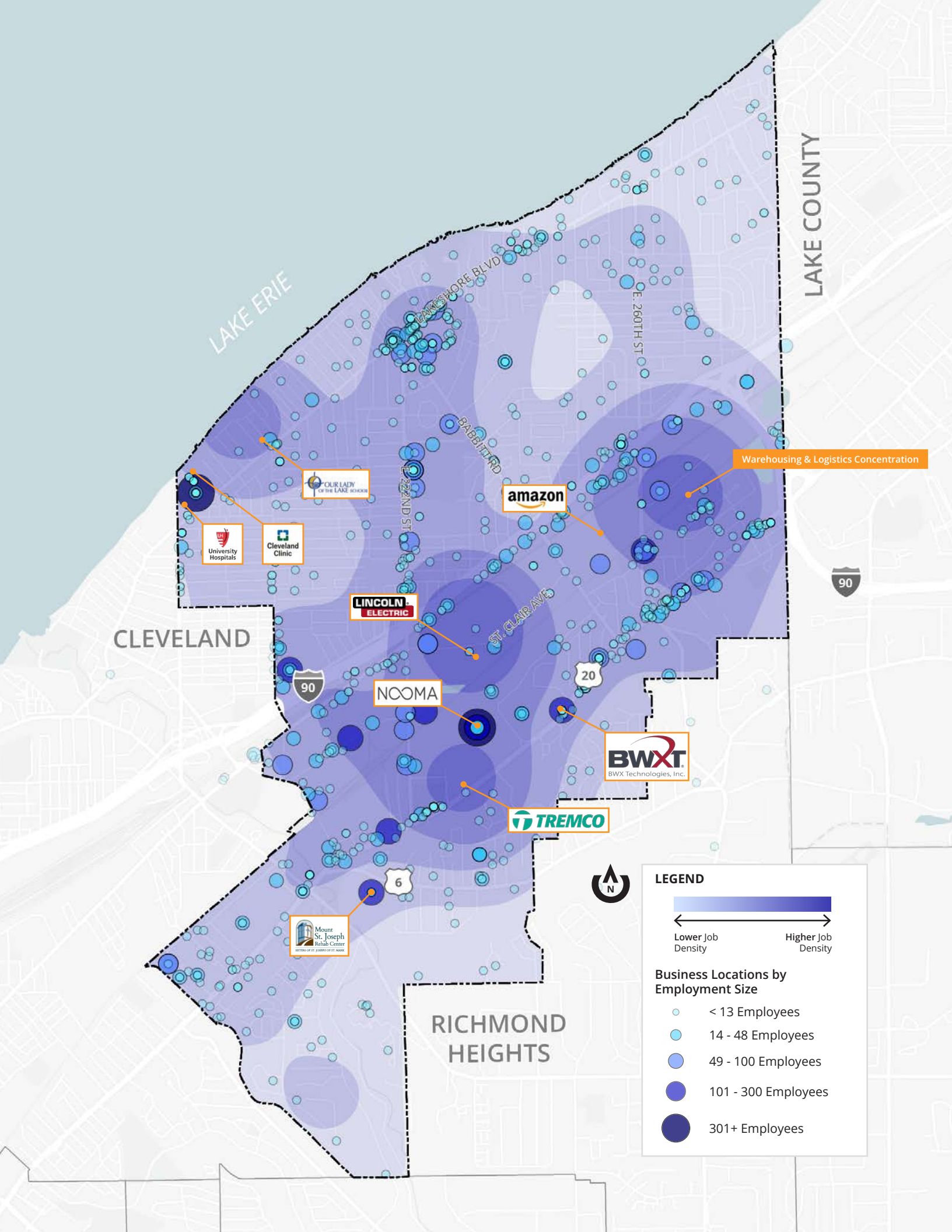
The City of Euclid has several large employers located within the community, some of the largest in northeast Ohio—including Amazon, Lincoln Electric, the Cleveland Clinic, and University Hospitals. Headquartered in Euclid, Lincoln Electric has 56 manufacturing locations in 19 countries and a worldwide network of distributors and sales offices serving customers in over 160 countries. In 2019 alone, the company had over 10,000 employees globally and generated revenues of over $3 billion.

With a wealth of job opportunities and regional highway access, the City of Euclid sees large increases in roadway traffic during weekdays and peak travel times. In 2019, the City had a total workforce of 16,198. This included 14,307 workers that don't live in Euclid, but are employed within the community and travel there daily to their jobs. However, only 1,891 workers both live and work within Euclid. Additionally, 21,201 Euclid residents commute daily to their place of employment outside of the community. These large shifts in traffic can greatly impact how roadways function, how road conditions feel to non-motorized users, and affect the overall comfort and safety for everyone—especially during weekdays and peak commuting hours.

COMMUTING PATTERNS, 2019



Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD), Area Profile Analysis by All Jobs, 2019; Reference USA, May 2022; TeamNEO; U.S. Bureau of Labor Statistics, National Business Employment Dynamics Data by Firm Size Class; Image Source: Cuyahoga County


LAKE ERIE
LAKE COUNTY
LAKESHORE BLVD
E. 260TH ST
BABBITT RD
E. 222ND ST
ST. CLAIR AVE
CLEVELAND
RICHMOND HEIGHTS
Warehousing & Logistics Concentration
OUR LADY OF THE LAKE SCHOOL
University Hospitals
Cleveland Clinic
amazon
LINCOLN ELECTRIC
NOOMA
BWXT
BWX Technologies, Inc.
TREMCO
Mount St. Joseph Rehab Center
90
20
6
N
LEGEND
Lower Job Density
Higher Job Density
Business Locations by Employment Size
< 13 Employees
14 - 48 Employees
49 - 100 Employees
101 - 300 Employees
301+ Employees

TRAVELSHED ANALYSIS

Travelsheds are an important measure for understanding the level of accessibility to and from a predetermined destination. Distance and direction of routes can vary greatly depending on the overall availability of necessary facilities—such as sidewalks or bus stops. Additionally, travelsheds utilize an existing road network's level of connectivity, street patterns, intersection density, and block lengths to determine how far a person could walk, bike, drive, etc. from an initial starting point. However, it is important to note that these analyses do not take into account the condition of these facilities—which could be a potential deterrent for users in real life.

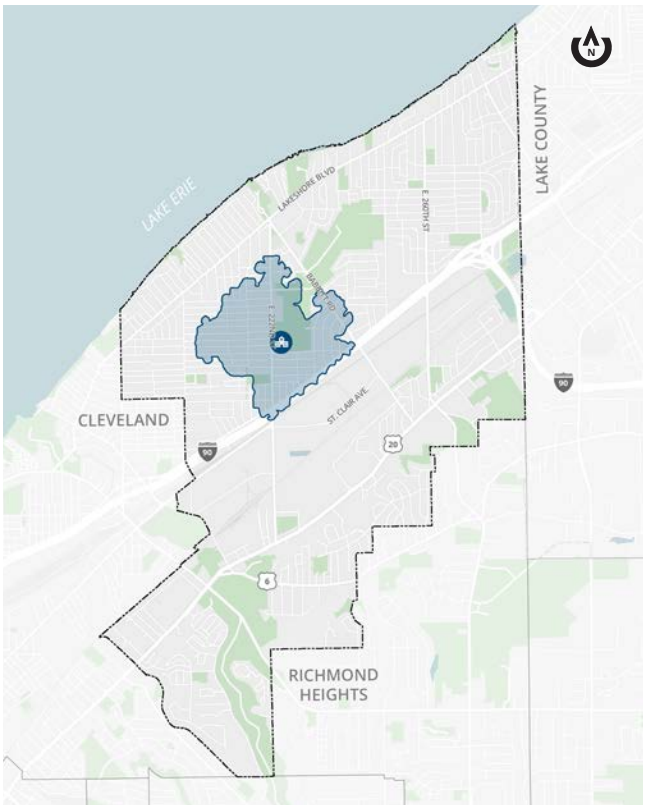
For the purposes of this Pedestrian & Bicycle Safety Action Plan, various travelshed analyses were conducted and evaluated based on the principles of the 15 Minute City—or the idea that residents can access the majority of the goods and services they might need on a regular basis within a 15 minute walk, bike, or transit ride. In general, 15 minute walk, bike, and transit sheds were created to demonstrate how far of a reach those destinations have based on based on existing infrastructure.

The goal of these travelshed analyses are to understand where and why certain key destinations and job hubs might have limited access for residents and the workforce. This is important for the city to begin to take action towards improving access, upgrading facilities, and developing sustainable maintenance schedules to ensure the long-term care of public infrastructure.

EXAMPLE TRAVEL SHED ANALYSIS

STEP 1: SELECT A DESTINATION
STEP 2: SELECT MODE OF TRAVEL
STEP 3: SET PREFERRED TRAVELSHED TIME

For this example the Euclid School Campus on E. 222nd Street was utilized to showcase how far a person could potentially walk within 15 minutes. The area encompasses approximately one square mile of mostly residential neighborhoods and institutional uses and has a robust sidewalk network—making the area highly walkable.



Source: County Planning; TravelTime, November 2023

WHAT IS THE 15 MINUTE CITY?

Quickly gaining momentum during the COVID-19 pandemic, the 15 Minute City concept has expanded its reach into American cities across the country. Originally coined in 2016, the 15 Minute City promotes the idea that any resident within a given community can quickly and easily access most goods or services they need on a daily basis—all within a 15 minute walk, bike, or transit ride. The 15 Minute City places an emphasis on non-motorized modes of travel, however doesn't necessarily limit or prohibit the use of cars.

In July of 2023, City of Cleveland Mayor Justin Bibb and his administration took significant actions to advance the vision for a 15 minute city. The City's goal: make Cleveland a more attractive, desirable, and safer city in which to live, work and play. In general, Cleveland's 15 Minute City framework encompasses a number of key social and economic goals:

- Address traffic safety through a Vision Zero policy;
- Decarbonize the city and respond to climate change through proximity and transportation choice;
- Improve air quality and public health;
- Create conditions for more affordable and diverse housing options;
- Support health, sustainability, and equity through new the City's new form based zoning code; and
- Support a small business ecosystem that affords entrepreneurship opportunities for Clevelanders.

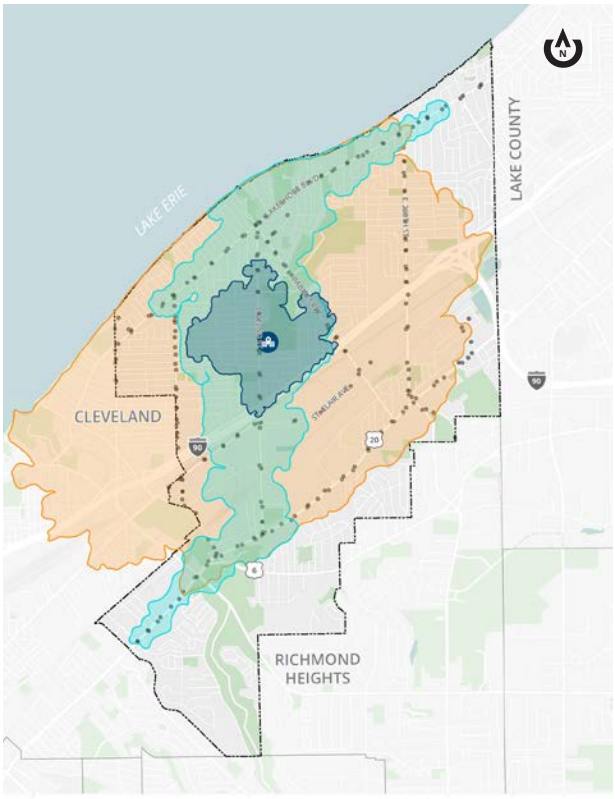
Overall, the 15 Minute City is an initiative to improve the quality of life of residents and create sustainable change to how people move throughout a community.

Source: Cuyahoga County

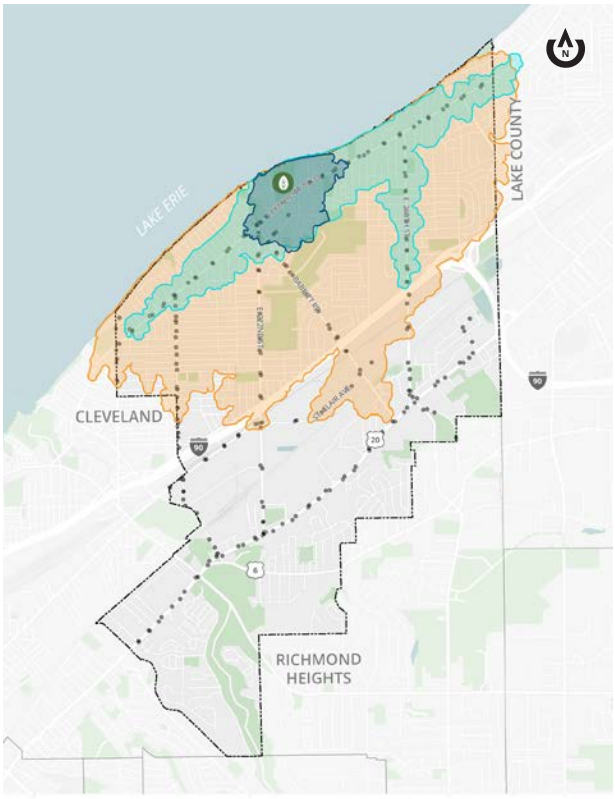
TRAVELSHED ANALYSIS | *KEY DESTINATIONS*

Overall, the City of Euclid has a nearly complete sidewalk network with a predominantly linear street pattern—making many areas throughout the city highly-walkable. However, certain sections of the community are more easily accessible than others. In general, destinations located north of I-90 are more easily accessible than those south of I-90. This is largely due to the curvilinear street patterns found in the southern portions of the community, more dramatic topography shifts, as well as being a location where there are gaps in transit services and bus stops south of Euclid Avenue. Additionally, areas west of Babbitt Road are more easily accessible via public transit than those east of Babbitt Road. This is predominantly due to transit availability and limited weekend service. However, these areas are still highly-walkable and bikeable to residents and visitors to these locations. Some of the most accessible destinations in Euclid include the Euclid High School-Middle School Campus, Hero Park, and Sims Park.

HIGH SCHOOL-MIDDLE SCHOOL

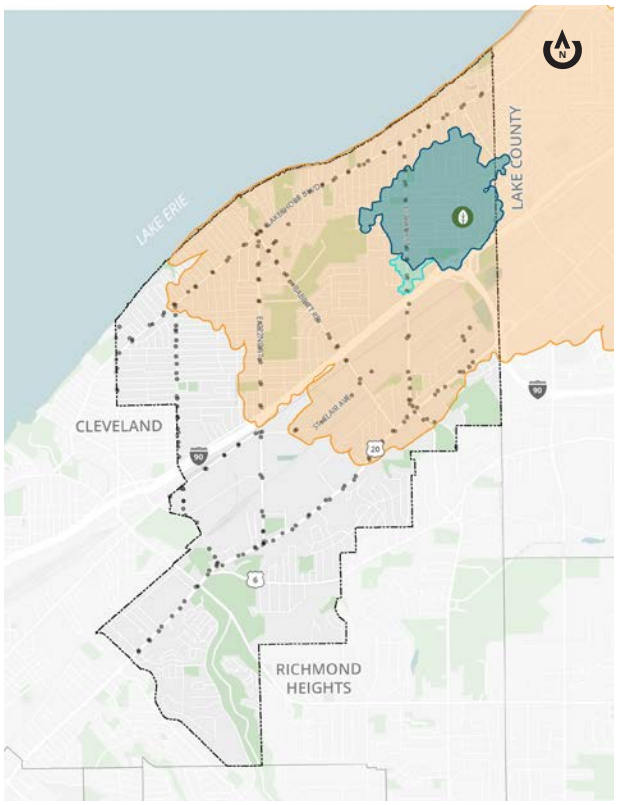


HENN MANSION/SIMS PARK

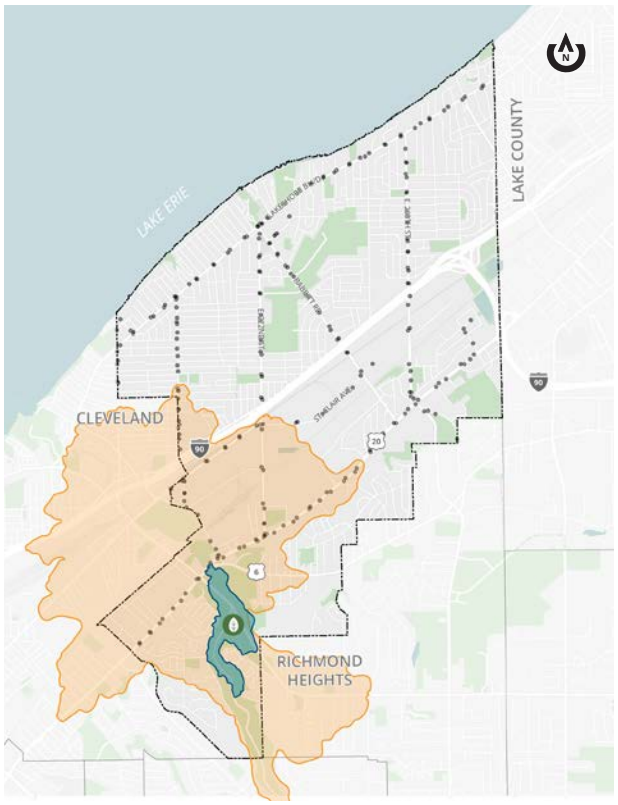


Source: County Planning; TravelTime, November 2023

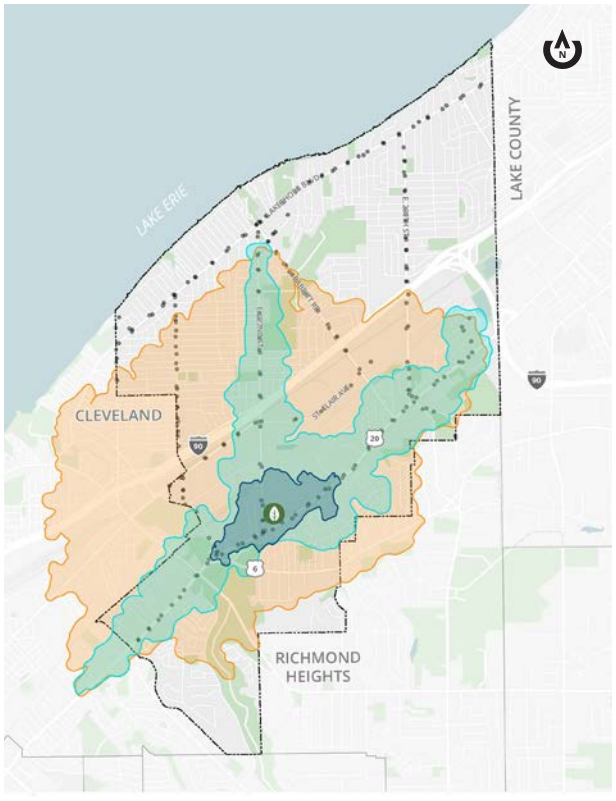
WILLOW PARK & FIELD



EUCLID CREEK RESERVATION



HERO PARK



LEGEND

- 15 minute **WALK**
- 15 minute **BIKE**
- 15 minute **Using Transit**
- Park/Open Space
- k-12 School/Education
- GCRTA Bus Stop

15 minute WALK = ~1/2 - 3/4 mile

15 minute BIKE = ~2 - 2.5 miles

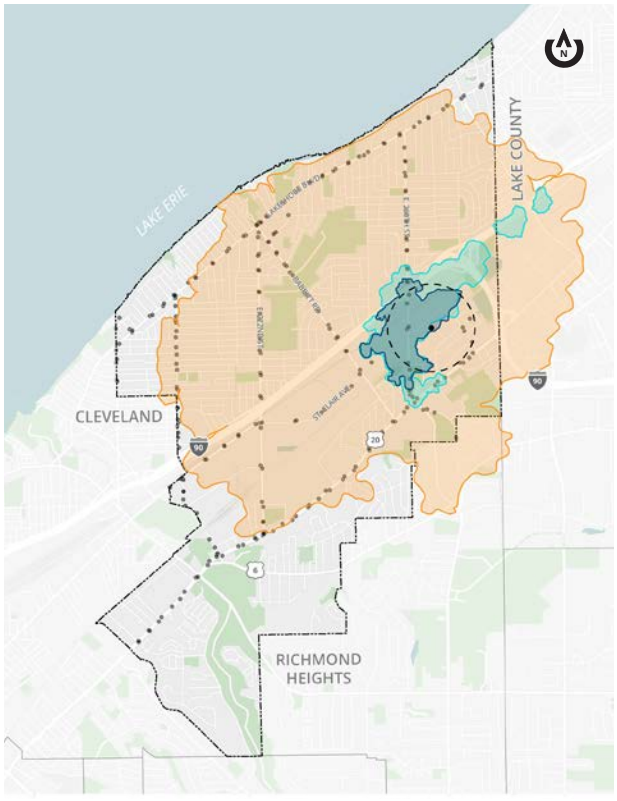
15 minute USING TRANSIT = Varies; Dependent upon availability of service, location of stops, and current traffic or weather conditions

This analysis was run using a centroid point from each location to generate routes using existing traffic and infrastructure conditions with turn-by-turn directions.

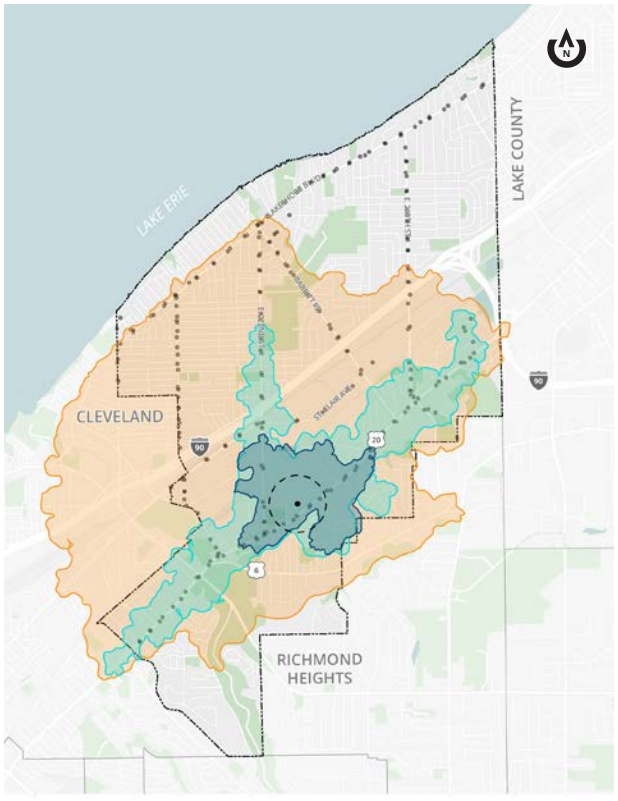
TRAVELSHED ANALYSIS | *MAJOR JOB HUBS*

Similar to its key destinations, accessibility to the city's major job hubs differ based on a number of contributing factors. In comparison, jobs hubs overall tend to be more highly accessible via public transit than other areas throughout the community. This is significant because readily available public transit provides an opportunity for the workforce to access jobs at major employers without the need for a personal vehicle. However, there are still some gaps in service. This gap is potentially due to limited overnight service of transit lines in areas where 24-hour operations or late-night shift jobs exist—such as Amazon. Additionally, while the city has a robust sidewalk network throughout the majority of the community, areas throughout its industrial core—located south of I-90 and north of Euclid Avenue—are more highly-concentrated with streets that do not have sidewalks. Furthermore, these areas begin to converge with curvilinear residential streets that create indirect routes and often limit or eliminate some access to users.

AMAZON & AFFILIATES

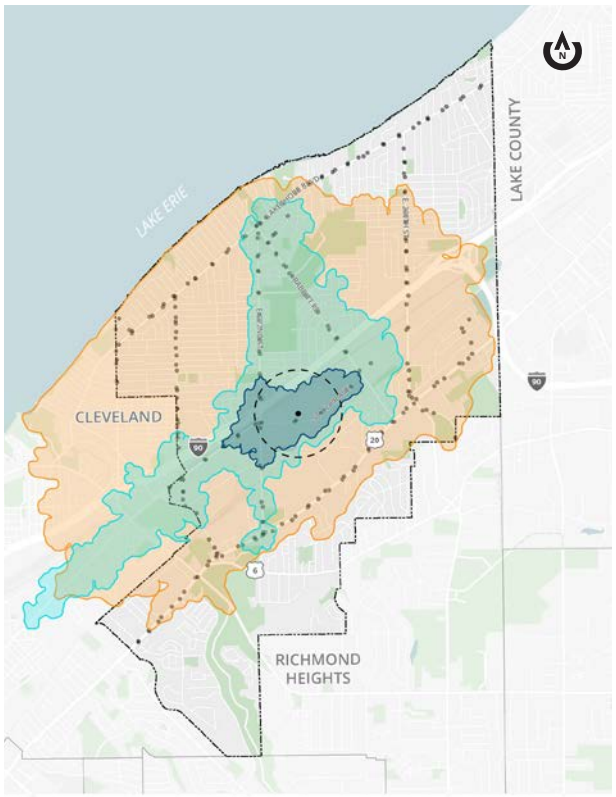


TREMCO & INDUSTRIAL CORE

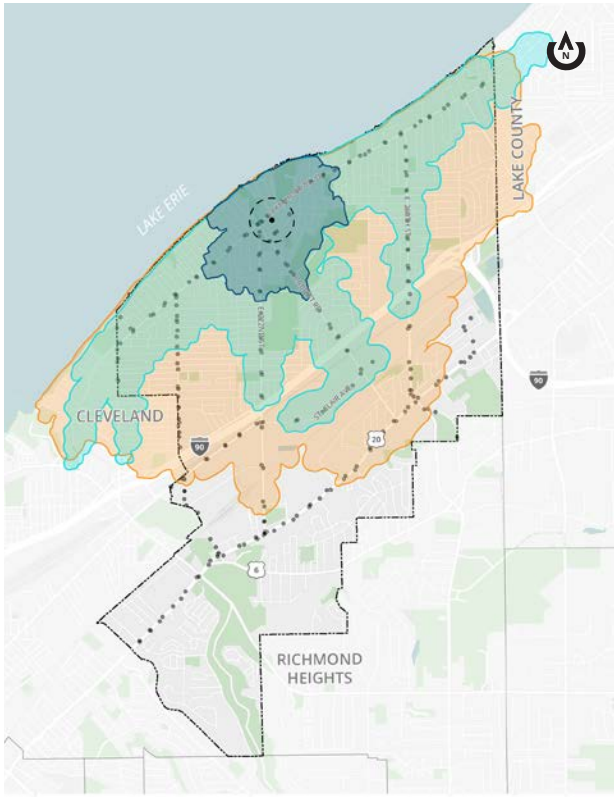


Source: County Planning; TravelTime, November 2023

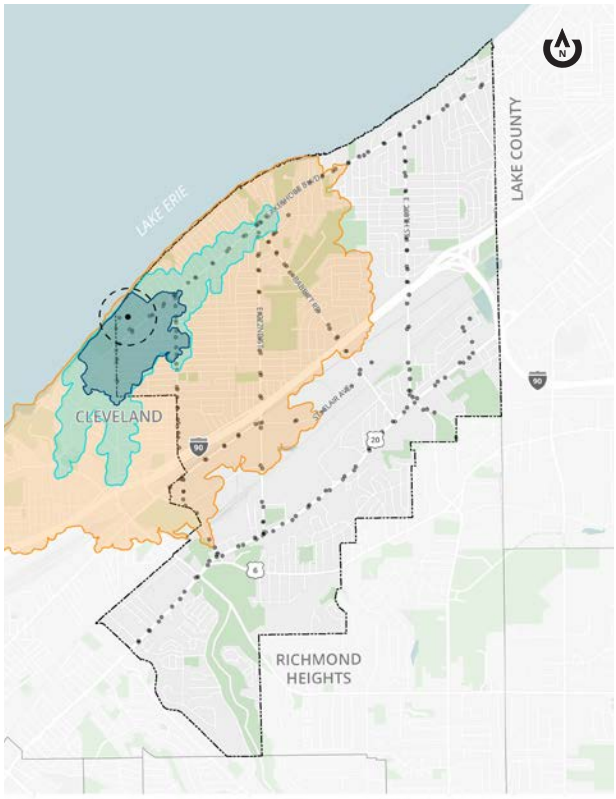
LINCOLN ELECTRIC CAMPUS



SHORE CENTER PLAZA



CLEVELAND CLINIC & UH CAMPUS



LEGEND

- 15 minute **WALK**
- 15 minute **BIKE**
- 15 minute **Using Transit**
- Major Job Hub
- GCRTA Bus Stop

15 minute WALK = ~1/2 - 3/4 mile

15 minute BIKE = ~2 - 2.5 miles

15 minute USING TRANSIT = Varies; Dependent upon availability of service, location of stops, and current traffic or weather conditions

This analysis was run using a centroid point from each location to generate routes using existing traffic and infrastructure conditions with turn-by-turn directions.

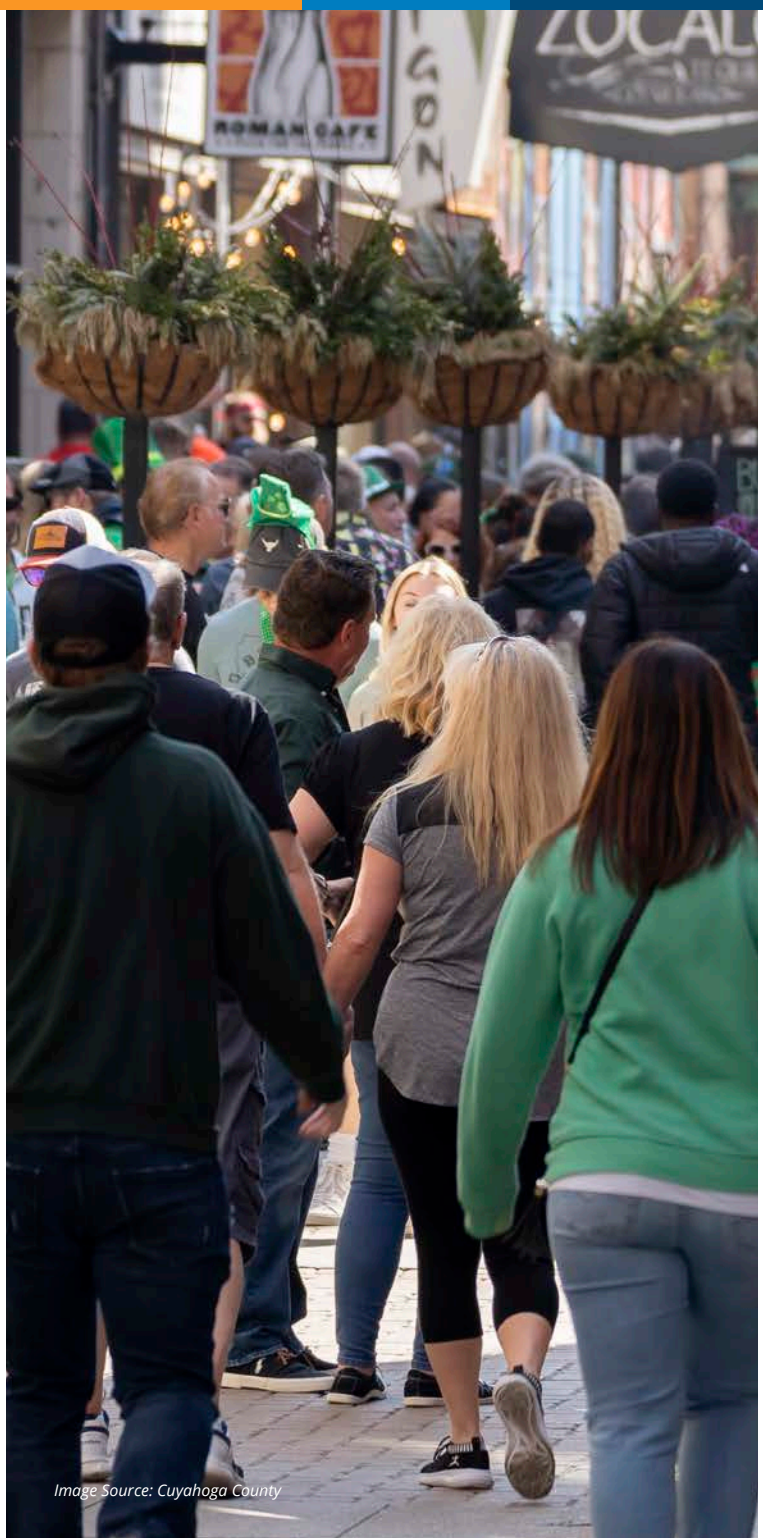


Image Source: Cuyahoga County

"[The COVID-19 pandemic] magnified what we've always known: our nation's streets are dangerous by design.

More than 6,500 people—nearly 18 per day—were struck and killed while walking in 2020, a 4.7% increase over 2019."

Smart Growth America
Dangerous by Design, July 2022

SECTION 3

PLAN OBJECTIVES & RECOMMENDED ACTIONS

The vision for active transportation in the City of Euclid is simple: improve the safety and comfort of all non-motorized users. Existing neighborhoods currently support a robust all-ages and abilities network of local connections; however, these only exist in scattered pockets throughout the community and do not interconnect. Additionally, pedestrians and bicyclists have very few route options that are safe and suitable for most of these users—making access to neighborhood destinations, such as schools, community facilities, and parks challenging without a personal vehicle.

This Pedestrian & Bicycle Safety Action Plan looks to not only support an inclusive and welcoming active transportation network, but also create a community of informed roadway users. While coordinated infrastructure projects physically improve connections and remove transportation barriers, education and programming are equally as important to improving safety and addressing equity. Investing in community education and programming are necessary steps towards achieving real change—informed users are safer users.

In addition to physical improvements and strengthened community education, city policies are also an important component to supporting active transportation initiatives. Policies that are outdated or do not align with active transportation goals can be a deterrent to making human-powered mobility a preferred transportation method of choice. Currently, Euclid only has voluntary guidelines for bicycle accommodations as part of new development—which doesn't include non-motorized site circulation requirements or mandatory connections to existing facilities, such as sidewalks, adjacent to a project site.

In general, it is this Plan's goal to create an active transportation framework that provides guidance to the City's decision-making process through recommended projects, policies, programming, and partnerships. This section provides an overview of this Plan's objectives and outlines recommended actions to achieve a safe, comfortable, and equitable connectivity network.

3.1 THE 5 Es & PLAN OBJECTIVES

With residents rediscovering their communities as a result of the COVID-19 pandemic, it is no surprise that people choosing to walk or bike continues to grow. Simple steps to make human-powered mobility safe and comfortable can have exponential benefits.

The League of American Bicyclists is a grassroots movement that seeks to create safer roads, stronger communities, and a Bicycle Friendly America for everyone. The League serves as a tremendous resource to communities, businesses, universities, and states across the United States. In particular, the Bicycle Friendly Community program provides a road map to improve conditions for bicycling and offers direct assistance to make a community's distinct vision for a better, bikeable community a reality. As of Fall 2022, there were a total of 501 Bicycle Friendly Communities across the United States—21 of them located in Ohio.

The distinction of becoming a Bicycle Friendly Community can have impressive results—increased property values, expanded tourism opportunities, and strengthened business attraction and retention. Additionally, the converse also holds true with similar results—reduced carbon emissions, pavement, and expansive parking lots. This Pedestrian & Bicycle Safety Action Plan looked to the League as a resource for best practices. Community feedback was supported by the five Es for a Bicycle Friendly America as a base for outlining this Plan's overarching active transportation objectives.

Source: The League of American Bicyclists

FIVE ESSENTIAL ELEMENTS OF A BICYCLE FRIENDLY AMERICA

EQUITY & ACCESSIBILITY: A bicycle friendly America for everyone

ENGINEERING: Creating safe and convenient places to ride and park

EDUCATION: Giving people of all ages and abilities the skills and confidence to ride

ENCOURAGEMENT: Creating a strong bike culture that welcomes and celebrates bicycling

EVALUATION & PLANNING: Planning for bicycling as a safe and viable transportation option

THE LEAGUE
OF AMERICAN BICYCLISTS
since 1880

OUR ACTIVE TRANSPORTATION OBJECTIVES ARE:

"The City of Euclid will have an active transportation network that: is **inclusive** of all ages and abilities; supports creating **informed** citizens and education opportunities; is **welcoming** to all users; is **coordinated** by prioritizing active transportation projects; and is **prepared** for creating safe and convenient connections."

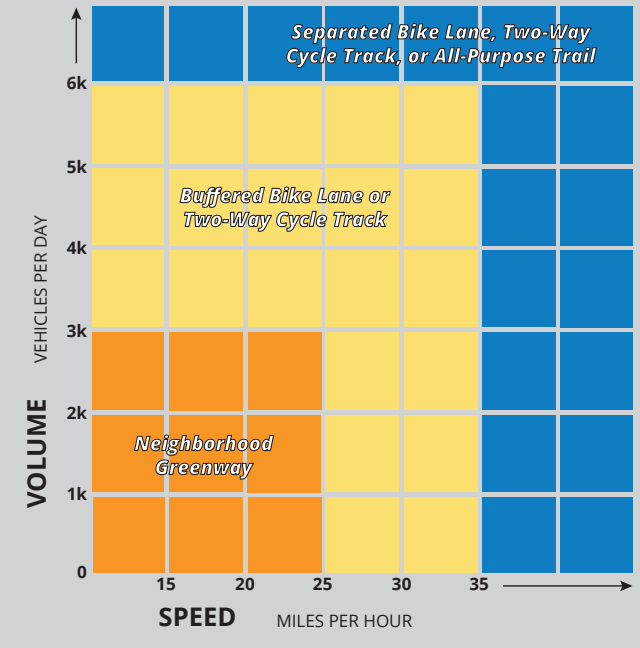
INCLUSIVE	Create an equitable network of connections that supports improvements to eliminate disparities in accessibility.
INFORMED	Provide opportunities for users to build their skills, confidence, and comfort while educating the public about the city's connectivity network.
WELCOMING	Support users with active transportation incentives and programs, while providing guidance through signage, wayfinding, and internal systems.
COORDINATED	Develop a seamless connectivity network that emphasizes and encourages human-powered mobility options across the community.
PREPARED	Construct and maintain active transportation facilities that focus on the built environment and comfort of all users.

3.2 RECOMMENDED ACTIONS

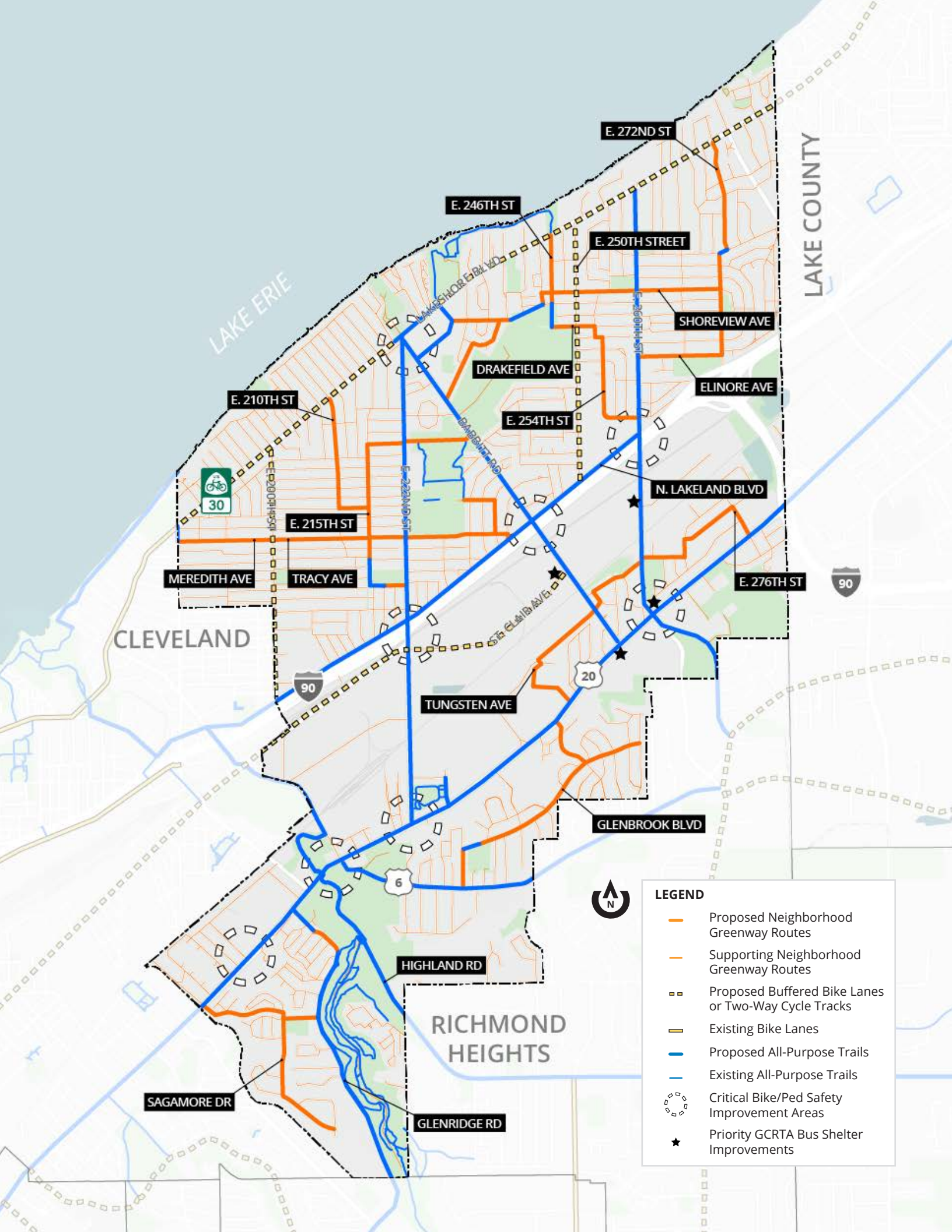
The recommendations contained in this Pedestrian & Bicycle Safety Action Plan are the culmination of ideas, wants, and needs of residents, city officials, and other key community stakeholders. As seen in the table below, there are 14 key topics that provide the foundation for achieving a more pedestrian and bicycle friendly Euclid—each with its own recommended actions and implementation overview. The implementation overview for each topic includes an overall priority level of importance, general length of time for completion, potential partners to assist with implementation, and estimated costs—Low cost is up to $100,000; Medium cost is $100,000-$500,000; and High cost is over $500,000.

FUTURE CONNECTIVITY NETWORK

This Plan's recommendations are grounded in a common theme that articulates from the urgency and desire for safer roadways and facilities for all users throughout Euclid. As seen in the map on the next page, a robust Connectivity Network has been developed through an analysis of existing facilities, speed limits, daily traffic counts, community preferences, best practices, and the Cuyahoga Greenways trail alignments. Choosing the correct facility type is just as important as placement in or around a roadway. The Future Connectivity Network map on the next page should be used in conjunction with the Facility Selection Matrix below as new connection opportunities arise, conditions change, and recommended actions are implemented throughout Euclid.



RECOMMENDED ACTIONS FOR A MORE PEDESTRIAN & BICYCLE FRIENDLY EUCLID	
Complete Sidewalk Availability	Shared Transportation & Micromobility
Buffered Bike Lanes & Two-Way Cycle Tracks	Wayfinding, Signage & Mobile Apps
Road & Lane Diet Conversions	Ped/Bike Advisory Committee & Policing
All-Purpose Trails & Sidepaths	Safe Routes to School Program
Neighborhood Greenways & Traffic Calming	Complete & Green Streets Policy
Temporary Installations	Zoning & Codified Ordinances
Streetscaping & Amenities	Project Coordination & Collaboration


LAKE ERIE
LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
E. 272ND ST
E. 246TH ST
E. 250TH STREET
LAKESHORE BLVD
E. 260TH ST
SHOREVIEW AVE
DRAKEFIELD AVE
ELINORE AVE
E. 210TH ST
E. 254TH ST
BARBARA RD
E. 200TH ST
E. 222ND ST
N. LAKELAND BLVD
30
E. 215TH ST
MEREDITH AVE
TRACY AVE
E. 276TH ST
90
ST CLAIR AVE
20
TUNGSTEN AVE
GLENBROOK BLVD
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HIGHLAND RD
SAGAMORE DR
GLENRIDGE RD
N
LEGEND
Proposed Neighborhood Greenway Routes
Supporting Neighborhood Greenway Routes
Proposed Buffered Bike Lanes or Two-Way Cycle Tracks
Existing Bike Lanes
Proposed All-Purpose Trails
Existing All-Purpose Trails
Critical Bike/Ped Safety Improvement Areas
Priority GCRTA Bus Shelter Improvements

NEAR-TERM FACILITY IMPROVEMENTS *(1-3 YEARS)*

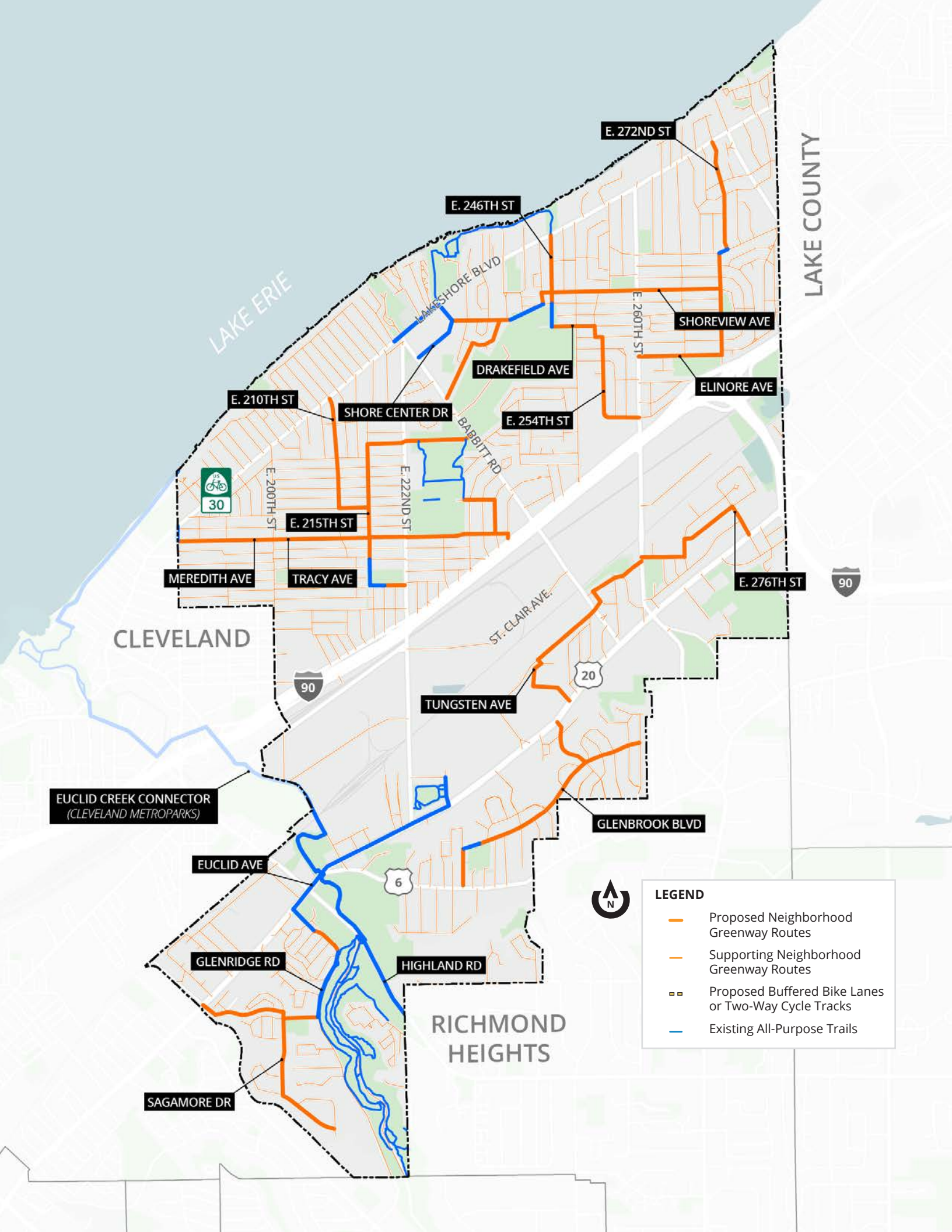
The City of Euclid envisions a complete and seamless active transportation network that allows residents and visitors to safely access destinations without the need for a personal vehicle. As such, it is important to set a steady pace for implementation and pursue the physical installation of projects over time, rather than all at once. This will allow the City to remain flexible should other funding sources become available, but also plan accordingly in the coming years and complete projects in a fiscally responsible and predictable manner.

Near-term facility improvements are infrastructure projects that should be considered for implementation within the next 1-3 years upon completion of this Pedestrian & Bicycle Safety Action Plan. This includes projects that are easier to implement in comparison to larger projects and can generally be considered "early wins"—or projects that are lower in cost, and due to their relative simplicity, have shorter timelines for their installation. While the majority of these improvements are focused on building out the City's network of bicycle friendly streets, or Neighborhood Greenways, other projects include installing sidewalks where they currently do not exist or repairing existing ones for a complete and safe network of pedestrian-focused access.

Implementing Neighborhood Greenways could initially include actions such as road markings, robust signage programs, and community education. However, depending on the complexity of traffic calming desired, longer-term actions could include installing more physical measures—such as chicanes, bump-outs, or mini-roundabouts. Neighborhood Greenways are an important component to the overall connectivity network because they provide parallel route options through calm residential streets, but still provide access to nearby destinations—such as Tungsten Avenue parallel to Euclid Avenue.

TARGET IMPLEMENTATION: *SIDEWALKS & NEIGHBORHOOD GREENWAYS*

Source: County Planning; Flickr User Minneapolis Public Works TPP


E. 272ND ST
E. 246TH ST
LAKESHORE BLVD
LAKE ERIE
LAKE COUNTY
E. 260TH ST
SHOREVIEW AVE
DRAKEFIELD AVE
ELINORE AVE
E. 210TH ST
SHORE CENTER DR
E. 254TH ST
BABBITT RD
E. 200TH ST
E. 222ND ST
30
E. 215TH ST
MEREDITH AVE
TRACY AVE
E. 276TH ST
90
CLEVELAND
ST. CLAIR AVE.
20
TUNGSTEN AVE
EUCLID CREEK CONNECTOR
(CLEVELAND METROPARKS)
GLENBROOK BLVD
EUCLID AVE
6
GLENRIDGE RD
HIGHLAND RD
RICHMOND HEIGHTS
SAGAMORE DR
N
LEGEND
Proposed Neighborhood Greenway Routes
Supporting Neighborhood Greenway Routes
Proposed Buffered Bike Lanes or Two-Way Cycle Tracks
Existing All-Purpose Trails

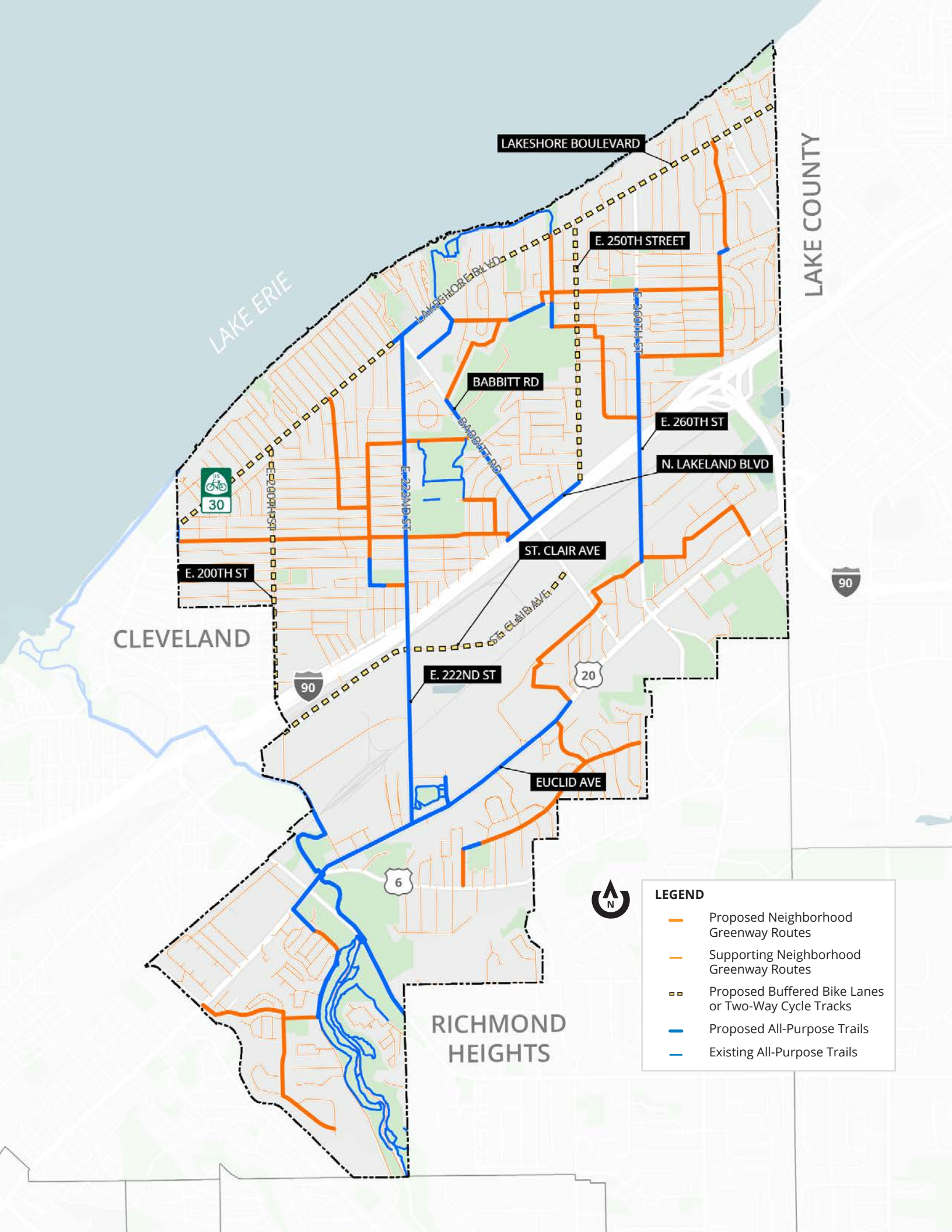
MID-TERM FACILITY IMPROVEMENTS *(3-7 YEARS)*

Building upon a completed sidewalk network and designated Neighborhood Greenway routes, mid-term facility improvements are infrastructure projects that should be considered for implementation within the next 3-7 years upon completion of this Pedestrian & Bicycle Safety Action Plan. This includes more robust infrastructure, will generally come at higher costs, and have longer timelines than near-term projects. However, mid-term projects encompass critical on- and off-street facilities that begin to connect the community in ways near-term or "early-win" projects could not do alone.

These mid-term facility improvements focus on bike lanes and all-purpose trail connections. Bike lanes are a quick and convenient travel option for cyclists that allow them to safely navigate the City with clearly marked, and separate facilities—reducing conflicts between users and other modes of transportation. Additionally, mid-term facility improvements begin to connect the community north and south. There are challenges present making these slightly more difficult to implement—such as I-90, underpasses, and potentially constrained rights-of-way. However, these connections are critical to ensuring safe, non-motorized transportation facilities are accessible to everyone. Implementing bike lanes and all-purpose trails will take the cooperation and coordination of many partners. While near-term projects are being implemented, the City should begin having these conversations for the construction of new connections via on- and off-street facilities concurrently.

TARGET IMPLEMENTATION: *BIKE LANES & ALL-PURPOSE TRAILS*

Source: Cuyahoga County; County Planning


LAKESHORE BOULEVARD
E. 250TH STREET
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LAKE COUNTY
BABBITT RD
E. 260TH ST
N. LAKELAND BLVD
E. 200TH ST
ST. CLAIR AVE
CLEVELAND
E. 222ND ST
EUCLID AVE
RICHMOND HEIGHTS
LEGEND
Proposed Neighborhood Greenway Routes
Supporting Neighborhood Greenway Routes
Proposed Buffered Bike Lanes or Two-Way Cycle Tracks
Proposed All-Purpose Trails
Existing All-Purpose Trails

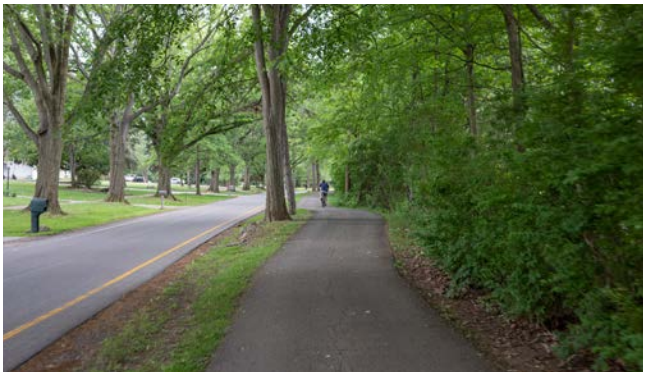
LONG-TERM FACILITY IMPROVEMENTS *(7+ YEARS)*

Continuing to build upon near- and mid-term projects, long-term facility improvements are infrastructure projects that should be considered for implementation about seven years beyond completion of this Pedestrian & Bicycle Safety Action Plan. Specifically, this includes projects that come at much higher costs and have potentially longer timelines than mid-term projects. This is largely due to the location or topography where new facilities might be placed. However, this could also include upgrading older facilities, on-street facilities to off-street facilities should the opportunity arise.

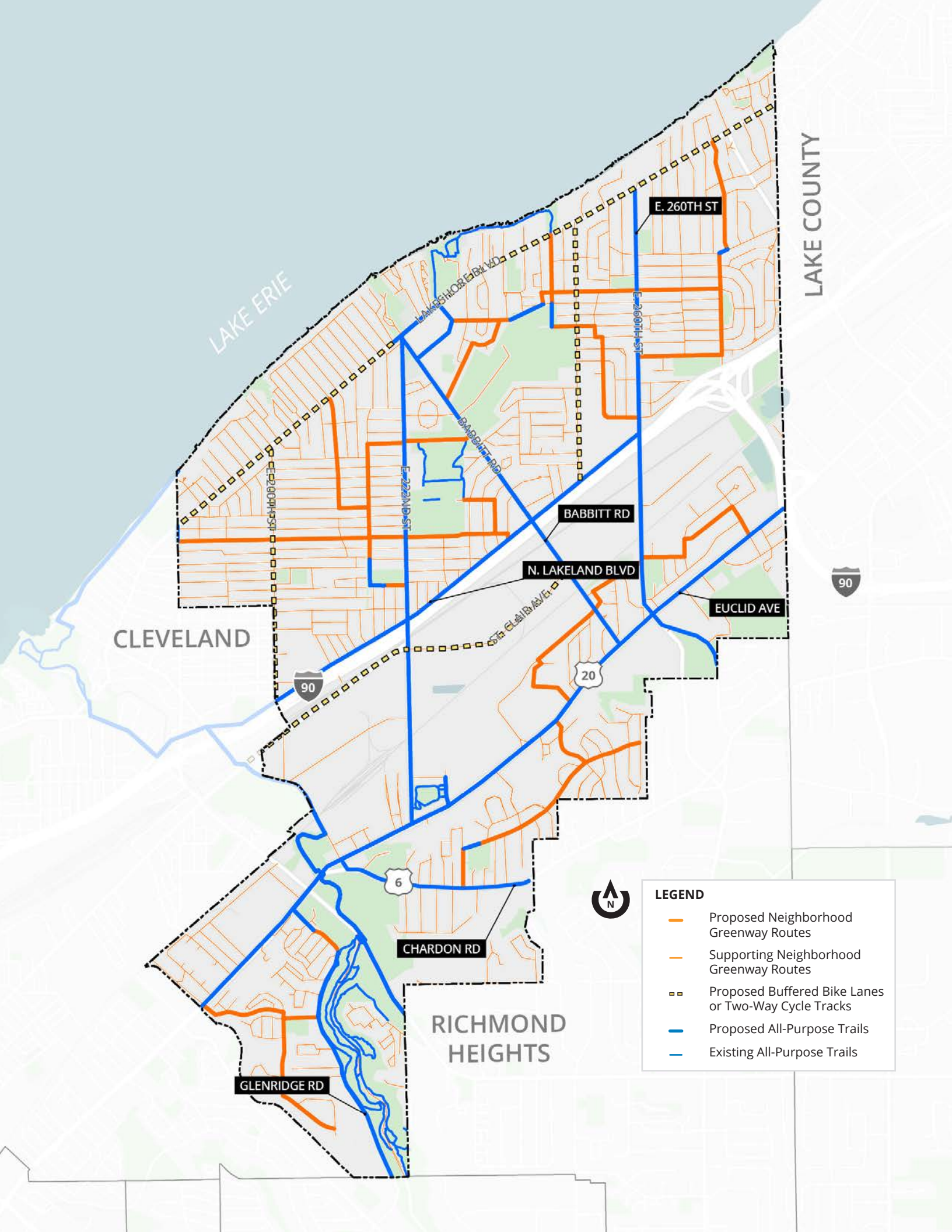
An example of a long-term facility improvement would be an all-purpose trail connecting residents on Chardon Road. Residents generally located in neighborhoods south of Euclid Avenue have much steeper topography and elevation changes than its neighbors north of Euclid Avenue. Additional studies will need to be conducted to ensure that the appropriate trail alignments are utilized and users can safely navigate the terrain challenges present in this area.

Similar to mid-term facility improvements, long-term facility improvements will need the cooperation and coordination of many partners. This could include Cleveland Metroparks, the Ohio Department of Transportation, local Homeowners Associations, engineers, and others to ensure the success of these very important, yet more challenging, projects.

TARGET IMPLEMENTATION: *CHALLENGING ALL-PURPOSE TRAIL CONNECTIONS*



Source: Cuyahoga County


LAKE ERIE
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RICHMOND HEIGHTS
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BABBITT RD
E. 222ND ST
E. 200TH ST
BABBITT RD
N. LAKELAND BLVD
ST. CLAIR AVE
EUCLID AVE
CHARDON RD
GLENRIDGE RD
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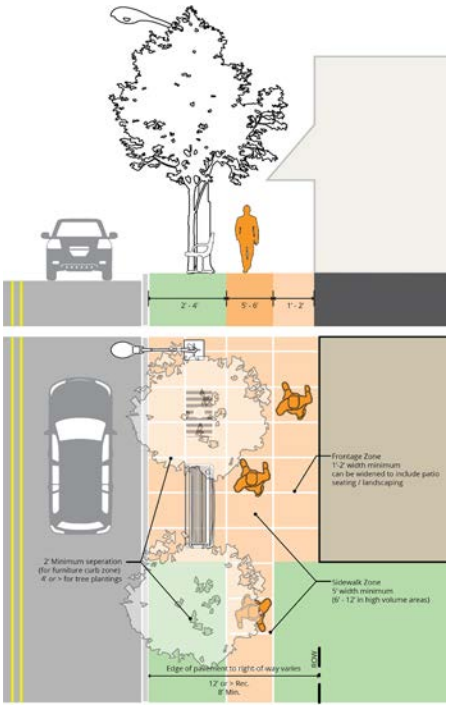
LEGEND
Proposed Neighborhood Greenway Routes
Supporting Neighborhood Greenway Routes
Proposed Buffered Bike Lanes or Two-Way Cycle Tracks
Proposed All-Purpose Trails
Existing All-Purpose Trails

COMPLETE SIDEWALK AVAILABILITY

The City of Euclid is a well-established community with a robust roadway network, including both grid and curvilinear street patterns. As seen in the map on the next page, the majority of missing sidewalks are located along roadways south of I-90. The sections of roadway identified in orange are considered priority sidewalk connections, or roads that currently do not have sidewalks on either side. These areas not only include residential neighborhoods, but also major employers and key job hubs within the city's industrial core. Closing these gaps in the sidewalk network and mandating new development have improved design standards would create a much more comfortable and safer environment for pedestrians on many local streets.

Additionally, sidewalks should be designed to go above and beyond the accepted minimum requirements. According to the National Association of City Transportation Officials (NACTO), "pedestrians and businesses thrive where sidewalks have been designed at an appropriate scale, with sufficient lighting, shade, and street-level activity. These considerations are especially important for streets with higher traffic speeds and volumes, where pedestrians may otherwise feel unsafe and avoid walking." Euclid has many streets filled with opportunity to make these public spaces safer and comfortable for the road's most vulnerable users.



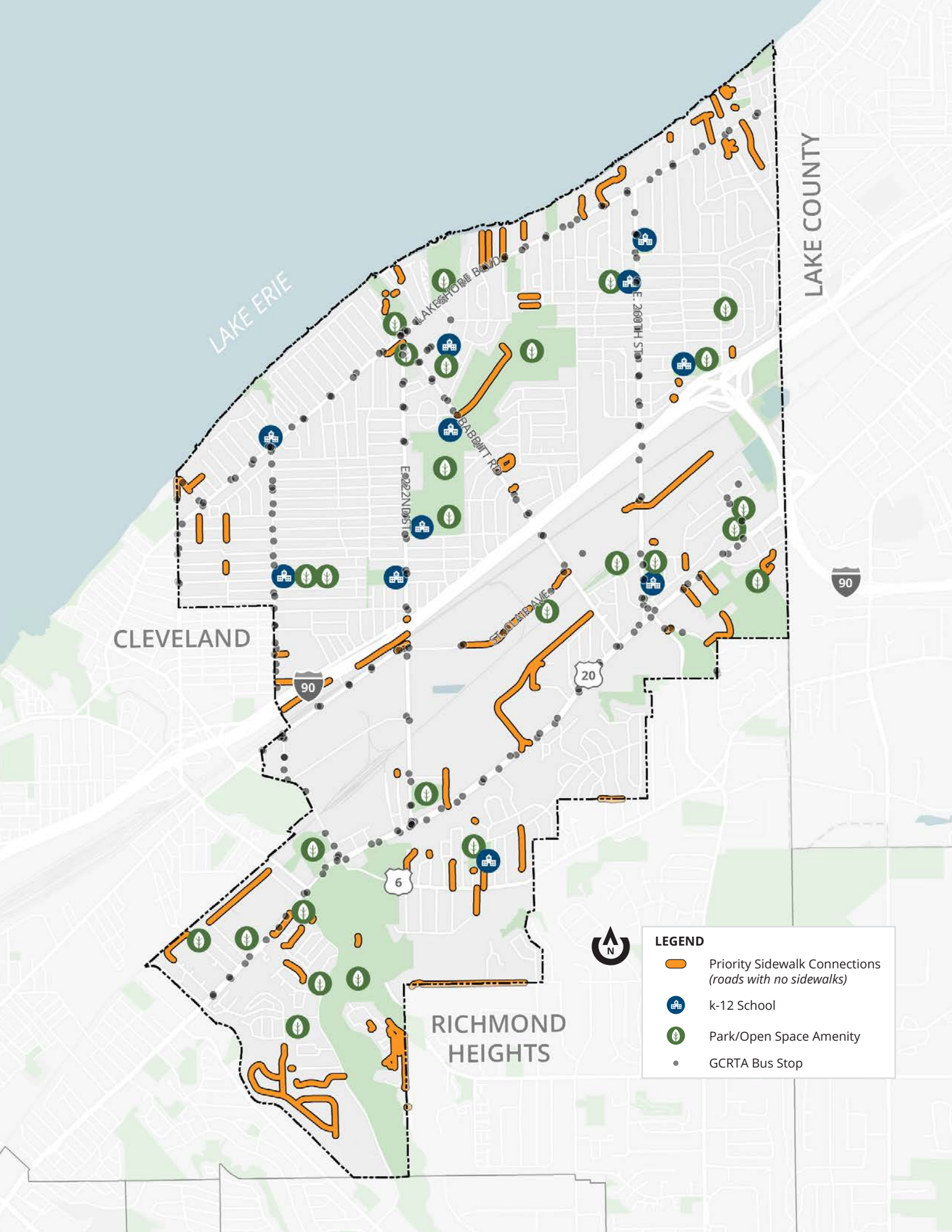
As seen in the image to the left, sidewalks should be designed to accommodate higher than projected pedestrian volumes. This should include ample space for streetscaping and enough room for users to not interfere with each other. High-quality sidewalk designs will strengthen local economies and commercial districts, in addition to improving the quality of life of residents.

RECOMMENDED ACTIONS
Prioritize streets that provide access to key destinations (schools, parks, etc.)
Prioritize first-mile/last mile connections that provide access to transit stops and job centers
Prioritize new or rebuilt sidewalks on streets with higher speeds, crashes, and volumes
Increase minimum standards for sidewalk construction (width, location, furnishings, etc.) to increase comfort and safety

EARLY WIN!

IMPLEMENTATION OVERVIEW: SIDEWALKS			
Priority Level	***High***	Medium	Low
Timeline	***Near-Term***	Mid-Term	Long-Term
Estimated Costs	High	Medium	***Low***
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Businesses		

Source: County Planning; National Association of City Transportation Officials (NACTO)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LAKE COUNTY
CLEVELAND
RICHMOND HEIGHTS
LAKESHORE BLVD
E 260TH ST
BABBITT RD
E 222ND ST
ST CLAIR AVE
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20
6
LEGEND
Priority Sidewalk Connections
(roads with no sidewalks)
k-12 School
Park/Open Space Amenity
GCRTA Bus Stop

ROAD & LANE DIET CONVERSIONS

A road diet, or roadway reconfiguration, can help improve safety and calm traffic by reallocating space formally dedicated for automobiles. Road re-striping, lane width reductions, crossing medians, and bike lanes are all examples of road improvements that can integrate road diet principles.

Many of Euclid's primary corridors have wide pavement widths and relatively low traffic volumes, allowing vehicles to move with ease and maximum efficiency. However, this robust emphasis on vehicular travel and forgiving roadway designs—extra space given to drivers knowing they will make occasional mistakes—has led to widespread speeding and distracted driving issues throughout the community. Roadways that have been designed in this manner are a signal to drivers that there is no need to slow down for more vulnerable users such as pedestrians, bicyclists, or road workers—which ultimately continues to grow the issue surrounding unsafe driving practices.

Road diets are a widely accepted, low-cost method for creating more livable spaces and complete streets, or streets designed for everyone—which can be planned in conjunction with other roadway and repaving projects. These are opportunities to better integrate and re-imagine pedestrian, bicycle, and transit facilities within Euclid. Additionally, road diets can take on many different forms, but the end goal remains the same—improve roadway safety.

In general roadways that operate below 20,000 ADT (Average Daily Traffic) are good candidates for road diets. However, as ADT approaches 20,000 vehicles or above, capacity can become affected—indicating that road may not be an ideal candidate for road or lane conversions. Only one roadway segment in Euclid rates above 20,000 ADT: Euclid Avenue west of Chardon Road (24,000+ ADT); this would need further study and analysis to determine the best treatment for this area without negatively impacting roadway capacity. Roadways in Euclid that would be good candidates for potential road or lane conversions include: Babbitt Road, Euclid Avenue east of Chardon Road, Lakeshore Boulevard, St. Clair Avenue, E. 200th Street, E. 222nd Street, E. 250th Street, and E. 260th Street.

RECOMMENDED ACTIONS
Evaluate road diet and lane width reduction guidelines
Integrate road diet considerations into Capital Improvements Program (CIP), pavement resurfacing, or similar construction schedules
Conduct corridor and/or targeted intersection analyses on roadways where road or lane reductions are being considered

IMPLEMENTATION OVERVIEW: ROAD DIETS			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Schools, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

PLANNING IN ACTION

CASE STUDY: ALEXANDRIA, VIRGINIA

The City of Alexandria, Virginia has long been at the forefront of roadway planning and best practices surrounding complete streets. In the fall of 2019, the City of Alexandria repaved Seminary Road—a critical corridor within the city—which included a redesign of the roadway itself. City Council ultimately voted to reorganize the roadway to include buffered bicycle lanes, more space between sidewalks and vehicles, new pedestrian crossings, and one travel lane in each direction with a center turn lane.

The project was deemed a success following a post-project implementation evaluation in the Spring of 2022. This analysis compared pre-project data with newly collected data, which reflected a return to normal traffic patterns following the COVID-19 pandemic. Over the nearly 2.5 years since becoming operational, the Seminary Road improvements showed:

- A 41% decrease in annual crashes;
- A 14% drop in non-severe crashes;
- Traffic volumes during peak travel times decreased between 11-17%;
- Traffic does not appear to have diverted to neighboring streets;
- Since implementation, there have been zero crashes in which people were killed or seriously injured, regardless of mode of transportation;
- Extreme speeding has decreased;
- Peak period travel times have decreased by 35-60 seconds; and
- Bicycle ridership increased by 75% during peak times

BEFORE (2019)

Seminary Road prior to the improvements made in 2019 was a typical thoroughfare primarily tailored towards motorized traffic with minimal considerations for other modes of transportation. The roadway had four lanes of travel (two each direction) and had a 35 mph posted speed limit.

AFTER (2021)

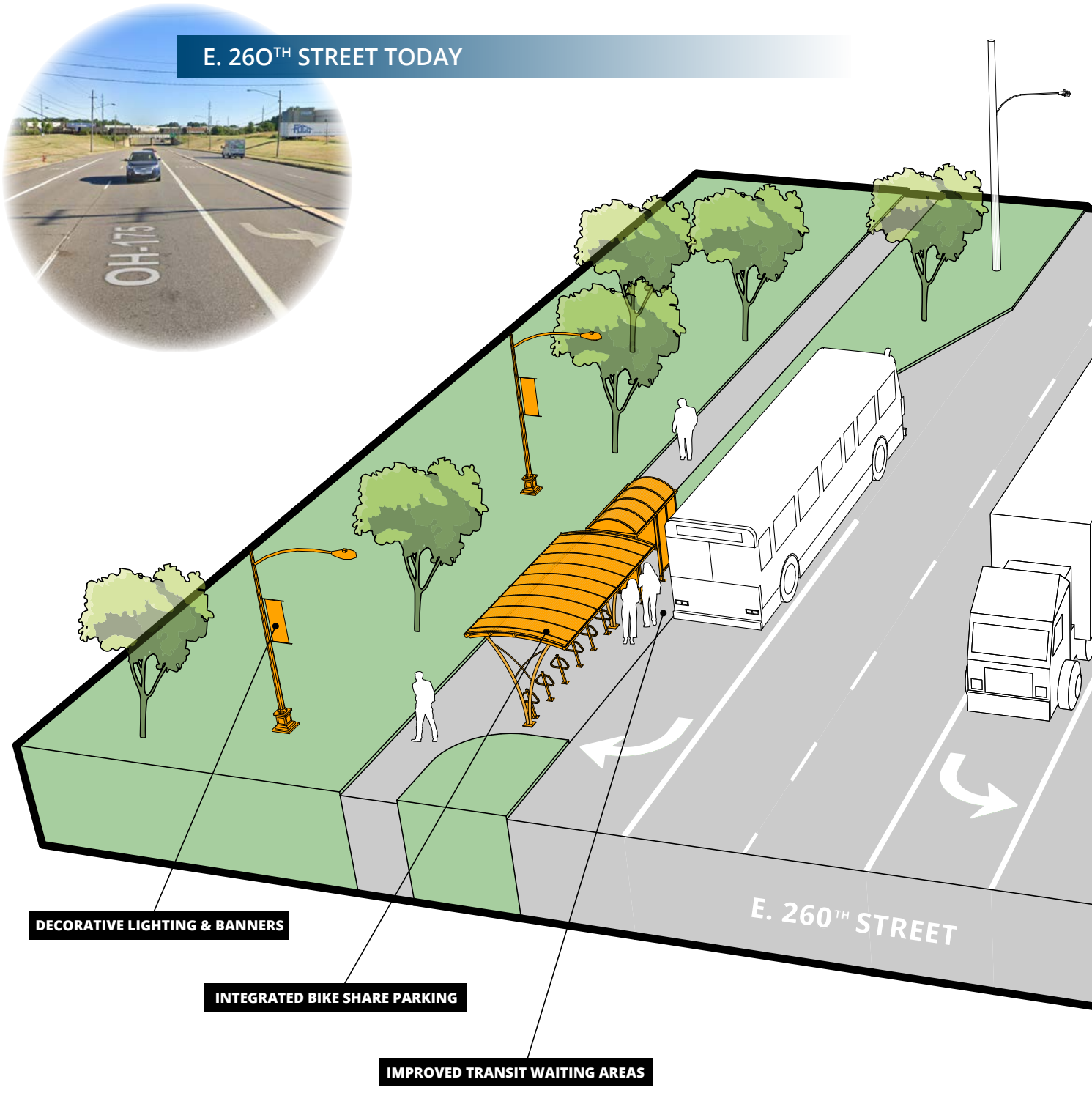
Seminary Road after to the improvements made in 2019 became a livable streetscape that supports multiple modes of transportation—placing safety at the forefront. The roadway now has two lanes of travel (one each direction), a 25 mph posted speed limit, and greatly improved safety for non-motorized users.

A post-implementation evaluation is a useful method for tracking a project's success and overall impact. The Seminary Road Complete Street Project's Implementation Evaluation is a great benchmark for understanding how the roadway improvements are performing and where adjustments might need to be made in the future.

Source: City of Alexandria, Virginia; Google Earth; County Planning

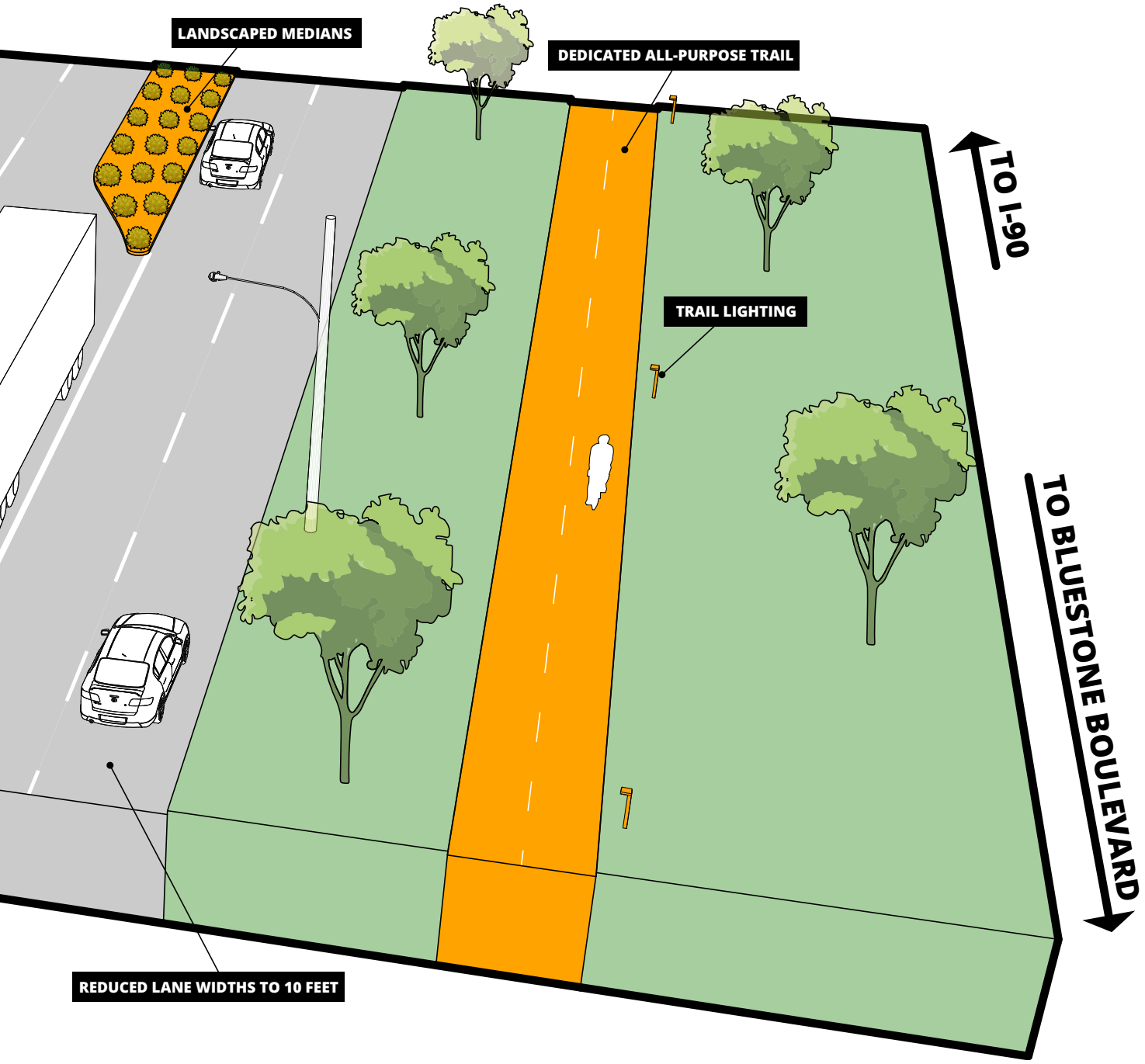
PROPOSED E. 260TH ROAD DIET IMPROVEMENTS & LANE WIDTH REDUCTIONS

E. 260TH STREET NORTH OF BLUESTONE BOULEVARD



Source: County Planning; Google Earth

Recommended road diets or lane width reductions are options for roadways that are "over-designed" with more pavement width than necessary based on several key indicators—average daily traffic, level of service, number of crashes, and other similar factors. There are numerous roadways within the City of Euclid that could be good candidates for road diet considerations—including E. 260th Street, which provides direct access to major employers and jobs, and averages just over 15,000 vehicles per day. As seen in the example below, E. 260th Street could be improved through lane width reductions from 12 feet to 10 feet, which would still maintaining the right and left turn only lanes to accommodate truck movements. This would provide enough space to accommodate a 10 foot wide all-purpose trail on the eastern side of the road, with enough room to safely pass underneath the railroad bridge to the north. Additionally, trail lighting, decorative lighting, a potential bike-share station, and improved transit waiting areas could be integrated as well to strengthen user safety and comfort.



BUFFERED BIKE LANES & TWO-WAY CYCLE TRACKS

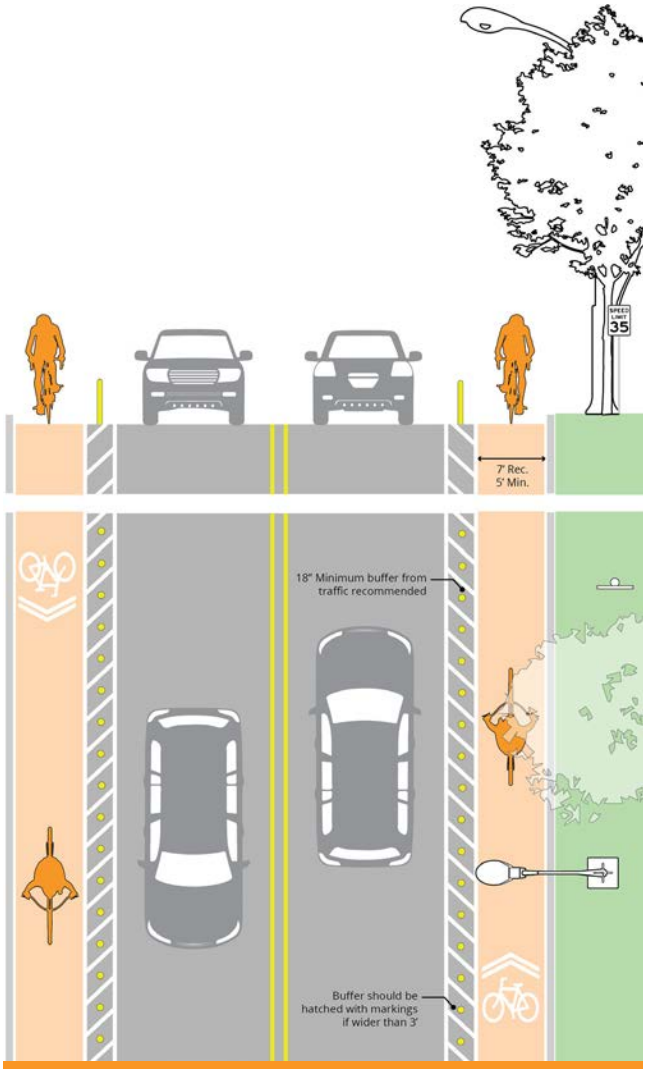
Bicyclists have similar needs in terms of access and mobility requirements to that of motorists, and are best accommodated by a well-connected and intuitive network of bicycle facilities. Typically, networks will consist of a variety of facility types; however, it is the goal of this Plan to create a network of connections that is safe, comfortable, and accessible by as many users as possible. It is a best practice that greater the separation of non-motorized users from motorists will increase their overall comfort level. When completely separate facilities—such as side paths and all-purpose trails—are not an option, buffered on-road facilities present an alternative that works within the existing right-of-way to achieve the same goal: improving roadway safety and comfort for bicyclists. Separated on-road facilities improve safety by a creating physical barrier between bicyclists and vehicles. A "street buffer" can take on many forms—including both vertical separators, such as bollards and planters, and horizontal separators, such as lane striping, from traffic. The Ohio Department of Transportation (ODOT) provides guidance to communities and recommends specific minimum standards based on projected peak hour directional bicyclists volumes. These include key considerations such safety, overall connectivity, ease of access, public feedback, available right-of-way, curbside lane uses, intersection operations, ingress and egress to the bikeway, maintenance, and feasibility.

In general, on-road facilities are a sensible network choice for more urbanized areas and are recommended on several of Euclid's primary corridors—including Lakeshore Boulevard, St. Clair Avenue, and E. 200th Street. These roadways have relatively low traffic volumes, wide right-of-way available, manageable speed limits (either 25 or 35 mph), and a high Level of Service (LOS)—making these roads good candidates for on-road facilities and as road diet considerations. However, it is important to note that conditions may change along a corridor—potentially warranting a combination of calming measures and roadway treatments. Corridors with many driveways or curb cuts may warrant safety and visibility improvements—including closing driveways, tightening turn radii (15-20 feet), narrowing driveways, and improving driveway definition by elevating the point of entry.

RECOMMENDED ACTIONS
Evaluate identified roads for preferred on-road facility configuration and type
Create school and community education/awareness campaigns for responsible road sharing of all users
Integrate strong wayfinding, signage, and road marking programs on streets where on-road facilities are implemented
Utilize continuous barriers to separate vehicles and bicyclists when possible and/or elevated facilities with intermittent barriers or delineators

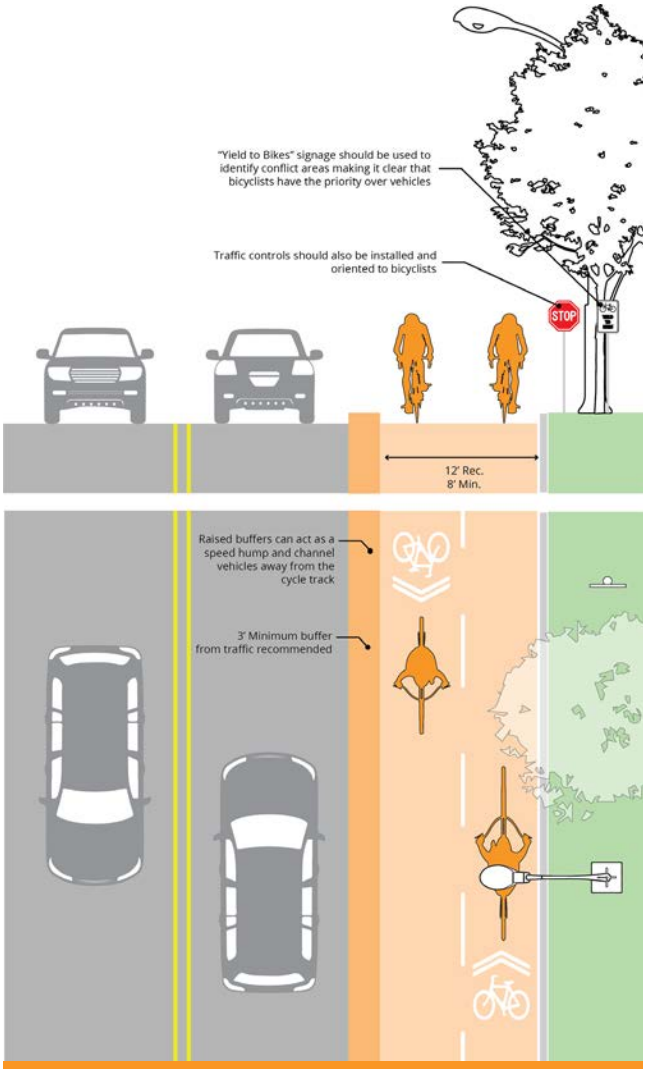
IMPLEMENTATION OVERVIEW: ON-ROAD FACILITIES			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Schools, Bike Advocacy Groups (Bike Euclid, Bike Cleveland), Community Block Clubs/Groups, ODNR		

Source: County Planning; Urban Bikeway Design Guide, National Association of City Transportation Officials (NACTO); Multimodal Design Guide, On-Road Bicycle Facilities, Ohio Department of Transportation (ODOT)



BIKE LANES WITH INTERMITTENT BARRIER

One-way bike lanes are the more widely used facility type than two-way bikeways, or "cycle tracks." This facility type allows bicyclists to travel in the same direction as traffic and is typically the easiest option to integrate into the existing operation of a roadway. One-way protected bike lanes can be designed to accommodate driver error is by utilizing physical barriers such as medians or vertical delineators, or by creating a mountable curb. A mountable curb or "elevated bike lane" raises the entirety of the facility by several inches or to the full height of the curb then dropped at driveways to allow vehicles to safely pass. These countermeasures help make bicyclists more noticeable.

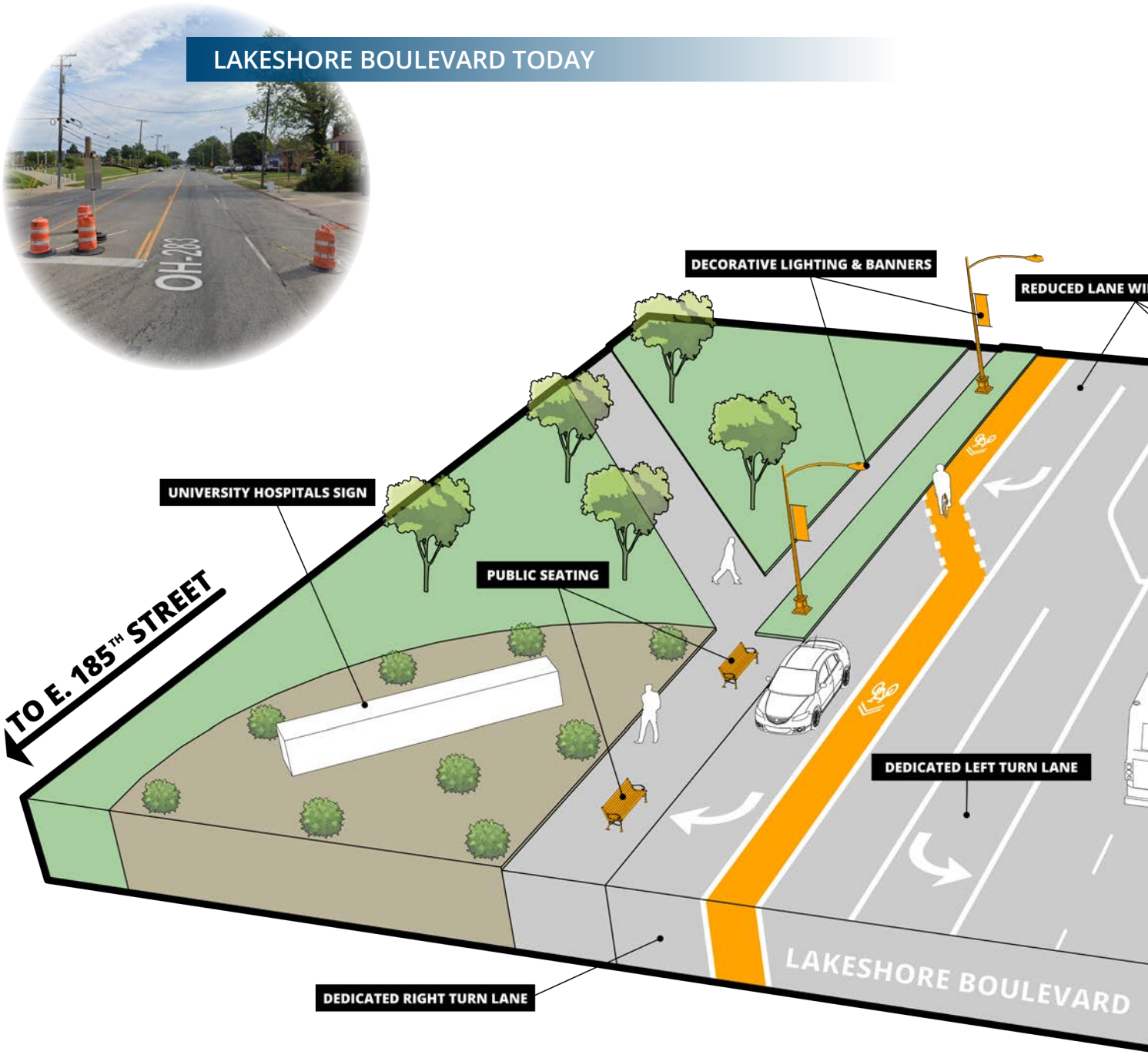


TWO-WAY CYCLE TRACK WITH CONTINUOUS BARRIER

Two-way cycle tracks are an alternative to more traditional one-way bike lanes, and integrate a counter flow movement for bicyclists. This facility type is used more often in urbanized settings where key destinations are clustered on a single side of the street, where fewer driveways and intersection points exist, or other similar contextual features occur. If used, extra attention should be given to the design of intersections, driveways, and other conflict points, as people walking and driving may not anticipate bicyclists traveling in the opposite direction—a continuous buffer would be recommended. Community signage, education, and outreach will be critical to ensuring the safety of all roadway users.

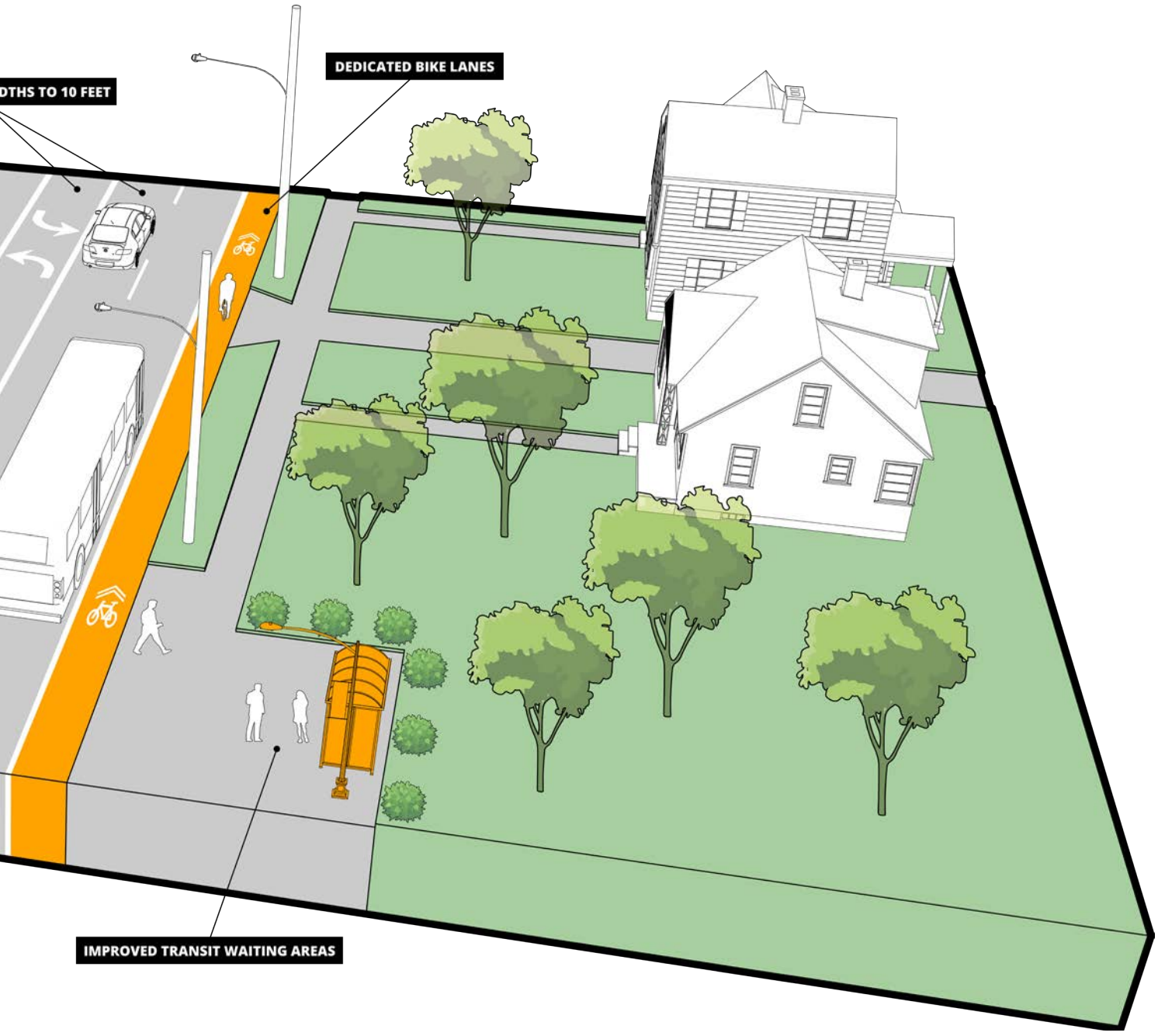
PROPOSED LAKESHORE BOULEVARD ON-ROAD FACILITY IMPROVEMENTS

LAKESHORE BOULEVARD EAST OF E. 185TH STREET



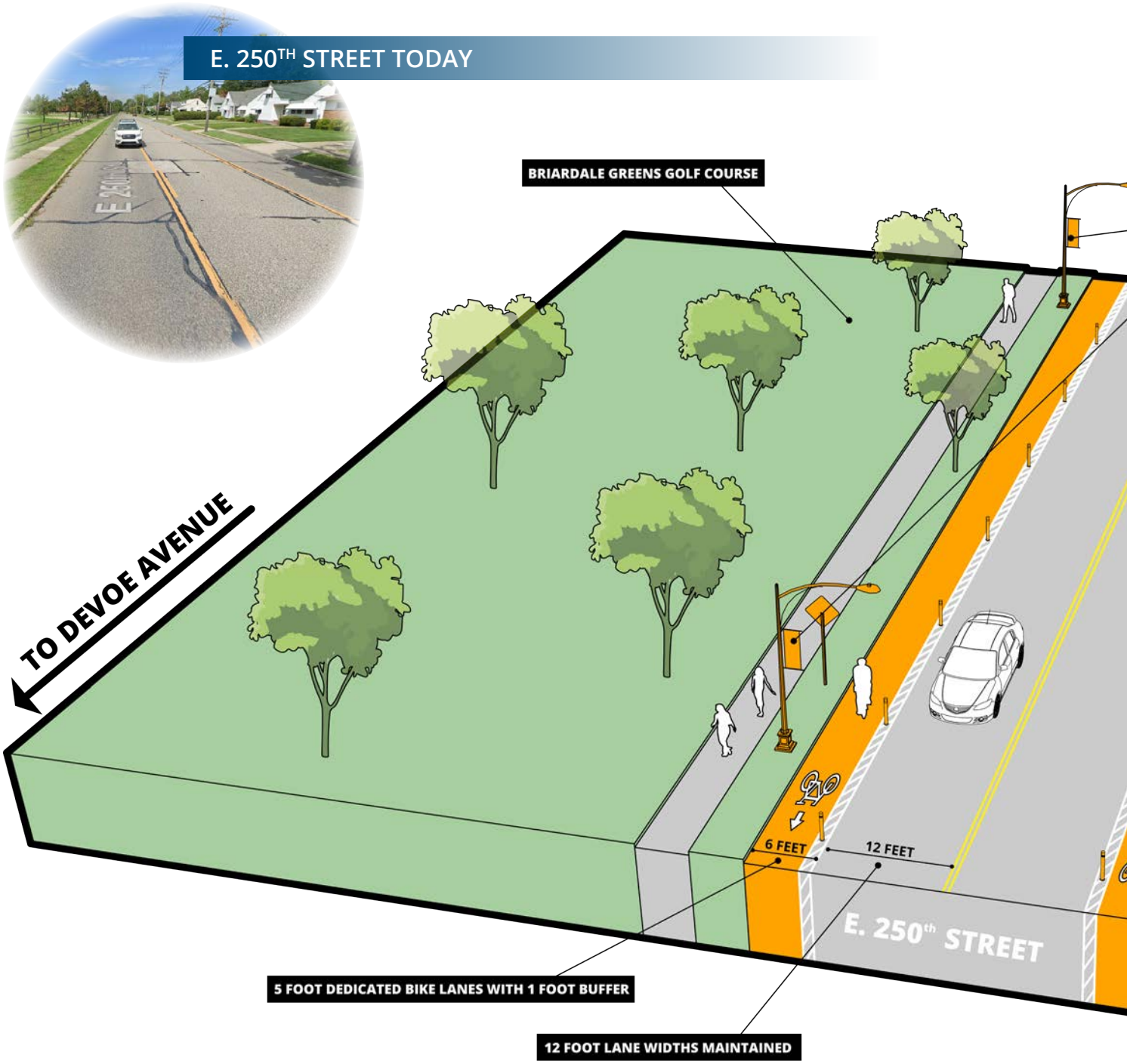
Source: County Planning; Google Earth

Recommended on-road facilities, such as bike lanes or cycle tracks, are a great lower-cost option when considering the safety and comfort of bicyclists on the road. In many cases bike lanes can be integrated into existing pavement widths and rights-of-way without the need for major roadway reconstruction—mostly through road re-striping and lane width reductions. Currently, Lakeshore Boulevard doesn't have as many daily vehicles as Euclid Avenue, but has just as much, if not more, pavement width. As seen in the example below, there is an opportunity to restructure and reorganize the western section of Lakeshore Boulevard from E. 189th Street to E. 185th Street. By reducing lane widths from 12 to 10 feet, enough space is created to accommodate five foot wide bike lanes within the existing pavement width. Road re-striping and surface paint will play an integral role in creating clear traffic divisions, not only for bicyclists, but also vehicles. Additionally, dedicated left and right turn lanes should be considered at E. 185th Street to make vehicular turning movements more predictable. Lastly, decorative lighting and improved transit waiting areas should be integrated into this area for the safety and comfort of non-motorized users.



PROPOSED E. 250TH STREET ON-ROAD FACILITY IMPROVEMENTS

E. 250TH STREET SOUTH OF MARSDON DRIVE



Source: County Planning; Google Earth

E. 250th Street is another roadway that would be a good candidate for road diet considerations and on-road facilities. Currently, E. 250th Street has 12 foot drive lanes in each direction and a continuous 12 foot center turn lane. Due to the low traffic volumes on this street—about 3,712 vehicles per day—as well as residential neighborhoods on both sides, the road could be restriped and the excess right-of-way be repurposed to allow for dedicated bike lanes in each direction. This configuration would maintain 12 foot drive lanes in each direction and the space formerly dedicated to the center turn lane would be repurposed into two, 5 foot dedicated bike lanes with 1 foot buffers in each direction. This route would connect into the larger proposed network via neighborhood greenways on Drakefield Avenue and Stephen Avenue, as well as off-road facilities on N. Lakeland Boulevard and on-road facilities on Lakeshore Boulevard. Removing the center turn lane would also have the added benefit of narrowing the roadway, making E. 250th Street feel more like the local neighborhood street it was intended as, rather than a collector road.

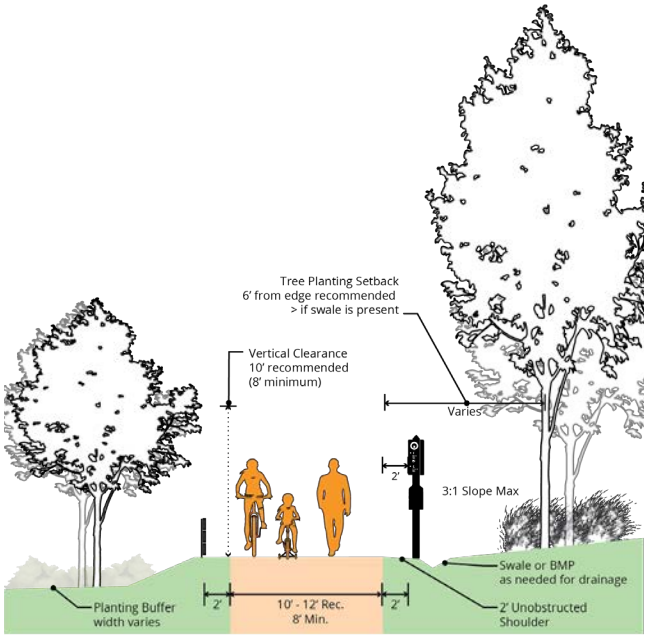
ALL-PURPOSE TRAILS & SIDEPATHS

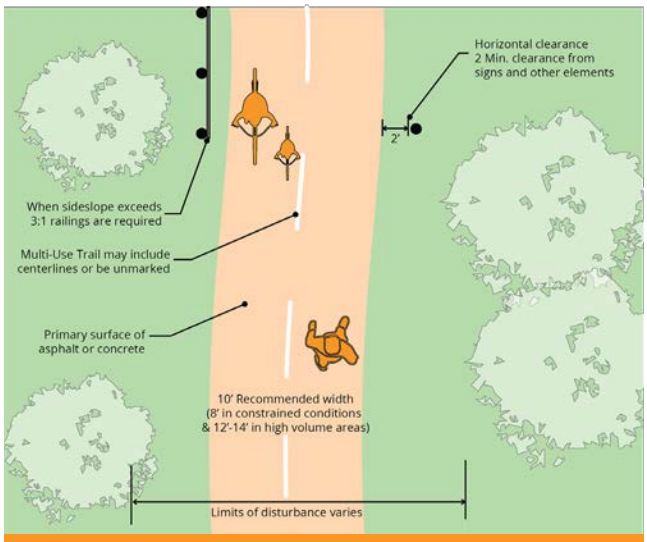
All-purpose trails and sidepaths are important components to building an all ages and abilities network of non-motorized connections and infrastructure. Trails in general provide numerous benefits to communities and not only provide a wealth of recreational opportunities, they also have positive impacts on the economy, the physical health of its residents, property values, and quality of life. All-purpose trails and sidepaths are both recreational amenities and transportation facilities, thus accessibility is mandated by the Federal Americans with Disabilities Act of 1990 (ADA)—requiring certain design standards for facilities to be in compliance with the law. Additionally, the U.S. Access Board, in partnership with the Architecture Barriers Act (ABA), have developed new guidelines under the ADA law that addresses access to sidewalks and streets, crosswalks, curb ramps, pedestrian signals, on-street parking, and other components of public rights-of-way. These Public Rights-of-Way Accessibility Guidelines are considered best practices for ensuring pedestrian and bicycle facilities are physically safe and accessible by all users—what is accessible or easy for one user may not be for another. In addition to the location and accessibility of trails, how the trail surface is constructed is equally as important as placement. Material, drainage, costs, life expectancy, and long-term maintenance are all key considerations when installing new all-purpose trails and sidepaths. While hard-surface trails, such as asphalt or concrete, are more accommodating, require less maintenance, and can withstand frequent use, they are also more expensive. On the other hand, soft-surface trails, such as natural surface or woodchips, cost less, but generally do not hold up well under heavy use or varying weather conditions, nor are they ADA compliant. This plan recommends using a combination of hard-surface materials to construct sidepaths along the eastern side of Babbitt Road, southern side of Chardon Road, southern side of Euclid Avenue, eastern side of Glenridge Road, eastern side of Highland Road, northern side of N. Lakeland and Lakeshore Boulevards (Sims Park to Downtown Euclid), and the eastern sides of E. 222nd Street and E. 260th Street.

RECOMMENDED ACTIONS
Prioritize installation of the Euclid Creek Connector Trail from Euclid Creek Reservation to the Lakefront.
Evaluate potential trail extensions through utility rights-of-way, vacated railroads, land bank parcels, or strategic land assembly as opportunities become available for connections
Evaluate trail alignment options and engineering/topography strategies along Euclid Avenue, Chardon Road, and Highland Road to ensure the ease of access and usability is maintained
Consider a sidewalk conversion into an all-purpose trail on N. Lakeland Boulevard, Lakeshore Boulevard (Sims Park to Downtown Euclid), and Glenridge Road

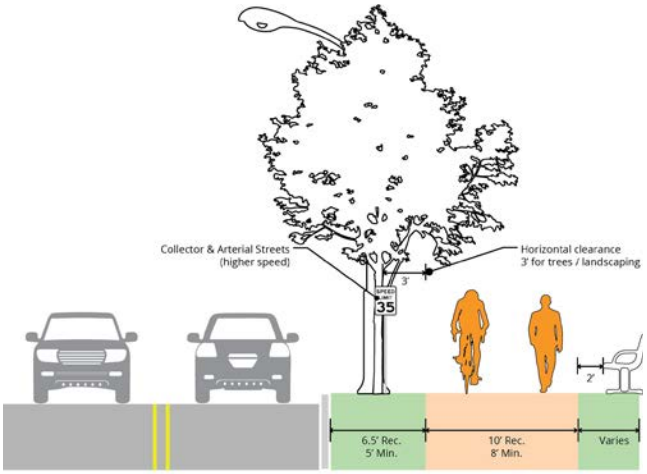
IMPLEMENTATION OVERVIEW: TRAILS & SIDEPATHS			
Priority Level	High	**Medium**	Low
Timeline	Near-Term	Mid-Term	**Long-Term**
Estimated Costs	**High**	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Utilities, Railroads, Schools, Property Owners, Bike Advocacy Groups (Bike Euclid, Bike Cleveland), Cuyahoga Land Bank, Cleveland Metroparks.		

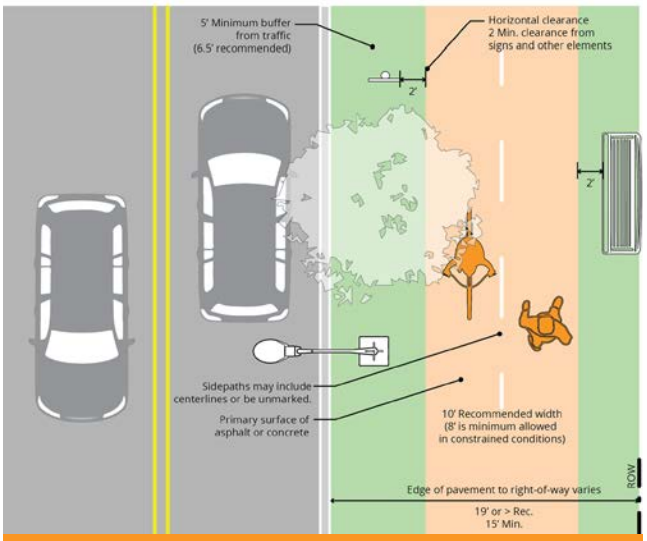
Source: County Planning; Accessibility, Surfaces, Rails-to-Trails Conservancy; Public Rights-of-Way Accessibility Guidelines, U.S. Access Board; Building Better Asphalt Trails, Eric West, P.E., American Trails





ALL-PURPOSE TRAIL





SIDEPATH

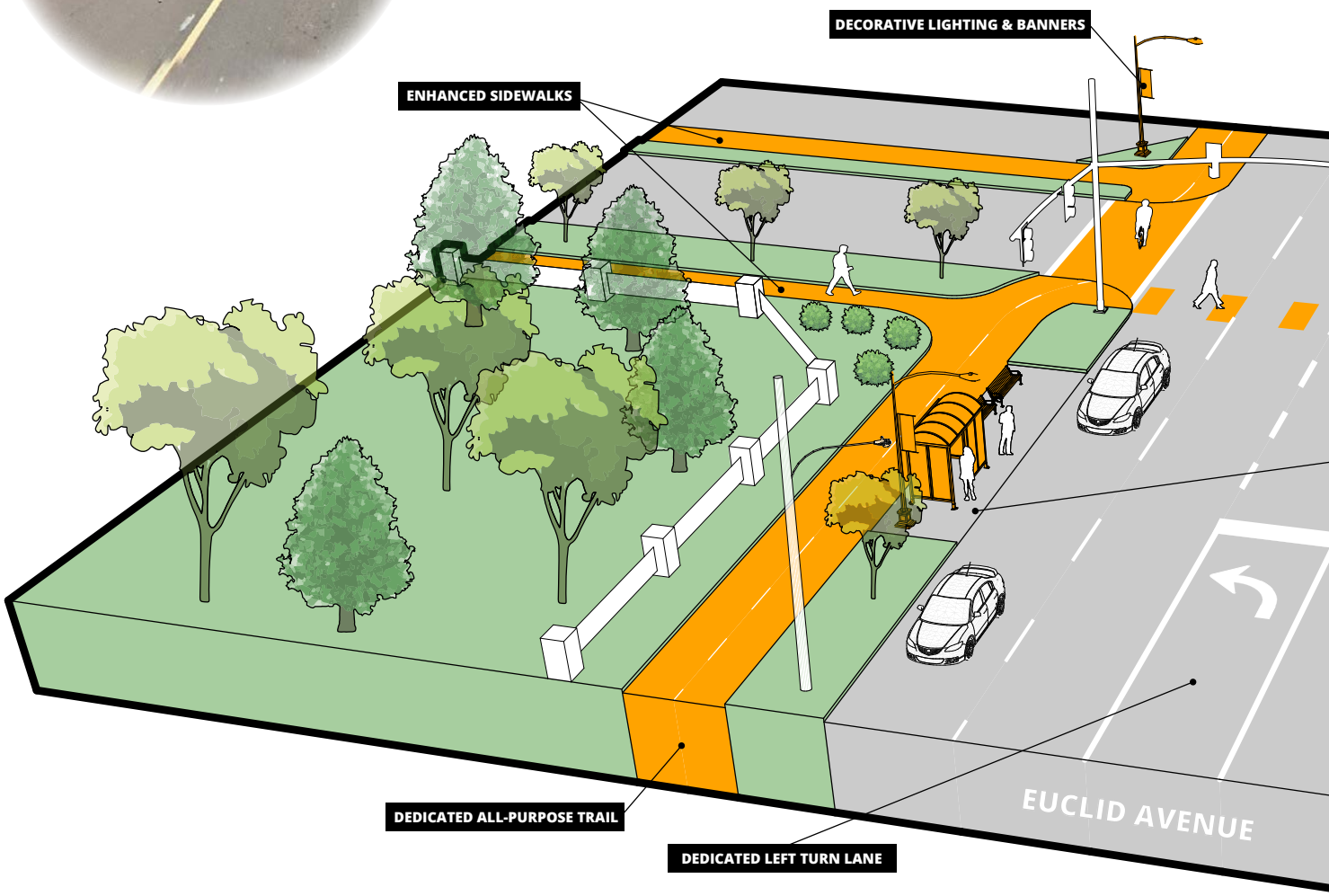
All-purpose trails rank the highest in terms of user comfort level and separation from roadway traffic. However, this facility type may take much longer to implement than other types of infrastructure due to the necessity for potential land acquisitions, easements, long-term maintenance, and funding. Planning for and installing all-purpose trails takes collaboration and coordination between numerous partners. Trail alignments should also be carefully considered to ensure an accessible route is created for all to utilize.

Sidepaths are all-purpose trails that follow and are adjacent to active roadways. This facility type allows its users to be fully separated from moving traffic and rank the highest in terms of comfort level—making them an ideal all ages and abilities network choice. Sidepaths can be implemented by utilizing the existing sidewalk network and widening sidewalks where there is enough space within the right-of-way to do so. However, land acquisitions or easements may still be required when undertaking this process.

PROPOSED EUCLID AVENUE OFF-ROAD FACILITY IMPROVEMENTS

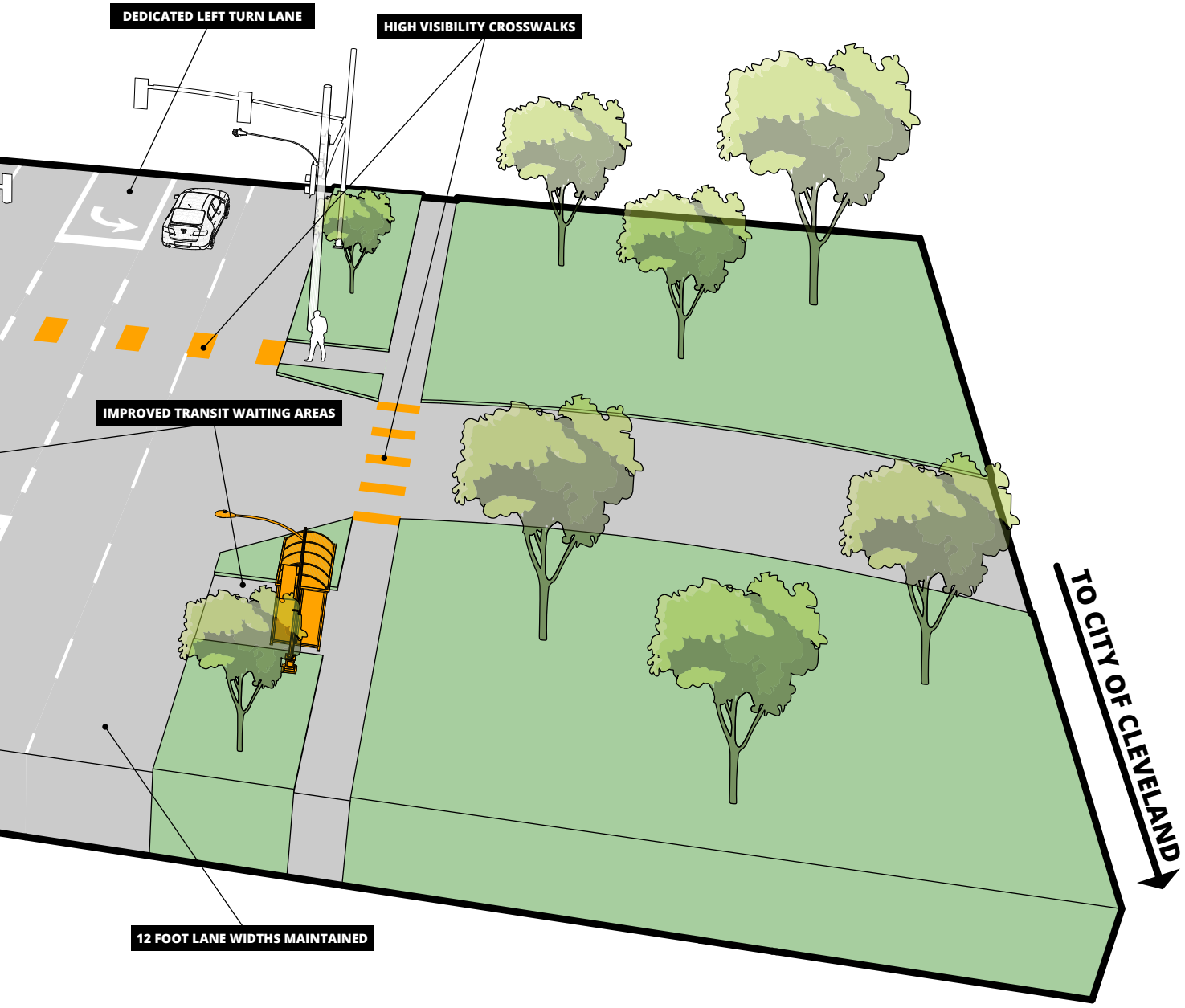
EUCLID AVENUE WEST OF E. 193RD STREET

EUCLID AVENUE TODAY



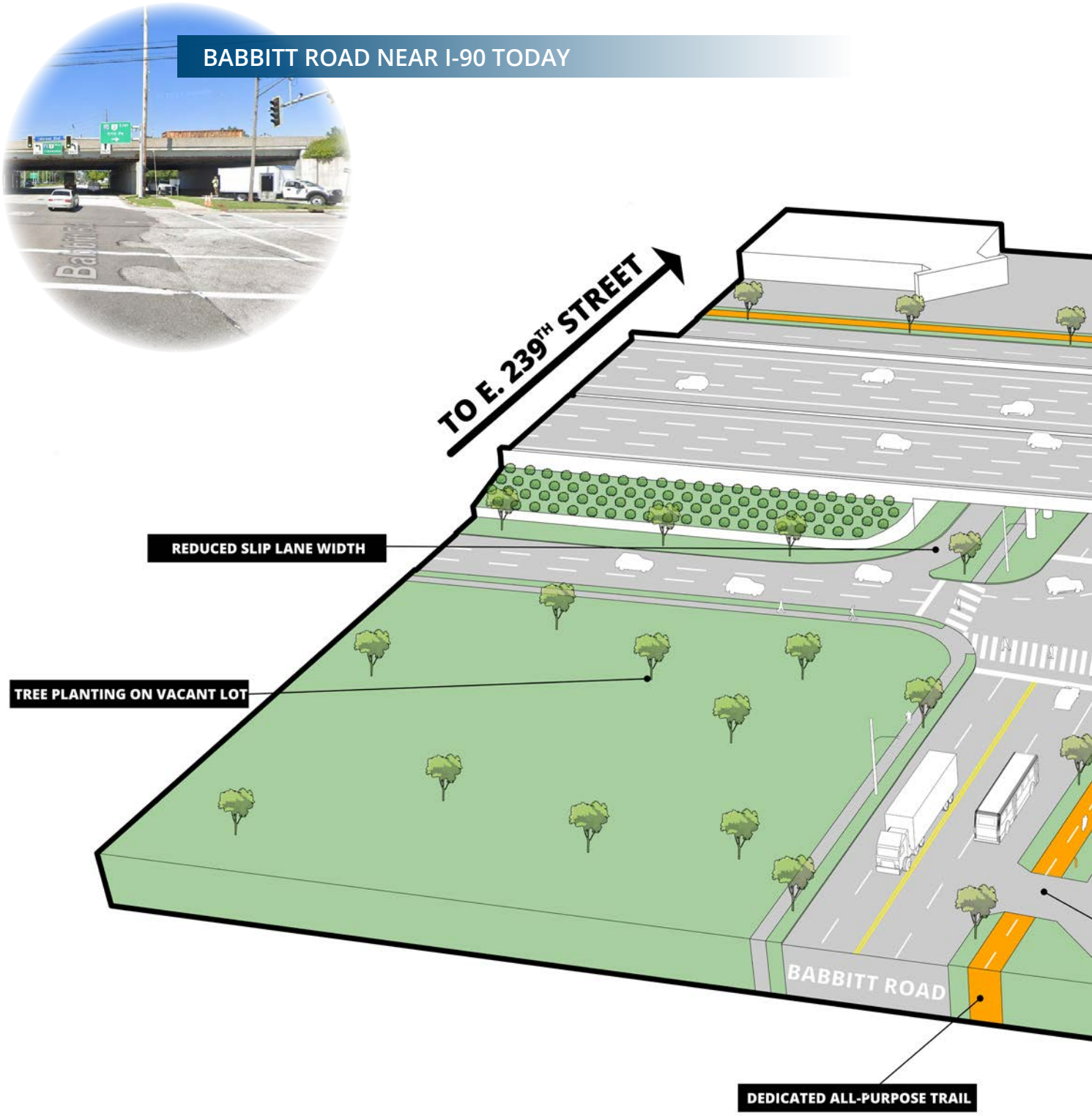
Source: County Planning; Google Earth

Recommended off-road facilities, or all-purpose trails and sidepaths, in Euclid are critical for bicycle and pedestrian safety along major thoroughfares. These types of facilities are suitable for all ages and abilities, and provide the greatest comfort levels for its users. All-purpose trails and sidepaths are generally 10 feet wide and connect into other existing trail systems, key destinations, and even residential neighborhoods. Euclid Avenue has some of the highest daily traffic counts within the city, with over 25,000 vehicles traveling between the Cleveland border and Chardon Road alone. Due to this level of traffic and current travel speeds at 35 mph, off-road facilities would be the best choice in this location. As seen in the example below, an all-purpose trail or sidepath could be integrated on the northern side of Euclid Avenue—which will likely need collaboration with property owners and utilities—in addition to improved transit waiting environments, decorative lighting for improved night safety, and new high visibility crosswalks. Current 12 foot lane widths could be maintained, with a conversion to dedicated left turn only lanes to help prevent unpredictable turning movements from vehicles.



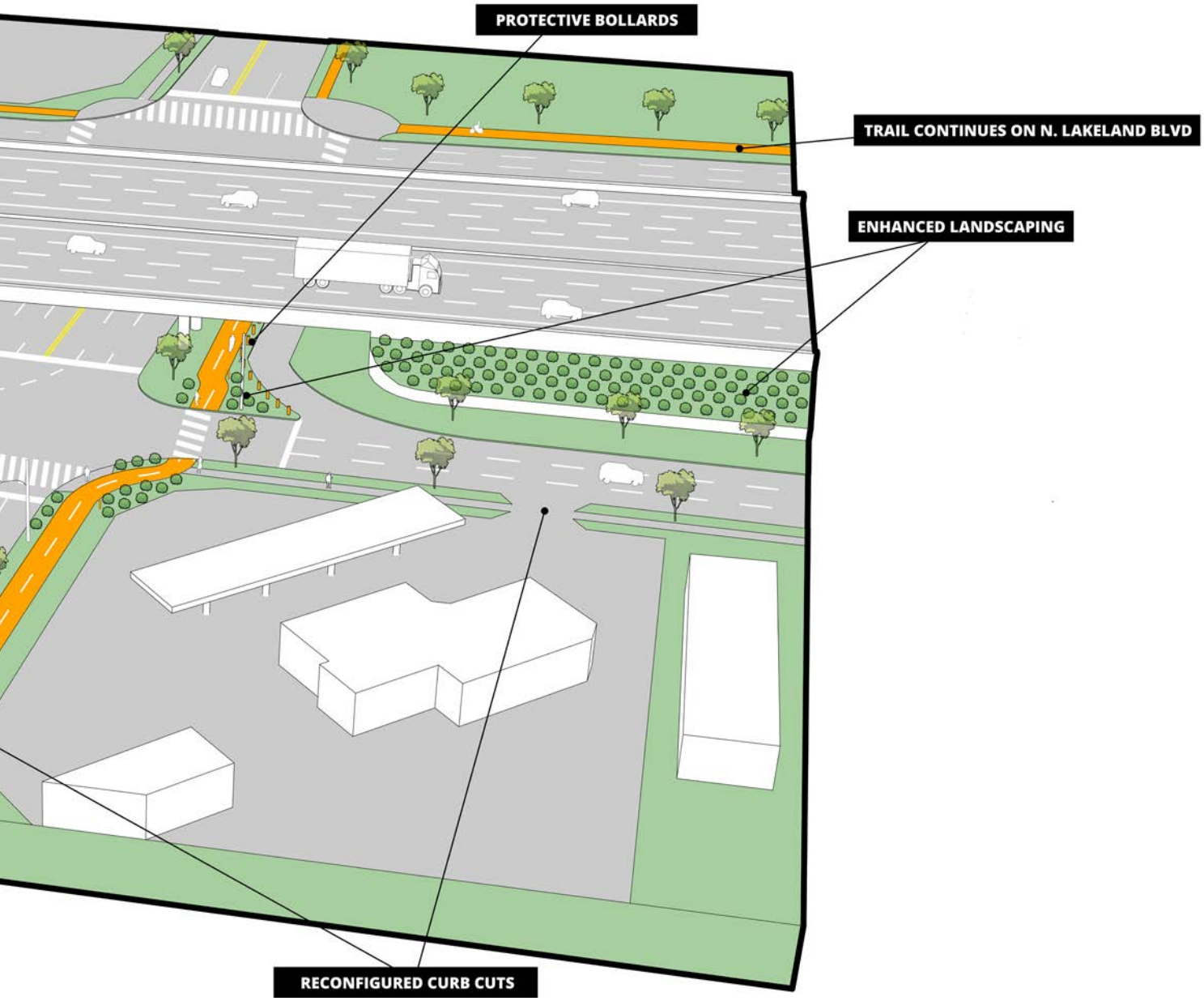
PROPOSED BABBITT ROAD OFF-ROAD FACILITY IMPROVEMENTS

BABBITT ROAD NEAR I-90



Source: County Planning; Google Earth

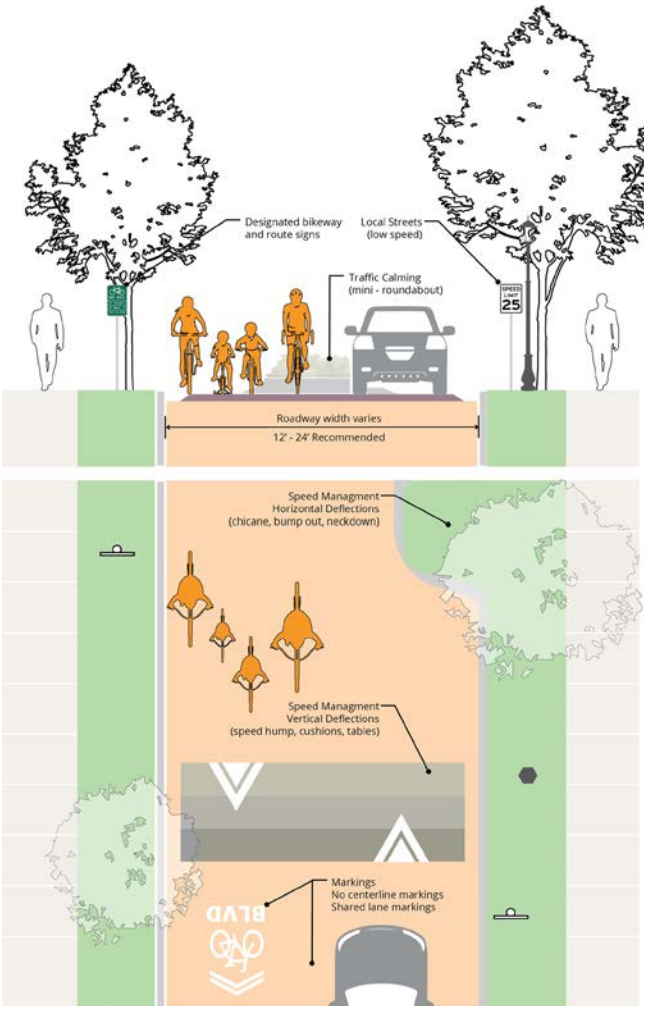
Off-road facilities, or all-purpose trails and sidepaths, are especially important around high traffic intersections and land uses that do not support comfortable walking environments. While Euclid's large industrial corridors and freeway systems are economic drivers for the city, they also physically disconnected residents north and south. Due to heavy truck traffic in these areas, off-street facilities are recommended to help bridge this north-south divide, as well as provide safe walking and bicycling facilities to the city's industrial core. As seen in the example below, a sidepath could be integrated into the western side of Babbitt Road utilizing existing right-of-way and easements from property owners. The existing bridge pillars could help protect users from the main roadway under I-90, and protective bollards could be installed for additional protection from slip lanes. The existing slip lanes are still needed in this area due to the heavy truck traffic, however they can be reduced in width to allow for more pedestrian space and to slow traffic. Additional underpass improvements such as enhanced landscaping, lighting, and public art can be utilized to improve the pedestrian experience. Similar strategies can also be employed on other north-south streets that pass under I-90—including E. 200th Street, E. 222nd Street, and E. 260th street.



NEIGHBORHOOD GREENWAYS & TRAFFIC CALMING

Bicycle boulevards or "neighborhood greenways" are designated roadways that have low traffic volumes and speeds, and are designed to give bicyclists the priority. Designated routes can be enhanced with a wide variety of treatments to best manage traffic volumes and speeds by specifically tailoring existing conditions to meet desired outcomes. Signage and road markings, speed and volume management, and intersection crossings are important components to calming traffic and improving safety.

While it is important to slow down motorists, pavement marking such as high-visibility crosswalks, bike boxes (highly-visible area for bikes to queue in traffic), and HAWK or Rectangular Rapid Flashing Beacons (RRFB) can help make drivers more aware of pedestrians and cyclists at intersections. Additionally, the size of a turn radius can also directly relate to the length of a crosswalk—longer crosswalks take more time to cross, increasing pedestrian exposure. Eliminating right turn “slip” lanes in favor of a smaller curb radius not only encourages slower and safer turns, it also expands the pedestrian area and shortens crossing distances and times.



RECOMMENDED ACTIONS
Identify pilot projects for implementation of traffic calming measures, especially on proposed Neighborhood Greenways
Implement permanent features from successful pilot projects and update all signage and road markings accordingly
Reduce curb radii and add curb extensions, median refugee islands, and mid-block crossings on designated Neighborhood Greenways routes and high-stress corridors with higher-levels of traffic stress.
Collaborate with ODOT to develop an access management plan to help reduce curb cuts and conflict points between cars and non-motorized users

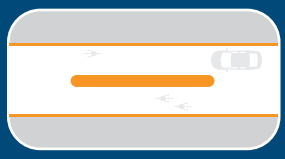
IMPLEMENTATION OVERVIEW: GREENWAYS/CALM TRAFFIC			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Schools, Neighborhood Groups, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

PLANNING IN ACTION

SPEED REDUCTION TECHNIQUES

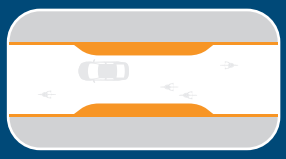
Controlling the speed of vehicles can take on many forms—some techniques physically alter the configuration of the road, while others change how people psychologically perceive and respond to a street. The National Association of City Transportation Officials (NACTO) provides the following guidance on numerous tools used to impact the speed of motorized traffic.

MEDIANS



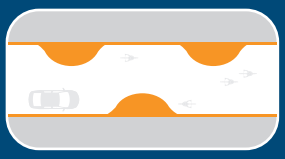
Medians create a pinchpoint for traffic in the center of the roadway and can reduce pedestrian crossing distances.

PINCHPOINT



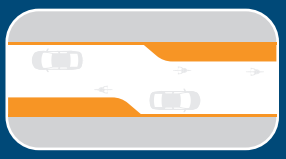
Chokers or pinchpoints restrict motorists from operating at high speeds on local streets and significantly expand the sidewalk realm for pedestrians.

CHICANE



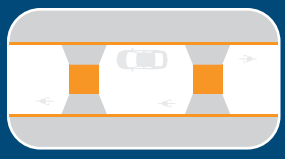
Chicanes slow drivers by alternating parking or curb extensions along the corridor.

LANE SHIFT



A lane shift horizontally deflects a vehicle and may be designed with striping, curb extensions, or parking.

SPEED HUMP

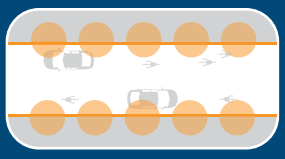


Speed humps vertically deflect vehicles and may be combined with a midblock crosswalk.

2-WAY STREET

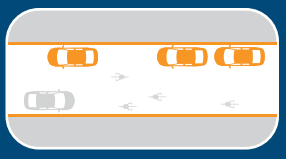
2-way streets, especially those with narrower profiles, encourage motorists to be more cautious and wary of oncoming traffic.

STREET TREES



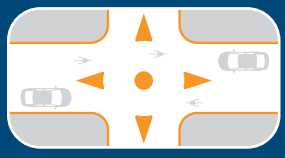
Trees narrow a driver's visual field and create rhythm along the street.

ON-STREET PARKING



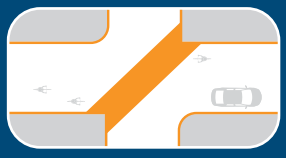
On-street parking narrows the street and slows traffic by creating friction for moving vehicles.

ROUNDABOUT



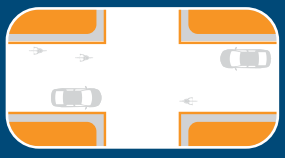
Roundabouts reduce traffic speeds at intersections by requiring motorists to move with caution through conflict points.

DIVERTER



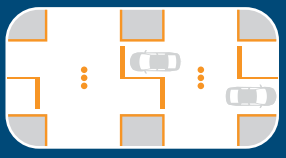
A traffic diverter breaks up the street grid while maintaining permeability for pedestrians and bicyclists.

BUILDING LINES



A dense built environment with no significant setbacks constrains sightlines, making drivers more alert and aware of their surroundings.

SIGNAL PROGRESSION

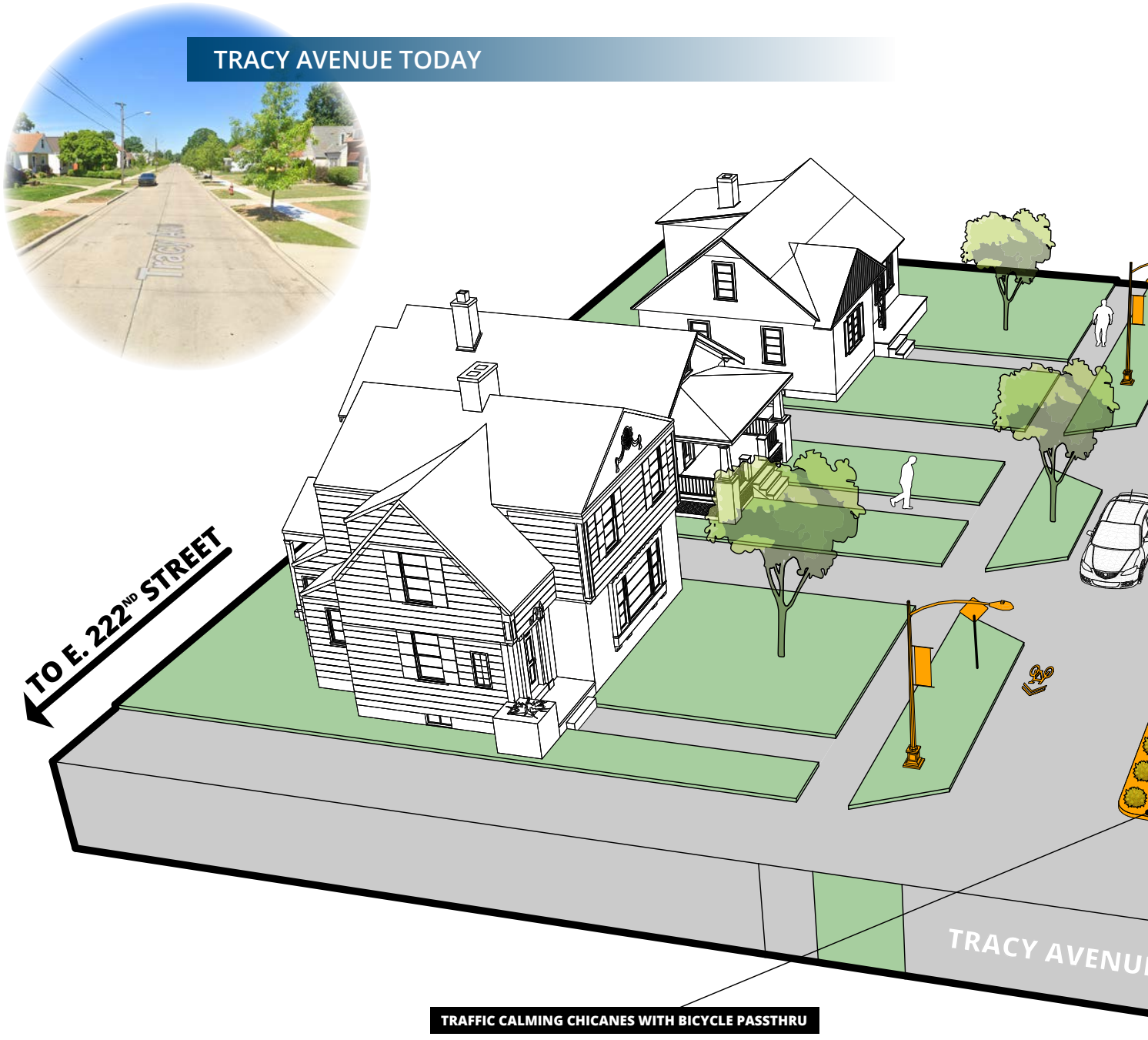


Signals timed to a street's target speed can create lower speeds along a corridor.

Source: County Planning; National Association of City Transportation Officials (NACTO)

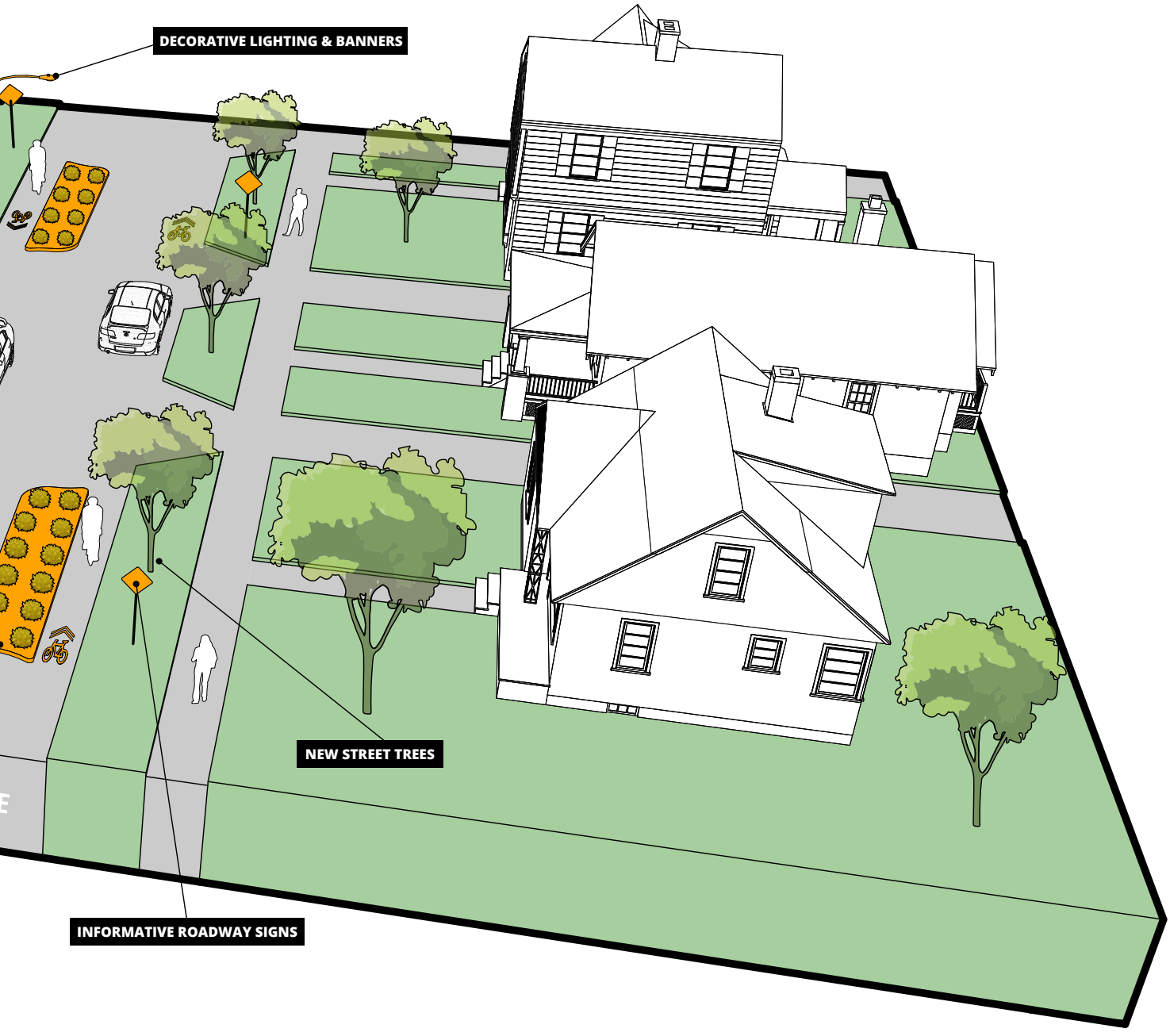
PROPOSED TRACY AVENUE NEIGHBORHOOD GREENWAY IMPROVEMENTS

TRACY AVENUE WEST OF E. 222ND STREET



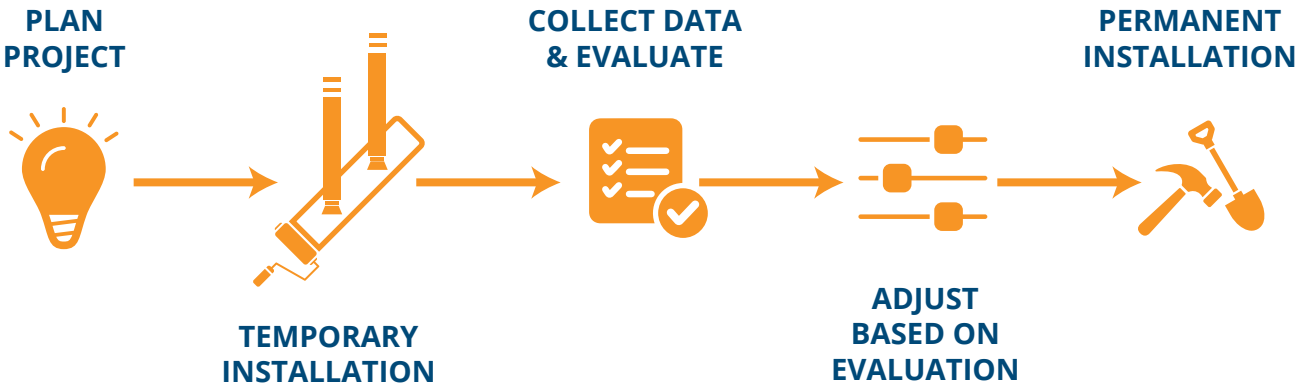
Source: County Planning; Google Earth

Recommended Neighborhood Greenways routes should integrate streetscaping and traffic calming elements to give non-motorized traffic the priority, and provide a safe and comfortable experience for all users. As seen in the example below, Tracy Avenue is an important Neighborhood Greenway because it provides direct access to E. 222nd Street—which has numerous community and institutional amenities, in addition to other major trail connections within Euclid's proposed citywide network. Neighborhood Greenways should also include informational signage clearly identifying the designated route, lighting for safety, and appropriately scaled landscaping to improve comfort. These types of routes are a lower cost facility choice that still supports an all ages and abilities network to accommodate any skill or age of user.



TEMPORARY INSTALLATIONS

An early strategy for implementing safer bicycle and pedestrian infrastructure is starting out with low-cost, temporary installations. Temporary installations have several added benefits compared to the traditional construction process. By utilizing demonstration projects, communities can gather meaningful, on-the-ground public input on a proposed design, and evaluate a proposal through supporting data—such as speed, traffic volumes, bicycle and pedestrian counts, and air quality readings. These installations are designed to accepted engineering standards and have the added benefit of allowing motorists to get accustomed to potential larger scale infrastructure improvements before they are permanently constructed. Starting out with demonstration projects can allow for a streamlined decision making process. Different facility types and infrastructure improvements can be tested or altered based on the individual context and data gathered before it is installed. While this approach may result in more time spent in its evaluation, it has the ability to save money in the long run by ensuring that the infrastructure is supported and understood by pedestrians, cyclists, and motorists in the community—ultimately securing that the intended impact is achieved. The relatively low cost of demonstration projects makes them an integral first step and early win in implementation.



RECOMMENDED ACTIONS
Utilize the NOACA Street Supplies program as a method to demonstrate and test temporary bicycle and pedestrian infrastructure improvements.
Prioritize neighborhood traffic calming projects such as speed tables and curb bump outs to help build out a neighborhood greenway network
Consider testing reduce turn/curb radii at intersections along the proposed neighborhood greenway network—with an emphasis at major corridor crossings and in Downtown Euclid

IMPLEMENTATION OVERVIEW: TEMPORARY INSTALLS — EARLY WIN!

Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, City of Euclid Public Service Department, Neighborhood Groups, Residents, Schools, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

PLANNING IN ACTION

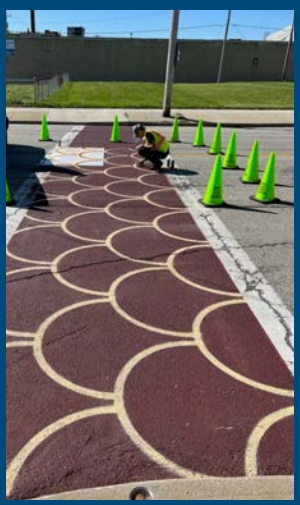
CASE STUDY: PEOPLE'S STREETS—ASIATOWN

Funded through a grant from the Ohio Department of Transportation (ODOT) and the Ohio Department of Health, the Northeast Ohio Coordinating Agency's (NOACA) Street Supplies program provides a free library of roadway materials to communities within its service area. The City of Euclid has experience utilizing NOACA's Street Supplies program, with the inaugural Street Supplies Project resulting in a 30 day temporary installation on Lakeshore Boulevard.

Since its creation, other communities have also begun to utilize this program in creative and semi-permanent ways. One such example is People's Streets on Payne Avenue in AsiaTown. This grassroots initiative is run by volunteers from various socio-economic backgrounds that come together to create streets that better serve people. The mission of People's Streets is to, "create connections between neighborhoods, safer streets for all ages and modes of travel, and welcoming places where people embrace their environment."

The first project for People's Streets was on the Payne Avenue corridor—with the vision of creating a more vibrant streetscape. People's Street Payne Avenue was the first of its kind in the City of Cleveland and received approval from the Cleveland Planning Commission in September of 2021. Shortly afterwards, and with the help of neighborhood volunteers, they began by painting and installing decorative crosswalks, temporary ADA ramps, and curb extensions along Payne Avenue at major intersections in AsiaTown and Campus District neighborhoods. People's Streets also striped temporary bike lanes on the Payne Avenue Bridge over I-90. The vibrant design added a sense of cultural placemaking to the street in Cleveland's AsiaTown neighborhood, but also improved safety for pedestrians and cyclists by calming traffic and elevating their visibility.

This project was a temporary improvement to advocate for safer streets and crossings. With an incredible amount of support from the Cleveland Planning Commission, volunteers, and local artists, the project was completed in Spring of 2022. The People's Streets Payne Project remained in place until the resurfacing of Payne Avenue began in 2023, with plans for permanent installation in 2024.



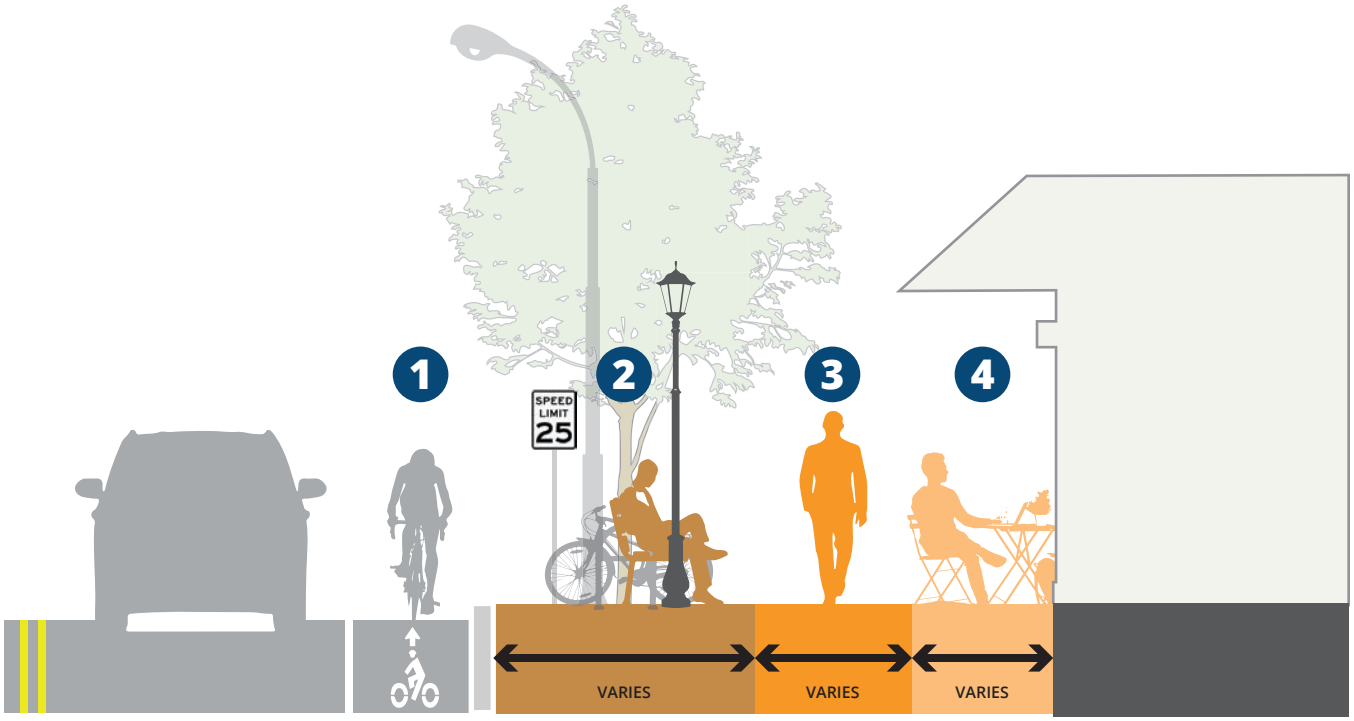
People's Streets Payne Avenue created temporary infrastructure improvements including painted crosswalks, curb extensions, and temporary protected bike lanes. This demonstration project remained in place for almost two years.

The NOACA Street Supply library includes street paint, tape, cones, signage, street furniture, bike racks, and planters. NOACA has also published a Community Guidance document, pictured left, which outlines program details, processes, and procedures to get communities started, as well as an inventory sheet of available supplies.

Source: Northeast Ohio Areawide Coordinating Agency (NOACA); AsiaTown Cleveland

STREETSCAPING & AMENITIES

Utilizing city owned rights-of-way in thoughtful and creative ways can allow for added amenities to further enhance the visual aesthetics, safety, and social interaction along a corridor. Additionally, branding can also be directly incorporated into amenities to help promote a sense of identity and celebrate a location's character. It is recommended that Euclid's commercial corridors incorporate the following streetscape amenities with cohesive design features that will promote pedestrian comfort and safety, as well as define community identity and sense of place.



Streetscaping amenities—including furniture, trees, landscaping, lighting, signage, bike parking, and other similar features—are key components of creating a comfortable space for both walking and biking. Generally, public rights-of-way on commercial corridors should be split into four zones:

1. **The Roadway & Extension Zone**, extends beyond the curb into the roadway and is the primary space for car travel and on-street bicycle facilities.
2. **The Edge & Furnishing Zone**, is located between the curb and the sidewalk and is where most streetscape amenities should be located to act as a buffer between the roadway and the sidewalk.
3. **The Sidewalk & Pedestrian Zone**, is the primary pathway for pedestrian travel and ensures that pedestrians always have a safe, adequate, and accessible facility to use.
4. **The Building & Frontage Zone**, extends between the sidewalk and property line and consists of business specific amenities and provides adequate space to enter and exit buildings safely.

Source: County Planning

BENCHES & SEATING

Benches and seating make the public realm more enjoyable and accessible for all, and provide passersby with a place to sit, rest, wait, eat, and socialize. Seating should be fixed to the pavement or built into a wall to avoid theft. Seating should be located under trees where possible to provide shade and a comfortable experience. Where sidewalk widths can accommodate it, seating should be oriented perpendicular to the street, however when seating needs to be oriented parallel to the street, it should face towards buildings when located in the Edge & Furnishing Zone, and toward the sidewalk when located in the Building & Frontage Zone.

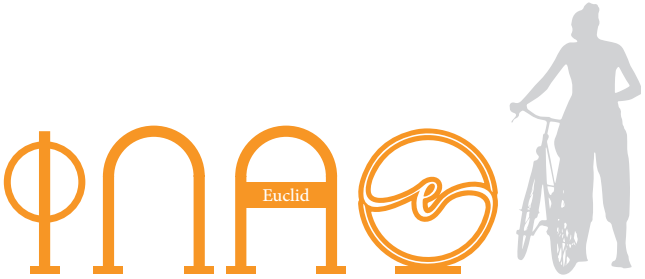
TRASH & RECYCLING RECEPTACLES

Trash receptacles are necessary for keeping the public realm clean—however with proper design and branding they can reinforce the uniform character of public street furniture. Trash and recycling receptacles should be located in highly visible and active locations, such as street corners and transit waiting environments, and should be made of durable materials that allow for ease of use, maintenance, and cleaning.

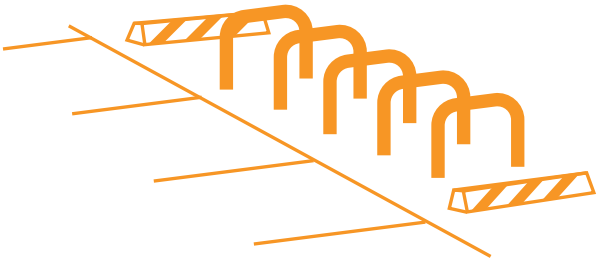
BICYCLE PARKING

Bicycle parking is important for promoting bicycle usage and should be implemented throughout the City of Euclid. Effective bike parking depends on two main factors: 1) proximity to destinations; and 2) ease of use. Bike parking should be visible and close to the entrance of the businesses it serves. In places with limited sidewalk space, "bike corrals" can be located within parking spaces adjacent to the curb. Bicycle racks can also incorporate design or branding elements. However, it is more important for bicycle parking to be functional and intuitive than aesthetic. Racks should be made of high quality material, be bolted into concrete, and be able to provide two points of contact with the bicycle frame.

As seen in the images both above, street furniture such as benches and trash and recycling receptacles provide the opportunity for design elements that help to reinforce the city's branding and identity. Creating cohesive branding standards either at the City level or on a more targeted corridor or neighborhood level helps to make the street amenities look unified and reinforce a sense of place.



As seen in the image above, recommended bicycle racks include the "Inverted U" and "Post and Ring" designs. These provide two points of contact with a bicycle's frame, while being easy to install and can come in many different variations.



Bike corrals can be utilized when there is a limited amount of sidewalk space and available on-street car parking spaces. One car parking space can typically accommodate eight to twelve bicycles.

STREETSCAPING & AMENITIES *(CONTINUED)*

PUBLIC ART & LIGHTING

Public art can help beautify and unify places with a distinct theme or identity, as well as simply add visual interest to an area. Public art can also be instrumental in activating a street or building, helping to create vibrancy while emphasizing community participation and investment.

Lighting is an essential element in the overall composition of streetscapes and public spaces, and can have significant effects on safety, security and comfort. Generally, lighting can be broken down into three categories: 1) street lighting; 2) pedestrian lighting; and 3) specialty lighting. Street lighting is typically larger and taller in scale and illuminates the street as a whole. Pedestrian lighting is placed at a lower height than street lighting, and is typically used to highlight areas and spaces occupied by pedestrian and cyclists. Specialty lighting is used to illuminate smaller features such as plants, buildings, benches, or public art.

Taken together, these three scales of lighting can contribute significantly to the overall atmosphere and safety of an area. Special considerations should be taken to avoid unnecessary light pollution by specifying light fixtures that direct light downward rather than upward into the sky, or outward on to adjacent properties. It is also recommended that design standards for poles, fixtures, and light selection are adopted to ensure community-wide consistency in design.

Some pathways that are convenient in the day close immediately following sundown, limiting their utility to trail users. By placing proper signage and enforcing after-dark policies, trail managers can extend the hours of operation. Installing lighting along a trail is another effective way to enable safe night use. Trail lighting that is well placed, properly installed and frequently maintained can improve visibility, increase overall trail access and convenience and give trail users a sense of security while passing through at night.

The Euclid Lakefront Trail is a great local example of comprehensive lighting for a trail project. It is recommended for any future trail projects to utilize similar lighting design, such as the bollard trail light in the above image. Ensuring the same lighting style is utilized on all new trail projects will help reinforce unified feel of Euclid's trail network.

Source: County Planning; Cuyahoga County; Rails-to-Trails Conservancy

LANDSCAPING & PLANTERS

Plants and landscaping are key elements in any quality streetscape. They offer visual appeal, soften architecture features, and also improve biodiversity, climate resilience, and cool urban heat islands. Typically, smaller landscaping elements, such as shrubs and planters, are used to further define important spaces or screen unsightly areas—including parking lots or utilities.

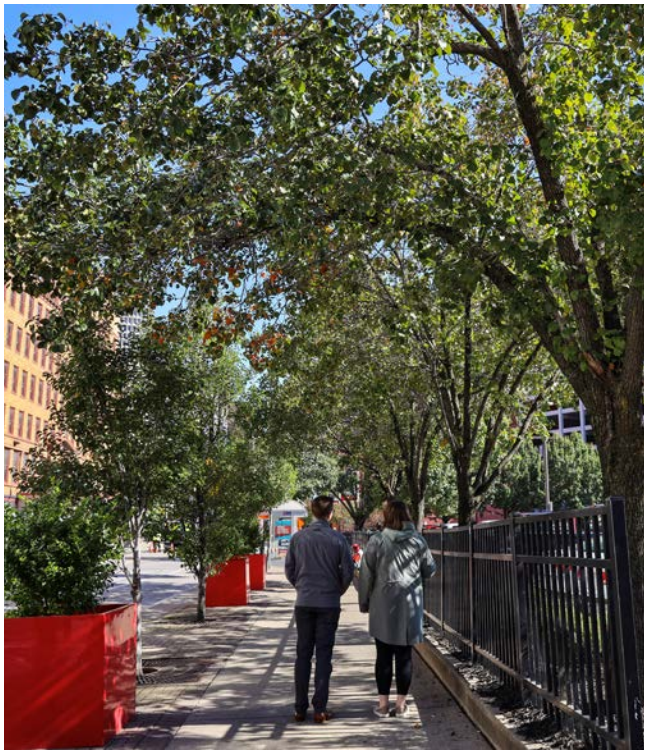
Screening plants should be at least 36 inches tall and consist of native shrubs or ornamental trees. Planting should be done in clusters with a variety of colors and textures to avoid a single species being planted in a row.

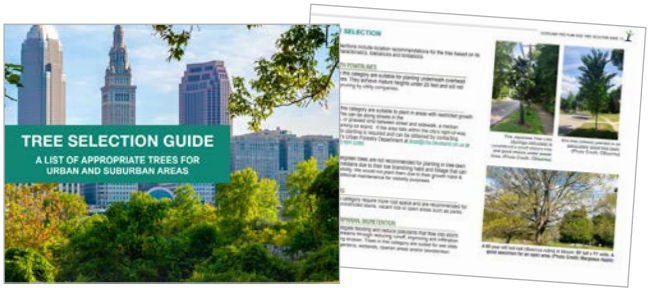
If the Edge & Furnishing Zone cannot accommodate street trees due to limited right of way space, or if trees are currently located along the property line, planters should be utilized in their stead. Planters are a lower cost solution and can act as a visual and physical buffer allowing additional greenery and increased pedestrian comfort to streetscapes.

STREET TREES

Available in a wide variety of sizes, colors, and shapes, street trees should be placed along public rights-of-way in the Edge & Furnishing Zone. Street trees provide a numerous and measurable aesthetic, social, environmental, and economic benefits. They also serve as a buffer between pedestrians and motorists, and add to the overall comfort and experience of a location. With the onset of climate change, trees are increasingly important. Trees provide shade and cool the air through evapotranspiration leading to improved outdoor comfort and overall climate resiliency.

In more residential areas, street trees are planted in grass strips adjacent to the curb, while in commercial areas they are traditionally located within tree wells. Maintenance and tree selection are important considerations—most issues such as road salt absorption, lack of tree diversity, utility conflicts, soil compaction, and inadequate growing space can be addressed by planting the right tree species.





Street trees, landscaping and planters provide essential greenery to areas with high amounts of impervious surfaces. For more information on tree selection see, "The Cleveland Tree Plan 2020: Tree Selection Guide," a local resource providing essential information to select climate-resilient trees that are suitable for urban and suburban areas in Northeast Ohio. This guide includes species lists, information on what tree is appropriate for each situation, and key considerations for successful planting.

Source: County Planning; ; Cuyahoga County; Holden Forests & Gardens

STREETSCAPING & AMENITIES *(CONTINUED)*

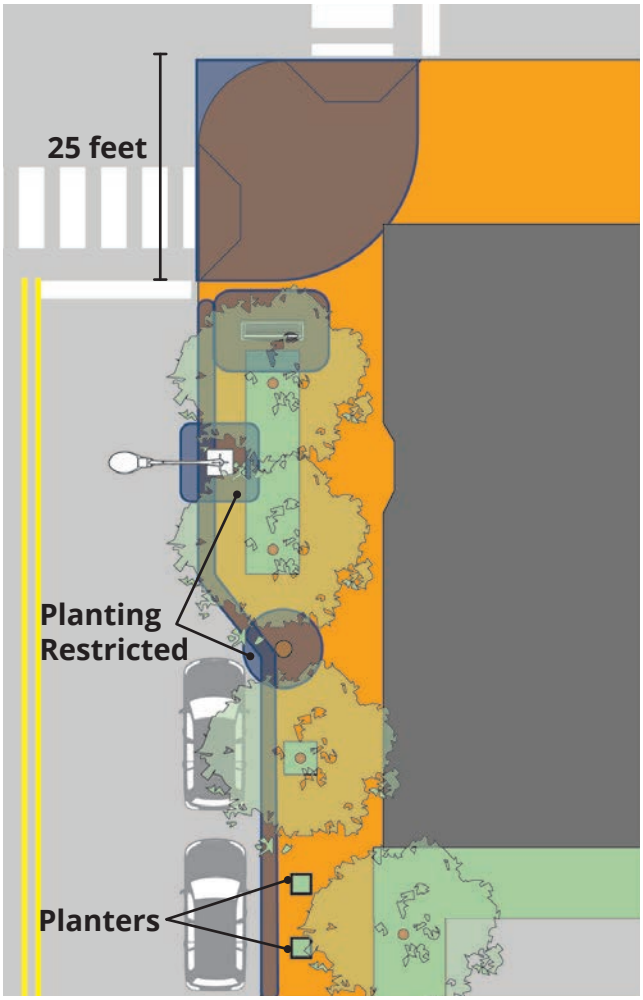
SAFETY CONSIDERATIONS

An important consideration for all streetscaping elements is their effects on both non-motorized users and vehicular safety. While street trees have proven benefits of calming traffic on urban streets, if placed incorrectly they can have an adverse affect on signage visibility and reduced effectiveness of lighting. Additionally, mature tree roots can potentially interfere with underground utilities and other infrastructure such as sidewalks—it is important to take all of these considerations into account when siting a new street tree.

Trees should be placed back from intersection crossing zones so that both pedestrian and vehicular movements are visible to oncoming traffic. Euclid's code requires that street trees be placed at least 25 feet from the intersecting street lines to prevent this issue. Additional best practices include ensuring that trees are placed a sufficient distance from street furniture, lights, signs, and other above ground utilities—between three and five feet is recommended. If necessary, streets with higher traffic speeds may need to have trees be laterally offset an additional four to six feet from the roadway to help reduce the likelihood of serious or fatal collisions with trees.

As seen in the image to the right, while street trees are important to a healthy pedestrian environment, their placement should be carefully thought out. Leaving adequate space so as they do not conflict with lighting, utilities, and street furniture, as well as space to allow sightlines at intersections can significantly reduce maintenance and lead to safer and more complete streets. Using planters when space is limited or if there are conflicts with utilities or existing trees can help add biodiversity and enhance the attractiveness to streets with limited right of way.

EXAMPLE STREETSCAPING PLACEMENT



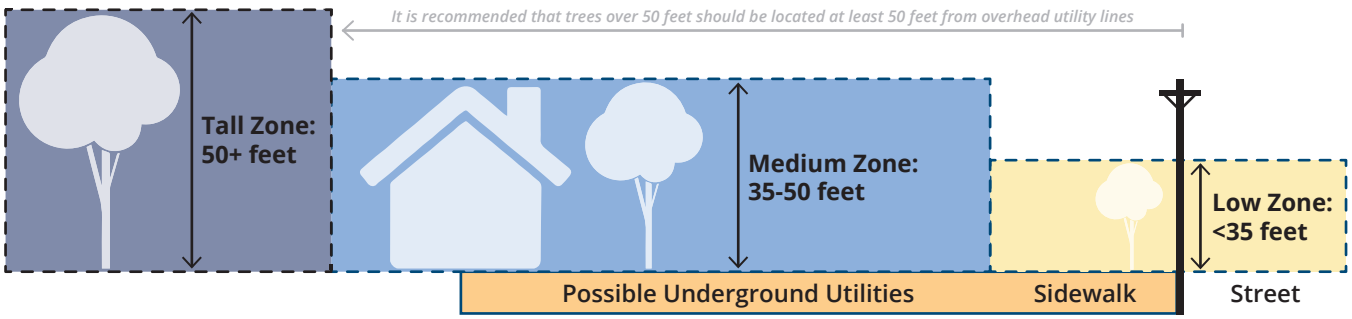
Source: County Planning

UTILITY CONFLICTS

Another important consideration regarding street trees is their potential conflicts with overhead and underground utilities. The height and spread of a mature tree must fit within the available growing space—both above and below ground. For underground utilities—such as electric, water, sewer, and natural gas lines—the greatest potential for conflict occurs during the initial tree planting. Accidental digging into underground utilities can be extremely costly. Additionally, as trees mature and their roots expand, there is the potential to damage underground lines. On the other hand, if underground utilities need to be replaced, tree roots can also be damaged. This can harm or even potentially kill mature trees. For these reasons, it is important to identify underground utilities before planting occurs, allow for sufficient space for root expansion, and to plant the correct tree species to reduce the likelihood of damage.

For overhead utilities—such as communication and electrical lines—tree selection is especially important. In general, taller tree species, or trees that have a mature height of over 50 feet, should be placed farther away (at least 50 feet) from overhead distribution lines—which could include the middle of residential blocks or open spaces such as parks. Medium sized trees, or trees that have a mature height of 35-50 feet, should be placed at least 15 feet from overhead distribution lines. Smaller trees that have a mature tree height of less than 35 feet may be placed within 15 feet of distribution lines—provided they aren't high voltage transmission lines.

RECOMMENDED MATURE TREE HEIGHT ZONES



RECOMMENDED ACTIONS
Develop cohesive, city-wide branding standards for streetscape amenities and site furniture (benches, trash receptacles, bicycle parking, and lighting)
Standardize and implement streetscape amenity designs already in use in recently developed projects throughout the city to keep a cohesive feel to amenities—such as street furniture from the E. 185th Streetscaping project and lighting from the Lakefront Trail
Add streetscape amenities in key locations throughout the community to improve pedestrian comfort—with an emphasis on Downtown Euclid and prominent corridors, such as E. 185th Street, E. 200th Street, E. 222nd Street, Babbitt Road, Euclid Avenue, and Lakeshore Boulevard
Coordinate the addition of street trees in locations with high pedestrian activity utilizing Healthy Urban Tree Canopy grants (www.countyplanning.us/services/grant-programs/healthy-urban-tree-canopy-grant-program/)—when street trees are not feasible due to right-of-way restrictions, utilize planters

IMPLEMENTATION OVERVIEW: STREETSCAPING			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, City of Euclid Public Service Department, City of Euclid Sewer Department, Euclid Shade Tree Commission, Businesses, Property Owners, Bike Advocacy Groups (Bike Euclid, Bike Cleveland), Community Groups, NEORSD, Utility Companies, County Planning		

Source: County Planning

SHARED TRANSPORTATION & MICROMOBILITY

Micromobility refers to small, lightweight devices that are used for short trips. Generally operating below 25 mph, these devices can be rented by individuals for short periods of time within an area. These devices can include bicycles, e-bikes, e-scooters, and other similar devices for personal use. Micromobility has rapidly proliferated in cities nationwide, proving to be a popular transportation option for many users. In response to the increasing demand for walking and bicycling facilities in cities and towns across the country, many communities are exploring micromobility as an alternative mode for short trips and active transportation—with an emphasis on "first and last mile" connections. These devices are often deployed in targeted areas to help make complete trips via other modes, such as public transit. It is important to coordinate with businesses, property owners, utility companies, and other regional partners to determine priority areas for improving transit waiting environments—including physical bus shelters for "first and last mile" riders.

The Greater Cleveland Regional Transit Authority (GCRTA) has long evaluated the necessity of bus shelters based on available space and ridership numbers—stops must have 50 or more daily riders to warrant a shelter. However, this number was recently reduced to 30 daily riders and qualifies more GCRTA bus stops for a shelter. Within Euclid, there are four bus stops that now meet this criteria and do not presently have a shelter: St. Clair Avenue/Babbitt Road; E. 260th Street/ Bluestone Boulevard; Euclid Avenue/Babbitt Road; and Euclid Avenue/E. 260th Street. In general, the City of Euclid has tremendous potential for a micromobility program. However, a successful roll-out for this type of program will take significant community outreach and education efforts, collaboration with partners, and a having a strong regulatory and maintenance plan in place. A successful program will greatly improve access to underserved neighborhoods, key job hubs, regional amenities, schools, and much more throughout Euclid.

RECOMMENDED ACTIONS
Survey businesses, employees, regional partners, and other stakeholders to identify opportunities for increased job access through first/last mile and micromobility improvements
Identify pilot locations to test the functionality and feasibility of an expanded micromobility network
Collaborate with GCRTA on integrating micromobility programs with bus routes and stops to improve first/last mile connections for transit riders and workers
Establish a public/private partnership to create a sponsor program for the ongoing funding and maintenance of a micromobility program and bus shelters
Coordinate education, events/programming, and outreach for micromobility programs with Euclid City Schools/students about proper use of such devices and laws governing them

IMPLEMENTATION OVERVIEW: MICROMOBILITY			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, City of Cleveland, City of Richmond Heights, City of South Euclid, Lake County (City of Willowick, City of Wickliffe), Residents, Business Owners, Major Employers, Property Owners, Schools, Utilities, Ride/Bike/Scooter Share Companies, Nonprofits, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

Source: Federal Highway Administration (FHWA)

PLANNING IN ACTION

BEST PRACTICES FOR REGULATING MICROMOBILITY

The rapid growth in the number of shared micromobility trips and the introduction of e-scooters has required cities to focus new attention on how best to regulate these new services in order to achieve the best public outcomes.

In 2018, users took 84 million trips on shared bikes and e-scooters in the United States, more than double the number of trips taken in 2017. Of these, 38.5 million trips were taken on shared e-scooters, the newest vehicle type in the shared micromobility marketplace, requiring cities to establish and adapt new oversight tools, metrics, and practices. E-scooters, in particular, pose unique challenges and opportunities as a new vehicle type, with emerging regulatory standards.

The National Association of City Transportation Officials (NACTO) is an association of 96 major North American cities and transit agencies that empowers cities to realize their goals for stronger, safer, and fairer transportation choices. NACTO is a national leader and a repository of best practices and publications that provide vital resources for practitioners, policy-makers, academics, and advocates. In 2019, NACTO released Version 2 of their *Guidelines for Regulating Shared Micromobility*. The guide was developed to reflect the wide variety of experiences that North American cities have had in regulating and managing shared micromobility. It is divided into two main sections:

- **Best Practice Recommendations:** regulations or policies that cities should include in their permits or require from their operators.
- **Current State of Practice:** how different cities regulate shared micromobility systems—including fleet size, customer service expectations, permit fees, service areas, and other areas where cities differ.

NACTO's *Guidelines for Regulating Shared Micromobility* is an excellent resource that provides modern best practices and tools necessary for communities considering their micromobility programs.

Source: Guidelines for Regulating Shared Micromobility, Version 2, National Association of City Transportation Officials (NACTO), 2019

WAYFINDING, SIGNAGE & MOBILE APPS

Keeping residents and visitors up to date on roadway conditions and special events, particularly those relating to walking and biking, are key elements in generating interest in active transportation. Additionally, updating members of the community on the status of construction projects or public meetings they might attend is also important to generate interest. Technology services can allow residents, businesses, and visitors to accurately identify where construction projects and issues, such as potholes, exist in real time, this can also help the city stay ahead of any critical infrastructure issues.

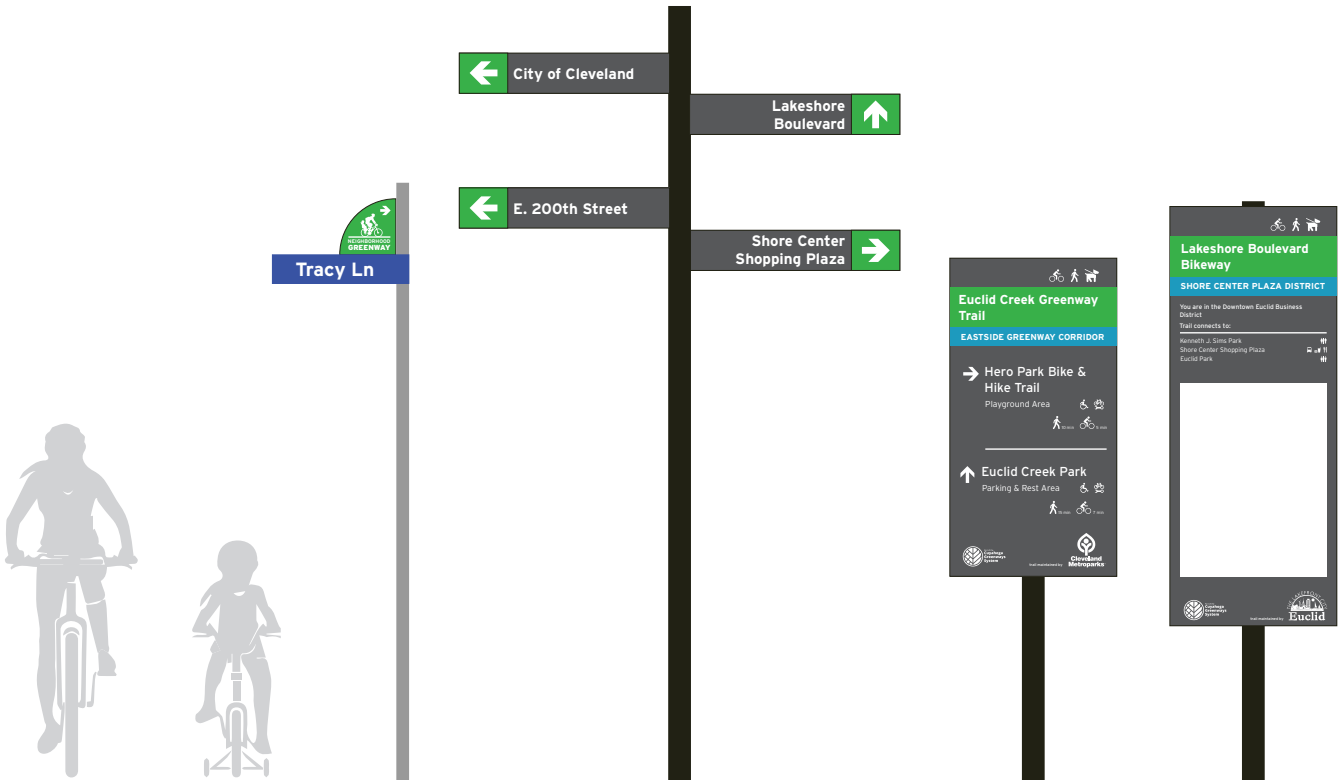
Many cities, such as Hudson, Ohio, have created online GIS mapping software or mobile apps to allow users greater access to community services and information. Many platforms allow users to upload photos directly from their smartphone and document issues in real-time. Euclid should aim to integrate a similar application to make public information and community resources more accessible to residents and visitors, and to prioritize and report on infrastructure repairs.

Euclid can also continue to provide up to date information through the city's website, social media platforms, and the "Euclid Connect" notification system. Information can also be spread and posted through partner organizations, such as Bike Euclid—a local chapter of Bike Cleveland. Lastly, these technological advances can be developed with the support of Ped/Bike Advisory Committee—a group responsible for providing input to decision makers on bicycle and pedestrian projects, programs, and policies.

As a prominent First Ring suburb of Cleveland, the City of Euclid has a strong community identity that can be well-conveyed through signage and wayfinding. Consistent branding in signage can define a place and provide visitors with an enjoyable and memorable experience. A wayfinding system with a distinct style that provides easy-to-follow and legible directions can give users an experience that is unique to the community. Euclid can build upon its status as "*The Lakefront City*", and continue this message to new signage and other public amenities. As the city expands and strengthens its trail access to other destinations, the number of users will continue to increase overtime. It is important that Euclid implement a wayfinding system that users will be able to easily navigate the city's future network of connections. Signage should be consistent in style, colors, appearance, and general locations, in addition to efficiently providing information to visitors and residents.

The graphics on the next page showcase the design developed by the Cleveland Metroparks for the Cuyahoga Greenways system of trails. These examples show how consistency across all branding elements is vital and creates a sense of togetherness across Euclid and the region. The city should consider undertaking a branding campaign that better communicates the spirit and of Euclid through signage and wayfinding.

PROPOSED WAYFINDING SIGNAGE



EXAMPLES OF EXISTING WAYFINDING SIGNAGE IN THE REGION

RECOMMENDED ACTIONS

Work with qualified design professionals to develop a comprehensive wayfinding system that integrates the City's brand across all signage types

Coordinate all bicycle and pedestrian network signage with future routes connecting to larger regional networks (Cleveland Metroparks, Cuyahoga Greenways, etc.) by utilizing the *Trails and Bikeway Wayfinding System: Sign System Standards version 3* (see appendix)

Develop a webpage on the City's website specific to pedestrian and bicycle projects, improvements, and events

Create an interactive online portal and/or mobile app for residents to report and upload photos of issues occurring on roadways, trails, sidewalks, etc.

Utilize existing Downtown Euclid Special Improvement District (SID) to prioritize wayfinding throughout key destinations

IMPLEMENTATION OVERVIEW: WAYFINDING

Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, County Planning, Cleveland Metroparks, Qualified Design Professionals, City of Cleveland, City of Richmond Heights, City of South Euclid, Lake County (City of Willowick, City of Wickliffe), Residents, Business Owners, Property Owners, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

Source: Cleveland Metroparks: Guide Studio; Canalway Partners; Cuyahoga County; County Planning

PED/BIKE ADVISORY COMMITTEE & POLICING

Distracted driving and speeding are serious traffic violations that can have tragic consequences, and all roadway users share a responsibility to ensuring streets are safe for everyone. Speeding and distracted driving have been identified as critical issues within the City of Euclid, and as of April 4, 2023, it is now also illegal to use or hold a cell phone or electronic device in your hand, lap, or other parts of the body while driving on Ohio roads (Section 4511.204 ORC). Efforts have been made at the state and national levels to begin changing the perceptions and behaviors of motorists, however the actual enforcement of laws at the municipal level is reliant upon local law enforcement officers. Officer training, education, and protocols are all important factors to ensuring violations are being addressed fairly and consistently. While there are state and national safety campaigns and laws—including Ohio's distracted driving law and the national "Click it or Ticket" campaign—the City of Euclid does not currently have any local safety initiatives that look to specifically target ongoing safety issues throughout the city's roadways, such as a Zero Tolerance policy. A Zero Tolerance policy aims to address a specific issue, such as speeding and distracted driving, and imposes a citation or warning for any infraction of the law. The overall goal of a Zero Tolerance policy is to prevent the conscious or unconscious desire to violate the law. However, enforcement of the law needs to be supplemented with ample community outreach, awareness campaigns, and education to bring long-term change.

RECOMMENDED ACTIONS
Create a High Visibility Enforcement (HVE) schedule for deploying officers in high crash/speed areas to administer citations, warnings, and to "catch people doing good" at crosswalks, stop signs, traffic signals, etc.
Collaborate with ODOT to ensure local police forces are well-educated and trained to enforce speed limits within the City.
Establish and enforce a citywide, Zero Tolerance policy for distracted driving and speeding within the city
Form a Ped/Bike Advisory Committee to assist police, ODOT, and other agencies with community outreach, identifying critical safety areas, and providing insights on safety improvements.
Adopt a Vision Zero for the long-term commitment to eliminate serious traffic-related injuries and fatalities.
Establish new standards for tracking accidents and injuries/ fatalities—including well-defined categories of roadway users, such as vehicles, heavy trucks, motorcycles/scooters (gas powered/motorized), pedacycles (bicycles, tricycles, scooter, or other similar non-motorized/human-powered devices), and pedestrians (with/without mobility assistance devices)
Coordinate and adjust patrol routes to coincide with peak travel times in high-accident areas

EARLY WIN!

IMPLEMENTATION OVERVIEW: SAFETY & POLICING			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Schools, Police, Fire, Neighborhood Groups, Local Businesses, Residents, Ped/Bike Advisory Committee, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

Source: City of Euclid Police Department; Ohio Department of Transportation (ODOT)

PLANNING IN ACTION

CASE STUDY: WATCH FOR ME NC

In 2012, the State of North Carolina launched a pilot program with four communities aimed at elevating enforcement and raising awareness of laws—with an emphasis on bicyclist, pedestrian, and school safety. By 2014 North Carolina was able to launch the "Watch For Me NC" program statewide, and by 2021 a total of 50 partner communities had undergone police training and implemented the program's core goals to:

- Raise awareness of pedestrian and bicyclist safety issues;
- Provide education on relevant laws for officers and the general public;
- Support safer behaviors; and
- Prevent injuries and fatalities.

While the "Watch For Me NC" program is driven at the state level, its success relies on the implementation of local programs led by municipalities, advocates, and partner agencies—including planners, public health officials, engineers, residents, and school administrators. In general, the program involves two key elements: 1) safety and educational messages directed towards all roadway users; and 2) High Visibility Enforcement efforts (HVE) by local police to reduce the number of traffic safety violations. Building support for the program and delivering its message is critical for the success and long-term sustainability user behaviors.

Between 2012 and 2017, the "Watch For Me NC" program and law enforcement have:

- Conducted 433 law enforcement safety operations—including almost 11,000 warnings or citations given to drivers, bicyclists, or pedestrians;
- Held more than 500 community engagement activities;
- Trained 565 officers across 90 agencies;
- Reached approximately 170 million people, through billboards, transit ads, radio PSAs, sidewalk stencils, and gas station ads along high-crash corridors; and have
- Appeared in more than 150 news stories in newspapers, TV, radio, and online platforms.

The "Watch For Me NC" program has been a great success for the state and participating communities have reported: increased community awareness of bicyclist and pedestrian safety; improved officer knowledge on law and ability to engage with residents; and increased driver compliance with yielding laws.

Source: Watch For Me NC, North Carolina Department of Transportation (NCDOT)

SAFE ROUTES TO SCHOOL PROGRAM

A safe and well-connected transportation network allows children to comfortably get to school by walking or biking. The Safe Routes to School (SRTS) program is funded by the Ohio Department of Transportation (ODOT) and provides resources, technical assistance, and funding as part of a inclusive approach to promote walking and biking to school through both infrastructure and non-infrastructure related projects. The Ohio SRTS program provides $5 million in annual funding for projects in six categories: Education, Engineering, Evaluation, Encouragement, Engagement, and Equity. As part of the SRTS program, all infrastructure projects must be located within two miles of a school that serves students in grades K-12 and are capped at $500,000. ODOT will reimburse 100% of any eligible costs including Engineering, design, right-of-way acquisition, and construction. Non-infrastructure activities include Education, Encouragement, Enforcement, Evaluation, Engagement, and Equity. ODOT will reimburse 100% of any eligible costs including training, materials, program supplies, campaigns, and other similar incentives. These projects are limited to $60,000 for a one-year project or $120,000 for a two-year project. Applying for Safe Routes to School (SRTS) funding begins with developing a School Travel Plan (STP). Applications for funding can be developed based on a city's STP or an Active Transportation Plan (ATP). Cities that choose to develop a SRTS program are serving their community by actively becoming a better place to walk and bike, especially for their school aged residents. In addition to transportation safety benefits, SRTS can:

- Increase physical and mental health
- Contribute to school and community health and wellness initiatives
- Increase student success rates by improving cognitive learning and behavior
- Decrease tardiness and increase attendance rates by establishing safe and efficient travel routes to schools
- Establish programs like walking school buses, bike trains, and school-pools to get their children to school safely and on-time
- Build strong community relationships and connections by walking/biking together

RECOMMENDED ACTIONS
Consider technical assistance early in the SRTS process with the Safe Routes Partnership to bring city and school officials together in support of safer connections to facilities
Utilize outreach methods like school surveys to better understand and tally student and teacher travel patterns, safety needs, and improvements
Collaborate with Euclid City Schools to update School Travel Plan (STP) and apply for Safe Routes to School funding
Collaborate with ODOT to ensure applications meet eligibility requirements and for internal review of materials
Collaborate with Euclid City Schools to incorporate SRTS into everyday learning at schools—such as outdoor learning or physical education programs

EARLY WIN!

IMPLEMENTATION OVERVIEW: SAFE ROUTES			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, Euclid City School District, Safe Routes Partnership, Nonprofits, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

PLANNING IN ACTION

SAFE ROUTES PARTNERSHIP

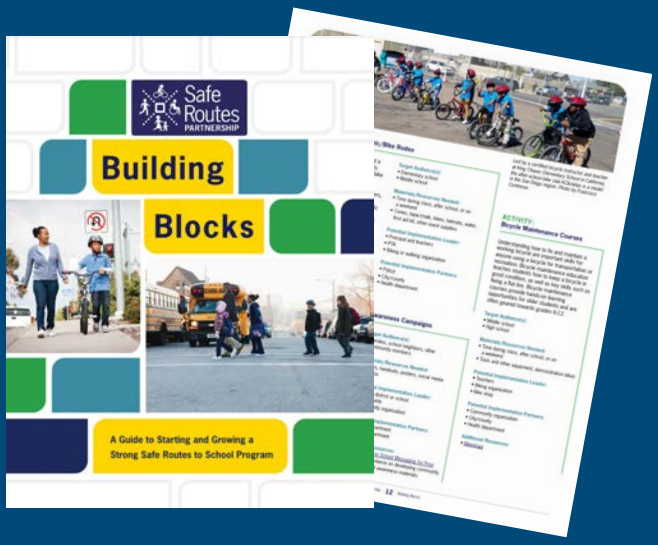
Undertaking a Safe Routes to School (SRTS) process is a communitywide effort that takes the support, collaboration, and coordination of various groups and stakeholders. The *Safe Routes Partnership* is a national nonprofit organization working to advance safe walking and biking to and from schools and in everyday life, improving the health and well-being of people of all races, income levels, and abilities, and building healthy, thriving communities for everyone.

Safe Routes Partnership is a leader in SRTS best practices and offers a wide variety of resources to communities looking to advance SRTS programs and active transportation—including publications, webinars, coaching, technical assistance, and consulting services. One such publication is Safe Routes Partnership's "Building Blocks" toolkit, which is a guide to help communities and school districts begin a new SRTS program or strengthen an existing one. It provides a step-by-step framework for bringing municipalities and school districts together to develop a strong SRTS program that will last for many years to come.

"Safe Routes to School reaches students through program activities that get more kids using active travel to school and making streets and neighborhoods safer for walking and biking.

A comprehensive approach requires embedding Safe Routes to School into many aspects of a community."

Safe Routes Partnership



All first grade students at Pagosa Springs Elementary School, Colorado, receive bicycle education as part of their physical education program. During a week-long unit, students learn bicycle safety and skills, including helmet fitting, braking, hand signals, and other rules for riding safely on streets, sidewalks, or paths.

This program uses 32 bicycles purchased by Retro Metro Kids, Archuleta School District's Safe Routes to School coalition, and is taught by a physical education teacher who was trained in bicycle education with the help of Bicycle Colorado.

Source: Building Blocks: A Guide to Starting & Growing a Strong SRTS Program, Safe Routes Partnership, 2021, Photo: Kendra Bridges

Source: Building Blocks: A Guide to Starting & Growing a Strong SRTS Program, Safe Routes Partnership, 2021

COMPLETE & GREEN STREETS POLICY

Complete and green streets are roadways designed to not only accommodate all types of transportation modes and users, but also to include sustainable infrastructure that slows and filters stormwater runoff from impervious surfaces. These types of roadways are becoming increasingly popular; best practices recommend replacing or expanding upon traditional street designs and functionality. By replacing conventional grey infrastructure—systems of gutters, pipes, and tunnels—with green infrastructure, such as bioswales and permeable pavement, communities can see numerous benefits. These can include increased property values, decreased infrastructure costs, improved air and water quality, and economic growth by creating "green" jobs and enhancing business districts.

Currently, Euclid does not have a complete and green streets policy in place to facilitate the construction of roadways and take into account the overall safety and comfort of all users, and its environmental impact on stormwater management. By integrating such provisions into planning and construction processes, Euclid's roadways will become much safer, welcoming, and sustainable.

Of 66 Complete Streets policies submitted in 2018, the National Complete Streets Coalition chose Cleveland Heights' policy as the best in the country.

The policy codifies the City's dedication to prioritizing the safety and comfort of all roadway users with a special focus on the most vulnerable including children, pedestrian, bicyclists, and those with disabilities.

The policy also emphasizes the use of public transportation throughout the city to reduce its environmental impact.

Source: City of Cleveland Heights

RECOMMENDED ACTIONS

Engage with city departments, regional partners, and other organizations to identify feasibility, costs, and any concerns surrounding the implementation of Complete and Green Streets
Create a Complete and Green Streets policy that seeks to provide safe and desirable travel for all users and incorporates best management practices for green infrastructure
Coordinate Complete and Green Streets projects with Capital Improvements Program (CIP), pavement resurfacing, or similar construction schedules

IMPLEMENTATION OVERVIEW: COMPLETE STREETS

EARLY WIN!

Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Cuyahoga County Planning Commission, Qualified Design Professionals, Euclid Public Service Department, Police, Fire		

Source: National Association of City Transportation Officials (NACTO); Smart Growth America; National Complete Streets Coalition; United States Environmental Protection Agency (US EPA)

PLANNING IN ACTION

CASE STUDY: HOWARD COUNTY, MARYLAND

Howard County, Maryland—located between Washington, D.C. and Baltimore, Maryland—has largely evolved from a predominantly rural community to the epicenter of suburbanized growth over the last few decades. As more residents chose to call Howard County home, roadway safety became an increasingly apparent issue. Underfunded bike routes, incomplete bus stops, unsafe intersections, and nonexistent sidewalks meant that mobility in Howard County primarily served motor vehicles. The network that did exist for bicyclists and pedestrians had critical gaps, especially when it came to accessing essential destinations like schools and transit stations.

Then in 2016, Howard County adopted its Bike Master Plan, which was a highly coordinated effort between many partners, such as AARP Maryland, the American Heart Association, local realtors' associations, and schools. By 2019 the County formally adopted its Complete Streets Policy Framework, which prioritized equity by embedding language throughout the policy that clearly states that the safety for vulnerable street users is the highest priority during project selection, implementation, and evaluation.

One of many successful aspects of the policy is that it required an update to the community's Design Manual—a technical document that guides the design of Howard County streets. The policy also required that the process for updating the Design Manual include community input, effectively ensuring that it reflects community priorities. Between 2019 and 2022, Howard County held 37 virtual meetings and received over 900 comments that shaped the final version of their Design Manual, which was finalized in 2022. Howard County's policy was built on a strong foundation of collaboration, which required both time and extensive community engagement—including lessons learned:

- **Take your time—great policies are not created overnight.** They require significant time and energy from a diverse group of stakeholders to ensure the policy reflects community needs.
- **Bring together people with a wide range of lived experience and expertise to inform your policy.** In order to create a transformational policy that reflects the community's needs, bring together people with a wide range of personal and professional backgrounds.
- **Activate your community.** A critical component for success includes keeping the community informed and actively involved throughout the process.

In 2023, Howard County, Maryland received the first perfect score from the National Complete Streets Coalition as the best Complete Streets Policy in the nation.

Source: Howard County (MD): A collaborative effort to create Complete Streets, Smart Growth America, Cole, Courtney, 2023; Howard County Maryland

ZONING & CODIFIED ORDINANCES

Zoning codes and other codified ordinances regulate how, where, what, and even when development can occur within a community. The way in which communities are built can unintentionally create access barriers—thus limiting opportunities for safe walking and biking. Since the early 20th Century, automobiles and planning for them have dominated contemporary zoning regulations and design standards. However, preferences have long been shifting towards more accessible, connected, high-quality development that places non-motorized users needs above those of automobiles. This growing shift towards non-motorized travel was expedited as a result of the COVID-19 pandemic—which resulted in many communities reevaluating their zoning codes and development standards. Currently, the City of Euclid's Zoning Code provides limited mandatory requirements for pedestrian and bicyclist accessibility, circulation, and amenities.

Euclid's Zoning Code does allow developers to voluntarily reduce the number of vehicle parking spaces on their site by up to 20% if they comply with at least one of several prescribed methods—including the addition of bicycle infrastructure:

- A reduction of one space for every four on-site covered bicycle spaces or one space for every eight on-site uncovered bicycle spaces shall be permitted where employee lockers are also provided on site; and
- An additional reduction of one space is permitted for every two employee showers located on-site. These reductions shall only be permitted if the applicant can show that there is adequate bicycle access to the site.

When the number of vehicle parking spaces are reduced by providing bicycle infrastructure, the city also has specific requirements for bicycle parking—including both the overall location and design of such amenities:

- Bicycle parking must be near front entrances of buildings, well-lit, and clearly visible from inside the building and from the street.
- Uncovered bicycle parking spaces must be located within 50 feet from the front entrances of buildings and at the same grade as the sidewalk or an accessible route.
- Covered bicycle parking spaces must be located in a secure location that is easily accessible from the public right-of-way and building entrances.
- Bicycle spaces must have a minimum dimension of two feet in width by six feet in length, with a minimum overhead vertical clearance of seven feet; in addition to an aisle at least five feet wide between each row of bicycle parking to allow room for bicycle maneuvering.
- Bicycle parking must be surfaced as required for vehicle parking areas.
- Bicycle racks must support the bicycle in a stable position and must be securely anchored to the ground or a structure to prevent the rack from being removed from the location.

While these regulations provide clear and concise guidance on where these types of facilities should be located and how they must be designed, these provisions are still voluntary.

Currently, there are very few communities in Cuyahoga County that require bicycle parking as part of new development, nor are there any notable requirements for pedestrian and bicycle circulation plans as part of a planning review process.

The City of Cleveland Heights is one such community that specifically requires that bicycle parking spaces be part of new commercial development. For example, Cleveland Heights requires that bicycle parking spaces be included on-site where any new principal building is constructed or when a new addition of 25,000 square feet or more is made to an existing, commercial structure. The number of required spaces is dependent upon the use within the building; however, a minimum of two spaces is required regardless of use or size of structure. The Cleveland Heights Zoning Code also requires shower and locker facilities for offices, universities/ colleges, and hospitals over 25,000 square feet in gross floor area. However, there is still minimal guidance on non-motorized circulation as part of the site-plan review process.

Additionally, there are also specific provisions in the Cleveland Heights Zoning Code for bicycle parking space locations and design—which are very similar to those already defined in Euclid's Zoning Code. However, Euclid's guidelines are solely at the discretion of the developer to seek vehicle parking space reductions by providing such amenities for bicyclists and other non-motorized users. Overall, the City of Euclid should seek to strengthen its required development provisions for pedestrian and bicycle infrastructure by exceeding legal minimum requirements and implementing best practices seen in nearby communities.

Components of Local Land Development and Related Zoning Policies Associated with Increased Walking: A Primer for Public Health Practitioners, provides a primer for public health practitioners and community advocates to engage with local planning and zoning officials. Multi-sector discussions are important in planning and implementing policy strategies for creating and supporting walkable and bikeable communities.

RECOMMENDED ACTIONS
Require new development incorporate a pedestrian and bicycle circulation plan as part of the application review process and site designs
Require new development, especially in Commercially Zoned areas and the Downtown Overlay District, to extend new on-site, internal pedestrian and bicycle connections/access with existing, external infrastructure (sidewalks, trails, bus stops/ shelters, etc.)
Ensure new development provides safe, clear, and direct front door access to businesses
Require new development to integrate on-site bicycle parking, with additional parking reductions for covered bicycle parking, employee showers, lockers, or similar amenities
Create a checklist of bike and pedestrian-oriented elements that can be used as a guide when reviewing projects to ensure that development is encouraging safe and direct access for non-motorized users
Provide developers with tax, permitting, density, or other incentives to build facilities, such as sidewalks and trails or other similar amenities to increase opportunities for walking and biking
Develop new standards for placement, operation, and maintenance of micromobility facilities
Review off-street parking requirements in the city's zoning code and consider removing these requirements

EARLY WIN!

IMPLEMENTATION OVERVIEW: ZONING			
Priority Level	High	Medium	Low
Timeline	Near-Term	Mid-Term	Long-Term
Estimated Costs	High	Medium	Low
Potential Partners	Cuyahoga County Planning Commission, Developers, Property Owners, Business Owners, Developers, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

Source: Components of Local Land Development and Related Zoning Policies Associated with Increased Walking: A Primer for Public Health Practitioners, Institute for Health Research and Policy, January 2018; Cuyahoga County

PROJECT COORDINATION & COLLABORATION

Early collaboration and frequent communication are important for building trust and ensuring that there aren't missed opportunities to create meaningful change. Whether partnerships are formed with public entities, private agencies, nonprofits, or philanthropic organizations, all sectors have something to offer and can bring a competitive advantage towards moving projects forward.

The City of Euclid has a proven history of successful projects that involved numerous partners—including the Lakefront Public Access Plan, the Eastern Ledge Trail, and the Euclid Avenue & Chardon Road Safety Study. With a growing desire for safer and stronger connections, the city should provide the community with a dedicated staff person to coordinate and advocate for pedestrians and bicyclists. Duties could include site or development plan input, community outreach and education, pedestrian and bicycle infrastructure project coordination, organizing partners and funding, or other similar tasks.

RECOMMENDED ACTIONS
Establish new powers and duties for a Bicycle & Pedestrian Coordinator to be assumed by a newly created position or assigned to an existing staff member
Consider an expanded advisory role for the proposed Ped/Bike Advisory Committee to include the coordination of pedestrian and bicycle safety, access, amenities, and infrastructure
Coordinate roadway infrastructure projects with adjacent communities and other regional partners (ODOT, Cuyahoga County, etc.) to create a seamless connectivity network
Collaborate with the Cuyahoga County Department of Public Works on the repaving of County routes in order to integrate pedestrian and bicycle improvements into the roadway
Partner with Bike Euclid to help grow memberships and strengthen volunteer opportunities to improve awareness surrounding non-motorized transportation in Euclid

Source: Bike Euclid; Bike Cleveland; Cleveland Metroparks

The City of Euclid has a long and successful history of partnering with numerous local and regional organizations for the implementation of trails and other similar pedestrian and bicyclist focused infrastructure throughout the community.

Cleveland Metroparks Eastern Ledge Trail: Euclid Creek Reservation is one of the original nine reservations of the now more than 24,400 acres within Cleveland Metroparks. The trail now connects Richmond Heights with Euclid, and eventually all the way to Lake Erie. Phase I of the project is now open, with future phases estimated to be completed over the next 3-5 years.

EARLY WIN!

IMPLEMENTATION OVERVIEW: COLLABORATION			
Priority Level	**High**	Medium	Low
Timeline	**Near-Term**	Mid-Term	Long-Term
Estimated Costs	High	Medium	**Low**
Potential Partners	ODOT, NOACA, GCRTA, Cuyahoga County Department of Public Works, Cleveland Metroparks, City of Cleveland, City of Richmond Heights, City of South Euclid, Lake County (City of Willowick, City of Wickliffe), Residents, Business Owners, Property Owners, Schools, Nonprofits, Bike Advocacy Groups (Bike Euclid, Bike Cleveland)		

PLANNING IN ACTION

CASE STUDY: LAWRENCE, MASSACHUSETTS

Urbanized areas, especially where population growth and increased residential density has occurred, necessitate well-planned open spaces and access to recreation amenities. The Spicket River Greenway in Lawrence, MA was only a vision in 1998, but by the 2000 Census population growth in North Lawrence would compel the City to conceptualize the project into reality.

Led by Groundwork Lawrence (GWL), a local nonprofit formed in 1999, citywide Spicket River cleanups occurred over more than 11 years—resulting in more than 7,100 residents and other stakeholders removing more than 136 tons of debris and 3,650 tires from the banks of the river. By 2010 the project was gaining even more traction and was awarded $2.65 million in grants from the Massachusetts Gateway City Parks program for design and construction of the trail.

In 2013, the 3.5 mile Spicket River Greenway was completed and opened to the public. The trail links numerous greenspaces, walking paths, and residential areas throughout the community, and in 2015 Loft Five50, an affordable residential development, incorporated the greenway into its design and constructed a portion of the trail. The Spicket River Greenway has generated tremendous vibrancy and value in Lawrence, MA, which could not have happened without the support, collaboration, and cooperation of many groups. The trail connects the city, both physically and socially, and included over eight partners across various sectors—including private, public, nonprofit, and philanthropic.

"Building relationships is central to creating and maintaining parks and trails....

Whether it's volunteers from the neighborhood, nonprofits, state agencies, or developers that can help fund and benefit from these projects, strong relationships are needed to ensure these spaces remain top quality."

Heather McMann, Executive Director, Groundwork Lawrence

Source: City of Lawrence, MA; Groundwork Lawrence; Successful Partnerships for Parks: Collaborative Approaches to Advance Equitable Access to Open Space Urban Land Institute, 2020

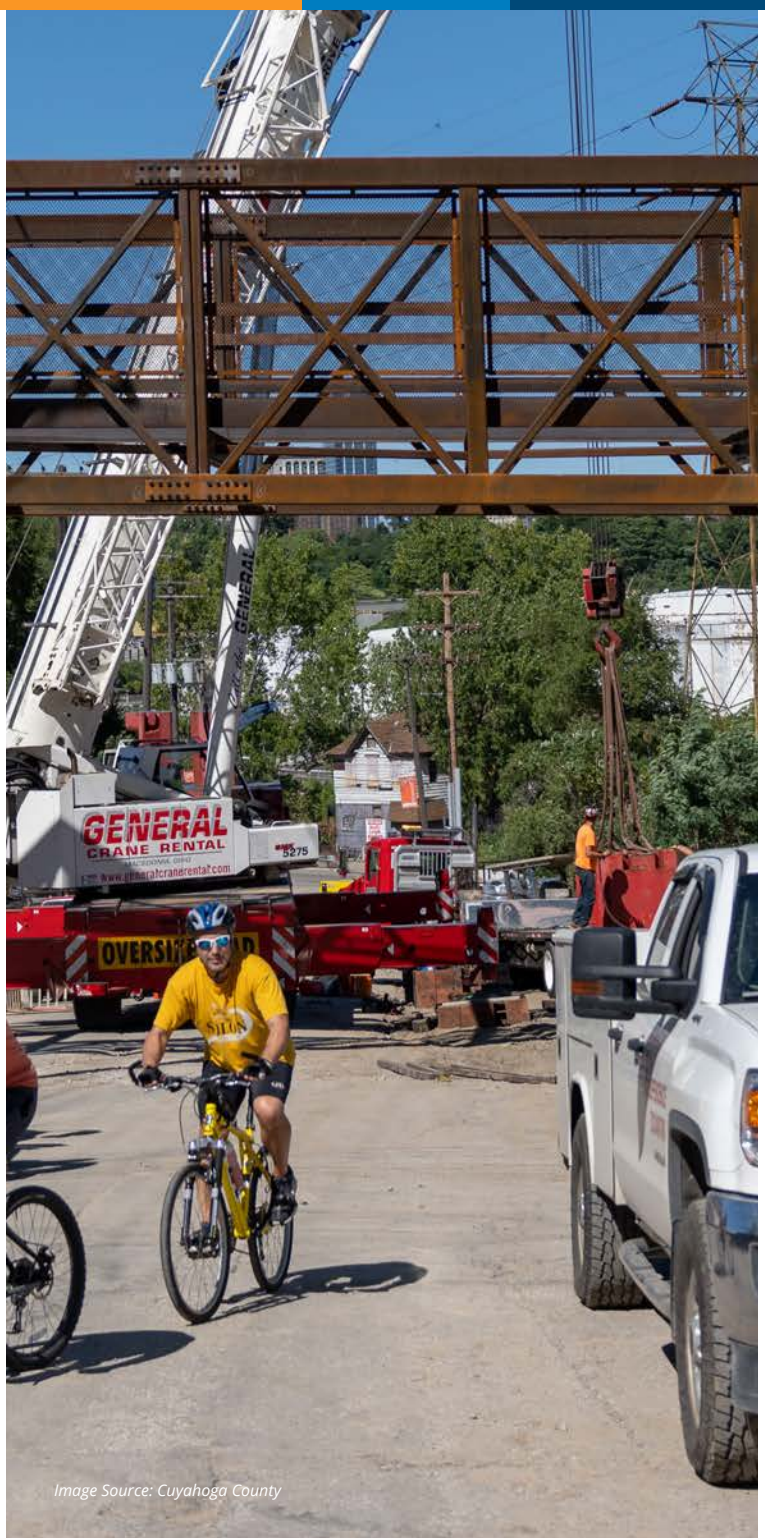


Image Source: Cuyahoga County

"Active mode facility construction tends to create more employment and regional business activity than other capital projects.

[On average,] $1 million spent on bike lanes directly creates 11.0 to 14.4 jobs, compared with approximately 7.0 jobs created by the same expenditure on roadway projects."

Todd Litman, Victoria Transport Policy Institute, Evaluating Active Transport Benefits & Costs, November 2022

SECTION 4

IMPLEMENTATION OPTIONS & FUNDING OPPORTUNITIES

This Pedestrian & Bicycle Safety Action Plan is just the first step of a larger process for improving active transportation throughout the City of Euclid. The Implementation Options & Funding Opportunities section aims to inform community leaders, residents, and other stakeholders about strategies that can be taken to successfully transition from the planning phase to making physical improvements for strengthening the City's bicycle and pedestrian network.

Implementation can take on many different forms. However, it can be helpful to prioritize actions by outlining available and potential funding sources, general project timelines, and understanding which recommendations can be more easily implemented than others. This section identifies the priority level, general timelines, potential partners, and estimated costs for each strategy discussed within this Plan.

Additionally, projects have been organized in a variety of ways to help the City of Euclid identify the best places to begin their path towards implementation—including early win projects; first steps; and catalyst projects:

- **Early Win Projects:** goals or actions that can be implemented more quickly due to lower costs or shorter time-frames that help build momentum towards larger projects
- **First Steps:** initial stride towards longer-term implementation projects
- **Catalyst Projects:** infrastructure-specific enhancements that would have a significant impact on pedestrian and bicycle safety within the City of Euclid—regardless of the project's cost or timeline.

In general, it is this Plan's intention to create an active transportation framework that provides guidance to the City's decision-making process through recommended projects, policies, programming, and partnerships. The Implementation Options & Funding Opportunities section provides an overview of this Plan's implementation strategies to achieve a safe, comfortable, and equitable connectivity network.

4.1 EARLY WIN PROJECTS

Early Win projects are goals or actions that can be implemented more quickly following this Plan's completion in order to deliver active transportation improvements throughout the City. Early wins allow the City to build momentum quickly and improve community perceptions of walking and biking in Euclid. These types of projects will demonstrate to community stakeholders and residents that the City is committed to pedestrian and bicycle safety and is actively working towards implementing improvements outlined within this Plan.

This Pedestrian & Bicycle Safety Action Plan organizes its recommendations into a series of goals and subsequent action steps that can be taken to achieve those goals. Some overall goals are categorized as "Early Win Goals" which have a high priority rating, low expected cost, and a shorter timelines. Additionally, within all the goals, there are specific action steps which are categorized as "First Steps," which are intended to be shorter-term building blocks that the City can undertake to gain momentum towards longer-term goals.

EARLY WIN GOALS

There are several goals which are comparatively much more feasible in the near term than their counterparts. In particular, many of the policy-related goals do not require hard infrastructure costs and can typically be implemented by the City more quickly and easily with existing resources. These actions are essential to fostering a positive community outlook on active transportation, and can have significant impacts on improving the public perception of future active transportation infrastructure improvements.

Early Win infrastructure goals may come at higher costs. However, compared to larger-scale infrastructure projects, they are relatively inexpensive. For example, goals such as "creating a complete sidewalk network (page 88)" or "utilizing temporary installations for the creation of neighborhood greenways (page 110)," are actions that are either currently underway by the City or have dedicated funding sources immediately available.

EARLY WIN *INFRASTRUCTURE* GOALS

- Goal A: Complete Sidewalk Inventory
- Goal E: Neighborhood Greenways & Traffic Calming
- Goal F: Temporary Installations

EARLY WIN *POLICY* GOALS

- Goal J: Bike/Ped Advisory Committee & Policing
- Goal K: Safe Routes to School Program
- Goal L: Complete and Green Streets Policy
- Goal M: Zoning & Codified Ordinances
- Goal N: Project Coordination & Collaboration

FIRST STEPS

All of the recommended actions within this Plan have specific implementations steps that can be taken immediately. While some may be undertaken quickly, others may take time or should be completed in a specific order. Outlined in the table below is a list of "First Steps" that the City can begin pursuing upon completion of this Plan. These First Steps are only an initial stride towards longer-term implementation. The City should be pursue these in order to build momentum and start working towards other action steps that might have a longer time-frames, higher costs, or more complex project elements.

GOAL	FIRST STEPS
Goal A: Complete Sidewalk Inventory	Increase minimum standards for sidewalk construction (width, location, furnishings, etc.) to increase comfort and safety.
Goal B: Road & Lane Diet Conversions	Evaluate road diet and lane width reduction guidelines.
Goal C: Buffered Bike Lanes & Two-Way Cycle Tracks	Evaluate identified roads for preferred on-road facility configuration and type.
Goal D: All Purpose Trails & Sidepaths	Prioritize installation of the trail connection from Euclid Creek Reservation to the Lakefront.
Goal E: Neighborhood Greenways & Traffic Calming	Identify pilot projects for implementation of traffic calming measures, especially on proposed Neighborhood Greenways. Develop an access management plan to help reduce curb cuts and conflict points between cars and non-motorized users.
Goal F: Temporary Installations	Utilize the NOACA Street Supplies program as a method to test temporary and demonstration bicycle and pedestrian infrastructure improvements.
Goal G: Streetscaping Amenities	Develop cohesive, city-wide branding standards for streetscape amenities and site furniture (benches, trash receptacles, bicycle parking, and lighting).
Goal H: Shared Transportation & Mobility	Survey businesses, employees, regional partners, and other stakeholders to identify opportunities for increased job access through first/last mile and micromobility improvements.
Goal I: Wayfinding Signage & Mobile Apps	Work with qualified design professionals to develop a comprehensive wayfinding system that integrates the City's brand across all signage types.
Goal J: Bike/Ped Advisory Committee & Policing	Form a Bike/Ped Advisory Committee to assist police, ODOT, and other agencies with community outreach, identifying critical safety areas, and providing insights on safety improvements.
Goal K: Safe Routes to School	Consider technical assistance early in the SRTS process with the Safe Routes Partnership to bring city and school officials together in support of safety connections to facilities
Goal L: Complete & Green Streets Policy	Engage with City departments, regional partners, and other organizations to identify feasibility, costs, and any concerns surrounding the implementation of complete streets.
Goal M: Zoning & Codified Ordinances	Create a checklist of bike and pedestrian-oriented elements that can be used as a guide to ensure new developments are encouraging safe and direct access for non-motorized users.
Goal N: Project Coordination & Collaboration	Establish new powers and duties for a Bicycle & Pedestrian Coordinator to be assumed by a newly created position or assigned to an existing staff member.

4.2 CATALYST PROJECTS

Catalyst projects are infrastructure specific enhancements that would have a significant impact on pedestrian and bicycle safety within the City of Euclid—regardless of the project's cost or timeline. These projects were identified through the Public Prioritization Survey, as well as through in depth conversations with City staff and Project Team members. Due to limited funding streams, prioritizing and identifying which projects will have the greatest benefits to the largest amount of people in the City of Euclid is critical.

Catalyst projects include only physical infrastructure project and do not directly integrate policy related actions. However, it is important to note that all infrastructure projects should be paired with additional city programs and policies updates to ensure each project's success. Additionally, while catalyst projects are important and will have a significant impact, they are not necessarily the highest priority actions identified within this Plan.

Two projects for each recommended facility type from the Future Connectivity Network (page 80) were identified and described on the following pages. These projects were selected based on their potential impact on bicycle and pedestrian safety in Euclid.

STREETSCAPING & AMENITIES

Downtown Euclid

The highest priority location for improving streetscapes is Downtown Euclid—including the area around Shore Center Plaza as well as the confluence of Babbitt Road, E. 222nd Street, and Lakeshore Boulevard. This area contains the city's primary business district and has the most walkable infrastructure within the community. While this area does have some amenities, such as street trees and planters, additional pedestrian seating, public lighting and bicycle parking should be added in order to ensure this prominent location elevates the safety of non-motorized users.

Lakeshore Boulevard

Lakeshore Boulevard is one of Euclid's major east-west thoroughfares with a number of key businesses and residential areas located on this corridor. Streetscaping interventions should be targeted along the boulevard at various point such as the intersections at E. 185th Street and E. 200th Street on the western end of the corridor, the area in and around Downtown Euclid, the E. 266th Street intersection on the eastern end of Lakeshore Boulevard, and mid-block crossing points.

Source: Google Earth

ON-STREET FACILITIES

Lakeshore Boulevard

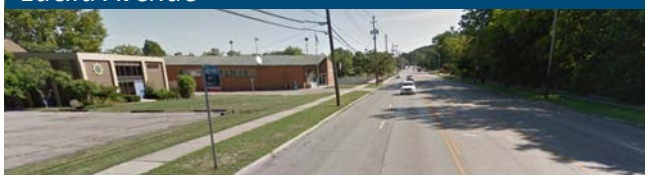
Lakeshore Boulevard is oversized and creates a safety barrier for non-motorized users. An on-street facility on this prominent corridor would not only connect workers with jobs, but residents and visitors to key community areas—including the Cleveland Clinic/University Hospital campus, Downtown Euclid, Simms Park, and the Lakefront Trail.

E. 250th Street

Similar to Lakeshore Boulevard, E. 250th Street is also oversized for the area and traffic volumes are low enough to support road considerations. An on-street facility on this corridor would connect numerous destinations and provide access to key job hubs south of I-90 via new facility connections N. Lakeland Boulevard, E. 260th Street, Babbitt Road, and St. Clair Avenue.

OFF-STREET FACILITIES

Euclid Avenue



An all-purpose trail on Euclid Avenue would run through the southern portion of the community connecting residents and visitors east-west to key destinations—such as Cleveland Metroparks Euclid Creek Reservation, Hero Park, and numerous commercial areas along the corridor. This new facility will also soon connect into the Lakefront Trail, as well as proposed major facilities on E. 222nd Street, Babbitt Road, and E. 260th Street.

E. 222nd Street

An E. 222nd Street all-purpose trail would provide a major north-south connection across significant land and transportation barriers—including I-90, the industrial core, and various rail yards. The E. 222nd Street trail would also provide direct access to Downtown Euclid, municipal services and amenities, and educational institutions.

INTERSECTION IMPROVEMENTS

Euclid Avenue & E. 260th Street

Euclid Avenue at E. 260th Street/Richmond Road is often considered among the most challenging intersections in the City. This intersection has particularly wide turn radii with long crossing distances—which can encourage vehicles turning at a higher rate of speed and often requires pedestrians to be exposed to traffic for extended periods of time.

Lakeshore Boulevard & E. 222nd Street

Lakeshore Boulevard at E. 222nd Street is a particularly dangerous and confusing intersection for all road users. This intersection is located in the heart of Euclid's Downtown core. However, its 3-way, triangular convergence with Babbitt Road can be hazardous to cross—discouraging people from choosing to walk throughout the City's most active and interesting areas.

4.3 FUNDING OPPORTUNITIES

Funding for projects is one of the most critical and challenging aspects of implementation. From careful budget considerations to competitive grant applications, it is essential for the City of Euclid to cast a wide net and evaluate numerous local, regional, state, federal, and private funding opportunities to supplement the City's capital improvement budget.

A number of large infrastructure projects identified as part of this Plan will have higher costs associated with them. It is important for the City to remain flexible in their funding strategies and consider the use of temporary infrastructure projects as community demonstrations and proof of concept. By phasing projects and coordinating active transportation improvements with roadway resurfacing or repaving to schedules, the City can achieve its vision in a sustainable manner.

The Cuyahoga County Planning Commission has published a guidebook outlining Funding and Resources for Communities. This guidebook highlights sources of grant dollars—as well as other useful resources available to Cuyahoga County Communities. The information in the guidebook is grouped by topic, is supplemented with a description of the grant or resource, and has online links to the resource's website. The funding sources listed are current as of the date of publication, and the guidebook is updated regularly, with the latest update completed in 2021. Relevant topic sections and their page numbers in the guidebook are listed in the table below. Additionally, sample funding sources and cost estimates for four catalyst projects can be seen on pages 140 and 141 of this plan.

Relevant Sections within the Funding and Resources for Communities Guidebook
Natural Environment: Recreation pg 55
Natural Environment: Trees pg 55
Transportation: Equity & Mobility pg 60
Transportation: Road & Bridge Infrastructure pg 61
Transportation: Safety pg 64
Transportation: Various Transportation Funding pg 66
Water Resources: Shorelines & Streams pg 70
Water Resources: Stormwater Management pg 72

Find additional resources at: countyplanning.us/guidebooks

CATALYST PROJECTS & COST ESTIMATES

Many of the larger-scale recommendations in this Plan will require additional design and feasibility studies. These studies provide valuable and detailed information to community members and leaders, are necessary to prove that a project is feasible, and also build community support. By utilizing the sample improvement costs below for individual components of infrastructure improvements, cost estimates can be approximated for specific projects on a case-by-case basis. These estimates will provide the City an estimated planning-level cost for improvements before feasibility studies, additional engineering, or conceptual designs are completed. It should, however, be understood that these numbers are meant to act as a guide, and that the actual cost of materials, labor, and other variables will vary.

Improvement Type	Unit	Estimated Cost*^
Street Painting (Bikelanes, pavement marking)	Mile	$120,000
Delineators	Each	$200
Sidewalk (Remove and Replace)	Square Foot	$12
Sidewalk (New)	Square Foot	$10
Multi-Use Path/ Trail (Simple)	Mile	$1,500,000
Multi-Use Path/Trail (Average)	Mile	$2,500,000
Multi-Use Path/Trail (Complex)	Mile	$5,000,000
Monument Signs	Each	$8,000-$50,000
Wayfinding Signs	Each	$400
Streetscape Minor Enhancements	Varies	$50-$100
Streetscape Major Enhancements	Varies	$275-$1,000
Bike Racks	Each	$500
Streetlights	Each	$500-$1,000
Street Trees	Each	$300-$700
Benches	Each	$1,800
Bump Out Traffic Calming	Square Foot	$150
Raised Crosswalk	Square Foot	$150
Ladder Crosswalk	Intersection	$12,000
ADA Curb Ramps	Intersection	$15,000
Pedestrian Refuge Island	Each	$25,000
Pedestrian Signals - RRFB	Per Crossing	$120,000
Pedestrian Signals - HAWK	Intersection	$250,000

*Cuyahoga County Public Works, 2024 estimated costs derived by applying 20% multiplier to reflect noted increases in labor and materials costs since 2018

^ All costs are estimates only; actual costs of labor, materials, and project can vary

ON-STREET CATALYST PROJECTS

Street	Length	Facility Type	Delineator	Cost Estimate
Lakeshore Blvd	3.9 miles	Two-way cycle track	Every 20 ft - 1 side	$669,000
Lakeshore Blvd	3.9 miles	Buffered bike lanes*	Every 20 ft - 2 sides	$1.08 million
E. 250th Street	1.4 miles	Two-way cycle track	Every 20 ft - 1 side	$239,000
E. 250th Street	1.4 miles	Buffered bike lanes*	Every 20 ft - 2 sides	$311,000

*Buffered, bi-directional single bike lanes tend to have a higher cost estimate than a singular two-way cycle track due to the cost of an additional delineator. There are pros and cons of each facility type, and future feasibility and preliminary engineering studies may be required to determine the best facility type for each section of roadway.

Potential Funding Sources for On-Street Projects

CONGESTION MITIGATION AND AIR QUALITY PROGRAM (CMAQ)
NORTHEAST OHIO AREAWIDE COORDINATING AGENCY (NOACA)
Funds transportation projects or programs that reduce traffic congestion, improve air quality, and help urban areas make progress toward meeting Federal clean air standards.
https://www.noaca.org/community-assistance-center/funding-programs/ congestion-mitigation-air-quality-program

FEDERAL AID ROADWAY CAPITAL PROGRAM
NORTHEAST OHIO AREAWIDE COORDINATING AGENCY (NOACA) IN PARTNERSHIP WITH THE CUYAHOGA COUNTY DEPARTMENT OF PUBLIC WORKS, AND MUNICIPALITIES
Funding for the resurfacing of major arterials with high average daily traffic counts, and multi-city projects. The construction cost share is: 80% federal surface transportation funds through NOACA/10% contribution from the county/10% contribution from the municipality. The project design cost share is: 80% county/20% municipality. Bicycle and pedestrian features can be incorporated at the request of the municipality.
For more information about this program, contact NOACA at (216) 241-2414 or noaca@mpo.noaca.org.

LOCAL OPERATIONS RESURFACING PROGRAM
CUYAHOGA COUNTY DEPARTMENT OF PUBLIC WORKS
Funds the resurfacing of minor arterial and collector roads with an 80% county/20% municipality cost contribution for construction, and a 60% county/40% municipality cost contribution for the project design. Bicycle and pedestrian features can be incorporated in the roadway project.
For more information about this program, contact Erik Mack, Cuyahoga County Department of Public Works, at emack@cuyahogacounty.us.

LOCAL RESURFACING PROGRAM (50/50)
CUYAHOGA COUNTY DEPARTMENT OF PUBLIC WORKS
Funds the resurfacing of local county roads by sharing the cost equally with the municipality (50%/50%) up to a maximum of $250,000 per project for construction. Design costs are paid 100% by the municipality. Bicycle and pedestrian projects can be coordinated with a roadway resurfacing project.
For more information about this program, contact June Gauss, Cuyahoga County Department of Public Works, at jgauss@cuyahogacounty.us.

PEOPLE FOR BIKES COMMUNITY GRANT PROGRAM
PEOPLE FOR BIKES
Supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride.
https://www.peopleforbikes.org/grants

TRANSPORTATION ALTERNATIVES PROGRAM
OHIO DEPARTMENT OF TRANSPORTATION (ODOT)
Provides funding for projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; and safe routes to school projects.
https://www.transportation.ohio.gov/programs/local-funding-opportunities/resources/transportation-alternatives-program

URBAN PAVING PROGRAM
OHIO DEPARTMENT OF TRANSPORTATION (ODOT)
Provides funds for eligible surface treatment and resurfacing projects on State and U.S. Routes within municipal corporations. Contact District 12 Planning & Engineering Administrator, (216) 581-2100. https://www.transportation.ohio.gov/wps/portal/gov/odot/working/funding/resources/ urban-paving#:~:text=Eligibility,necessary%20to%20preserve%20the%20pavement.

OFF-STREET CATALYST PROJECTS

Street	Length	Facility Type	Cost Estimate
Euclid Avenue	4.1 miles	Side Path	$10.3 million
E. 222nd Street	2.5 miles	Side Path	$6.4 million

Potential Funding Sources for Off-Street Projects

CLEAN OHIO TRAILS FUND
OHIO DEPARTMENT OF NATURAL RESOURCES
Funding for trails to improve outdoor recreational opportunities for Ohioans.
https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/apply-for-grants/grants/clean-ohio-trails-fund

COMMUNITY CHANGE GRANTS
AMERICA WALKS
Provides funds for innovative, engaging, and inclusive programs and projects that create change and opportunity for walking and movement at the community level.
https://americawalks.org/programs/community-change-grants/

CONGESTION MITIGATION AND AIR QUALITY PROGRAM (CMAQ)
NORTHEAST OHIO AREAWIDE COORDINATING AGENCY (NOACA)
Funds transportation projects or programs that reduce traffic congestion, improve air quality, and help urban areas make progress toward meeting federal clean air standards.
https://www.noaca.org/community-assistance-center/funding-programs/ congestion-mitigation-air-quality-program

PEOPLE FOR BIKES COMMUNITY GRANT PROGRAM
PEOPLE FOR BIKES
Supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride.
https://www.peopleforbikes.org/grants

RAISE DISCRETIONARY GRANTS
U.S. DEPARTMENT OF TRANSPORTATION (USDOT)
Funding for road, rail, transit and port projects that have a significant local or regional impact, including multi-modal, multi-jurisdictional projects. Prioritization will be given to projects that can demonstrate improvements to racial equity, reduction of the impacts of climate change, and creating equitable opportunity for all Americans through good paying jobs.
https://www.transportation.gov/RAISEgrants

RECREATIONAL TRAILS PROGRAM
OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR)
Funding for development of urban trail linkages, trail head and trailside facilities; maintenance of existing trails; restoration of trail areas damaged by usage; improving access for people with disabilities; acquisition of easements and property; development and construction of new trails; purchase and lease of recreational trail construction and maintenance equipment; environment and safety education programs.
https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/apply-for-grants/grants/ recreational-trails-program

TRANSPORTATION ALTERNATIVES PROGRAM
OHIO DEPARTMENT OF TRANSPORTATION (ODOT)
Provides funding for projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; and safe routes to school projects.
https://www.transportation.ohio.gov/programs/local-funding-opportunities/resources/transportation-alternatives-program

4.4 IMPLEMENTATION MATRIX

It is important to recognize that there are numerous factors that are beyond the City's control, including economic or regulatory changes. In such cases, it is critical to continue forward and maintain supportive partnerships with those who can provide assistance. Additionally, because cities across Cuyahoga County and the State are facing declining resources, it is becoming more important than ever to engage firms, institutions, and citizens to collaborate in the work of local government. This Plan identifies opportunities for engaging with other entities in developing mutually beneficial programs. The implementation tables on the following pages link directly to the actions outlined within this document. While Potential Partners, Estimated Timelines, and Estimated Cost are provided, changes in priorities or funding streams may require updating. It is important to recognize that these tables serve as guides, and they are intended to be updated as circumstances change.

ESTIMATED TIMELINES

Estimated timelines are an important component for coordinating the implementation of multiple projects concurrently. This Pedestrian & Bicycle Safety Action Plan has provided planning-level timeline estimates for each Recommended Action. However, it is important to recognize that these timelines coincide with the start date of when an action is undertaken, and not from the adoption of this Plan. Additionally, these general timelines may shift as more resources become available. Any action with an "Ongoing" timeline indicates an action that the City is currently undertaking and should continue in the future towards full implementation.

ESTIMATED COSTS

Costs will also vary depending on the type of action described. Some recommendations may be more administrative, and can be addressed internally by the City staff, boards, commissions, or City Council. Other recommendations will require outside professional assistance or additional studies. These implementation tables provide a range of costs to give a general understanding of the scope of an action. As seen in the table below, estimated costs are categorized into three levels: High, Medium, and Low.

Estimated Cost Range	
$$$	High Cost *(Over $500,000)*
$$	Medium Cost *($100,000 to $500,000)*
$	Low Cost *(Up to $100,000)*

For the purposes of this Plan, these cost ranges describe the action as it is outlined within this document and do not include additional steps that would occur outside each action. Importantly, estimated costs are only supplied for the action as described, and they do not take into account potential additional steps. For instance, the action "Identify pilot projects for implementation of traffic calming measures, especially on proposed Neighborhood Greenways", only takes into account the cost of identifying pilot projects. The estimate does not include the potential

costs associated with implementing traffic calming measures.

PRIORITY LEVELS

The priorities for actions are identified by stars throughout the implementation tables on the next pages. Those actions with three stars are considered the highest priority while fewer stars indicate lower priorities as shown in the table below. Priority levels were determined through public input and feedback from the Project Team.

Priority Level	
★★★	Highest Priority
★★	Medium Priority
★	Lowest Priority

POTENTIAL PARTNERS

This Plan outlines numerous goals and strategies to achieve the community's vision for improving pedestrian and bicycle safety. However, while some actions can completed by the City itself, others may require the assistance, resources, or support from other partners. Throughout the implementation matrix on the next pages, Potential Partners have been identified that could help with the implementation of this Plan's strategies.

As seen in the table to the right, a legend has been provided to help better understand who might be the right fit for each action. While this is a detailed list of potential partners, it is not comprehensive and other partners could exist. In general, this list should act as a starting point for the City when moving forward with implementation and further collaboration will be important as projects and ideas become thoroughly developed.

Legend of Potential Partners	
BC	Bike Cleveland
BE	Bike Euclid
BO	Business Owners
CC	City of Cleveland
CRH	City of Richmond Heights
CSE	City of South Euclid
CMP	Cleveland Metroparks
CCD	Cuyahoga County Department of Development
CCPW	Cuyahoga County Department of Public Works
CCPC	Cuyahoga County Planning Commission
CLB	Cuyahoga Land Bank
DP	Design Professionals
DEV	Developers
ECSD	Euclid City School District
EFD	Euclid Fire Department
EPDD	Euclid Planning & Development Department
EPD	Euclid Police Department
EPSD	Euclid Public Service Department
ERD	Euclid Recreation Department
ESTC	Euclid Shade Tree Commission
GCRTA	Greater Cleveland Regional Transit Authority
LC	Lake County
LB	Local Businesses
ME	Major Employers
NC	Neighboring Communities
NG	Neighborhood Groups
NP	Nonprofits
NOACA	Northeast Ohio Areawide Coordinating Agency
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
PBAC	Ped/Bike Advisory Committee
PO	Property Owners
RR	Rail Roads
RES	Residents
RSC	Ride Share Companies
UT	Utilities

Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
Goal A: Complete Sidewalk Availability (page 88)					
Strategy 1: Prioritize streets that provide access to key destinations (schools, parks, etc.)	★★	Ongoing	ODOT, NOACA, CDPW, BO, EPSD, PO, RES	$	
Strategy 2: Prioritize first-mile/last mile connections that provide access to transit stops and job centers.	★★	Ongoing	ODOT, NOACA, GCRTA, ME, EPSD	$$	
Strategy 3: Prioritize new or rebuilt sidewalks on streets with higher speeds, crashes, and volumes.	★★★	Ongoing	ODOT, NOACA, CDPW, EPSD	$	
Strategy 4: Increase minimum standards for sidewalk construction (width, location, furnishings, etc.) to increase comfort and safety.	★★★	6 Months	ODOT, NOACA, CDPW, EPSD	$	
Goal B: Road & Lane Diet Conversions (page 90)					
Strategy 1: Evaluate road diet and lane width reduction guidelines.	★★★	6 Months	ODOT, NOACA, DP, PBAC	$	
Strategy 2: Integrate road diet considerations into Capital Improvements Program (CIP), pavement resurfacing, or similar construction schedules.	★★	Ongoing	CCPW, GCRTA, ODOT, NOACA	$	
Strategy 3: Conduct corridor and/or targeted intersection analyses on roadways where road or lane reductions are being considered.	★★	1 Year	ECSD, BE, BC, PBAC	$$	
Goal C: Buffered Bike Lanes & Two-Way Cycle Tracks (page 94)					
Strategy 1: Evaluate identified roads for preferred on-road facility configuration and type.	★★★	6 Months	ODOT, CCPW, NOACA, GCRTA	$	
Strategy 2: Create school and community education/awareness campaigns for responsible road sharing of all users.	★★	1 Year	ECSD, BE, BC, NG, PBAC	$	
Strategy 3: Integrate strong wayfinding/signage, and road marking programs on streets where on-road facilities are implemented.	★★★	Ongoing	NOACA, CCPW, NG, BE, BC, DP	$$	
Strategy 4: Utilize continuous barriers to separate vehicles and bicyclists when possible and/or elevated facilities with intermittent barriers and delineators.	★★	Ongoing	ODOT, NOACA, GCRTA, BC, BE, DP	$$	
Goal D: All-Purpose Trails & Sidepaths (page 100)					
Strategy 1: Prioritize installation of the Euclid Creek Connector Trail from Euclid Creek Reservation to the Lakefront.	★★★	Ongoing	CCPW, CMP, NOACA, DP	$$$	
Strategy 2: Evaluate potential trail extensions through utility rights-of-way, vacated railroads, land bank parcels, or strategic land assembly as opportunities become available for connections.	★★	1-2 Years	UT, RR, ECSD, PO, CLB, ODNR, CMP, PBAC, DP, RES	$$	
Strategy 3: Evaluate trail alignment options and engineering/topography strategies along Euclid Avenue, Chardon Road, and Highland Road to ensure the ease of access and usability is maintained.	★★	1-2 Years	ODOT, NOACA, GCRTA, CDPW, PBAC, DP, RES	$$	

Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
Strategy 4: Consider a sidewalk conversion into an all-purpose trail on N. Lakeland Boulevard, Lakeshore Boulevard (Sims Park to Downtown Euclid), and Glenridge Road.	★★	1 Year	ODOT, NOACA, CDPW, BC, BE, DP	$$$	
EARLY WIN! **Goal E: Neighborhood Greenways & Traffic Calming (page 106)**					
Strategy 1: Identify pilot projects for implementation of traffic calming measures, especially on proposed Neighborhood Greenways.	★★★	Ongoing	NOACA, NG, BC, BE, PBAC	$	
Strategy 2: Implement permanent features from successful pilot projects and update all signage and road markings accordingly.	★★	Ongoing	ODOT, NOACA, GCRTA, CDPW, DP	$$$	
Strategy 3: Reduce curb radii and add curb extensions, median refugee islands, and mid-block crossings on designated Neighborhood Greenways routes and high-stress corridors with higher-levels of traffic stress.	★★	3-5 Years	ODOT, NOACA, GCRTA, CDPW, PBAC DP	$$$	
Strategy 4: Develop an access management plan to help reduce curb cuts and conflict points between cars and non-motorized users.	★★★	1-2 Years	ECSD, NG, BC, BE, PBAC DP	$	
EARLY WIN! **Goal F: Temporary Installations (page 110)**					
Strategy 1: Utilize the NOACA Street Supplies program as a method to demonstrate and test temporary bicycle and pedestrian infrastructure improvements.	★★★	Ongoing	ODOT, NOACA, EPSD, NG, PO, ECSD, BC, BE, RES, PBAC	$	
Strategy 2: Prioritize neighborhood traffic calming projects such as speed tables and curb bump outs to help build out a neighborhood greenway network.	★★★	Ongoing	ODOT, NOACA, CEPSD, NG, PO, ECSD, BC, BE, RES, PBAC	$	
Strategy 3: Consider testing reduce turn/curb radii at intersections along the proposed neighborhood greenway network with an emphasis at major corridor crossings and in Downtown Euclid.	★★	1-2 Years	ODOT, NOACA, EPSD, NG, PO, ECSD, BC, BE, RES, PBAC	$	
Goal G: Streetscaping Amenities (page 112)					
Strategy 1: Develop cohesive, city-wide branding standards for streetscape amenities and site furniture (benches, trash receptacles, bicycle parking, and lighting).	★★★	1 Year	NOACA, EPSD, BC, BE, NG, DP	$	
Strategy 2: Standardize and implement streetscape amenity designs already in use in recently developed projects throughout the city to keep a cohesive feel to amenities—such as street furniture from the E. 185th Streetscaping project and lighting from the Lakefront Trail.	★★★	1-2 Years	NOACA, EPSD, BC, BE, NG, DP, PBAC	$	
Strategy 3: Add streetscape amenities in key locations throughout the community to improve pedestrian comfort-with an emphasis on Downtown Euclid and prominent corridors, such as E. 200th Street, E. 222nd Street, Babbitt Road, Euclid Avenue, and Lakeshore Boulevard.	★★★	1-2 Years	NOACA, EPSD, LB, BC, BE, DP, PBAC	$$	

Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
Strategy 4: Coordinate the addition of street trees in locations with high pedestrian activity utilizing Healthy Urban Tree Canopy grants (www.countyplanning.us/services/grant-programs/healthy-urban-tree-canopy-grant-program/).	★★★	Ongoing	NOACA, EPSD, CCPC, ESTC	$	
Goal H: Shared Transportation & Micromobility (page 118)					
Strategy 1: Survey businesses, employees, regional partners, and other stakeholders to identify opportunities for increased job access through first/last mile and micromobility improvements.	★★★	6 Months	RES, BO, ME, PO, NOACA, GCRTA, NP, RSC, BC, BE	$	
Strategy 2: Identify pilot locations to test the functionality and feasibility of an expanded micromobility network.	★	1-2 Years	CC, CRH, CSE, LC, RSC, GCRTA, NC, ME	$	
Strategy 3: Collaborate with GCRTA on integrating micromobility programs with bus routes and stops to improve first/last mile connections for transit riders and workers.	★★	1-2 Years	GCRTA, RSC, ME	$$	
Strategy 4: Establish a public/private partnership to create a sponsor program for the ongoing funding and maintenance of a micromobility program and bus shelters.	★	3-5 Years	CEPSD, GCRTA, RSC, NP, BO, ME	$$$	
Strategy 5: Coordinate education, events/programming, and outreach for micromobility programs with Euclid City Schools/students about the proper use of such devices and laws governing them.	★	Ongoing	ECSD, NOACA, ODOT, RSC	$$	
Goal I: Wayfinding, Signage & Mobile Apps (page 120)					
Strategy 1: Work with qualified design professionals to develop a comprehensive wayfinding system that integrates the City's brand across all signage types.	★★★	1-2 Years	CCPC, DP, NOACA	$$$	
Strategy 2: Coordinate all bicycle and pedestrian network signage with future routes connecting to larger regional networks (Cleveland Metroparks, Cuyahoga Greenways, etc.) by utilizing the Trails and Bikeway Wayfinding System: Sign System Standards version 3 (see appendix)	★★★	Ongoing	CMP, CC, CRH, CSE, LC, NOACA	$	
Strategy 3: Develop a webpage on the City's website specific to pedestrian and bicycle projects, improvements, and events.	★	6 Months	ODOT, NOACA, GCRTA, CDPW, DP, RES, BO, PO, BC, BE	$$	
Strategy 4: Create an interactive online portal and/or mobile app for residents to report and upload photos of issues occurring on roadways, trails, sidewalks, etc.	★	1 Year	ODOT, NOACA, GCRTA, CDPW, DP, RES, BO, PO, BC, BE, LB	$$$	
Strategy 5: Utilize existing Downtown Euclid Special Improvement District (SID) to prioritize wayfinding throughout key destinations.	★★★	Ongoing	NOACA, CDPW, PO, BO, DP, LB	$	

Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
Goal J: Ped/Bike Advisory Committee & Policing (page 122)					
Strategy 1: Create a High Visibility Enforcement (HVE) schedule for deploying officers in high crash/ speed areas to administer citations, warnings, and to "catch people doing good" at crosswalks, stop signs, traffic signals, etc.	★★	6 Months	EPD, EFD, PBAC	$	
Strategy 2: Collaborate with ODOT to ensure local police forces are well-educated and trained to enforce speed limits within the City.	★★	Ongoing	ODOT, EPD, PBAC	$	
Strategy 3: Establish and enforce a citywide, Zero Tolerance policy for distracted driving and speeding within the City.	★★★	1 Year	ODOT, NOACA, EPD, PBAC	$	
Strategy 4: Form a Ped/Bike Advisory Committee to assist police, ODOT, and other agencies with community outreach, identifying critical safety areas, and providing insights on safety improvements.	★★★	1 Year	ODOT, NOACA, PBAC, EPD, EFD, RES, BE, BC, ECSD, LB	$	
Strategy 5: Adopt a Vision Zero for the long-term commitment to eliminate serious traffic-related injuries and fatalities.	★★	6 Months	ODOT, NOACA, PBAC, EPD	$	
Strategy 6: Establish new standards for tracking accidents and injuries/fatalities—including well-defined categories of roadway users, such as vehicles, heavy trucks, motorcycles/scooters (gas powered/motorized), pedacycles (bicycles, tricycles, scooter, or other similar non-motorized/human-powered devices), and pedestrians (with/without mobility assistance devices).	★★	1 Year	EPD, EFD, PBAC	$	
Strategy 7: Coordinate and adjust patrol routes to coincide with peak travel times in high-accident areas.	★★	6 Months	EPD, EFD, PBAC	$	
Goal K: Safe Routes to School (page 124)					
Strategy 1: Consider technical assistance early in the SRTS process with the Safe Routes Partnership to bring city and school officials together in support of safe connections to facilities.	★★★	1 Year	ODOT, NOACA, ECSD, NP	$	
Strategy 2: Utilize outreach methods like school surveys to better understand and tally student and teacher travel patterns, safety needs, and improvements.	★★	1 Year	ODOT, ECSD, NP, BE, BC, RES	$	
Strategy 3: Update School Travel Plan (STP) and apply for Safe Routes to School funding.	★★★	1-2 Years	ODOT, ECSD, RES	$	
Strategy 4: Collaborate with ODOT to ensure applications meet eligibility requirements and for internal review of materials	★★	Ongoing	ODOT, ECSD	$	
Strategy 5: Collaborate with Euclid City Schools to incorporate SRTS into everyday learning at schools—such as outdoor learning or physical education programs.	★★	3-5 Years	ODOT, ECSD, RES	$	

	Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
EARLY WIN!	**Goal L: Complete & Green Streets Policy (page 126)**					
	Strategy 1: Engage with city departments, regional partners, and other organizations to identify feasibility, costs, and any concerns surrounding the implementation of Complete and Green Streets.	★★★	1 Year	CCPC, CDPW, NOACA, ODOT, EPSD, EPD, EFD, NP, BE, BC	$	
	Strategy 2: Create a Complete and Green Streets policy that seeks to provide safe and desirable travel for all users and incorporates best management practices for green infrastructure.	★★★	1-2 Years	DP, ODOT, NOACA, CCPC, EPSD, EPD, EFD	$	
	Strategy 3: Coordinate Complete and Green Streets projects with Capital Improvements Program (CIP), pavement resurfacing, or similar construction schedules.	★★	Ongoing	ODOT, NOACA, GCRTA, CDPW, EPSD, EPD, EFD	$$	
EARLY WIN!	**Goal M: Zoning & Codified Ordinances (page 128)**					
	Strategy 1: Require new development incorporate a pedestrian and bicycle circulation plan as part of the application review process and site designs.	★★	1-2 Years	DEV, BE, BC, NOACA, EPSD, CCPC	$	
	Strategy 2: Require new development, especially in Commercially Zoned areas and the Downtown Overlay District, to extend new on-site, internal pedestrian and bicycle connections/access with existing, external infrastructure (sidewalks, trails, bus stops/shelters, etc.)	★★	1-2 Years	DEV, BE, BC, NOACA, EPSD, CCPC	$	
	Strategy 3: Ensure new development provides safe, clear, and direct front door access to businesses.	★★★	Ongoing	DEV, BO, LB, NOACA, EPSD, CCPC	$$	
	Strategy 4: Require new development to integrate on-site bicycle parking with additional parking reductions for covered bicycle parking, employee showers, lockers, etc.	★★	1-2 Years	DEV, BE, BC, CEPSD, CCPC	$	
	Strategy 5: Create a checklist of bike and pedestrian-oriented elements that can be used as a guide to ensure new developments are encouraging safe and direct access for non-motorized users.	★★★	6 Months	BE, BC, CCPC, ODOT, NOACA, EPSD, DEV	$	
	Strategy 6: Provide developers with tax, permitting, density, or other incentives to build facilities, like sidewalks, trails, and other similar amenities to increase opportunities for walking and biking.	★★★	Ongoing	DEV, CDPW, EPSD, ODOT, NOACA, CCPC, BO, LB	$	
	Strategy 7: Develop new standards for placement, operation, and maintenance of micromobility facilities.	★	1-2 Years	EPSD, ODOT, NOACA, RSC, GCRTA, CCPC	$	
	Strategy 8: Review off-street parking requirements in the city's zoning code and consider removing these requirements	★★★	1-2 Years	DEV, LB, CCPC	$	

Recommended Actions	Priority	Timeline	Potential Partners	Cost	Notes
Goal N: Project Coordination & Collaboration (page 130)					
Strategy 1: Establish new powers and duties for a Bicycle & Pedestrian Coordinator to be assumed by a newly created position or assigned to an existing staff member.	★★	6 Months	EPSD, BC, BE, NOACA, ODOT	$$	
Strategy 2: Consider an expanded advisory role for the proposed Ped/Bike Advisory Committee to include the coordination of pedestrian and bicycle safety, access, amenities, and infrastructure	★★	6 Months	RES, BO, PO, ECSD, NP, BC, BE, CMP, PBAC	$	
Strategy 3: Coordinate roadway infrastructure projects with adjacent communities and other regional partners (ODOT, Cuyahoga County, etc.) to create a seamless connectivity network	★★★	Ongoing	ODOT, GCRTA, NOACA, CDPW, CRH, CSE, LC, CC, PBAC	$	
Strategy 4: Collaborate with the Cuyahoga County Department of Public Works on repaving the County routes in order to integrate pedestrian and bicycle improvements into the roadway.	★★★	Ongoing	ODOT, GCRTA, NOACA, CDPW, PBAC	$$	
Strategy 5: Partner with Bike Euclid to help grow memberships and strengthen volunteer opportunities to improve awareness surrounding non-motorized transportation in Euclid.	★★★	Ongoing	BE, BC, RES, PBAC	$	

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