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# THE HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

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February 2025 | FINAL





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- » South Euclid: January 27, 2025. Resolution No. 39-24



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**People walking in Euclid Creek Reservation.**

# EXECUTIVE SUMMARY







## EXECUTIVE SUMMARY

### INTRODUCTION

The Heights Regional Active Transportation Plan (Heights Regional ATP) is a guide for the future of walking, biking, and rolling in Cleveland Heights, University Heights, and South Euclid. Developed with regular input and guidance from the public, and a steering committee consisting of representatives from local and regional stakeholders, the plan seeks to improve connectivity between the three cities and to the rest of the Cleveland area by building on each city's recent investments in active transportation infrastructure. The plan was created through the collaborative efforts of a core project team consisting of representatives from the cities of Cleveland Heights, University Heights, South Euclid, as well as Burton Planning Services, Burgess & Niple, Toole Design Group, and the Ohio Department of Transportation.

### WHAT IS ACTIVE TRANSPORTATION AND WHY IS IT IMPORTANT?

“Active transportation” is an umbrella term used to describe all of the methods people use to travel around without a motorized vehicle – walking or biking, using mobility assistance devices (such as wheelchairs and scooters), skating or skateboarding, and more. In short, active transportation is human-powered travel. Active transportation is a fundamental transportation mode many Ohioans use to access public transit, work, school, retail stores or any number of destinations in urban, suburban, and rural settings. In addition to personal mobility, active transportation provides many community benefits such as improved public health, economic development, greater quality of life, and enhanced environmental quality, as summarized on the next page.

## Benefits of Active Transportation

### Physical Health

Increased opportunities for active modes of travel can increase physical activity levels and reduce the risk for developing preventable, chronic diseases.

### Mental Health

Physical activity reduces depression, can improve the quality of sleep, and has been shown to improve cognitive function for older adults.<sup>1</sup> Active transportation can also support building friendships and community networks by walking, biking, or rolling together, which contributes to positive mental well-being among residents.

### Economic Development

There is broad consensus across the country, and in Ohio, that investing in active transportation produces a positive return on investment for host communities.<sup>2</sup> This is especially true when it comes to trails, which serve as major regional attractions for recreational riders.

### Quality of Life

Comfortable and accessible options for bicycling and walking provide many quality-of-life benefits. They increase travel options for everyone and can lead to greater independence for older residents, young people, and others who cannot or choose not to drive. Providing a high-quality active transportation network is especially important for the mobility of community members who do not have full access to a vehicle.

### Environmental Quality

Shifting to bicycling and walking trips, and concentrating development in dense walkable and bikeable communities, can reduce transportation-based emissions and sprawling land use that impacts the natural environment.<sup>3</sup>

1. U.S. Department of Health and Human Services. 2008 PHYSICAL ACTIVITY GUIDELINES FOR AMERICANS. Washington, DC: U.S. Dept of Health and Human Services; 2008. <http://health.gov/paguidelines/pdf/paguide.pdf>

2. For one study in Ohio, see: Econsult Solutions, Inc. (2021). The Regional Impacts of a Completed Central Ohio Greenways in Franklin County. Prepared for the Mid-Ohio Regional Planning Commission. <https://www.morpc.org/2023/wp-content/uploads/2023/03/08-19-22-Economic-Impact-of-the-Central-Ohio-Greenways.pdf>

3. Federal Highway Administration, National Bicycling and Walking Study, "Case Study No. 15 The Environmental Benefits Of Bicycling And Walking," 1993 [http://safety.fhwa.dot.gov/ped\\_bike/docs/case15.pdf](http://safety.fhwa.dot.gov/ped_bike/docs/case15.pdf)

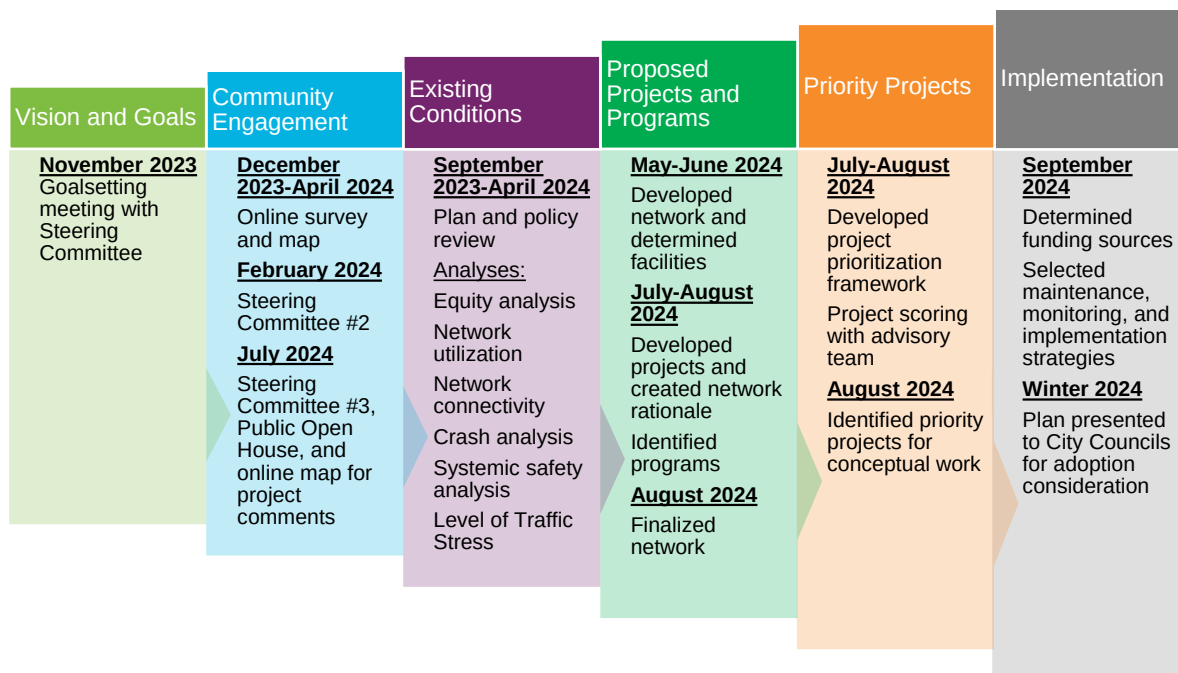
## WHAT IS AN ACTIVE TRANSPORTATION PLAN?

An Active Transportation Plan (ATP) outlines the vision, goals, and strategies needed to support safe, convenient, and accessible active transportation options for a community at a local, regional, or statewide scale. It should identify a combination of infrastructure improvements, policies, and programs to address the various challenges that people may encounter to engaging in more active transportation. A regional plan like the Heights Regional ATP also focuses on linking communities together while improving local networks. This document summarizes the findings of the planning process and is organized into the following sections:

- » Executive Summary
- » Vision and Goals
- » Community Engagement
- » Existing Conditions
- » Proposed Projects and Programs
- » Priority Projects
- » Implementation

## PROJECT TIMELINE

The process to develop the Heights Regional ATP began in September 2023 with an assessment of existing conditions and a review of other relevant plans and studies. Public input via in-person meetings, an open house, and online surveys and a technical analysis provided a foundation for proposed projects and prioritization of those recommendations. The plan's final chapter incorporates all of this input and analysis to provide guidance for implementation. The project is expected to be approved in October 2024 (see **Figure 1** for a project timeline).



**Figure 1. Project Timeline**

## VISION AND GOALS

The community vision statement for this plan is:

**The Heights Regional Active Transportation Plan will provide a framework to increase transportation equity and allow residents to safely travel in and between Cleveland Heights, University Heights, and South Euclid. The Plan strives to create a safe, convenient, and accessible transportation system including for those walking, biking, and rolling, regardless of wealth, ability, or disability.**

The vision statement is supported by the following goals:



### **Connectivity**

Increase active transportation connections in and among the cities of Cleveland Heights, University Heights, and South Euclid, including both trips for work and everyday destinations.



### **Safety**

Improve the safety of the transportation system with a focus on walking and biking.



### **Accessibility**

Create mobility options for users of all ages and abilities.



### **Health**

Use active transportation to motivate healthy lifestyles in the community.



### **Education**

Educate the public on mobility options such as walking, biking, rolling, and driving options.



### **Equity**

Support well-maintained walking and biking infrastructure in areas of the greatest need (lowest income, highest transportation burden).



## PUBLIC ENGAGEMENT

Community engagement was included at key milestones in the plan process to gain input on the vision and goals for the plan, any barriers to walking or biking, potential new walking or biking facilities, and project prioritization. Engagement activities included two online surveys, a public open house, three Steering Committee meetings, and additional outreach at community-focused events such as local bicycle rides and community workshops. Early public engagement identified avenues to encourage more walking and biking, which included more bicycle facilities and trails, more separation for pedestrians and bicyclists from vehicles, and better maintenance of sidewalks and trails. The later public open house and accompanying online survey collected input on how to prioritize the various projects, programs, and policies. Community input indicated the greatest enthusiasm for bicycle boulevards such as Silsby Road and improvements to major corridors such as Cedar Road, Lee Road, and Mayfield Road. The Steering Committee assisted in the development of the vision and goals for the ATP, suggested implementation action items, and identified potential focus projects for further development. Those discussions consistently highlighted safety as an important consideration in plan development and project selection. Additional details about all aspects of public engagement are located in the Community Engagement section.

### Public Engagement Activities

- Two online surveys
- One public open house
- Three steering committee meetings
- Additional outreach at community events



Source: Toole Design Group

Attendees at the public open house.

### EXISTING CONDITIONS

The project team completed an existing conditions analysis to understand the current transportation system and where improvements could be made for people who travel by walking and biking. The analysis revealed high concentrations of bicycle and pedestrian crashes from 2018 to 2022 on major arterials including Cedar Road, Coventry Road, Lee Road, Noble Road, and Warrensville Center Road/Noble Road. In addition, the project team reviewed ODOT's Demand and Needs Analyses, which identified areas with strong potential for biking and walking. High demand and high need areas in Cleveland Heights, University Heights, and South Euclid include many of the census tracts bounded by Mayfield Road, Lee Road, Cedar Road, and Green Road, as well as some adjacent areas. Smartphone mobility data, provided by the firm Streetlight), was used to review areas with high walking and biking activity in 2019. High levels of walking activity include major key corridors such as Coventry Road, Lee Road, Mayfield Road, and Warrensville Center Road. High levels of existing bicycling activity include Edgehill Road, North Park Boulevard, and Taylor Road. Additional details about the existing conditions data considered as part of the plan are located in the Existing Conditions section.

### PROPOSED PROJECTS AND PROGRAMS

The combined result of the existing conditions analysis, community input, and Steering Committee guidance provided a recommended active transportation network plan for the region. The network includes recommendations for new walking and biking infrastructure including:

- » 21 miles of bicycle boulevards,
- » 17 miles of shared use paths,
- » 11 miles of separated bike lanes,
- » 5 miles of buffered bicycle lanes,
- » 3 miles of on-road bicycle lanes,
- » 6 miles of sidewalks; and
- » improvements to 50 intersections.

Supportive programs and policies are also recommended to assist the cities and residents in making active transportation an easy option in the future. Examples of recommended programs and policies include educational campaigns, walking and biking encouragement programs, policies that support safety, and school-related programs. See the **Community Engagement** chapter for details on the proposed bicycle and pedestrian projects and supportive programs.



## PRIORITY PROJECTS

A prioritization process that included input from the community and other key metrics was used to identify projects recommended for implementation or further study in the short term (1-3 years).

Projects that ranked high in prioritization included:

- » Warrensville Center Road/Noble Road - separated bicycle lanes, crossing improvements, and sidewalk gap fill
- » Cedar Road - shared use path, separated bicycle lanes, and crossing improvements
- » Mayfield Road - shared use path, separated bicycle lanes, and crossing improvements
- » Taylor Road- bicycle improvements and crossing improvements
- » Bluestone Road- bicycle boulevard

Additionally, the following projects were selected for additional conceptual design work:

- » Warrensville Center Road/Noble Road - separated bicycle lanes, crossing improvements, and sidewalk gap fill
- » Bluestone Road - bicycle boulevard
- » Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive - bicycle boulevard
- » Belvoir Boulevard - buffered bicycle lanes



**Rendering of proposed Green Road/Bluestone Road intersection improvements**

# VISION AND GOALS





## VISION AND GOALS

### COMMUNITY VISION STATEMENT

The Heights Regional Active Transportation Plan will provide a framework to increase transportation equity and allow residents to safely travel in and among the cities of Cleveland Heights, University Heights, and South Euclid. The Plan strives to create a safe, convenient, and accessible transportation system including for those walking, biking, and rolling, regardless of wealth, ability, or disability.

### COMMUNITY GOALS

- » **Connectivity** – increase active transportation connections in and among the cities of Cleveland Heights, University Heights, and South Euclid, including both trips for work and everyday destinations.
- » **Safety** – improve the safety of the transportation system with a focus on walking and biking.
- » **Accessibility** – create mobility options for users of all ages and abilities.
- » **Health** – use active transportation to motivate healthy lifestyles in the community.
- » **Education** – educate the public on mobility options such as walking, biking, rolling, and driving options.
- » **Equity**– support well-maintained walking and biking infrastructure in areas of the greatest need (lowest income, highest transportation burden).

# COMMUNITY ENGAGEMENT







Source: Toole Design Group

## COMMUNITY ENGAGEMENT

Community engagement is an essential tool in the plan development process. Involving the public builds trust in the Plan and improves the overall quality of the findings. The project team used several strategies to collect public input including online surveys, a public open house, Steering Committee meetings, and additional outreach at related events such as local bicycle rides or community workshops.

## ENGAGEMENT TIMELINE (MILESTONE TOUCHPOINTS)

The project team hosted three Steering Committee meetings throughout the project at key milestones to gain feedback and guidance. The first Steering Committee meeting was held in November 2023 as a project kickoff meeting, the second in February 2024 to discuss the region's existing state of walking and biking, and the third meeting was held in June 2024 to review the draft active transportation network.

In addition to the Steering Committee, community engagement activities included an online map and survey in winter/spring 2024 to learn about the community's current use of trails and sidewalks along with suggestions for new facilities. A public meeting held in the summer of 2024 was supplemented by an online survey to gather feedback on new draft projects.



## STRATEGIES

### Steering Committee Meetings

The Steering Committee, comprised of City staff, elected officials, transit agency staff, and local stakeholders, guided the development of the Heights Regional ATP. Steering Committee members are listed under Acknowledgments at the beginning of this document. The Steering Committee met three times over the course of the plan development:

- » The first meeting introduced the project development process, with discussion focused on existing plans and policies, and included an exercise in mapping positives, negatives, and gaps in existing infrastructure.
- » The second meeting focused on the existing conditions analysis and included an exercise to determine plan goals.
- » The third meeting focused on a review of the recommended projects, programs, and policies, and Steering Committee members identified high-priority projects and preferred bicycle boulevard treatments.

### Public Input

Public feedback was collected through online surveys and a public open house during the project process:

- » **An online survey** at the beginning of the planning process included questions about barriers to bicycling and walking and a web map exercise to identify opportunities and challenges. The survey ran from December 4, 2023 through April 1, 2024. The survey received 505 responses, and the web map received 234 individual comments. Examples of the user interface for the web map showing point and line comments are in **Figure 2**.
- » **An open house** was held after projects had been identified to review the draft network recommendations and plans and policies. The event took place on July 15, 2024 from 6:00pm to 8:00pm at the Noble Branch Library (2800 Noble Road) in Cleveland Heights. Approximately 50 people attended and 22 people submitted comment cards.
- » **A second online survey** allowed people to review the draft network recommendations and provide comments. The survey ran from July 15 through August 12, 2024 and received 26 responses.

The online surveys and open house were advertised by Cleveland Heights, University Heights, and South Euclid through email and social media channels. City staff also handed out fliers advertising the surveys and open house at community events such as local bicycle rides, festivals, neighborhood meetings, and meetings for other local plans.

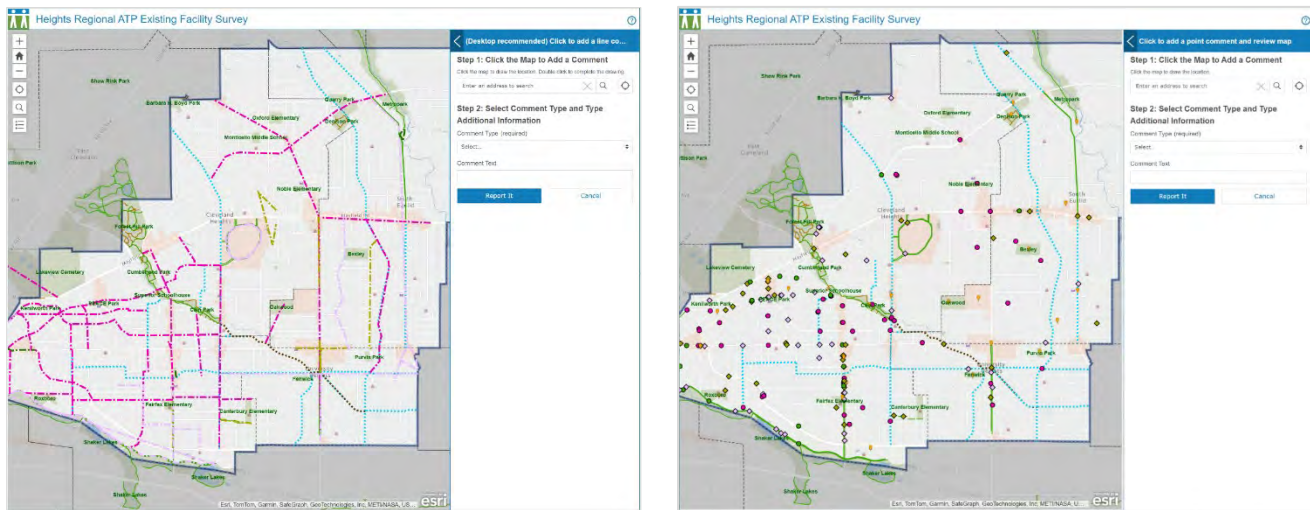


Figure 2. Example Images of Heights ATP Web Map with Public Comments as Lines (left) and Points (right)

## KEY TAKEAWAYS

The first Steering Committee meeting and initial online survey helped determine popular destinations, barriers to walking and biking in Cleveland Heights, University Heights, and South Euclid, and key streets that people are currently using to bike or walk.

### Popular destinations

- » Schools, including: Rowland Elementary School, Memorial Junior High, Brush High School, and Ruffing Montessori School
- » Libraries
- » Parks: Denison Park, Euclid Creek Metropark, Quarry Park, and Walter Stinson Community Park
- » Commercial corridors and districts: Lee Road, Cedar Road, Fairmount Boulevard, Coventry Road, and University Circle (in Cleveland)

### Top barriers to walking

- » **Unmaintained sidewalks and trails.** Better maintenance of sidewalks and trails was a top priority, with 55 percent of survey respondents saying that this would encourage them to walk or roll more.
- » **Not enough space between vehicles and pedestrians.** Nearly half (48%) of survey respondents noted greater separation from motor vehicles would encourage them to walk or roll more.
- » **Lack of shade.** People requested more trees and shade along sidewalks and trails.
- » **Feeling unsafe.** Respondents expressed concerns about pedestrian safety from high vehicle traffic and speeds on corridors such as Cedar Road, Lee Road, and Coventry Road. Relatedly, they requested traffic calming along Coventry Road, Lee Road, and at the Cedar Road/Warrensville Center Road intersection. Community members also requested





## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

improvements to pedestrian infrastructure such as lighting, signals, and pedestrian crossings at various intersections along Cedar Road, Coventry Road, Euclid Heights Boulevard, Fairmount Boulevard, Green Road, Lee Road, and Mayfield Road.

### Top barriers to biking

- » **Lack of bicycle facilities with separation.** Over 60 percent of survey respondents said that more bicycle lanes or trails would encourage them to bike more, and 60 percent also said they would prefer more separation between cars and trucks and people biking.
- » **Bicycle facility maintenance.** Better maintenance of bicycle facilities was a concern for at least 45 percent of survey respondents, and people specifically mentioned debris in existing bicycle facilities on corridors such as Cedar Glen Road, Edgehill Road, Green Road, Lee Road, North Park Boulevard, and Warrensville Center Road
- » **More physical protection and separation.** Respondents expressed a desire for wider bicycle facilities and more physical protection on corridors with painted bicycle lanes such as Lee Road, North Park Boulevard, and Warrensville Center Road
- » **Intersections on major roads.** People mentioned various intersections as barriers for bicyclists, including: Cedar Road/Cottage Grove, Coventry Road/Euclid Heights Boulevard, Cedar Road/Euclid Heights Boulevard, Coventry Road/Scarborough Road, and Cedar Road/Fairmount Boulevard.

### Streets currently serving as key routes for bicycling/walking

- » The corridors that received the most comments in the first online survey were Lee Road (35 comments), Cedar Road (25 comments) and Euclid Heights Boulevard (20 comments).
- » Other major commercial corridors such as Coventry Road, Fairmount Boulevard, Mayfield Road, and Warrensville Center Road were noted as important.
- » Bicyclists identified existing on-road bicycle facilities on Cedar Glen Road, Edgehill Road, Green Road, Lee Road, North Park Boulevard, and Warrensville Center Road as key routes.



Source: Burton Planning Services

The first Steering Committee meeting.



## KEY TAKEAWAYS (cont.)

In June 2024 the draft proposed network was presented to the Steering Committee, and committee members were asked to identify priority projects based on their knowledge of the existing network and community needs. In July 2024 the draft proposed network was presented at a public open house, where community members were asked to vote on up to three priority projects and any priority programs and policies.

During the third Steering Committee meeting, committee members broke into small groups to share their preferences for project priority by city. The following project list provides a qualitative assessment of prioritization and may be considered alongside the data-driven project prioritization list (see **Priority Projects**).

### Steering Committee Priority Projects by City

- » Cleveland Heights
  1. Lee Road: separated bicycle lane (Fairfax Elementary School to Cain Park)
  2. The bicycle boulevard network overall, including improving the current greenways
  3. Euclid Heights Boulevard: shared use path (Cedar Road to Taylor Road)
  4. Noble Road: separated bicycle lanes (northern City limit to Mayfield Road)
- » South Euclid
  1. Bicycle boulevards
    - a. Route along Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive (Monticello Boulevard to southern City limit)
    - b. Bluestone Road (Noble Road to shared use path entrance)
  2. South Belvoir Boulevard: buffered bicycle lanes (Bluestone Road to southern City limit)
  3. Warrensville Center Road: separated bicycle lanes (Mayfield Road to Cedar Road)
- » University Heights
  1. Washington Boulevard: shared use path (Cain Park to Silsby Road/Walter Stinson Community Park)
  2. Warrensville Center Road: separated bicycle lanes (within City limits, planned for 2027)
  3. Washington Boulevard: shared use path (extension to John Carroll University)
  4. Silsby Road bicycle boulevard (within City limits)

The final public meeting was an open house that presented the project process, vision and goals, and the proposed active transportation projects, programs, and policies. It took place on July 15, 2024, from 6:00pm to 8:00pm at the Noble Branch Library in Cleveland Heights, and was attended by people from all three project jurisdictions. Attendees could add comments to the posters noting potential changes or their support. The event also included a survey that allowed participants to indicate the projects programs, and policies they would like to see implemented first. The public identified the following projects to be prioritized:

- » Cedar Road: shared use path, separated bicycle lane, and crossing improvement zone (13 votes)
- » Lee Road: separated bicycle lane and crossing improvement zone (10 votes)
- » Mayfield Road: shared use path, separated bicycle lane, and crossing improvement zone (9 votes)

- » Washington Boulevard: shared use path (6 votes) and buffered bicycle lane (3 votes)
- » Silsby Road, Essex Road, Westminster Road, and Clarkson Road: bicycle boulevard (7 votes)
- » Taylor Road: bicycle facilities (6 votes)
- » Monticello Road: shared use path (4 votes)
- » Warrensville Center Road: separated bicycle lane and crossing improvement zone (4 votes)
- » Severance Circle: shared use path (4 votes)
- » Coventry Road: crossing improvement zone (4 votes)
- » Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive: bicycle boulevard (3 votes)
- » Belvoir Boulevard: bicycle boulevard (3 votes)
- » Liberty Road, Norma Road, and Ardmore Road: bicycle boulevard (3 votes)
- » Euclid Heights Boulevard: bicycle boulevard (3 votes)

In response to feedback from the public open house and online survey, a project was added at the Coventry Road/Clarkson Road intersection to add pedestrian crossings, and the proposed connection from Severance Circle to Crest Road was changed from a sidewalk to a shared use path. Additionally, proposed projects were added to upgrade the existing bicycle lanes along Severance Circle to a shared use path and to upgrade the existing buffered bicycle lanes along North Park Boulevard to a separated bicycle lane.

Participants in stakeholder and public engagement regularly emphasized safety as an important concern for active transportation in the Heights Regional ATP area. Full summaries and information about all public engagement can be found in **Appendix A**.



Source: Toole Design Group

People providing comments at the public open house.

# EXISTING CONDITIONS







## EXISTING CONDITIONS

This chapter examines several elements of University Heights, Cleveland Heights, and South Euclid's transportation system. It presents a demographic profile of this study area, and a plan and policy review summarizing existing active transportation and related efforts to date, framing the current planning process as a logical next step in the study area's active transportation evolution. This chapter also summarizes existing programs that support active transportation. A set of analyses that examines the active transportation system from various perspectives (e.g., equity, safety, connectivity) is also included.

## DEMOGRAPHIC PROFILE

To build the demographic profile for the cities of University Heights, Cleveland Heights, and South Euclid, data was collected from the US Census American Community Survey (ACS) 5-year estimates for 2022 and the 2020 Census. These three cities are in the Cleveland, Ohio, area and are home to about 80,405 individuals according to ACS 2022 estimates.

The study area is more diverse than the state of Ohio average with 40.8 percent of the population identifying as Black compared to the statewide average of 12.3 percent, as illustrated in **Figure 3**.<sup>1</sup> The age breakdowns of the study area population, illustrated in **Figure 4**, are on par with the statewide age breakdowns, with a slightly larger proportion in the study area in the 15-24 age range.<sup>2</sup> This is likely due to the presence of Case

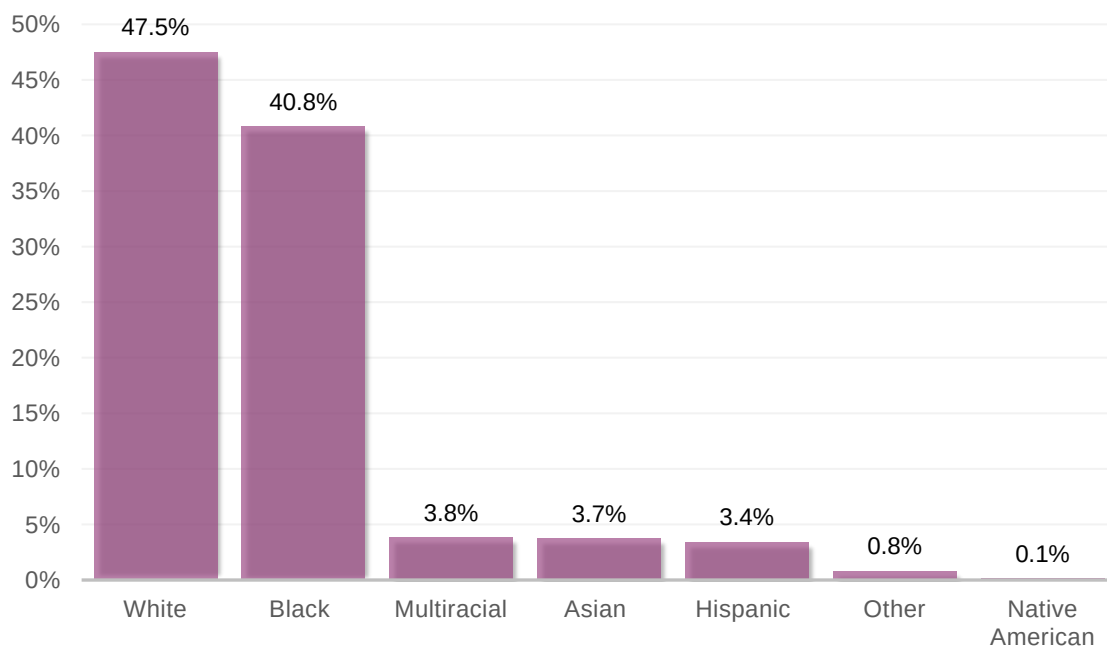
<sup>1</sup> U.S. Census Bureau. "PROFILE OF GENERAL POPULATION AND HOUSING CHARACTERISTICS." Decennial Census, DEC Demographic Profile, Table DP1, 2020, <https://data.census.gov/table/DECENNIALDP2020.DP1?q=2020+census&t=Race+and+Ethnicity&g=060XX00US3903516014,3903573264,3903578932&d=DEC+Demographic+Profile>. Accessed on January 17, 2024.

<sup>2</sup> U.S. Census Bureau. "ACS Demographic and Housing Estimates." American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP05, 2022, <https://data.census.gov/table/ACSDP5Y2022.DP05?q=DP05:ACS+Demographic+and+Housing+Estimates&g=060XX00US3903516014,3903573264,3903578932&moe=false>. Accessed on January 17, 2024.



Western Reserve University and John Carroll University. Car ownership rates, illustrated in **Figure 5**, are generally lower in the study area compared to Ohio overall, with 8.8 percent of households not owning a car and 41.4 percent owning one car, compared to 7.2 percent and 34.3 percent statewide, respectively.<sup>3</sup> This lower car ownership is reflected in commute mode share. While nearly 70 percent of the University Heights, Cleveland Heights, and South Euclid working population commute to work by driving alone, as illustrated in **Figure 6**, the rates of walking, biking, and using transit are all more than double the statewide average.<sup>4</sup>

The largest employment industry is “Educational services, health care, and social assistance,” with 35.8 percent of the working population in the study area employed in these sectors.<sup>5</sup> The average median household income for the three cities is \$79,016, higher than the state average of \$65,720.<sup>6</sup> However, the study area’s unemployment rate is 6.7 percent which is higher than the state average of 3.7 percent. The percent of the population of the study area below the poverty line is 13.4 percent, the same as the state average.<sup>7</sup>



**Figure 3. Study Area Race**

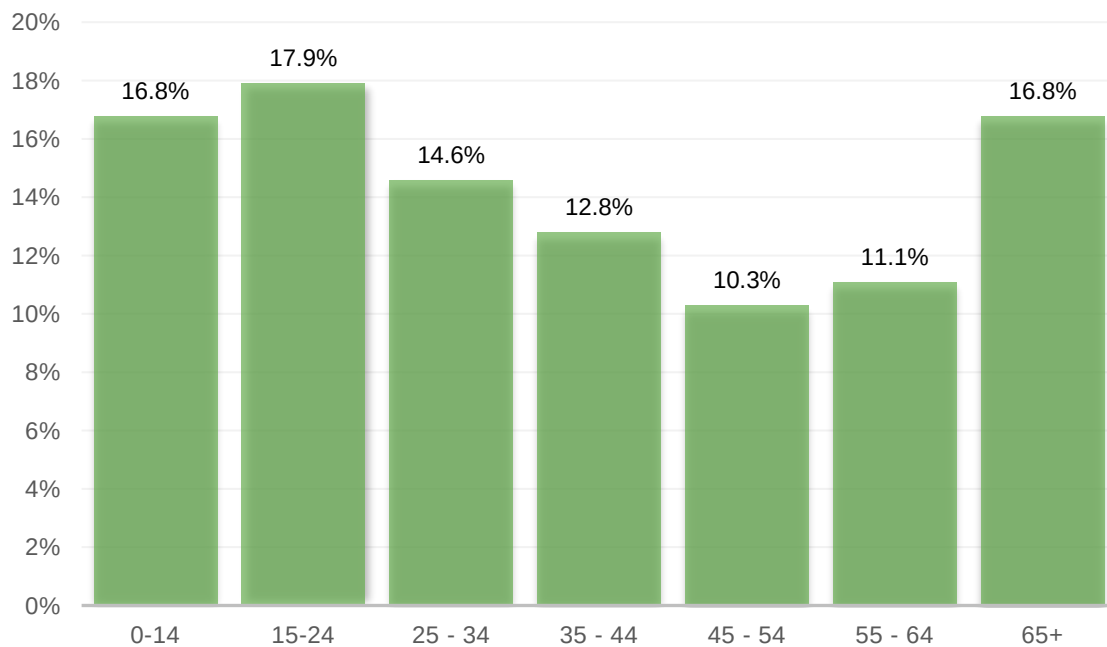
<sup>3</sup> U.S. Census Bureau. "Physical Housing Characteristics for Occupied Housing Units." American Community Survey, ACS 5-Year Estimates Subject Tables, Table S2504, 2022, <https://data.census.gov/table/ACSST5Y2022.S2504?q=S2504&g=160XX00US3916014,3973264,3978932&moe=false>. Accessed on January 17, 2024.

<sup>4</sup> U.S. Census Bureau. "Selected Economic Characteristics." American Community Survey, ACS 5-Year Estimates Data Profiles, Table DP03, 2022, <https://data.census.gov/table/ACSDP5Y2022.DP03?q=DP03&g=160XX00US3916014,3973264,3978932&moe=false>. Accessed on January 17, 2024.

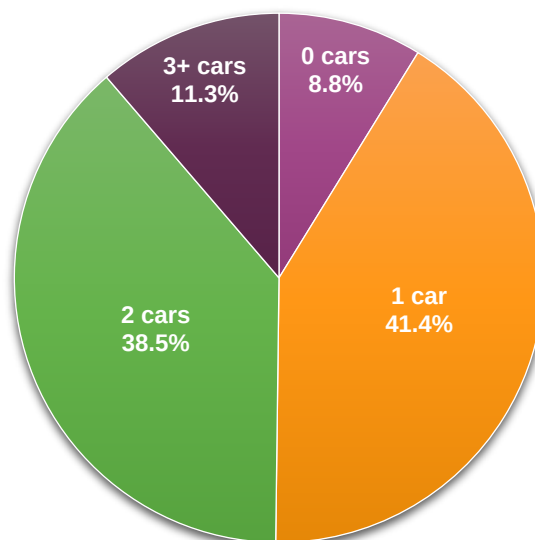
<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.



**Figure 4. Study Area Age**



**Figure 5. Study Area Car Ownership by Household**



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

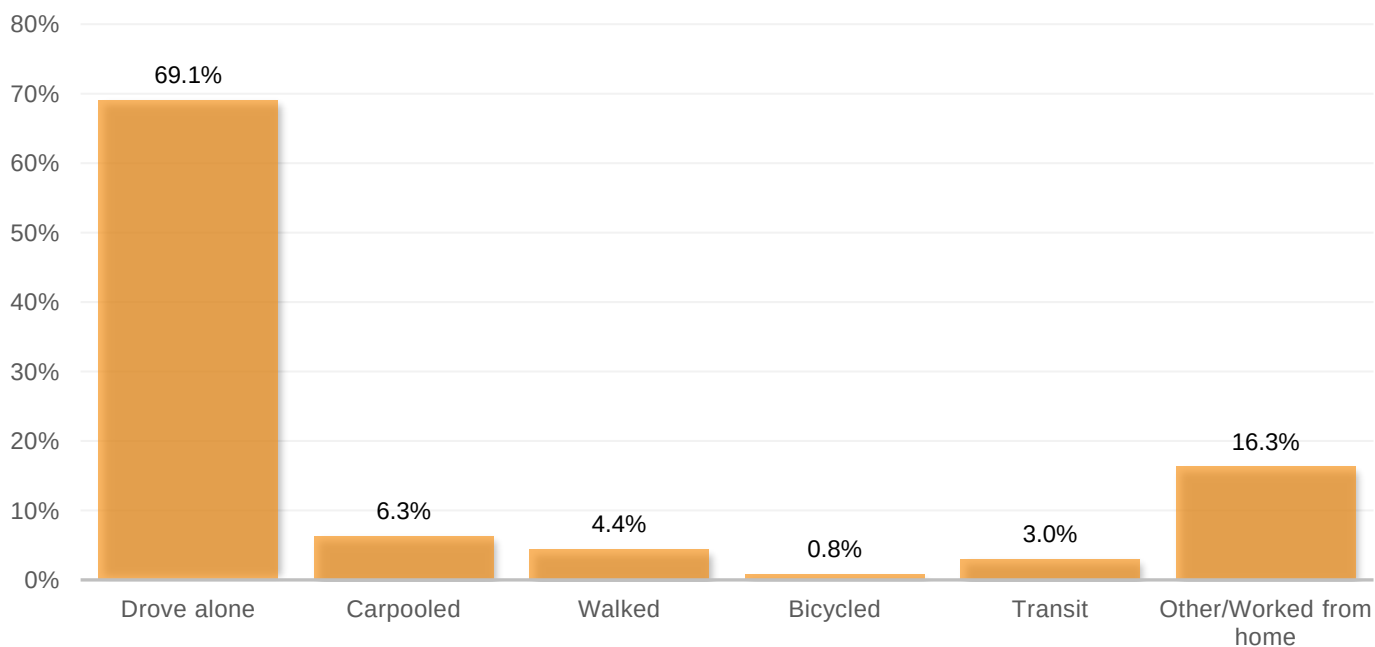


Figure 6. Study Area Commute Mode Share



Source: Burton Planning Services

People crossing Coventry Road in a crosswalk.

### EXISTING PLANS, POLICIES, AND SUPPORTIVE PROGRAMS

This plan builds on prior plans (**Table 2**) and initiatives (**Table 3**) developed by regional entities and entities within Cleveland Heights, University Heights, and South Euclid. It looks to these plans for existing conditions data, issue identification, and recommendation support.

**Table 1. Existing Plans and Policies**

| Plan/ Policy                                           | Lead Agency                         | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------|-------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cleveland Heights Zoning Code</b>                   | Cleveland Heights                   | 2023 | <p>The Cleveland Heights Zoning Code includes bicycle parking requirements applicable to new constructions or substantial additions to existing buildings. These regulations mandate the type and number of bicycle parking spaces based on the type of use and size of the development.</p> <p>The Code requires bicycle parking to be conveniently situated in relation to building entrances and street access. Short-term parking should be within 50 feet of building entrances, while long-term parking necessitates secure areas such as locked rooms, fenced spaces, or those monitored by security measures. Other requirements include minimum dimensions for bicycle spaces, design requirements for bicycle security, and signage if bicycle parking is not visible from the street.</p> |
| <b>South Euclid Zoning Code</b>                        | South Euclid                        | 2023 | <p>The South Euclid Zoning Code includes bicycle parking requirements that apply to most land uses except for single and two-family residential units and manufacturing/industrial uses. Required bicycle parking rates vary depending on the land use, such as one space per two units of multifamily housing and one space per 25 vehicle spaces for commercial uses. The Code includes design requirements, including that the facilities must be in accordance with the Association of Pedestrian and Bicycle Professional Bike Parking Guidelines. If a site provides structured parking, the bicycle parking is required to be inside the structure.</p>                                                                                                                                       |
| <b>University Heights Zoning Code</b>                  | University Heights                  | 2023 | <p>The University Heights Zoning Code includes bicycle parking requirements only within the Cedar Center/Mixed-Use District (U-9) zone. The Code required one bicycle parking space for every 20 automobile parking spaces, with a minimum of two spaces. The bicycle parking is required to be clearly marked and separated from automobile parking and traffic, and businesses on the same block can provide a shared bicycle parking facility. If a site provides structured parking, the bicycle parking is required to be inside the structure.</p>                                                                                                                                                                                                                                             |
| <b>Bus Stop &amp; Transit Street Design Guidelines</b> | Greater Cleveland Transit Authority | 2023 | <p>This document provides best practices for bus stops and roadways to support transit as part of design projects. It includes a typology of local bus stops that incorporates different bus stop lengths and amenities, possible bus stop configurations, and preferred designs for bus-bike interaction areas. These guidelines should be considered whenever a new or redesigned pedestrian or bicycle facility is being considered along a transit route.</p>                                                                                                                                                                                                                                                                                                                                    |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                                     | Lead Agency       | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|-------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compton Greenway Project Implementation</b>   | Cleveland Heights | 2022 | <i>This presentation follows up on the 2019 study, detailed below, to describe recent design activity towards project implementation. The primary implementation elements are mini roundabouts and the pocket park between Berkeley Road and South Compton Road.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Cedar-Lee Business District Parking Study</b> | Cleveland Heights | 2022 | <p><i>The purpose of this study is to examine accessibility, usage, and management of existing on- and off-street parking in the Cedar-Lee Business District. It was primarily undertaken in response to a proposed mixed-use project and offers recommendations that include identifying potential new on-street parking spaces.</i></p> <p><i>The primary recommendations from the report that would impact active transportation are two areas along Washington Boulevard where it proposes new parking spaces that would require moving the sidewalk. It also proposes the creation of additional on-street metered spaces and new technology for payments. Additionally, the report includes recommendations for reconfiguring existing off-street parking lots and fostering shared parking agreements with entities like Cleveland Heights High School and the library.</i></p>                                                                                                                                                                                                                               |
| <b>Cedar-Lee-Meadowbrook Traffic Memorandum</b>  | Cleveland Heights | 2022 | <p><i>The goal of the Cedar-Lee-Meadowbrook Traffic Study is to evaluate the traffic operations and assess the impacts on the transportation network in the Cedar-Lee District due to the proposed Cedar-Lee-Meadowbrook development.</i></p> <p><i>The proposed city recommendations from the Cedar-Lee-Meadowbrook Traffic Study prioritize improvements in signals progression and efficiency alongside coordination that ensures speed limit compliance within the Cedar-Lee District. To enhance pedestrian safety, the study suggests installing raised crosswalks at marked pedestrian crossings along Lee Road. Additionally, the study recommends replacing Rectangular Rapid Flashing Beacons (RRFBs) with Pedestrian Hybrid Beacons (HAWK signals) at pedestrian crossings.</i></p> <p><i>As part of the development project, the removal of an access drive near Wendy's is proposed. To maintain safe pedestrian access between the development and the high school, the study suggests converting the existing traffic signal at Wendy's driveway to a Pedestrian Hybrid Beacon (HAWK signal).</i></p> |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                                                           | Lead Agency                            | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------|----------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Taylor Road Corridor Study</b>                                      | Cleveland Heights & University Heights | 2021 | <i>Cleveland Heights, along with the City of University Heights, obtained a Transportation for Livable Communities (TLCI) planning grant from NOACA to identify ways to make Taylor Road safer and more desirable for people biking and walking. Recommendations from the study include bicycle facilities, road diet strategies, midblock crossing improvements, walkable zoning, and streetscape standards. The study also recommends improving crosswalks, installing missing crosswalks, adding advanced stopbars, and basic crosswalk enhancements throughout the corridor. Additionally, new roadway configurations and lane widths are proposed for each segment of the corridor.</i>                        |
| <b>Vision Zero Policy</b>                                              | Cleveland Heights                      | 2021 | <i>Cleveland Heights passed a Vision Zero policy that includes the goal of achieving zero annual traffic fatalities in the City. It also directs the City Manager to have City Departments cooperate and coordinate to prioritize the goals of zero traffic fatalities in the planning of future projects, facilities, or operations.</i>                                                                                                                                                                                                                                                                                                                                                                           |
| <b>South of Cedar Neighborhood Traffic and Parking Management Plan</b> | Cleveland Heights                      | 2020 | <p><i>The purpose of the plan is to “understand, quantify, and address concerns” expressed by residents. This includes addressing perceived problems related to traffic volume and speed on neighborhood streets, as well as examining parking patterns and regulations on each street.</i></p> <p><i>The plan recommends testing bollards for bicycle lanes on North Park. Other recommendations within the South Cedar neighborhood include bicycle lanes, marked and raised crosswalks, and sharrows.</i></p> <p><i>To support traffic calming, the plan recommends corridor and intersection treatments including the introduction of mini roundabouts, chicanes, bump-outs, and choker/neckdowns, etc.</i></p> |
| <b>Compton Road Greenway Study</b>                                     | Cleveland Heights                      | 2019 | <i>The goal of the study is to examine opportunities to create a safe, comfortable, and connected greenway that connects to Cain Park and extends into the surrounding neighborhood. The study provides designs and ideas for areas that are conceptually divided into five distinct zones. Some of the key recommendations include wayfinding, mini traffic circles, a new “pocket park” public space between Berkeley Road and South Compton Road, a shared street design in some areas, physically protected bicycle lanes in other areas, and an improved crossing to Cain Park.</i>                                                                                                                            |
| <b>Cuyahoga County Greenways Plan</b>                                  | Cuyahoga County                        | 2019 | <p><i>Cuyahoga Greenways is a county wide initiative to envision, plan, and implement greenways and urban trails throughout Cuyahoga County. Facilities will connect public transportation and parks to offer recreational opportunities and options for getting around the county, improving the community’s mobility options, health, well-being, and economic vitality. Cuyahoga Greenways seeks to build an interconnected network that is safe and welcoming for people of all ages, abilities, and demographics, changing the way people think about and move around the county.</i></p> <p><i>Continued next page</i></p>                                                                                    |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                                   | Lead Agency                        | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------|------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                |                                    |      | <p>The plan was funded through the Northeast Ohio Areawide Coordinating Agency's (NOACA) Transportation for Livable Communities Initiative (TLCI) and powered by collaboration from the Cuyahoga County Planning Commission (CCPC), Cleveland Metroparks, and NOACA.</p> <p>The resulting Priority Projects Map takes 800 miles of candidate routes identified in the overall framework and distills them into 69 projects, (242.5 miles) divided into three categories: Critical Gaps (13.5 miles), Regional Links (122 miles), Key Supporting Routes (107 miles). Projects within the three cities in the study area are noted below by priority, with no critical gaps in the study area.</p> <p>Regional Links:</p> <ul style="list-style-type: none"> <li>• South Belvoir Boulevard – On-street bicycle facility (Cleveland Heights, University Heights, and South Euclid)</li> </ul> <p>Key Supporting Routes:</p> <ul style="list-style-type: none"> <li>• Acacia Connector – Hybrid on-street and off-street bicycle facility (South Euclid)</li> <li>• Washington Boulevard – On-street bicycle facility (Cleveland Heights, University Heights)</li> </ul>  |
| <b>Mayfield Road Multimodal Corridor Study</b> | Cleveland Heights and South Euclid | 2018 | <p>The Mayfield Road Multimodal Corridor Study is designed to develop a cohesive vision for the corridor that effectively integrates transportation and land use.</p> <p>The plan recommends near-term strategies as they relate to bicyclists and pedestrians. These action steps include but are not limited to installing new markings where existing ones have faded, and assessing intersections for pedestrian crossing enhancements, especially along school routes. Additionally, the plan recommends a strategy to assess identified locations for additional new marked pedestrian crossings. To ensure ongoing effectiveness, the plan recommends an annual walk audit to be conducted along the corridor, identifying both maintenance requirements and capital improvement project needs.</p> <p>For Cleveland Heights, an evaluation and installation of shared lane markings for a short segment of Mayfield Road, east of E. 126<sup>th</sup> St with appropriate signage to be included is recommended. South Euclid has specific recommendations to assess and conduct relevant maintenance of sidewalk and ADA facilities along Mayfield Road.</p> |
| <b>Green &amp; Complete Streets Policy</b>     | Cleveland Heights                  | 2018 | <p>In May of 2018, the City of Cleveland Heights City Council adopted a Complete and Green Street Policy with a vision for the City to develop safe, comfortable, reliable, efficient, integrated and completely connected multimodal transportation network providing access, mobility, safety, and connections to all users. It was ranked #1 by the National Complete Streets Coalition in 2018 of 66 policies submitted.</p> <p>Continued next page</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                                                                  | Lead Agency        | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------|--------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                               |                    |      | <i>The policy defines Complete and Green Streets as roadways designed and operated to safely and comfortably accommodate users of all ages and abilities, including cyclists, pedestrians, transit riders, elderly, wheelchair users, delivery and service personnel, and emergency responders, and to reduce, accommodate and slow stormwater runoff as part of a comprehensive stormwater management system.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Cedar-Fairmount District Parking Study</b>                                 | Cleveland Heights  | 2018 | <i>This report assesses existing and future parking and traffic conditions of the Cedar Fairmount Commercial District, with a specific focus on the Top-of-the-Hill (TOH) Mixed Use Development Site. Recommendations include the introduction of a mid-block crossing with pedestrian-activated flashing beacons on Euclid Heights Boulevard to the west of the parking garage access drive to facilitate pedestrian and bicycle access to the site from neighborhoods to the north. The report also recommends prohibiting certain turns such as northbound left turns from Delaware Road, eastbound left turns into the project site, and southbound left turns out of the project site during AM and PM peak hours to enhance safety.</i>                                                                                                                                                                                                                                                                                                                                                                            |
| <b>City of Cleveland Heights Master Plan</b>                                  | Cleveland Heights  | 2017 | <p><i>The plan includes a vision statement for a complete transportation network and includes goals to support the development of high-quality transit connections, incorporate TOD concepts, and to develop a bicycle network that incorporates recommendations of the Eastside Greenway Plan and local bicycle plans in order to achieve silver bicycle friendly designation. Additionally, the plan includes a goal to promote biking and walking with a system of complete streets that incorporate options for all types of transportation.</i></p> <p><i>Action steps to assist in achieving the plan's goals include, but are not limited to, constructing an "Innovation Connector Trail" between University Circle and the city's Business Districts, adopting a complete and green streets policy, funding streetscape improvements in the Cedar Fairmount district, Cedar Lee district, and on Noble Road, and reviewing key intersections with high pedestrian and bicycle crash rates.</i></p> <p><i>Since plan adoption, Cleveland Heights has adopted a Complete and Green Streets Policy (2018).</i></p> |
| <b>Warrensville Center Road and Cedar Road Multimodal Transportation Plan</b> | University Heights | 2015 | <p><i>The plan seeks to create better multimodal transportation connectivity by improving the existing infrastructure.</i></p> <p><i>On Cedar Road, recommendations include relocating crosswalks at intersections, adding new curb ramps and refuge areas, adjusting pedestrian signal heads, and upgrading to countdown pedestrian signals. The plan proposes modification such as such as installing new curb ramps and crosswalks, relocating stop lines and some crosswalks, and upgrading to countdown pedestrian signals at the intersections of Cedar Road with University Square West and University Square East Entrance.</i></p> <p><i>Continued next page</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                            |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                  | Lead Agency     | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|-----------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               |                 |      | <p><i>Other key location-specific within the plan related to bicycle and pedestrian facilities include:</i></p> <ul style="list-style-type: none"> <li>• Adding new crosswalks and curb extensions at key intersections such as Warrensville Center Road at Traymore Road and Hillbrook Road.</li> <li>• Installing crosswalks, curb ramps, and upgraded pedestrian signals at the intersection of Warrensville Center Road and University Square Driveway.</li> <li>• Adding new curb ramps and upgrading countdown pedestrian signal heads at the intersections of Warrensville Center Road with Silsby Road and Washington Boulevard.</li> <li>• Adding a crosswalk with new curb ramps and upgrading pedestrian signal heads at the intersection of Warrensville Center Road with Meadowbrook Boulevard and Milford Road.</li> <li>• Reducing the number of driveway curb cuts on Cedar Road within the commercial zones near South Taylor Road, Warrenville Center Road, and South Green Road.</li> <li>• Adding a pedestrian crossing island, adjusting signal timing, and upgrading to pedestrian countdown signals at the intersection of Warrensville Center Road and Fairmount Boulevard.</li> </ul>                                                                                                                                                                                                                                                                                                          |
| <b>Eastside Greenway Plan</b> | Cuyahoga County | 2015 | <p><i>The goal of the Eastside Greenway Plan is to examine existing and potential greenways that can connect residents to jobs, recreation, services, etc. The plan also provides an opportunity for multi-jurisdictional coordination for connecting greenways.</i></p> <p><i>Projects within the three cities in the study area are noted below by priority.</i></p> <p><i>Transformative/high priority projects:</i></p> <ul style="list-style-type: none"> <li>• Warrensville Center Road – Reconstruction and enhancement (Noble Road south to Harvard Road or Miles Avenue, Cleveland Heights, University Heights, and South Euclid).</li> </ul> <p><i>Near-term projects:</i></p> <ul style="list-style-type: none"> <li>• South Belvoir Boulevard – Buffered bicycle lanes. (Monticello Boulevard to Warrensville Center Road, South Euclid)</li> <li>• Monticello Boulevard – Widening sidewalk into a new side path trail along south side of the road. (Mayfield Road to Euclid Creek Trail, Cleveland Heights and South Euclid)</li> <li>• Noble Road – Reconfiguration of road to accommodate dedicated bicycle facilities and streetscape enhancement. (Euclid Avenue to Warrensville Center Road, Cleveland Heights)</li> </ul> <p><i>Completed projects:</i></p> <ul style="list-style-type: none"> <li>• Martin Luther King Jr. Drive – Bicycle facility improvements along Martin Luther King Jr. Drive, including bicycle lanes. (Lake to Lakes Trail to Miles Avenue, Cleveland Heights)</li> </ul> |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Plan/ Policy                                                                                                                              | Lead Agency       | Year | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Facilitative Bicycle and Transit Travel in University Circle and Cleveland Heights (Bicycle Network Study and Missing Links Study)</b> | Cleveland Heights | 2013 | <p>The study was conducted in response to rapid employment growth and its associated parking demand in University Circle to evaluate transportation needs and to encourage Cleveland Heights residents who live and work in University Circle to consider alternate transportation modes.</p> <p>The recommended actions are influenced by factors such as traffic volume, road geometry, and topography. Additionally, the study places specific emphasis on establishing a comprehensive network of bicycle connections between University Circle and Cleveland Heights. Bikeway corridor recommendations for Superior, Euclid, Mayfield, East Boulevard, East 105<sup>th</sup> Street, East 108<sup>th</sup> Street, among others include, but are not limited to, the installation of bicycle facilities such as bicycle lanes, buffered bicycle lanes, multi-use trails, sharrows, signage, bicycle boulevards, etc.</p> <p>A key follow-up from this study was bicycle lane improvements on Edgehill Road in 2013, with additional intersection improvements in 2019.</p>                                                                                    |
| <b>Cedar-Taylor District Streetscape and Neighborhood Identity Improvements (presentation)</b>                                            | Cleveland Heights | 2013 | <p>This presentation provides recommendations for a successful, unique Cedar Taylor business district and was developed using Community Development Block Grant (CDBG) funds. It includes a list of "Infrastructure concepts for consideration" such as the introduction of sharrows or painted bicycle lanes along Cedar Road, pedestrian light fixtures, bus stop updates, and posted bus routes, bicycle routes, and maps. It also suggests bicycle safety signage to remind road users. Under "Development concepts for consideration," the presentation includes bicycle valet, and under "Design/streetscape concepts for consideration" it includes new street furniture, bicycle racks, and bike boxes in the Cedar Taylor district.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Cedar-Fairmount Transportation &amp; Streetscape Plan</b>                                                                              | Cleveland Heights | 2009 | <p>The purpose of the study is to advocate for strategic investments in public infrastructure to create a multi-modal district in Cleveland Heights, emphasizing the importance of accommodating various modes of transportation, promoting safety, and enhancing the overall appeal and vibrancy of urban areas.</p> <p>Recommendations include improvements for bicyclists and pedestrians in the Cedar-Fairmount district focusing on enhancing safety, connectivity, and overall urban experience. The plan suggests a reconfiguration of the roadway to meet ODOT standards, with wider lanes, striping, and "sharrows" for cyclist accommodation. The Avenue Concept prioritizes widened sidewalks, offering space for outdoor activities and seating, while sustainable initiatives like rain gardens contribute to environmental considerations.</p> <p>Sharrows have been added along Cedar Road and there have been various sidewalk and streetscape amenity updates since the plan was adopted, but many of the proposed pedestrian realm improvements such as wider sidewalks and reduced pedestrian crossing distances have not been implemented.</p> |

**Table 2. Existing Supportive Programs**

| Program                                     | Lead Agency                                                                | Est. Year | Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------|----------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bike with the Mayor</b>                  | <i>Bike Cleveland, Cuyahoga Greenway Partners, and Slow Roll Cleveland</i> | 2023      | <i>This series of rides provides residents with the opportunity to engage in physical activity with their elected leaders while learning about greenspaces and trails in their area. In 2023 (the first year of the program), the series included rides in Cleveland Heights and University Heights, and was focused on locations along the Cuyahoga Greenways network.</i>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Cuyahoga County Greenprint</b>           | Cuyahoga County                                                            | 2023      | <i>This is a set of mapping and planning tools developed and maintained by Cuyahoga County to help communities and their staff, civic and environmental leaders, nature advocates, and developers do their work. The online mapping layers include bicycle facilities, bicycle and pedestrian crashes, and the Level of Traffic Stress (LTS) from NOACA.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Car Free Day</b>                         | Cleveland Heights                                                          | 2023      | <i>World Car-Free Day is an international event held each September that encourages people in more than 2,000 cities in 40 countries to travel car-free or car-lite by using transit, bicycling, walking, carpooling, or telecommuting.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Park(ing) Day</b>                        | Cleveland Heights                                                          | 2023      | <i>Park(ing) Day is an event where collaborators across the world temporarily transform parking spaces into “Park(ing)” spaces: tiny temporary parks and places for art, play, and activism.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Neighborhood Traffic Calming Program</b> | Cleveland Heights                                                          | 2022      | <i>The goal of Cleveland Heights’ Neighborhood Traffic Calming Program is to reduce excessive speeding and/or traffic volumes on local and collector streets. The process for including streets in the program must be initiated by neighborhood residents, not the city. The response to Cleveland Heights’ new Neighborhood Traffic Calming program has been overwhelming! Eight streets have successfully petitioned for traffic calming and are in the queue for traffic studies. As a result, the city is temporarily no longer accepting new applications for neighborhood traffic calming so it can focus on those streets that have already applied.</i>                                                                                                                              |
| <b>Shared Spaces Program</b>                | Cleveland Heights                                                          | 2022      | <p><i>Temporary outdoor dining facilities, parklets, and pedlets are creative and cost-effective ways to add outdoor seating and spaces. The City of Cleveland Heights’ program focuses on creating additional private seating areas managed and maintained by private businesses. Outdoor dining facilities may be located on the sidewalk or on private property; parklets and pedlets are located in the parking lane adjacent to the curb and are designed to be an extension of the sidewalk.</i></p> <p><i>The City of Cleveland Heights’ Shared Spaces Program Application Manual leads applicants through the application process for authorization to install a temporary outdoor-dining facility, parklet, or pedlet within the public right-of-way or on private property.</i></p> |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Program                                                      | Lead Agency                                                              | Est. Year | Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------|--------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bicycle and Scooter Share Memorandum of Understanding</b> | Cuyahoga County, Cleveland Heights, University Heights, and South Euclid | 2021      | In 2021, Cleveland Heights, University Heights, and South Euclid signed memorandums of understanding with Cuyahoga County to expand bicycle- and scooter-sharing operations to the cities. The memorandum includes the county sharing revenue and data for trips that start in each city, as well as allowing each city to establish a maximum number of micromobility vehicles and specific station locations.                                                                           |
| <b>“Complete and Green Streets Policy” Project Checklist</b> | Cleveland Heights                                                        | 2022      | This checklist is intended to assist the Cleveland Heights Planning and Public Works Departments during the planning and design phases of roadway projects to support carrying out the Complete Streets Policy. It includes a series of descriptive and yes/no questions regarding existing infrastructure and the proposed project to identify what has been included in previous plan, any inadequacies in the existing infrastructure, infrastructure needs, and design opportunities. |
| <b>All Geared Up Event</b>                                   | Cleveland Heights                                                        | 2015      | This is a community cycling event in the City of Cleveland Heights with one- and two-mile family fun rides, safety demonstrations, and other fun activities.                                                                                                                                                                                                                                                                                                                              |
| <b>Bicycle Friendly Community<sup>SM</sup> Designations</b>  | Cleveland Heights                                                        | 2013      | The League of American Bicyclists evaluates communities that apply for the Bicycle Friendly Community <sup>SM</sup> designation against the five Es (Equity & Accessibility, Engineering, Education, Encouragement, and Evaluation & Planning), and awards designations from Bronze to Platinum depending on a jurisdiction’s performance on each criterion. Cleveland Heights has achieved a Bronze-level designation since 2013.                                                        |
| <b>Weeknight Community Rides</b>                             | Cleveland Heights Bike Coalition (Bike Cleveland)                        | 2013      | Over the summer and fall, the Heights Bicycle Coalition organizes casual bicycle rides for approximately 8-10 miles. In 2023 rides were approximately every other week from June through October, and the organization is considering weekly rides in 2024.                                                                                                                                                                                                                               |
| <b>Bike Route and Suitability Maps</b>                       | Northeast Ohio Area Coordinating Agency (NOACA)                          | 2013      | NOACA develops printable maps of bicycle routes for each of the five counties within the region that are updated every three to five years and has an online GIS portal with bicycle routes updated more regularly. The organization also maintains a GIS layer of bicycle Level of Traffic Stress (LTS). The Cuyahoga County printable map was last updated in 2019.                                                                                                                     |
| <b>Heights Area Bike Map</b>                                 | Cleveland Heights Bike Coalition (Bike Cleveland)                        | 2013      | The Heights Bicycle Coalition publishes a map of recommended routes and destinations in Cleveland Heights, University Heights, and Shaker Heights. The map includes routes for different experience levels, as well as noting significant elevation changes. It was last updated in 2018.                                                                                                                                                                                                 |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Program                              | Lead Agency                                         | Est. Year              | Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------|-----------------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Walk or Bike to School Day</b>    | Cleveland Heights, University Heights, South Euclid | 2012                   | Walk or Bike to School Day is an event organized nationally to encourage students to walk, bike, or roll to school. The Cleveland Heights-University Heights School District has participated since 2012, and South Euclid has participated since 2013.                                                                                                                                                                                                                            |
| <b>Bike to Work Day</b>              | Heights Bicycle Coalition, Cleveland Heights        | 2012                   | Bike to Work Day is an annual event organized nationally to encourage people to bike for their commute. The Heights Bicycle Coalition supports Bike to Work Day by providing free coffee and pastries at the intersection of Edgehill and Overlook.                                                                                                                                                                                                                                |
| <b>Bicycle and Pedestrian Counts</b> | NOACA                                               | 2004                   | NOACA has conducted bicycle and pedestrian counts since 2004, and they reorganized the project to follow best practices from the National Bicycle and Pedestrian Documentation Project (NBPD) in 2011. Counts at three to five locations have been conducted in the plan area in the most recent five years (2019 to 2023), covering ten total locations.                                                                                                                          |
| <b>Safety Town</b>                   | Cleveland Heights, South Euclid                     | Began 1980s or earlier | Safety Town is a child safety program offered to children who are entering Kindergarten in the fall. In South Euclid it is offered by the Euclid Police Department in conjunction with Euclid City Schools, and in Cleveland Heights it is offered by the Cleveland Heights Community Center. Students learn valuable safety lessons from police and other safety-based organizations. Both cities have offered Safety Town for many decades, dating back to the 1980s or earlier. |

# TRANSPORTATION FUNDING AND INVESTMENTS

## RECENT INVESTMENTS

In the cities of Cleveland Heights, University Heights, and South Euclid, several active transportation-related projects have been completed, including enhanced crossings, bicycle parking, bicycle lanes, pedestrian facilities, and intersection improvements.

As a result of recent improvements, the City of Cleveland Heights was awarded a Bronze Level Bicycle Friendly Community Designation by the League of American Bicyclists, and the Edgehill Road bicycle facility was awarded the “Best Bike Lane Project” by the Greater Cleveland Trails and Greenways Conference. Improvements in University Heights have increased pedestrian access to John Carroll University and business districts in the area, and South Euclid’s Complete Streets project along Green Road connects the Euclid Creek Reservation to the South Euclid-Lyndhurst Branch Cuyahoga County Public Library, schools, and Notre Dame College via dedicated bicycle lanes along the corridor.

In Cleveland Heights, recent improvements include:

- » Cedar Road sharrows and sidewalk updates
- » Edgehill Road buffered bicycle lane (2013)
- » Intersection improvements to encourage residents to use active transportation between the city and University Circle (2019)

In University Heights, recent improvements include:

- » Warrensville Center Road bicycle lanes (2018)
- » Cedar Road / Taylor Road pedestrian improvements (2018)
- » Warrensville Center Road pedestrian crossing islands (2019)
- » Intersection improvements at Silsby Road and Washington Boulevard to reduce pedestrian crossing distances and vehicle turning speeds (2023)

In South Euclid, recent improvements include:

- » Green Road Complete Streets project with dedicated bicycle lanes (2022/23)
- » New curb cuts and accessible crosswalks with road resurfacing projects (ongoing)

## CURRENT OR PLANNED INVESTMENTS

Cleveland Heights, University Heights, and South Euclid have completed various studies and plans to prepare for future investments in pedestrian and bicycle infrastructure as shown in **Table 1**. Additionally, the Heights Regional ATP will assist the three cities in prioritizing future improvements and future funding applications.

Currently, there are four projects planned and funded within the study area:

- » Warrensville Center Road / Traymore Road intersection curb bump-outs (2027, University Heights)
- » Warrensville Center Road / Hillbrook Road intersection curb bump-outs (2027, University Heights)
- » Taylor Road Corridor Project Phase 1 implementation (University Heights and Cleveland Heights)
- » Heights Regional Neighborhood Greenway Phase 1 improvements, which will add signing and striping improvements on several corridors in the plan area (Cleveland Heights, University Heights, and South Euclid)



*Source: Burton Planning Services*

**The recently redesigned Silsby Road and Washington Boulevard intersection.**

### EXISTING CONDITIONS ANALYSES

After mapping the existing transportation system, the project team performed several analyses to better understand the equity of the network, its connectivity, use of walking and bicycling facilities, safety, and infrastructure conditions. This section provides a summary of each existing conditions analysis, which consist of the following:

- » **Summary of Facility Inventory**
- » **Equity**
- » **Network Utilization**
- » **Network Connectivity**
- » **Safety** (including a crash analysis and systemic safety analysis)
- » **Level of Traffic Stress**

### DATA CONSIDERATIONS AND LIMITATIONS

Existing conditions analyses were conducted with data from the following sources: Cleveland Heights, University Heights, South Euclid, Northeast Ohio Areawide Coordinating Agency (NOACA), ODOT Transportation Information Mapping System (TIMS) and GIS Crash Analysis Tool (GCAT), U.S. Census Bureau, and StreetLight Data (StreetLight). Analyses were conducted with available data and there are data limitations that should be acknowledged, particularly with crash data and StreetLight. To help fill data gaps, this planning process also relies on stakeholder and general public input.

#### Crash Data Limitations

Local law enforcement agencies submit the crash reports that provide the raw data for GCAT. Although crash reports are the best way to obtain information about a large quantity of crashes, they have limitations. For example, the total number of crashes may be higher than captured because of unreported crashes.

Crashes may go unreported for a variety of reasons. Some crashes go unreported because of distrust or fear of police due to negative prior experiences with law enforcement. Another reason for unreported crashes is that the police departments often do not have enough officers to respond to high crash volumes during rain, snow, or other inclement weather events. This means even when police are called, they do not have the staff to respond to all crashes. In those situations, a crash report would only be filed if one of the involved parties had the resources and ability to either self-report the crash online or to travel to police headquarters to self-report.

When crashes are reported, the data within those crash reports has limitations as well. For example, crash reports may underestimate the severity of a crash because adrenaline at the time of a crash may mask injury or the severity of an injury. Additionally, it can be difficult to determine if factors such as speed or distracted driving are involved in a crash particularly if police or other witnesses are not present at the time of the crash. It is useful to keep these limitations in mind when considering what information is presented by crash reports and what information is not documented.



## StreetLight Data Limitations

StreetLight uses smartphone mobility data, also known as Location-based Services (LBS), to estimate pedestrian and bicycle volumes throughout North America. While this is a valuable source of information on pedestrian and bicycle activity in the study area, it is important to understand the data limitations. Since LBS does not include information on a person's mode of travel, StreetLight infers how a person is moving based on factors such as distance, speed, and acceleration during a trip. Mode estimates are calibrated and validated by StreetLight using permanent pedestrian and bicycle counters installed by transportation agencies, together with more manual data collection including travel diaries and surveys collected by StreetLight. However, there are relatively few permanent pedestrian and bicycle counters compared to vehicle counters, which provides less data for validation. There is also sampling bias towards people who own cell phones, which could underestimate travel for populations such as lower-income, younger, and older people.

In general, based on validation analysis developed by StreetLight, estimates for pedestrians and bicyclists are more accurate for roads with higher pedestrian and bicycle volumes because there is more data for those modes on more popular routes. Volumes for off-road trails are also more accurate because there is less potential for confusion with other modes.

## SUMMARY OF FACILITY INVENTORY

The cities of Cleveland Heights, South Euclid, and University Heights are inner-ring suburbs of Cleveland. The cities include neighborhoods that easily connect to commercial areas along tree-lined streets, some with planted medians, and a thorough sidewalk network. Each city is committed to providing a road network that meets the needs of drivers, pedestrians, bicyclists, and bus riders to provide quality spaces for all people. The three cities are served not by highways, but by a system of local streets that provide connectivity to key destinations across the region. Existing transportation facilities are shown in **Figure 7** and described below.

### Existing Pedestrian Infrastructure

The region has a well-connected pedestrian network with sidewalks throughout most of the area. Recent pedestrian infrastructure improvements include the installation of pedestrian crossing islands along Warrensville Center Road between Meadowbrook Road and Hillbrook Road (2019), and various pedestrian crossing improvements using Safe Routes to School funding. While the region benefits from sidewalks along most streets, there are a few notable locations with missing sidewalks, and several arterials have long gaps between marked and controlled crossings. Locations within the plan area that do not have sidewalks or have limited access to sidewalks include North Park Boulevard from Arlington Road to West St. James Parkway (north side), Warrensville Center Road from Bayard Road to Oakwood Drive (west side), Belvoir Boulevard from Bluestone Road to Monticello Boulevard (west side), and Monticello Boulevard from Belvoir Boulevard to Quarry Drive (south side).

### Existing Biking Infrastructure

The three cities are actively pursuing the development of a connected bicycle network through recent planning efforts, including the Heights Regional Active Transportation Plan. The existing bicycle infrastructure provides connections to regional destinations, for example parks and commercial corridors, in certain areas, but lacks overall connectivity throughout each city and throughout the region.

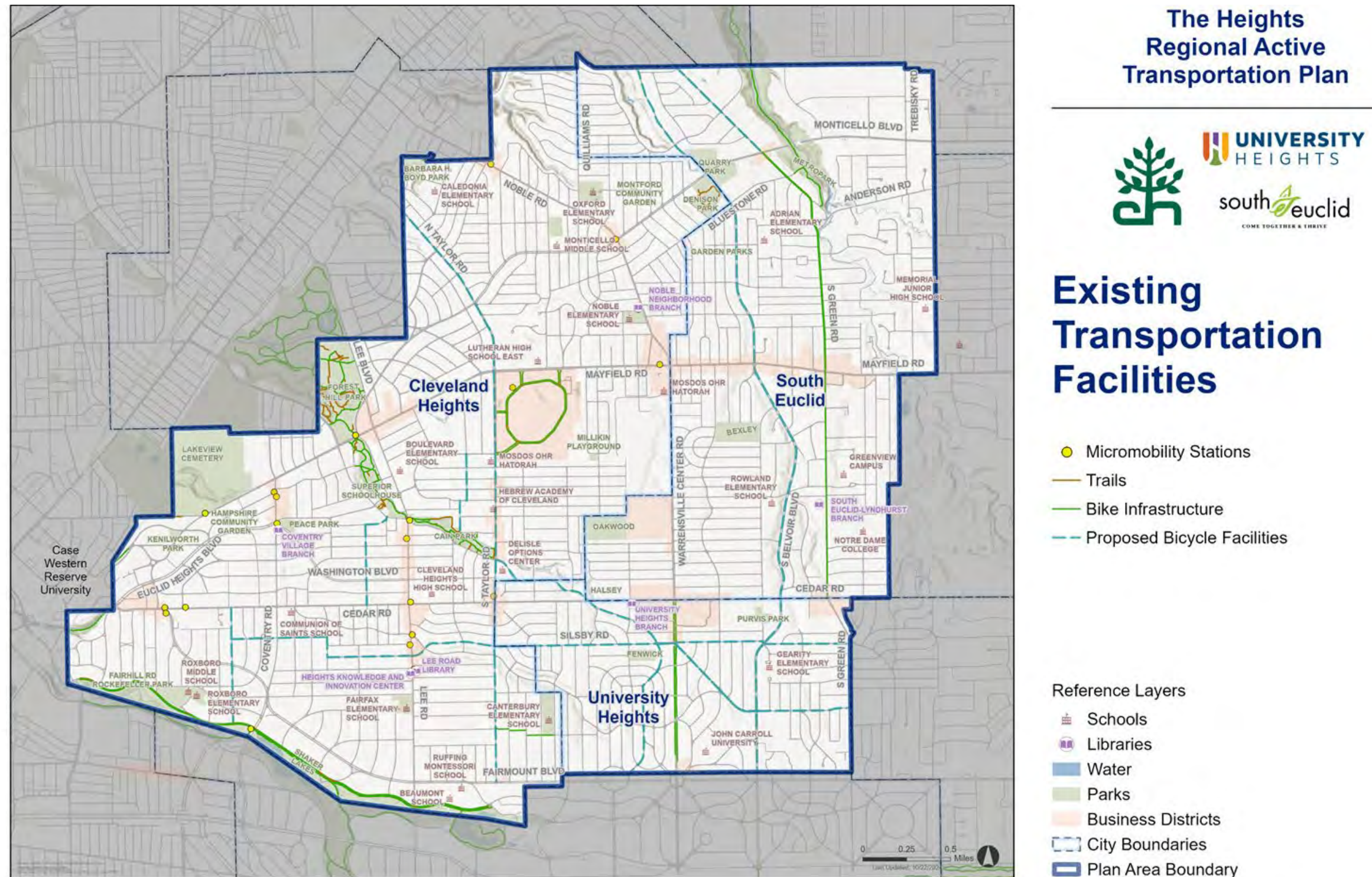
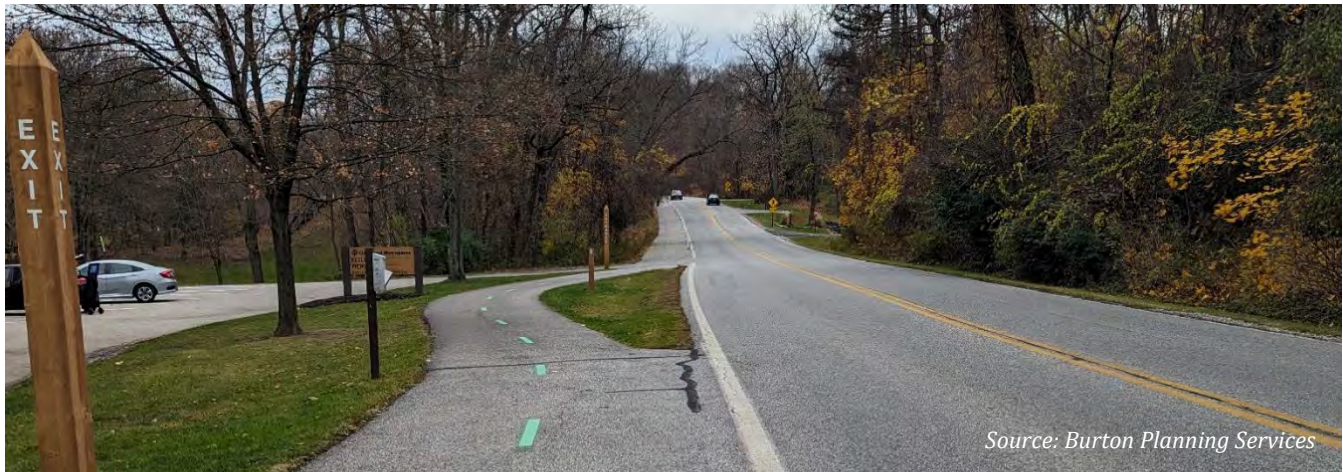


Figure 7: Existing Network Map



Currently, Shared Use Paths (SUP) provide access for pedestrians and bicyclists along Euclid Creek Parkway within the Euclid Creek Reservation, within the connected park system of Cain Park, Cumberland Park, and Forest Hill Park, and along Cedar Road from Euclid Heights Boulevard to Case Western Reserve University located west of the tri-city area. There is also an off-street trail south of Canterbury Elementary School connecting portions of Bradford Road. On-street bicycle facilities provide connections for people riding bicycles on Lee Road from North Park Boulevard to Ormond Road, Green Road from Cedar Road to Monticello Road, Warrensville Center Road from Fairmont Boulevard to Cedar Road, North Park Boulevard from Lee Road to Harcourt Drive, and Severance Circle. Stakeholders have noted challenges to the existing on-street bicycle network include narrow bicycle lanes on Lee Road and maintenance and debris issues in bike lanes on heavily trafficked roads.

All three cities have signed memorandums of understanding with Cuyahoga County to allow bicycle and scooter share companies to operate within their jurisdictions, and Cleveland Heights has designated micromobility stations where shared bicycles and scooters are allowed to park.



*Source: Burton Planning Services*

**Side use path facility in Euclid Creek Reservation.**

### Existing Public Transit Services

The region is served by the Greater Cleveland Regional Transit Authority (GCRTA). Seven of GCRTA's lines provide regular service in the area. The East 260 Green line runs every 60 minutes, while the Warrensville, Lakeview-Lee, Lee Boulevard-East 123, Quincy-Cedar, Mayfield-Hough, and Monticello lines run every 30 minutes. Warrensville Center Road, Noble Road, and Cedar Road are all identified by GCRTA as a Priority Transit Corridors. There is currently no park-and-ride within the tri-city area.

Regular transit service in the area is currently available on the following roads:

- » Monticello Boulevard
- » Mayfield Road
- » Cedar Road
- » Lee Road
- » Warrensville Center Road
- » Noble Rd

## EQUITY

### Incorporating Equity in Active Transportation Planning

Active transportation options contribute to a more equitable transportation system by reducing barriers for people who do not use a motor vehicle. Many people do not drive because of ability, income, age, or a combination of these factors. The cost of owning and maintaining a vehicle can be a major burden, especially on low-income families. People without a vehicle need to access employment, school, grocery shopping, and a variety of other activities to fully participate in society. Transit, walking, and bicycling play a vital role in the overall transportation system by offering increased mobility, independence, and access to opportunity for people without vehicles.

National statistics point towards the need for equity in active transportation planning and design. Across the country and in Ohio, a disproportionate share of walking and bicycling fatalities occurs among communities of color, older adults, and low-income populations.<sup>1</sup> Connected and accessible active transportation infrastructure for these groups results in better access to daily physical activity and improved quality of life.

1. Ohio Department of Transportation. (2020), *Walk.Bike.Ohio Safety Analysis Reports*.  
<https://www.transportation.ohio.gov/wps/portal/gov/odot/programs/walkbikeohio/existing-future-conditions-analysis/safety-analysis-reports>

### Equity Analysis

As part of its statewide bicycle and pedestrian plan, Walk. Bike. Ohio, the Ohio Department of Transportation (ODOT) performed an active transportation need analysis for the entire state. It created a composite need score for every census tract in the state, with scores assigned based on the presence of non-white groups, youth, older adults, poverty, low educational attainment, limited English proficiency, and low motor vehicle access. Higher scores correspond to a higher presence of underserved groups and indicate a greater need to increase equitable outcomes.

Active transportation need, shown in **Figure 8**, is more concentrated north of Mayfield Road in Cleveland Heights and South Euclid. There are also areas identified as high-need in the area bounded by Lee Road, Mayfield Road, Green Road, and Silsby Road, together with a census tract near Case Western Reserve University and another bounded by Coventry Road, Cedar Road, and Fairmount Boulevard.

### Active Transportation Demand

Walk.Bike.Ohio's statewide analysis also looked at the demand for active transportation infrastructure to serve as an estimate for the likelihood of people walking or bicycling in an area. This analysis used the variables employment density, population density, walk/bicycle commute mode share, park density,



presence of college/universities, retail employment density, and the number of people 200% below the poverty line.

The census tracts with high demand, shown in purple in **Figure 9**, tend to be concentrated in the geographic middle of the study area. Much of the central part of Cleveland Heights, University Heights, and South Euclid between Mayfield Road and Silsby Road is classified as high demand as well as the areas around Case Western Reserve University and John Carroll University.

Areas of high need and high demand should be prioritized for bicycle and pedestrian improvements because residents in these areas likely rely more heavily on active transportation options for getting around. **Figure 10** combines active transportation demand and need with demand shown as a blue color ramp, high need shown as a red color ramp, and the in between values a mix of these colors. The most important areas for investment, areas with a combined high demand and need, are shown in dark purple.

In Cleveland Heights, University Heights, and South Euclid, the main indicators for active transportation demand were higher employment density, population density, retail employment density, and park density. The three main indicators for active transportation need are higher shares of the population that are considered to be part of a minority group, experiencing poverty, and without access to a motor vehicle.



**People at the dog park in Quarry Park.**



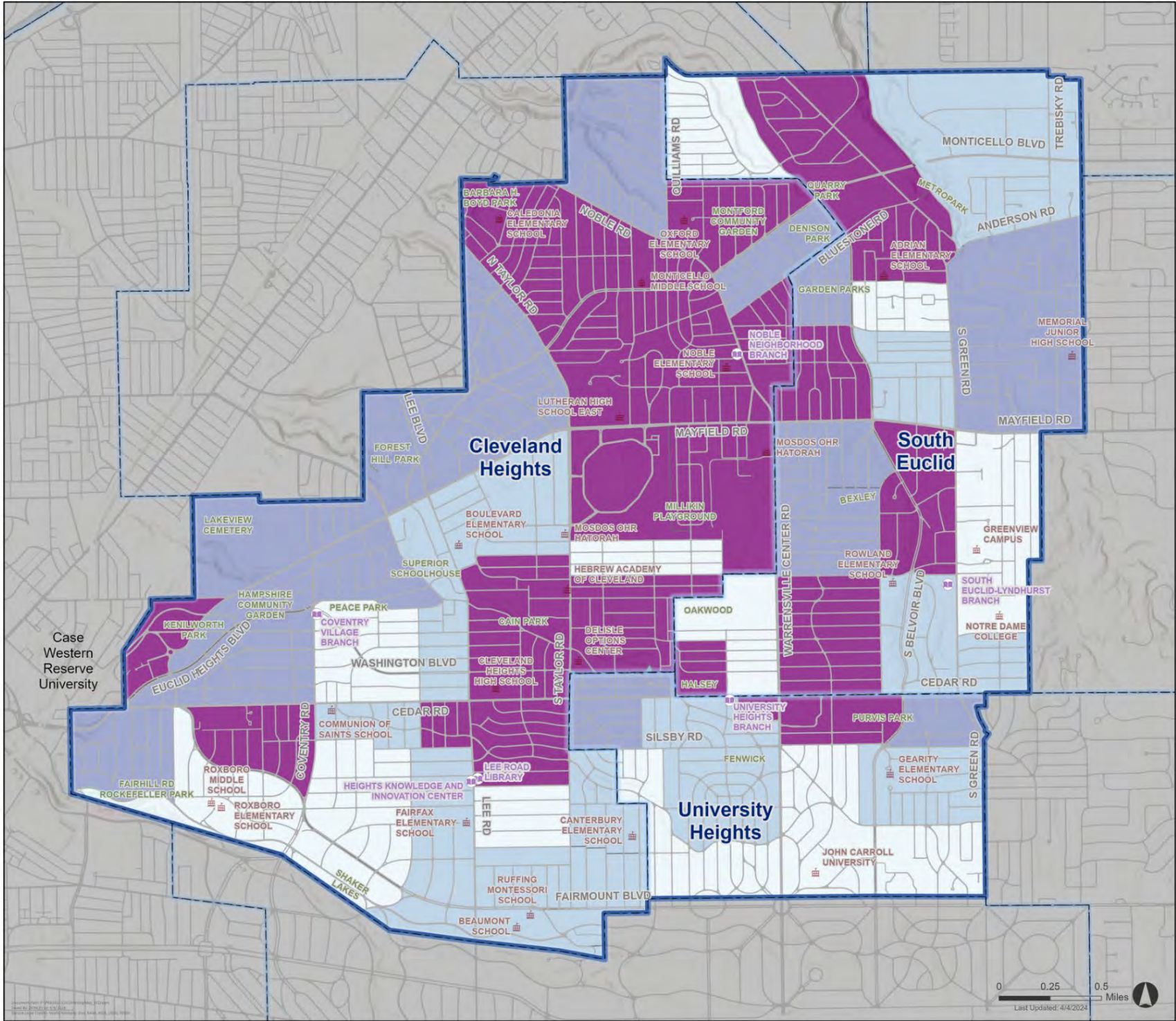
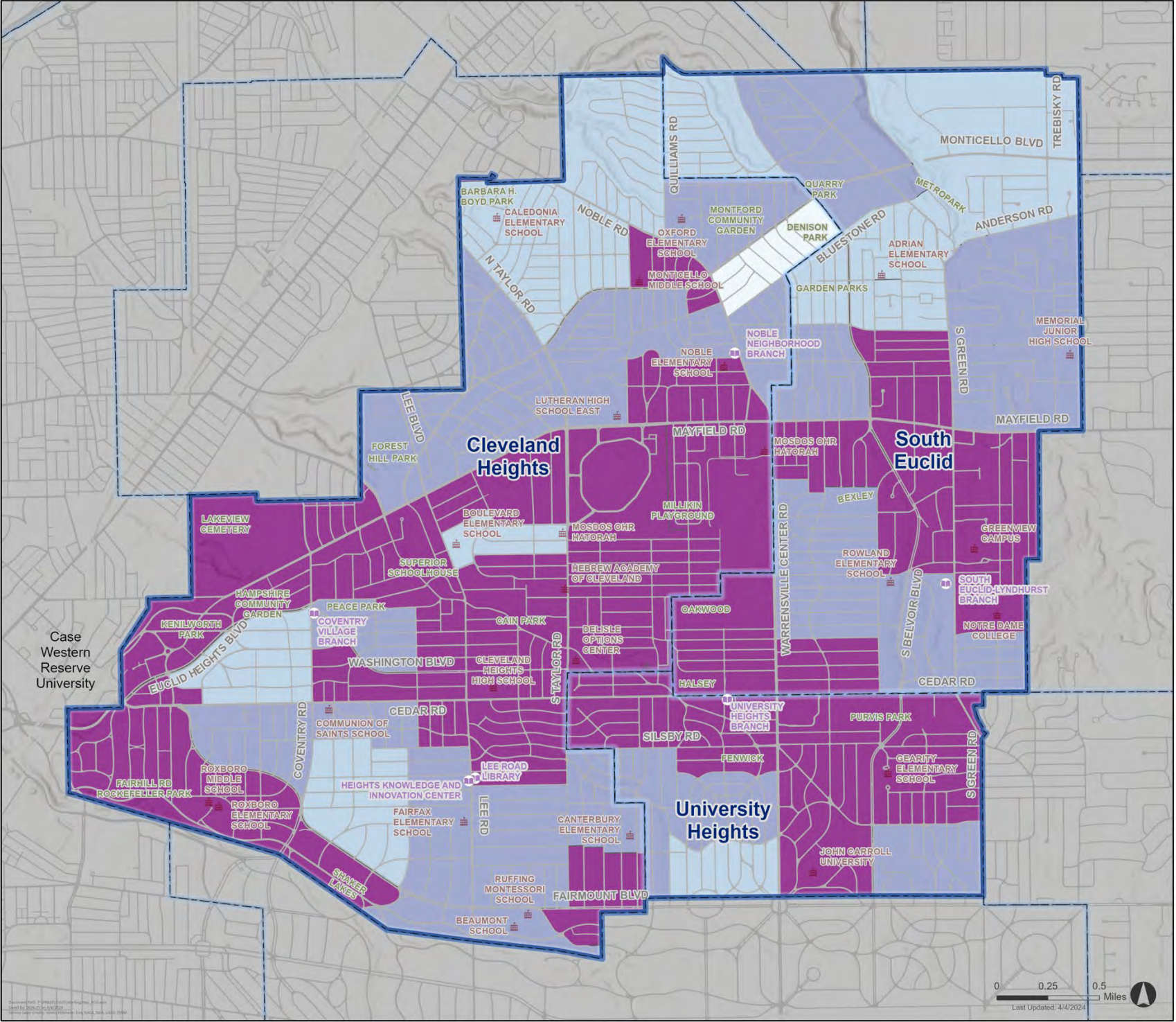


Figure 8: Active Transportation Need





# The Heights Regional Active Transportation Plan



## Active Transportation Demand

- Active Transportation Demand
- Low
  - Medium
  - High

- Reference Layers
- Schools
  - Libraries
  - City Boundaries
  - Plan Area Boundary

Figure 9: Active Transportation Demand



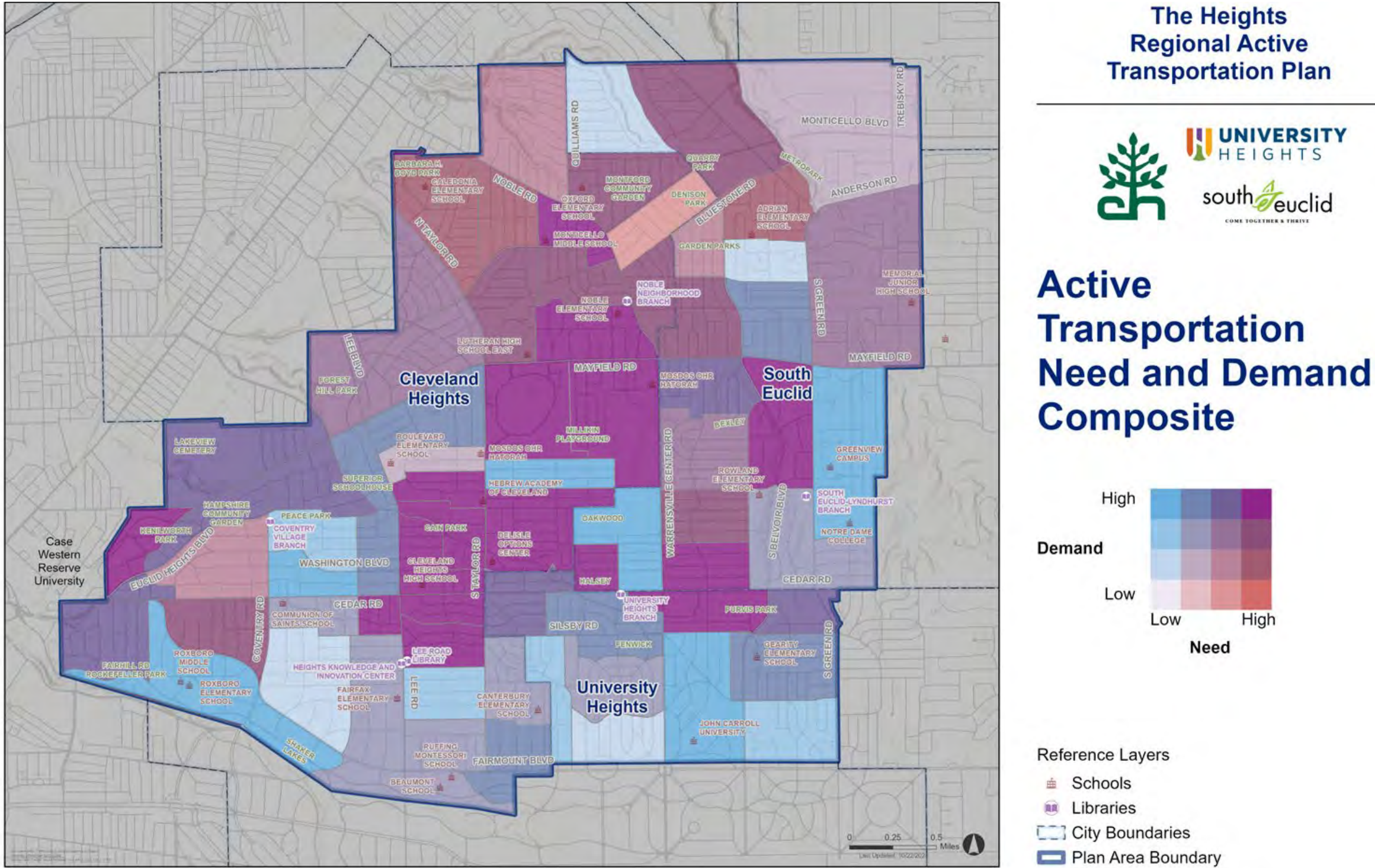


Figure 10: Active Transportation Demand and Need



## NETWORK UTILIZATION

### Level of Walking and Bicycling Activity in Cleveland Heights, South Euclid, and University Heights

Network utilization describes who is walking and bicycling, where, and how often. Several factors impact network usage, including land use and development patterns, the presence or absence of active transportation facilities, proximity of destinations, safety concerns, and socioeconomic need. Understanding the level of walking and bicycling activity in the study area provides an understanding of where people are already walking and bicycling, and where there may be a lack of infrastructure, due to low levels of walking and bicycling activity.

#### Walking and Bicycling Activity

The project team used StreetLight to analyze levels of walking and bicycling in the region (**Figure 11** and **Figure 12**) and better understand where and when walking and bicycling activity is currently occurring within the study area. StreetLight data was downloaded for April through June and August through October of 2019 for all primary and secondary roads, together with a limited number of residential roads based on recommendations from the three cities.<sup>8</sup>

Business districts and commercial areas within the region tend to have higher walking and biking activity. Additionally, areas near bus lines, schools or universities, parks, and places with existing bicycle facilities tend to have higher biking volumes.

Areas with the highest levels of walking activity include:

- » Coventry Road between Mayfield Road and Euclid Heights Boulevard
- » Mayfield Road near Coventry Road; medium-high levels of walking extend to Forest Hill Park
- » Mayfield Road and Green Road commercial area; medium-high levels of walking extend to Warrensville Center Road
- » Lee Road between Cedar Road and Ormond Road; medium-high levels of walking extend to Cain Park
- » Warrensville Center Road commercial area (near Cedar Road)
- » Belvoir Boulevard (near John Carroll University)

Areas with the highest levels of biking activity include:

- » Edgemoor Road west of Overlook Road (existing buffered bicycle lanes)
- » North Park Boulevard (existing bicycle lanes)
- » Taylor Road (painted sharrows)

<sup>8</sup> StreetLight Data estimates for walking and biking have not been updated with data after April 2022, and COVID likely affected walking and biking activity between March 2020 and mid-2021. This means that 2019 is the most recent available full year with results not affected by COVID.

There are additional medium-high levels of biking activity in the following areas:

- » Mayfield Road near the Lakeview Cemetery
- » Mayfield Road between Taylor Road and Warrensville Center Road
- » Coventry Road between Cedar Road and Fairmount Boulevard

Due to the timeframe for the StreetLight results, the recently constructed Green Road bicycle lanes (constructed in 2022-23) are not reflected in the biking activity data. City staff and stakeholders also noted some areas where actual volumes may be different from what is reported by StreetLight:

- » Cleveland Heights noted there is an area of medium-high walking activity along Taylor Road between Severance Circle and Cain Park, which may underestimate total pedestrian activity due to members of the Jewish community in that area using cell phones less on the Sabbath and other holidays.
- » University Heights noted that areas near John Carroll University, such as student housing along Warrensville Center Road, likely have higher pedestrian volumes than what is shown.
- » Stakeholders noted that pedestrian volumes within business districts (which would not be captured as activity along the roads) is likely higher than what is shown.

NOACA conducts manual bicycle and pedestrian counts in May and September each year for two-hour periods across Northeast Ohio. In the most recent five years (2019 to 2023), these counts have included three to five locations per year in the plan area, covering ten total locations. The five locations in 2023 were as follows:

- » Edgehill Road west of Overlook Road
- » Cedar Road west of Overlook Road
- » Noble Road north of Monticello Boulevard
- » Lee Road south of Washington Boulevard
- » Silsby Road east of Lee Road

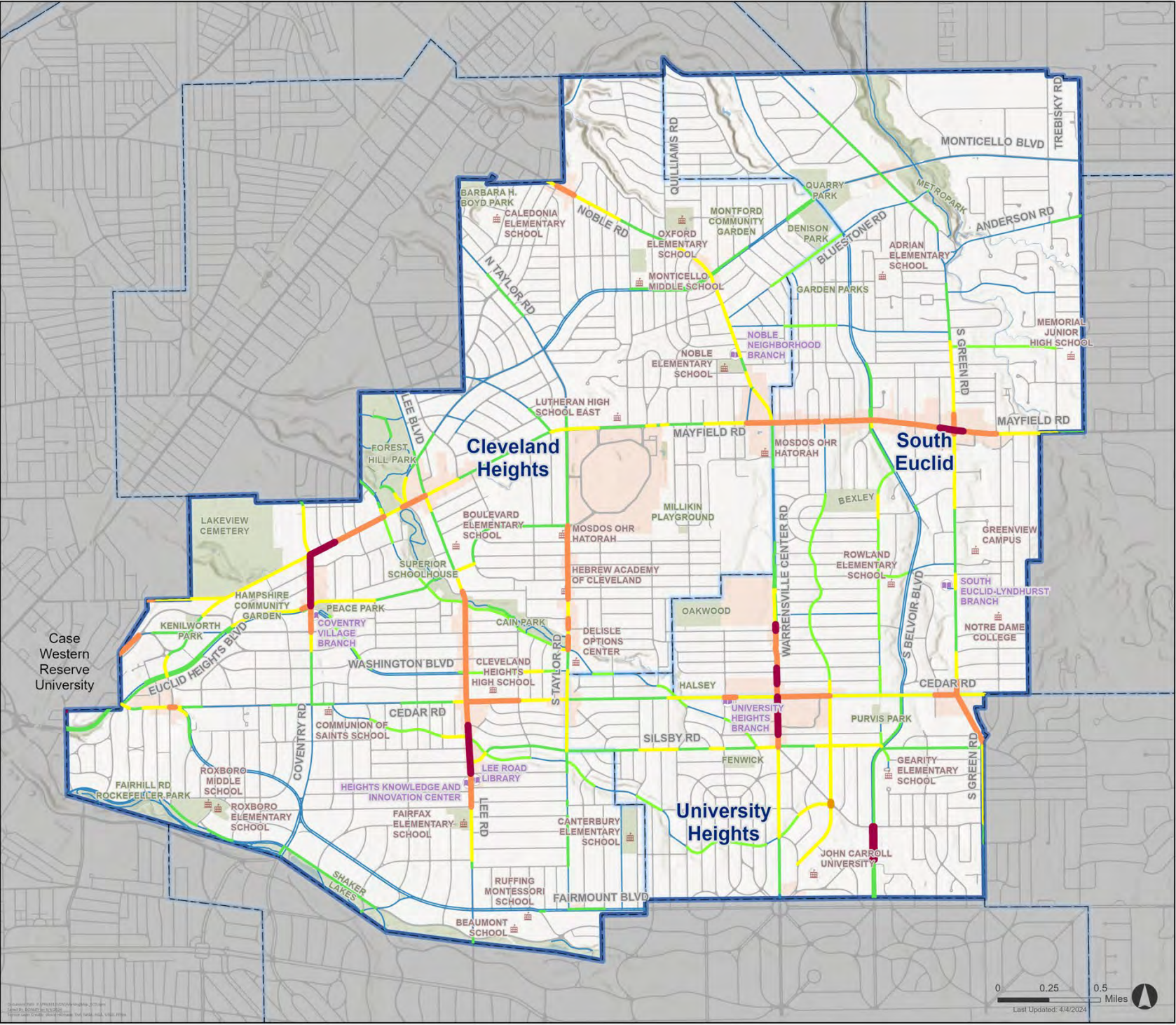
The 2023 results indicate that Silsby Road near Lee Road had the highest pedestrian volumes of the five locations, likely from visitors to the nearby commercial area. While Silsby Road is not noted as a high-volume pedestrian road from StreetLight, the adjacent section of Lee Road is estimated to have high pedestrian activity.



**The Edgehill Road buffered bicycle lane west of Overlook Road**

Edgehill Road west of Overlook Road had the highest bicycle volumes, likely from the route being a low-stress way to travel between Cleveland and Cleveland Heights near Case Western Reserve University. This is consistent with StreetLight results on Edgehill Road.





# The Heights Regional Active Transportation Plan



## Average Daily Pedestrian Volumes

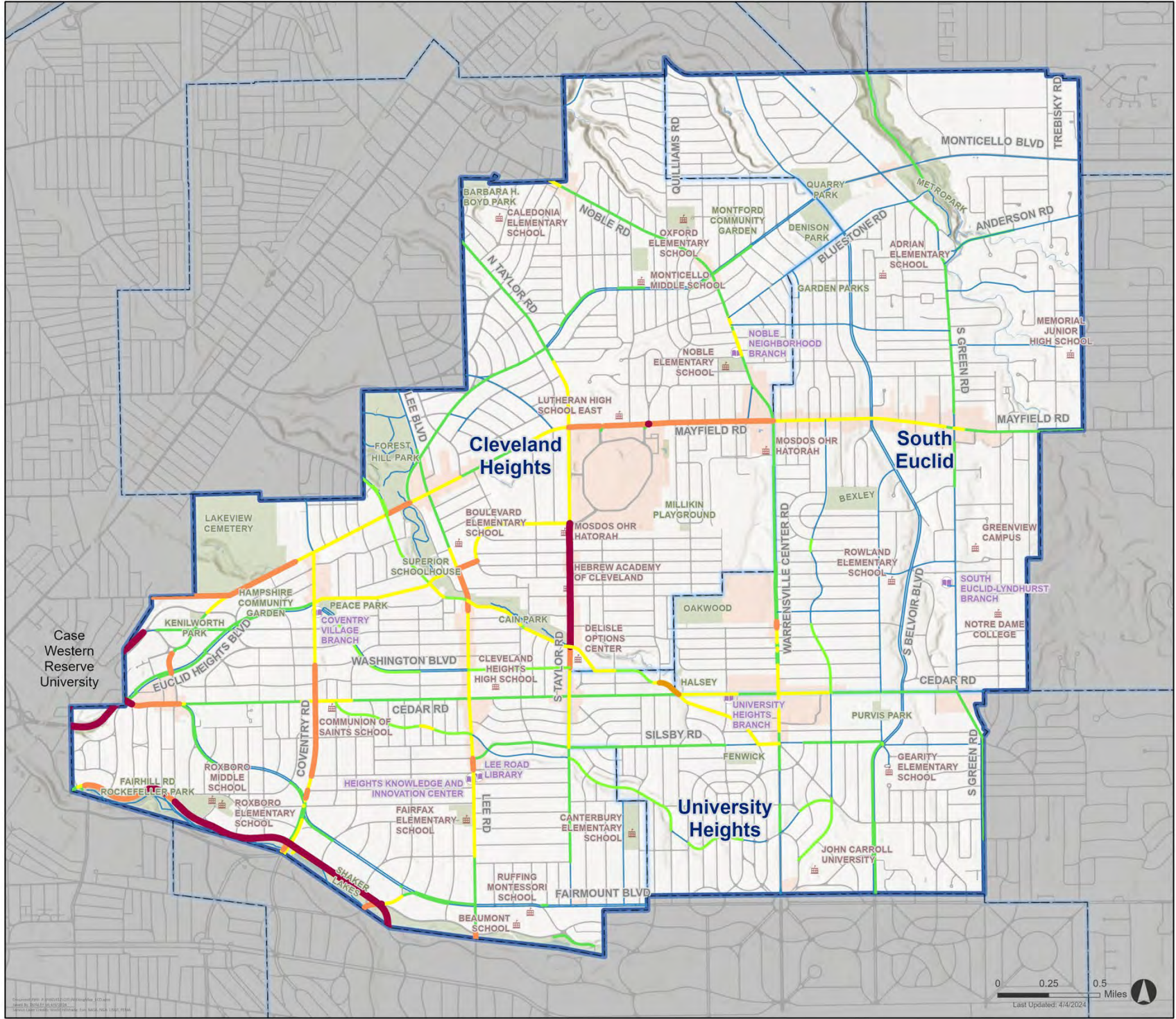
Average Daily Pedestrian Traffic

- Low
- Medium
- High
- Very High

- Reference Layers
- Schools
  - Libraries
  - Water
  - Parks
  - Business Districts
  - City Boundaries
  - Plan Area Boundary

Figure 11. Walking Activity Map





# The Heights Regional Active Transportation Plan



## Average Daily Bicycle Volumes

Average Daily Bicycle Traffic

- Low
- Medium
- High
- Very High

Reference Layers

- Schools
- Libraries
- Water
- Parks
- Business Districts
- City Boundaries
- Plan Area Boundary

Figure 12. Biking Activity Map



## NETWORK CONNECTIVITY

### Completeness of Active Transportation System

Active transportation facilities that connect people to jobs, schools, parks, and other destinations form a complete network. Filling in missing connections expands access and mobility for people walking and bicycling and providing multiple route options accommodates people of all ages and abilities. Evaluating network connectivity provides an understanding of where gaps in the network exist and whether low comfort or high comfort walking and bicycling facilities exist.

### Pedestrian and Bicycle Facilities

The project team utilized existing inventories of pedestrian and bicycle facilities from the cities of Cleveland Heights, University Heights, and South Euclid, and supplemented those data sources with information from ODOT and recent street imagery from online sources. The inventory helped the team understand the completeness and connectedness of the current active transportation system.

Major gaps in the current network include:

- » Missing sidewalk on the west side of Warrensville Center Road from Bayard Road to Oakwood Drive, Cleveland Heights; this segment includes two GCRTA bus stops on the side of the road without a sidewalk.
- » Missing sidewalk on the north side of North Park Boulevard from Arlington Road to West St. James Parkway, Cleveland Heights.
- » Missing sidewalk on the west side of Belvoir Boulevard from Bluestone Road to Monticello Boulevard and the south side of Monticello Boulevard from Belvoir Boulevard to Quarry Drive, both adjacent to Denison Park in South Euclid.
- » Relatively few roads have dedicated bicycle facilities and are likely uncomfortable for most road users, as noted in the **Level of Traffic Stress** section. This results in barriers for north-south and east-west bicycle travel throughout the project area.

Even with the existing gaps in the network, almost all destinations are currently accessible by sidewalks and roads where bicycling is allowed.

### *Gaps and Generators Mapping*

A gap analysis examines physical breaks in an active transportation network, such as sidewalk gaps or missing connections between bicycle facilities as well as generators to biking and walking trips. It can also identify deficiencies in policy, planning, and programming that pose barriers to walking and bicycling. During a stakeholder committee meeting with representatives from the three cities, attendees identified the following gaps and generators beyond those identified above:

### » Gaps

- o Intersection crossings are uncomfortable for pedestrians at the Cedar Road and Fairmount Boulevard intersection
- o Intersection crossings are uncomfortable for pedestrians at the Coventry Road and Fairmount Boulevard intersection
- o Intersection crossings are uncomfortable for pedestrians and bicyclists at the Cedar Road and Taylor Road intersection
- o A lack of good bicycle and pedestrian connection to Purvis Park from the neighborhoods to the south via the Wrenford Road right-of-way
- o Direct connection between Raymont Boulevard and the Cedar Road/Taylor Road intersection
- o Additional connections to Euclid Creek Reservation via Bluestone Road

### » Generators

- o State and regional parks including Cain Park, Euclid Creek Reservation, Forest Hill Park, and Shaker Lakes
  - Cleveland Heights noted that they are working with Shaker Heights and the Northeast Ohio Sewer District on a redesign of the Shaker Lakes area along Lee Road, North Park Boulevard and South Park Boulevard. The work will include a network of trails and passive recreation which should increase its popularity.
- o Business districts such as Cedar Warrensville, Cedar Green, Cedar Lee, Coventry Village, Mayfield Corridor, and Severance Commercial District
- o John Carroll University, Notre Dame College, and Case Western Reserve University (in Cleveland, just west of Cleveland Heights)<sup>9</sup>



**Bexley Park in South Euclid.**

<sup>9</sup> Since the stakeholder meeting, Notre Dame College announced its closure in Spring 2024: <https://www.cleveland.com/news/2024/02/notre-dame-college-to-close-after-spring-semester.html>



Participants noted that while many areas are walkable and bikeable, there are some missing connections, especially crossings across key roads. Recent projects that added pedestrian crossing amenities, reduced vehicle lanes on wide arterials, and added new bicycle facilities were appreciated.

In addition to the input received from the stakeholder committee members, the public provided feedback on existing gaps and generators through an online survey and interactive online web map application. The following gaps and generators were identified by the public, including areas with existing infrastructure that is inadequate and/or the public feels unsafe:

### » Gaps

- o Cedar and Cottage Grove intersection, Cedar Road and Warrensville Center Road intersection, Cedar Road and Overlook Road Intersection, Cedar Road and Fairmount Boulevard intersection, Cedar Road/Harcourt Road/Cedar Glen Road/Euclid Heights Boulevard intersection, Cedar Road and Lee Road intersection
- o Euclid Heights Boulevard and Coventry intersection, Euclid Heights Boulevard and Cedar Road intersection, Euclid Heights Boulevard and Edgehill Road intersection, Euclid Heights Boulevard and Woodridge Road intersection
- o Scarborough Road and Coventry Road intersection
- o Monticello Road and Noble Road intersection, Monticello Road and Lee Road intersection
- o Lee Road and Tullamore Road intersection, Lee Road and Kensington Road intersection, Lee Road and Corydon Road intersection, Lee Road and Ormond Road intersection
- o St. James Road and Fairmount Road intersection
- o Mayfield Road and Green Road intersection
- o Coventry Road and Hampshire intersection
- o Euclid Heights Boulevard
- o Lee Road
- o Overlook Road
- o Warrensville Center Road
- o Coventry commercial district
- o Mayfield Road
- o Fairmount Boulevard
- o Cedar Fairmount district

### » Generators

- o Parks
- o Outdoor Performing Arts Venue
- o Libraries
- o Universities/Colleges
- o Business Districts
- o Schools (Daycare, Pre-school, K-12)

## SAFETY

### Evaluating crash trends and patterns

Evaluating crash trends and patterns identifies where crashes are currently occurring and provides a better understanding of what factors may be contributing to crashes. Understanding these crashes can lead to projects that have the greatest likelihood of improving safety for pedestrians and bicyclists. These analyses are especially important because Ohio is not trending in the right direction for bicyclist and pedestrian safety.

### Crash Analysis

Five years of bicycle and pedestrian crash data were reviewed using ODOT's GIS Crash Analysis Tool and mapped in **Figure 13**. This exercise identified problem locations for people walking and bicycling in the plan area. During the time period reviewed (2018-2022), there were 179 crashes involving bicyclists and pedestrians in the study area, 25 of which resulted in serious injuries and five of which resulted in fatalities (**Figure 14** and **Figure 15**). Crashes involving bicyclists and pedestrians peaked at 49 crashes in 2019 (**Figure 14**). However, in 2020 the number of crashes dropped by almost half from the year before, most likely due to the impact of COVID-19 on commuting and recreation patterns. The number of crashes rose again in 2021 to 35 then decreased to 30 in 2022. While complete 2023 results were not available at the start of the project, there were four fatal pedestrian crashes in Cleveland Heights in 2023, and ODOT recorded six pedestrian or bicycle severe injury crashes in the plan area. This represents an unfortunate uptick in fatal and severe injuries compared to 2018-2022, when there were zero to two fatal crashes, and four to six serious injury crashes each year.<sup>10</sup>

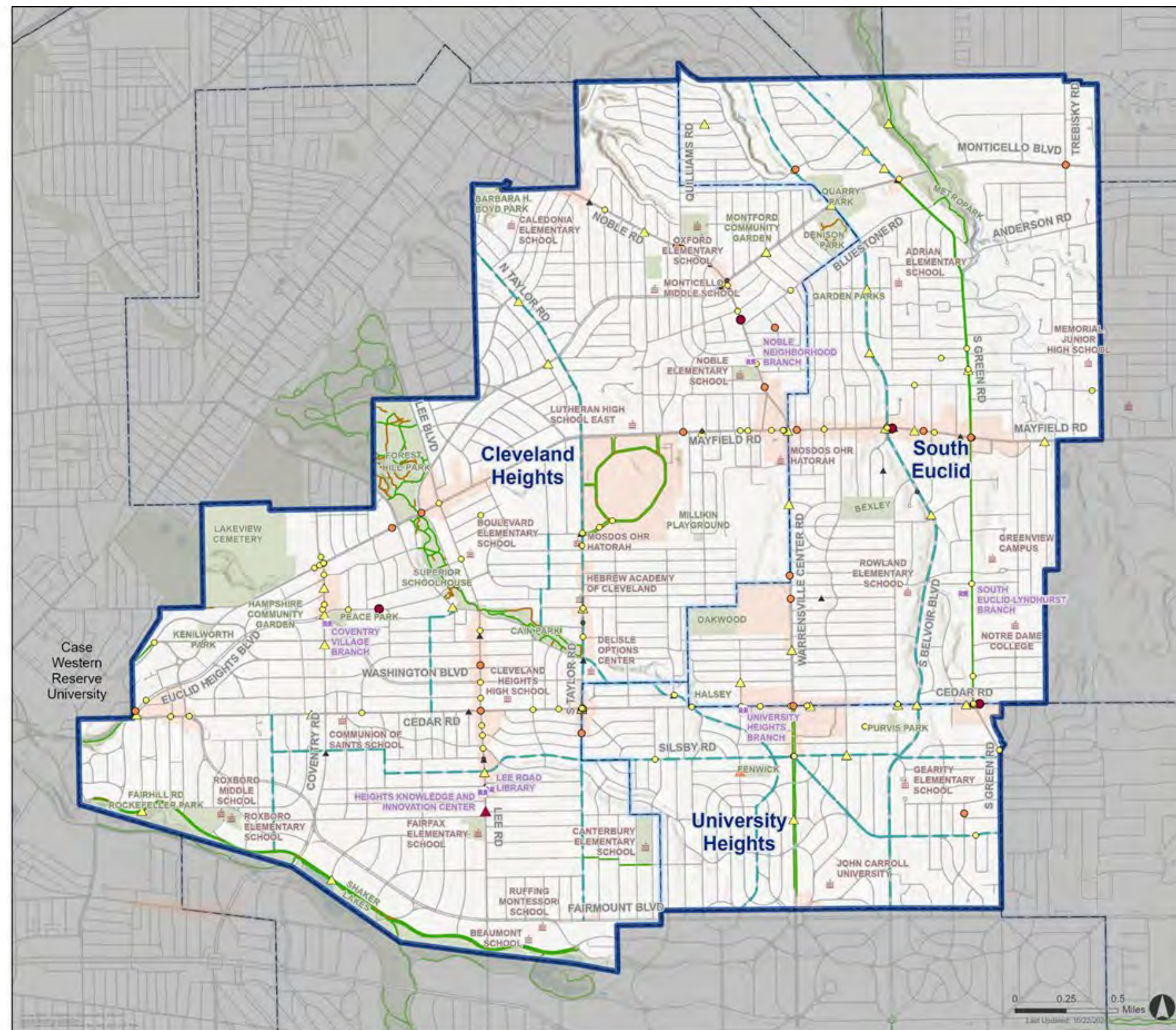
During the time period reviewed (2018-2022), there were more pedestrian crashes than bicycle crashes, with 112 and 67 in the five-year period, respectively (**Figure 15**). Pedestrian crashes also represented over 85 percent of fatal and severe crashes, accounting for 22 of the 25 serious injury crashes and four of the five fatal crashes. Intersection related crashes were the most common cause of serious injuries and fatalities for crashes involving a pedestrian or person on a bicycle, followed by those involving young drivers or senior drivers (**Figure 16**).

Concentrations of pedestrian crashes were in the following areas:

- » Lee Road from Superior Road to Meadowbrook Boulevard
- » Coventry Road and Mayfield Road intersection
- » Mayfield Road from Severance Circle to Green Road
- » Noble Road from Glenwood Road to Monticello Boulevard
- » Cedar Road from Fenwick Road to South Green Road
- » Intersection of Cedar Road and South Green Road

<sup>10</sup> Fatalities from 2023 were verified using news reports. Severe injuries were based on ODOT TIMS results as of March 11, 2024. No fatalities were reported in University Heights or South Euclid in 2023.





## The Heights Regional Active Transportation Plan



## Bicycle and Pedestrian Crashes

### Pedestrian Crash Severity

- Fatal
- Serious Injury
- Injury
- Property Damage Only

### Bicycle Crash Severity

- ▲ Fatal
- ▲ Serious Injury
- ▲ Injury
- ▲ Property Damage Only

### Reference Layers

-  Schools
-  Libraries
-  Water
-  Parks
-  Business Districts
-  City Boundaries
-  Plan Area Boundary
-  Trails
-  Bike Infrastructure
-  Proposed Bicycle Facilities

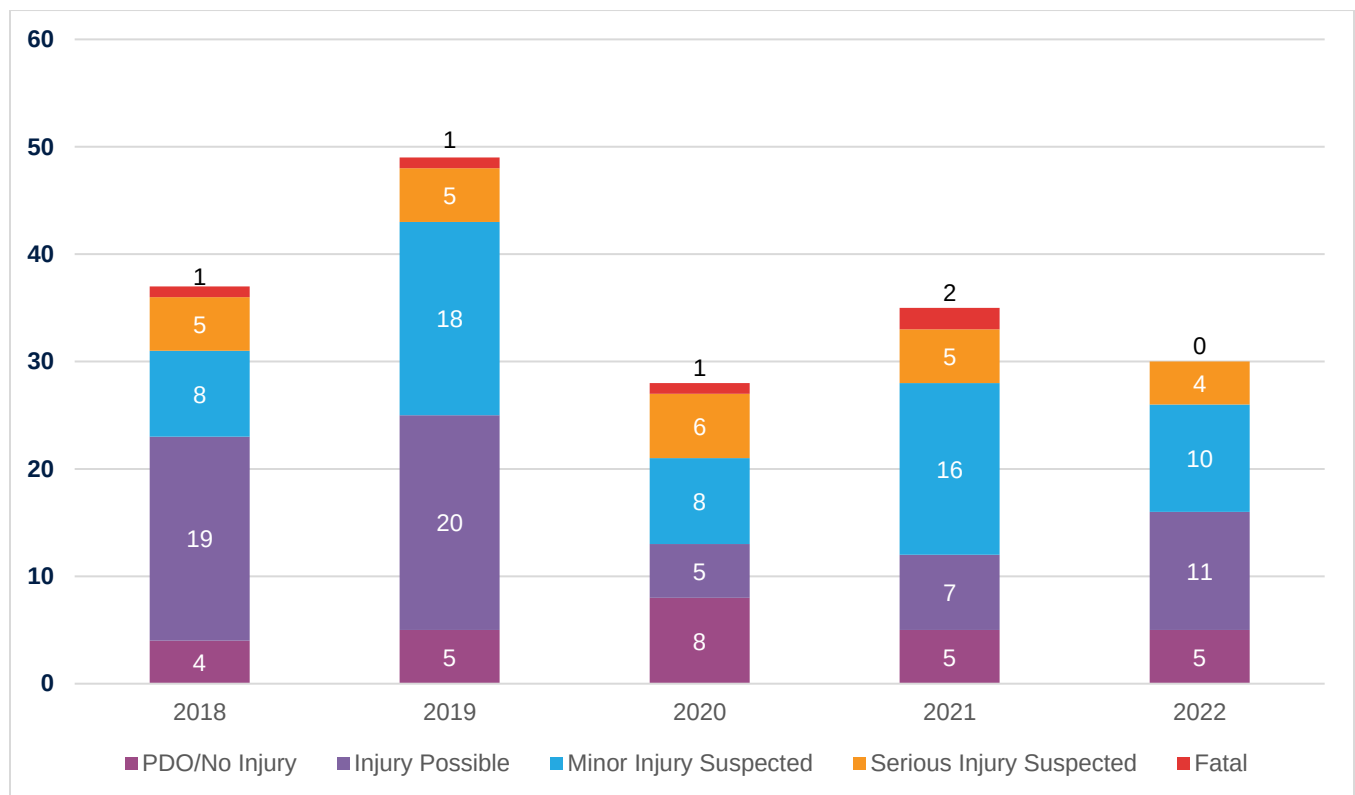
Figure 13: Bike and Pedestrian Crashes 2018-2022



Concentrations of bicycle crashes were in the following areas:

- » Lee Road from Scarborough Road to Meadowbrook Boulevard
- » Mayfield Road from Noble Road to Sheridan Road
- » Intersection of Mayfield Road and Belvoir Boulevard
- » Cedar Road from Warrensville Center Road to Green Road

Some locations have experienced crashes where drivers go over the curb and do not hit pedestrians but could cause injuries if anyone was present. Cleveland Heights noted one such location at the South Taylor Road/Fairmount Boulevard intersection. The systemic safety analysis in the next section identifies locations that may be at risk for future crashes based on recent pedestrian and bicycle crashes.



**Figure 14: Crash Trends by Severity 2018-2022**

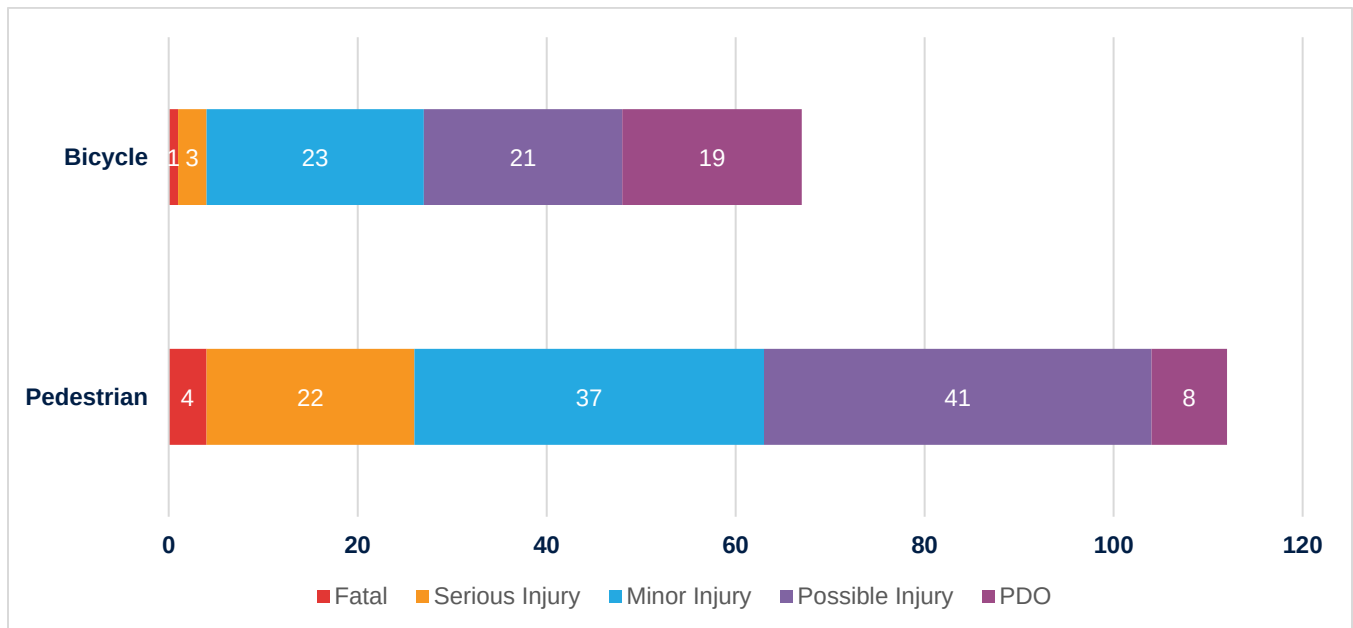


Figure 15: Crash Type Statistics, 2018-2022

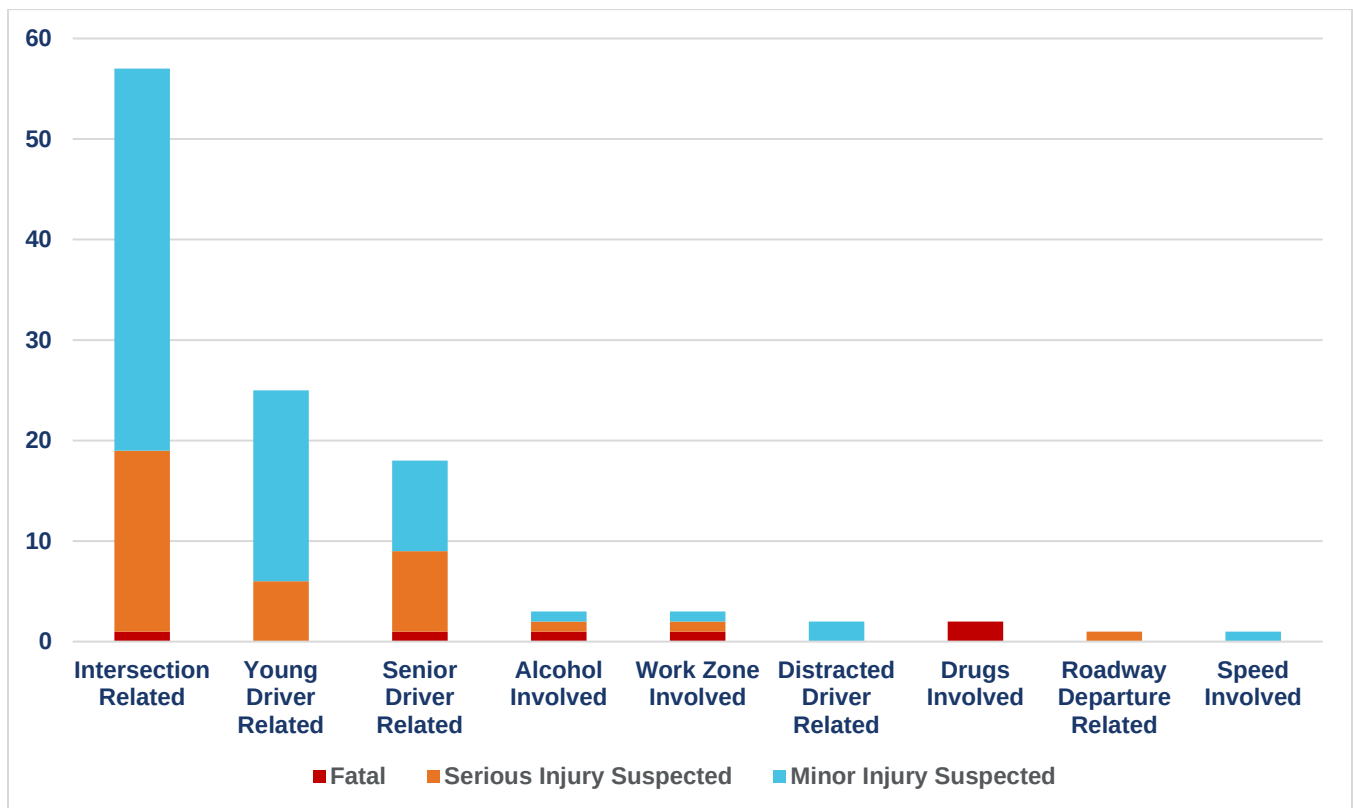


Figure 16: Emphasis Area by Severity

## Systemic Safety Analysis

### *Systemic Safety Project Selection Tool*

The Federal Highway Administration (FHWA) developed the Systemic Safety Project Selection Tool to build upon current safety management practices for identifying roadway safety problems.<sup>11</sup> The tool provides guidance on how to expand beyond traditional site-specific analysis to system-wide based approach. The tool is a step-by-step process to conducting a systemic safety analysis and determining high-risk roadways in the system. The process includes identifying focus crash types and risk factors, screening and prioritizing candidate locations, selecting countermeasures, and prioritizing projects. A systemic safety analysis was conducted for Cleveland Heights, University Heights, and South Euclid focusing on the first two steps of the FHWA's Systemic Safety Project Selection Tool:

- » Identify Focus Crash Types and Risk Factors
- » Screen and Prioritize Candidate Locations

### *Identify Focus Crash Types and Risk Factors*

#### Focus crash types

This step of the process identifies which types of crashes should be used for the subsequent analysis steps. Since this ATP is focused on making walking and biking safer, all pedestrian and bicycle crashes in the analysis timeframe were selected as the focus crash types.

#### Focus facilities

Crash data from years 2018 to 2022 was used to determine broad location categories where bicycle and pedestrian crashes most often occur, called “focus facilities” in this section. Most pedestrian crashes occurred at intersections, as shown in **Figure 17**, with about 25 percent more crashes at unsignalized intersections compared to signalized intersections. Nearly 60 percent of bicycle crashes occurred at unsignalized intersections, followed by signalized intersections, as shown in **Figure 18**. After categorizing intersection crashes by the intersection type (e.g., T-intersection or four-way intersection), crashes were further divided based on roadway classification. The analysis showed that most of the crashes for pedestrians and bicyclists were on arterial roadways. It also showed that while pedestrian crashes on segments were not the most common location, these crashes were highly concentrated on arterial. Therefore, the focus facilities are:

- » Arterial roadway segments (pedestrians)
- » Signalized four-way intersections that include arterial roads (pedestrians and bicyclists)
- » Unsignalized T-intersections that include arterial roads (pedestrians and bicyclists)
- » Unsignalized four-way intersections that include arterial roads (pedestrians)
- » Unsignalized four-way intersections that include collector roads (bicyclists)

<sup>11</sup> Systemic Safety Project Selection Tool, Federal Highway Administration, <https://safety.fhwa.dot.gov/systemic/fhwasa13019/chap1.cfm#chap11>





## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

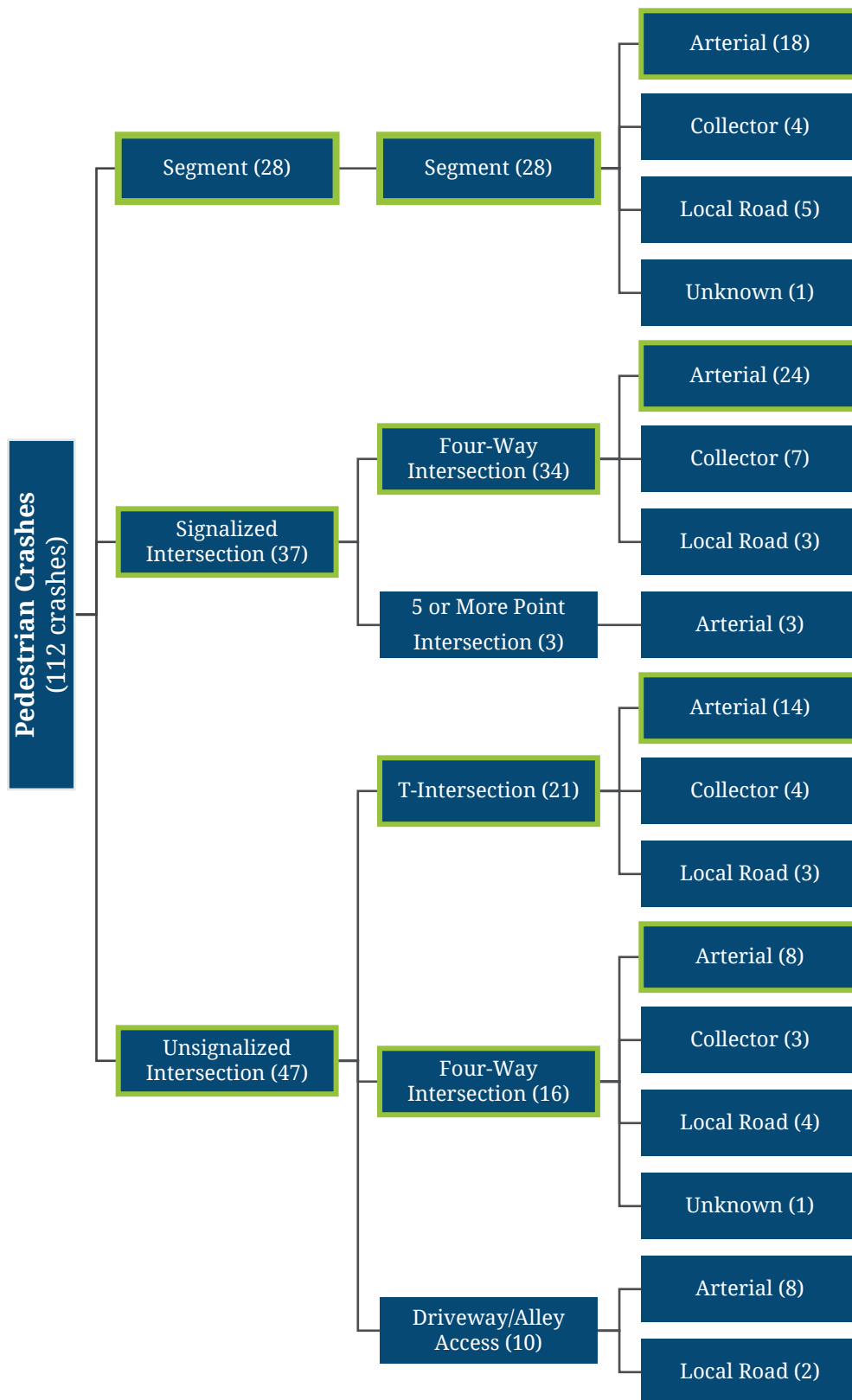


Figure 17: Pedestrian Crash Tree Diagram

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

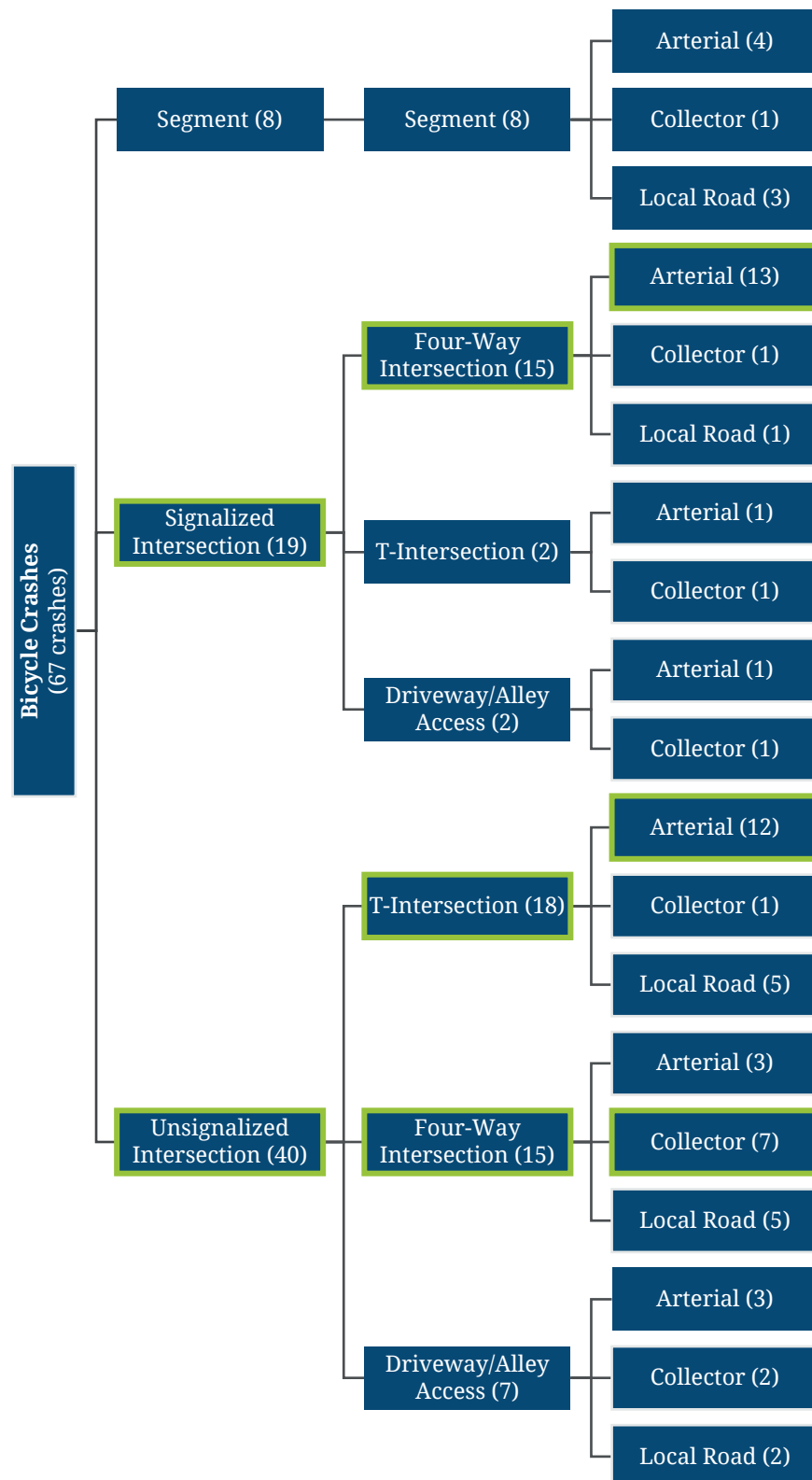


Figure 18: Bicycle Crash Tree Diagram

## Identify and evaluate risk factors

In order to define the focus facility types further, potential characteristics of locations where pedestrian and/or bicycle crashes occur were developed and evaluated to determine if they were risk factors for pedestrian and/or bicycle crashes. A characteristic was generally considered to be a risk factor if most crashes occurred on segments sharing that feature, although professional judgement could change whether something was a risk factor. For example, 76 percent of pedestrian crashes on arterial roadway segments were within 1/16 of a mile of a business district, so business district proximity was included as a risk factor for that crash type. Upon review of local, regional, and state data available for Cleveland Heights, University Heights, and South Euclid, characteristics of facilities found to increase the risk for pedestrian and/or bicycle crashes to occur within Cleveland Heights, University Heights, and South Euclid are summarized in **Table 3**.

**Table 3: Facility Risk Factors for Pedestrians and Bicyclists**

| <i>Location Type</i>                                       | <i>Volume</i>       | <i>Speed Limit</i>    | <i>Business District Proximity</i> | <i>School Proximity</i>      | <i>Number of Lanes</i> | <i>Other</i>                   |
|------------------------------------------------------------|---------------------|-----------------------|------------------------------------|------------------------------|------------------------|--------------------------------|
| <i>Pedestrians</i>                                         |                     |                       |                                    |                              |                        |                                |
| <i>Arterial roadway segments</i>                           | <i>&gt;10,000</i>   | <i>35 mph or more</i> | <i>Within 1/16 of a mile</i>       | <i>Not a factor</i>          | <i>4</i>               | <i>Dark road with lighting</i> |
| <i>Signalized four-way intersections with arterials</i>    | <i>&gt;10,000</i>   | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Not a factor</i>          | <i>4</i>               | <i>None</i>                    |
| <i>Unsignalized T-intersections with arterials</i>         | <i>&gt;10,000</i>   | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Within a quarter mile</i> | <i>4</i>               | <i>None</i>                    |
| <i>Unsignalized four-way intersections with arterials</i>  | <i>&gt;10,000</i>   | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Not a factor</i>          | <i>4</i>               | <i>Dark road with lighting</i> |
| <i>Bicyclists</i>                                          |                     |                       |                                    |                              |                        |                                |
| <i>Signalized four-way intersections with arterials</i>    | <i>&gt;15,000</i>   | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Not a factor</i>          | <i>4</i>               | <i>No bicycle facility</i>     |
| <i>Unsignalized T-intersections with arterials</i>         | <i>&gt;15,000</i>   | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Within a quarter mile</i> | <i>4</i>               | <i>No bicycle facility</i>     |
| <i>Unsignalized four-way intersections with collectors</i> | <i>7,500-10,000</i> | <i>Not a factor</i>   | <i>Within 1/16 of a mile</i>       | <i>Within a quarter mile</i> | <i>4</i>               | <i>No bicycle facility</i>     |



## Screen and Prioritize Candidate Locations

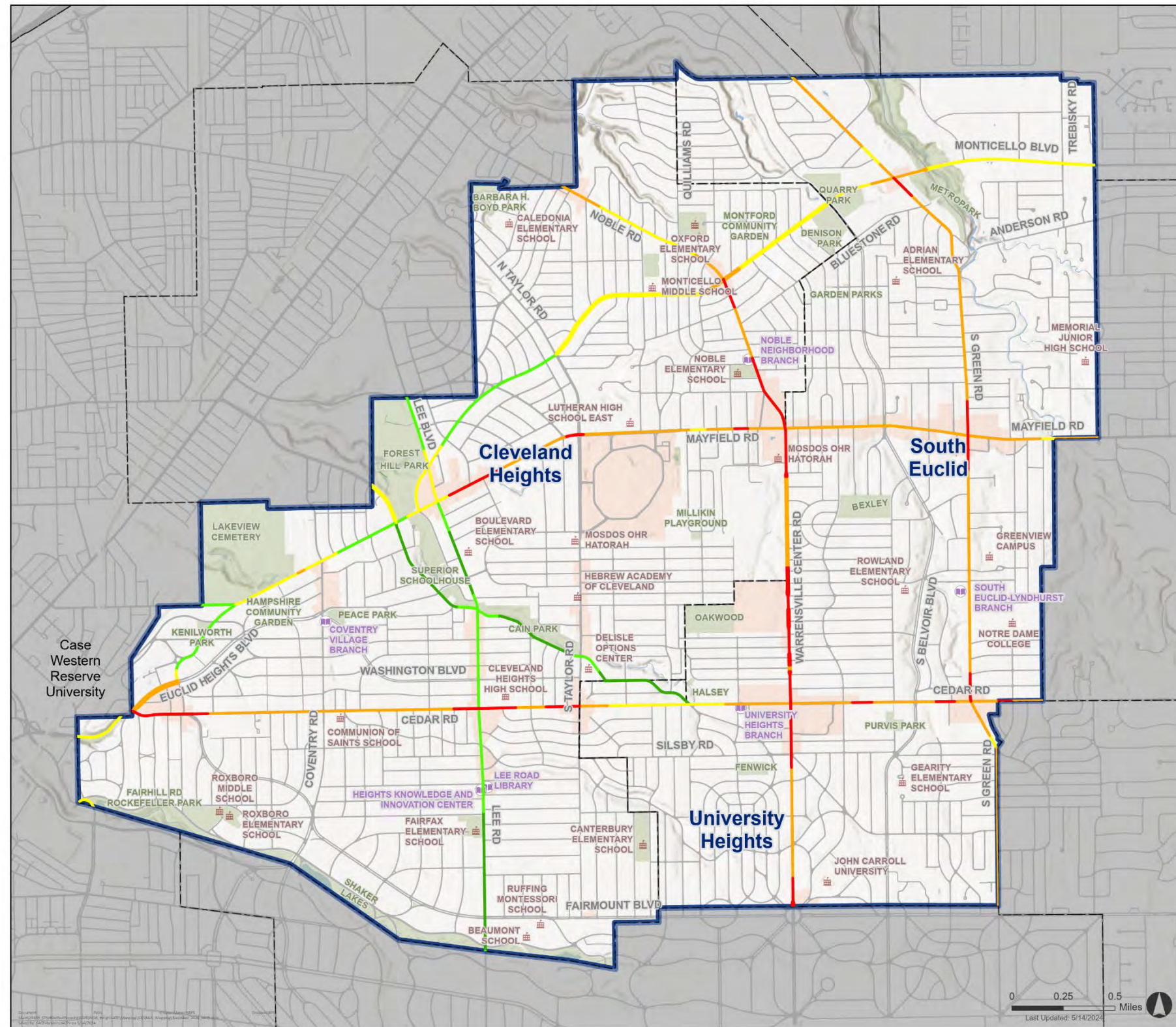
After determining the focus facilities and associated risk factors in the transportation network, a systemwide analysis was conducted to screen all segments in the system and identify the high-risk network locations. Based on the analysis described above and available data, all of the risk factors shown in **Table 3** were considered except for dark roads with lighting. This risk factor was not included since lighting would typically be a solution to nighttime crashes rather than a risk factor. The lighting risk factor, which was identified on arterial roadway segments and unsignalized four-way intersections with arterials, suggests the cities could evaluate existing nighttime lighting in high-risk areas and consider design solutions such as pedestrian-scale lighting.

Each road segment and intersection was evaluated to determine if it had one or more of the risk factors, and each risk factor contributed one point towards a risk score. **Figure 19** illustrates the pedestrian risk scores for roadway segments. Since sidewalks were present for all but one of the 18 pedestrian crashes on arterial segments, the cities should also consider additional pedestrian crossing facilities in high-risk areas to reduce crossings outside of marked facilities. **Figure 20** illustrates the intersection risk scores for pedestrians, and **Figure 21** illustrates the intersection risk scores for bicyclists. Different treatments could be considered for high-risk intersections depending on the intersection type and whether it is high risk for pedestrians, bicyclists, or both. The results of this analysis should be considered as part of proactive safety planning, and should be evaluated together with crash history to identify locations for safety treatments. Additional details on the systemic safety analysis methodology are included in **Appendix B**.



Shared use path on Cedar Road.





## The Heights Regional Active Transportation Plan



## Pedestrian High Risk Network

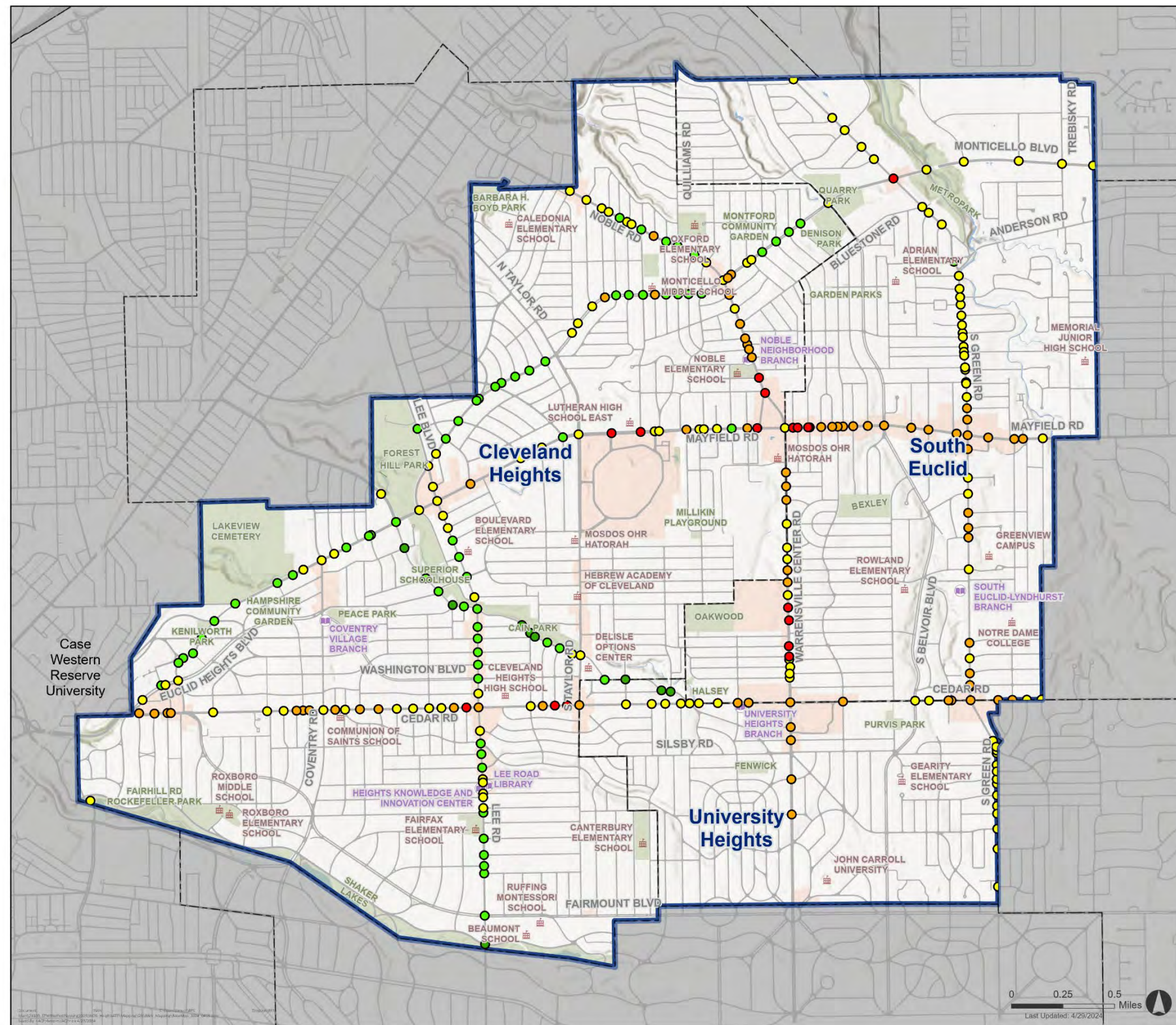
- Low Risk
- Medium Risk
- High Risk

### Reference Layers

- Schools
- Libraries
- Water
- Parks
- Business Districts
- City Boundaries
- Plan Area Boundary

Figure 19: Pedestrian High-Risk Network





## The Heights Regional Active Transportation Plan



## Pedestrian Intersection High Risk Network

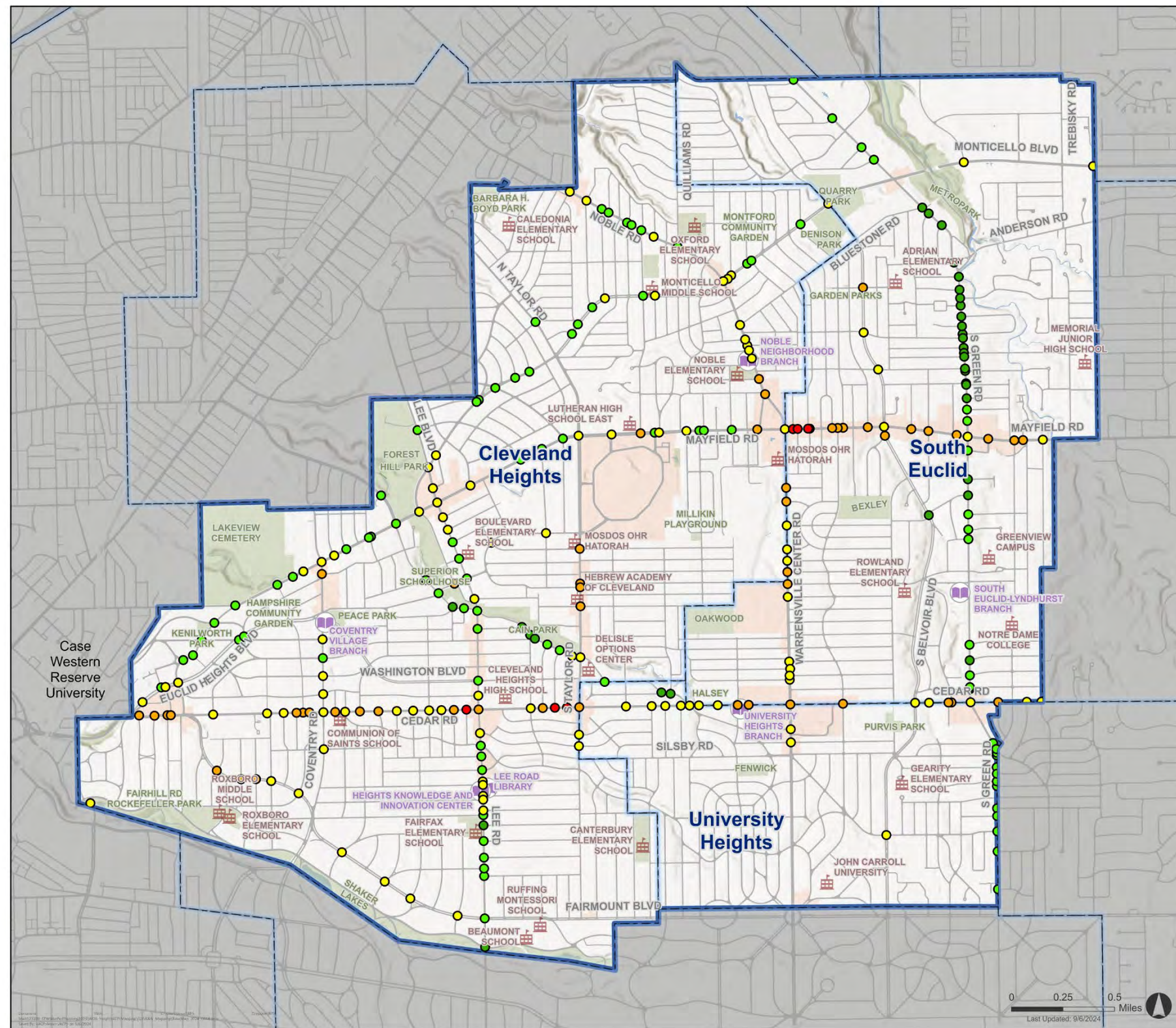
- Low Risk
- Medium Risk
- High Risk

### Reference Layers

-  Schools
-  Libraries
-  Water
-  Parks
-  Business Districts
-  City Boundaries
-  Plan Area Boundary

Figure 20: Pedestrian Intersection High-Risk Network





## The Heights Regional Active Transportation Plan



## Bicycle Intersection High Risk Network

- Low Risk
- Medium Risk
- High Risk

### Reference Layers

-  Schools
-  Libraries
-  Water
-  Parks
-  Business Districts
-  City Boundaries
-  Plan Area Boundary

Figure 21: Bicycle Intersection High-Risk Network



## LEVEL OF TRAFFIC STRESS

### Overview of Level of Traffic Stress

In active transportation planning, a Level of Traffic Stress (LTS) analysis uses broadly available road characteristics to classify the experience of riding a bicycle on different streets. A common method was first described in 2012<sup>12</sup>, and has been adopted and adjusted for local conditions across the country. An LTS analysis typically groups roads into one of four categories:

- » LTS 1 – A low stress facility suitable for all ages and abilities. These facilities have strong separation from motor vehicle traffic or are well-established on low speed, low volume roads.
- » LTS 2 – A facility suitable for people who are “interested but concerned” about riding a bicycle, which includes most adults and families. These facilities are separated from moderate speed and multilane roads or are shared lanes on lower speed, lower volume roads.
- » LTS 3 – A facility suitable for people who are “enthused and confident” about riding a bicycle. These facilities are shared lanes on moderate speed or separated from multilane, medium to high volume, and higher speed roads.
- » LTS 4 – A high stress facility is uncomfortable for most adults. These facilities are mixed flow on moderate speed or higher volume roads or in close proximity to high speed, high volume, or multilane roads.

### LTS Methodology

ODOT developed an LTS tool for the statewide bicycle network, and the tool and analysis method were adopted for this analysis.<sup>13</sup> The inputs for the ODOT LTS analysis include:

- » Number of lanes
- » Direction of travel (one- or two-way)
- » Posted speed limit
- » Annual Average Daily Traffic (AADT)
- » Bicycle facility type (shared use path, separated bicycle lane, buffered bicycle lane, bicycle lane, paved shoulder, or shared lane)
- » Bicycle lane width

The ODOT TIMS roadway inventory, combined with bicycle facility data from Cleveland Heights, University Heights, and South Euclid provided data inputs for the LTS analysis. Local roadways without bicycle facilities were excluded from the results since most of them do not have AADT data available, and non-local road segments where AADT data was not available were also excluded. This results in an analysis that primarily covers arterial and collector roads, together with a small number of local roads with bicycle facilities.

<sup>12</sup> Mekuria, M. C., Furth, P. G., & Nixon, H. (2012). Low-stress bicycling and network connectivity. Retrieved from <https://transweb.sjsu.edu/research/Low-Stress-Bicycling-and-Network-Connectivity>

<sup>13</sup> NOACA has also developed LTS for the region, available at <https://gis.noaca.org/portal/>. That analysis generally aligns with the results presented here, although some corridors have not been updated to reflect recent infrastructure in the Heights ATP area.

### LTS Results

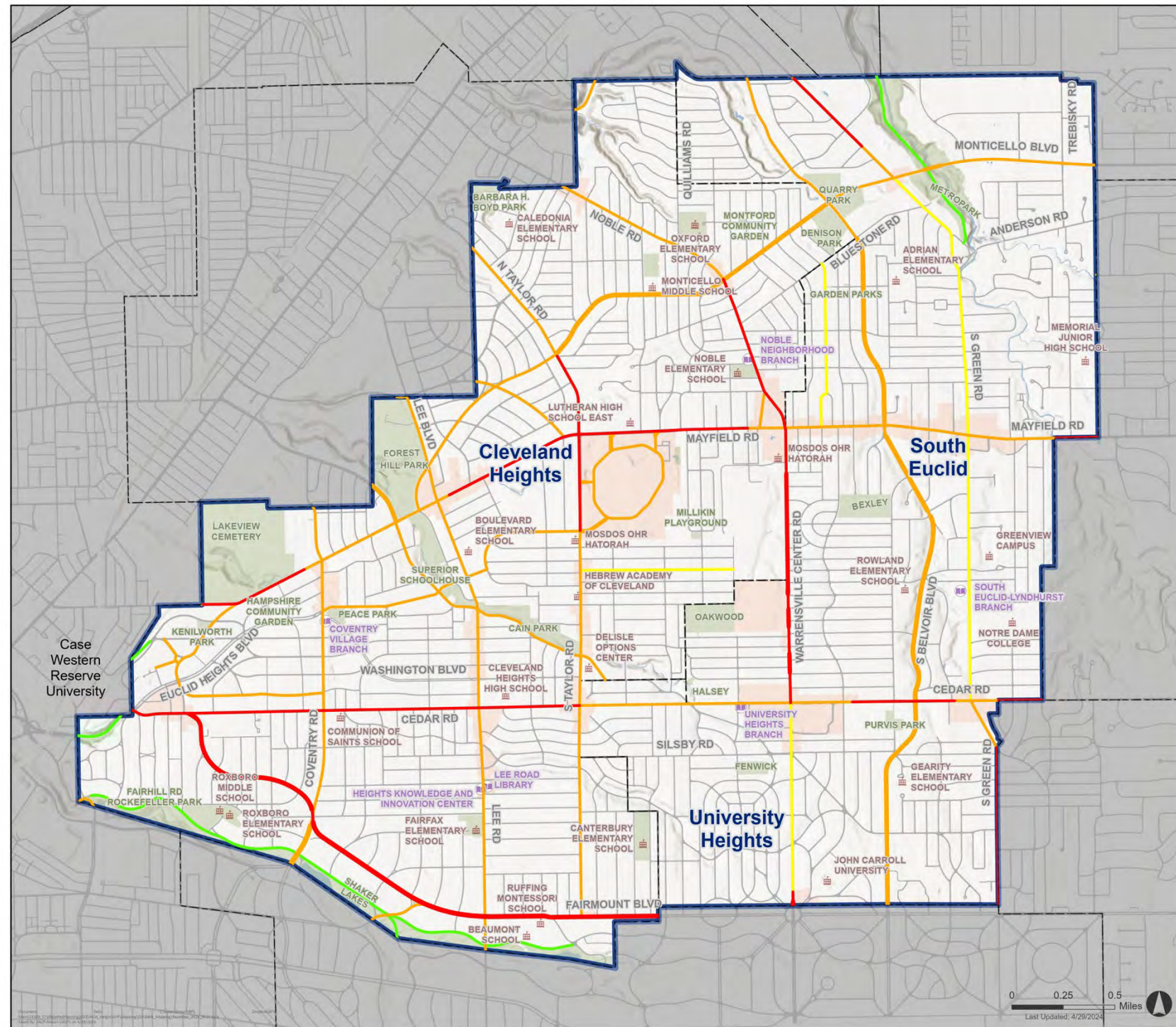
Most of the roads analyzed in the area have an LTS value of 3 or 4. This includes north-south and east-west connections between the three cities and indicates it may be difficult for people to easily travel by bicycle to local or regional destinations. North-south connections with LTS 4, indicating a high stress facility that is uncomfortable for most adults, include portions of Green Road, Warrensville Center Road, Noble Road, and Taylor Road. East-west connections with LTS 4 include portions of Mayfield Road, Cedar Road, and Fairmont Boulevard. Roads with LTS 3 or 4 are generally uncomfortable for most adults and families. In contrast, Euclid Park Road (in Euclid Creek Reservation), North Park Boulevard, and the steep portions Edgehill Road and Cedar Road near the border with the City of Cleveland have LTS 1 along segments of the road adjacent to shared use paths and buffered bike lanes. South Green Road and Warrensville Center Road have LTS 2 along roadway segments with on-street bicycle facilities. Roads with LTS 1 are suitable for all ages and abilities, and roads with LTS 2 are typically suitable for people who are “interested but concerned” about riding a bicycle, which includes most adults and families. **Figure 22** illustrates the results of the Level of Traffic Stress analysis.

Results of the Level of Traffic Stress analysis should be used alongside public feedback to ensure real life experiences align with the data. It is possible that other conditions, for example on street bicycle facility maintenance or high pedestrian/bicycle use on shared use paths, could contribute to people riding bicycles feeling more stress than indicated by the analysis.



**On-street bicycle lanes on Green Road.**





## The Heights Regional Active Transportation Plan



## Level of Traffic Stress - Bicycles

- Low Stress (LTS 1)
- Moderate Stress (LTS 2)
- High Stress (LTS 4)

### Reference Layers

-  Schools
-  Libraries
-  Water
-  Parks
-  Business Districts
-  City Boundaries
-  Plan Area Boundary

Figure 22: Bicycle Level of Traffic Stress



## KEY TAKEAWAYS

Examination of University Heights, Cleveland Heights, and South Euclid’s demographics, planning efforts, and transportation system highlights many recent successes while pointing to a need for further active transportation improvements and services across the area. The communities addressed in this plan have a lower rate of car ownership and higher unemployment rate than the rest of Ohio, which indicates a greater need for active transportation options. Relatedly, the rates of walking, biking, and transit use are all more than double the statewide average.

The three cities have an extensive sidewalk and off-street trail network, and have made recent progress to expand those networks. However, there are sidewalk gaps in some key locations, and stakeholders have noted a need for safer crossings and more on- and off-street bicycle facilities across the area. High active transportation demand and need suggests all three cities have both favorable conditions for walking and bicycling, as well as people who would benefit from safer and more comfortable nonmotorized transportation options. Concentrations of high demand and need for active transportation facilities are identified in the center of the area with the greatest area within Cleveland Heights. The crash history, systemic safety analysis, and Level of Traffic Stress all support the need for improvements for pedestrians and bicyclists on major arterials, along with targeted improvements on streets with lower vehicle volumes.

The communities have demonstrated interest in active transportation through development of plans, policies, and programs, and investments in related projects. This plan builds on nearly 20 other plans and initiatives developed by entities across and within the study area over the past five years, with even more plans and initiatives that were completed or incepted between five and 12 years ago. While all three cities have made recent bicycle and pedestrian-supportive improvements in their communities and have dedicated funding to others, these analyses emphasize where and to what extent active transportation projects, programs, and services are still needed in the region.



Side use path in Euclid Creek Reservation.

Source: Burton Planning Services

# PROPOSED PROJECTS AND PROGRAMS







## PROPOSED PROJECTS AND PROGRAMS

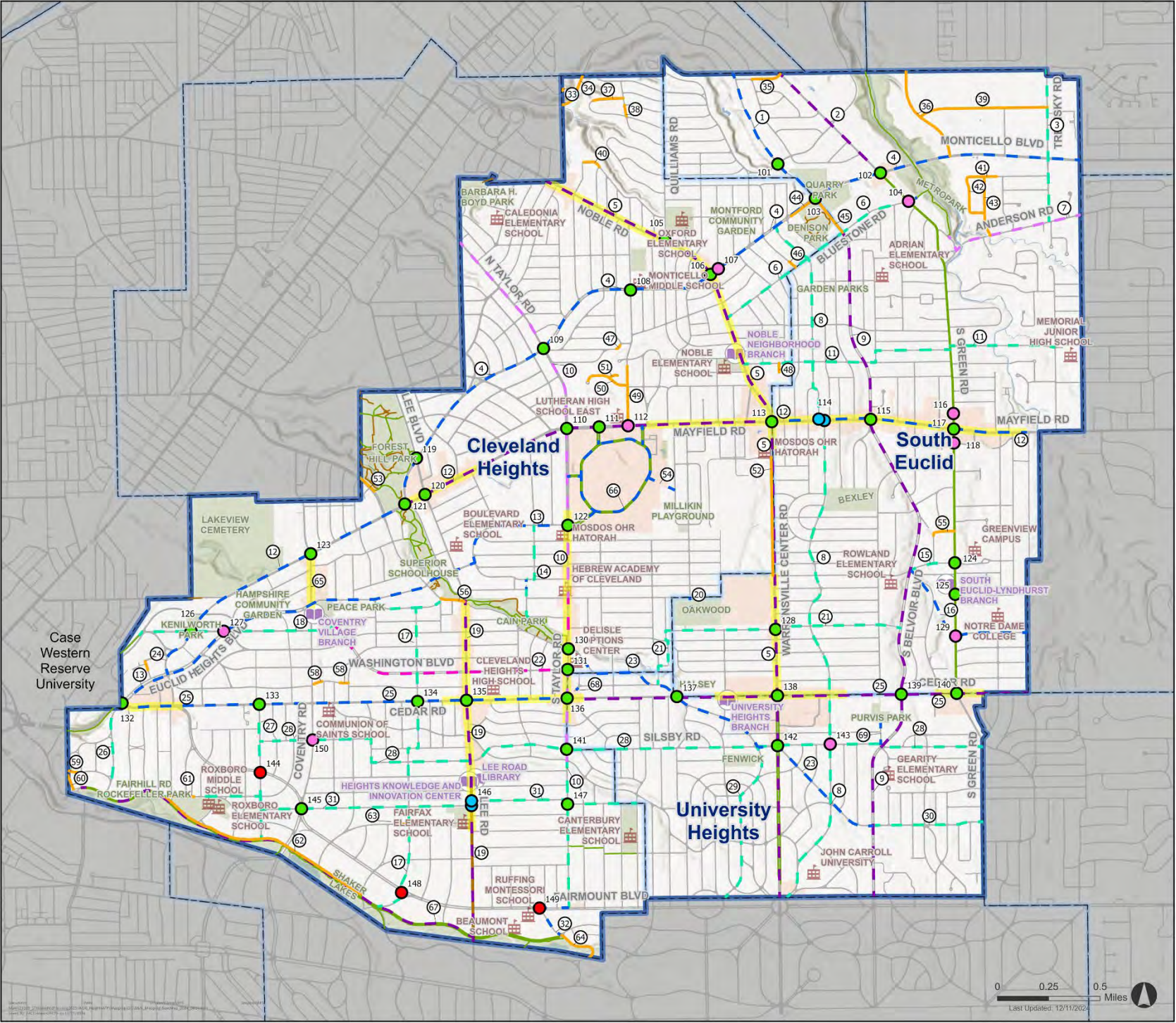
This plan makes recommendations that will promote and support active transportation through a combination of infrastructure projects, policies, and programs. Infrastructure recommendations refer to physical projects that will change how roadways are configured to provide space for all users. Policy and program recommendations aim to re-prioritize walking and bicycling and to change the culture around active transportation and help increase its use through engagement, education, encouragement, and evaluation.

### INFRASTRUCTURE PROJECTS

The final network is based on the existing conditions analysis, steering committee meetings, and public input. The network includes critical connections to schools, libraries, parks, and commercial corridors. The network also identifies multiple intersections that should be improved to make walking and biking safer along major roads, such as Cedar Road/Taylor Road, Mayfield Road/Warrensville Center Road, and Cedar Road/Euclid Heights Boulevard/Overlook Road. See **Figure 23** for a network recommendations map and **Table 4** for a complete list of all proposed projects with descriptions.

The recommendations outlined in **Figure 23** and **Table 4** will add over 21 miles of bicycle boulevards, 17 miles of shared use paths, 11 miles of separated bicycle lanes, eight (8) miles of on-street bikeways (including nearly five miles with a buffer), and six (6) miles of sidewalks to the transportation system, plus 50 intersection or crossing improvements.





The Heights  
Regional Active  
Transportation Plan



Proposed Active  
Transportation  
Improvements

- Proposed Project Type

  - Bicycle Boulevard
  - Bicycle Lane
  - Buffered Bicycle Lane
  - Separated Bicycle Lane
  - Shared Use Path
  - New Sidewalk
  - Crossing Improvement Zone
- Proposed Intersection Improvements

  - Offset Intersection Treatment
  - RRFB
  - Signalized Intersection
  - Unsignalized Intersection
- Reference Layers

  - Schools
  - Libraries
  - Water
  - Parks
  - Business Districts
  - City Boundaries
  - Plan Area Boundary
- Existing Infrastructure

  - Trails
  - Bicycle Infrastructure

Figure 23: Network Map



**Table 4. Project Recommendations**

| ID | Corridor or Intersection                                        | Project Type                                           | Project Limits                                                                        | Jurisdiction(s)                                     |
|----|-----------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1  | Belvoir Boulevard                                               | Shared Use Path                                        | Study area limits to Bluestone Road (including separate segment in Cleveland Heights) | Cleveland Heights, South Euclid                     |
| 2  | Green Road                                                      | Separated Bicycle Lane                                 | Study area limits to Monticello Boulevard                                             | South Euclid                                        |
| 3  | Trebisky Road                                                   | Bicycle Boulevard                                      | Study area limits to Anderson Road                                                    | South Euclid                                        |
| 4  | Monticello Road                                                 | Shared Use Path                                        | Mayfield Road to study area limits                                                    | Cleveland Heights, South Euclid                     |
| 5  | Warrensville Center Road/Noble Road                             | Separated Bicycle Lane and Buffered Bike Lane          | Study area limits                                                                     | Cleveland Heights, University Heights, South Euclid |
| 5  | Warrensville Center Road/Noble Road                             | Crossing Improvement Zone                              | Study area limits to approximately 1000 feet south of Mayfield Road                   | Cleveland Heights, South Euclid                     |
| 6  | Bluestone Road                                                  | Bicycle Boulevard & Shared Use Path                    | Noble Road to shared use path entrance east of Green Road                             | Cleveland Heights, South Euclid                     |
| 7  | Anderson Road                                                   | Bicycle Lane                                           | Metropolitan Park Boulevard to study area limits                                      | South Euclid                                        |
| 8  | Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive | Bicycle Boulevard                                      | Monticello Boulevard to study area limits                                             | Cleveland Heights, University Heights, South Euclid |
| 9  | Belvoir Boulevard                                               | Separated Bicycle Lane                                 | Bluestone Road to study area limits                                                   | Cleveland Heights, University Heights, South Euclid |
| 10 | Taylor Road                                                     | Bicycle Boulevard, Bicycle Lane, Buffered Bicycle Lane | Study area limits to Fairmount Boulevard                                              | Cleveland Heights, University Heights               |
| 10 | Taylor Road                                                     | Crossing Improvement Zone                              | Euclid Heights Boulevard to Cedarbrook Road                                           | Cleveland Heights                                   |
| 11 | Liberty Road, Norma Road, and Ardmore Road                      | Bicycle Boulevard                                      | Noble Road to Dorsh Road                                                              | Cleveland Heights, South Euclid                     |
| 12 | Mayfield Road                                                   | Shared Use Path & Separated Bicycle Lane               | Kenilworth Road to Sheridan Road                                                      | Cleveland Heights, South Euclid                     |
| 12 | Mayfield Road                                                   | Crossing Improvement Zone                              | Monticello Boulevard to Ivydale Road and Severance Circle to Sheridan Road            | Cleveland Heights, South Euclid                     |
| 13 | Euclid Heights Boulevard                                        | Shared Use Path                                        | Cedar Road to Taylor Road                                                             | Cleveland Heights                                   |
| 14 | Compton Road                                                    | Bicycle Boulevard & Shared Use Path                    | Euclid Heights Boulevard to Superior Park Drive                                       | Cleveland Heights                                   |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID | Corridor or Intersection                                     | Project Type                             | Project Limits                                                                                                                                                              | Jurisdiction(s)                                     |
|----|--------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 15 | Bayard Road                                                  | Bicycle Boulevard                        | Belvoir Boulevard to Green Road                                                                                                                                             | South Euclid                                        |
| 16 | Langerdale Road, Lanphier Park, and College Road             | Shared Use Path                          | Belvoir Boulevard to study area limits                                                                                                                                      | South Euclid                                        |
| 17 | Lincoln Boulevard, Cottage Grove Avenue, and Stratford Road  | Bicycle Boulevard                        | Euclid Heights Boulevard and Parkway Drive to North Park Boulevard                                                                                                          | Cleveland Heights                                   |
| 18 | Edgehill Road                                                | Bicycle Boulevard                        | Overlook Road to Washington Boulevard                                                                                                                                       | Cleveland Heights                                   |
| 19 | Lee Road                                                     | Separated Bicycle Lane                   | Superior Road to study area limits                                                                                                                                          | Cleveland Heights                                   |
| 19 | Lee Road                                                     | Crossing Improvement Zone                | Superior Road to Fairfax Road                                                                                                                                               | Cleveland Heights                                   |
| 20 | Oakwood Green Park Path                                      | Shared Use Path                          | Blanche Ave to existing park path                                                                                                                                           | Cleveland Heights, South Euclid                     |
| 21 | Verona Road, Antisdale Road, Revere Road, and Staunton Road  | Bicycle Boulevard                        | Washington Boulevard to Belvoir Boulevard                                                                                                                                   | Cleveland Heights, University Heights, South Euclid |
| 22 | Washington Boulevard                                         | Buffered Bicycle Lane                    | Edgehill Road to Taylor Road                                                                                                                                                | Cleveland Heights                                   |
| 23 | Washington Boulevard                                         | Shared Use Path                          | Taylor Road to Belvoir Boulevard                                                                                                                                            | Cleveland Heights, University Heights, South Euclid |
| 24 | Kenilworth Road                                              | Shared Use Path                          | Euclid Heights Boulevard to Mayfield Road                                                                                                                                   | Cleveland Heights                                   |
| 25 | Cedar Road                                                   | Shared Use Path & Separated Bicycle Lane | Within study area limits (Euclid Heights Boulevard to Lyndway Road)                                                                                                         | Cleveland Heights, University Heights, South Euclid |
| 25 | Cedar Road                                                   | Crossing Improvement Zone                | Euclid Heights Boulevard to Fairmount Boulevard, Oakdale Road to approximately 500 feet east of Taylor Road, Fenwick Road to Miramar Boulevard, Kerwin Road to Fenway Drive | Cleveland Heights, University Heights, South Euclid |
| 26 | Harcourt Drive                                               | Bicycle Boulevard                        | Cedar Road to North Park Boulevard                                                                                                                                          | Cleveland Heights                                   |
| 27 | Demington Drive                                              | Bicycle Boulevard                        | Cedar Road to North Park Boulevard                                                                                                                                          | Cleveland Heights                                   |
| 28 | Silsby Road, Essex Road, Westminster Road, and Clarkson Road | Bicycle Boulevard                        | Demington Drive to Green Road                                                                                                                                               | Cleveland Heights, University Heights               |
| 29 | Saybrook Road and Traymore Road                              | Bicycle Boulevard                        | Silsby Road to study area limits                                                                                                                                            | University Heights                                  |
| 30 | Washington Boulevard                                         | Bicycle Boulevard                        | Belvoir Boulevard to Green Road                                                                                                                                             | University Heights                                  |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID | Corridor or Intersection               | Project Type      | Project Limits                                                        | Jurisdiction(s)                       |
|----|----------------------------------------|-------------------|-----------------------------------------------------------------------|---------------------------------------|
| 31 | St. James Parkway and Scarborough Road | Bicycle Boulevard | North Park Boulevard to Canterbury Road                               | Cleveland Heights, University Heights |
| 32 | Fairmount Boulevard and Shelburne Road | Shared Use Path   | Taylor Road to North Park Boulevard                                   | Cleveland Heights                     |
| 33 | Reyburn Road                           | New Sidewalk      | Section within Cleveland Heights                                      | Cleveland Heights                     |
| 34 | Belvoir Boulevard                      | New Sidewalk      | Section within Cleveland Heights                                      | Cleveland Heights                     |
| 35 | Lancaster Road                         | New Sidewalk      | Greenvalue Drive to Green Road                                        | South Euclid                          |
| 36 | Parkside Boulevard                     | New Sidewalk      | Study area limits to Monticello Boulevard                             | South Euclid                          |
| 37 | Brinkmore Road                         | New Sidewalk      | Approximately 800 feet west of Edgerly Road to Edgerly Road           | Cleveland Heights                     |
| 38 | Edgerly Road                           | New Sidewalk      | Brinkmore Road to Fenley Road                                         | Cleveland Heights                     |
| 39 | Ammon Road                             | New Sidewalk      | Parkside Boulevard to Trebisky Road                                   | South Euclid                          |
| 40 | Randolph Road                          | New Sidewalk      | Woodview Road to Lecona Drive                                         | Cleveland Heights                     |
| 41 | McFarland Road                         | New Sidewalk      | Haywood Drive to approximately 325 feet east of Stuart Drive          | South Euclid                          |
| 42 | Haywood Drive                          | New Sidewalk      | McFarland Road to Stuart Drive                                        | South Euclid                          |
| 43 | Stuart Drive                           | New Sidewalk      | McFarland Road to Anderson Road                                       | South Euclid                          |
| 44 | Monticello Boulevard                   | New Sidewalk      | Approximately 125 feet east of Quarry Drive to Belvoir Boulevard      | Cleveland Heights                     |
| 45 | Belvoir Boulevard                      | New Sidewalk      | Monticello Boulevard to Bluestone Road                                | Cleveland Heights                     |
| 46 | Renfield Road                          | New Sidewalk      | Approximately 225 feet north of Bluestone Road to Bluestone Road      | Cleveland Heights                     |
| 47 | Woodridge Road                         | New Sidewalk      | Approximately 275 feet east of Edison Road for approximately 125 feet | Cleveland Heights                     |
| 48 | Brookline Road (path connection)       | New Sidewalk      | Ardmore Road for approximately 225 feet south                         | Cleveland Heights                     |
| 49 | Yellowstone Road                       | New Sidewalk      | Approximately 500 feet north of Glen Allen Drive to Mayfield Road     | Cleveland Heights                     |
| 50 | Glen Allen Drive                       | New Sidewalk      | Full road length (approximately 1150 feet)                            | Cleveland Heights                     |
| 51 | Birchtree Path                         | New Sidewalk      | Full road length (approximately 225 feet)                             | Cleveland Heights                     |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID | Corridor or Intersection                 | Project Type              | Project Limits                                                                                 | Jurisdiction(s)    |
|----|------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------|--------------------|
| 52 | Warrensville Center Road                 | New Sidewalk              | Oakwood Drive to Bayard Road                                                                   | Cleveland Heights  |
| 53 | Superior Road                            | New Sidewalk              | Approximately 75 feet west of Hillcrest Road to approximately 150 feet east of Ridgefield Road | Cleveland Heights  |
| 54 | Severance Circle (additional connection) | Shared Use Path           | Severance Circle to Crest Road                                                                 | Cleveland Heights  |
| 55 | Renwood Road                             | New Sidewalk              | Donwell Drive to Green Road                                                                    | South Euclid       |
| 56 | Superior Road                            | New Sidewalk              | Parkway Drive to Lee Road                                                                      | Cleveland Heights  |
| 57 | Kenilworth Lane                          | New Sidewalk              | Approximately 50 feet north of Kenilworth Mews for approximately 225 feet south                | Cleveland Heights  |
| 58 | Derbyshire Road                          | New Sidewalk              | Coventry Road to Renrock Road and Stillman Road to Lamberton Road                              | Cleveland Heights  |
| 59 | Denton Road                              | New Sidewalk              | Chestnut Hills Drive to Devonshire Drive                                                       | Cleveland Heights  |
| 60 | Chestnut Hills Drive                     | New Sidewalk              | Denton Drive to North Park Boulevard                                                           | Cleveland Heights  |
| 61 | St. James Parkway                        | New Sidewalk              | Grandview Avenue to approximately 200 feet east of Ardleigh Drive                              | Cleveland Heights  |
| 62 | North Park Boulevard                     | New Sidewalk              | St. James Parkway to Arlington Road                                                            | Cleveland Heights  |
| 63 | Monmouth Road                            | New Sidewalk              | Approximately 200 feet east of Arlington Road to Stratford Road                                | Cleveland Heights  |
| 64 | North Park Boulevard                     | New Sidewalk              | North Park Boulevard to study area limits                                                      | Cleveland Heights  |
| 65 | Coventry Road                            | Crossing Improvement Zone | Mayfield Road to Euclid Heights Boulevard                                                      | Cleveland Heights  |
| 66 | Severance Circle                         | Shared Use Path           | Full road length, including segments connecting to Mayfield Road and Taylor Road               | Cleveland Heights  |
| 67 | North Park Boulevard                     | Separated Bicycle Lane    | Martin Luther King Jr. Drive to Lee Road                                                       | Cleveland Heights  |
| 68 | Raymont Boulevard                        | Multi-use Path            | Raymont Boulevard (dead end) to Cedar Road/Taylor Road intersection                            | University Heights |
| 69 | Wrenford Road                            | Multi-use Path            | Purvis Park to Belvoir Boulevard/Silsby Road intersection                                      | University Heights |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID  | Corridor or Intersection                    | Project Type                           | Project Limits | Jurisdiction(s)                 |
|-----|---------------------------------------------|----------------------------------------|----------------|---------------------------------|
| 101 | Belvoir Boulevard/Princeton Boulevard       | Signalized Intersection Improvements   | N/A            | South Euclid                    |
| 102 | Green Road/Monticello Boulevard             | Signalized Intersection Improvements   | N/A            | South Euclid                    |
| 103 | Monticello Boulevard/Belvoir Boulevard      | Signalized Intersection Improvements   | N/A            | Cleveland Heights, South Euclid |
| 104 | Green Road/Bluestone Road                   | Unsignalized Intersection Improvements | N/A            | South Euclid                    |
| 105 | Noble Road/Quilliams Road                   | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 106 | Noble Road/Monticello Boulevard             | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 107 | Monticello Boulevard/Englewood Road         | Unsignalized Intersection Improvements | N/A            | Cleveland Heights               |
| 108 | Monticello Road/Yellowstone Road            | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 109 | Taylor Road/Monticello Boulevard            | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 110 | Mayfield Road/Taylor Road                   | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 111 | Mayfield Road/Severance Circle/Copper Trace | Signalized Intersection Improvements   | N/A            | Cleveland Heights               |
| 112 | Mayfield Road/Yellowstone Road              | Unsignalized Intersection Improvements | N/A            | Cleveland Heights               |
| 113 | Warrensville Center Road/Mayfield Road      | Signalized Intersection Improvements   | N/A            | Cleveland Heights, South Euclid |
| 114 | Mayfield Road/Felton Road/Grantleigh Road   | Offset Intersection Treatment          | N/A            | South Euclid                    |
| 115 | Mayfield Road/Belvoir Boulevard             | Signalized Intersection Improvements   | N/A            | South Euclid                    |
| 116 | Green Road/Messenger Court                  | Unsignalized Intersection Improvements | N/A            | South Euclid                    |
| 117 | Mayfield Road/Green Road                    | Signalized Intersection Improvements   | N/A            | South Euclid                    |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID  | Corridor or Intersection                                      | Project Type                           | Project Limits | Jurisdiction(s)   |
|-----|---------------------------------------------------------------|----------------------------------------|----------------|-------------------|
| 118 | Green Road/Rushton Road                                       | Unsignalized Intersection Improvements | N/A            | South Euclid      |
| 119 | Lee Boulevard/Monticello Boulevard                            | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 120 | Mayfield Road/Lee Road                                        | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 121 | Mayfield Road/Monticello Boulevard/Cumberland Road            | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 122 | Taylor Road/Euclid Heights Boulevard/Severance Circle         | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 123 | Mayfield Road/Coventry Road                                   | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 124 | Green Road/Bayard Road                                        | Signalized Intersection Improvements   | N/A            | South Euclid      |
| 125 | Green Road/South Euclid Lyndhurst Library/Notre Dame Driveway | Signalized Intersection Improvements   | N/A            | South Euclid      |
| 126 | Edgehill Road/Kenilworth Road                                 | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 127 | Edgehill Road/Euclid Heights Boulevard                        | Unsignalized Intersection Improvements | N/A            | Cleveland Heights |
| 128 | Warrensville Center Road/Antisdale Road/Verona Road           | Signalized Intersection Improvements   | N/A            | South Euclid      |
| 129 | Green Road/College Road                                       | Unsignalized Intersection Improvements | N/A            | South Euclid      |
| 130 | Taylor Road/Superior Road                                     | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 131 | Taylor Road/Washington Boulevard                              | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 132 | Cedar Road/Euclid Heights Boulevard/Overlook Road             | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 133 | Cedar Road/Demington Drive                                    | Signalized Intersection Improvements   | N/A            | Cleveland Heights |
| 134 | Cedar Road/Cottage Grove Avenue                               | Signalized Intersection Improvements   | N/A            | Cleveland Heights |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| ID  | Corridor or Intersection                               | Project Type                           | Project Limits | Jurisdiction(s)                       |
|-----|--------------------------------------------------------|----------------------------------------|----------------|---------------------------------------|
| 135 | Cedar Road/Lee Road                                    | Signalized Intersection Improvements   | N/A            | Cleveland Heights                     |
| 136 | Cedar Road/Taylor Road                                 | Signalized Intersection Improvements   | N/A            | Cleveland Heights, University Heights |
| 137 | Cedar Road/Washington Boulevard                        | Signalized Intersection Improvements   | N/A            | University Heights, South Euclid      |
| 138 | Warrensville Center Road/Cedar Road                    | Signalized Intersection Improvements   | N/A            | University Heights, South Euclid      |
| 139 | Cedar Road/Belvoir Boulevard                           | Signalized Intersection Improvements   | N/A            | University Heights, South Euclid      |
| 140 | Cedar Road/Green Road                                  | Signalized Intersection Improvements   | N/A            | University Heights, South Euclid      |
| 141 | Taylor Road/Silsby Road                                | Signalized Intersection Improvements   | N/A            | Cleveland Heights, University Heights |
| 142 | Warrensville Center Road/Washington Boulevard          | Signalized Intersection Improvements   | N/A            | University Heights                    |
| 143 | Silsby Road/Miramar Boulevard                          | Unsignalized Intersection Improvements | N/A            | University Heights                    |
| 144 | Fairmount Boulevard/Demington Drive                    | RRFB                                   | N/A            | Cleveland Heights                     |
| 145 | Fairmount Boulevard/Coventry Road/Scarborough Road     | Signalized Intersection Improvements   | N/A            | Cleveland Heights                     |
| 146 | Lee Road/Scarborough Road                              | Offset Intersection Treatment          | N/A            | Cleveland Heights                     |
| 147 | Taylor Road/Scarborough Road                           | Signalized Intersection Improvements   | N/A            | Cleveland Heights                     |
| 148 | Fairmount Boulevard/Stratford Road/North Woodland Road | RRFB                                   | N/A            | Cleveland Heights                     |
| 149 | Fairmount Boulevard/Shelburne Road                     | RRFB                                   | N/A            | Cleveland Heights                     |
| 150 | Coventry Road/Clarkson Road                            | Unsignalized Crossing Improvements     | N/A            | Cleveland Heights                     |



## ACTIVE TRANSPORTATION NETWORK RATIONALE

The ATP's vision and goals are focused on increasing connectivity in the region, improving safety, creating mobility options for users of all ages and abilities, motivating healthy lifestyles, providing education on mobility options, and supporting and providing walking and biking infrastructure in the areas of greatest need. The active transportation network was designed with the intention of providing safe, accessible, easy options for walking and biking that connect to regional destinations.

Through the public engagement process, community members shared their thoughts on important destinations to which they would like to connect, as well as corridors and areas with a lack of walking and biking facilities, areas that feel unsafe due to existing conditions (lack of crosswalks, traffic, speed, etc.), and the areas in which they like to walk and bike the most. Public comments, along with data from the existing conditions analysis related to safety, use, and equity, were the foundational pieces of information used to draft the recommended network.

The draft active transportation network was reviewed by the Steering Committee and the community to ensure it meets the needs of the community and the vision of the Heights Regional ATP.

### Pedestrian Facilities

Pedestrian infrastructure is provided in the form of new sidewalks, crossing improvements, and shared use paths. Since the area encompassed by the Heights Regional ATP plan has relatively few sidewalk gaps, all identified sidewalk gaps were included in the project recommendations. Shared use paths were typically identified along major roads or as park connections, and crossing improvements were most often identified along major roads and based on stakeholder input.

Filling sidewalk gaps is important for both pedestrian safety and comfort. The presence of sidewalks along a roadway corresponds to a 65 to 89 percent reduction in walking along road pedestrian crashes.<sup>14</sup> Pedestrians are also among the most vulnerable road users and 72 percent of pedestrian fatalities nationally occur at non-intersection locations.<sup>15</sup> Furthermore, around 39 percent of survey respondents for this project indicated that new sidewalks and trails in the community would encourage them to walk or roll more. Additional treatments implemented along roadways and crossing improvements would encourage more bicycling and walking, improve the experience, and decrease the number of crashes that occur. Crossing improvements proposed in this plan include high-visibility crosswalks, curb extensions, pedestrian refuge islands, and rectangular rapid-flashing beacons (RRFBs).

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<sup>14</sup> FHWA (2017). Desktop Reference for Crash Reduction Factors, FHWA-SA-08-011, Table 11. Referenced in <https://safety.fhwa.dot.gov/provencountermeasures/walkways/>

<sup>15</sup> FHWA (2018). Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations, Page 1. [https://safety.fhwa.dot.gov/ped\\_bike/step/docs/STEP\\_Guide\\_for\\_Improving\\_Ped\\_Safety\\_at\\_Unsig\\_Loc\\_3-2018\\_07\\_17-508compliant.pdf](https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf)

## Bicycle Facilities

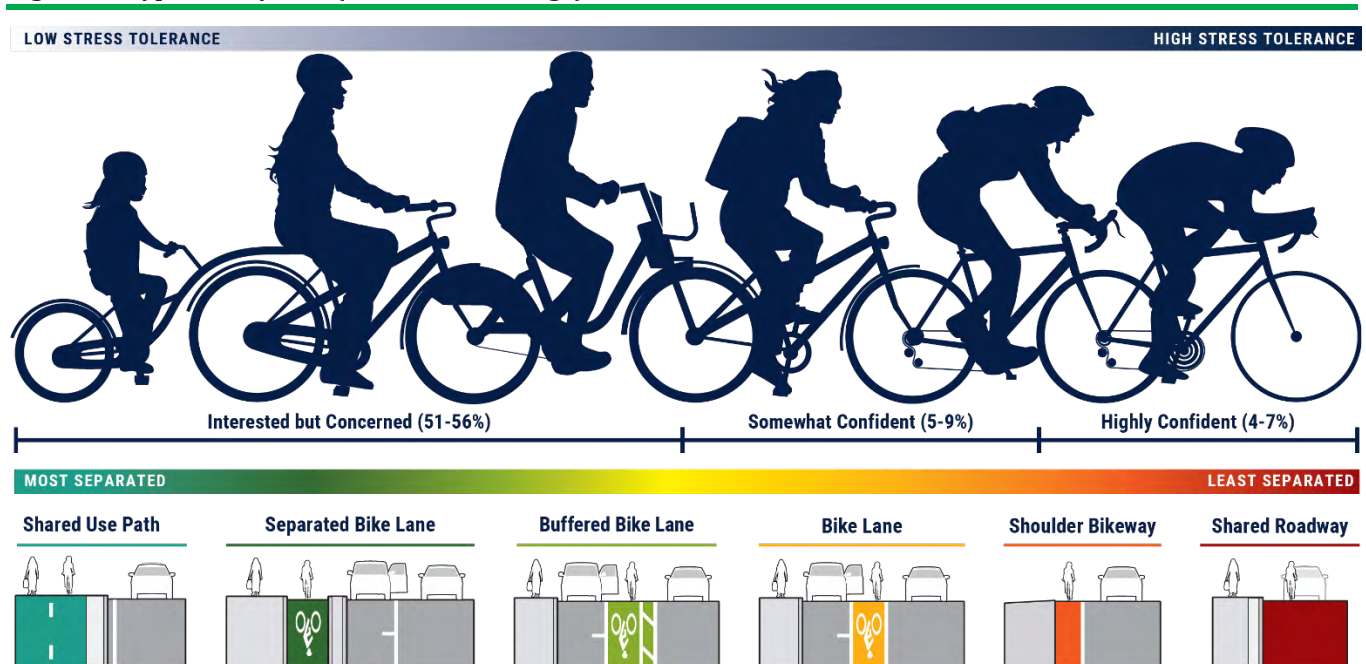
Bicycle infrastructure is provided in the form of bicycle boulevards, bicycle lanes, buffered bicycle lanes, separated bicycle lanes, and shared use paths (each of which is described in more detail in the **Facility Toolkit** section). Bicycle boulevards are recommended on lower-volume, local roads, while separated bicycle lanes and shared use paths are typically recommended on higher-volume, higher-speed roads. Bicycle lanes and buffered bicycle lanes are provided in limited situations based on previous studies for selected corridors or lower-volume corridors with space available for lane reductions.

Local infrastructure and routes will help riders of varying abilities access their daily destinations such as schools, grocery stores, parks, and places of employment. There are several important factors to consider during bicycle facility selection, such as design users and roadway conditions. This section describes the different types of bicyclists: highly confident, somewhat confident, and interested but concerned, who make up the majority of the population. It also provides an introduction to the FHWA bicycle facility selection matrix that identifies what type of facility is appropriate for majority of bicyclists based on speed, volume, and context.

## Design Users

Understanding which types of bicyclists feel comfortable using a given facility is key to building a safe, convenient, and well-used network. Bicyclists are most commonly classified according to their comfort level, bicycling skill and experience, age, and trip purpose. These characteristics can be used to develop generalized profiles of various bicycle users and trips, also known as “design users,” which inform bicycle facility design. A standard set of bicycle design users is described below and illustrated in **Figure 24**.

**Figure 24: Types of Bicyclists (Source: Toole Design)**



Comfort, skill, and age may affect bicyclist behavior and preference for different types of bicycle facilities. People who bicycle are influenced by their relative comfort operating with or near motor vehicle traffic. To accommodate the majority of the population, the proposed bicycle network in Heights Regional ATP was primarily designed for the “Interested but Concerned” rider.

### Design User Profiles

#### Highly Confident Bicyclist (~4-7%)

- » Smallest group.
- » Prefer direct routes and will operate in mixed traffic, even on roadways with higher motor vehicle operating speeds and volumes.
- » Many also enjoy separated bikeways.
- » May avoid bikeways perceived to be less safe, too crowded with slower moving users, or requiring deviation from their preferred route.

#### Somewhat Confident Bicyclist (~5-9%)

- » Comfortable on most types of facilities.
- » Lower tolerance for traffic stress, prefer striped or separated bike lanes on major streets and low-volume residential streets.
- » Willing to tolerate higher levels of traffic stress for short distances.

#### Interested but Concerned Bicyclist (~51-56%)

- » Largest group.
- » Lowest tolerance for traffic stress.
- » Avoid bicycling except with access to networks of separated bikeways or very low-volume streets with safe roadway crossings.
- » Tend to bicycle for recreation but not transportation.
- » Generally, the recommended design user profile to maximize potential for bicycling.

### Facility Selection Methodology

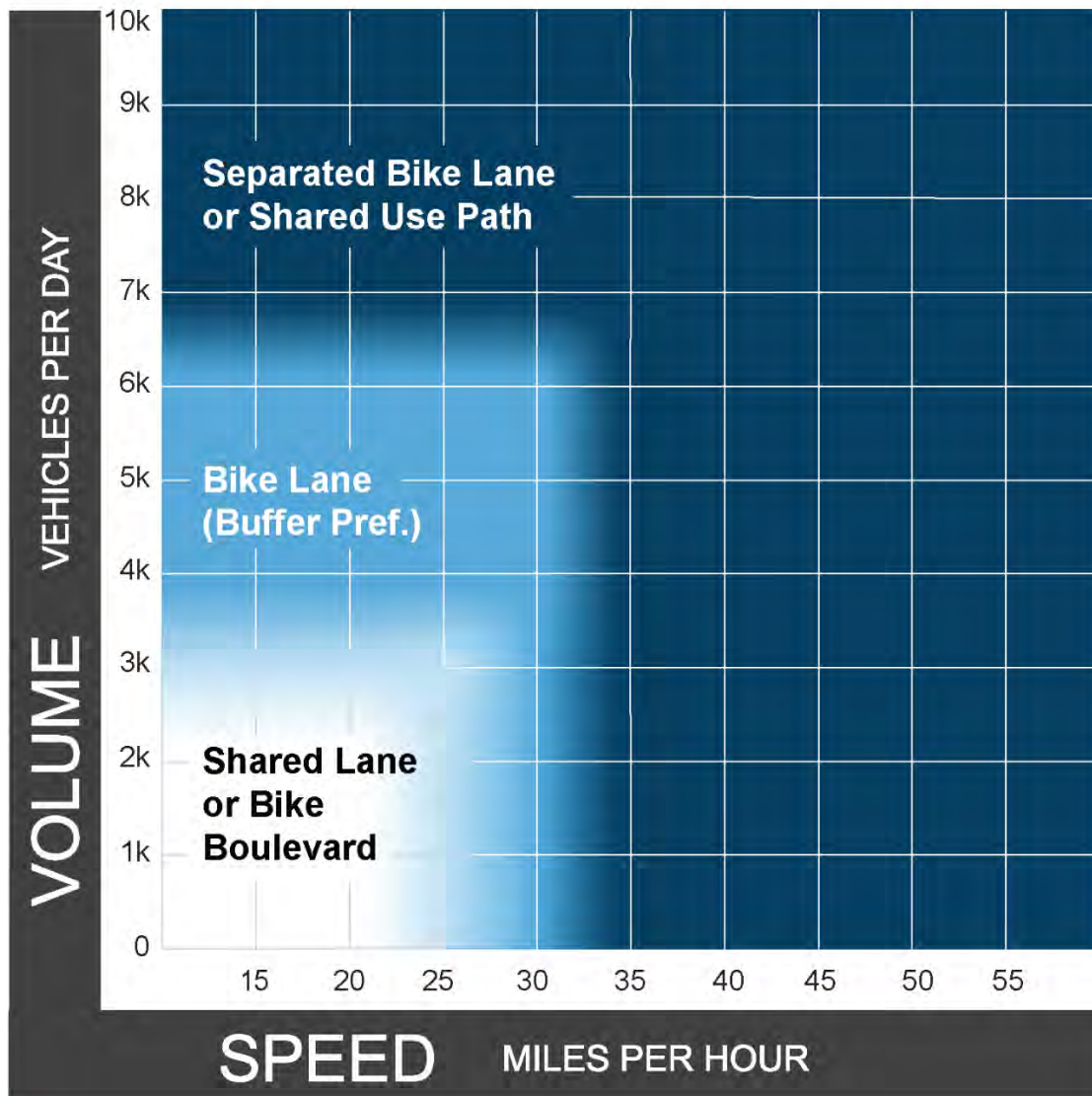
Bicycle networks should be continuous, connect seamlessly across jurisdictional boundaries, and provide access to destinations. Anywhere a person would want to drive to for utilitarian purposes, such as commuting or running errands, is a potential destination for bicycling. As such, planning connected low-stress bicycle networks is not achieved by simply avoiding motor vehicle traffic. Rather, planners should identify solutions for lowering stress along higher traffic corridors so that bicycling can be a viable transportation option for the majority of the population.

Before projects can be implemented, the type of on-street bicycle facility will need to be defined. The [Federal Highway Administration \(FHWA\)’s Bikeway Selection Guide](#)’s facility selection matrix in **Figure 25** was used



to help determine the best facility for roadways in the Heights ATP area based on road speed and volume as well as the “Interested but Concerned” design user type. The FHWA guide has further detail on recommended facility selection.

**Figure 25: FHWA Bikeway Facility Matrix: Preferred Bikeway Type for Urban, Urban Core, Suburban and Rural Town Contexts (Design User: Interested but Concerned)**



## Notes

- 1 Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- 2 Advisory bike lanes may be an option where traffic volume is <3K ADT.
- 3 See page 32 for a discussion of alternatives if the preferred bikeway type is not feasible.

### Facility Toolkit

Bicycle infrastructure recommendations include five bicycle facility types to accommodate people of varying ability and in different riding environments. Research shows that the provision of low-stress, connected bicycle networks improves bicyclist safety and encourages bicycling for a broader range of user types.<sup>16</sup> Pedestrian infrastructure is primarily provided in the form of sidewalks, shared use paths, and improved crossings.

**Table 5. Facility Toolkit\***

|                    | Sidewalk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Shared Use Path                                                                                                                                                                                                                                                                                                                                                                                                                       | Crossing                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                        |
| <i>Description</i> | Sidewalks are intended for exclusive use by pedestrians. They are adjacent to but separated from the roadway by a curb and/or buffer, such as a tree lawn. As roadway speeds and volumes increase, more separation is needed to maintain a safe and comfortable walking environment for pedestrians. Common in urban areas, they may also be necessary in rural areas with pedestrian generators, such as schools and businesses. They may notably increase levels of walking in areas with high traffic speeds/volumes. | Typically designed as two-way facilities physically separated from motor vehicle traffic and used by bicyclists, pedestrians, and other non-motorized users, shared use paths provide a low-stress and comfortable travel environment for users of all confidence levels. They are used for recreational opportunities in addition to transportation and can be located along roadways or completely separated from the road network, | A variety of solutions can be employed to make intersections and mid-block crossings safer and more convenient for pedestrians. These treatments range from painted facilities, such as high-visibility crosswalks, to lights and signals, such as rectangular rapid flashing beacons (RRFB). Painted crosswalks delineate the safest pathway for pedestrians, and RRFBs enhance user safety and convenience at crossing points when full signalization is not warranted. |

<sup>16</sup> AASHTO (2021). Guide to Bicycle Facilities, 4<sup>th</sup> Edition, 2.2. Why Planning for Bicycling is Important.

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

|                                     | Sidewalk                                           | Shared Use Path                                                                                                                                                                                                                                                                                                                                                                                         | Crossing                                                                                                                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                    | sometimes along rivers or old railroad corridors.                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                         |
| <b>Intended Users</b>               | Pedestrians                                        | Bicyclists and Pedestrians                                                                                                                                                                                                                                                                                                                                                                              | Bicyclists and Pedestrians                                                                                                                                                                                                                                              |
| <b>Context</b>                      | Urban                                              | Urban and Rural                                                                                                                                                                                                                                                                                                                                                                                         | Urban and Rural                                                                                                                                                                                                                                                         |
| <b>Posted Speed Limit</b>           | 30 mph or lower (preferred)<br>50 mph (acceptable) | Urban: Any speed (typically 30 mph+)<br>Rural: Any speed (typically 55 mph+)                                                                                                                                                                                                                                                                                                                            | Any Speed (appropriate treatment will vary)                                                                                                                                                                                                                             |
| <b>Motor Vehicle Traffic Volume</b> | 12,000 ADT or lower (preferred)                    | Urban: Any volume (typically 15,000 ADT+)<br>Rural: Any volume (typically 6,500 ADT+).                                                                                                                                                                                                                                                                                                                  | Any Volume (appropriate treatment will vary)                                                                                                                                                                                                                            |
| <b>Other Considerations</b>         | N/A                                                | Shared use paths should be at least 10 feet wide (wider where higher bicycle and pedestrian traffic is expected, e.g., urban areas). Special consideration must be given to the design of roadway crossings to increase visibility, clearly indicate right-of-way, and reduce crashes. Alternative accommodations should be sought when there are many intersections and commercial driveway crossings. | <u>Treatments</u> may include: <ul style="list-style-type: none"> <li>» High visibility markings</li> <li>» Advance yield lines and signage</li> <li>» Curb extensions</li> <li>» Raised crosswalk</li> <li>» RRFB</li> <li>» Textured intersection pavement</li> </ul> |

\*For more information on facility selection and design see the [FHWA Bikeway Selection Guide](#), AASHTO Guide for Development of Bicycle Facilities, and future ODOT Multimodal Design Guide.



Table 5. Facility Toolkit\* (continued)

|                                     | Bicycle Boulevard                                                                                                                                                                                                                                                                                                                                                                                                              | Bike Lane and Buffered Bike Lane                                                                                                                                                                                                                                                                                              | Separated Bike Lane                                                                                                                                                                                                                                                                                    |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                     |
| <b>Description</b>                  | Where traffic volumes and speeds are low, many bicyclists can comfortably share lanes with motor vehicles. Shared lane markings and signs are added to inform people driving that bicyclists may operate in the lane and where to expect bicyclists. Wayfinding signage and traffic calming can help increase user comfort and prioritize bicycle travel.                                                                      | One-way facilities within the roadway demarcated with painted lane lines. Standard bike lanes provide some improvements to bicyclist safety, and can be enhanced with painted buffers, bike lane extensions through intersections, green colored pavement and regulatory signs.                                               | One- or two-way facilities within the roadway and physically separated from adjacent travel lanes with vertical elements such as a curb, flex posts or on-street parking. Such facilities reduce the risk of injury and can increase bicycle ridership due to perceived and actual safety and comfort. |
| <b>Intended Users</b>               | Bicyclists and Motorists                                                                                                                                                                                                                                                                                                                                                                                                       | Bicyclists                                                                                                                                                                                                                                                                                                                    | Bicyclists                                                                                                                                                                                                                                                                                             |
| <b>Context</b>                      | Urban and Urban Periphery                                                                                                                                                                                                                                                                                                                                                                                                      | Urban                                                                                                                                                                                                                                                                                                                         | Urban                                                                                                                                                                                                                                                                                                  |
| <b>Posted Speed Limit</b>           | 25 mph or lower (preferred)<br>35 mph or lower (acceptable)                                                                                                                                                                                                                                                                                                                                                                    | 30 mph or lower                                                                                                                                                                                                                                                                                                               | Any speed (typically 30 mph or higher)                                                                                                                                                                                                                                                                 |
| <b>Motor Vehicle Traffic Volume</b> | ≤3,000 ADT (preferred)<br>≤5,000 ADT (acceptable)                                                                                                                                                                                                                                                                                                                                                                              | ≤6,000 ADT (preferred)<br>≤20,000 ADT (acceptable)                                                                                                                                                                                                                                                                            | Any volume (typically 15,000 ADT or greater)                                                                                                                                                                                                                                                           |
| <b>Other Considerations</b>         | May be used in conjunction with wide outside lanes. Explore opportunities to provide parallel facilities for less confident bicyclists. Where motor vehicles are allowed to park along shared lanes, place markings to reduce potential conflicts with opening car doors.<br>On low speed (<25 mph) low traffic (<3,000 ADT) streets, traffic calming and diversion can be used to slow traffic or create a bicycle boulevard. | Intersection designs should promote visibility of bicyclists and raise awareness of potential conflicts. Painted buffers can increase actual and perceived safety and are preferred when feasible. Bike lanes located next to parked cars should have a painted buffer next to the parking lane to prevent “dooring” crashes. | Intersection designs should promote visibility of bicyclists and raise awareness of potential conflicts. Separation may be provided through temporary measures such as planters or removable bollards as an interim and low-cost design.                                                               |

\*For more information on facility selection and design see the [FHWA Bikeway Selection Guide](#), AASHTO Guide for Development of Bicycle Facilities, and future ODOT Multimodal Design Guide

## PROGRAMS AND POLICIES

Active transportation programs and policies are an essential element of an active transportation plan and may be used to support safety, health, and connectivity along with many other benefits. A variety of non-infrastructure tools can increase pedestrians' and bicyclists' safety by establishing a culture of walking and biking and creating a friendly regulatory and political environment for active transportation.

Programs and policies can typically be implemented relatively quickly and inexpensively. Programs can be easily scaled to a wide audience, such as elementary school students, transit riders, or property owners, or they can target specific groups for programming, like police officers. Individual programs can increase walking and bicycling in specific circumstances and locations but should be coordinated with policy development to ensure lasting change. See **Table 6** for a list of proposed programs and policies. These proposed programs and policies aim to accomplish the following goals:

- » **Connectivity** – increase active transportation connections in and among the cities of Cleveland Heights, University Heights, and South Euclid, including both trips and everyday destinations.
- » **Safety** – improve the safety of the transportation system with a focus on walking and biking.
- » **Accessibility** – create mobility options for users of all ages and abilities.
- » **Health** – use active transportation to motivate healthy lifestyles in the community.
- » **Education** – educate the public on mobility options such as walking, biking, rolling, and driving options.
- » **Equity** – support well-maintained walking and biking infrastructure in areas of the greatest need (lowest income, highest transportation burden).

The proposed programs and policies also aim to address barriers discussed in public comments and in community members' recommendations for programs, such as a high percentage of people saying that better sidewalk maintenance and more bicycle facilities would encourage them to walk and bike more.

The timeframes outlined in **Table 6** are defined as follows:

- » **Short-term:** One year
- » **Medium-term:** Two to three years
- » **Long-term:** Three years or more

The status of programs and policies should be assessed and updated each time the overall plan is updated. Status is defined as:

- » **New:** A program or policy that is proposed in this Plan.
- » **Ongoing:** An existing program or policy that will be continued.
- » **On-hold:** A program or policy that has been stalled or deferred.
- » **Completed:** When regularly updating the plan, update the program or policy status to complete when applicable to help track progress.

Table 6. Program and Policy Recommendations

| Theme        | Program/ Policy                                                                        | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Responsible Party                                       | Key Partners                                                                                                            | Timeframe   | Status  |
|--------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------|---------|
| Connectivity | <b>Implement an “Idaho Stop” law where cyclists can yield at stop signs when safe.</b> | <ol style="list-style-type: none"> <li>1. Engage with city officials, transportation authorities, legal advisors, and community stakeholders to develop the policy proposal, addressing potential concerns and considerations.</li> <li>2. Draft or enact legislation or municipal ordinances to formally implement the Idaho Stop law, ensuring compliance with state and federal traffic laws and regulations.</li> <li>3. Develop a comprehensive public awareness campaign to educate cyclists, motorists, and law enforcement about the new law and its implications.</li> <li>4. Prioritize improvements such as clear signage indicating the Idaho Stop Law, dedicated bicycle lanes, bicycle boxes at intersections, and traffic calming measures to enhance cyclist safety.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | Local government, State government, State DOT, Legal Department, Police Department, City Planning and Engineering staff | Medium-Term | New     |
|              | <b>Adopt a Complete Streets Policy</b>                                                 | <ol style="list-style-type: none"> <li>1. Research best practices in Complete Streets policies.</li> <li>2. Adopt local Complete Streets policies.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | University Heights, South Euclid                        | NOACA, City Planning and Engineering staff                                                                              | Short-Term  | New     |
|              | <b>Evaluate Complete Streets Policy Updates and Implementation Best Practices</b>      | <ol style="list-style-type: none"> <li>1. Research any new best practices in Complete Streets policies and implementation.</li> <li>2. Adopt updated Complete Streets policies and implementation best practices.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cleveland Heights                                       | City Planning and Engineering staff                                                                                     | Short-Term  | Ongoing |
|              | <b>Increase Transit Access</b>                                                         | <ol style="list-style-type: none"> <li>1. Identify, prioritize, and fill sidewalk gaps.</li> <li>2. Work with GCRTA to coordinate funding and construction of shelters and benches at bus stops.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cleveland Heights, South Euclid, and University Heights | GCRTA                                                                                                                   | Medium-Term | Ongoing |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

Table 6 (cont.). Program and Policy Recommendations

| Theme                       | Program/ Policy                                                                 | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Responsible Party                                       | Key Partners                                     | Timeframe              | Status          |
|-----------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------|------------------------|-----------------|
| <b>Connectivity (cont.)</b> | <b>Wayfinding Program</b>                                                       | <ol style="list-style-type: none"> <li>1. Identify key neighborhood destinations (i.e., commercial areas, parks, schools).</li> <li>2. Develop wayfinding standard design.</li> <li>3. Implement wayfinding signage on key pedestrian and bicycle routes.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cleveland Heights, South Euclid, and University Heights | NOACA, Heights Bicycle Coalition                 | Short-Term             | New and Ongoing |
| <b>Safety</b>               | <b>Sidewalk and Trail Maintenance Policy</b>                                    | <ol style="list-style-type: none"> <li>1. Research best practices in sidewalk and trail maintenance policies.</li> <li>2. Adopt local sidewalk and trail maintenance policies</li> <li>3. Identify resources for maintenance inspections.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Cleveland Heights, South Euclid, and University Heights | City Planning, Engineering, and Inspection Staff | Short-Term             | New             |
|                             | <b>Street Tree Planting and Maintenance Policy</b>                              | <ol style="list-style-type: none"> <li>1. Research best practices in street tree planting and maintenance policies.</li> <li>2. Adopt local street tree planting and maintenance policies.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Cleveland Heights, South Euclid, and University Heights | City Planning Staff                              | Short-Term             | New             |
|                             | <b>Provide Leading Pedestrian Intervals (LPIs) at traffic signals city-wide</b> | <ol style="list-style-type: none"> <li>1. Develop standard city practices for LPIs. Recommend the usage of pedestrian recall, where the pedestrian phase is always activated with the LPI, on weekends or other times; particularly in areas with high pedestrian volumes and high Jewish populations (since some members of the Jewish community may not press buttons during the Sabbath and other holidays).</li> <li>2. Prioritize intersections based on factors such as crash history, high active transportation demand or need, proximity to schools, parks, or transit stops, and community input.</li> <li>3. Implement LPI at prioritized intersections and as part of ongoing maintenance work.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | City Planning and Engineering staff              | Medium-Term, Long-Term | New             |

**Table 6 (cont.). Program and Policy Recommendations**

| Theme          | Program/ Policy                                                                                              | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Responsible Party                                       | Key Partners                                                                                                            | Timeframe              | Status |
|----------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------|--------|
| Safety (cont.) | <b>Develop a “quick build” program used to implement, track, and analyze temporary infrastructure builds</b> | <ol style="list-style-type: none"> <li>1. Develop protocols for identifying and prioritizing suitable locations for temporary infrastructure builds, such as bicycle lanes, traffic calming, or curb extensions.</li> <li>2. Create a streamlined approval process for securing permits, funding, and community support for temporary infrastructure projects.</li> <li>3. Utilize modular and prefabricated components to facilitate the rapid assembly and disassembly of temporary infrastructure.</li> <li>4. Follow up with the community on early projects to identify potential process improvements.</li> </ol>                                                                                                                                                         | Cleveland Heights, South Euclid, and University Heights | Local Government, State DOT, City Planning and Engineering staff                                                        | Medium-Term, Long-Term | New    |
|                | <b>Ban right turns on red at all stoplights</b>                                                              | <ol style="list-style-type: none"> <li>1. Engage with city officials, transportation authorities, legal advisors, and community stakeholders to develop the policy proposal, addressing potential concerns and considerations.</li> <li>2. Draft or enact legislation or municipal ordinances to formally implement the ban on right turns at red lights, ensuring compliance with state and federal traffic laws and regulations.</li> <li>3. Launch a targeted public education and awareness campaign to inform residents, motorists, cyclists, and pedestrians about the rationale behind the ban, as well as the benefits for safety and active transportation.</li> <li>4. Prioritize improvements such as clear signage indicating the right turn on red ban.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | Local government, State government, State DOT, Legal Department, Police Department, City Planning and Engineering staff | Medium-Term, Long-term | New    |

**Table 6 (cont.). Program and Policy Recommendations**

| Theme                 | Program/ Policy                                                           | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Responsible Party                                       | Key Partners                                          | Timeframe              | Status |
|-----------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------|------------------------|--------|
| <b>Safety (cont.)</b> | <b>Remove all slip lanes</b>                                              | 1. Assess existing slip lanes across the jurisdiction to identify, date, and count the total number of slip lanes.<br>2. Prioritize slip lanes for removal based on factors such as crash history, high active transportation demand or need, proximity to schools, parks, or transit stops, and community input.<br>3. Collaborate with planning staff, engineering staff, and design professionals to develop alternative intersection designs that prioritize pedestrian safety, enhance active transportation access, and minimize vehicular conflicts. | Cleveland Heights, South Euclid, and University Heights | Local Government, City Planning and Engineering staff | Long-Term              | New    |
|                       | <b>Adopt a Vision Zero Policy</b>                                         | 1. Research best practices in Vision Zero Policies.<br>2. Adopt local Vision Zero Policy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | University Heights                                      | NOACA, City Planning and Engineering staff            | Short-Term             | New    |
|                       | <b>Implement speed management on arterial, collector, and local roads</b> | 1. Identify a toolkit of preferred local strategies for managing speeds on arterial, collector, and local roads.<br>2. Prioritize key roads for speed management measures using factors such as identified safety needs.<br>3. Implement speed management measures on prioritized roads.<br>4. Conduct speed studies to reduce speed limits on roads, where appropriate.                                                                                                                                                                                    | Cleveland Heights, University Heights, South Euclid     | City Planning and Engineering staff, ODOT             | Medium-Term, Long-Term | New    |



**Table 6 (cont.). Program and Policy Recommendations**

| Theme                 | Program/ Policy                                                                    | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Responsible Party                                       | Key Partners                                           | Timeframe              | Status |
|-----------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|------------------------|--------|
| <b>Safety (cont.)</b> | <b>Update signal timing at traffic signals city-wide to accommodate bicyclists</b> | <ol style="list-style-type: none"> <li>1. Develop standard city practices for yellow and all-red signal timing to accommodate slower bicyclist speeds.</li> <li>2. Prioritize intersections based on factors such as crash history, high active transportation demand or need, proximity to schools, parks, or transit stops, and community input.</li> <li>3. Implement signal timing changes at prioritized intersections and as part of ongoing maintenance work.</li> </ol>                                                                                | Cleveland Heights, South Euclid, and University Heights | City Planning and Engineering staff                    | Medium-Term, Long-Term | New    |
| <b>Accessibility</b>  | <b>Bicycle Parking and Storage Requirements in Commercial Districts</b>            | <ol style="list-style-type: none"> <li>1. Establish minimum requirements and standards for bicycle parking and storage facilities, including the quantity, design, placement, and security features of facilities.</li> <li>2. Collaborate with local businesses, property owners, and community organizations to identify opportunities for shared bicycle parking agreements.</li> <li>3. Draft or enact legislation or municipal ordinances to formally implement minimum requirements and standards for bicycle parking and storage facilities.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | Local Government, Local Businesses, Business Districts | Short-Term             | New    |

Table 6 (cont.). Program and Policy Recommendations

| Theme                        | Program/ Policy                                                                         | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Responsible Party                                       | Key Partners                                                             | Timeframe   | Status          |
|------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------|-------------|-----------------|
| <b>Accessibility (cont.)</b> | <b>Ensure that active transportation network is ADA compliant and accessible to all</b> | <ol style="list-style-type: none"> <li>1. Develop ADA Transition Plan for each city to identify needed network improvements for ADA compliance.</li> <li>2. Identify funding sources to implement ADA Transition Plan.</li> <li>3. Conduct ADA training sessions for city staff, engineers, planners, and project managers involved in active transportation planning and design.</li> <li>4. Establish a systematic review process to evaluate the ADA compliance of proposed active transportation projects during the planning, design, and construction phases.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | Local Government, City Planning and Engineering staff                    | Long-Term   | Ongoing         |
| <b>Health</b>                | <b>Community Walking and Biking Events</b>                                              | <ol style="list-style-type: none"> <li>1. Establish a team or working group responsible for planning and organizing community walking and biking events.</li> <li>2. Establish event signage and awareness for safe automobile usage.</li> <li>3. Broadcast event information to all residents.</li> </ol>                                                                                                                                                                                                                                                                     | Cleveland Heights, South Euclid, and University Heights | City Parks and Recreation Department, Local Government, Local Businesses | Medium-Term | New and Ongoing |
|                              | <b>Trainings &amp; Curricula</b>                                                        | <ol style="list-style-type: none"> <li>1. Train educators on safe walking and bicycling practices and road rules.</li> <li>2. Develop curriculum for all age ranges that promote safe usage of active transportation networks and the health benefits of active transportation.</li> <li>3. Incorporate training for students and youth as a part of classroom curriculum, physical education courses, or through the Safe Routes to Schools (SRTS) program.</li> </ol>                                                                                                        | Cleveland Heights, South Euclid, and University Heights | Public Schools, Local Health organizations, Heights Bicycle Coalition    | Medium-Term | New             |

**Table 6 (cont.). Program and Policy Recommendations**

| Theme     | Program/ Policy                                                                                   | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Responsible Party                                                           | Key Partners                                                                                                                               | Timeframe   | Status  |
|-----------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
| Education | <b>Bicycle and Pedestrian Safety Training, Policies, and Conversations with Police Department</b> | <ol style="list-style-type: none"> <li>1. Develop bicycle and pedestrian safety training program for police officers, focusing on relevant laws, regulations, best practices, crash reporting, and techniques for enforcing traffic rules and protecting pedestrians/cyclists. This includes tactics related to people blocking sidewalks and bicycle lanes.</li> <li>2. Incorporate interactive training methods, such as real-world case studies, to enhance education efforts.</li> <li>3. Organize community-led safety workshops, town hall meetings, and neighborhood forums to raise awareness about bicycle and pedestrian safety issues, promote responsible road behavior, and empower residents to advocate for safer streets.</li> </ol>                  | Cleveland Heights, South Euclid, and University Heights, Police Departments | Heights Bicycle Coalition, Residents                                                                                                       | Medium-Term | New     |
|           | <b>Spread Transit Awareness</b>                                                                   | <ol style="list-style-type: none"> <li>1. Collaborate with GCRTA to help community members learn about different public transit options.</li> <li>2. Develop multimedia campaigns utilizing various channels such as television, social media, and print materials to raise awareness about public transit services.</li> <li>3. Establish partnerships with employers, schools, universities, and large institutions to promote transit usage among employees, students, and visitors.</li> <li>4. Support the Cedar/Quincy and Warrensville Center/ Noble long-term priority corridors.</li> <li>5. Design bicycle facilities, particularly along transit priority corridors, in consultation with GCRTA to ensure bus stops are appropriately designed.</li> </ol> | GCRTA                                                                       | Cleveland Heights, South Euclid, and University Heights, Police Departments, Local Schools, Heights Bicycle Coalition, Nearby Universities | Long-Term   | Ongoing |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

Table 6 (cont.). Program and Policy Recommendations

| Theme                    | Program/ Policy                                             | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Responsible Party                                       | Key Partners                                                                                                                 | Timeframe   | Status          |
|--------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------|
| <b>Education (cont.)</b> | <b>Bicycle and Pedestrian Counts</b>                        | <ol style="list-style-type: none"> <li>1. Count pedestrian and cyclist usage before and after improvements are made to the active transportation network.</li> <li>2. Coordinate NOACA count locations based on upcoming pedestrian and bicycle projects.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cleveland Heights, South Euclid, and University Heights | NOACA, Heights Bicycle Coalition                                                                                             | Short-Term  | New and Ongoing |
| <b>Equity</b>            | <b>Expand access to free and low-cost bicycles and gear</b> | <ol style="list-style-type: none"> <li>1. Implement or expand bike bicycle share programs that offer low-cost or free access to bicycles for short-term use, providing residents with convenient and affordable transportation options.</li> <li>2. Collaborate with local government agencies, non-profit organizations, and private sector partners to secure funding, establish operational agreements, and deploy resources in strategic areas throughout the jurisdiction.</li> <li>3. Establish community bicycle libraries or lending programs that provide free or low-cost bicycles for long-term use for residents who may not have access to their own bicycles.</li> <li>4. Other financial incentives, discounts, or vouchers for the purchase of essential bicycle gear and accessories, such as helmets, lights, locks, racks, and reflective clothing.</li> <li>5. Establish donation programs that supply in-need residents with free gear and bicycles.</li> </ol> | Cleveland Heights, South Euclid, and University Heights | Local Government, NOACA, Heights Bicycle Coalition, Bicycle Suppliers, Libraries, Schools, Repair Shops, Youth Organizations | Medium-Term | New             |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

Table 6 (cont.). Program and Policy Recommendations

| Theme                 | Program/ Policy                                 | Action Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Responsible Party                                                                                   | Key Partners                                                                                              | Timeframe   | Status |
|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|--------|
| <b>Equity (cont.)</b> | <b>Project Prioritization</b>                   | <ol style="list-style-type: none"> <li>1. Implement framework to determine the order of infrastructure-based improvement by assessing the existing conditions and prioritizing high-need areas.</li> <li>2. Develop strategies for improvement that take into consideration historically underrepresented populations, including but not limited to Black, Indigenous, and People of Color (BIPOC) communities, the elderly, and individuals with mobility impairments.</li> <li>3. Prioritize project implementation from the Active Transportation Plan and other projects resulting from non-infrastructure programs and policies using the identified framework.</li> </ol> | Cleveland Heights, South Euclid, and University Heights                                             | Local Government, NOACA                                                                                   | Short-term  | New    |
|                       | <b>Expand access to bicycle repair programs</b> | <ol style="list-style-type: none"> <li>1. Implement local bicycle repair education programs that assist residents with maintaining their bicycles and educate them on conducting their own repairs.</li> <li>2. Collaborate with local government agencies, non-profit organizations, and private sector partners to secure funding for these programs and maintain organization sustainability.</li> </ol>                                                                                                                                                                                                                                                                     | Cleveland Heights, South Euclid, and University Heights                                             | Local Government, NOACA, Heights Bicycle Coalition, Libraries, Schools, Repair Shops, Youth Organizations | Medium-term | New    |
|                       | <b>Remove bicycle license requirement</b>       | <ol style="list-style-type: none"> <li>1. Identify relevant ordinances that require licenses on bicycles for city residents.</li> <li>2. Draft and enact legislation or municipal ordinances to formally remove bicycle license requirements.</li> <li>3. Remove bicycle helmet pledge as part of any optional bicycle registration process.</li> </ol>                                                                                                                                                                                                                                                                                                                         | Cleveland Heights and South Euclid<br><br>(University Heights removed this requirement in May 2024) | Local Government                                                                                          | Short-term  | New    |

# PRIORITY PROJECTS







## PRIORITY PROJECTS

The infrastructure recommendations in the previous chapter are conceptual routes, meant to show the potential of a comprehensive active transportation system in Cleveland Heights, University Heights, and South Euclid. The recommendations are planning level in scope and are not necessarily constrained by existing challenges. Funding, land use, property rights, terrain, and other project-specific factors may make certain recommendations less practicable than others. Project prioritization uses measurable data to determine which projects align with stakeholders' priorities, and are feasible, given real-world constraints.

## PRIORITIZATION METHODOLOGY

The proposed projects were prioritized using a quantitative approach based on the existing conditions analysis, project characteristics, and public input, ensuring a systematic and objective evaluation. Each project was assessed based on five of the six goals of the plan: connectivity, safety, accessibility, health, and equity. The goal of education was not included in infrastructure project scoring since it is addressed through programs and policies. Each of the five scoring categories was broken down into one or more variables that contributed to the overall category score, and the variables were weighted based on a combination of city priorities, statewide funding priorities, and stakeholder input. Safety and equity have the highest weights in the overall score, followed by accessibility, connectivity, and health. The weights for each category and variable are shown in **Table 7**.

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

Table 7. Weighted Categories for Quantitative Prioritization

| Category      | Weight     | Variable                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------|------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connectivity  | 5          | Connecting the Region                        | Projects receive a score of 10 points if they connect two or more of the Heights ATP cities, or connects to a city outside of the plan area                                                                                                                                                                                                                                                                                                                                                                                              |
|               | 5          | Connecting Destinations                      | Projects receive a score of up to 10 points if they are located within a quarter-mile of a key generator or community resource (School, Park, Library, or Business District): <ul style="list-style-type: none"> <li>• 5 or more generators = 10 points</li> <li>• 3-4 generator = 6 points</li> <li>• 1-2 generators = 3 points</li> <li>• No generators = 0 points</li> </ul>                                                                                                                                                          |
|               | 5          | Meeting AT Demand                            | Projects receive more points for a higher Active Transportation demand score from ODOT's Walk.Bike.Ohio analysis. <ul style="list-style-type: none"> <li>• High demand = 10 points</li> <li>• Med-high demand = 6 points</li> <li>• Low-med demand = 3 points</li> <li>• Low demand = 0 points</li> </ul>                                                                                                                                                                                                                                |
| Safety        | 20         | Five-Year Crash History                      | Projects will receive a score based on the number of bicycle and pedestrian crashes located within 300 feet of corridor projects or point/intersection improvement projects. <ul style="list-style-type: none"> <li>• 5+ crashes = 6 points</li> <li>• 3-4 crashes = 4 points</li> <li>• 1-2 crashes = 2 points</li> <li>• 0 crashes = 0 points</li> </ul> Projects will receive an additional 4 points if there are any fatal or severe injury crashes within 300 feet of corridor projects or point/intersection improvement projects. |
|               | 10         | High-Risk Network – Systemic Safety Analysis | Projects receive 10 points if identified as a high-risk corridor or location from the Systemic Safety analysis.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Accessibility | 10         | Level of Traffic Stress (LTS)                | Projects receive more points for higher LTS on a road segment. LTS analysis uses broadly available roadway characteristics to classify the experience of riding a bicycle on a street. <ul style="list-style-type: none"> <li>• LTS 4 = 10 points</li> <li>• LTS 3 = 6 points</li> <li>• LTS 2 = 3 points</li> <li>• LTS 1 = 0 points</li> </ul>                                                                                                                                                                                         |
|               | 10         | Filling Gaps                                 | Projects receive a score of 10 points if they fill a gap in the sidewalk network or receive points based on the number of connections to existing bicycle facilities: <ul style="list-style-type: none"> <li>• 2 or more connections = 10 points</li> <li>• 1 connection = 5 points</li> <li>• 0 connections = 0 points</li> </ul>                                                                                                                                                                                                       |
| Health        | 10         | Public Priorities                            | Projects receive up to 10 points based on the number of public comments in favor during the public comment period.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Equity        | 25         | AT Need Analysis                             | Project receive more points for a higher Active Transportation need score from ODOT's Walk.Bike.Ohio analysis. <ul style="list-style-type: none"> <li>• High need = 10 points</li> <li>• Med-high need = 5 points</li> <li>• Low need and low-med need = 0 points</li> </ul>                                                                                                                                                                                                                                                             |
| <b>Total</b>  | <b>100</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### PRIORITIZED INFRASTRUCTURE PROJECT LIST

Implementing this plan will take time and significant effort. **Table 8** identifies the prioritized projects based on the criteria described above. The projects are divided into the following categories:

- » Buffered bicycle lanes, separated bicycle lanes, and shared use paths (corridor projects with separation from vehicles)
- » Crossing improvement zones
- » Bicycle boulevards (including short, shared use path connections)
- » Sidewalk gaps
- » Intersections

Each category is prioritized as high, medium, or low, as the different project types typically had distinct distributions of scores and may be considered separately for implementation purposes. The intersection prioritization includes additional medium-high and medium-low categories due to the high number of intersections. This prioritization is also visualized in **Figure 26** and **Figure 27**. Implementation will require working with a larger number of partners, as well as building public support for priority projects. Whenever possible, recommendations in this plan should be incorporated into other roadway projects. Every year, Cleveland Heights, University Heights, and South Euclid should re-evaluate the priority list to track which projects have been implemented and to make adjustments as needed.

**Table 8. Prioritized Infrastructure Project List**

| Priority Category                                                            | Corridor or Intersection            | Project Limits                                                      | Project Type                                           | ID | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------|----|-----------------|----------------------------------------|
| <b>Buffered Bicycle Lanes, Separated Bicycle Lanes, and Shared Use Paths</b> |                                     |                                                                     |                                                        |    |                 |                                        |
| <b>High</b>                                                                  | Warrensville Center Road/Noble Road | Study area limits                                                   | Separated Bicycle Lane and Buffered Bike Lane          | 5  | CH, UH, SE      | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                  | Cedar Road                          | Within study area limits (Euclid Heights Boulevard to Lyndway Road) | Shared Use Path & Separated Bicycle Lane               | 25 | CH, UH, SE      | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                  | Mayfield Road                       | Kenilworth Road to Sheridan Road                                    | Shared Use Path & Separated Bicycle Lane               | 12 | CH, SE          | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                  | Taylor Road                         | Study area limits to Fairmount Boulevard                            | Bicycle Boulevard, Bicycle Lane, Buffered Bicycle Lane | 10 | CH, UH          | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                  | Monticello Road                     | Mayfield Road to study area limits                                  | Shared Use Path                                        | 4  | CH, SE          | HSIP, RTP, SRTS, TAP                   |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category                                                                    | Corridor or Intersection                 | Project Limits                                                                        | Project Type           | ID | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|--------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------|------------------------|----|-----------------|----------------------------------------|
| <b>Buffered Bicycle Lanes, Separated Bicycle Lanes, and Shared Use Paths (cont.)</b> |                                          |                                                                                       |                        |    |                 |                                        |
| <b>High</b>                                                                          | Euclid Heights Boulevard                 | Cedar Road to Taylor Road                                                             | Shared Use Path        | 13 | CH              | HSIP, RTP, SRTS, TAP                   |
| <b>Medium</b>                                                                        | Belvoir Boulevard                        | Bluestone Road to study area limits                                                   | Separated Bicycle Lane | 9  | CH, UH, SE      | SRTS, TAP                              |
| <b>Medium</b>                                                                        | Lee Road                                 | Superior Road to study area limits                                                    | Separated Bicycle Lane | 19 | CH              | HSIP, SRTS, TAP                        |
| <b>Medium</b>                                                                        | Green Road                               | Study area limits to Monticello Boulevard                                             | Separated Bicycle Lane | 2  | SE              | SRTS, TAP                              |
| <b>Medium</b>                                                                        | Raymont Boulevard                        | Raymont Boulevard (dead end) to Cedar Road/Taylor Road intersection                   | Shared Use Path        | 68 | UH              | TAP                                    |
| <b>Medium</b>                                                                        | Severance Circle                         | Full road length, including segments connecting to Mayfield Road and Taylor Road      | Shared Use Path        | 66 | CH              | TAP                                    |
| <b>Medium</b>                                                                        | Severance Circle (additional connection) | Severance Circle to Crest Road                                                        | Shared Use Path        | 54 | CH              | TAP                                    |
| <b>Medium</b>                                                                        | Belvoir Boulevard                        | Study area limits to Bluestone Road (including separate segment in Cleveland Heights) | Shared Use Path        | 1  | CH, SE          | RTP, TAP                               |
| <b>Medium</b>                                                                        | Washington Boulevard                     | Taylor Road to Belvoir Boulevard                                                      | Shared Use Path        | 23 | CH, UH, SE      | RTP, SRTS, TAP                         |
| <b>Medium</b>                                                                        | Kenilworth Road                          | Euclid Heights Boulevard to Mayfield Road                                             | Shared Use Path        | 24 | CH              | RTP, TAP                               |
| <b>Low</b>                                                                           | Wrenford Road                            | Purvis Park to Belvoir Boulevard/Silsby Road intersection                             | Shared Use Path        | 69 | UH              | TAP                                    |
| <b>Low</b>                                                                           | North Park Boulevard                     | Martin Luther King Jr. Drive to Lee Road                                              | Separated Bicycle Lane | 67 | CH              | SRTS, TAP                              |
| <b>Low</b>                                                                           | Anderson Road                            | Metropolitan Park Boulevard to study area limits                                      | Bicycle Lane           | 7  | SE              | TAP                                    |
| <b>Low</b>                                                                           | Washington Boulevard                     | Edgehill Road to Taylor Road                                                          | Buffered Bicycle Lane  | 22 | CH              | SRTS, TAP                              |
| <b>Low</b>                                                                           | Fairmount Boulevard and Shelburne Road   | Blanche Ave to existing park path                                                     | Shared Use Path        | 32 | CH              | TAP                                    |
| <b>Low</b>                                                                           | Oakwood Green Park Path                  | Taylor Road to North Park Boulevard                                                   | Shared Use Path        | 20 | CH, SE          | RTP, TAP                               |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category                                                                    | Corridor or Intersection                                        | Project Limits                                                                                                                                                              | Project Type                        | ID | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----|-----------------|----------------------------------------|
| <b>Buffered Bicycle Lanes, Separated Bicycle Lanes, and Shared Use Paths (cont.)</b> |                                                                 |                                                                                                                                                                             |                                     |    |                 |                                        |
| <b>Low</b>                                                                           | Langerdale Road, Lanphier Park, and College Road                | Belvoir Boulevard to study area limits                                                                                                                                      | Shared Use Path                     | 16 | SE              | RTP, SRTS, TAP                         |
| <b>Crossing Improvement Zones</b>                                                    |                                                                 |                                                                                                                                                                             |                                     |    |                 |                                        |
| <b>High</b>                                                                          | Mayfield Road                                                   | Monticello Boulevard to Ivydale Road and Severance Circle to Sheridan Road                                                                                                  | Crossing Improvement Zone           | 12 | CH, SE          | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                          | Cedar Road                                                      | Euclid Heights Boulevard to Fairmount Boulevard, Oakdale Road to approximately 500 feet east of Taylor Road, Fenwick Road to Miramar Boulevard, Kerwin Road to Fenway Drive | Crossing Improvement Zone           | 25 | CH, UH, SE      | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                          | Warrensville Center Road/Noble Road                             | Study area limits to approximately 1000 feet south of Mayfield Road                                                                                                         | Crossing Improvement Zone           | 5  | CH, SE          | HSIP, SRTS, TAP                        |
| <b>High</b>                                                                          | Taylor Road                                                     | Euclid Heights Boulevard to Cedarbrook Road                                                                                                                                 | Crossing Improvement Zone           | 10 | CH              | HSIP, SRTS, TAP                        |
| <b>Medium</b>                                                                        | Lee Road                                                        | Superior Road to Fairfax Road                                                                                                                                               | Crossing Improvement Zone           | 19 | CH              | HSIP, SRTS, TAP                        |
| <b>Medium</b>                                                                        | Coventry Road                                                   | Mayfield Road to Euclid Heights Boulevard                                                                                                                                   | Crossing Improvement Zone           | 65 | CH              | HSIP, SRTS, TAP                        |
| <b>Bicycle Boulevards (including short, shared use path connections)</b>             |                                                                 |                                                                                                                                                                             |                                     |    |                 |                                        |
| <b>High</b>                                                                          | Bluestone Road                                                  | Noble Road to shared use path entrance east of Green Road                                                                                                                   | Bicycle Boulevard & Shared Use Path | 6  | CH, SE          | TAP                                    |
| <b>High</b>                                                                          | Harcourt Drive                                                  | Demington Drive to Green Road                                                                                                                                               | Bicycle Boulevard                   | 26 | CH              | TAP                                    |
| <b>High</b>                                                                          | Silsby Road, Essex Road, Westminster Road, and Clarkson Road    | Cedar Road to North Park Boulevard                                                                                                                                          | Bicycle Boulevard                   | 28 | CH, UH          | TAP                                    |
| <b>High</b>                                                                          | Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive | Monticello Boulevard to study area limits                                                                                                                                   | Bicycle Boulevard                   | 8  | CH, UH, SE      | TAP                                    |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category                                                               | Corridor or Intersection                                    | Project Limits                                                                  | Project Type                        | ID | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|---------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------|----|-----------------|----------------------------------------|
| <b>Bicycle Boulevards (including short, shared use path connections, cont.)</b> |                                                             |                                                                                 |                                     |    |                 |                                        |
| <b>High</b>                                                                     | Liberty Road, Norma Road, and Ardmore Road                  | Euclid Heights Boulevard to Superior Park Drive                                 | Bicycle Boulevard                   | 11 | CH, SE          | TAP                                    |
| <b>High</b>                                                                     | Compton Road                                                | Noble Road to Dorsh Road                                                        | Bicycle Boulevard & Shared Use Path | 14 | CH              | TAP                                    |
| <b>Medium</b>                                                                   | Bayard Road                                                 | Belvoir Boulevard to Green Road                                                 | Bicycle Boulevard                   | 15 | SE              | TAP                                    |
| <b>Medium</b>                                                                   | Edgehill Road                                               | Overlook Road to Washington Boulevard                                           | Bicycle Boulevard                   | 18 | CH              | TAP                                    |
| <b>Medium</b>                                                                   | St. James Parkway and Scarborough Road                      | North Park Boulevard to Canterbury Road                                         | Bicycle Boulevard                   | 31 | CH, UH          | TAP                                    |
| <b>Medium</b>                                                                   | Verona Road, Antisdale Road, Revere Road, and Staunton Road | Washington Boulevard to Belvoir Boulevard                                       | Bicycle Boulevard                   | 21 | CH, UH, SE      | TAP                                    |
| <b>Low</b>                                                                      | Demington Drive                                             | Cedar Road to North Park Boulevard                                              | Bicycle Boulevard                   | 27 | CH              | TAP                                    |
| <b>Low</b>                                                                      | Lincoln Boulevard, Cottage Grove Avenue, and Stratford Road | Euclid Heights Boulevard and Parkway Drive to North Park Boulevard              | Bicycle Boulevard                   | 17 | CH              | TAP                                    |
| <b>Low</b>                                                                      | Trebisky Road                                               | Study area limits to Anderson Road                                              | Bicycle Boulevard                   | 3  | SE              | TAP                                    |
| <b>Low</b>                                                                      | Saybrook Road and Traymore Road                             | Silby Road to study area limits                                                 | Bicycle Boulevard                   | 29 | UH              | TAP                                    |
| <b>Low</b>                                                                      | Washington Boulevard                                        | Belvoir Boulevard to Green Road                                                 | Bicycle Boulevard                   | 30 | UH              | TAP                                    |
| <b>Sidewalk Gaps</b>                                                            |                                                             |                                                                                 |                                     |    |                 |                                        |
| <b>High</b>                                                                     | Warrensville Center Road                                    | Oakwood Drive to Bayard Road                                                    | New Sidewalk                        | 52 | CH              | HSIP, TAP                              |
| <b>High</b>                                                                     | Renwood Road                                                | Donwell Drive to Green Road                                                     | New Sidewalk                        | 55 | SE              | SRTS, TAP                              |
| <b>High</b>                                                                     | Kenilworth Lane                                             | Approximately 50 feet north of Kenilworth Mews for approximately 225 feet south | New Sidewalk                        | 57 | CH              | TAP                                    |
| <b>High</b>                                                                     | Brookline Road (path connection)                            | Ardmore Road for approximately 225 feet south                                   | New Sidewalk                        | 48 | CH              | TAP                                    |
| <b>High</b>                                                                     | Yellowstone Road                                            | Approximately 500 feet north of Glen Allen Drive to Mayfield Road               | New Sidewalk                        | 49 | CH              | TAP                                    |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category            | Corridor or Intersection | Project Limits                                                                                 | Project Type | ID | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------|--------------------------|------------------------------------------------------------------------------------------------|--------------|----|-----------------|----------------------------------------|
| <b>Sidewalk Gaps (cont.)</b> |                          |                                                                                                |              |    |                 |                                        |
| <b>High</b>                  | Glen Allen Drive         | Full road length (approximately 1150 feet)                                                     | New Sidewalk | 50 | CH              | TAP                                    |
| <b>High</b>                  | Birchtree Path           | Full road length (approximately 225 feet)                                                      | New Sidewalk | 51 | CH              | TAP                                    |
| <b>High</b>                  | Lancaster Road           | Greenvalue Drive to Green Road                                                                 | New Sidewalk | 35 | SE              | TAP                                    |
| <b>High</b>                  | Woodridge Road           | Approximately 275 feet east of Edison Road for approximately 125 feet                          | New Sidewalk | 47 | CH              | TAP                                    |
| <b>Medium</b>                | Monticello Boulevard     | Approximately 125 feet east of Quarry Drive to Belvoir Boulevard                               | New Sidewalk | 44 | CH              | TAP                                    |
| <b>Medium</b>                | Belvoir Boulevard        | Monticello Boulevard to Bluestone Road                                                         | New Sidewalk | 45 | CH              | TAP                                    |
| <b>Medium</b>                | Superior Road            | Approximately 75 feet west of Hillcrest Road to approximately 150 feet east of Ridgefield Road | New Sidewalk | 53 | CH              | TAP                                    |
| <b>Medium</b>                | Denton Road              | Chestnut Hills Drive to Devonshire Drive                                                       | New Sidewalk | 59 | CH              | TAP                                    |
| <b>Medium</b>                | Chestnut Hills Drive     | Denton Drive to North Park Boulevard                                                           | New Sidewalk | 60 | CH              | TAP                                    |
| <b>Medium</b>                | Belvoir Boulevard        | Section within Cleveland Heights                                                               | New Sidewalk | 34 | CH              | TAP                                    |
| <b>Medium</b>                | Stuart Drive             | McFarland Road to Anderson Road                                                                | New Sidewalk | 43 | SE              | TAP                                    |
| <b>Medium</b>                | Reyburn Road             | Section within Cleveland Heights                                                               | New Sidewalk | 33 | CH              | TAP                                    |
| <b>Medium</b>                | Randolph Road            | Woodview Road to Lecona Drive                                                                  | New Sidewalk | 40 | CH              | TAP                                    |
| <b>Medium</b>                | Brinkmore Road           | St. James Parkway to Arlington Road                                                            | New Sidewalk | 37 | CH              | TAP                                    |
| <b>Medium</b>                | Edgerly Road             | Approximately 800 feet west of Edgerly Road to Edgerly Road                                    | New Sidewalk | 38 | CH              | TAP                                    |
| <b>Medium</b>                | Renfield Road            | Brinkmore Road to Fenley Road                                                                  | New Sidewalk | 46 | CH              | TAP                                    |
| <b>Low</b>                   | North Park Boulevard     | Approximately 225 feet north of Bluestone Road to Bluestone Road                               | New Sidewalk | 62 | CH              | SRTS, TAP                              |
| <b>Low</b>                   | Superior Road            | Parkway Drive to Lee Road                                                                      | New Sidewalk | 56 | CH              | TAP                                    |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category            | Corridor or Intersection                          | Project Limits                                                    | Project Type                         | ID  | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------|---------------------------------------------------|-------------------------------------------------------------------|--------------------------------------|-----|-----------------|----------------------------------------|
| <b>Sidewalk Gaps (cont.)</b> |                                                   |                                                                   |                                      |     |                 |                                        |
| <b>Low</b>                   | St. James Parkway                                 | Grandview Avenue to approximately 200 feet east of Ardleigh Drive | New Sidewalk                         | 61  | CH              | TAP                                    |
| <b>Low</b>                   | Derbyshire Road                                   | Coventry Road to Renrock Road and Stillman Road to Lamberton Road | New Sidewalk                         | 58  | CH              | TAP                                    |
| <b>Low</b>                   | North Park Boulevard                              | North Park Boulevard to study area limits                         | New Sidewalk                         | 64  | CH              | TAP                                    |
| <b>Low</b>                   | Parkside Boulevard                                | Study area limits to Monticello Boulevard                         | New Sidewalk                         | 36  | SE              | TAP                                    |
| <b>Low</b>                   | Ammon Road                                        | Parkside Boulevard to Trebisky Road                               | New Sidewalk                         | 39  | SE              | TAP                                    |
| <b>Low</b>                   | McFarland Road                                    | Haywood Drive to approximately 325 feet east of Stuart Drive      | New Sidewalk                         | 41  | SE              | TAP                                    |
| <b>Low</b>                   | Haywood Drive                                     | McFarland Road to Stuart Drive                                    | New Sidewalk                         | 42  | SE              | TAP                                    |
| <b>Low</b>                   | Monmouth Road                                     | Approximately 200 feet east of Arlington Road to Stratford Road   | New Sidewalk                         | 63  | CH              | TAP                                    |
| <b>Intersections</b>         |                                                   |                                                                   |                                      |     |                 |                                        |
| <b>High</b>                  | Cedar Road/Taylor Road                            | N/A                                                               | Signalized Intersection Improvements | 136 | CH, UH          | HSIP, TAP                              |
| <b>High</b>                  | Warrensville Center Road/Mayfield Road            | N/A                                                               | Signalized Intersection Improvements | 113 | CH, SE          | HSIP, SRTS, TAP                        |
| <b>High</b>                  | Cedar Road/Euclid Heights Boulevard/Overlook Road | N/A                                                               | Signalized Intersection Improvements | 132 | CH              | HSIP, TAP                              |
| <b>High</b>                  | Warrensville Center Road/Cedar Road               | N/A                                                               | Signalized Intersection Improvements | 138 | UH, SE          | HSIP, TAP                              |
| <b>High</b>                  | Cedar Road/Lee Road                               | N/A                                                               | Signalized Intersection Improvements | 135 | CH              | HSIP, SRTS, TAP                        |
| <b>High</b>                  | Mayfield Road/Severance Circle/Copper Trace       | N/A                                                               | Signalized Intersection Improvements | 111 | CH              | SRTS, TAP                              |
| <b>High</b>                  | Cedar Road/Green Road                             | N/A                                                               | Signalized Intersection Improvements | 140 | UH, SE          | HSIP, TAP                              |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category            | Corridor or Intersection                           | Project Limits | Project Type                           | ID  | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------|----------------------------------------------------|----------------|----------------------------------------|-----|-----------------|----------------------------------------|
| <b>Intersections (cont.)</b> |                                                    |                |                                        |     |                 |                                        |
| <b>High</b>                  | Green Road/Monticello Boulevard                    | N/A            | Signalized Intersection Improvements   | 102 | SE              | HSIP, TAP                              |
| <b>High</b>                  | Noble Road/Monticello Boulevard                    | N/A            | Signalized Intersection Improvements   | 106 | CH              | HSIP, SRTS, TAP                        |
| <b>High</b>                  | Mayfield Road/Yellowstone Road                     | N/A            | Unsignalized Intersection Improvements | 112 | CH              | SRTS, TAP                              |
| <b>High</b>                  | Mayfield Road/Green Road                           | N/A            | Signalized Intersection Improvements   | 117 | SE              | HSIP, TAP                              |
| <b>High</b>                  | Mayfield Road/Belvoir Boulevard                    | N/A            | Signalized Intersection Improvements   | 115 | SE              | HSIP, TAP                              |
| <b>Med-High</b>              | Taylor Road/Superior Road                          | N/A            | Signalized Intersection Improvements   | 130 | CH              | TAP                                    |
| <b>Med-High</b>              | Noble Road/Quilliams Road                          | N/A            | Signalized Intersection Improvements   | 105 | CH              | HSIP, SRTS, TAP                        |
| <b>Med-High</b>              | Monticello Boulevard/Englewood Road                | N/A            | Unsignalized Intersection Improvements | 107 | CH              | TAP                                    |
| <b>Med-High</b>              | Mayfield Road/Felton Road/Grantleigh Road          | N/A            | Offset Intersection Treatment          | 114 | SE              | TAP                                    |
| <b>Med-High</b>              | Mayfield Road/Monticello Boulevard/Cumberland Road | N/A            | Signalized Intersection Improvements   | 121 | CH              | HSIP, TAP                              |
| <b>Med-High</b>              | Monticello Boulevard/Belvoir Boulevard             | N/A            | Signalized Intersection Improvements   | 103 | CH, SE          | TAP                                    |
| <b>Med-High</b>              | Taylor Road/Washington Boulevard                   | N/A            | Signalized Intersection Improvements   | 131 | CH              | TAP                                    |
| <b>Med-High</b>              | Cedar Road/Belvoir Boulevard                       | N/A            | Signalized Intersection Improvements   | 139 | UH, SE          | TAP                                    |
| <b>Med-High</b>              | Green Road/Bluestone Road                          | N/A            | Unsignalized Intersection Improvements | 104 | SE              | TAP                                    |
| <b>Med-High</b>              | Mayfield Road/Coventry Road                        | N/A            | Signalized Intersection Improvements   | 123 | CH              | HSIP, TAP                              |



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category            | Corridor or Intersection                              | Project Limits | Project Type                           | ID  | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------|-------------------------------------------------------|----------------|----------------------------------------|-----|-----------------|----------------------------------------|
| <b>Intersections (cont.)</b> |                                                       |                |                                        |     |                 |                                        |
| Medium                       | Taylor Road/Euclid Heights Boulevard/Severance Circle | N/A            | Signalized Intersection Improvements   | 122 | CH              | TAP                                    |
| Medium                       | Monticello Road/Yellowstone Road                      | N/A            | Signalized Intersection Improvements   | 108 | CH              | TAP                                    |
| Medium                       | Belvoir Boulevard/Princeton Boulevard                 | N/A            | Signalized Intersection Improvements   | 101 | SE              | HSIP, TAP                              |
| Medium                       | Taylor Road/Monticello Boulevard                      | N/A            | Signalized Intersection Improvements   | 109 | CH              | TAP                                    |
| Medium                       | Cedar Road/Washington Boulevard                       | N/A            | Signalized Intersection Improvements   | 137 | UH, SE          | TAP                                    |
| Medium                       | Warrensville Center Road/Antisdale Road/Verona Road   | N/A            | Signalized Intersection Improvements   | 128 | SE              | TAP                                    |
| Medium                       | Green Road/Messenger Court                            | N/A            | Unsignalized Intersection Improvements | 116 | SE              | TAP                                    |
| Medium                       | Green Road/Rushton Road                               | N/A            | Unsignalized Intersection Improvements | 118 | SE              | TAP                                    |
| Medium                       | Silsby Road/Miramar Boulevard                         | N/A            | Unsignalized Intersection Improvements | 143 | UH              | HSIP, TAP                              |
| Medium                       | Taylor Road/Silsby Road                               | N/A            | Signalized Intersection Improvements   | 141 | CH, UH          | TAP                                    |
| Med-Low                      | Mayfield Road/Taylor Road                             | N/A            | Signalized Intersection Improvements   | 110 | CH              | TAP                                    |
| Med-Low                      | Edgehill Road/Kenilworth Road                         | N/A            | Signalized Intersection Improvements   | 126 | CH              | TAP                                    |
| Med-Low                      | Fairmount Boulevard/Demington Drive                   | N/A            | RRFB                                   | 144 | CH              | TAP                                    |
| Med-Low                      | Green Road/Bayard Road                                | N/A            | Signalized Intersection Improvements   | 124 | SE              | TAP                                    |
| Med-Low                      | Mayfield Road/Lee Road                                | N/A            | Signalized Intersection Improvements   | 120 | CH              | TAP                                    |

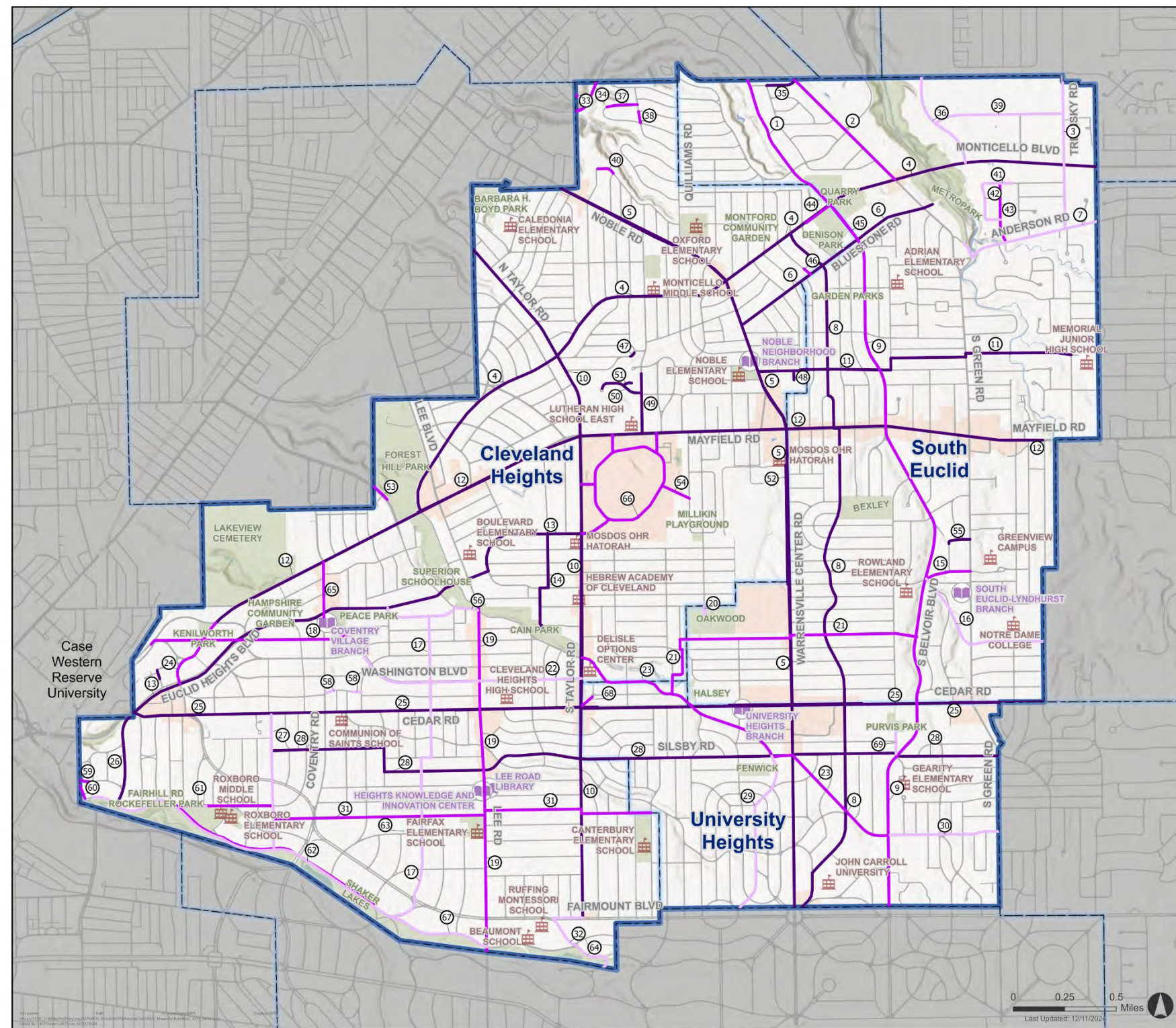
## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Priority Category            | Corridor or Intersection                                      | Project Limits | Project Type                           | ID  | Jurisdiction(s) | Potential Funding Sources <sup>1</sup> |
|------------------------------|---------------------------------------------------------------|----------------|----------------------------------------|-----|-----------------|----------------------------------------|
| <b>Intersections (cont.)</b> |                                                               |                |                                        |     |                 |                                        |
| <b>Med-Low</b>               | Cedar Road/Demington Drive                                    | N/A            | Signalized Intersection Improvements   | 133 | CH              | TAP                                    |
| <b>Med-Low</b>               | Edgehill Road/Euclid Heights Boulevard                        | N/A            | Unsignalized Intersection Improvements | 127 | CH              | TAP                                    |
| <b>Med-Low</b>               | Lee Boulevard/Monticello Boulevard                            | N/A            | Signalized Intersection Improvements   | 119 | CH              | TAP                                    |
| <b>Med-Low</b>               | Lee Road/Scarborough Road                                     | N/A            | Offset Intersection Treatment          | 146 | CH              | TAP                                    |
| <b>Low</b>                   | Warrensville Center Road/Washington Boulevard                 | N/A            | Signalized Intersection Improvements   | 142 | UH              | TAP                                    |
| <b>Low</b>                   | Green Road/College Road                                       | N/A            | Unsignalized Intersection Improvements | 129 | SE              | TAP                                    |
| <b>Low</b>                   | Fairmount Boulevard/Shelburne Road                            | N/A            | RRFB                                   | 149 | CH              | TAP                                    |
| <b>Low</b>                   | Green Road/South Euclid Lyndhurst Library/Notre Dame Driveway | N/A            | Signalized Intersection Improvements   | 125 | SE              | TAP                                    |
| <b>Low</b>                   | Cedar Road/Cottage Grove Avenue                               | N/A            | Signalized Intersection Improvements   | 134 | CH              | TAP                                    |
| <b>Low</b>                   | Fairmount Boulevard/Coventry Road/Scarborough Road            | N/A            | Signalized Intersection Improvements   | 145 | CH              | TAP                                    |
| <b>Low</b>                   | Fairmount Boulevard/Stratford Road/North Woodland Road        | N/A            | RRFB                                   | 148 | CH              | TAP                                    |
| <b>Low</b>                   | Taylor Road/Scarborough Road                                  | N/A            | Signalized Intersection Improvements   | 147 | CH              | TAP                                    |

**Notes:**

1. HSIP = Highway Safety Improvement Program, SRTS = Safe Routes to School, TAP = Transportation Alternatives Program, RTP = Recreational Trails Program





## The Heights Regional Active Transportation Plan



## Segment Projects Priority Categories

### Project Priority

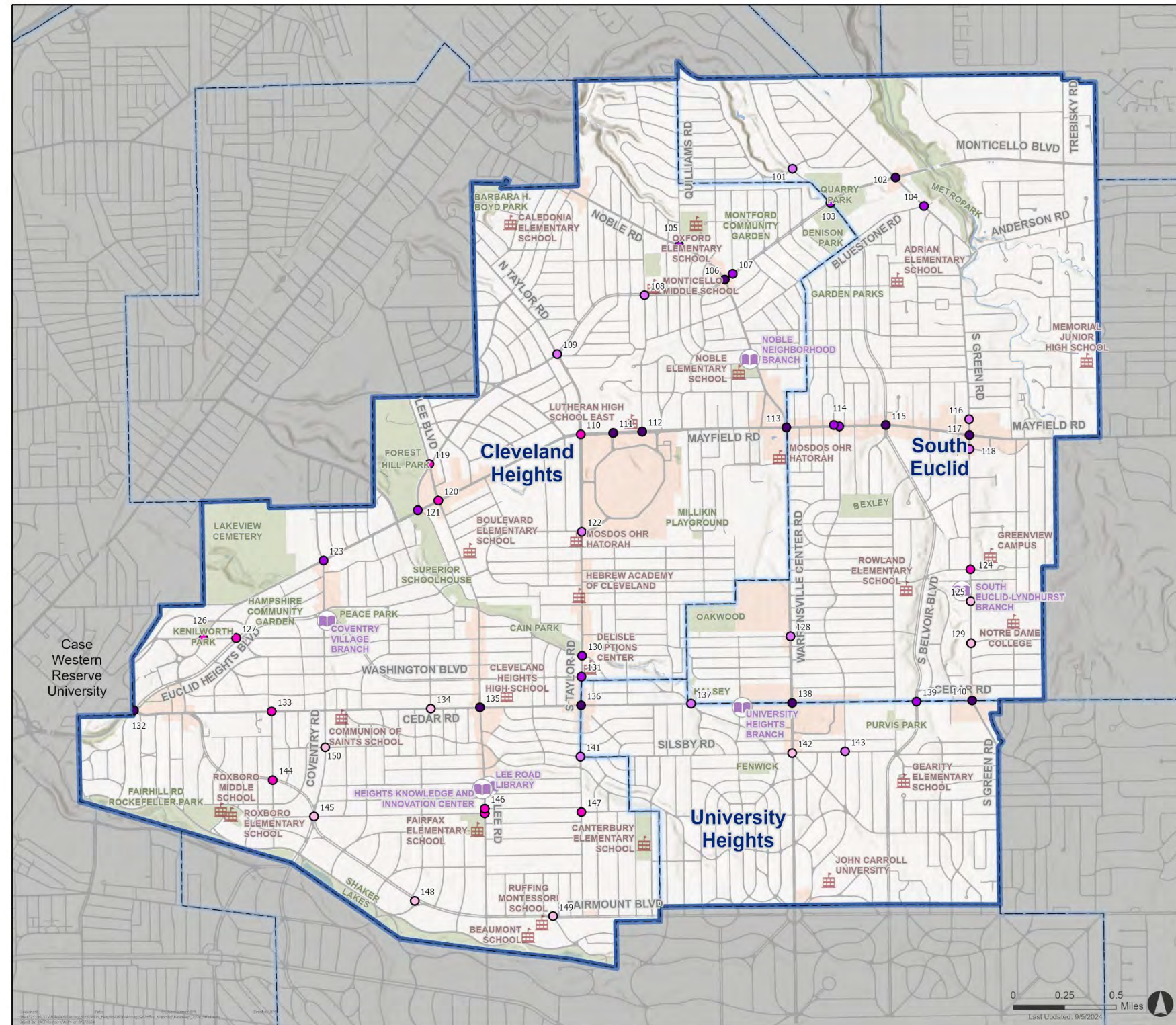
- High Priority
- Medium Priority
- Low Priority

### Reference Layers

-  Schools
-  Libraries
-  Water
-  Parks
-  Business Districts
-  City Boundaries
-  Plan Area Boundary

Figure 26: Segment Project Prioritization





## The Heights Regional Active Transportation Plan



## Intersection Projects Priority Categories

### Project Priority

- High Priority
- Medium-High Priority
- Medium Priority
- Medium-Low Priority
- Low Priority

### Reference Layers

- Schools
- Libraries
- Water
- Parks
- Business Districts
- City Boundaries
- Plan Area Boundary

Figure 27: Intersection Project Prioritization



## PRIORITY PROJECT CUTSHEETS

Cleveland Heights, University Heights, and South Euclid identified three projects to further study. The selected projects support travel between the three jurisdictions, require complex decision-making, and are high priority projects based on the project prioritization list. The additional study of these projects may allow for quicker implementation following plan adoption. The three projects selected are:

1. Warrensville Center Road/Noble Road - separated bicycle lanes, crossing improvements, and sidewalk gap fill (Project #5 and 52)
2. Bluestone Road - bicycle boulevard (Project #6 and 104)
3. Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive - bicycle boulevard (Project #8) and Belvoir Boulevard - buffered bicycle lanes (Project #9)

A brief overview of each project is presented in this section, together with select information from the cutsheet. A complete cutsheet for each project are included in **Appendix C**.

### What is a cut sheet?

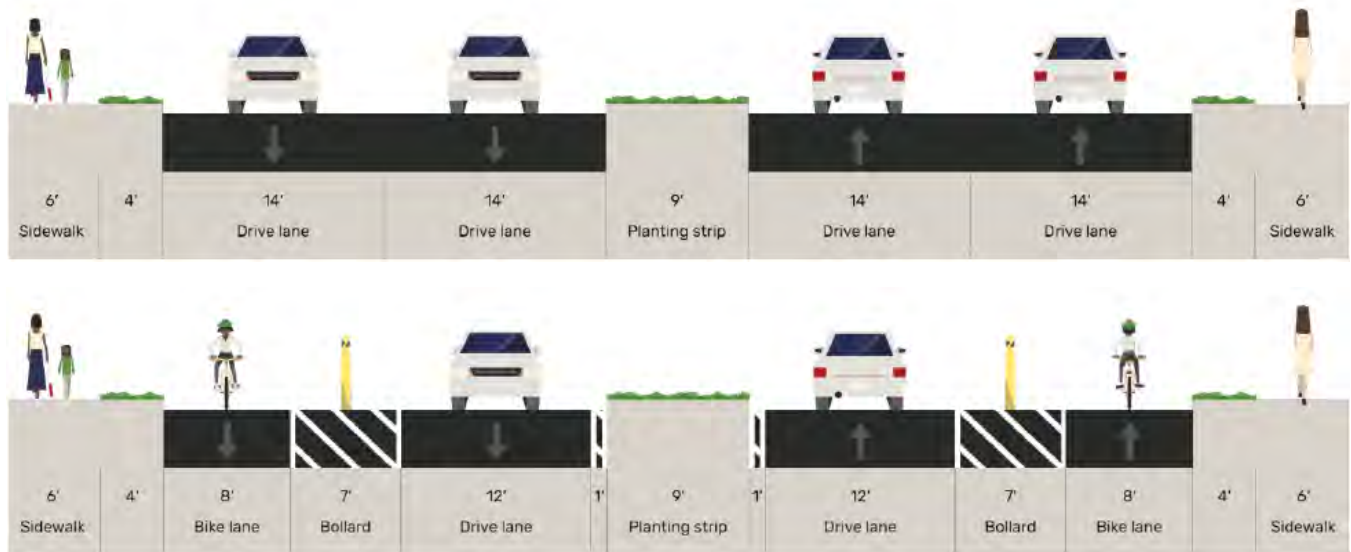
A cut sheet provides a summary of information about a project, such as the vehicle speed limits, average daily traffic, and connectivity to other active transportation routes. Depending on the project, it can also include information about project elements, cost estimates, and a project visualization.

### Warrensville Center Road/Noble Road

The Warrensville Center Road/Noble Road project consists of adding a separated bicycle lane from the northern boundary of Cleveland Heights (near Greyton Road) to the southern boundary of University Heights (Fairmount Boulevard), filling a sidewalk gap between Oakwood Drive and Bayard Road, and pedestrian crossing improvements at intersections. It was the highest-scoring project under both the “Buffered Bicycle Lanes, Separated Bicycle Lanes, and Shared Use Paths” category and the “Sidewalk Gaps” category in the project prioritization list, and was high-scoring in the “Crossing Improvements Zones” category. The corridor is a north-south route that connects all three cities and includes bus transit.

Sample cross-sections for the project corridor are shown in **Figure 29**, and more are included in **Appendix C**. A cost estimate for the corridor is shown in **Figure 28**. Note that the cost estimate does not include the portion of the project in University Heights.

**Figure 28: Sample Warrensville Center Road/Noble Road Cross-Sections for Existing Conditions (top) and Project (bottom)**



**Figure 29: Warrensville Center Road/Noble Road Cost Estimate**

| Warrensville-Noble Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------|
| Opinion of Probable Costs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |                        |
| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     | Total Cost             |
| Roadway Pavement Markings and Delineators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     | \$ 974,300.00          |
| Bus Stops                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     | \$ 960,000.00          |
| Intersections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     | \$ 900,000.00          |
| Bicycle Safe Grates (Drainage)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     | \$ 124,500.00          |
| Construction Costs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     | \$ 2,958,800.00        |
| Maintenance of Traffic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LS  | \$ 100,000.00          |
| Mobilization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LS  | \$ 150,000.00          |
| Public Utilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | LS  | \$ 50,000.00           |
| <b>Construction Subtotal</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     | <b>\$ 3,258,800.00</b> |
| Contingency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20% | \$ 651,760.00          |
| Design                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10% | \$ 391,060.00          |
| <b>Total Construction Costs (2024)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     | <b>\$ 4,301,620.00</b> |
| <b>Total Construction Costs (2029)*</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | <b>\$5,370,226.51</b>  |
| * Inflation costs calculated using the ODOT FY 2024-2028 Business Plan Inflation Calculator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |                        |
| Opinions of probable cost were developed by identifying major pay items and establishing rough quantities to determine a rough order of magnitude cost. Additional pay items have been assigned approximate lump sum prices based on a percentage of the anticipated construction cost. Planning-level cost opinions include a 20% contingency to cover items that are undefined or are typically unknown early in the planning phase of a project. Unit costs are based on 2024 dollars and were assigned based on historical cost data from ODOT. Cost opinions do not include easement and right-of-way acquisition; permitting, inspection, or construction management; engineering, surveying, geotechnical investigation, environmental documentation, special site remediation, escalation, or the cost for ongoing maintenance. A cost range has been assigned to certain general categories such as utility relocations; however, these costs can vary widely depending on the exact details and nature of the work. The overall cost opinions are intended to be general and used only for planning purposes. Toole Design Group, LLC makes no guarantees or warranties regarding the cost estimate herein. Construction costs will vary based on the ultimate project scope, actual site conditions and constraints, schedule, and economic conditions at the time of construction. |     |                        |



## Bluestone Road

The Bluestone Road project consists of adding a bicycle boulevard from Noble Road to the entrance of Euclid Creek Reservation at Green Road, and includes unsignalized intersection improvements at the Green Road/Bluestone Road intersection. It was the highest-scoring project under the “Bicycle Boulevard” category, and the intersection improvement received a medium-high score. The corridor passes through Cleveland Heights and South Euclid.

The project team developed a conceptual design for the project based on City staff input, together with a list of potential bicycle boulevard elements and quantities. The conceptual design rendering for the Green Road/Bluestone Road intersection is shown in **Figure 30**, including a version with key features labeled. More information is included in **Appendix C**.

**Figure 30: Bluestone Road and Green Road Conceptual Design Rendering (top) and with labeling (bottom)**



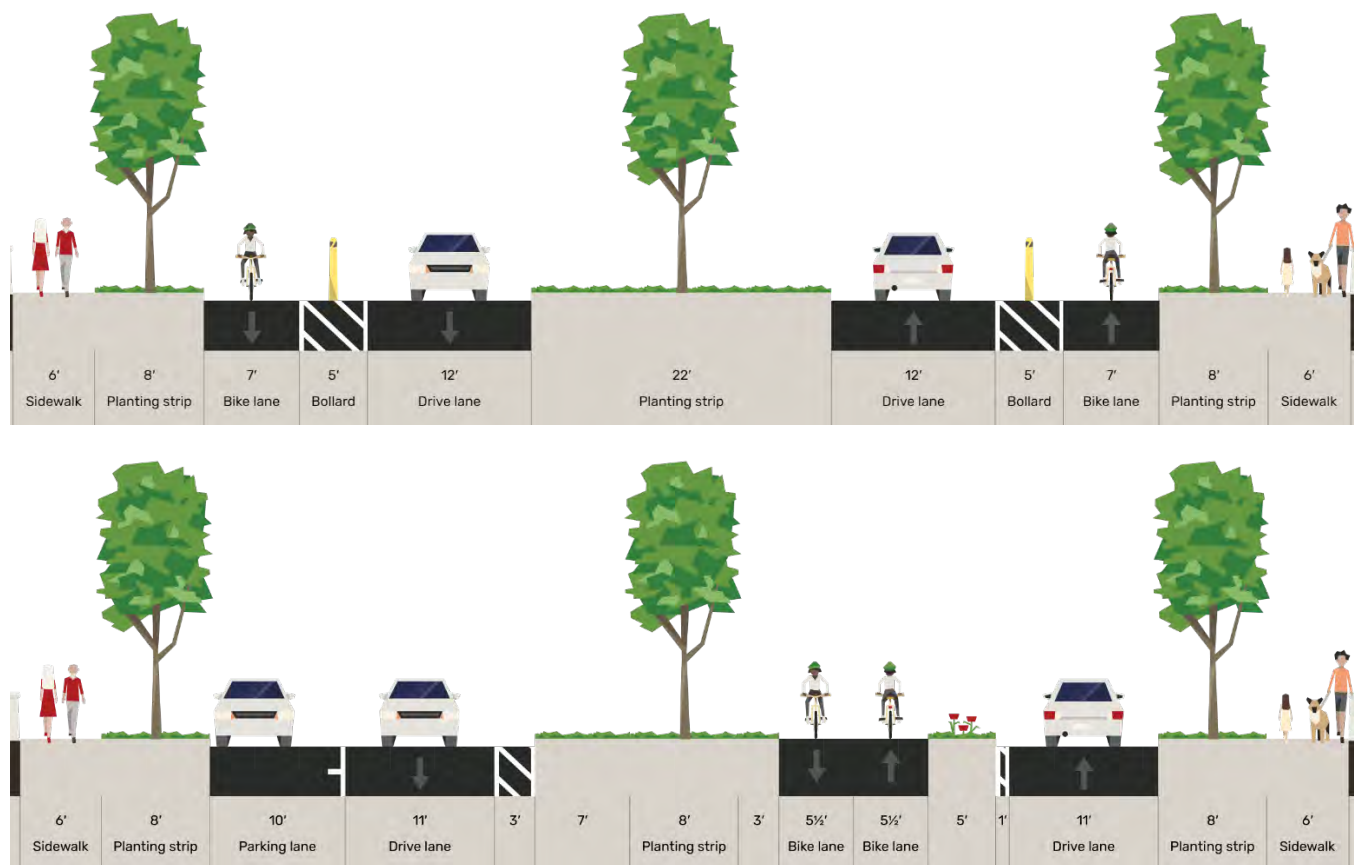
## Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive; Belvoir Boulevard

The Miramar Boulevard, Felton Road, Avondale Road, and Quarry Drive project (hereafter referred to as the Miramar Boulevard/Felton Road project) consists of adding a bicycle boulevard from Bluestone Road to the southern boundary of University Heights at Fairmount Circle. It was the fourth-highest scoring project under the “Bicycle Boulevard” category in the project prioritization list. Miramar Boulevard/Felton Road is a parallel and nearby corridor to the proposed Belvoir Boulevard buffered bicycle lanes, which would be from Bluestone Road to the southern boundary of University Heights at Fairmount Boulevard. The Belvoir

Boulevard project scored at a medium level in the project prioritization under the “Buffered Bicycle Lanes, Separated Bicycle Lanes, and Shared Use Paths” category. Both corridors are north-south roads that intersect all three cities.

City staff were interested in comparing the potential approaches for the two corridors to help evaluate which one to prioritize for project development. The project team developed a list of potential bicycle boulevard elements and quantities for the Miramar Boulevard/Felton Road project, and potential cross-sections for the Belvoir Boulevard project. While prior planning efforts had proposed buffered bicycle lanes on Belvoir Boulevard, City staff suggested evaluating separated bicycle lanes along the corridor instead. Sample cross-sections based on that input are shown in **Figure 31**. The team also considered six-legged and offset intersection designs that could be applied on the project corridors. More information is included in **Appendix C**.

**Figure 31: Sample Belvoir Boulevard Cross-Sections for One-way (top) and Two-way (bottom) Separated Bicycle Lane Alternatives**



# IMPLEMENTATION







## IMPLEMENTATION

### ROLES AND RESPONSIBILITIES

Collaboration is the first step toward successful implementation of the Heights ATP. Stakeholders involved in the planning process will be collectively responsible for the design, funding, construction, maintenance, monitoring, and/or evaluation of the network. See **Table 9** for a list of responsibilities.

**Table 9. Implementation Responsibilities**

| Agency                                                                           | Responsibility                            | Description                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cities of Cleveland Heights/ University Heights/ South Euclid Local Admin</b> | City owned facilities                     | Design, construction, maintenance, and evaluation of bicycling and walking facilities per identified projects.                                                                                                      |
|                                                                                  | Legislation and municipal ordinances      | Help draft and implement supporting legislation and municipal ordinances.                                                                                                                                           |
|                                                                                  | Collaboration with stakeholders           | Collaborate with neighboring jurisdictions, government departments, local businesses, property owners, and community organizations to identify opportunities for policy and project implementation and maintenance. |
|                                                                                  | Public engagement                         | Oversee and collaborate in planning and organizing community events and public engagement efforts.                                                                                                                  |
| <b>Planning Departments</b>                                                      | Drive AT plan adoption and implementation | Adopt and publish the Active Transportation Plan.                                                                                                                                                                   |
|                                                                                  |                                           | Make updates to plan as needed.                                                                                                                                                                                     |
|                                                                                  |                                           | Supportive program implementation.                                                                                                                                                                                  |

## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

| Agency                                     | Responsibility                                   | Description                                                                                                                                                     |
|--------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | Legislation and municipal ordinances             | Help draft and implement supporting legislation and municipal ordinances                                                                                        |
|                                            | Supportive policies and programming              | Research, draft, implement complementary policies                                                                                                               |
|                                            | Project Implementation                           | Oversee monitoring and evaluation of implement best practices, policies, and walking/cycling facilities                                                         |
| <b>Engineering Departments</b>             | City owned facilities                            | Design, construction, maintenance, and evaluation of city-owned bicycling and walking facilities                                                                |
|                                            |                                                  | Establish an annual review of street paving plan in comparison with the active transportation network to identify appropriate on-street facilities to complete. |
|                                            |                                                  | Update maintenance policy for bicycle and pedestrian facilities.                                                                                                |
| <b>Planning Commissions/ City Councils</b> | Legislation and municipal ordinances             | Draft and implement supporting legislation and municipal ordinances                                                                                             |
|                                            | Project Implementation                           | Help facilitate identification of infrastructure locations, approval process, funding, and construction for projects.                                           |
| <b>Parks &amp; Recreation Departments</b>  | Public Engagement                                | Oversee and collaborate in planning and organizing community events and public engagement efforts                                                               |
| <b>Greater Cleveland Transit Authority</b> | Transit facilities                               | Design, construction, maintenance, and evaluation of transit owned bicycling and walking-friendly facilities                                                    |
|                                            | Public Engagement                                | Collaborate with local government and organizations to help community members learn about different public transit options                                      |
| <b>Schools/ School Districts</b>           | Public Engagement                                | Train educators on safe walking and bicycling practices and road rules                                                                                          |
|                                            |                                                  | Provide education to public on safe active transportation practices and road rules                                                                              |
| <b>Community Organizations</b>             | Project Implementation                           | Collaborate with local government to identify opportunities for policy and project implementation, maintenance, and evaluation                                  |
|                                            | Public Engagement                                | Provide education to government staff and community members on safe active transportation practices and road rules                                              |
| <b>NOACA</b>                               | Project Implementation                           | Support the implementation of local projects through technical resources and funding                                                                            |
| <b>ODOT</b>                                | State owned facilities outside of municipalities | Incorporate bicycling and walking facilities into state and U.S. highways.                                                                                      |
|                                            | Project Implementation                           | Support the implementation of local projects through technical resources and funding                                                                            |



## FUNDING STRATEGIES

Active transportation projects comprise a fraction of overall transportation network construction and maintenance. While pedestrian and bicycle infrastructure generally does not serve as many users as highways, bridges, and other critical infrastructure, it can have a substantial positive effect on local economies. Additionally, providing opportunities for active living promotes public health and may reduce the burden on taxpayer-funded healthcare systems over time. In this light, active transportation infrastructure is a critical component of a complete transportation network and results in a positive return on investment for communities that fund such projects.

Several state and federal funding sources can be used to supplement local funding sources to build out the active transportation network and fund related programming efforts. **Table 10** lists the primary funding sources for active transportation projects in Ohio. Click on the name of each funding source to access web pages with further information. In addition, ODOT and the Ohio Department of Health (ODH) have developed an [Active Transportation Funding Matrix](#). Communities may use this tool to search for additional potential funding sources to support infrastructure and non-infrastructure projects that advance walking and bicycling. As part of the statewide Walk.Bike.Ohio Plan, ODOT published a [Funding Overview Report](#) that provides more details on types of funding available, schedules, and eligibility requirements. For information on funding for public transit, visit the [ODOT Office of Transit website](#).



Source: Burton Planning Services

**Miramar Boulevard, a proposed bicycle boulevard corridor**



## HEIGHTS REGIONAL ACTIVE TRANSPORTATION PLAN

Table 10. Primary Active Transportation Funds in Ohio

| Funding Source                                                     | Distributed by                                                                                         | Eligible Project Examples                                                                                                                                                                                                                                                                                    | Eligible Project Sponsor                                                                                                                           |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <a href="#"><u>Transportation Alternatives</u></a>                 | Metropolitan Planning Organization (if applicable), or Ohio Department of Transportation (ODOT) if not | <ul style="list-style-type: none"> <li>Bicycle &amp; pedestrian facilities</li> <li>Safe routes for non-drivers</li> <li>Conversion &amp; use of abandoned railroad facilities</li> <li>Overlooks &amp; viewing areas</li> </ul>                                                                             | Local governments                                                                                                                                  |
| <a href="#"><u>Safe Routes to School</u></a>                       | ODOT                                                                                                   | <ul style="list-style-type: none"> <li>Infrastructure</li> <li>Non-Infrastructure</li> <li>School Travel Plan assistance</li> </ul>                                                                                                                                                                          | Local governments (infrastructure)<br>Local governments, school or health district, or non-profit (non-infrastructure)                             |
| <a href="#"><u>Highway Safety Improvement Program</u></a>          | ODOT (Coordinate with local ODOT District to submit a safety study)                                    | <ul style="list-style-type: none"> <li>Signalization</li> <li>Turn lanes</li> <li>Pavement markings</li> <li>Traffic signals</li> <li>Pedestrian signals/crosswalks</li> <li>Bike lanes</li> <li>Road diets</li> </ul>                                                                                       | Local governments                                                                                                                                  |
| <a href="#"><u>Recreational Trails Program</u></a>                 | Ohio Department of Natural Resources (ODNR)                                                            | <ul style="list-style-type: none"> <li>New recreational trail construction</li> <li>Trail maintenance/restoration</li> <li>Trailside and trailhead facilities</li> <li>Purchase/lease of construction &amp; maintenance equipment</li> <li>Acquisition of easements</li> <li>Educational programs</li> </ul> | Local governments<br>State and federal agencies<br>Park districts<br>Conservancy districts<br>Soil and water conservation districts<br>Non-profits |
| <a href="#"><u>Clean Ohio Trails Fund</u></a>                      | ODNR                                                                                                   | <ul style="list-style-type: none"> <li>New trail construction</li> <li>Land acquisition for a trail</li> <li>Trail planning/engineering and design (must include construction)</li> </ul>                                                                                                                    | Local governments<br>Park districts<br>Conservancy districts<br>Soil and water conservation districts<br>Non-profits                               |
| <a href="#"><u>Clean Ohio Green Space Conservation Program</u></a> | Ohio Public Works Commission (OPWC)                                                                    | <ul style="list-style-type: none"> <li>Open space acquisition including easements</li> <li>Bike racks</li> <li>Kiosks/Signs</li> <li>Hiking/Biking trails</li> <li>Pedestrian bridges</li> <li>Boardwalks</li> </ul>                                                                                         | Local governments<br>Park districts<br>Conservancy districts<br>Soil and water conservation districts<br>Non-profits                               |

### MAINTENANCE STRATEGIES

The long-term performance of bicycle and pedestrian networks depends on both the construction of new facilities and an investment in continued maintenance. Maintaining bicycle and pedestrian facilities is critical to ensuring those facilities are accessible, safe, and functional. As further evidence for the importance of maintenance, the top action that people said would encourage more walking and rolling in the first online survey for the Heights ATP was better maintenance of sidewalks and trails (55 percent). Overall street maintenance is also important in locations with on-street bicycle facilities.

#### FREQUENCY

The first step to approaching maintenance is to understand how often maintenance should be performed. Many activities, such as signage updates or replacements, are performed as needed, while other tasks such as snow removal are seasonal (see **Table 11**). Creating a winter maintenance approach is important to encourage year-round travel by walking and biking. One key component of this approach should be identifying priority routes for snow removal. More information on winter maintenance such as types of equipment needed for different facility types and how to consider snow removal in the design of facilities can be found in [ODOT's Pedestrian and Bicycle Snow and Ice Removal Toolkit](#).

#### PLAN FOR MAINTENANCE

Creating a strong maintenance program begins in the design phase. The agency that will eventually own the completed project should collaborate with partners to determine the infrastructure placement, final design, and life cycle maintenance cost. Maintenance staff should help identify typical maintenance issues, such as areas with poor drainage or frequent public complaints. They may have suggestions for design elements that can mitigate these issues or facilitate maintenance activities and can provide estimates for ongoing maintenance costs for existing and proposed facilities.

#### COORDINATION & RESPONSIBILITY BETWEEN AGENCIES

Many jurisdictions struggle with confusion around which entity – city, village, township, county, or state – is responsible for the maintenance of trails and other active transportation facilities. Frequently there is no documentation showing who is responsible for maintenance of existing facilities, which can prolong unsafe conditions for trail users. Coordination between the government agencies is key for effective maintenance programs. Intergovernmental agreements (IGAs) are used to codify the roles and responsibilities of each agency regarding ongoing maintenance. For example, a local government may agree to conduct plowing, mowing, and other maintenance activities on trails in its jurisdiction that were built by another agency. Clarifying who is responsible for maintenance costs and operations ensures that maintenance problems are resolved in a timely manner.

**Table 11: Maintenance Activity Frequency**

| Frequency | Facility Type                                                              | Maintenance Activity                                                                            |
|-----------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| As Needed | Shared Use Paths                                                           | Tree/brush clearing and mowing                                                                  |
|           |                                                                            | Replace/repair trail support amenities (parking lots, benches, restrooms, etc.)                 |
|           |                                                                            | Map/signage updates                                                                             |
|           |                                                                            | Trash removal/litter clean-up                                                                   |
|           |                                                                            | Repair flood damage: silt clean-up, culvert clean-out, etc.                                     |
|           |                                                                            | Patching/minor regrading                                                                        |
|           | Shared Use Paths/<br>Separated Bike Lanes / Paved Shoulders/<br>Bike lanes | Sweeping                                                                                        |
| Seasonal  | Bicycle Boulevards                                                         | Sign replacement                                                                                |
|           | Sidewalks                                                                  | Concrete panel replacement                                                                      |
|           | All                                                                        | Snow and ice control                                                                            |
|           | Shared Use Paths                                                           | Planting/pruning/beautification                                                                 |
|           |                                                                            | Culvert/drainage cleaning and repair                                                            |
| Yearly    | Installation/removal of seasonal signage                                   |                                                                                                 |
|           | Shared Use Paths/<br>Sidewalks                                             | Evaluate support services to determine need for repair/replacement                              |
|           |                                                                            | Perform walk audits to assess ADA compliance of facilities                                      |
|           | Separated Bike Lanes / Paved Shoulders/<br>Bike lanes                      | Surface evaluation to determine need for patching/reggrading/re-stripping of bicycle facilities |
| 5-year    | Shared Use Paths                                                           | Repaint or repair trash receptacles, benches, signs, and other trail amenities, if necessary    |
|           |                                                                            | Sealcoat asphalt shared use paths                                                               |
| 10-year   | Shared Use Paths                                                           | Resurface/reggrade/re-stripe shared use paths                                                   |
| 20-year   | Shared Use Paths/<br>Sidewalks                                             | Assess and replace/reconstruct shared use paths/sidewalks                                       |



## MAINTENANCE ACTIVITIES

Different facility types require different types of strategies to be maintained. **Table 12** breaks down maintenance activities and strategies for each by facility type.

**Table 12: Maintenance Strategy Recommendations**

| Facility Type                                | Maintenance Activity             | Strategy                                                                                                                                                                                                                                          |
|----------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shared Use Paths/<br>Separated<br>Bike Lanes | Pavement Preservation            | Develop and implement a comprehensive pavement management system for the shared use path network.                                                                                                                                                 |
|                                              | Snow and Ice Control             | Design shared use paths to accommodate existing maintenance vehicles.                                                                                                                                                                             |
|                                              | Drainage Cleaning/Repairs        | Clear debris from all drainage devices to keep drainage features functioning as intended and minimize trail erosion and environmental damage.                                                                                                     |
|                                              |                                  | Check and repair any damage to trails due to drainage issues.                                                                                                                                                                                     |
|                                              | Sweeping                         | Implement a routine sweeping schedule to clear shared use paths of debris.                                                                                                                                                                        |
|                                              |                                  | Provide trail etiquette guidance and trash receptacles to reduce the need for sweeping.                                                                                                                                                           |
|                                              | Vegetation Management            | Implement a routine vegetation management schedule to ensure user safety.                                                                                                                                                                         |
|                                              |                                  | Trim or remove diseased and hazardous trees along trails.                                                                                                                                                                                         |
|                                              |                                  | Preserve and protect vegetation that is colorful and varied, screens adjacent land uses, provides wildlife habitats, and contains prairie, wetland and woodland remnants.                                                                         |
|                                              | ADA Requirements                 | Conduct walk and bike audits to assess accessibility of new, proposed, and existing shared use paths.                                                                                                                                             |
|                                              |                                  | Ensure that ADA compliance is incorporated into the design process for new facilities.                                                                                                                                                            |
| Paved Shoulders/<br>Bike Lanes               | Pavement Markings                | Explore approaches to routinely inspect pavement markings for bicycle infrastructure and replace as needed.                                                                                                                                       |
|                                              |                                  | Consider preformed thermoplastic or polymer tape on priority bikeways (identified in this Plan) adjacent to high-volume motor vehicle routes (preformed thermoplastic or polymer tape are more durable than paint and requires less maintenance). |
|                                              | Snow and Ice Control             | Clear all signed or marked shoulder bicycle facilities after snowfall on all state-owned facilities that do not have a maintenance agreement with a local governmental unit in place.                                                             |
|                                              | Sweeping                         | Implement a routine sweeping schedule to clear high-volume routes of debris.                                                                                                                                                                      |
| Bicycle Boulevards                           | Sign Replacement                 | Repair or replace damaged or missing signs as soon as possible.                                                                                                                                                                                   |
| Sidewalks                                    | Pavement Preservation and Repair | Conduct routine inspections of high-volume sidewalks and apply temporary measures to maintain functionality (patching, grinding, mudjacking).                                                                                                     |
|                                              |                                  | Consider using public agency staff or hiring contractors for sidewalk repairs, rather than placing responsibility on property owner (property owner can still be financially responsible).                                                        |
|                                              | Snow and Ice Control             | Educate the public about sidewalk snow clearance.                                                                                                                                                                                                 |
|                                              |                                  | Require sidewalk snow clearance to a width of five feet on all sidewalks.                                                                                                                                                                         |
|                                              |                                  | Establish required timeframes for snow removal.                                                                                                                                                                                                   |
|                                              |                                  | Implement snow and ice clearing assistance programs for select populations.                                                                                                                                                                       |

## ON-GOING MONITORING AND EVALUATION

Measuring the performance of active transportation networks is essential to ongoing success. Bicycle and pedestrian counts, crash records, and other data contribute to a business case for continued improvement of and investment in multimodal infrastructure. As recommendations are implemented, the cities of Cleveland Heights, University Heights, and South Euclid must be able to measure whether these investments are paying active transportation dividends (i.e. more people walking and bicycling). An affirmative answer reinforces this Plan’s legitimacy and provides evidence that future investments will also yield positive results. The performance measures listed in **Table 13** will chart progress toward making walking and bicycling safe, connected, and comfortable. The cities of Cleveland Heights, University Heights, and South Euclid should establish baseline targets and revisit these metrics as new plans and priorities occur. Data on these measures should be documented and published for public review annually. A robust performance measures program includes establishing baseline measurements, performance targets, data collection frequency, and responsibility for data collection and analysis.

**Table 13: Performance Measures**

| <i>Plan Goal</i>    | <i>Performance Measure</i>                                                                                                                             | <i>Timeline</i> (how often is data collected/updated) | <i>Responsibility</i> (who will collect the data)                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Connectivity</b> | Miles of sidewalk added and/or repaired                                                                                                                | Annually                                              | Planning Departments and Engineering Departments (Cities of Cleveland Heights, University Heights, and South Euclid) |
|                     | Miles of on-street bike network added and/or repaired                                                                                                  | Annually                                              | Planning Departments and Engineering Departments (Cities of Cleveland Heights, University Heights, and South Euclid) |
|                     | Miles of shared use paths added and/or repaired                                                                                                        | Annually                                              | Planning Departments and Engineering Departments (Cities of Cleveland Heights, University Heights, and South Euclid) |
|                     | Number and type of communications and tools developed promoting active transportation (i.e. social media, emails, website, trail guides, digital maps) | Annually                                              | Communications Teams (Cities of Cleveland Heights, University Heights, and South Euclid)                             |
|                     | Digital communications – audience reached (i.e. views, like counts, interactions, subscriptions)                                                       | Annually                                              | Communications Teams (Cities of Cleveland Heights, University Heights, and South Euclid)                             |

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| <b>Plan Goal</b>     | <b>Performance Measure</b>                                                                                                                                                                                                                | <b>Timeline</b> (how often is data collected/updated) | <b>Responsibility</b> (who will collect the data)                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Safety</b>        | Safety statistics tracking                                                                                                                                                                                                                | Annually                                              | Police Departments (Cities of Cleveland Heights, University Heights, and South Euclid)<br><br>ODOT                      |
|                      | Number of vehicular accidents:<br><ul style="list-style-type: none"> <li>- Total</li> <li>- Involving pedestrians</li> <li>- Involving cyclists</li> <li>- Near points of interest</li> <li>- Before/after safety improvements</li> </ul> | Annually                                              | Police Departments (Cities of Cleveland Heights, University Heights, and South Euclid)<br><br>ODOT                      |
| <b>Accessibility</b> | Number of bicycle parking and storage facilities added and/or repaired                                                                                                                                                                    | Annually                                              | Planning Departments (Cities of Cleveland Heights, University Heights, and South Euclid)                                |
|                      | Number of ADA training sessions held                                                                                                                                                                                                      | Annually                                              | Planning and Engineering Departments (Cities of Cleveland Heights, University Heights, and South Euclid)                |
|                      | Number of ADA compliant projects completed                                                                                                                                                                                                | Annually                                              | Planning and Engineering Departments (Cities of Cleveland Heights, University Heights, and South Euclid)                |
| <b>Health</b>        | Number of community walking and biking events held                                                                                                                                                                                        | Annually                                              | City Parks and Recreation Departments (Cities of Cleveland Heights, University Heights, and South Euclid)               |
|                      | Number of safe walking and biking training sessions held annually                                                                                                                                                                         | Annually                                              | Cities of Cleveland Heights, University Heights, and South Euclid<br><br>Heights Bicycle Coalition                      |
| <b>Education</b>     | Number of bicycle and pedestrian safety classes taught to police officers                                                                                                                                                                 | Annually                                              | Police Departments (Cities of Cleveland Heights, University Heights, and South Euclid)<br><br>Heights Bicycle Coalition |



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| Plan Goal               | Performance Measure                                                                                     | Timeline (how often is data collected/updated) | Responsibility (who will collect the data)                                                                          |
|-------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Education, cont.</b> | Number of community-led safety workshops and town hall meetings on bicycle and pedestrian safety issues | Annually                                       | Police Departments (Cities of Cleveland Heights, University Heights, and South Euclid)<br>Heights Bicycle Coalition |
|                         | Number of people reached by trainings and curricula developed (i.e. educators trained, students)        | Annually                                       | Cities of Cleveland Heights, University Heights, and South Euclid                                                   |
|                         | Number of interactions per public transit social media campaign                                         | Per campaign                                   | GCRTA                                                                                                               |
|                         | Increase in pedestrian and cyclist usage after improvements are made (bike and ped counts)              | Annually                                       | Cities of Cleveland Heights, University Heights, and South Euclid<br>NOACA                                          |