MAYFIELD ROAD MULTIMODAL CORRIDOR STUDY

FINAL REPORT

OCTOBER 2018

NORTHEAST OHIO AREAWIDE COORDINATING AGENCY
NOACA: Planning For Greater Cleveland

NOACA TLCI Program

Sponsored By:

- City of Cleveland Heights
- City of Lyndhurst
- City of Mayfield Heights
- City of South Euclid

Acknowledgements

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CHAPTER I: INTRODUCTION

Introduction

The goals of this study were informed by previous community planning efforts, NOACA TLCI program objectives, and a stakeholder and community engagement process. This chapter introduces the study and all of the background information that helped to guide the planning process.

TRANSPORTATION FOR LIVABLE COMMUNITIES

The cities of Cleveland Heights, South Euclid, Lyndhurst, and Mayfield Heights were awarded a planning grant through the Transportation for Livable Communities Initiative (TLCI) by the Northeast Ohio Areawide Coordinating Agency (NOACA) to study the Mayfield Road corridor that runs through all four communities. This program awards funding to aid communities in studying and implementing transportation and land use strategies that help to improve overall livability for residents.

STUDY AREA AND PURPOSE

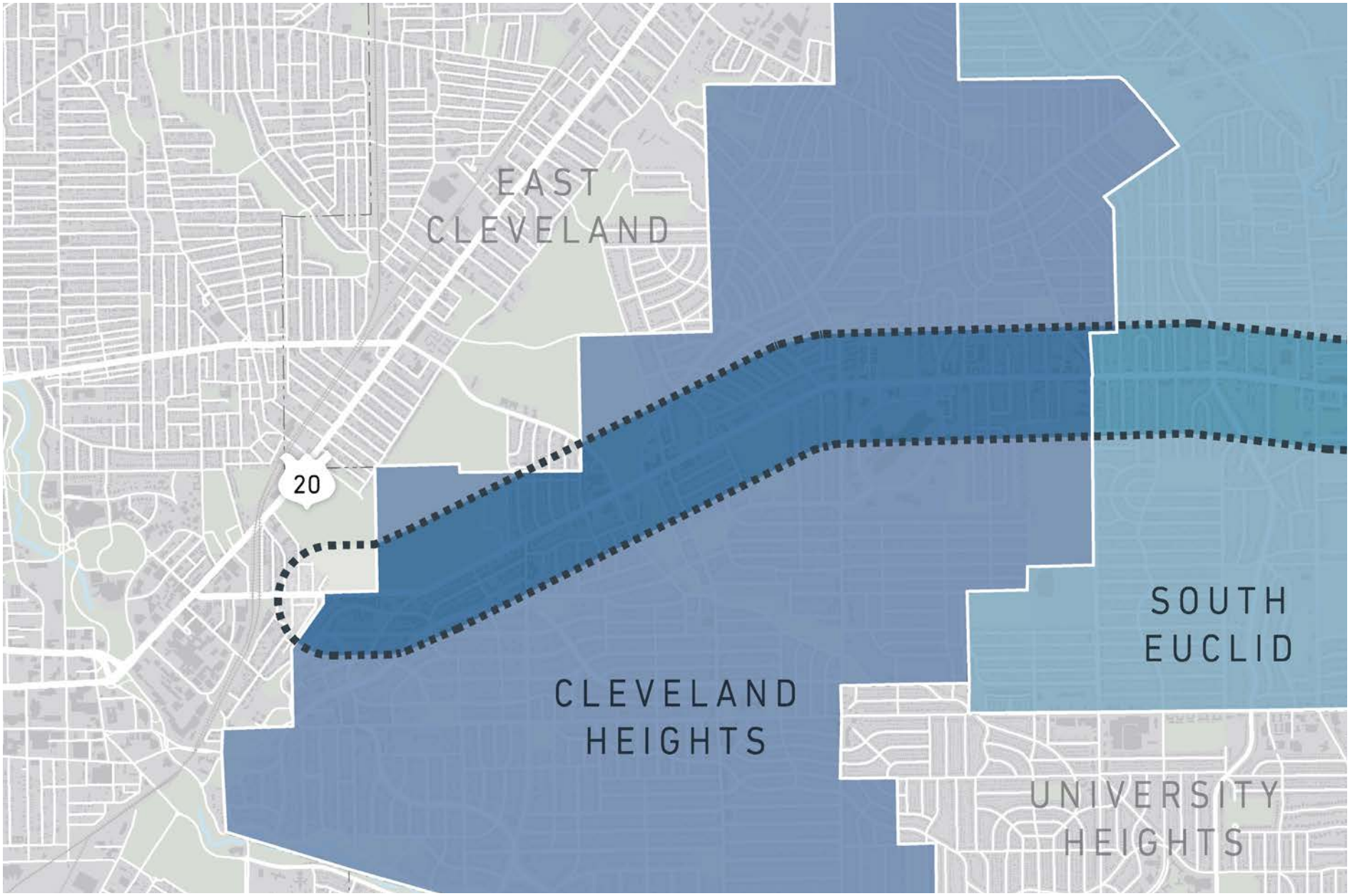
The Study Area runs the length of Mayfield Road within the cities of Cleveland Heights, South Euclid, Lyndhurst, and Mayfield Heights, beginning at 126th Street on the western edge and ending at SOM Center Road to the east. This portion of Mayfield Road within the Study Area is approximately 8 miles long.

The study considers the entirety of the street within the public right-of-way, as well as the properties directly adjacent to the street. The map on the following page illustrates the general Study Area for this plan.

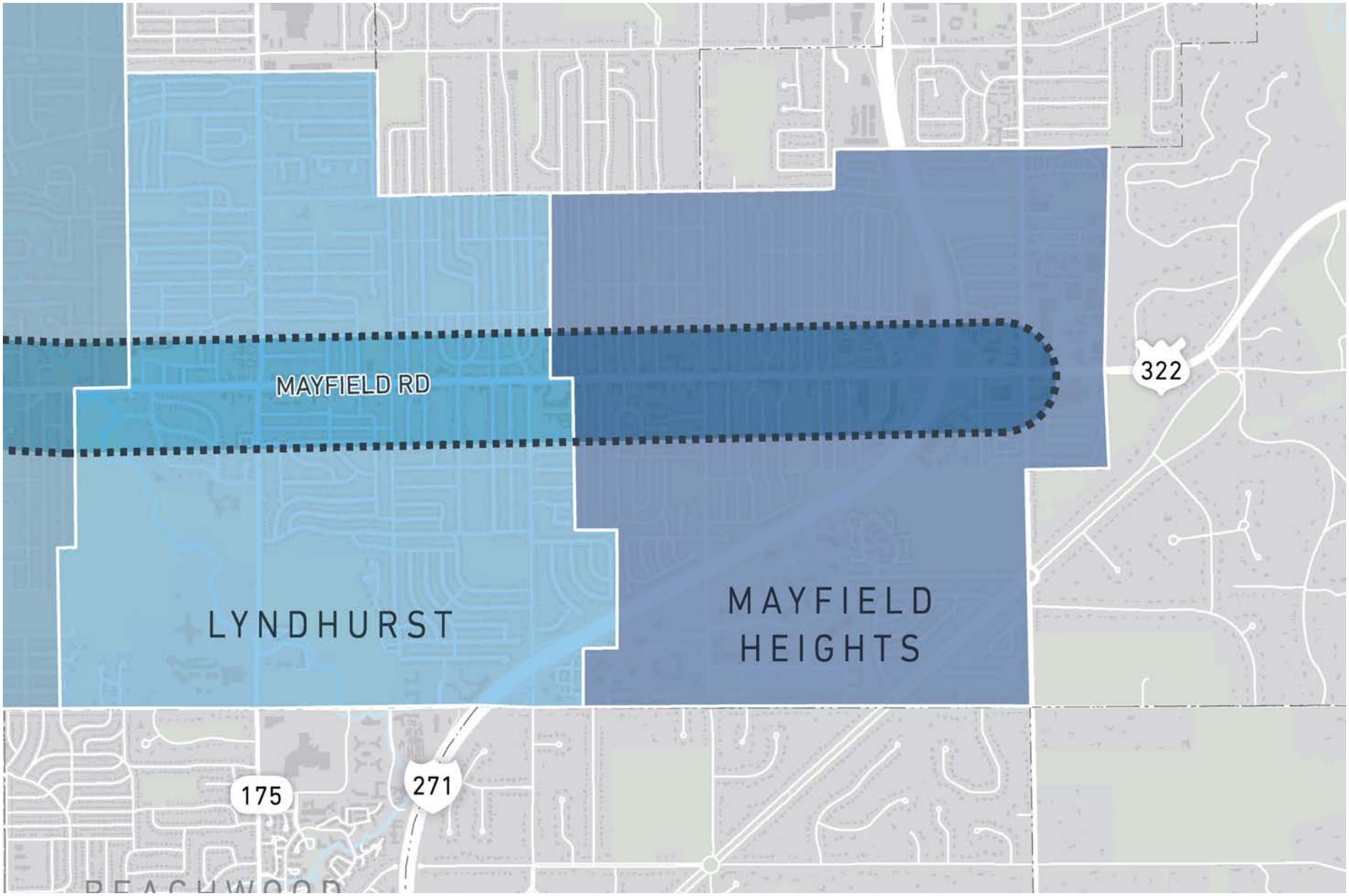
The intent of the study is to create a unified vision for the corridor that appropriately integrates transportation and land use, while addressing the individual needs and character of each community. Some of the key considerations guiding the study included:

- low and medium cost improvements that take advantage of available right-of-way
- improving safety & connectivity for pedestrians, bicyclists and public transit
- promote reinvestment in declining areas and provide improved access
- promotes economic viability, beautification and potential for private reinvestment

STUDY AREA



STUDY AREA



EXISTING PLANS AND POLICIES

Existing plan and policy documents relevant to the Mayfield Road corridor were reviewed to help inform the existing conditions assessment and gather all relevant material regarding past recommendations, project goals, and community visions.

PLAN DOCUMENT	YEAR	STUDY AREA
Cleveland Heights Master Plan	2017	Cleveland Heights
GCRTA Bus Stop Design Guidelines	2017	Greater Cleveland Area
Mayfield Heights Commercial Corridor Design Manual	2016	Parcels fronting Mayfield Road and SOM Center Road in Mayfield Heights
CUY US 322 Signal Retiming	2016	Mayfield Road Corridor in Lyndhurst
South Euclid Comprehensive Master Plan	2015	City of South Euclid
Eastside Greenway Plan	2015	Eastern Cuyahoga County
Mayfield Road Corridor Strategic Development Plan	2014	Mayfield Road Corridor in Mayfield Heights
GCRTA Strategic Plan	2014	Greater Cleveland Area
Facilitating Bicycle and Transit Travel in University Circle and Cleveland Heights	2013	University Circle and Cleveland Heights
South Euclid-Lyndhurst Schools Safe Routes to School Travel Plans	2013	City of South Euclid and City of Lyndhurst
Mayfield Road Traffic Signal Warrant Study	2012	Cleveland Heights
Cleveland Heights Strategic Development Plan	2011	Cleveland Heights
ODOT Safety Studies	2010-14	Various Intersections
GCRTA Transit Waiting Environments	2004	Greater Cleveland Area
Mayfield Heights Master Plan	2004	City of Mayfield Heights

While the origin and subject matter of each plan varied, many of the goals and recommendations followed a similar overarching theme, expressing a need to create a transportation system that enables a higher quality of life and supports the future growth of the community. The goals and objectives from these studies all support the vision of the TLCI program, and were used as a basis for guiding the direction of the planning process for this study.

OVERALL GOALS	OBJECTIVES
Promote and encourage connectivity	▸ Undertake streetscape improvements to create cohesive, yet distinct districts, that **support walking, bicycling, and transit**
	▸ Adopt zoning and access management strategies that **promote traffic safety and efficiency**
Increase the quality and accessibility of alternative modes of transportation	▸ **Connect existing non-motorized segments** by filling the gaps and connecting them to activity centers
	▸ **Support enhanced public transit**
	▸ **Coordinate with the RTA** and neighboring communities to improve transit options
Support economic development and reinvestment in underutilized properties	▸ **Promote mixed-use core development** at major nodes
	▸ **Encourage rehabilitation and adaptive reuse** of existing commercial sites and buildings where possible
	▸ **Establish a multimodal network** to support desired growth

NOACA TLCI PROGRAM OBJECTIVES	
Enhance regional cohesion by supporting collaboration between regional and community partners	**Provide people with safe and reliable transportation choices** that enhance their quality of life
Promote reinvestment in underused or vacant/abandoned properties through development concepts supported by multimodal transportation systems	**Ensure that the benefits of growth and change are available to all members of a community** by integrating principles of accessibility and environmental justice into projects
Support economic development through place-based transportation and land-use recommendations, and connect these proposals with existing assets and investments	**Develop transportation projects that provide more travel options** through complete streets and context sensitive solutions, increasing user safety and supporting positive public health impacts

PROJECT PROCESS

The Mayfield Road Multimodal Corridor planning process was a year-long effort with three major tasks as illustrated below.

PROJECT SCHEDULE

JULY 2017

TASK 1

GROUNDWORK & ENGAGEMENT

- Project launch and stakeholder engagement
- Document review and existing conditions assessment
- Study Group Meeting 1

Kick-off Meeting

TASK 2

CONCEPT DEVELOPMENT

- Data collection and traffic analysis
- Street design alternatives and draft recommendations
- Study Group Meeting 2

Public Workshops 1 & 2

TASK 3

PLAN COMPLETION

- Draft plan development and review
- Revisions to draft plan based on stakeholder and community feedback
- Revisions to draft plan
- Final plan adoption

Public Open House 3

JULY 2018

*Cleveland Heights was added to the study in April of 2018

PLAN OVERVIEW

The Mayfield Road Multimodal Corridor plan is divided into six chapters as described below.

CH 1
INTRODUCTION

This chapter introduces the study and explains the public planning process that was undertaken to develop the plan. It describes the study area and purpose and summarizes the review that was completed of previous planning efforts and existing documents.

CH 2
PUBLIC ENGAGEMENT

This chapter provides an overview of the public engagement that was conducted throughout the planning process. It describes the resources that were used to engage community members and solicit feedback and provides a summary of the input that was collected.

CH 3
LAND USE & DEVELOPMENT

This chapter dives into the existing development patterns and land uses along the Mayfield Road corridor today. It highlights potential strategies for guiding future development along the corridor and describes tools that can be used to enhance development conditions over time.

CH 4
TRANSPORTATION

This chapter analyzes the current conditions along the corridor related to all modes of transportation and explores potential opportunities to improve those conditions. Strategies for enhancing pedestrian, bicycle, and transit facilities, as well as general aesthetics are described in this chapter.

CH 5
STREET DESIGN

This chapter explores the corridor from curb to curb - digging into current traffic conditions and available space for reconfiguring the street. It explains the preferred options for redesigning Mayfield Road as well as the tradeoffs to consider when planning for the future Mayfield Road.

CH 6
IMPLEMENTATION

This chapter provides a summary of all of the strategies discussed throughout the plan. It provides a guide for each community to work toward implementing the vision for Mayfield Road that was established through the community engagement process.

CHAPTER II: PUBLIC ENGAGEMENT

Public Engagement

The planning process for Mayfield Road involved leadership from each of the four communities, a Study Group, and a robust public engagement effort. This process included two in-person workshops that were well attended by residents of each community, as well as a project website and social media outreach.

STUDY GROUP

The Study Group consisted of leadership and staff from each of the four communities, as well as ODOT, NOACA, and the RTA. This group met three times over the course of the study and helped to guide the overall planning process. Each member provided unique insight into the challenges and opportunities of the corridor, which helped to generate a full understanding of the study area. The group was also responsible for providing feedback on all materials and deliverables created throughout the study.

PUBLIC OUTREACH

Through coordination with City staff, Study Group members, and other local organizations, the public outreach process aimed to reach every resident of each community. This effort included a dedicated project webpage, social media platforms, local news media, an online survey, community mailers (via email and regular mail), yard signage marketing, flyers on area buses, and two community workshops.

Input and feedback from area residents helped to shape the planning process, the plan recommendations, and the implementation priorities.

ONLINE PRESENCE

A project webpage was launched through the NOACA website and shared across social media platforms for each community. Information about upcoming meetings, meeting presentations and materials, and an online survey were shared through these resources. Facebook events were also created for each public workshop and shared on each community's Facebook page.

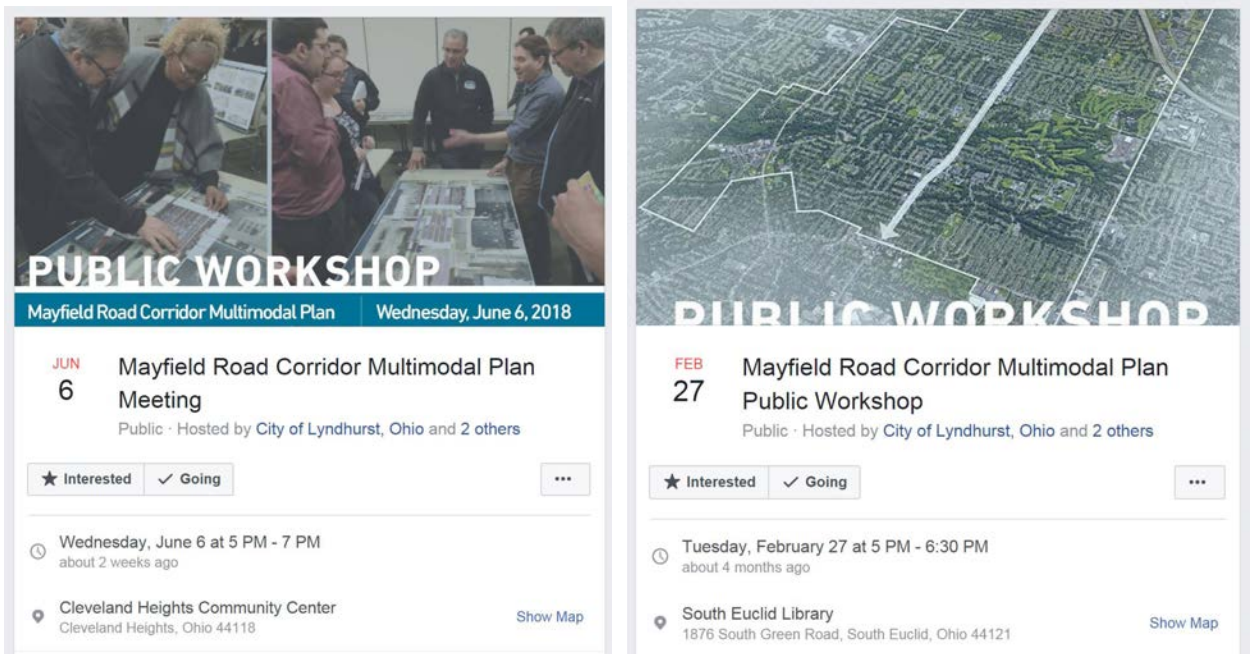
The following statistics are a summary of the activity generated through the various online resources used throughout the study.

6,000+ Facebook Users Reached

800+ Unique Page Views on the Project Webpage

45 Online Surveys Completed

A Webpage was Developed for the Project Through Collaboration with NOACA to Provide Information in a Central Online Resource



Facebook Events Were Created in Collaboration with NOACA to Generate Project Buzz and Workshop Attendance

PUBLIC WORKSHOPS

The first public workshop introduced the study to community residents, explored existing conditions along the corridor, and asked attendees to share their vision for the corridor through a series of interactive activities. The workshop was held on February 27th, 2018 at the South Euclid-Lyndhurst Library in South Euclid from 5-7pm.

More than 70 members of the community attended the workshop and participated in the visioning exercises. This included a questionnaire, a street design and preferences activity, and a corridor improvements station. The questionnaire asked attendees to describe Mayfield Road as it exists today, what their vision is for the future of Mayfield Road, and what their priorities are for the corridor.

The street design activity provided visual examples of potential street configuration designs for Mayfield Road and asked participants to identify their preferred design option. Participants were also invited to create their own street configuration if none of the example options fit their vision for the corridor. The design station allowed participants to build their own version of Mayfield Road by selecting the desired number of travel lanes and widths of sidewalks, and decide what tradeoffs they would make in order to implement their vision.

Public Workshop Attendees Participating in Visual Preference Surveys

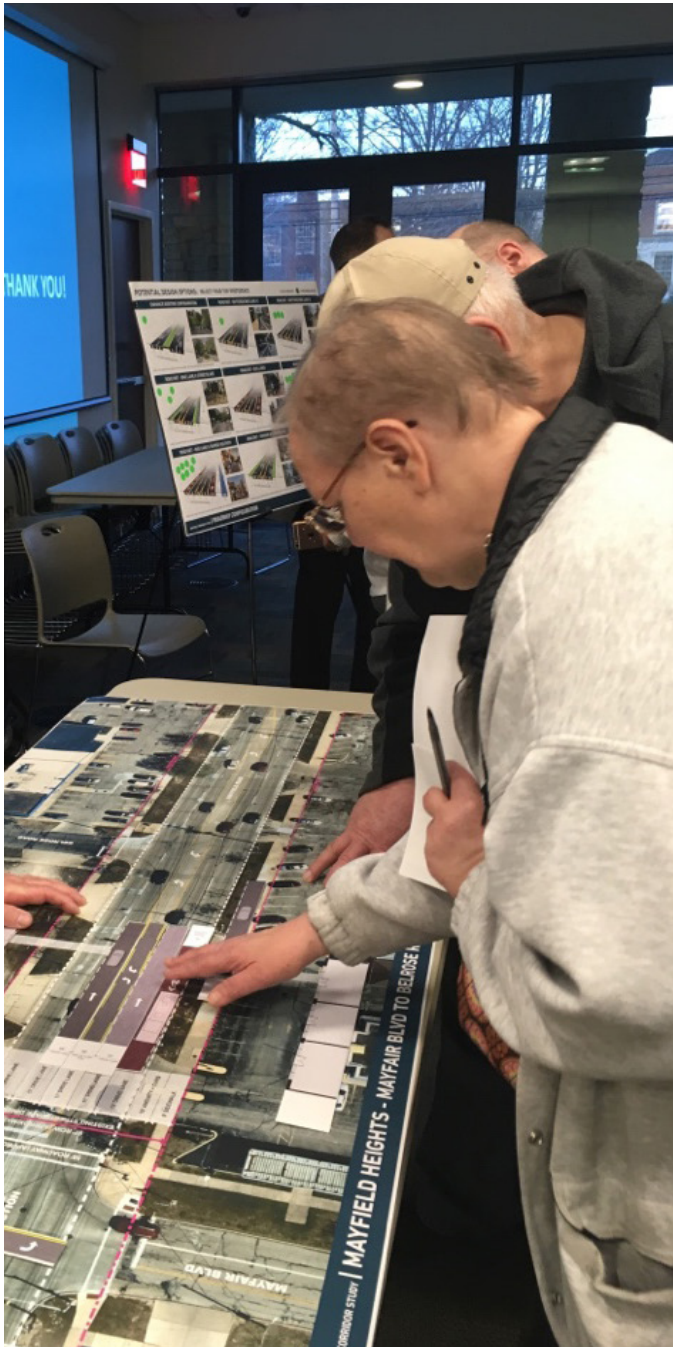
The corridor improvements station asked participants to identify specific locations where they would like to see additional pedestrian crossings, improved transit stop amenities, enhanced pedestrian facilities, and bicycle parking options.

The second public workshop was similar in format to the first workshop and was held on June 6th, 2018 at the Cleveland Heights Community Center. More than 60 members of the community attended and shared their thoughts about the corridor.

Between the two workshops, more than 130 residents from the four communities attended and shared their input. More than 60 questionnaires were collected with open-ended responses describing Mayfield Road today, visions for the future, and top priorities for the corridor. In combination with the online surveys that were completed, a total of more than 100 survey responses were collected.

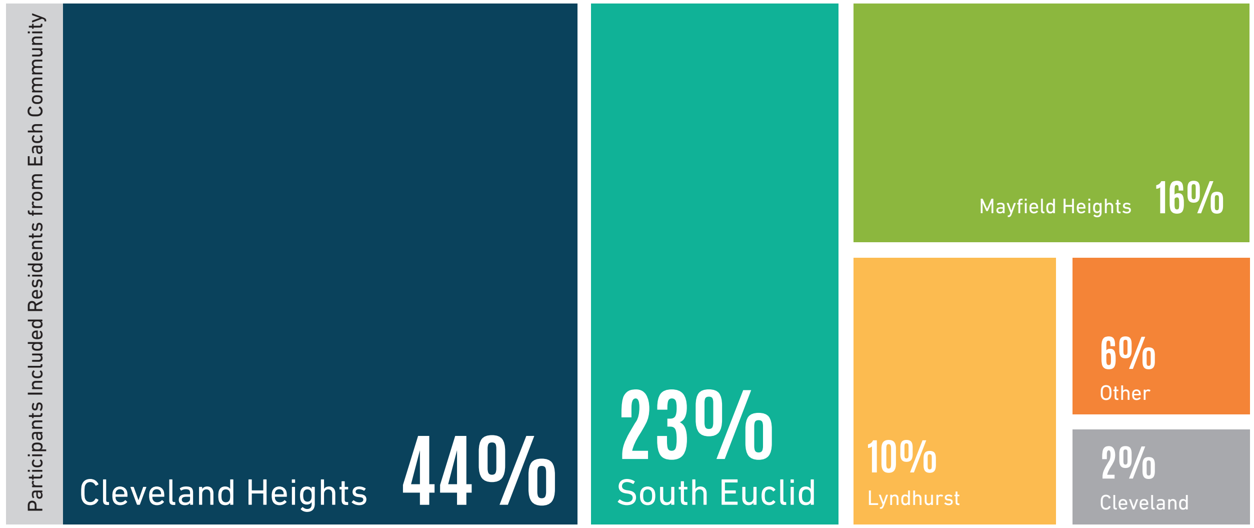
130+
Workshop
Attendees


MAYFIELD ROAD CORRIDOR
MULTIMODAL TRANSPORTATION PLAN


THANK YOU!
MAYFIELD HEIGHTS - MAYFAIR BLVD TO

INPUT SUMMARY

The following represents a summary of all community input received through the various online platforms and public workshops. As part of the input process, community members were asked to identify the community where they currently reside. Out of the participants who provided this information, the majority (67%) were residents of either Cleveland Heights or South Euclid. Residents from Lyndhurst and Mayfield Heights comprised about 26% of participants, and the remaining 8% were interested outside parties.



Mayfield Road Today

Participants were asked to describe Mayfield Road as it exists today. The word cloud shown here illustrates the words that were most frequently used to describe the corridor; the larger the word, the more frequently it was cited. Some common descriptions of the corridor included:

- "it's congested"
- "it's a traffic sewer"
- "I avoid it as much as possible"
- "it's very car friendly"
- "it's dangerous"

The primary theme occuring throughout the responses received was that residents do not find Mayfield Road an appealing corridor as it exists today.

Mayfield Road Vision

Participants were asked to describe what their vision for the future of Mayfield Road would look like. The word cloud shown here illustrates the words that were most frequently used in participants visions for the corridor. Some of the most frequent characteristics described included:

- "pedestrian friendly"
- "more businesses and development"
- "better bike facilities"
- "more greenery"

The primary theme occuring throughout the responses received included a vision for a more walkable and people-friendly corridor.

Mayfield Road Priorities

Participants were asked to list their top priorities for improvements to the corridor. The most common responses were related to walkability, demonstrating a desire for a more pedestrian-friendly environment. The next most frequently described priorities included transit improvements and aesthetic enhancements to the corridor. Additional topics that were mentioned frequently in the responses included bike-friendliness, a desire for more development, safety improvements, and general concern about improving the flow of traffic.

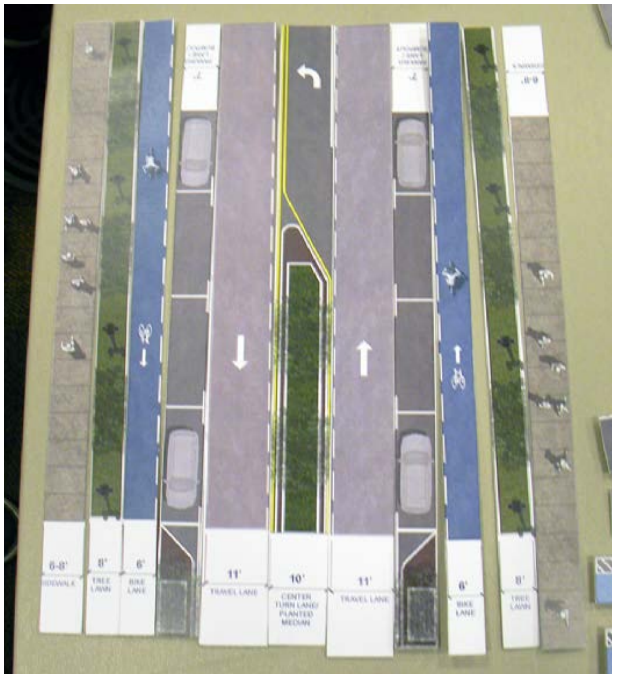
All of this input was used to inform the recommendations throughout the plan.

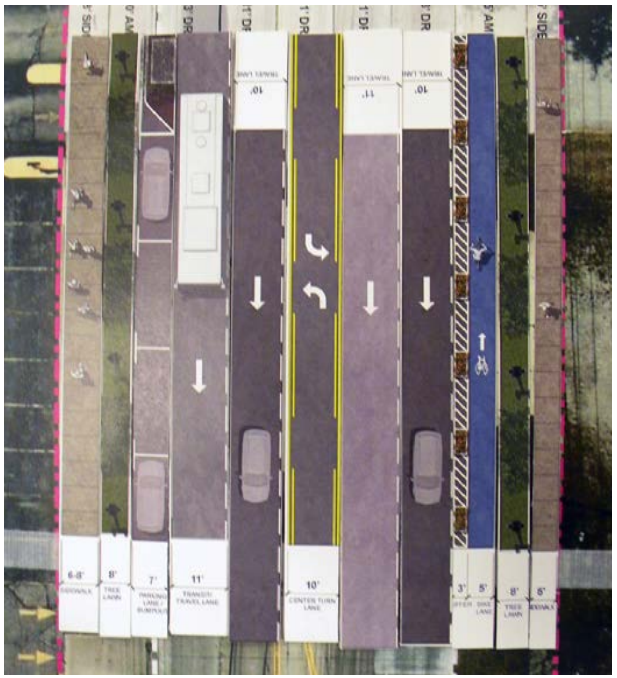
Street Design Activity

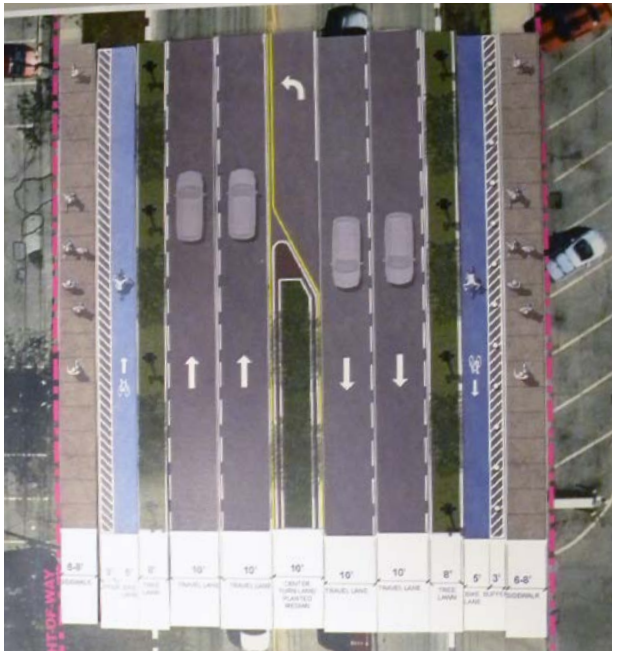
The primary purpose of the street design activity is to help the community understand the challenges of street design and the constraints that exist within the available right-of-way (ROW). Base maps were provided for various sections of the corridor with existing ROW, curb to curb, and individual lane dimensions. This allowed participants to experiment with different street elements and see how they all fit (or do not fit) together within the available space.

The activity generated discussion between community members, the planning team, and city staff regarding desired street elements, appropriate dimensions for those elements, traffic considerations, and other related street design factors. Many of the meeting attendees participated in the conversations, but rather than designing their own street configuration they chose to select their preferred option from the board showing potential designs. Those who chose to design their own configuration seemed more inclined to keep all existing lanes of traffic, but still wanted to try fitting in other design elements.

A secondary benefit to the activity is collecting additional input on the desired elements and cross-section configurations. As participants experimented with potential street design options, the planning team recorded the configurations by taking photographs of each participant's finished product. Photos of some of the completed designs are shown here.







The hesitancy to remove existing travel lanes is illustrated by many of the images shown here, but nearly all of those design also include bicycle facilities or on-street parking. These participants chose the narrowest possible dimensions for all facilities, including 10-foot travel lanes, in order to squeeze all of the elements into the available space. Space above the curb was also repurposed to squeeze in bike facilities next to the sidewalk.

It is also worth noting that all configurations that included bike facilities were designed to have buffered or protected facilities. Most participants felt that regular bike lanes with no separation from traffic are not an appropriate design option for Mayfield Road.

Transit was also a consideration in most of the participant-created design options, either through a wider travel for both buses and cars, or a wider travel lane designated for only buses and bicyclists.

The input that was gathered through the street design activity and related discussions was used to guide the planning process and subsequent analysis. All of the input collected regarding preferred street configurations is discussed in the street design chapter later in this report.

CHAPTER III: LAND USE AND DEVELOPMENT

Land Use and Development

Development patterns along the Mayfield Road corridor represent a variety of land uses, architectural styles and eras of construction. This chapter considers the context of land use and development as it relates to the transportation functions of the roadway, and provides recommendations to guide future development toward promoting a more walkable, multi-modal environment.

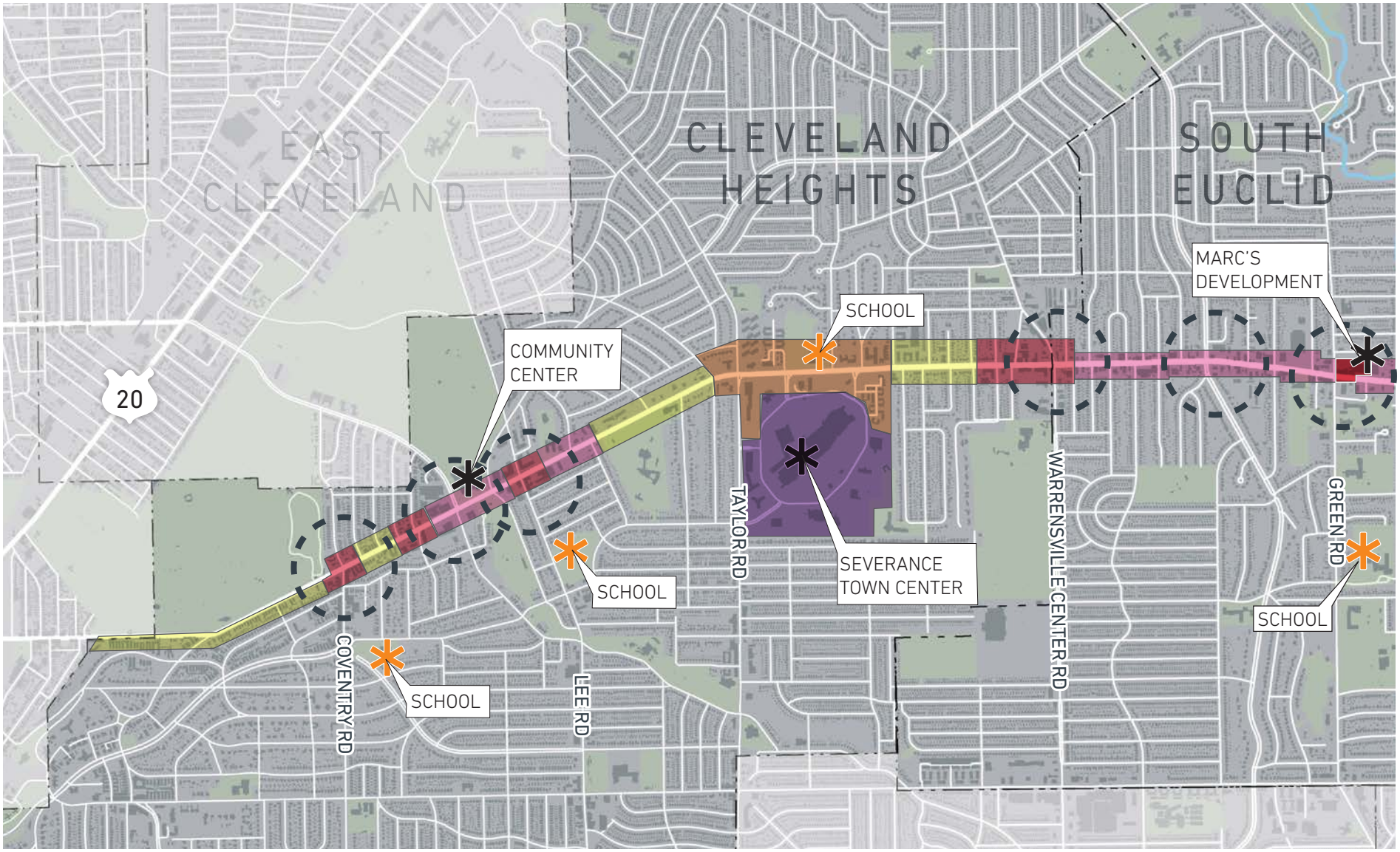
EXISTING DEVELOPMENT CHARACTER

This section provides an inventory of the land uses and development character along the length of the corridor. The different character areas take into consideration the type street frontage, which includes the location, scale, and character of buildings and parking as they relate to the street and sidewalk. The land uses and development character change significantly as one travels along the corridor, which has a direct impact on the accessibility and function of the transportation system.

Development Typologies

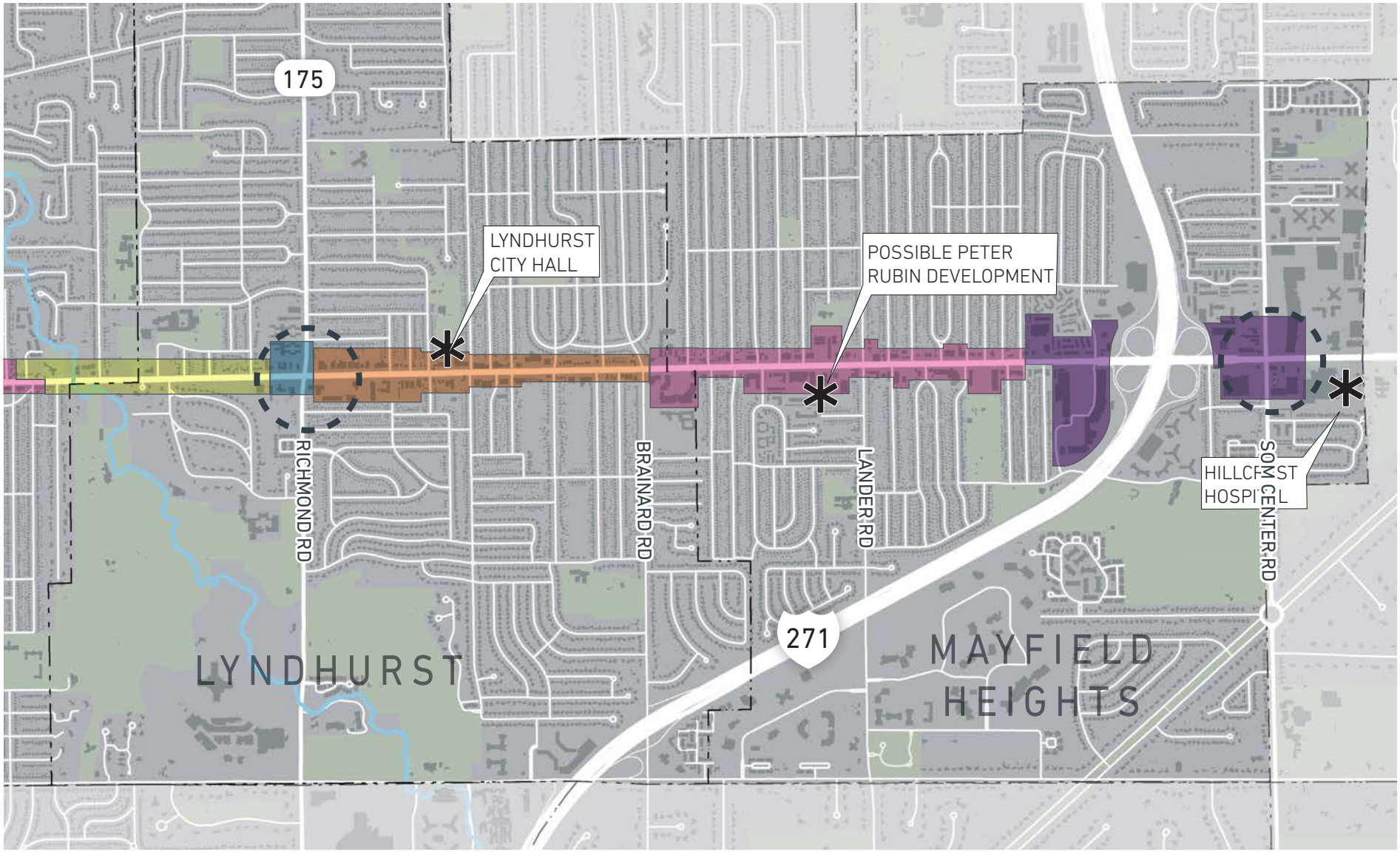
There are six different development character typologies throughout the study area that will be discussed on the following pages:

- Regional Commercial
- Suburban Commercial Corridor
- Urban Commercial Node
- Suburban Office/Institutional Node
- Residential Corridor
- Mixed Suburban Commercial / Residential



DEVELOPMENT CHARACTER

- Regional Commercial
- Suburban Commercial
- Urban Commercial
- Suburban Office
- Mixed Suburban Commercial/Residential
- Residential



Major Destination

School

Activity Node

REGIONAL COMMERCIAL

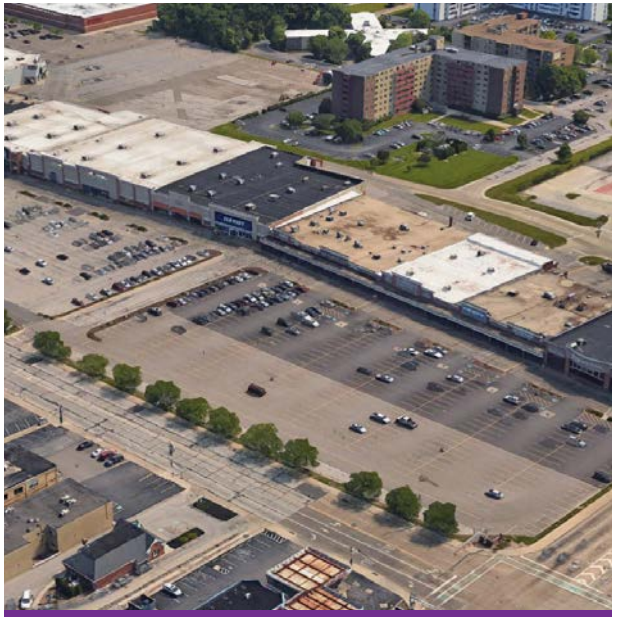
The I-271 interchange provides access to regional shopping center destinations on both sides of the expressway in Mayfield Heights, as well as the Cleveland Clinic Hillcrest Hospital. This sets a tone of automobile-oriented development patterns at the eastern gateway to the corridor. Further west in Cleveland Heights, the Severance Town Center shopping mall is another regional commercial destination.

These areas are characterized by large format buildings set behind large parking lots in “super blocks” of development. Due to consolidated land ownership, vehicular curb cuts for driveways are somewhat less frequent and more coordinated than elsewhere in the corridor.

Severence Town Center Mall (Cleveland Heights)

Golden Gate Plaza (Mayfield Heights)

Automobile Dealership (Mayfield Heights)

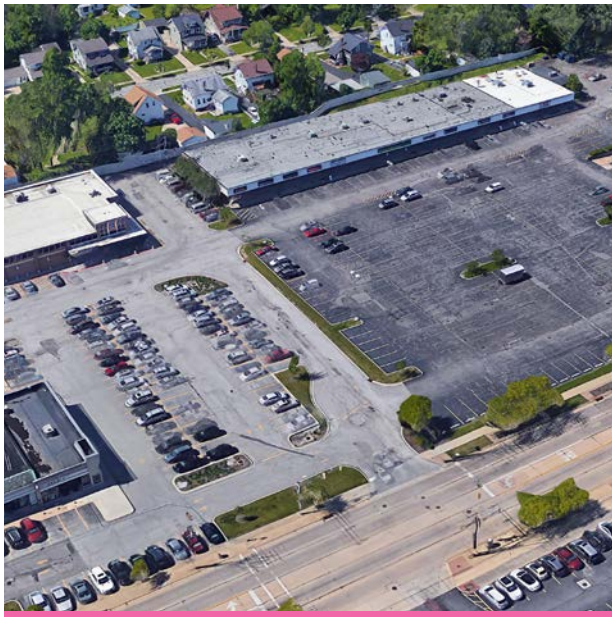


Eastgate Shopping Center (Mayfield Heights)

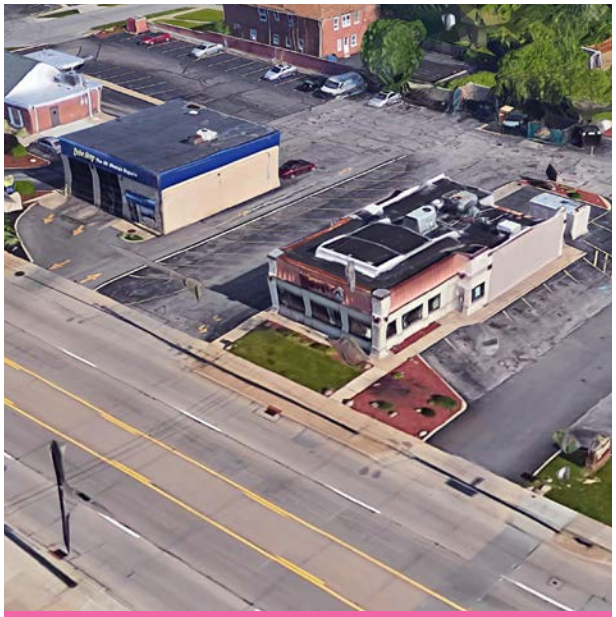
SUBURBAN COMMERCIAL

Much of the Mayfield Road Corridor is characterized by suburban commercial development. Commercial buildings occasionally engage the street, but more typically are set behind parking lots of various sizes, sometimes with a landscaped edge, but commonly with parking directly behind the sidewalk. As a result, much of the roadway corridor is lined with significant stretches of continuous parking lots.

These areas include retail strip centers, small-scale shopping centers, and stand-alone retail buildings, including drive-thru restaurants and other auto-oriented uses. Vehicular curb cuts are frequent, and typically uncoordinated between adjacent properties. This is the typical development condition along the corridor through Mayfield Heights, and much of Lyndhurst and South Euclid, along with some stretches in Cleveland Heights.



Large building setbacks with expansive parking lots



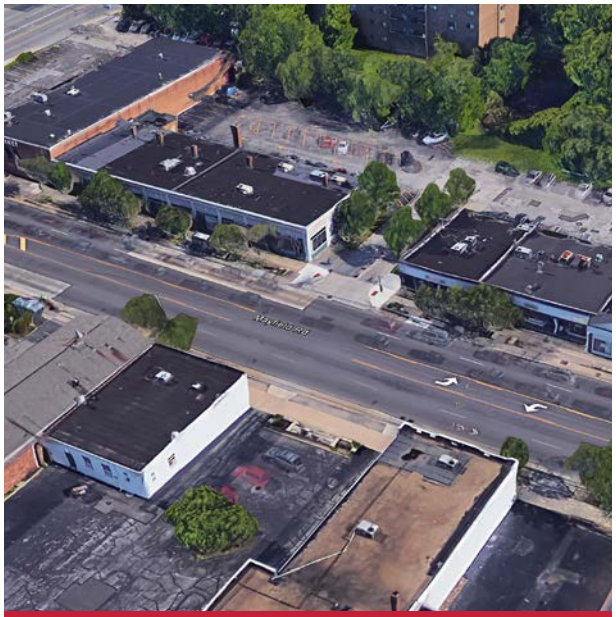
Numerous driveways and drive-through facilities

Large driveways into street-front parking lots

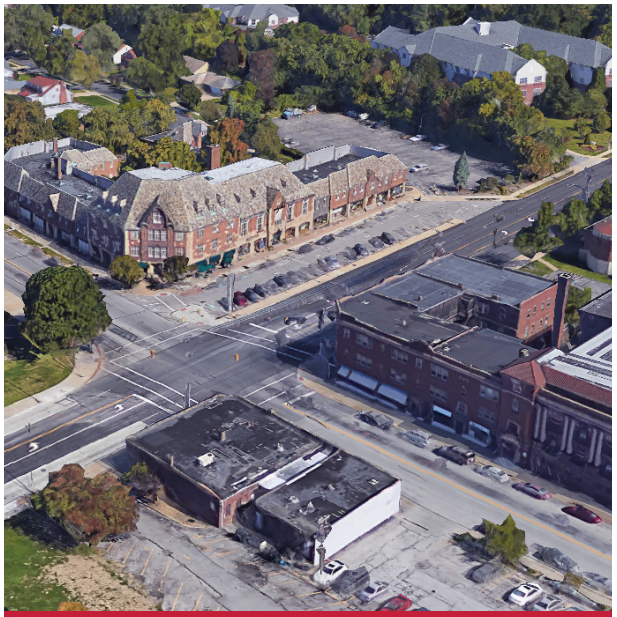
Continuous parking lot eges along the sidewalk

URBAN COMMERCIAL

Some sections of the corridor are lined with more or less continuous building frontage along the street with active commercial uses. These are the most pedestrian-oriented areas of Mayfield Road, representing earlier development patterns that pre-date the automobile-oriented development that has predominated over the past 40 to 50 years. Driveway curb cuts are less frequent, accessing parking located to the side or rear of buildings. These areas are generally located at major intersections, including Mayfield and Green Road in South Euclid, and the Warrensville Center, Lee Road and Coventry Road intersections in Cleveland Heights.

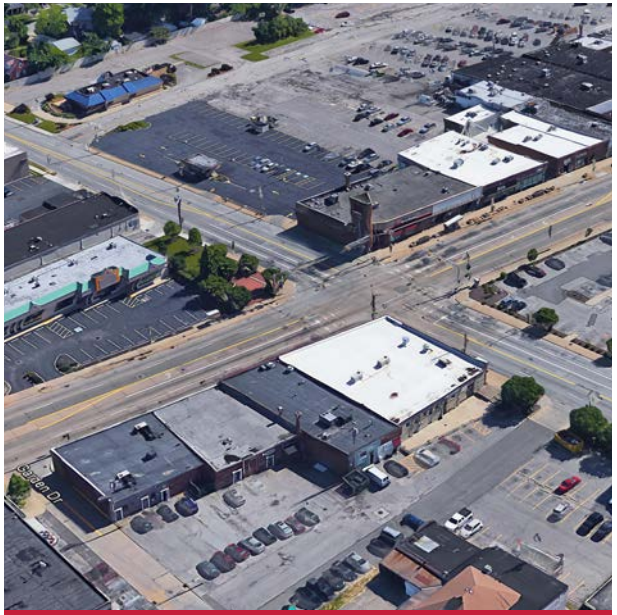


Mayfield and Warrensville Center Road (Cleveland Heights)



Mayfield and Lee Road (Cleveland Heights)

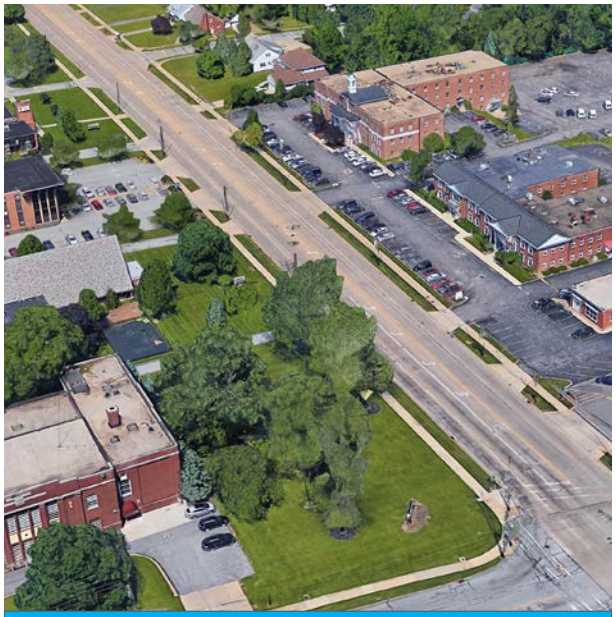
Street-facing buildings with wide sidewalks (South Euclid)



Minimum building setbacks with parking in rear (South Euclid)

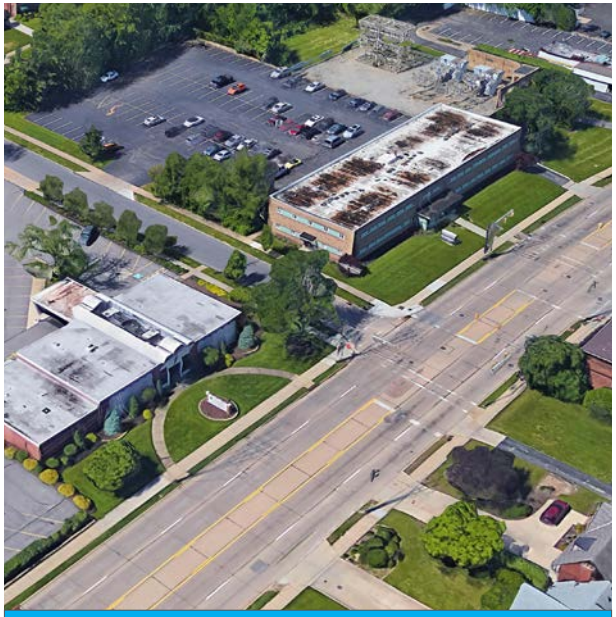
SUBURBAN OFFICE/INSTITUTIONAL

While much of the corridor is lined with a mixture of retail and office buildings set behind parking lots, there are occassional clusters of office or institutional buildings (churches, schools, etc.) set behind front yards and landscape ares. Vehicular curb cuts for driveways are somewhat frequent.

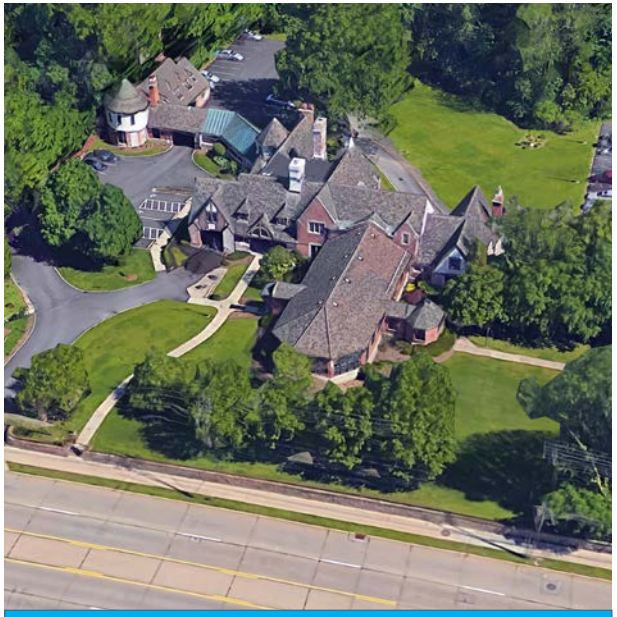


South Euclid-Lyndhurst Board of Education

Lyndhurst Community Presbyterian Church



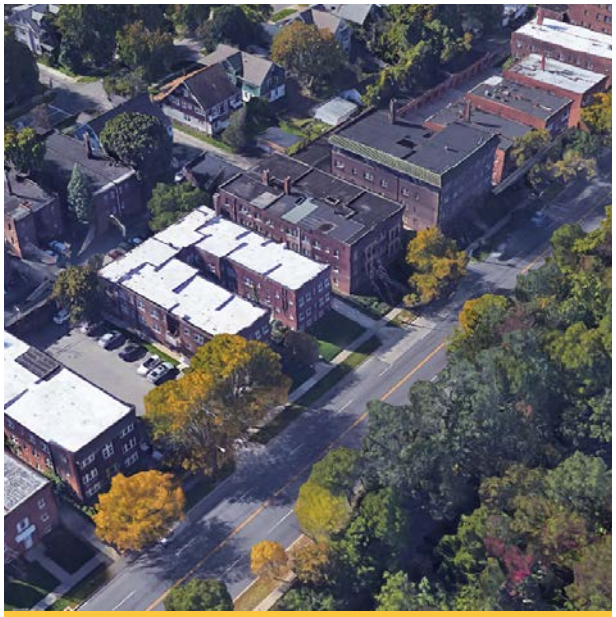
Large driveways into street-front parking lots



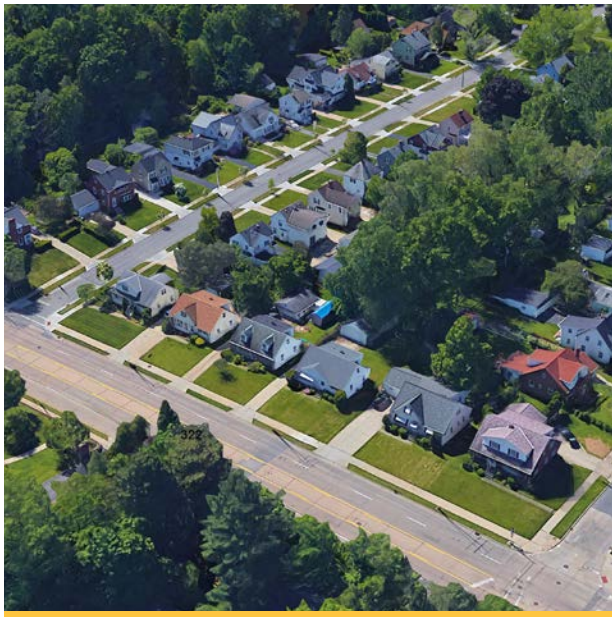
William Telling Mansion

RESIDENTIAL

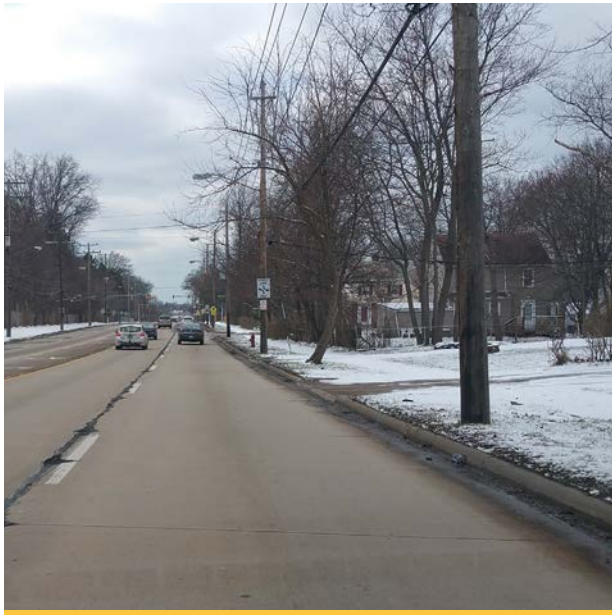
Some stretches of the corridor are lined primarily with residential development (single-family and/or multi-family) with front yard setbacks and somewhat frequent vehicular curb cuts for driveways. Residential development types range from relatively suburban, such as the single-family homes in west Lyndhurst and east South Euclid, to older, more urban apartment buildings in Cleveland Heights.



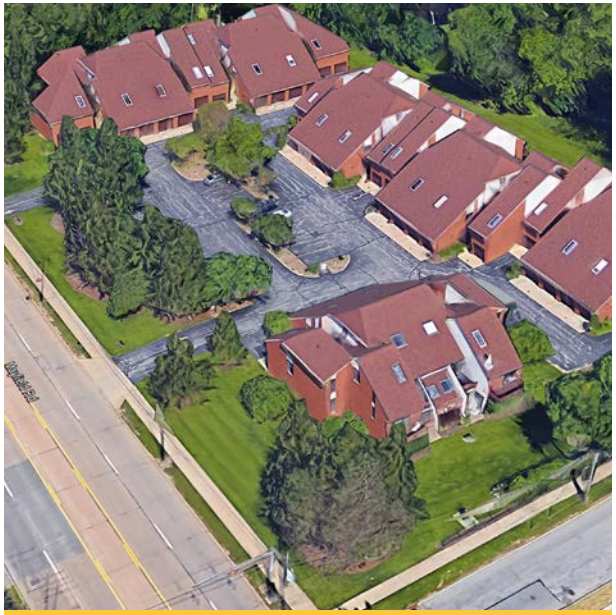
Multi-family apartment buildings (Cleveland Heights)



Single-family, detached housing (South Euclid)



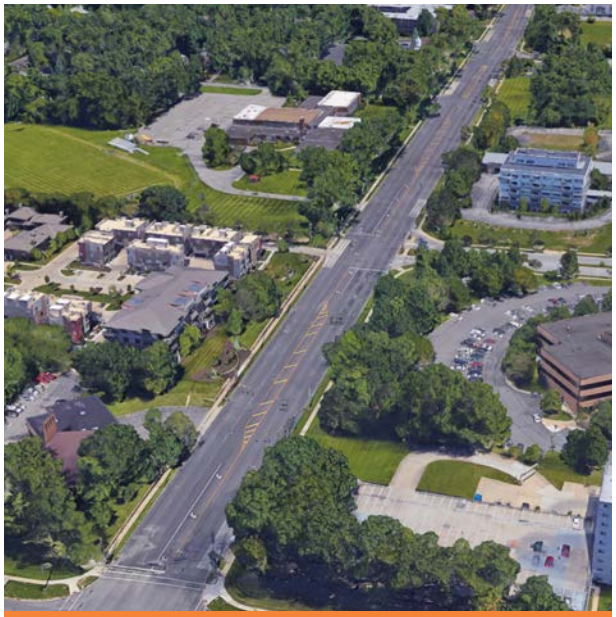
Deep residential front yards (Lyndhurst)



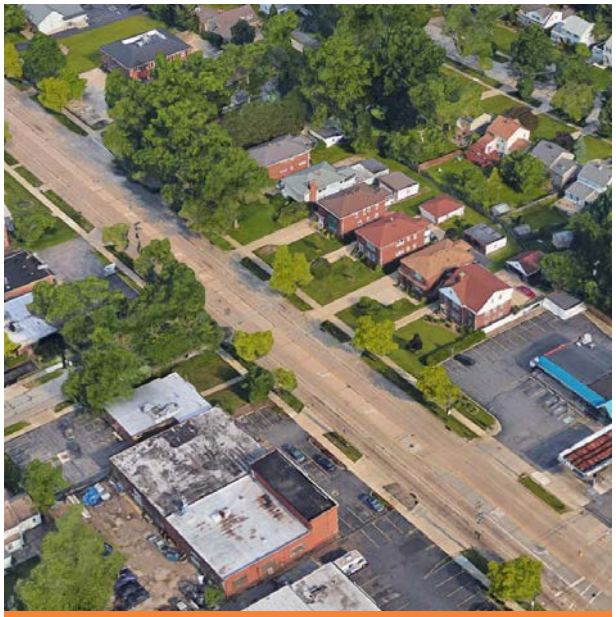
Suburban Townhomes (Lyndhurst)

MIXED SUBURBAN COMMERCIAL / RESIDENTIAL

Some areas of the corridor are a mixture of residential and commercial development, largely reflecting periods of redevelopment from residential to commercial, with a few remaining homes surrounded by retail or office buildings. In some areas, single-family structures have been repurposed for commercial use. Buildings are typically set back from the street by front yards or surface parking lots with somewhat frequent vehicular curb cuts for driveways. This condition largely occurs in Lyndhurst, as well as some sections of the corridor in South Euclid and Cleveland Heights.



Mixture of office and multi-family development



Mixture of single family homes and suburban retail

Single family homes repurposed for commercial use

Suburban commercial with remaining original single family

GUIDING FUTURE DEVELOPMENT

Development Design Standards

Each community should update their zoning requirements to guide appropriate infill development along the corridor. This could take the form of a design character overlay that would address issues of building form and site design to ensure that new development meets the standards of a more vibrant, attractive and pedestrian-oriented corridor.

Design standards should respond to the various existing conditions along Mayfield Road, preserving desired development patterns, while ensuring undesired development patterns are transitioned to more appropriate outcomes as redevelopment occurs. Care should be taken to preserve development flexibility while also establishing clear expectations and predictable processes. The creation of a design character overlay with appropriate standards can:

- Set a vision for each community that communicates their unique goals for development along the corridor
- Create a more engaging street presence that supports and encourages pedestrian activity
- Establish development standards that (1) provide clarity to the development community and (2) protect the public investment in right-of-way improvements
- Encourage redevelopment through the simplification of the plan approval process

The design standards should be simple, yet precise enough to clarify zoning and development expectations along the corridor. Items that may be included:

- **Access management** - as sites along the corridor redevelop, driveways should be closed, consolidated, or minimized
- **Building scale/proportion and maximum building height** - each community should establish appropriate standards for the intensity of development desired in various sections of the corridor
- **Architectural design standards** - minimum requirements should ensure a quality pedestrian experience along the sidewalk, avoiding blank walls for instance; each community may desire additional detailed design requirements
- **Parking placement and design** - parking should be oriented to the rear or side of buildings, and/or appropriately buffered from the sidewalk if located in the front
- **Setbacks and build-to limits** - preserve space for ped/bike improvements, but keep buildings oriented to the street
- **Pedestrian access considerations** - require main entrances facing the street and directly accessed from the sidewalk
- **Streetscape/landscape improvements** - any new or re-development should be required to install streetscape enhancements along the right-of-way

Stages of Redevelopment

Significant changes in development patterns along the corridor will happen gradually over time, while some minor improvements can be completed in the short term. The following diagrams illustrate examples of short, medium, and long-term improvements. Some of these improvements may require public-private collaboration and/or new policies and zoning regulations that establish standards for any site redevelopment on the corridor.

Short-term (quick fixes)

- minor site improvements (e.g. parking, landscaping, etc.)
- may occur through voluntary site updates by property owners
- could be encouraged through grant or small loan programs or coordinated by a Special Improvement District

Mid-term (moderate fixes)

- closing driveways, expanding streetscape
- will require access management plan and coordination between property owners
- may occur incrementally in strategic sections of the corridor

Long-term (high-cost fixes)

- (site redevelopment, burying utility lines, comprehensive roadway improvements)
- site redevelopment will occur incrementally, subject to market forces
- major capital improvement projects will require multiple funding sources and inter-jurisdictional coordination

Design Character Overlays

URBAN COMMERCIAL OVERLAY

The City of Columbus Urban Commercial Overlay (UCO) creates a walkable corridor that reflects the development patterns of the late 19th and early 20th century commercial corridors. In areas where the UCO applies, its regulations apply to all new construction, expansion, and new signage to all commercial uses.

Specifically, the Code addresses the design and location of buildings, parking lots, and other such development standards. Shared parking conditions are encouraged. Examples of regulations include:

- "Buildings are placed no further back from the right-of-way than 10 feet; up to 50% of the building frontage can be set back an additional 5 feet to provide a public-private space, such as an outdoor dining area."
- "At least 60% of the front elevation between 2 and 10 feet in height must be clear window glass."
- "Off-street parking is not permitted between the building and the street."
- "Drive-thru windows are placed to the side or rear of the building."

*City of Columbus Guide: Urban Commercial Overlay

COMMUNITY COMMERCIAL OVERLAY

The City of Columbus Community Commercial Overlay (CCO) creates a walkable corridor that resembles the Main Street - feel of commercial corridors in the early 20th century. Within CCO areas, the regulations apply to all new construction, expansion, and new signage to all commercial uses.

The Code addresses the design and location of buildings, parking lots, and other such development standards. Shared parking conditions are encouraged. Example regulations include:

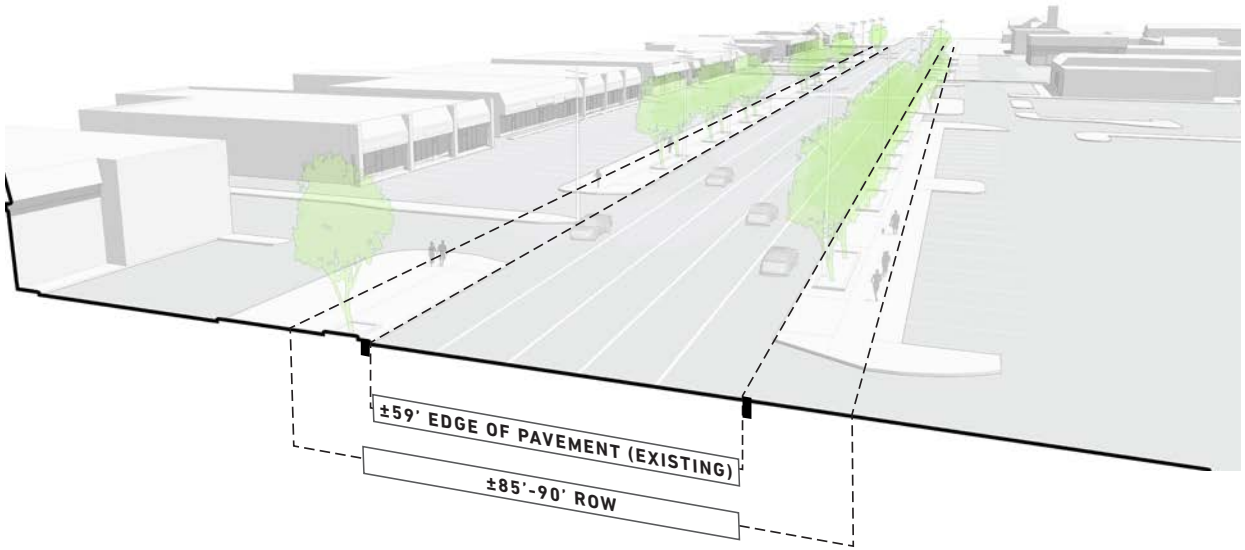
- "Buildings are placed at 25 feet (plus or minus 2 feet) from the public right-of-way of the primary street; up to one-third of the building frontage can be set 5 feet in advance or 15 feet beyond this "build to" line to provide a public-private space,such as an outdoor dining area."
- "Front yards are to be landscaped and parking, stacking and circulation aisles are not permitted between the building and the right-of-way."
- "No more than 50% of off-street parking spaces is allowed to the side of the building."*

*City of Columbus Guide: Community Commercial Overlay

Urban Commercial Overlay - E Main Street, Columbus, OH

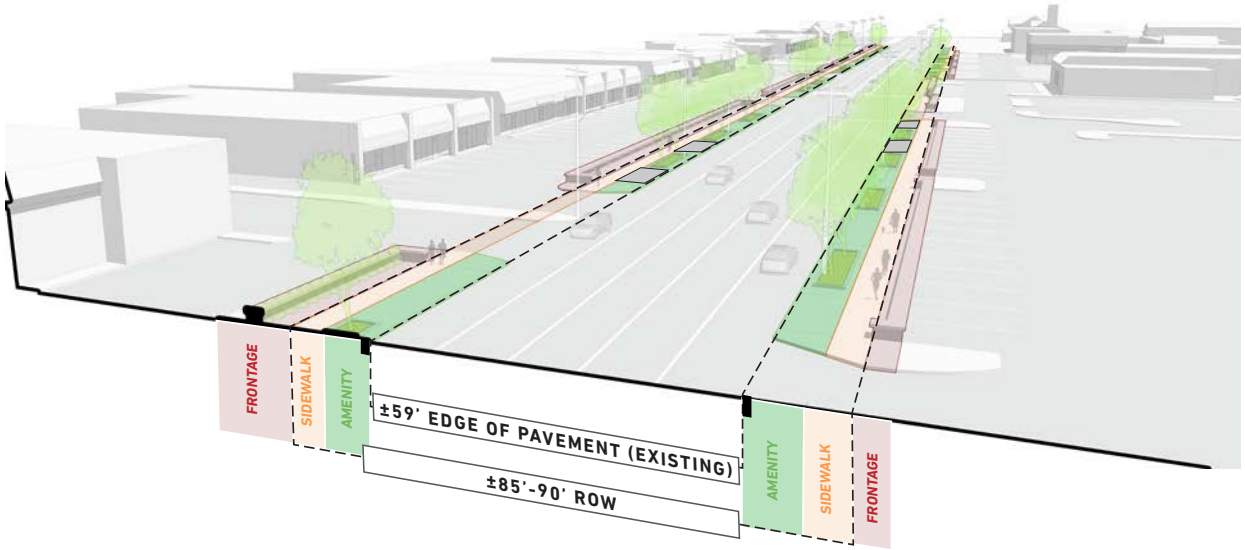
Community Commercial Overlay - N High Street, Columbus, OH

EXISTING CONDITIONS: PARKING LOT FRONTAGE

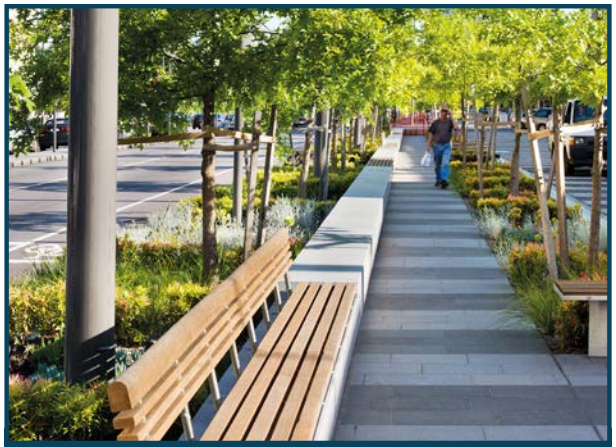


Existing Conditions: Driveways and Parking Lot Frontage

PHASE 1: ESTABLISH BUILD-TO LINE / CREATE PARKING LOT BUFFER (SHORT-TERM)



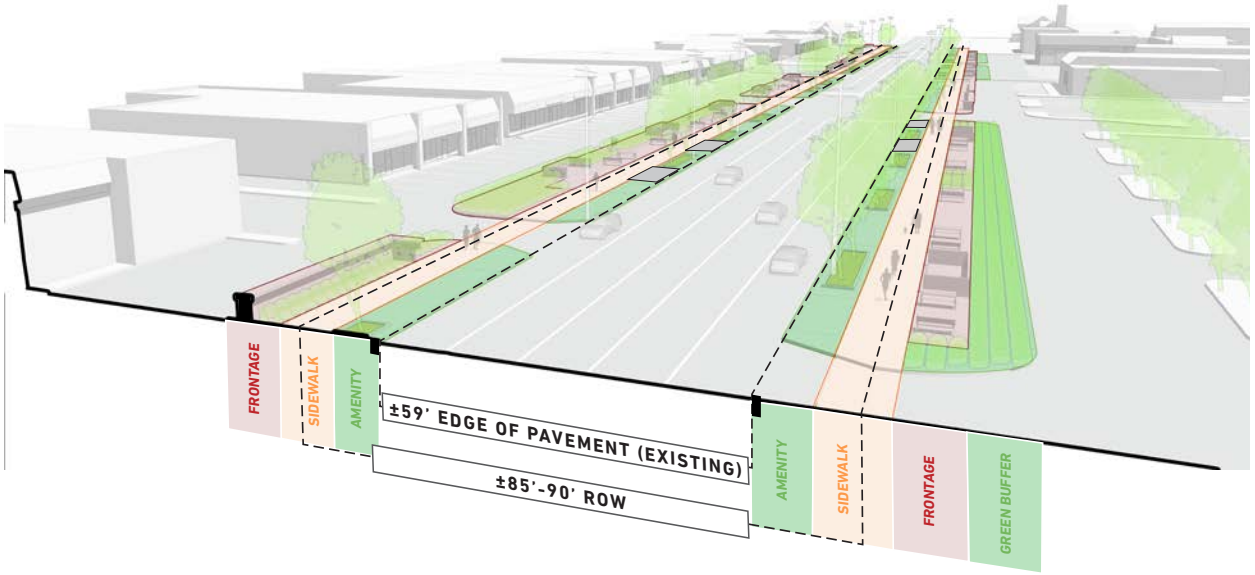
Phase 1 Design Features: Planters and Decorative Walls



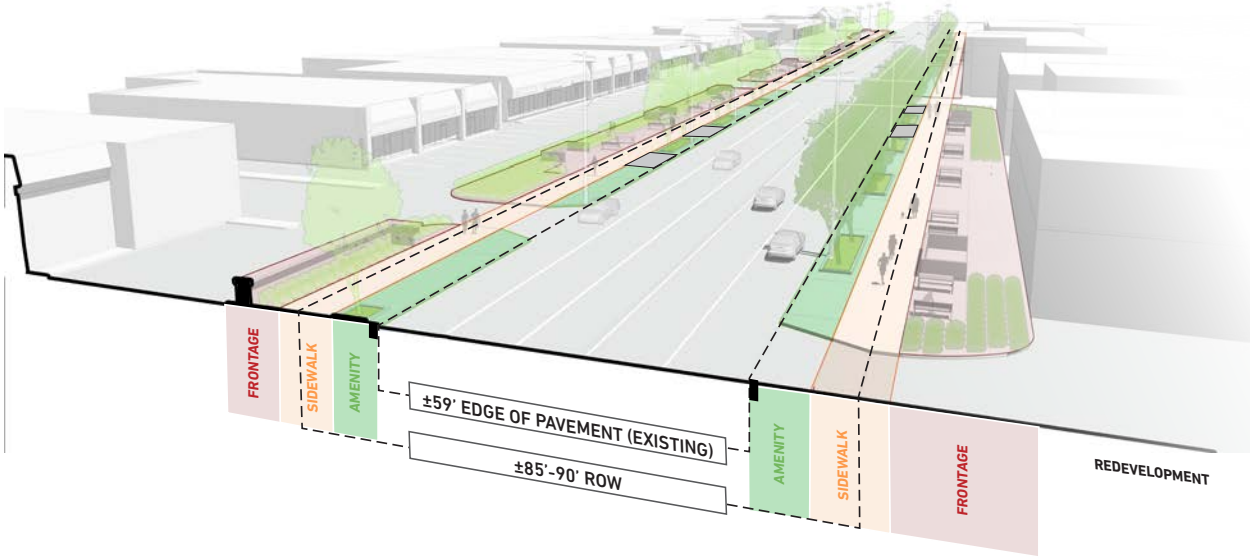
Phase 2: Enhanced Streetscape Amenities

Phase 3: Redevelopment with Active Street Frontage

PHASE 2: CREATE PUBLIC SPACES WHERE APPROPRIATE (MID-TERM)



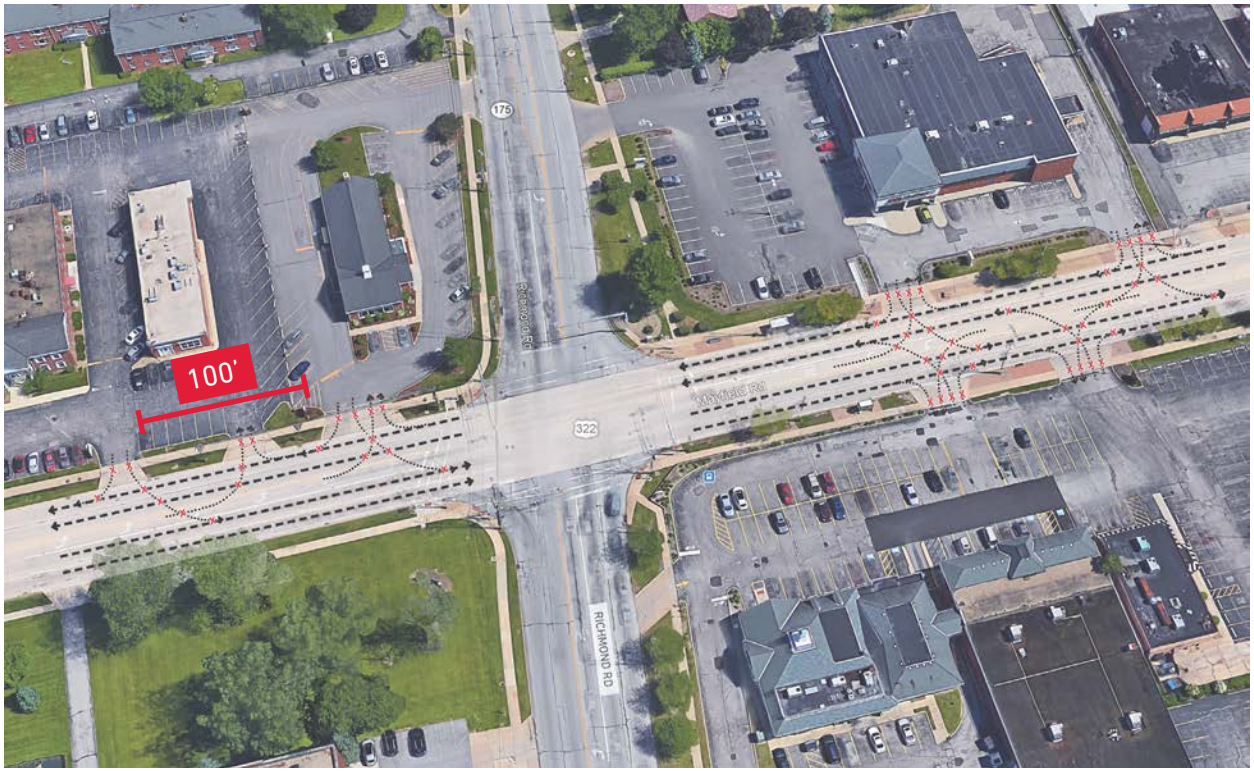
PHASE 3: ENCOURAGE INFILL DEVELOPMENT (LONG-TERM)



DRIVEWAYS AND ACCESS

The current development patterns along the corridor consist of a significant amount of surface parking, which is primarily accessed directly from Mayfield Road. Throughout a majority of the corridor, each individual adjacent property has at least one driveway, and certain segments of the corridor have driveways within 50 feet of each other. This has created a condition along the corridor where turning movements are uncontrolled and a significant number of conflict points exist as a result. This condition also creates confusion, leading to traffic back-ups where motorists are unsure when and where to use the center turn lane to make left-turns.

According to the ODOT State Highway Access Management Manual, a road like Mayfield Corridor with a 35 mph speed limit should have a minimum spacing of 250 feet between driveways. Where the speed limit drops to 25 mph, the minimum required spacing for driveways is 155 feet. These standards were established to ensure operational safety and efficiency, while still allowing for access to private property along the roadway.



Typical Driveway Condition - Significant Number of Potential Conflict Points Due to Excess of Curb Cuts

Medians and Access Management

Medians can be added along the corridor within the center left-turn lane to help mitigate some of the conflict between left-turn movements and through-traffic. They can be used to designate where left-turns are allowed, reducing the confusion of the two-way center turn lane that exists today. A median can be installed as part of a comprehensive access management program, cosolidating left turns to safe points.

Installation of medians would require close coordination with property owners to ensure adequate vehicular access is maintained, especially for commercial sites. Wherever possible driveways should be consolidated into shared, controlled access points serving multiple properties and commercial destinations. Overtime, as redevelopment occurs, parking lots should be interconnected with internal drives and/or rear alleys to alleviate unnecessary local trips on the street.

Medians also create an opportunity to add landscaping and improve the aesthetics of the street. Medians with trees add a vertical element to the street that can have a traffic calming effect and make the street more pleasant for walking and bicycling. Maintenance responsibilities and costs would need to be planned for within each community.

Access Management

WHAT IS ACCESS MANAGEMENT?

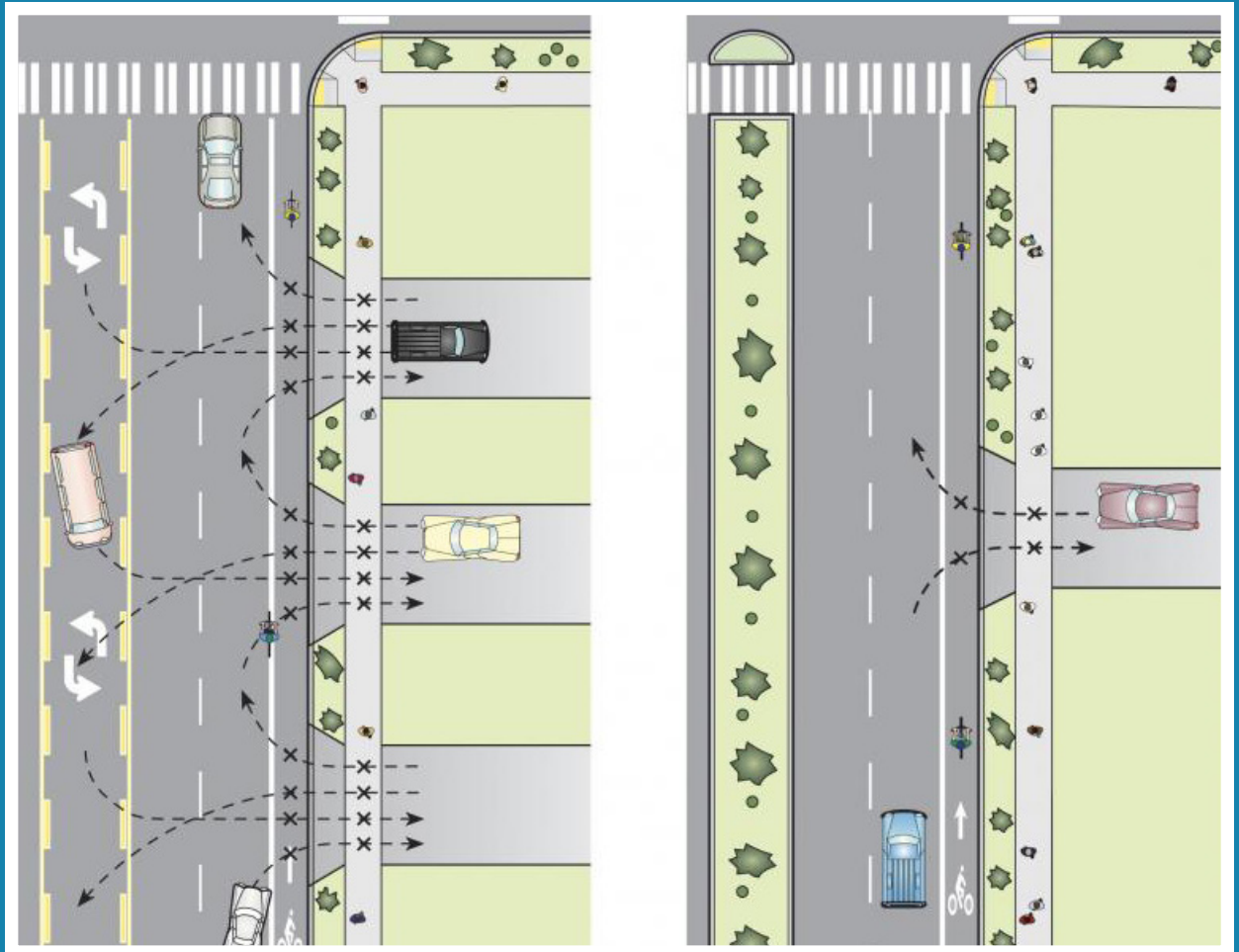
Access management involves maximizing the existing street capacity and reducing potential for crashes through limiting the number of access points, carefully placing and spacing access points (side streets, commercial driveways and median crossovers), ensuring driveway design meets standards, and properly spacing traffic signals and other enhancements.

WHY IS IT IMPORTANT?

SAFETY: Studies show a direct relationship between the number of driveways along a corridor and the number of crashes. Successful access management reduces the number of driveways and potential for crashes.

CAPACITY: Access management helps improve capacity and traffic flow without costly widening or reconstruction by removing conflicts and flow interruptions such as turning movements and merging that slow down traffic.

COMMUNITY: Access management helps sustain vibrant business districts by making roads more walkable, bikeable, and livable.



A Raised Median and Consolidated Driveways Reduce Conflict Points - *Souce: Oregon Department of Transportation*

WHEN IS IT USED?

- With new development (during site plan/ permit review process)
- At times of redevelopment/re-use or expansion (retro-fit access during site plan/permit review processes)
- During road reconstruction projects, the county and community may work with property owners to close or redesign access points as part of a road improvement project.

CHAPTER IV: TRANSPORTATION

Transportation

Transportation along Mayfield Road includes personal vehicles, public transit services, commercial delivery trucks, as well as people bicycling and walking. The following chapter analyzes the existing transportation conditions along the corridor and explores potential opportunities for improvement.

PEDESTRIAN FACILITIES

Current conditions for pedestrians along Mayfield Road vary by location on the corridor. Sidewalk widths and conditions change depending on the context, with widths ranging between 5 – 20 feet. Along some portions of the corridor, sidewalks are buffered from the roadway by a narrow strip of grass or wider tree lawn, while along others the sidewalks are directly adjacent to the curb. The width of these buffer areas also varies depending on the location from 3 - 14 feet.

Pedestrian crossing locations along the corridor are limited and commonly marked by fading lines that are often only on one side of the intersection. This section of the transportation chapter explores the existing challenges and opportunities with pedestrian facilities and provides strategies for improving conditions.

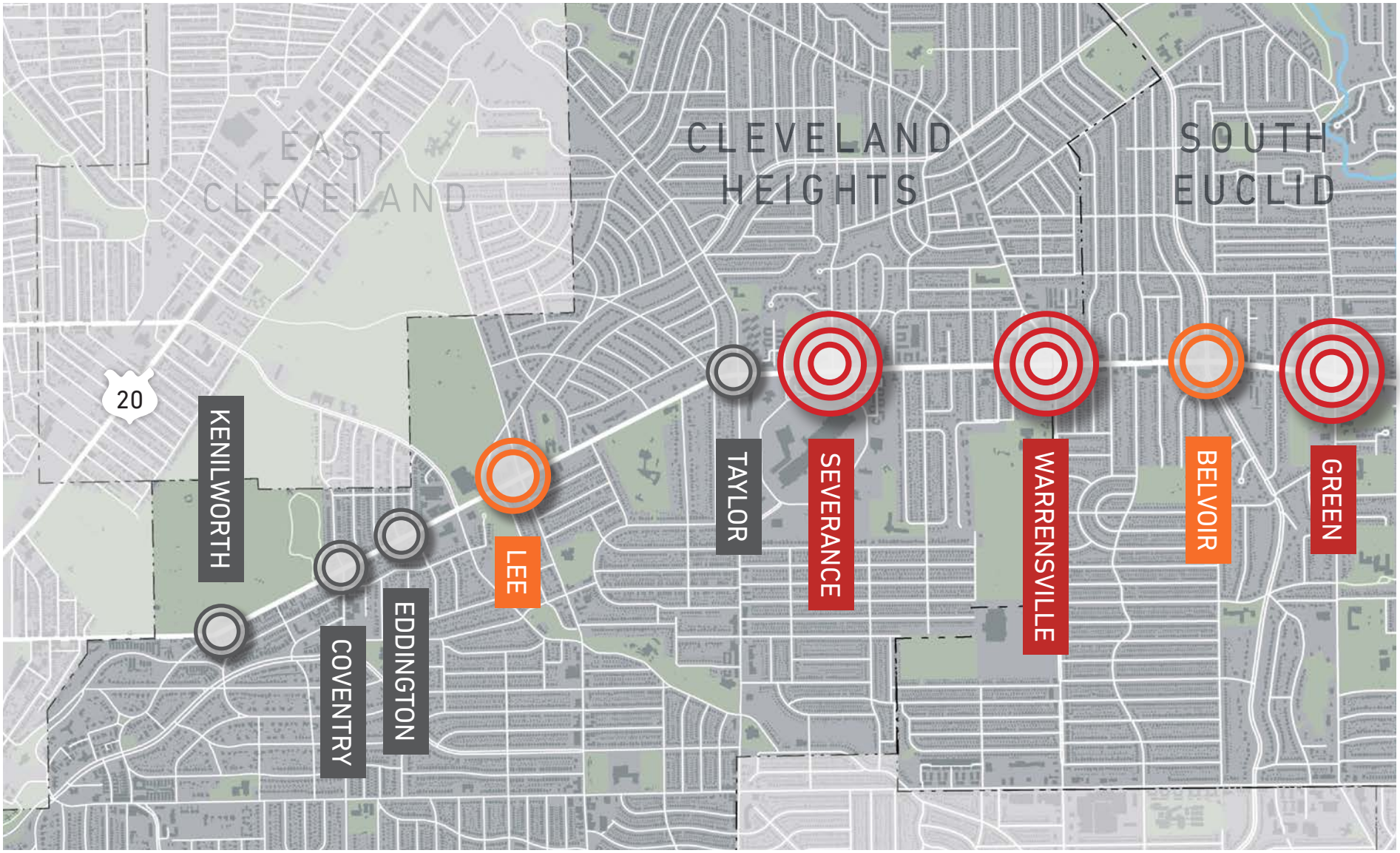
Sidewalks and Streetscape

The quality of the walking environment and the amenities provided along Mayfield Road changes as you move through the corridor and typically depends on the adjacent land uses as well as available space within the right-of-way.

Streetscape Focus Areas

Community residents who attended the public workshops and visited the project webpage were asked to help identify key locations along the corridor where streetscape enhancements are needed. This included elements such as new or improved pedestrian crossings, enhanced bus stops, pedestrian amenities like street trees and lighting, and bicycle parking.

The map on the following page represents a summary of the input that was received, illustrating the locations that were most commonly identified as needing improvements.



STREETSCAPE FOCUS AREAS

Minor Hotspot

Moderate Hotspot

Priority Hotspot

- In most cases, participants identified major intersections as the primary locations where streetscape improvements are needed.
- Additional locations included major destinations where there is more pedestrian activity mixing with high traffic volumes.

Issues and Opportunities

The areas most commonly identified by residents exhibit many similar characteristics that contribute to unpleasant pedestrian environments and are significant hurdles to walkability, bikeability, and transit use. The images on the following pages represent some of these common conditions present along the corridor today.

Sidewalks in some areas of the corridor feel like an afterthought, squeezed into small strips of land remaining between the road and adjacent parking lots. This space also frequently accommodates utilities such as light posts, street signs, and parking meters, which obstruct the walkway and limit ADA accessibility.

Driveways from Mayfield Road into parking lots along the corridor interrupt the flow of the sidewalk and are often so wide that it is unclear whether the space is meant for pedestrians or cars. In most cases, the driveways are constructed with a similar concrete material at the same level as the sidewalk, which helps to visually and physically indicate that the sidewalk has priority, but this treatment is not consistent along the corridor. Some sidewalks that directly abut the curb become the driveway, often with cross-slopes that present a challenge to ADA accessibility. Additionally, some bus stops are located in spots where the driveways are so wide or so frequent that buses are forced to stop in front of driveways.

Single-Bay Parking Lots Relegate Pedestrians to Narrow Strips of Sidewalk that are not ADA Accessible (Irene Rd)

Wide Driveways into Parking Lots Interrupt the Sidewalk and Create Additional Conflict Areas for Pedestrians (Woodrow Ave)

Bus stops along the corridor were consistently identified as locations for improvement, with current conditions varying by location and even side of the street. In many cases, the official waiting area for a stop is the narrow sidewalk and many of these stops consist solely of a sign indicating where the stop is. Many stops also lack accessible landing pads to connect the sidewalk to the curb for boarding the bus, forcing passengers to walk through the grass.

While designated bicycle facilities are not present on the corridor today, there is a desire for accommodating bicycle parking in key locations. People are bicycling along the corridor in the existing travel lane as well as on the sidewalks, and are also bicycling on connector streets to and from adjacent neighborhoods. Major destinations along the corridor were consistently identified as locations where bicycle parking is needed.

Intersections are the primary areas of the corridor that were identified for improvement and demonstrate a few challenges. Existing pedestrian crossings are fading or only exist on one side of the intersection, providing minimal accommodation for pedestrians trying to cross Mayfield Road. Additionally, many intersections were designed with large corner radii to allow for easier right-turn movements for large vehicles. These wide corners allow for motorists to make right-turns at higher speeds, which limits their ability to yield for pedestrians in the crosswalk.

Many Bus Stop Waiting Areas Leave Transit Users Standing in Harsh Environments

Wide Curb Radii at Intersections Allow Motorists to Turn at High Speeds, Rather than Pay Attention to Crossing Pedestrians

Streetscape Improvement Recommendations

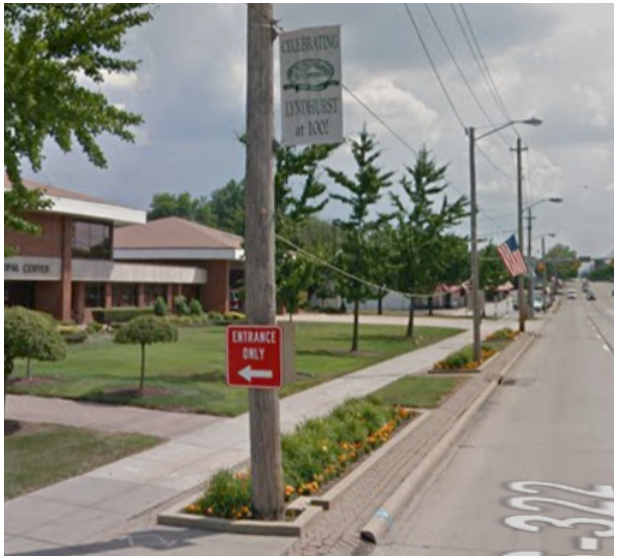
The opporutnities for streetscape enhancement along Mayfield Road are abundant and can be as minor as adding some basic planting beds or conducting regular maintenance of existing sidewalks. Each community should conduct regular assessments of pedestrian conditions along the corridor to review maintenance needs, ADA issues, and other opportunities for improvement.

In addition to making these basic improvements, developing streetscape design standards could help establish a larger strategy for addressing streetscape conditions in a more holistic along the corridor. Each community could create standards that are unique to their own context, while setting a unified approach to improving pedestrian conditions corridor-wide.

Mayfield Heights has already developed their own streetscape standards for the corridor through the Mayfield Heights Commercial Corridor Design Manual that work in combination with the development design standards established in the same manual. It is recommended that Cleveland Heights, South Euclid, and Lyndhurst each develop their own streetscape standards in a similar manner, coordinated with a design character overlay that allows for long-term expansion or improvement of the streetscape. These streetscape standards could be developed as citywide manuals that include specific recommendations for Mayfield Road, or as a design guide specifically for Mayfield Road.

Tree Routes Upheaving Sidewalks, Creating Tripping Hazards

Sidewalks Without Buffer from Traffic are Uncomfortable



Planting Beds in Front of Lyndhurst City Hall

Wide Sidewalk Buffer with Shade Trees

Thinking about the long-term implications in the development of these standards will be critical for areas where the existing right-of-way is too constrained for significant streetscape improvements, where shared use paths or wider sidewalks may be desired, where features such as outdoor dining or other amenities may be desired, or simply where current development standards or the existing zoning code do not account for the relationship between the street, the pedestrian environment, and the development (or lack thereof) along the corridor.

The streetscape design standards should establish different zones within the pedestrian environment that can help to address the long-term goals for the street, but also clarify how the space within the pedestrian area is designed and used. Appropriate dimensions for each "zone" can vary by context to account for the different conditions along Mayfield Road, while ensuring that the appropriate amount of space is designated for various elements of the streetscape.

Key considerations for these zones include providing a clear walking path free from obstruction, providing a buffer from adjacent vehicular traffic, and providing desired streetscape amenities. Sidewalks with a sufficient buffer from the roadway and elements like shade trees create a much more comfortable pedestrian environment and encourage more walking.

Coordinated Streetscape Design and Development Standards Can Create Opportunities for Expanding the Pedestrian Environment

Designating "Walking" Zones Ensure Clear Pathway for Pedestrians, While "Amenity" Zones Provide Space for Design Features

Zones of the Sidewalk

The pedestrian environment within the right-of-way consists of more than just the sidewalk. It is made up of three different zones: the frontage or building zone, the pedestrian through zone, and the furnishing or buffer zone. These three zones work together to create a comfortable and appealing pedestrian environment.

The frontage, or buidling, zone is typically the space immediately adjacent to the property line or building facade. In more urbanized locations, this zone provides space for doors to open without obstructing the path of travel and can also accommodate things like outdoor seating. In less urban locations, it can provide space for screening a parking lot, or may just be a large setback of green space for adjacent property.

The pedestrian through zone consists of the sidewalk, or the space designated solely for movement. This space must be clear from obstructions and provide, at minimum, four feet of width for ADA access.

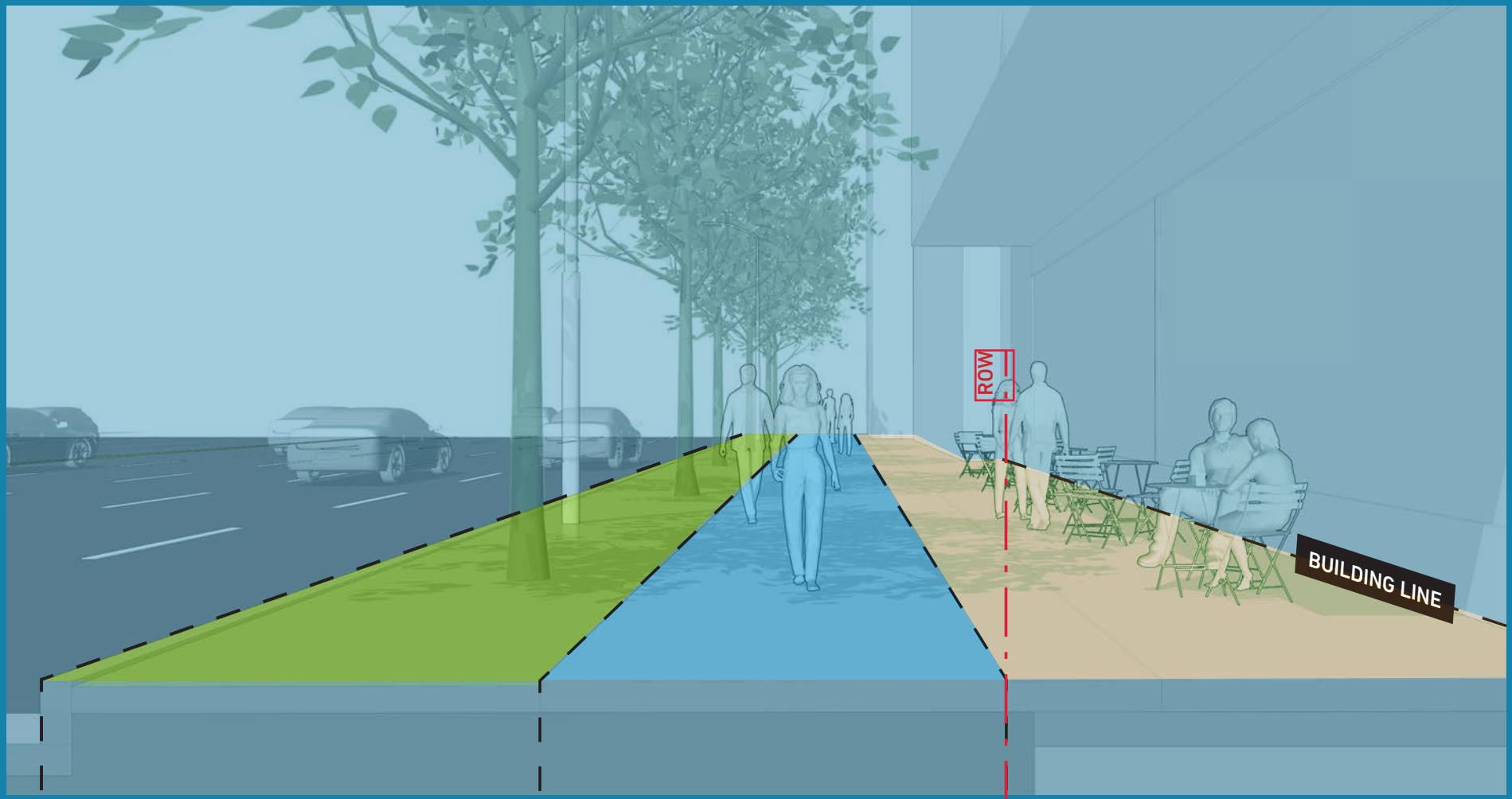
The furnishing, or buffer, zone is the space immediately adjacent to the curb that provides a buffer between vehicular and pedestrian traffic. This zone may consist of a simple grass lawn, street trees, bus stops, or a full set of streetscape amenities/furnishings. Bus stops in the buffer zone connect pedestrians from the through zone to the curb for boarding.

The diagram on the following page illustrates how these zones are intended to function in relation to each other and their context.

Furnishing Zone Split into Utility Strip and Amenity Strip

Street Trees in Furnishing Zone Provide Buffer from Traffic

Furnishing Zone Keeps the Pedestrian Through Zone Clear



FURNISHING OR BUFFER ZONE

Objective: Separate and protect pedestrians from adjacent travel lanes; provide space for amenities and trees

Design: Maintain existing buffer strip, add trees (or other vertical elements) and amenities where necessary

PEDESTRIAN THROUGH ZONE

Objective: Provide ample space for pedestrian travel/activity (minimum 4' for ADA)

Design: Should be clear of obstructions

FRONTAGE OR BUILIDING ZONE

Objective: Provide a seamless transition between the public right-of-way and private development

Design: Varies with building/use context, landscape vs. hardscape emphasis based on ground-level activity.

Identity and Branding

In some sections of the corridor, each community has implemented various examples of streetscape amenity improvements. These include decorative planters, such as those at Coventry and Mayfield Road in Cleveland Heights and in front of the Lyndhurst City Hall, as well as the recent streetscape elements added in South Euclid at Green Road and Mayfield Road. These are coordinated design treatments that can be implemented in targeted areas and expanded over time for longer stretches of the corridor with the effect of adding visual interest, improving pedestrian comfort, and lending to a sense of place that can be customized to each community.

Bike racks, planters, benches, banners, and other streetscape furnishings and amenities can be installed to incrementally improve the quality of the streetscape. These may be temporary, in anticipation of longer term permanent capital improvements, and can be implemented through a variety of means. One avenue for these improvements could be dedicated funding from each City for specific streetscape projects. Another option could include establishing one or more Special Improvement Districts (SID), in which property owners would contribute a consistent funding stream for public improvements that would directly benefit their properties and the district as a whole.

South Euclid Branded Bike Parking

South Euclid Streetscape Amenities

Cleveland Heights Coventry Village Streetscape Elements

South Euclid Branding and Signage

Special Improvement Districts

A Special Improvement District (SID) is an area of land within which property owners pay an additional tax or fee for specific services or improvements within the district's boundary. A SID can exist within a single municipal corporation or any combination of contiguous municipal corporations.

BENEFITS OF A SID

The following are benefits that can be achieved through the establishment of a SID:

- Pools financial resources to fund services and improvements that directly benefit those who are paying the assessment
- Assessment provides a dedicated and predictable funding stream, which can help with long-term planning
- Can be used as a flexible tool for different sized projects
- Boundaries for the taxing district can be assessed, or "right-sized," based on the desired effort and interested properties
- Helps to create unity among businesses that are part of the district and foster better collaboration between public and private entities
- Builds on existing momentum and efforts to improve the corridor, taking it to the next level with dedicated funding

POTENTIAL USES

A SID can provide a number of services:

- Fund and implement streetscape project and other capital improvements
- Program public spaces
- Broker shared parking arrangements
- Research, marketing, and promotion, including development of unique branding
- Innovative practices that may not be feasible through public resources

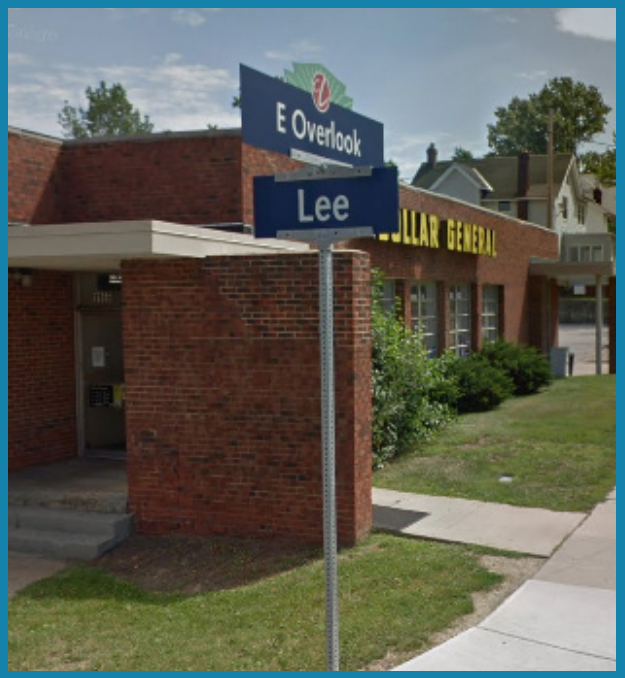
EXISTING SIDS

There are currently currently four SIDs operating within the cities of Cleveland Heights and South Euclid:

- Cedar Lee
- Cedar Fairmount
- Coventry Village
- Bluestone Historic District

Cedar Fairmount SID Funded a District-Area Streetscape Project

Cleveland Heights, OH



Cedar Lee District Branded Street Signage

Cleveland Heights, OH

Pedestrian Crossings

The location and condition of marked pedestrian crossings varies depending on the segment and context of the corridor. The standard crosswalk marking along the corridor is a typical transverse marking with two solid lines delineating the outer edges of the crosswalk. These markings fade relatively quickly and create an additional maintenance need. They also provide the least amount of visibility and priority for pedestrians.

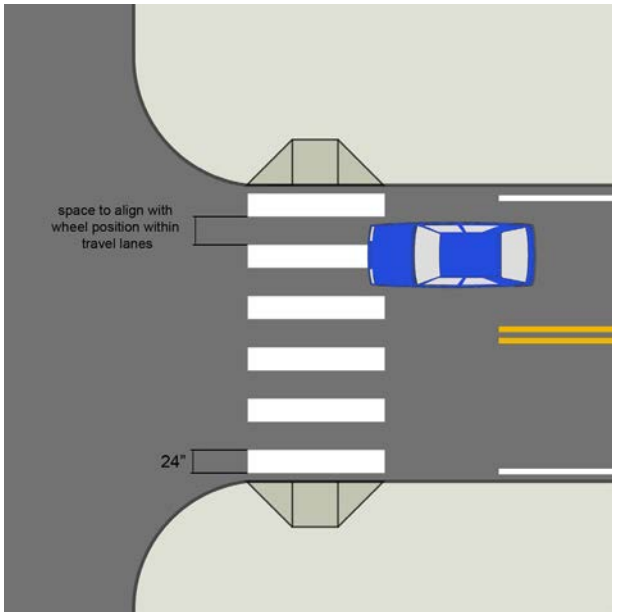
Current best practices for crosswalk markings include the use of higher visibility markings such as continental markings, which are thick bars marked in a ladder pattern parallel to the direction of vehicular travel. These crosswalks can be marked using standard marking paint, thermoplastic, or inlay tape. While paint is the most budget-friendly option at installation, it wears away the quickest and requires more maintenance. Inlay tape is the most expensive option up-front and can only be installed in combination with repaving, but lasts the longest and is more cost-effective in the long run. Additionally, thermoplastic and inlay tape provide the highest visibility for crosswalk markings.

Continental crosswalks can also be designed to align with the pattern of vehicular movement in the travel lanes. The bar markings can be spaced to allow for vehicle wheels to pass between the markings, rather than over top of them, reducing the wear on the markings and mitigating future maintenance needs.

Faded Standard (Transverse Line) Crosswalk at Coventry Road

Faded Standard (Transverse Line) Crosswalk at Green Road

Continental (Ladder) Crosswalk Markings have High Visibility



Markings Designed to Minimize Wear from Vehicles

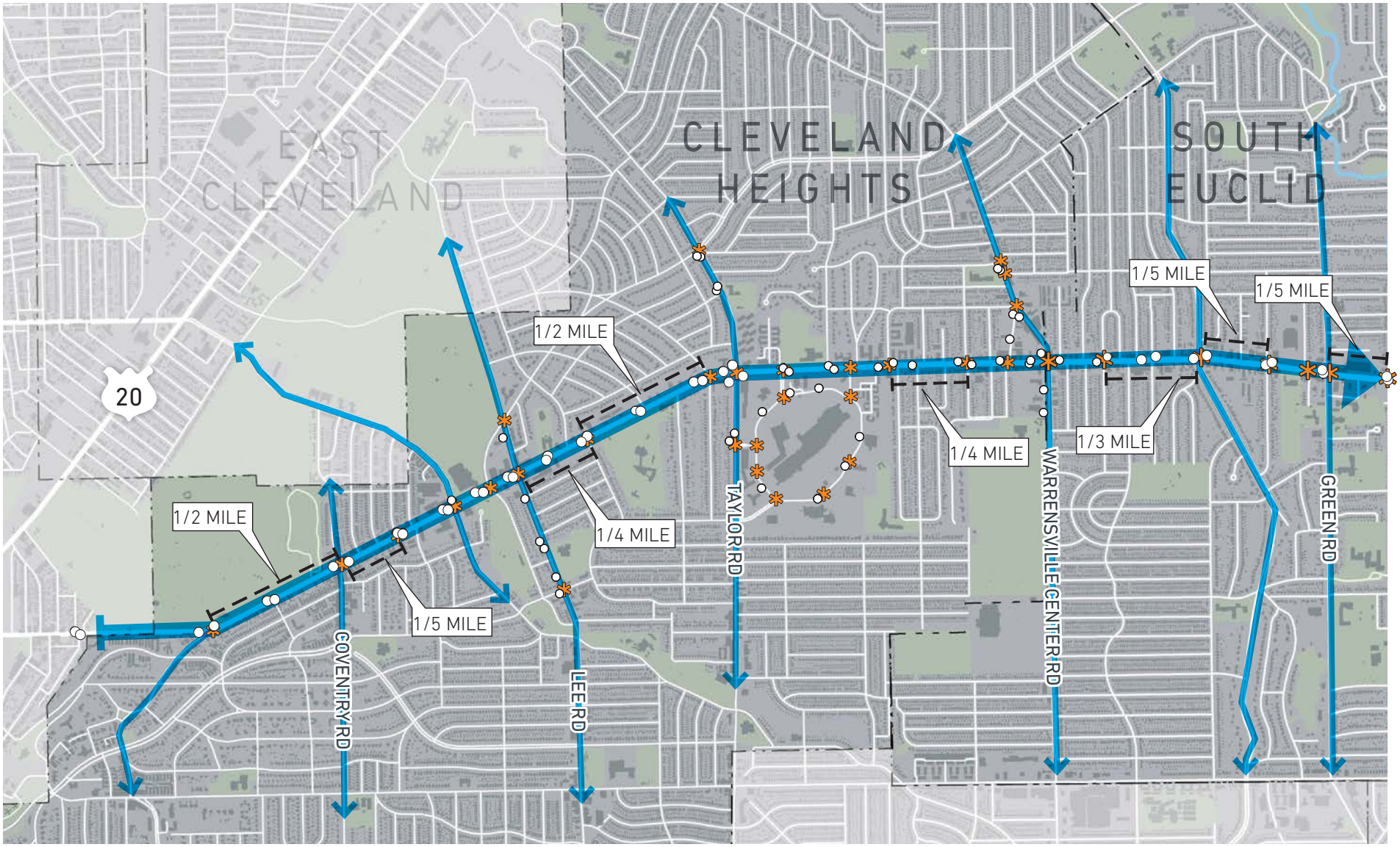
Most of the signalized intersections along the corridor have at least one crosswalk marked for pedestrians crossing Mayfield Road, but many of these intersections are limited to just one crossing on one side of the intersection. In some locations, this is due to an offset intersection condition, which can create a conflict between pedestrians crossing and vehicles moving through the offset intersection.

There are some locations along the corridor, like at the intersection with Eddington Rd shown here, where a bus stop is located on one side of the intersection, and the crosswalk is only marked on the opposite side. Pedestrian signage on the bus stop side of the inersection indicates that pedestrians should not cross in that location, while vehicular signage alerts motorists to the potential presence of pedestrians crossing.

Intersections with at least one existing marked pedestrian crossings are identified in the map on the following page. This map also includes bus stop locations and the approximate distances between existing crossings. There are 12 instances along the corridor where the distance between existing marked pedestrian crossings is greater than 1,000 feet. This can add up to more than 8 minutes of additional time walking, often in the wrong direction, just to cross the street. Most pedestrians will cross the street without a pedestrian crossing, rather than walking out of their way just to find one.

Existing Signage and Street Design is Confusing for Motorists and Pedestrians

Existing Marked Pedestrian Crossings are Sometimes more than 1/2 Mile Apart, or more than 1/4 Mile from a Bus Stop

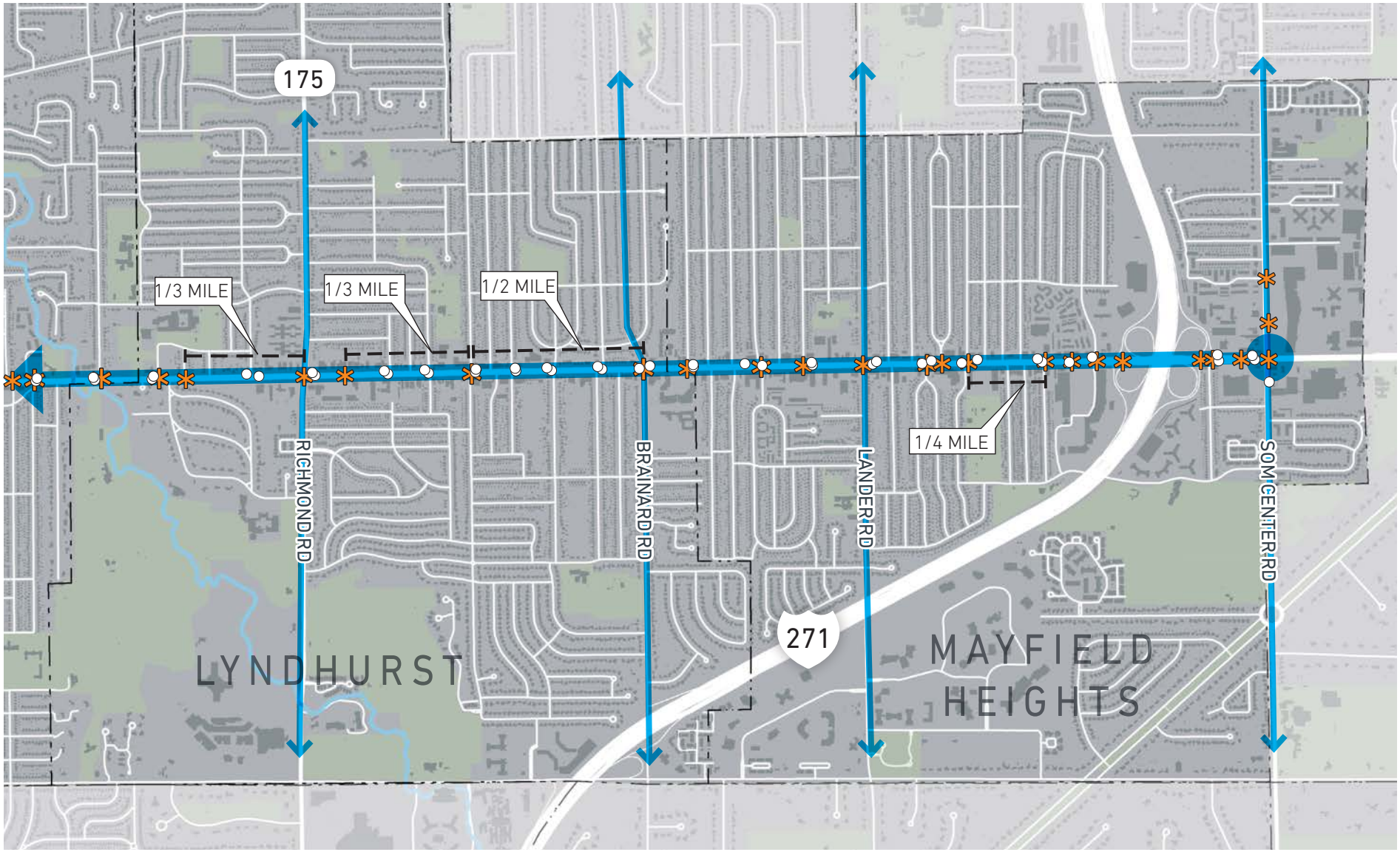


PEDESTRIAN CONDITIONS

Existing Traffic Signal with Pedestrian Crossing

Distance Between Existing Pedestrian Crossings

Existing Bus Stop



- 1/5 mile is equivalent to about 1,000 feet
- 1/4 mile is equivalent to about 1,300 feet and around 5 minutes of walking time, depending on walking speed
- 1/2 mile is equivalent to about 2,600 feet and around 10 minutes of walking time, depending on walking speed

Uncontrolled Pedestrian Crossings

Pedestrians typically cross the street at a point where it is most convenient for their path of travel. This is often at locations where there is no traffic signal or marked pedestrian crossing, but is a direct line between their origin and destination. While it may not be possible to provide a marked pedestrian crossing at every intersection, it is important to provide consistent, safe, and convenient crossings often enough to encourage safe crossing behavior.

CROSSING TYPES

The U.S. Department of Transportation Federal HIghway Administration (FHWA) recently released a new Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations that provides guidelines and a step-by-step process for selecting appropriate treatments. The recommended process for selecting treatments includes the following steps:

- Collect data and engage the public
- Inventory conditions and prioritize locations
- Analyze crash types and safety issues
- Select countermeasures (treatments)
- Consult design and installation resources
- Identify opportunities and monitor outcomes

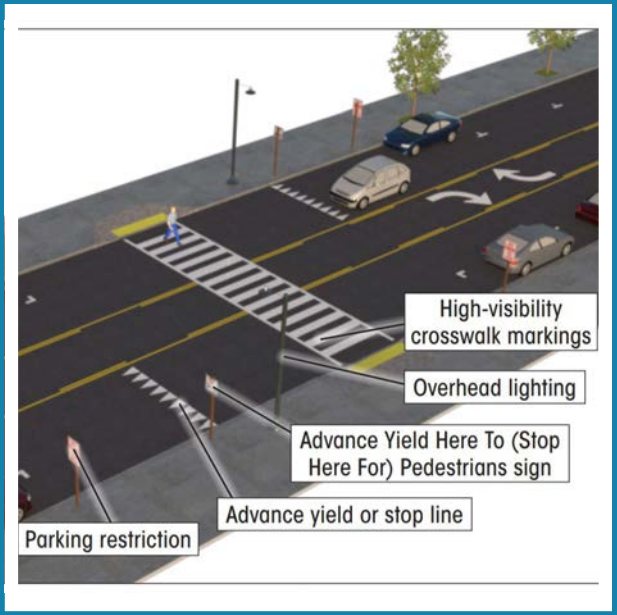
Each step is described in detail in the guide to help communities through the process of identifying locations and installing treatments.

The treatments recommended by the guide include the following:

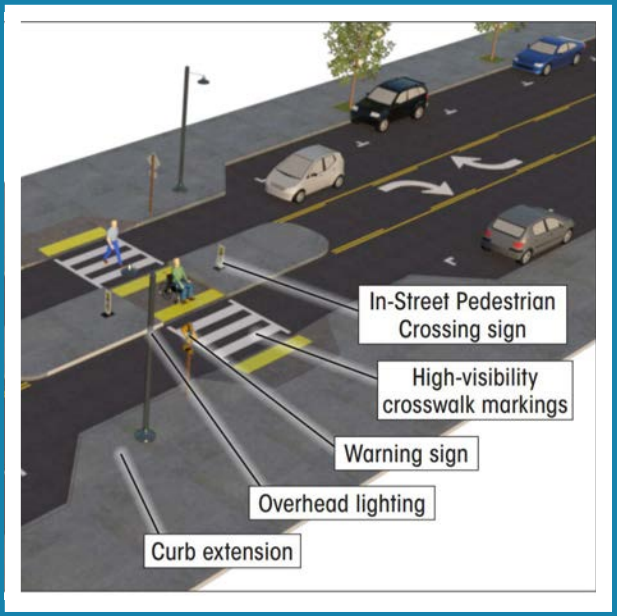
- Crosswalk visibility enhancements
- In-street pedestrian crossing signage
- Advance yield signage and markings
- Curb extensions
- Raised crosswalks
- Pedestrian refuge islands
- Pedestrian Hybrid Beacons (PHBs)
- Road diets

An upcoming update to the guide also includes Rectangular Rapid-Flashing Beacons (RRFBs) as a recommended treatment.

Not all of these treatments are appropriate in every location, which is where Step 4: Select Countermeasures becomes important. The chart on the following page summarizes where specific treatments are appropriate based on street configuration and traffic conditions.



Crosswalk Visbility Enhancements - *Source: FHWA*



Pedestrian Refuge Island - *Source: FHWA*

APPLYING THE GUIDE

The numbers in each cell of the chart represent the treatments that are appropriate for that context (the identified roadway configuration, traffic volumes, and speed limit). Numbers highlighted in dark circles are those that are recommended for use in that particular location. Numbers without the highlight could be appropriate, but may require engineering judgment based on the context. Numbers that are missing from the cells are treatments that *are not* appropriate for theatlocation.

OPTIONS FOR MAYFIELD ROAD

When considering possible treatments for the Mayfield Road corridor, there are a variety of characteristics to consider. The street configuration, speed limit, and even traffic volumes vary depending on location along the corridor, which makes selection of a potential pedestrian crossing treatment very site-specific. Each uncontrolled location along the corridor being considered for a pedestrian crossing will require its own evaluation to determine the appropriate treatment.

However, based on the information in the guide, there are a few key elements that could be used in most locations along Mayfield Road:

- High visibility crosswalk markings are appropriate in any location and are recommended for use in all scenarios, but should always be used in combination with other crossing treatments.

Roadway Configuration	Speed Limit								
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	❶ 2 3 4 5 6	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6 7	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼
3 lanes with raised median*	❶ 2 3 4 5	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ 3 4 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 4 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼
3 lanes w/o raised median†	❶ 2 3 4 5 6 7	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6 7	❶ ❸ 5 6 ❼	❶ ❸ 5 6 ❼	❶ ❸ 4	❶ ❸	❶ ❸
4+ lanes with raised median‡	❶ ❸ 5	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼
4+ lanes w/o raised median‡	❶ ❸ 5 6 7 8	❶ ❸ 5 ❻ 7 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ 7 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8

*One lane in each direction †One lane in each direction with two-way left-turn lane ‡Two or more lanes in each direction

Given the set of conditions in a cell,

❶ Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.

\# Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restriction on crosswalk approach, adequate nighttime lighting levels
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Pedestrian Hybrid Beacon
8 Road Diet

This table was developed using information from: Zegeer, C. V., Stewart, J. R., Huang, H. H., Lagerwey, P. A., Feaganes, J., & Campbell, B. J. (2005), Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines (No. FHWA-HRT-04-100); Manual on Uniform Traffic Control Devices, 2009 Edition, Chapter 4F. Pedestrian Hybrid Beacons; the Crash Modification Factors (CMF) Clearinghouse website (http://www.cmfclearinghouse.org/); and the Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE) website (http://www.pedbikesafe.org/PEDSAFE/).

Application of Pedestrian Crash Countermeasures - *Source: FHWA Guide for Improving Pedestrian Safety at Uncontrolled Locations*

- Advance yield signage and markings are appropriate for any location and are recommended for use in all scenarios.
- PHBs are appropriate for any location, but may require additional considerations due to higher costs and impact on corridor-wide signalization.
- Pedestrian refuge islands will require installation of raised medians, but are recommended anywhere raised medians are feasible.
- Curb extensions are only appropriate where on-street parking exists, or the roadway configuration allows for them.

Crossing Challenges

In many cases along Mayfield Road, particularly many of the more residential portions, the block lengths are very short (between 200 - 400 feet), but the distances between marked pedestrian crossings are much larger. Short block lengths are a significant factor contributing to walkability, but the few existing opportunities to cross the street are limitation to walkability. Pedestrians walking along the corridor today often wait for a break in traffic to cross at locations between existing crosswalks, because walking to the nearest existing crosswalk would take them out of their way.

A recent project in Cleveland Heights included the installation of an RRFB and high visibility crosswalk marking at an unsignalized location near Superior Road. This facility allows pedestrians to push a button that turns on flashing signals that signalize to motorists that they need to yield for pedestrians crossing the street.

This portion of Mayfield Road is signed with a 25 mph speed limit, which makes it appropriate for the use of an RRFB without additional design elements. However, the roadway configuration in this location and 35 mph speed limits approaching from each direction, the actual speeds are likely much higher. Additional treatments, such as a small pedestrian refuge island between driveways, and advance yield signage and marking could help to improve pedestrian safety at this crossing location.

Pedestrians Cross Mayfield Between Existing Crosswalks

Push Buttons to Activate Pedestrian Signals

Newly Installed Mid-Block Crosswalk with High Visibility (Continental) Markings and Rectangular Rapid Flashing Beacon (RRFB)

Pedestrian Crossings Recommendations

The FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations provides guidance for identifying, prioritizing, and designing pedestrian crossings at unsignalized locations. The steps in the process outlined within the guide are recommended for selecting appropriate locations and treatments for Mayfield Road.

In addition, the following are recommendations for consideration:

- Each location along the corridor identified as having a gap between existing crossings of 1/5 mile or more should be evaluated for installation of new, marked pedestrian crossings.
- The recommended average spacing between pedestrian crossings for Mayfield Road is 600-800 feet, depending on the context.
- The recommended distance between a bus stop and a marked pedestrian crossing is less than 100 feet in ideal conditions, or less than 300 feet in constrained conditions. Each jurisdiction should coordinate with the RTA to establish appropriately spaced crossings in regard to bus stop locations.
- All crossing locations, including both signalized and unsignalized, should be marked and signed with high visibility treatments and advance yield markings.

Repurposed Two-Way Left-Turn Lanes with Medians to Facilitate Pedestrian Crossings

- Raised medians should be installed within two-way center left-turn lanes where feasible to create pedestrian refuge islands with marked crossings.
- Locations with high volumes of pedestrian activity or significant activity generators (major destinations such as shopping centers, etc.) should be considered for PHBs or RRFBs combined with additional design treatments.
- When identifying locations for new pedestrian crossings, adequate sight distance must be provided to ensure that any oncoming motorists are able to see pedestrians in the crosswalk.

Landscaped Pedestrian Refuge Island

BICYCLE FACILITIES

Current bicycle facilities along Mayfield Road consist of faded shared lane markings, or "sharrows," throughout a majority of the corridor. A single bike lane exists on the western-most portion of the corridor in Cleveland Heights, but is not clearly marked as a bike lane.

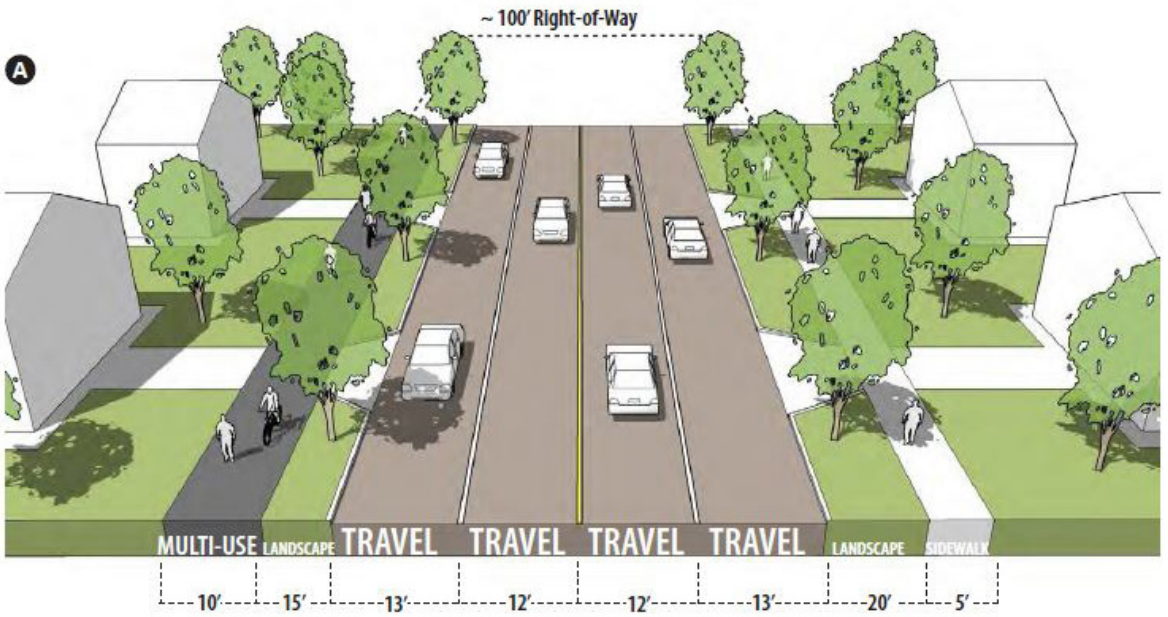
Planned Bicycle Facilities

Looking at the larger bicycle network for the surrounding communities, there are a number of planned or proposed bicycle facilities on north-south routes, but there is a gap in bicycle network connectivity from east to west throughout the area. While Mayfield Road is not currently identified for any future bicycle facilities, there are many intersecting corridors with noteworthy facilities planned to cross or connect to Mayfield Road.

The map on the following page illustrates the existing and planned bicycle network for eastern Cuyahoga County, and the images on this page illustrate the proposed facility types for key corridors. The planned facilities include near-term priority routes, opportunity routes, future projects and transformative routes.

Near-term priority routes include:

- Leed Road
- Monticello Boulevard
- Belvoir Boulevard



Monticello Boulevard Proposed Shared Use Path - *Source: Eastside Greenways Plan 2015*

Belvoir Boulevard Proposed Buffered Bike Lanes - *Source: Eastside Greenways Plan 2015*

The Cleveland Heights Master Plan recommended implementation of an "Innovation Connector Trail" along Mayfield from Kenilworth to Monticello, and continuing along Monticello.

Opportunity routes and future projects are less clear in terms of the facility type and timeline, but are intended to be considered as capital improvement projects or other initiatives come up on the identified corridors. These routes include:

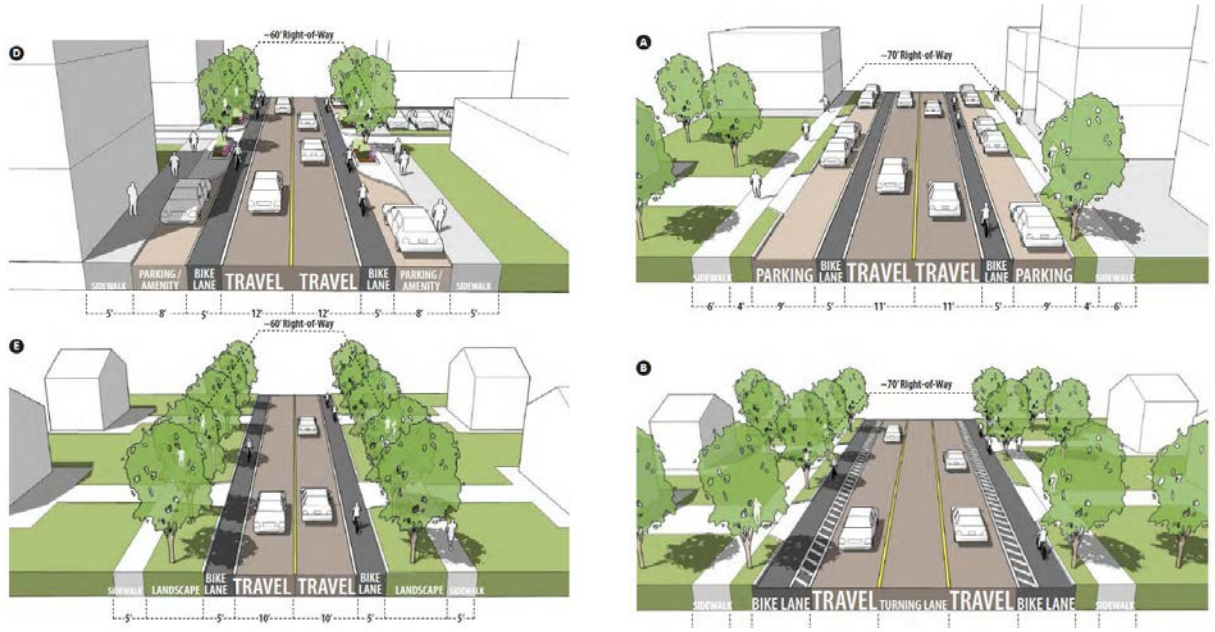
- Taylor Road
- Brainard Road

The transformative facilities include those that may take 10+ years to implement, but are regionally significant routes and critical to the overall network. These include:

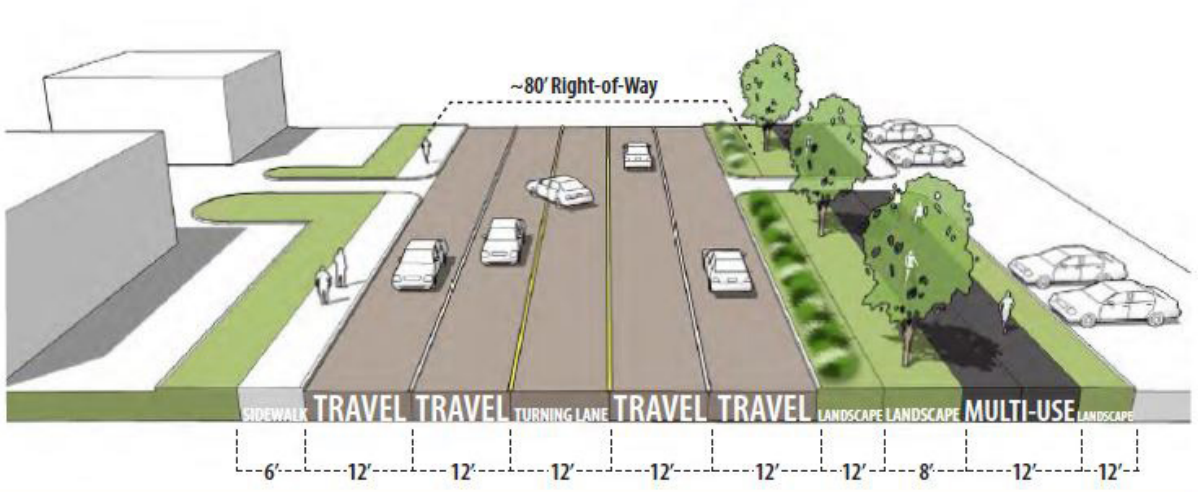
- Noble/Warrensville Center Road
- SOM Center Road

Bicycle Facility Recommendations

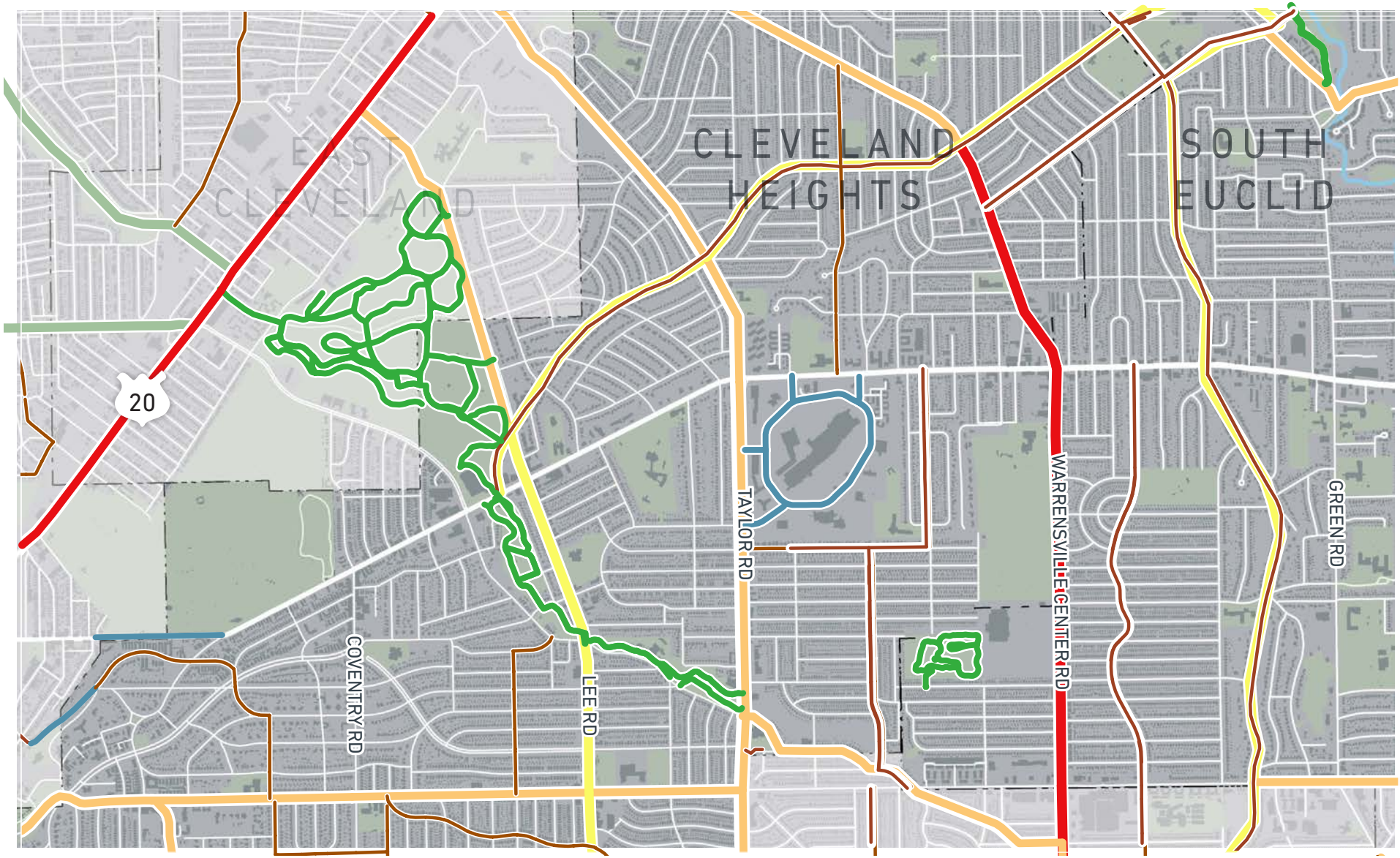
With a number of planned bicycle facilities connecting to and across Mayfield Road, bicycle activity along the corridor is likely to increase over time. Community input through the Mayfield Road planning process has indicated a desire for more and better bicycle parking options along the corridor, which could be installed by each City or through requirements on new development. As each community develops streetscape design standards, guidelines for bicycle parking design and installation should be included to help address this need.



Proposed Facilities for Lee Road and Noble/Warrensville Center Road - *Source: Eastside Greenways Plan 2015*

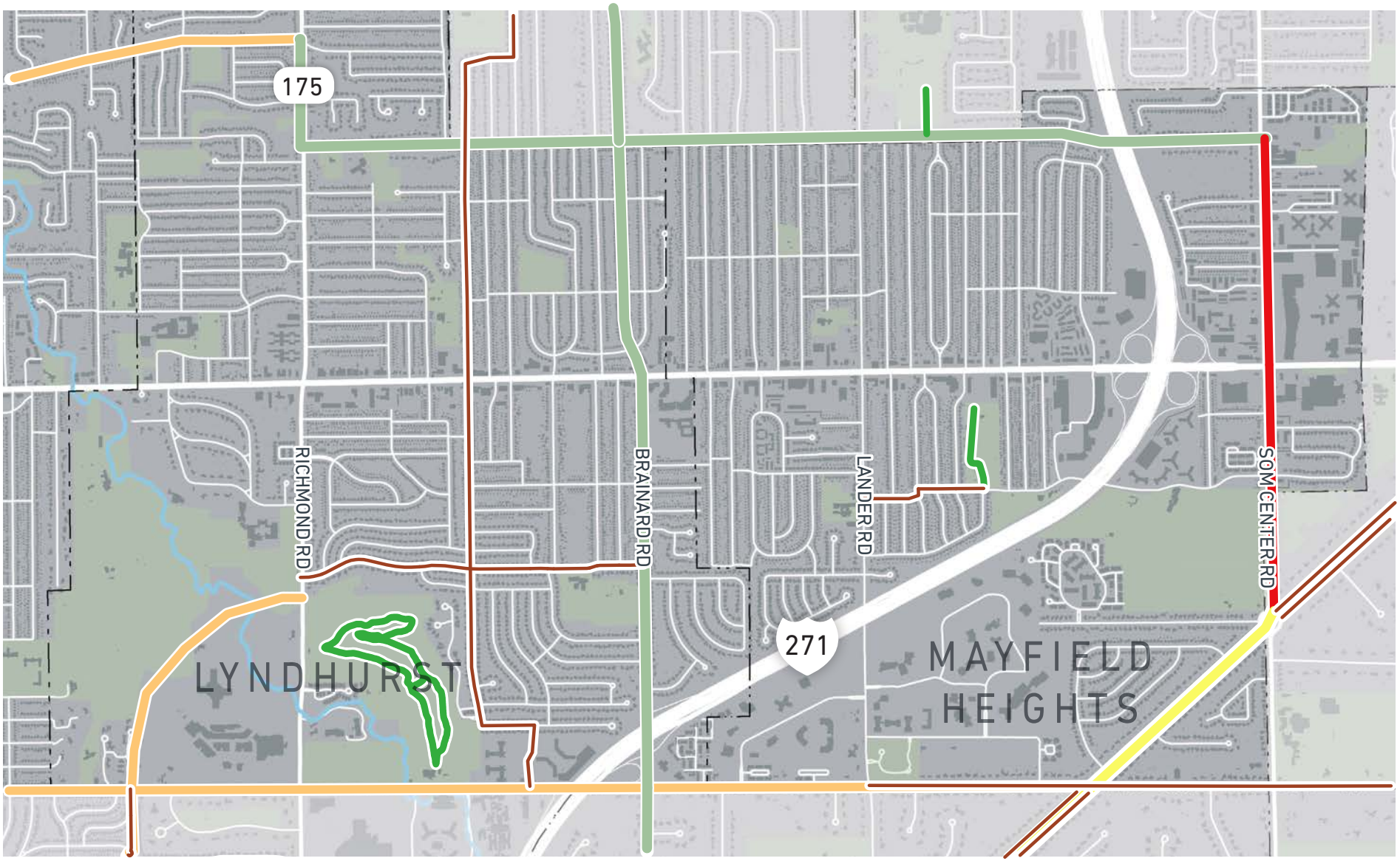


SOM Center Road Proposed Shared Use Path - *Source: Eastside Greenways Plan 2015*



BICYCLE FACILITIES

- Existing Trail
- Existing Bike Lane
- Existing Bike Route / "Connector Street"
- Near-Term Priority
- Opportunity Route
- Transformative Route
- Future Project



- No bicycle facility has been identified for Mayfield Road through the Eastside Greenways planning process
- Cedar Road has been identified as a Opportunity Route for some type of bicycle facility, but is also identified as a priority route for GCRTA

TRANSIT SERVICE AND AMENITIES

Transit service along the corridor is provided by the Greater Cleveland Regional Transit Authority (GCRTA). The study area is served in its entirety by a single GCRTA bus route – Route 9, which originates at the Cleveland Clinic Main Campus on Euclid Avenue and travels to SOM Center Road before turning around and returning along the same route. Riders traveling to downtown must transfer to the Health Line or the Red Line to continue their trip, which is less convenient than having a direct, one-seat ride to downtown.

The study area is also bisected by routes 7, 37, and 40 in Cleveland Heights, routes 41, 41F, and 34 in South Euclid, route 94 in Lyndhurst, and a limited version of route 7 again in Mayfield Heights. The following chart lists the operating frequencies of each route as of August 2018.

Bus Stops

A bus stop consolidation and safety review was conducted by GCRTA for Route 9 in the Fall 2017, which resulted in consolidation and relocation of existing stops. This effort moved stop locations to help increase efficiency of service, provide better spacing between stops, and place the relocated stops in more ideal locations for passenger loading. The map on the following page illustrates the existing locations of bus stops and presence of shelters, as well as current peak-period service frequencies listed here.

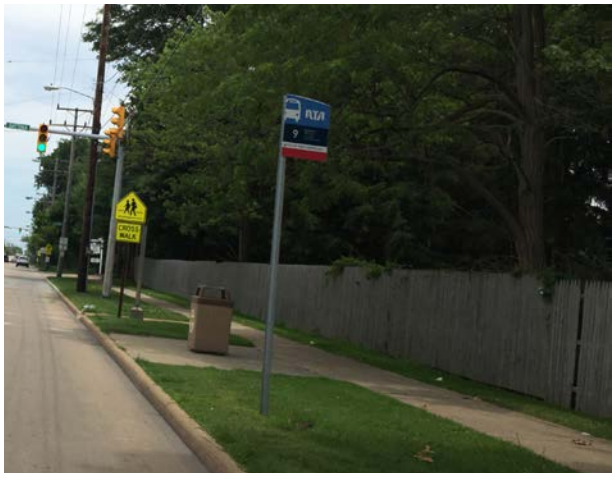
ROUTE NAME	DESTINATIONS	OPERATING FREQUENCIES*
7: Monticello – Euclid Heights	Begins at Cleveland Clinic and ends at the Richmond Town Square in Richmond Hts.; Some buses continue to SOM Center Road and Mayfield Road	▸ M-F Peak: 40 min. headways ▸ M-F Off-Peak: 45 min. headways ▸ SAT & SUN: 60 min. headways
9: Mayfield	Travels between the Cleveland Clinic Main Campus and SOM Center Road	▸ M-F Peak: 30 min. headways ▸ M-F Off-Peak: 45 min. headways ▸ M-F Nights: 60 min.. headways ▸ SAT: 45 min. headways ▸ SAT Nights: 60 min. headways ▸ SUN: 60 min. headways
34: East 200 - Green	Begins at Euclid Hospital and ends at the Green Road Rapid Station	▸ M-F: 60 min. headways
37: East 185 - Taylor	Travels from Euclid Hospital in Cleveland to Severance Town Center (overlaps with Route 9 at Severance)	▸ M-F Peak: 40 min. headways ▸ M-F Off-Peak: 60 min. headways ▸ SAT & SUN: 60 min. headways
40: Lakeview - Lee	Travels between the area of Taft Avenue and Eddy Road in Cleveland, and the Southgate Transit Center in Maple Heights	▸ M-F Peak: 45 min. headways ▸ SAT: 60 min. headways ▸ SUN: 60 min. headways
41/41F: Warrensville	Begins at Louis Stokes Rapid Station and ends on Emerald Parkway in Glenwillow; Some 41F buses travel from Chagrin Blvd to Solon	▸ M-F Peak: 30 min. (or better) headways ▸ SAT: 30/60 min. headways ▸ SUN: 60 min. headways
94: East 260 - Richmond	Begins at East 222nd St & Lake Shore Blvd and ends at Cuyahoga Community College Eastern Campus	▸ M-F: 60 min. headways ▸ SAT & SUN: 60 min. headways

*Route frequencies as of August 2018; frequencies are subject to change by RTA.

Approximately 32% of the bus stops along Mayfield Road through the Study Area have a bus shelter at the stop. A majority of the stops with bus shelters are on the north side of the street for stops serving west-bound buses, and the type of bus shelter varies by location. The greater presence of shelters in the west-bound direction is generally a result of more boardings at those stops (and more passengers waiting), compared to more passengers primarily getting off the bus in the east-bound direction (rather than waiting at stops).

According to the GCRTA Bus Stop Design Guidelines, a bus shelter with seating is only *installed* at stops with more than 50 daily boardings if there is adequate space at the stop location. However, some of the existing shelters along Mayfield Road may have been installed at a time when ridership was higher and have not been removed. An additional consideration for placement of bus shelters is whether a connecting bus route exists that would require passengers to wait for a transfer.

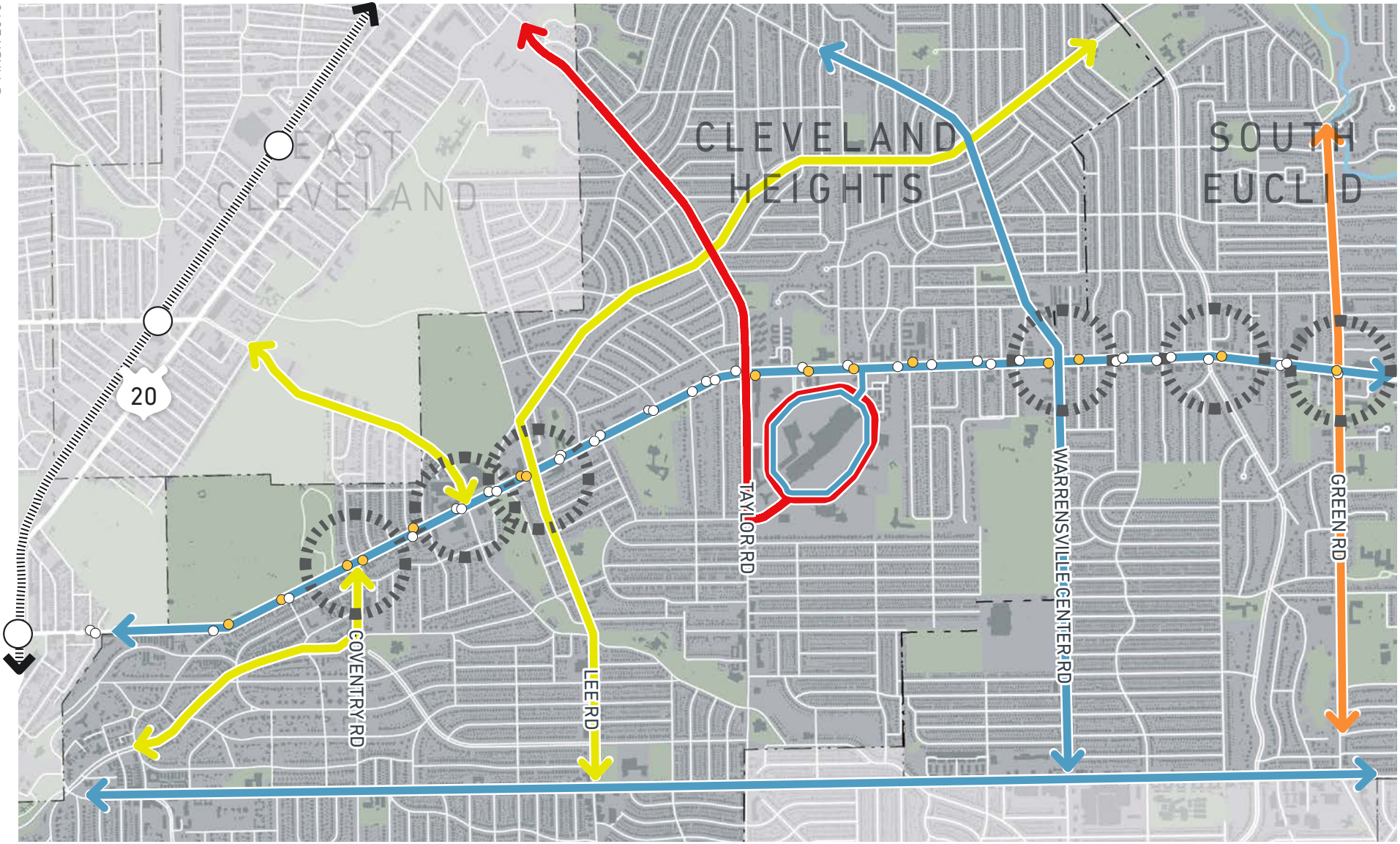
Agencies and organizations outside of GCRTA have the option to install shelters at existing bus stops, but the entity that installs the shelter is responsible for maintenance. GCRTA only maintains shelters that they install. Additionally, GCRTA does not provide or service trash bins at bus stops - that is the responsibility of the relevant municipality. GCRTA also does not typically provide paved waiting areas for bus stops, but encourages local jurisdictions to install them. Approximately 72% of bus stops along the corridor have paved loading areas.



Basic Bus Stop with Sign - No Paved Waiting/Loading Area

Basic Bus Stop with Sign + Paved Waiting/Loading Area

Basic Bus Stop with Sign + Paved Waiting/Loading Area and Seating



TRANSIT SERVICES

Peak Headways (in minutes)

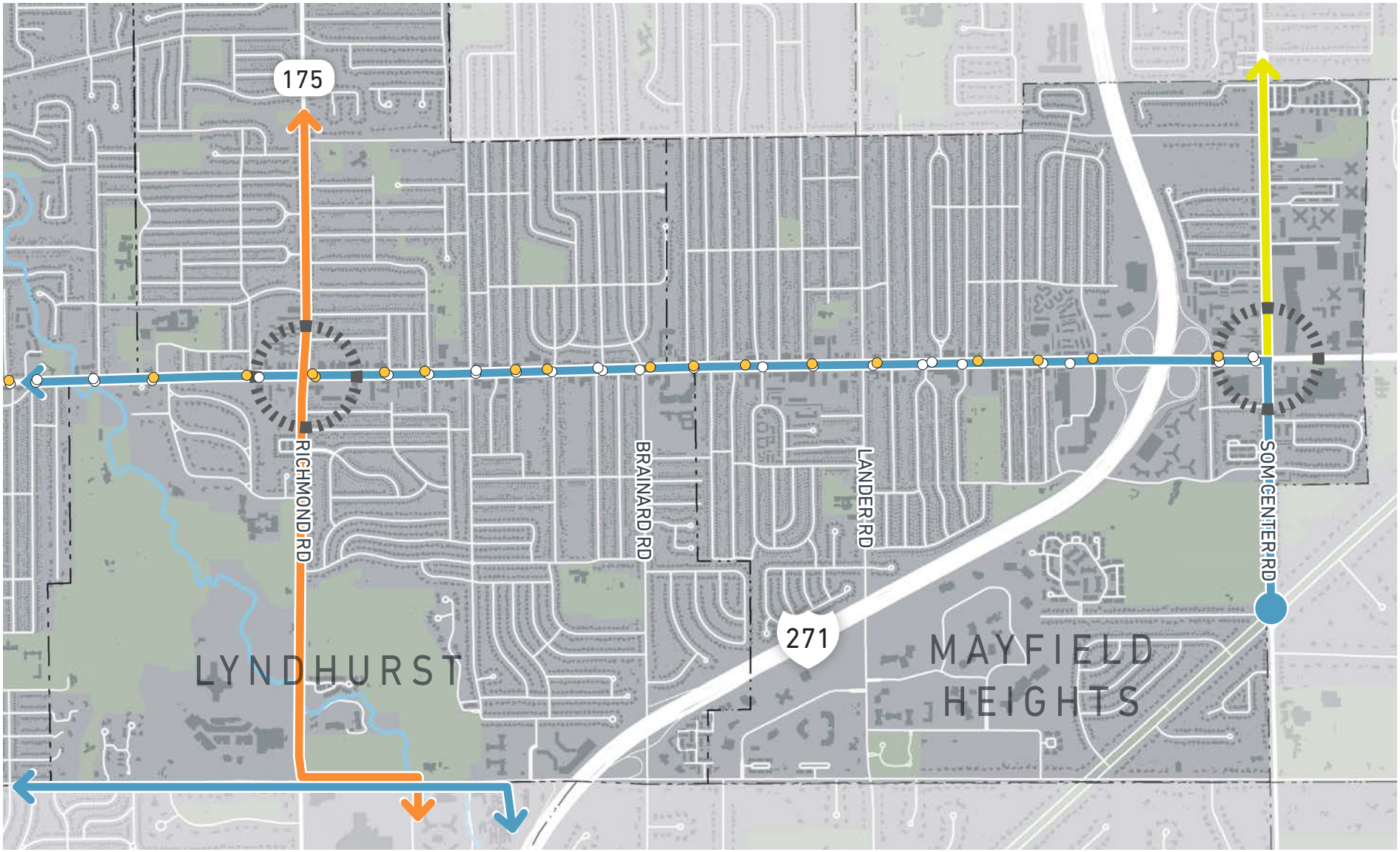
30 45 60 180

Existing Bus Stop with Shelter

Existing Bus Stop NO Shelter

Rapid Transit Line (Red)

Activity Node



- Route 9: Mayfield Road currently offers the highest frequency bus services within the study area communities and connects to a number of routes serving other communities on the east side of Cleveland

Design Standards

The physical appearance of bus stops is a key component of every transit experience – the bus stop is the first and last piece of the transit system that a user sees, and waiting at a stop without even the most basic amenities can be a deterrent to potential new riders. The design of a bus stop thus becomes a critical aspect for encouraging transit usage. The addition of features such as seating, trash receptacles, lighting, and shelters can go a long way to improving the experience for transit riders.

In addition to the design of the stop itself, design of the environment leading up to the stop also has a significant impact on the user experience. Every transit trip begins and ends with the walk to and from the bus stop, which can often be a challenge. Bus stops must be located within reasonable walking distance of crosswalks and major destinations to ensure access for transit riders.

There are at least 10 instances along the corridor where bus stops are located more than 500 feet from an existing crosswalk. Many transit riders must cross the street on one end of their trip, and walking an extra 500 feet to reach a crosswalk can add up to more than four extra minutes of walking, often in the wrong direction. Many transit riders will cross the street right next to their bus stop, whether there is a marked crossing or not. Ideally, crosswalks should be within 100 feet of a bus stop.

Extra Small Shelter for Narrow Spaces - No Amenities

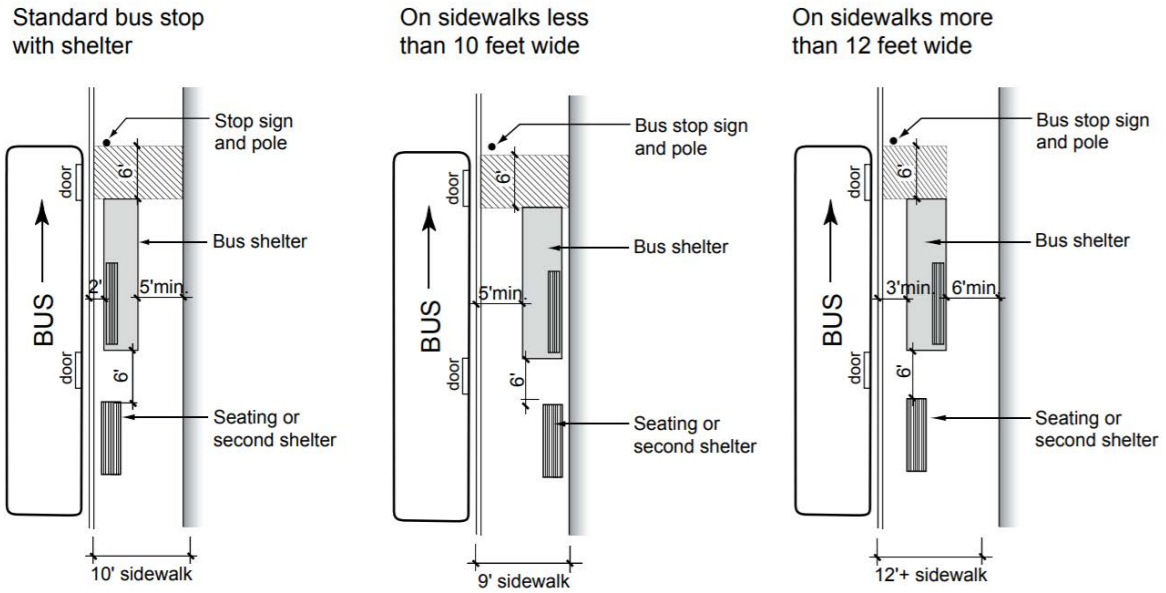
Atypical, Medium Shelter - Obstructing Pedestrian Through-Zone

Small Shelter with Trash Can

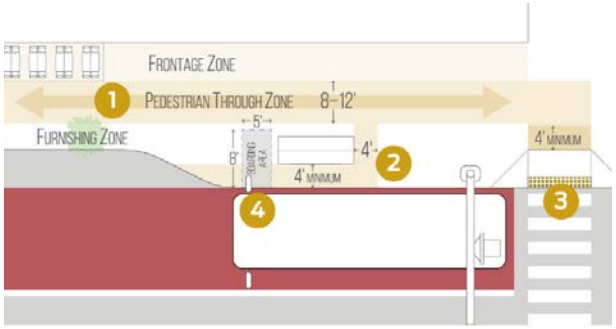
Bus Stop Design Recommendations

In addition to the Bus Stop Design Guidelines, GCRTA also developed an "ideabook" called Transit Waiting Environments that provides communities with ideas for improving the waiting area around a bus stop. A standard bus stop typically includes a basic sign post, paved waiting area, and trash can, but communities can work with GCRTA to install additional amenities such as shelters and seating. In addition to the provision of amenities, key considerations for bus stop design include:

- Proximity to crosswalks: Crosswalks should be provided within 100 feet of a bus stop; if not feasible, 300 feet is the maximum distance recommended between a bus stop and a crosswalk. Relocation of the bus stop can also be considered in coordination with RTA.
- Accessible loading areas: Federal regulations require a clear, 5x8-foot landing pad for ADA access at bus stops.
- Placement amongst other streetscape elements: Bus stops and stop amenities should be integrated within the design of the surrounding streetscape.
- Right-of-way constraints: Stops should ideally be located in areas with enough space to accommodate the waiting area and necessary amenties without obstructing the pedestrian through-zone. Communities should work with GCRTA to ensure sufficient space is provided for pedestrian travel and access.



GCRTA Transit Waiting Environments Ideabook - Bus Stop Shelter Placement Options



1. An un-obstructed pedestrian walkway must be provided, with a preferred width of 8-12 feet
2. A minimum 4-foot clear zone is preferred around all design elements, including shelters and other streetcape features
3. Crosswalks must be accessible, with special attention to people with limited mobility
4. An accessible boarding area must be provided, measuring 5 feet by 8 feet to allow for use of a wheelchair ramp for boarding/alighting

NACTO Transit Street Design Guide - Recommended Bus Stop Design Features

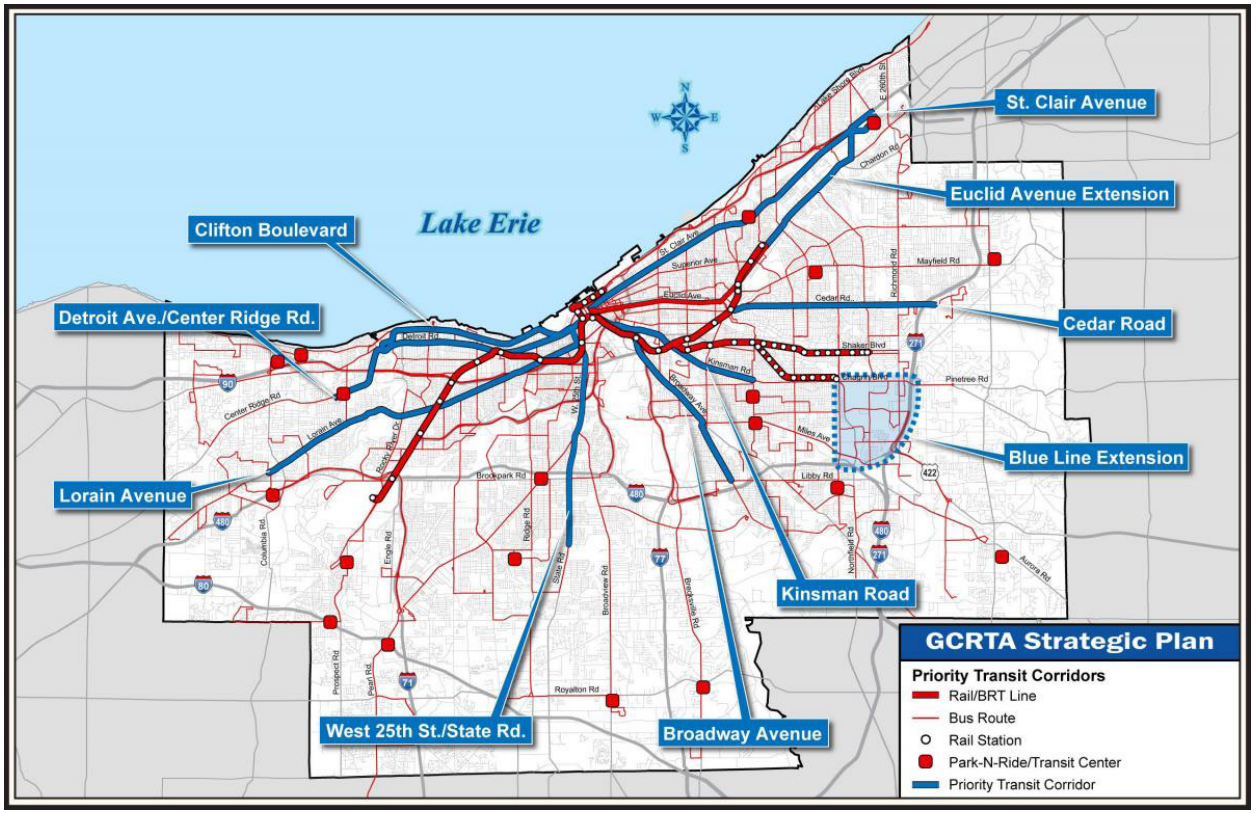
Each community should collaborate with GCRTA to enhance the bus stops along Mayfield Road and coordinate how bus stops are integrated into streetscape design. Enhanced stop amenities should be considered as part of an overall streetscape design and redevelopment strategy so adequate space can be allotted as properties along the corridor redevelop.

Future Transit Plans

The GCRTA Strategic Plan currently identifies Cedar Road to the south of Mayfield Road as a priority corridor for future transit investment. These nine corridors are potential locations for high-quality transit service as well as improved transit accommodations, and their selection was based on where GCRTA has determined there is potential for ridership growth. However, the implementation of any improvements along these corridors will require coordination with the adjacent communities and will be dependent on available funding.

Current transit ridership as well as land use, population, and employment densities are all higher on Cedar Road than on Mayfield Road. However, the current operating frequencies of Route 32 along Cedar Road are similar to that of Route 9 on Mayfield Road, with peak headways of 30 minutes. The width of the right-of-way and current traffic volumes on Cedar Road are just as limiting as the conditions on Mayfield Road, if not moreso, in terms of the potential for adding dedicated transit lanes and other significant transit improvements.

This plan explored the possibility of adding designated bus lanes to Mayfield Road, as well as other high-quality transit enhancements. Public input indicated that residents are interested in having better access to transit, higher frequency transit, and improved bus stops along Mayfield Road.



GCRTA Strategic Plan Priority Transit Corridors (*source: www.riderta.com/strategicplan)*

Much of the input asking for better transit also indicated a desire for bike lanes and improved conditions for bicycling along Mayfield Road. In terms of physical street design, a road diet that would add bike lanes separated from vehicular traffic by additional space for streetscape was the majority preference indicated by participants. This street design input will be discussed in further detail in the next chapter.

BICYCLE & TRANSIT INTERACTIONS

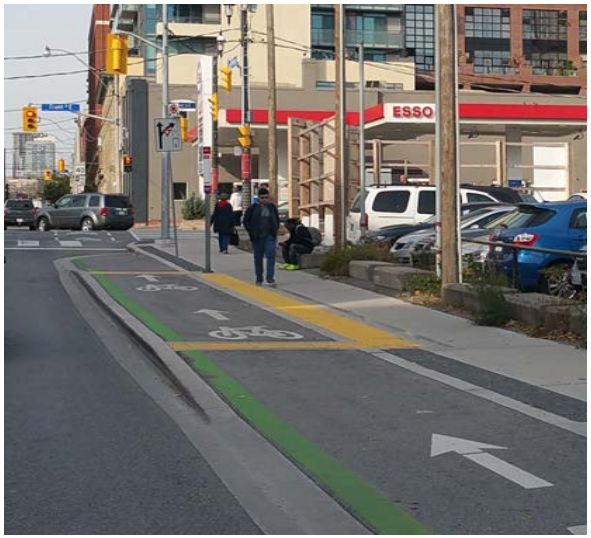
An important consideration for a heavily traveled, multimodal corridor like Mayfield Road is the interaction between buses and people on bicycles. While the peak bus frequencies on Mayfield are low enough that conflicts between bicyclists and buses may not occur often, if frequencies improve or if bike lanes are added to the roadway, the design around bus stops will need to safely accommodate this interaction.

Design Options

In most cases where streets have bike lanes and bus stops, buses typically pull into the bike lane and up to the curb to stop and pick up passengers. When a bicyclist approaches a stopped bus, they are required to either stop and wait behind the bus, or merge into the adjacent travel lane to pass the bus. Alternatively, if the bike lane is actively being used by bicyclists, buses must wait for a gap to pull up to the stop.

In some cities, bus stops are being designed to prevent this interaction from occuring by shifting the bike lane to travel behind the bus stop. The bike lane is designed to indicate appropriate crossing locations for pedestrians to access the adjacent bus stop and make bicyclists aware that it is a shared space. An alternative option being used is a raised bike lane that also serves as the bus loading area. Bicyclists must yield to passengers boarding and alighting, but have the right-of-way when no transit vehicles are present.

A Floating Bus Island in Denver, Colorado Allows Bicyclists to Travel Behind the Bus Stop and Avoid Conflict with Buses



A Raised Bike Lane Serves Dual Purpose as Bus Stop on Narrow Street in Toronto, Canada

A Separated Bike Lane at Sidewalk Level Provides Level Crossing for Riders Accessing Bus Stop in Vancouver, Canada

CHAPTER V: STREET DESIGN

Street Design

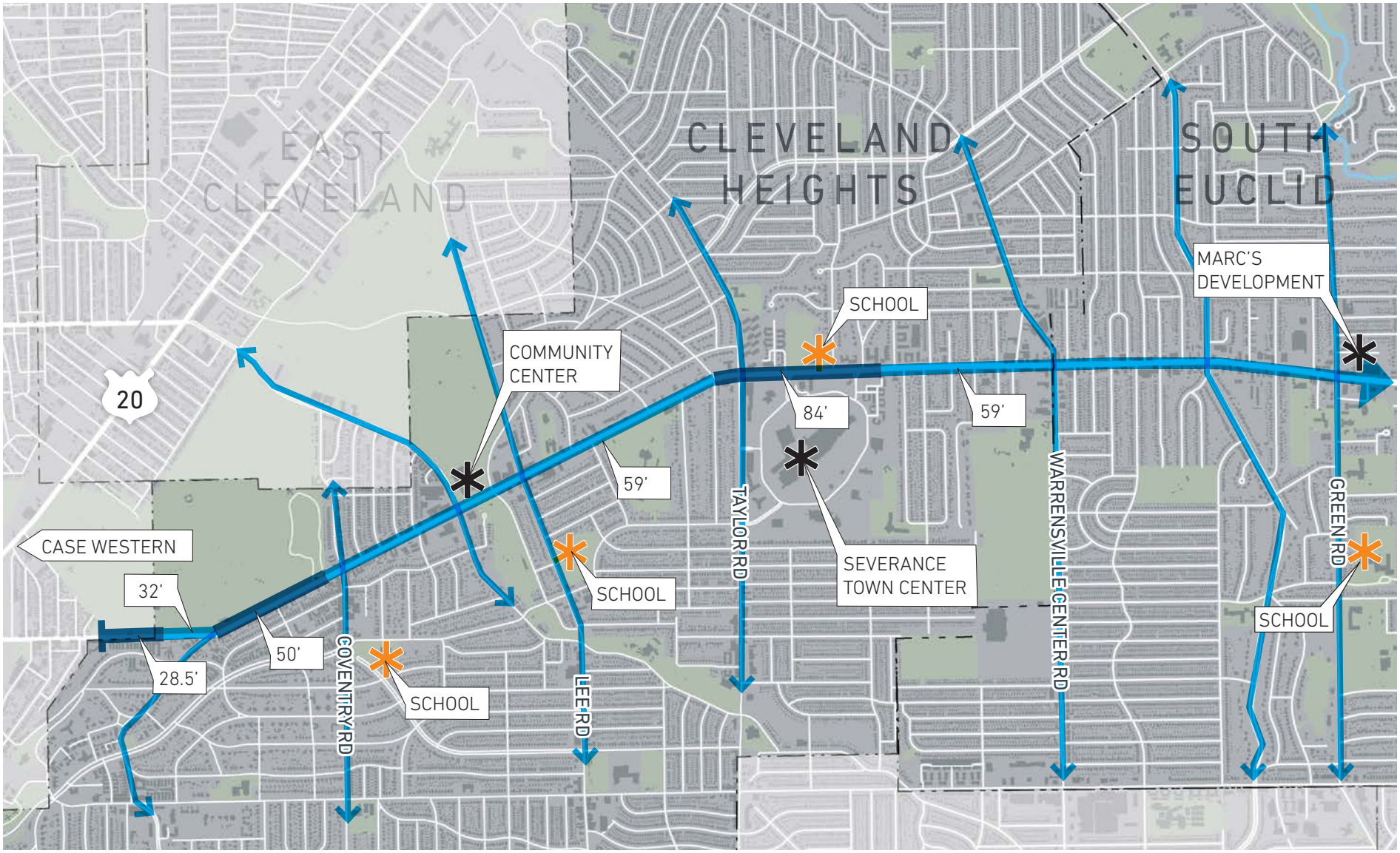
The design of the street has a significant impact on both the experience of traveling the corridor, as well as the character and quality of development along the corridor. As it exists today, Mayfield Road is designed to serve primarily as a vehicle thoroughfare between Downtown Cleveland/University Circle and neighborhoods to the east of Cleveland. Many of the properties adjacent to the corridor have developed to fit the context of the roadway and are primarily auto-oriented in their design.

EXISTING RIGHT-OF-WAY

The primary focus of this study includes the existing Mayfield Road public right-of-way (ROW). This ROW area consists of the space between existing property lines on each side of the street, which contains existing sidewalks, a landscape buffer or other amenity zone above the curb, as well as the street itself. The following section describes the existing conditions within the Mayfield Road ROW and explores potential opportunities for improvement.

Curb to Curb Space

Mayfield Road is classified as a principal arterial with a speed limit that varies between 25 and 35 miles per hour throughout the study area. The width of the existing ROW as well as the width and configuration of the street varies significantly throughout the Cleveland Heights portion of the corridor, but maintains a fairly consistent cross-section through the remainder of the study area (from just west of Warrensville Center Road to just east of Lander Road). The diagrams on the following pages illustrate the different ROW widths and existing street configurations.

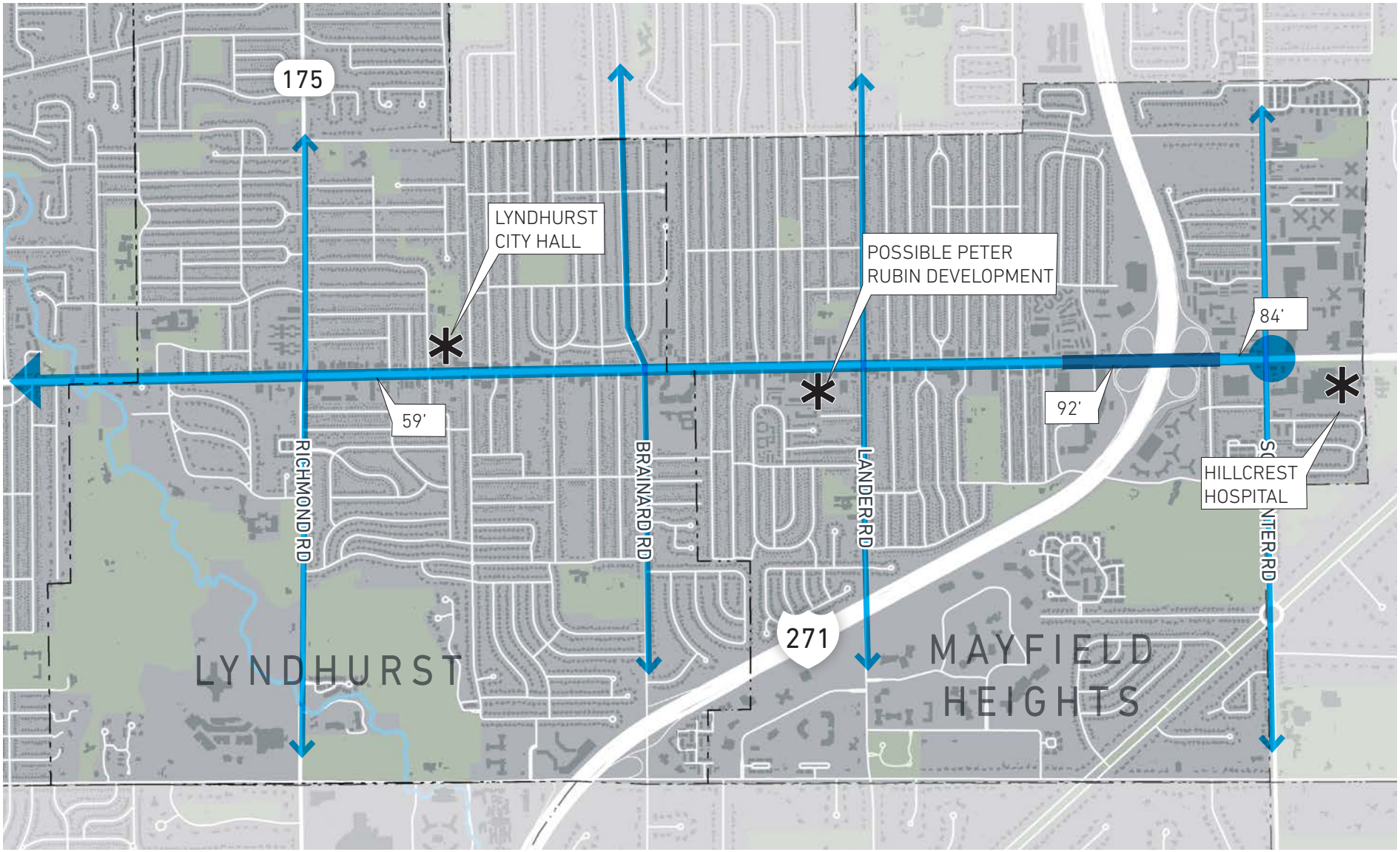


CURB TO CURB STREET WIDTH

School

Major Destination

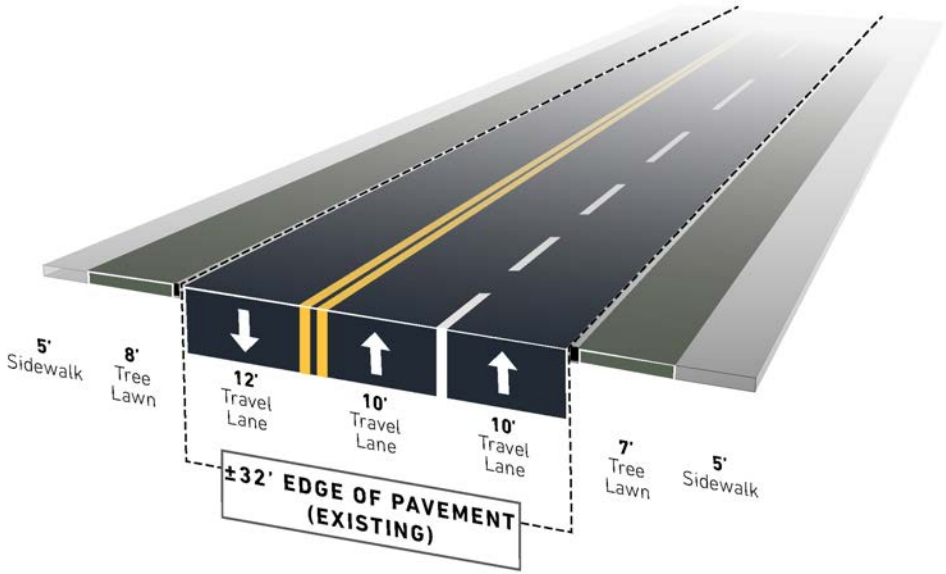
#'
Street Width Dimension



- Street width dimensions vary significantly throughout Cleveland Heights, but are consistent throughout much of the rest of the corridor

SEGMENT 1: EAST OF 125TH ST

SEGMENT 2: KENILWORTH RD INTERSECTION



CURRENT STREET CONDITIONS

Segment 1: East of 125th Street

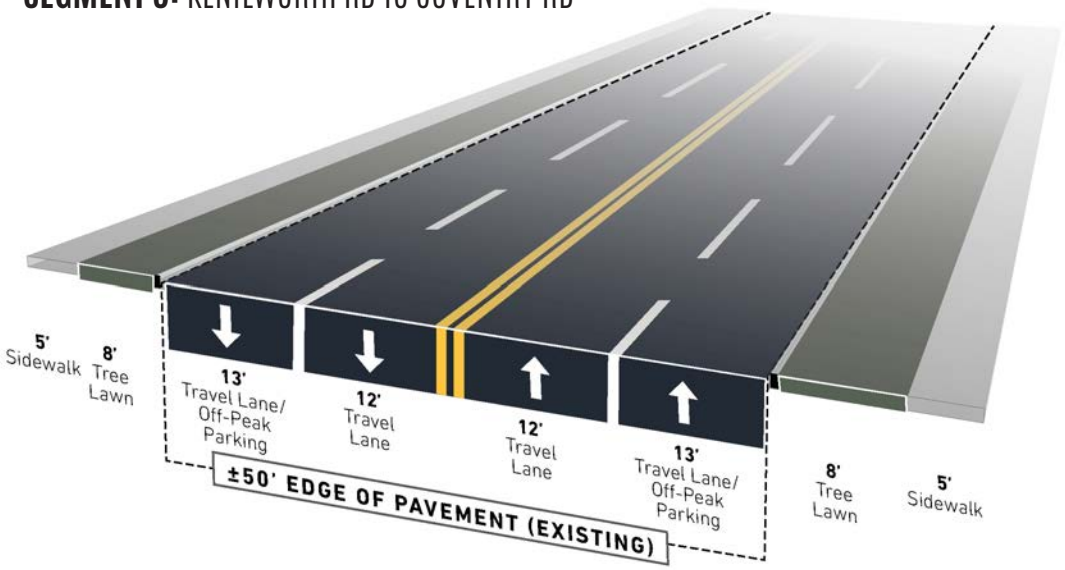
Segment 2: West of Kenilworth Road

CURRENT STREET CONDITIONS

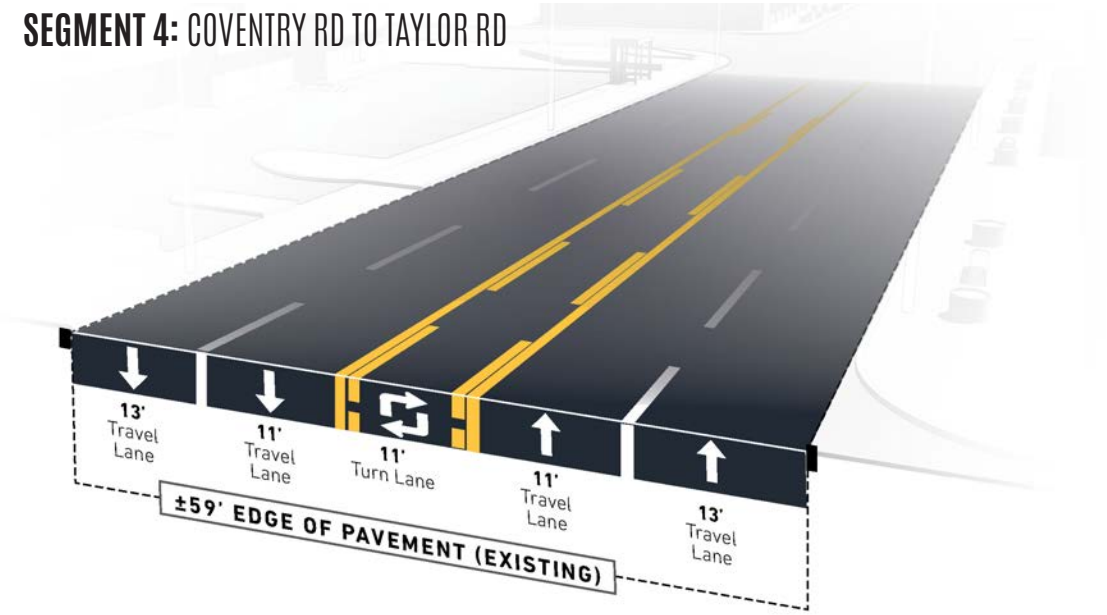
Segment 3: Between Kenilworth Road and Coventry Road

Segment 4: Between Coventry Road and Taylor Road

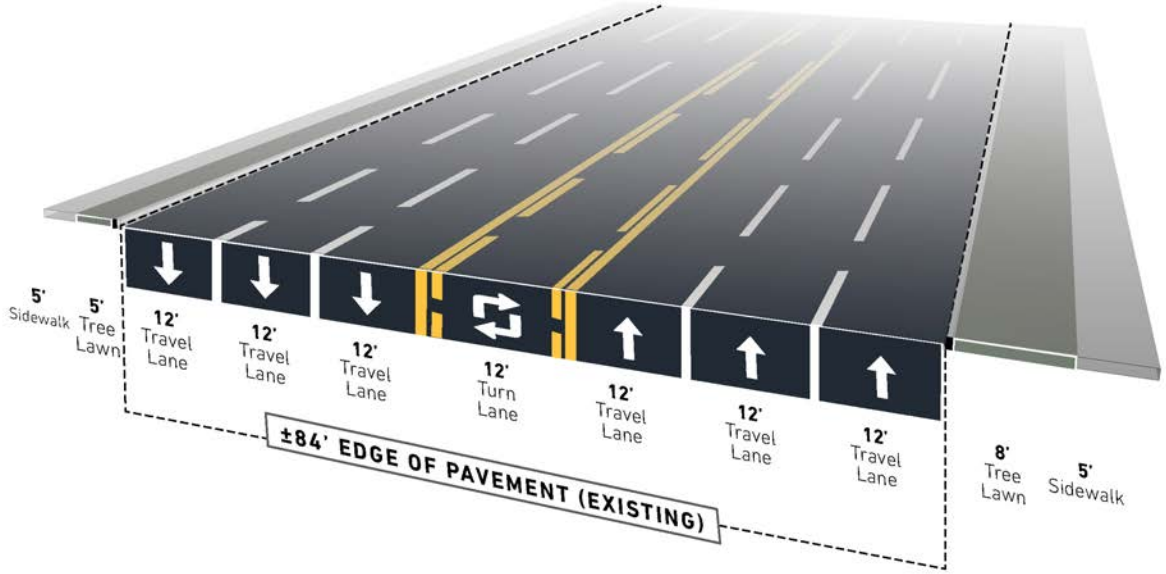
SEGMENT 3: KENILWORTH RD TO COVENTRY RD



SEGMENT 4: COVENTRY RD TO TAYLOR RD



SEGMENT 5: TAYLOR RD TO INGLEWOOD DR



CURRENT STREET CONDITIONS

Segment 5: Taylor Rd to Inglewood Dr

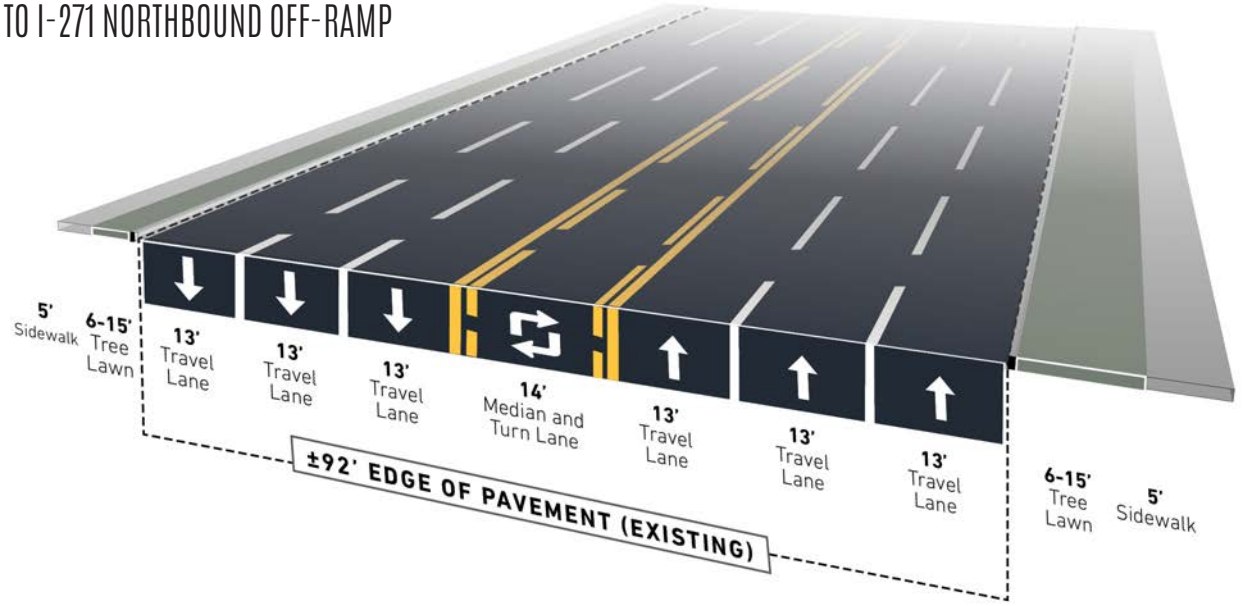
SEGMENT 6: INGLEWOOD DR TO WOODROW AVE

Segment 6: Inglewood Dr to Woodrow Ave

CURRENT STREET CONDITIONS

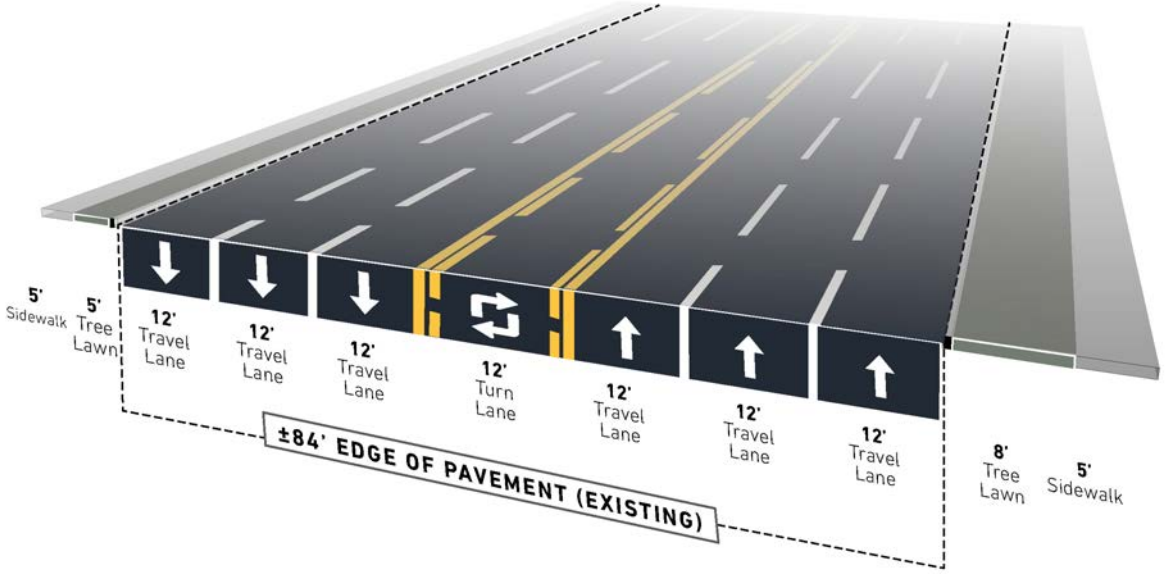
Segment 7: Woodrow Ave to I-271 NB Off-Ramp

SEGMENT 7: WOODROW AVE TO I-271 NORTHBOUND OFF-RAMP



Segment 8: I-271 NB Off-Ramp to SOM Center Rd

SEGMENT 8: I-271 NORTHBOUND OFF-RAMP TO SOM CENTER RD



DESIGN POSSIBILITIES

Through the community engagement process, this study revealed significant demand for a more walkable and bike-friendly Mayfield Road. Residents do not feel comfortable walking and bicycling along Mayfield Road today, because the conditions favor vehicular traffic over any other users.

The varying conditions along Mayfield Road as described throughout this report present both challenges and opportunities in terms of possible improvements to address these community desires. In some areas, the curb to curb and overall ROW widths are too narrow to make much change to the street, while other areas offer more room to work with.

A majority of the corridor has a curb to curb width of approximately 59 feet, with five total lanes (two travel lanes in each direction plus a two-way center left-turn lane). Reallocating one travel lane in each direction as part of a road diet opens up 24 feet for other uses, such as on-street parking and bike lanes. However, reducing the number of travel lanes available for cars can have a negative impact on traffic. This is a key concern for a street like Mayfield Road that carries more than 20,000 vehicles per day.

The following pages describe the results of a planning-level assessment of current traffic volumes on the corridor, as well as the potential trade-offs to consider before implementation of a road diet. Traffic data was not collected as part of this study, but was obtained from previous studies along the corridor and combined for the purpose of estimating potential impacts of a road diet along Mayfield Road.

Because this data was not all collected during the same time period, it is recommended that a detailed engineering study with updated traffic counts be conducted for the corridor to more clearly understand current conditions and potential impacts of a road diet.

NOACA TLCI Design Flexibility Guidelines

> "Making these destinations safely and easily accessible by foot, bike, or transit is the essence of the TLCI program. These changes may result in adverse operational impacts to motor vehicle traffic, but should still be considered when balancing the transportation needs and livability of the community."

Travel Lanes Repurposed for Bikes and Buses

Travel Lanes Repurposed for Buffered Bike Lanes

Traffic Data

A model was created of existing study area intersections and roadways using the Synchro 9 (Trafficware) software suite based on Synchro files provided by each community, the Ohio Department of Transportation (ODOT) and the Northeast Ohio Areawide Coordinating Agency (NOACA) to determine vehicle level of service (LOS) and delay during typical afternoon peak-hour weekday conditions. The "peak hour" is typically defined as the one continuous hour of peak traffic flow counted within a three-hour period in the afternoon.

Vehicle LOS is a measure of the quality of traffic flow, typically expressed as the **average** length of time a motorist will have to wait at a particular intersection. Generally, LOS A (less than 10 seconds of average delay) through D (35 to 55 seconds of average delay) are considered acceptable during the peak hour, LOS E (55 to 80 seconds of average delay) is considered congested, and any intersection that operates at LOS F (more than 80 seconds of average delay) is considered over capacity.

Two different scenarios were built into the Synchro model:

- Existing conditions
- Road diet conditions

The existing conditions scenario included existing lane configurations, intersection controls, and vehicle turning movement counts.

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010*, Transportation Research Board, 2010.
1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Level of Service Criteria for Signalized Intersections, Highway Capacity Manual 2010

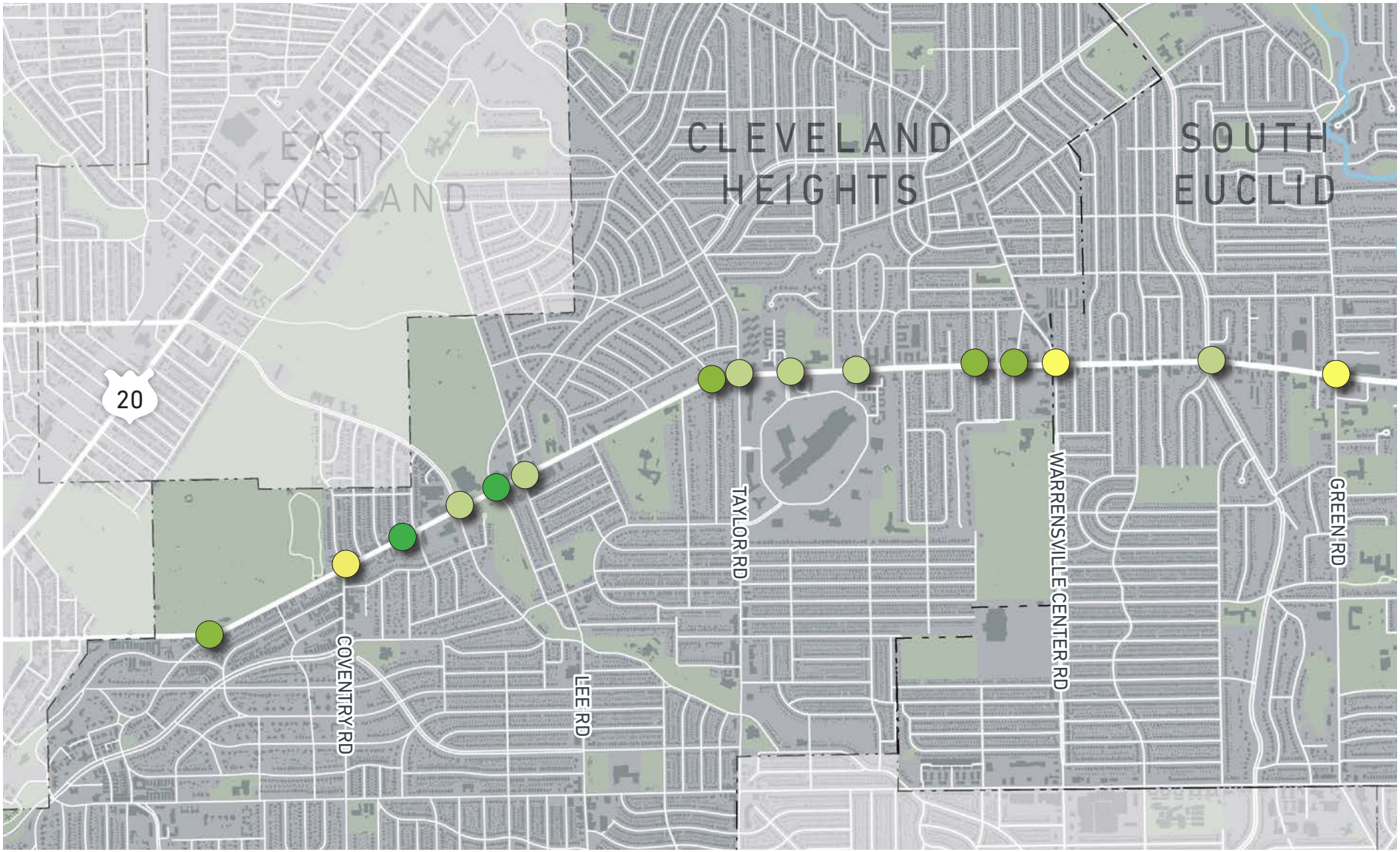
The purpose of the existing conditions scenario was to establish a baseline for current traffic conditions to compare against the results of the road diet assessment.

The road diet scenario reduced the number of through lanes to one in each direction in most locations along the corridor, while keeping or adding a center two-way left-turn lane. Exceptions to this include:

- Segment between East 125th Street and Kenilworth Road was modeled without a center two-way left-turn lane
- Segment between Taylor Road and Ingledwood Drive was modeled with two travel lanes in each direction
- Segment between Woodrow Avenue and SOM Center Road was not modified from existing configuraion

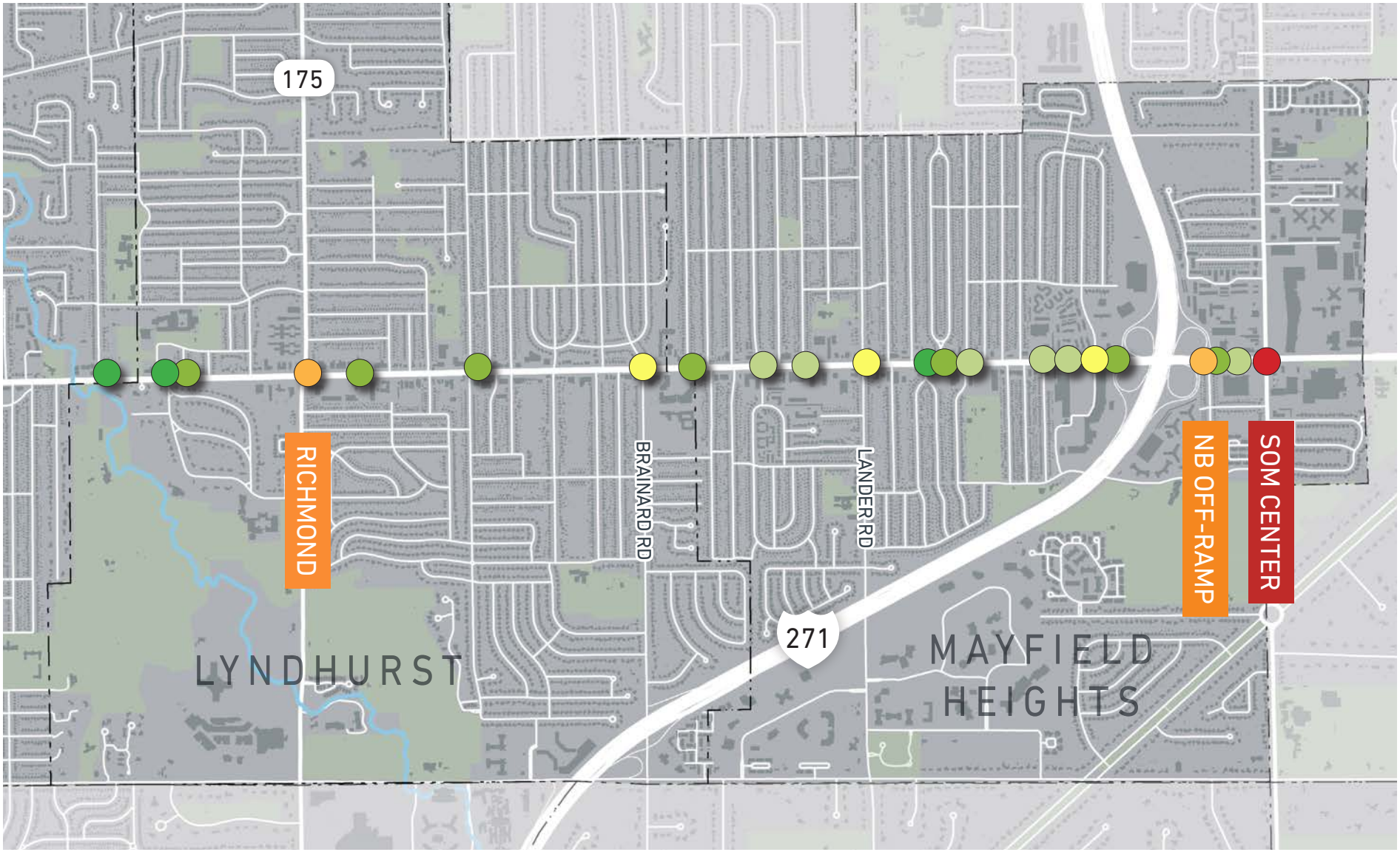
The segment between Woodrow Avenue and SOM Center Road was originally modified from three lanes in each direction down to two in each direction, but the results of the model indicated unacceptable levels of service due to the interchange with I-271.

The diagrams on the following pages illustrate the results of the two scenarios, indicating the average delay currently experienced at each signalized intersection along the corridor, as well as the potential delay that could be experienced if a road diet were implemented.

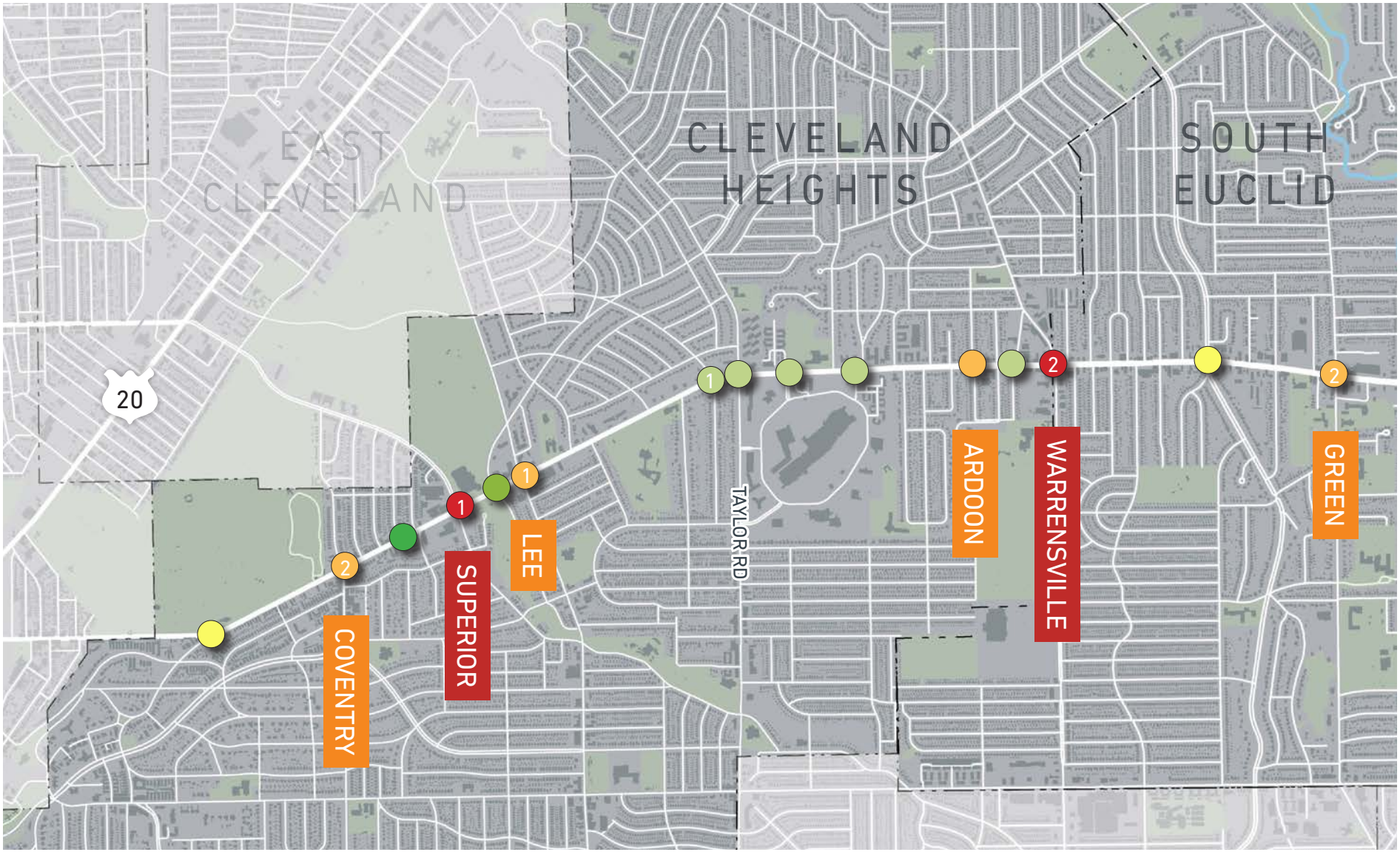


EXISTING AVERAGE DELAY PER VEHICLE

- <10 Seconds
- >10-25 Seconds
- >20-35 Seconds
- >35-55 Seconds
- >55-80 Seconds
- >80 Seconds

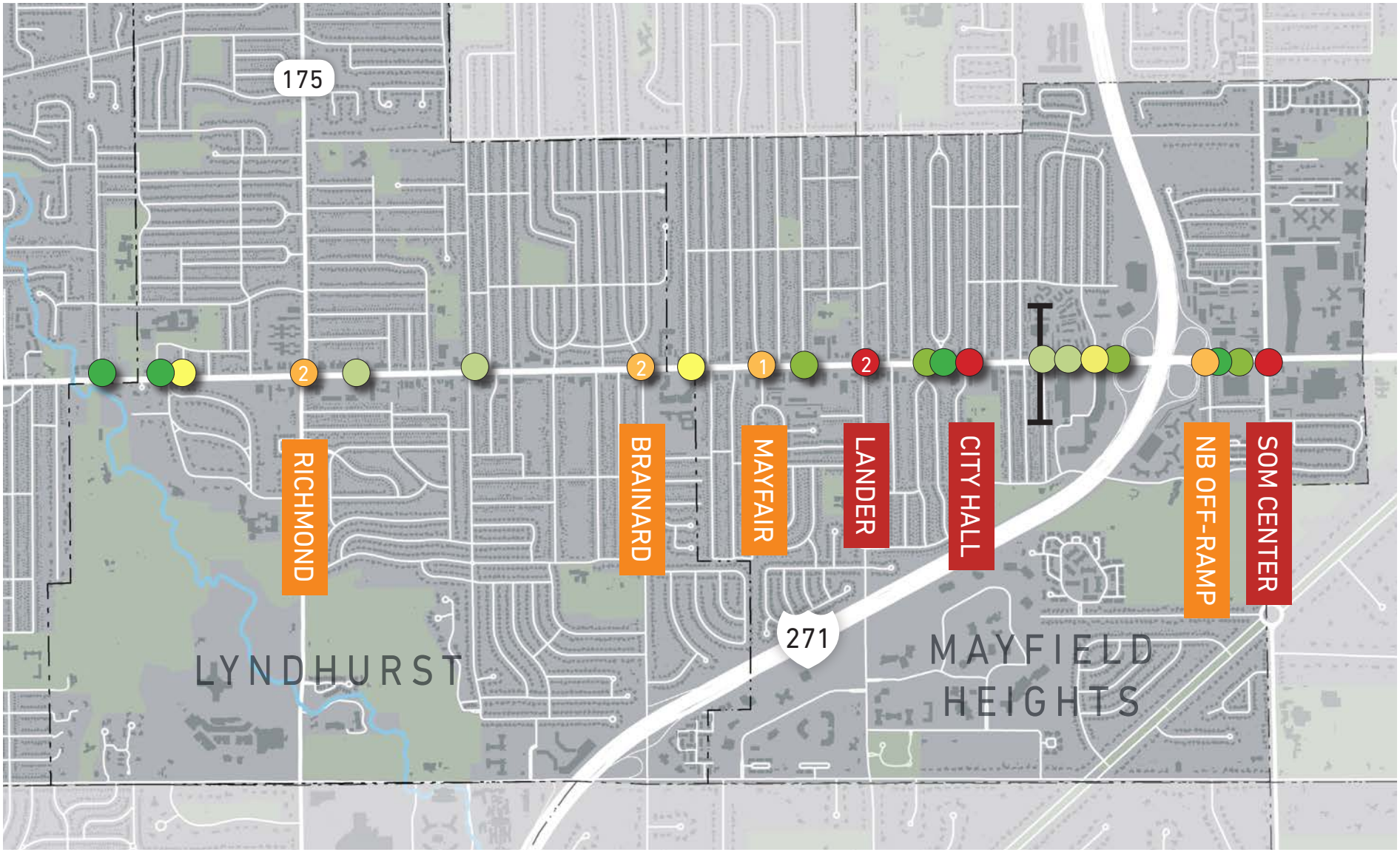


- Three intersections along the corridor currently operate below acceptable levels: Richmond, SOM Center, and the NB I-271 off-ramp.
- Current travel times from one end of the corridor to the other vary between 25 - 50 minutes, depending on traffic conditions.



POTENTIAL AVERAGE DELAY PER VEHICLE

- <10 Seconds
- >10-25 Seconds
- >20-35 Seconds
- >35-55 Seconds
- >55-80 Seconds
- >80 Seconds



- Results from the road diet model indicated that 13 out of the 37 signalized intersections could potentially experience 55+ seconds of delay.
- The total travel time from one end of the corridor to the other was estimated as an average of 45 minutes during the evening rush hour.
- Some of the intersections were adjusted to include dedicated right-turn lanes to reduce delay (illustrated by numbers in the circles above).

Tradeoffs to Consider

When considering the implementation of a road diet, there are a number of factors that should be taken into account. Road diets offer numerous benefits that can include improved safety for all users, reduced speeding, and even operational improvements in certain scenarios, there are also negative impacts that can result from road diets implemented under unsuitable conditions.

A traffic analysis that indicates potential for poor levels of service should be compared with the potential benefits for other users, and desires of the adjacent communities. A free-flowing corridor that only serves the purpose of moving traffic may not suit the needs of the community.

Over many decades of transportation planning and engineering, LOS has been used as a metric to guide roadway design and to measure the performance of streets and intersections in terms of how well they facilitate the movement of traffic. Communicated in a letter grade format (A to F), the LOS metric can be intuitively interpreted as “good” (A) or “bad” (F) – but this only captures a part of the larger picture of roadway function.

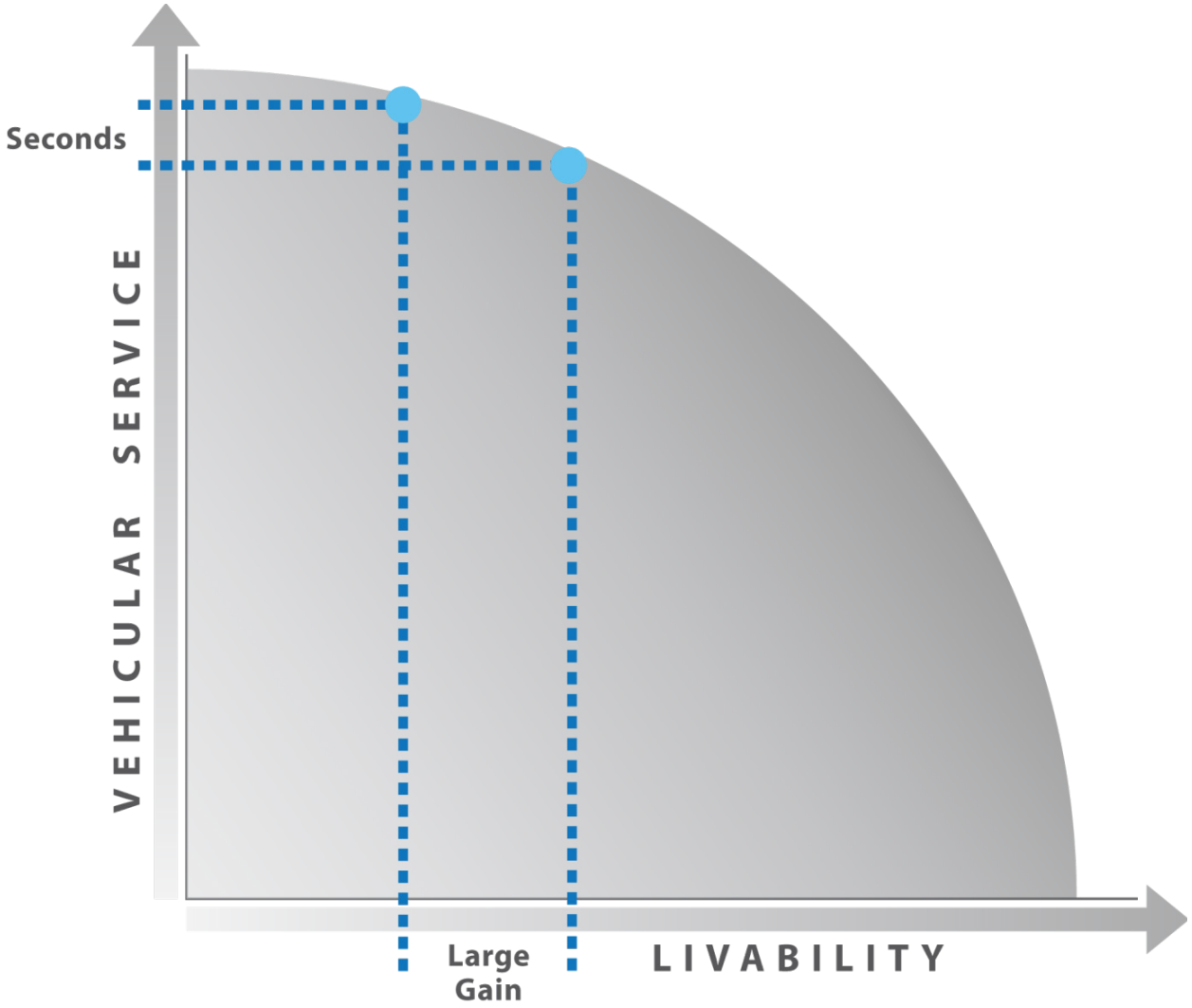
Example Representation of what “LOS A” Looks Like

Example Representation of What “LOS F” Looks LIke

An LOS of “A” means traffic is moving unimpeded and flowing freely, while “F” indicates congestion. But the appropriate level of service really should be influenced by the context of development along the roadway and the needs of other users, including pedestrians, bicyclists, transit riders, and other emerging modes of transportation. A vehicle LOS of “A” does not serve these other users well, and typically does not indicate vibrant, walkable places.

In contrast, an LOS of “F,” while characterized by slower moving traffic, is often the grade given to streets in the most attractive, economically productive neighborhoods. In many cases, a trade-off of waiting a few additional seconds at a traffic light can unlock many other community benefits by allowing roadways to be redesigned with more space for pedestrians and safer pedestrian crossings.

In making decisions about roadway design and potential reconfiguration, it is critical that communities consider the type of place they want the corridor to be and balance vehicular LOS with other objectives for community mobility, accessibility, placemaking, and economic development.



A Tradeoff of Increasing Delay by a Few Seconds Can Result in a Much Larger Gain In Livability

Road Diets

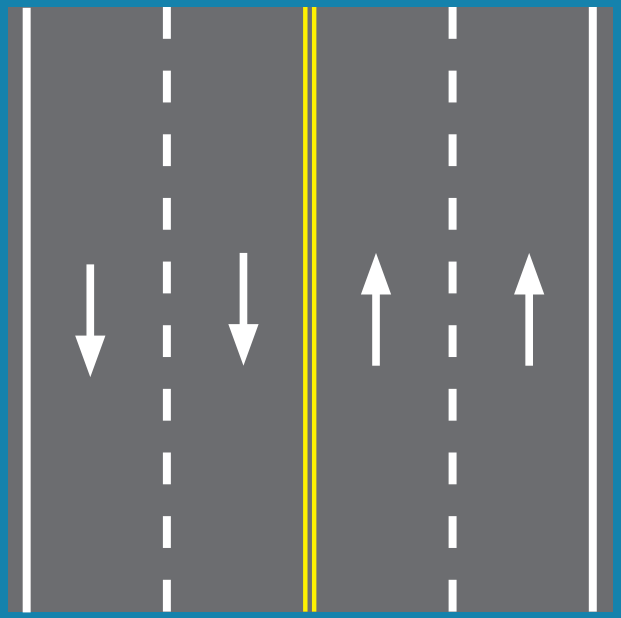
A road diet is a design-based safety solution that reconfigures a street by removing travel lanes to repurpose the space for other uses and travel modes. The most common scenario is the conversion of an undivided, four-lane roadway to a three-lane roadway where the center lane serves as a two-way, left-turn lane. In many cases, features such as bike lanes, on-street parking, or bus-only lanes are incorporated in the street redesign to improve convenience and quality of life for all users.

According to the Federal Highway Administration (FHWA), roadways with fewer than 20,000 vehicles per day are ideal candidates for road conversions to three lanes. However, FHWA also acknowledges that successful road conversions have been applied to roadways with up to 25,000 vehicles per day.

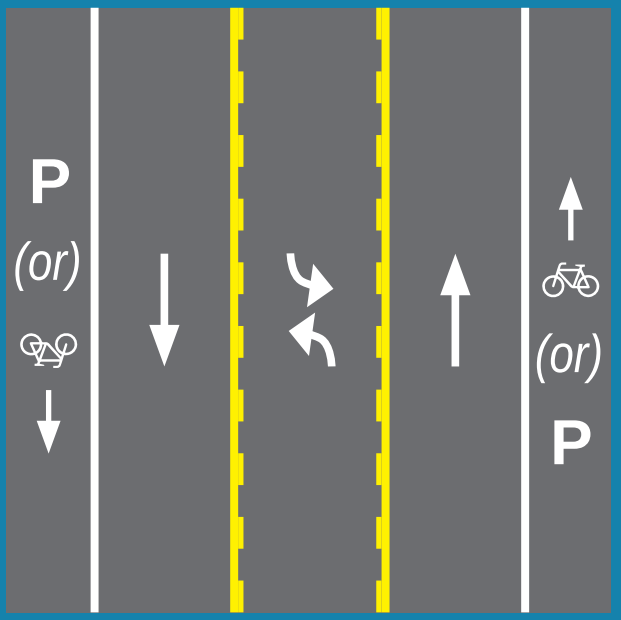
The implementation of road diets across a variety of environments has demonstrated numerous positive impacts, but also has resulted in some unintended negative impacts. The potential benefits and associated tradeoffs must be considered with every conversion.

POTENTIAL BENEFITS

- **Safer traffic speeds:** Reducing travel to one lane in each direction limits vehicle speeds to the slowest driver on the road, which helps to reduce speeding.
- **Operational improvements:** The addition of a center left-turn lane allows left-turning motorists to move out of the travel lane to make their turns, reducing conflicts with through-moving vehicles.
- **Reduction of number and severity of crashes:** Studies show a 19 to 47 percent reduction in crashes when a road diet is installed, which largely affect drivers younger than 35 and older than 65.
- **Additional space in the right-of-way for other uses:** Space that has been made available through conversion can create opportunities for new on-street parking, bike lanes, wider sidewalks, etc.
- **Reduction of the overall crossing distance for pedestrians:** The addition of on-street parking or center medians can reduce the crossing distance for pedestrians, or provide pedestrian refuge islands.
- **Improved safety for all users:** Motorists, pedestrians, transit users, and bicyclists all benefit from fewer potential conflict zones and enhanced accommodations.



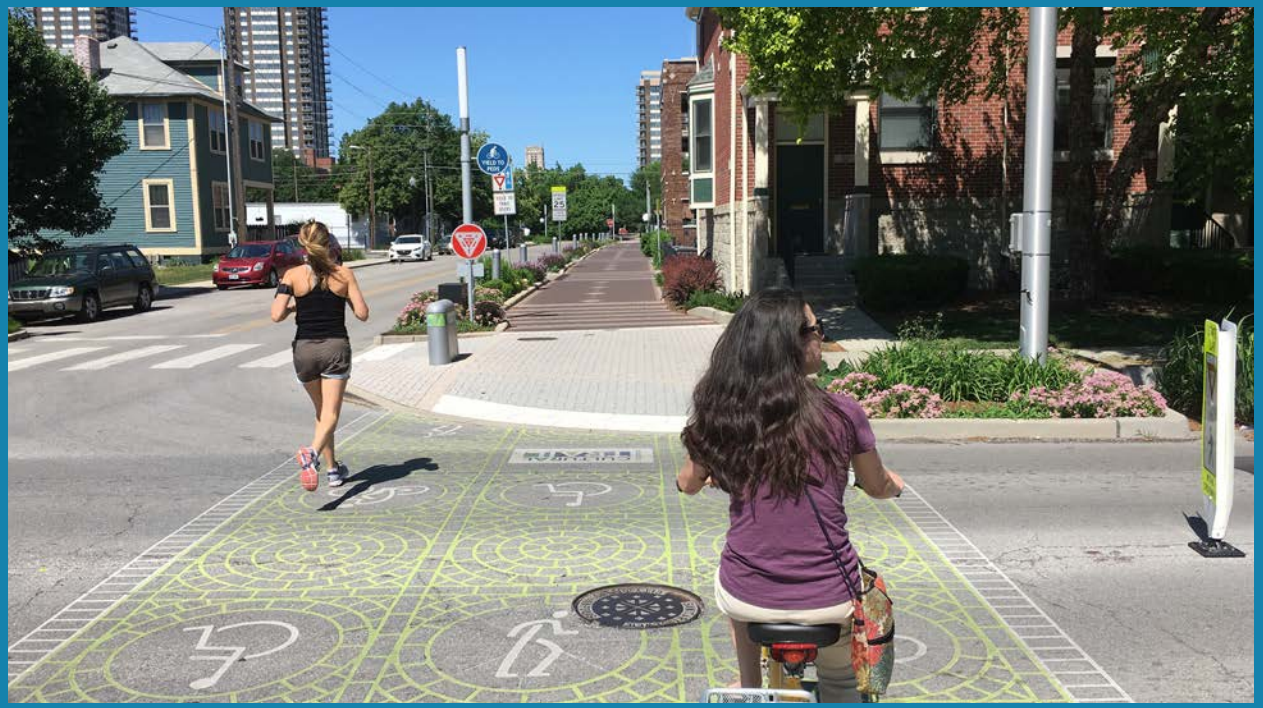
Typical Four-Lane Street Configuration



Typical Conversion from Four to Three Lanes

CONSIDERATIONS

- **Potential delay at traffic signals:** reducing the number of travel lanes can increase delay at major intersections, particularly if there are high volumes of turning movements. However, traffic signal timing and the presence of designated turn lanes can help to resolve this.
- **Potential reduction in capacity for increased traffic volume**: While in most cases the converted roadway can still handle the existing traffic volumes, some traffic may divert to alternate routes.
- **Potential congestion with in-lane bus stops:** When travel lanes are reduced to install bike lanes, buses are required to stop in the travel lane to pick up passengers. This can cause a back up due to motorists not being able to pass the stopped bus.
- **Potential impacts on transit service reliability:** If the road conversion adds on-street parking or space for buses to pull out of the travel lane for passenger pick-up, the bus then has to wait for traffic to pass to move back into the travel lane. Depending on the volume of traffic, this can add up to significantly longer service times for buses. Adding bump-outs at bus stops would resolve this issue, but potentially add to congestion.
- **Potential reduction of on-street parking:** In scenarios where bike infrastructure is prioritized, there may not be space remaining for on-street parking.



Indianapolis Cultural Trail has had an estimated $864.5 million overall economic impact

- **Potential impacts on maintenance and snow removal:** If the road conversion includes installation of medians or other curbed infrastructure, it can add complexities to maintenance and snow removal efforts.

CASE STUDY

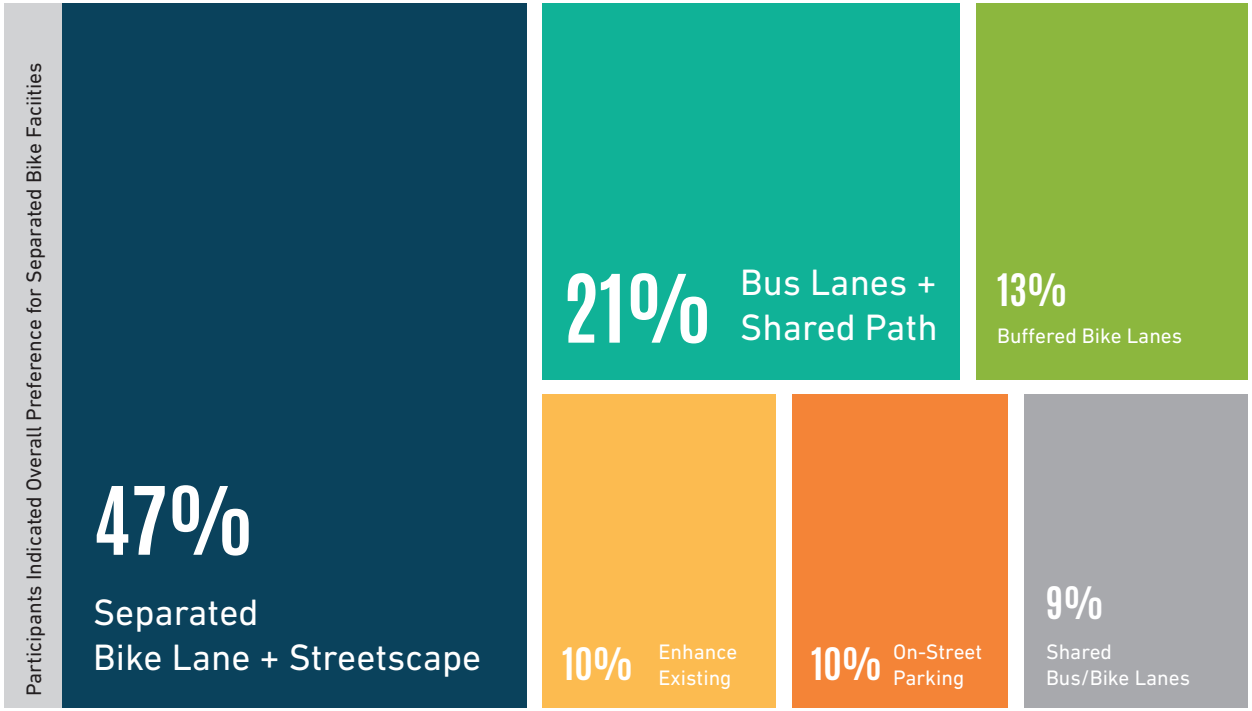
In addition to the benefits listed here, some cities have recorded positive economic impacts after installing dedicated bicycle facilities as part of a road diet. The Indianapolis Cultural Trail is one example of a project that was implemented via road diet, and has recorded significant economic benefits post-construction. The total cost of the project was was $63 million. Some of the recorded benefits include:

- $864.5 million estimated overall economic impact
- $4 million invested in public art along trail
- $250 million/year estimated returns to city revenue
- 11,372 estimated jobs created
- 5 acres of green space was added to downtown including many stormwater planters alongside parts of the trail

PREFERRED DESIGN OPTIONS

Community residents were provided example images of potential configurations for each different segment of Mayfield Road and asked to identify their preferred alternative. While the design options varied slightly by location along the corridor, the input received throughout the process indicated that there is an overall preference for a separated bike facility along Mayfield Road. Nearly 50% of all input received indicated a preference for a bike lane separated by additional streetscape, while another 21% of the input indicated preference for a bus lane in the street with a separated shared use path in the place of the existing sidewalk.

The strategies and recommendations on the following pages were developed based on the input that was received,

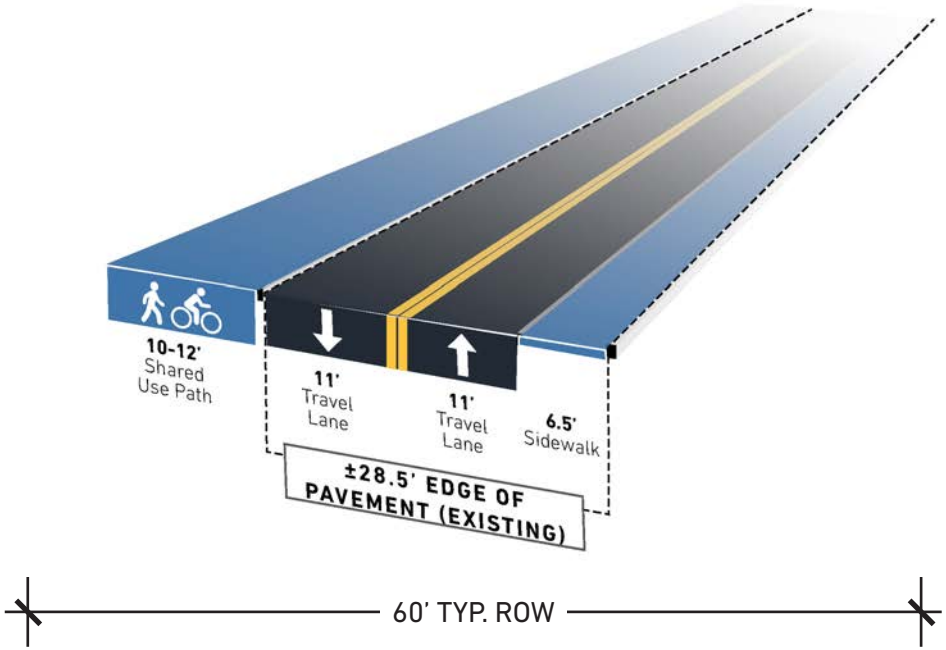


Segment 1: East of 125th Street

The preferred alternative for the western-most segment of Mayfield Road included the implementation of a shared use path along the north side of the street. Due to the cost and nature of constructing a path, this option will take longer to implement, but is recommended as the long-term configuration for this segment of Mayfield Road.

In the near-term, an engineering study should be conducted to determine the feasibility and design of the shared use path in that location. The existing width of the space above the curb is approximately 10-12 feet, which is the typical width for a shared use path. This leaves little to no space for a buffer (beyond a typical curb) from the adjacent travel lanes, or street trees and utilities.

SEGMENT 1: PREFERRED DESIGN OPTION

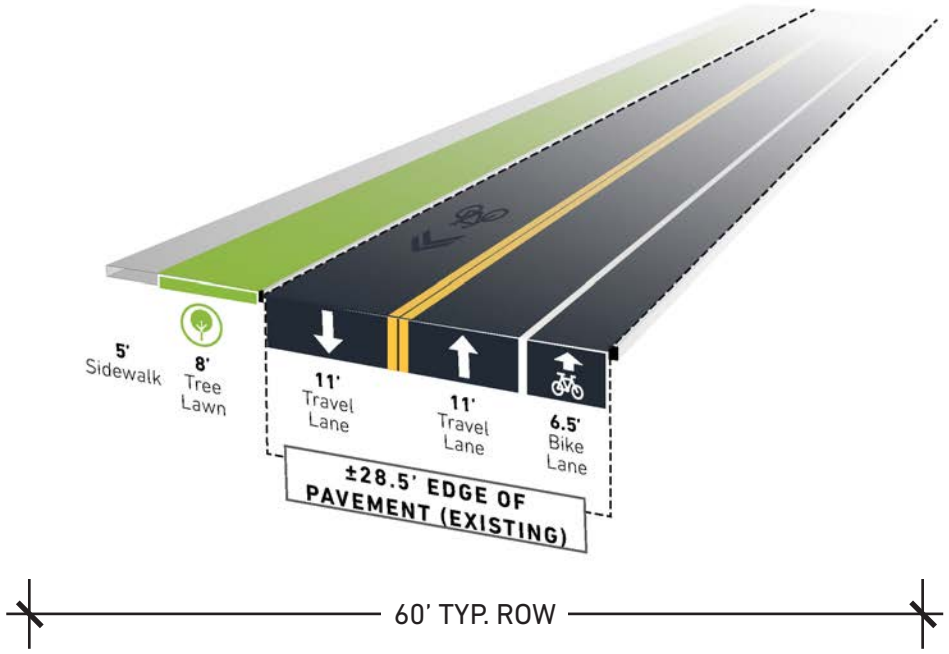


Shared Use Path with Designated User Zones and Separation from Vehicular Traffic

Shared Use Path in Place of Sidewalk with Limited Space

For a near-term design enhancement, it is recommended that the existing bike lane in the east-bound direction be marked more clearly as a bike lane. Appropriate bike lane signage should also be provided along the south side of the road to identify the bike lane. Additionally, the west-bound travel lane should be marked appropriately with shared lane markings for bicyclists traveling in that lane. These shared lane markings in the downhill direction should remain on the street with the installation of the shared use path to allow for bicyclists traveling downhill at higher speeds to remain in the roadway.

SEGMENT 1: NEAR-TERM DESIGN OPTION



Bike Lane in Uphill Direction with Shared Lane Markings in Downhill Direction

Bike Lane Markings to Clearly Identify Bike Lane

Federal and State Design Criteria

Mayfield Road is part of two different nationally designated roadway networks: the National Highway System (NHS) and the National [Truck] Network. While the two networks include many of the same roadways, they are two completely separate systems. However, roads designated as part of the NHS as well as the National Network are required to comply with federal regulations and design standards.

NATIONAL [TRUCK] NETWORK

The National Network was established in 1982 to ensure freight access in cities and densely populated areas. In order to provide for this access, criteria for the modification of any route in the National Network require "lanes designed to be a width of 12 feet or more or otherwise consistent with highway safety." This means that at least one 12-foot lane must be provided in each direction on all National Network routes or a design exception must be approved by the Federal Highway Administration (FHWA).

NATIONAL HIGHWAY SYSTEM

The Moving Ahead for Progress in the 21st Century Act (MAP-21) is a funding and authorization bill that was implemented in 2012 to regulate federal surface transportation spending. MAP-21 expanded the road network known as the National Highway System (NHS) by adding all roads classified as principal arterials into the system. This update to the network added Mayfield Road into the NHS.

The design standards required by the FHWA for projects on the NHS network include A Policy on Geometric Design of Highways and Streets (2011) and A Policy on Design Standards Interstate System (2005), published by the American Association of State Highway and Transportation Officials (AASHTO). However, design exceptions may be approved on a project basis for designs that do not conform to the minimum criteria set forth by the FHWA, known as the controlling criteria.

In 2016, the FHWA revised their policy on controlling criteria, reducing the total number of criteria from 13 to 10 and changing the requirements so the full set of criteria only applies to NHS routes that have a design speed equal to or greater than 50 mph. For NHS routes with design speeds below 50 mph, only two controlling criteria are applicable: design loading structural capacity and design speed.

This change means that lane width standards are no longer a federal controlling criteria for NHS routes with design speeds less than 50 mph. However, the Ohio Department of Transportation (ODOT) Location & Design Roadway Design Manual requires that all urban arterials with speeds less than 50 mph have 11-foot lanes, at minimum.

The revisions to the federal controlling criteria were based on a study that examined the safety and operational impacts of the 13 original criteria. The results of the study indicated that the criteria had little to no impact on safety and operations on low-speed (less than 50 mph) urban and suburban corridors.

APPLYING TO MAYFIELD ROAD

While 12-foot lanes can be accommodated in most locations along the corridor within the street configuration concepts explored through this study, wide travel lanes have been shown to encourage higher vehicular travel speeds, which community residents have identified as not desirable for Mayfield Road.

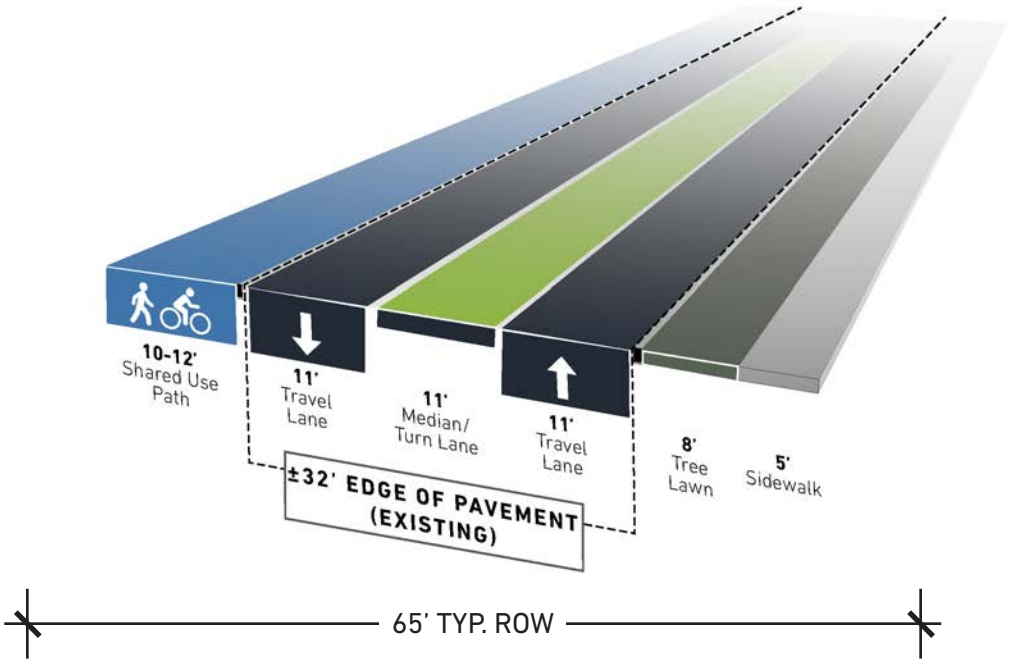
ODOT's Office of Roadway Engineering and the ODOT District 12 office should be consulted to confirm the requirements for lane widths and other design criteria to determine how to move forward with a National Network Safety Analysis for the FHWA design exception.

See appendix for links to relevant sources.

Segment 2: Approach to Kenilworth Road

The preferred alternative for this segment of Mayfield Road also included the implementation of a shared use path along the north side of the street, as well as a landscaped center median. This option is recommended as the long-term configuration for this segment of Mayfield Road, but will require an engineering study to determine feasibility and final design. If a physical median is not feasible, a center left-turn lane could be implemented. Additional design consideration will need to be given to the configuration at any bus stops in this location along the corridor to ensure appropriate and safe access is provided for all users.

SEGMENT 2: PREFERRED DESIGN OPTION



Median Between Left-Turn Pockets

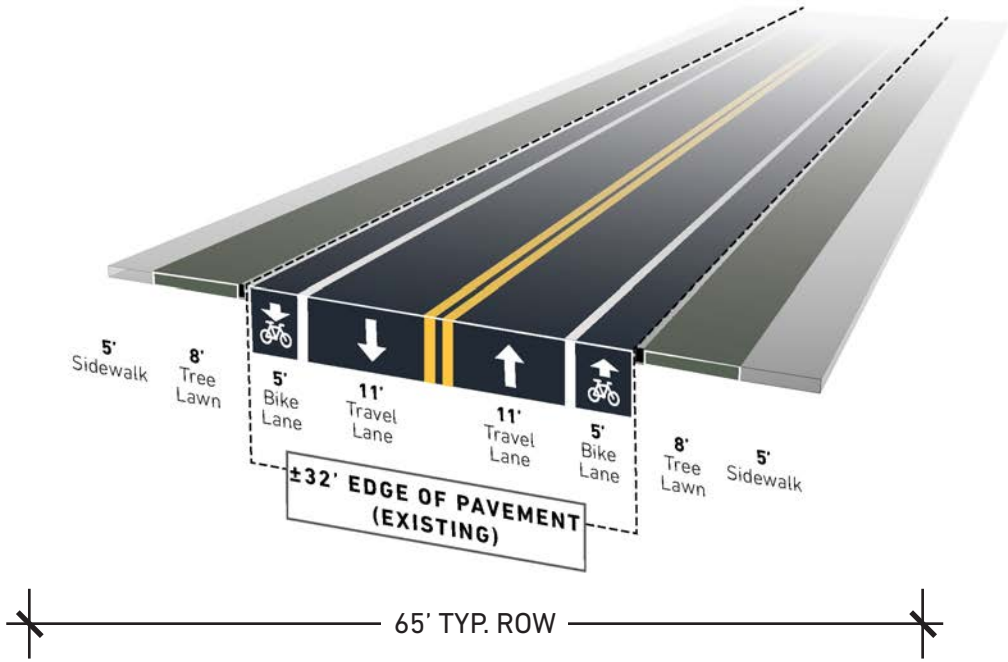
Landscaped Center Median

Shared Use Path at Edge of Curb

In the near-term, this segment could be re-striped to designate the center median location until funding is available to construct the full project. Another option for the near-term would be to restripe the lane configuration to provide 5-foot bike lanes on each side of the street until the shared path can be constructed.

Additionally, the intersection with Kenilworth Road and Mayfield Road has previously been studied through the Facilitating Bicycle and Transit Travel in University Circle and Cleveland Heights plan. Proposed improvements include bump-outs with stormwater infrastructure and enhanced pedestrian crossings. It is recommended that these improvements be installed with consideration to the future configuration of Mayfield Road.

SEGMENT 2: NEAR-TERM DESIGN OPTION



Bike Lane Markings to Clearly Identify Bike Lane

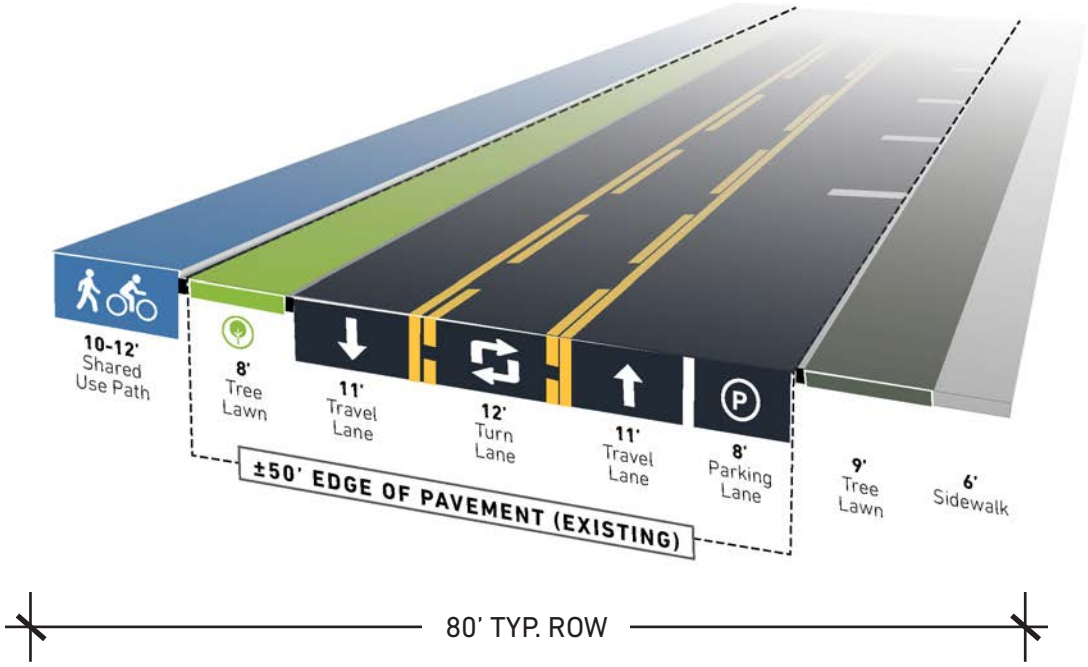
Mayfield at Kenilworth Preferred Intersection Design - Facilitating Bicycle and Transit Travel in University Circle and Cleveland Heights

Segment 3: Kenilworth Road to Coventry Road

The preferred alternative for this segment of Mayfield Road included reducing the existing four-lane configuration to a single lane in either direction witih a center two-way left-turn lane. This would formalize on-street parking on one side of the street (currently only off-peak parking is allowed) and add a shared use path on the north side of the street. The shared use path would be combined with extension of the tree lawn into the existing roadway, rather than keeping on-street parking on both sides.

Where the available public right-of-way (ROW) is constrained and may not allow for full build-out of a high-quality shared use path, consideration should be given to opportunities that can be created through redevelopment of the corridor over time. This may require minor acquisition of private property or the creation of public easements.

SEGMENT 3: PREFERRED DESIGN OPTION



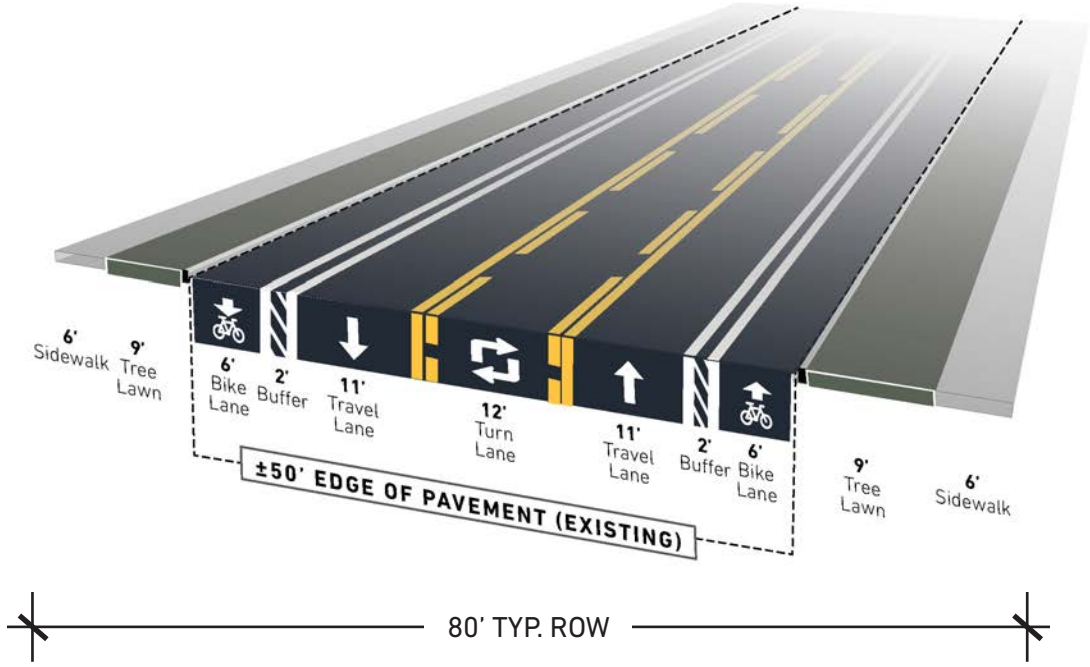
Shared Use Path Abutting Adjacent Buildings

Shared Use Path with Wide Buffer Zone

Because the shared use path and tree lawn are a longer-term project, a near-term strategy for this segment of Mayfield Road could include re-striping from four lanes to three lanes, and adding either on-street parking or buffered bike lanes to each side of the street. Additional design consideration will need to be given to the configuration at any bus stops in this location along the corridor to ensure appropriate and safe access is provided for all users.

Also in the near-term, it is recommended that a parking assessment be conducted to understand the current parking utilization in areas along Mayfield Road that currently allow it. If this parking is not utilized, or can be accommodated in other areas, this space could be utilized for other purposes.

SEGMENT 3: NEAR-TERM DESIGN OPTION



Buffered Bike Lane with Plastic Bollards

Buffered Bike Lane with Plastic Bollards and Wide Planters

Segment 4: Coventry Road to Taylor Road

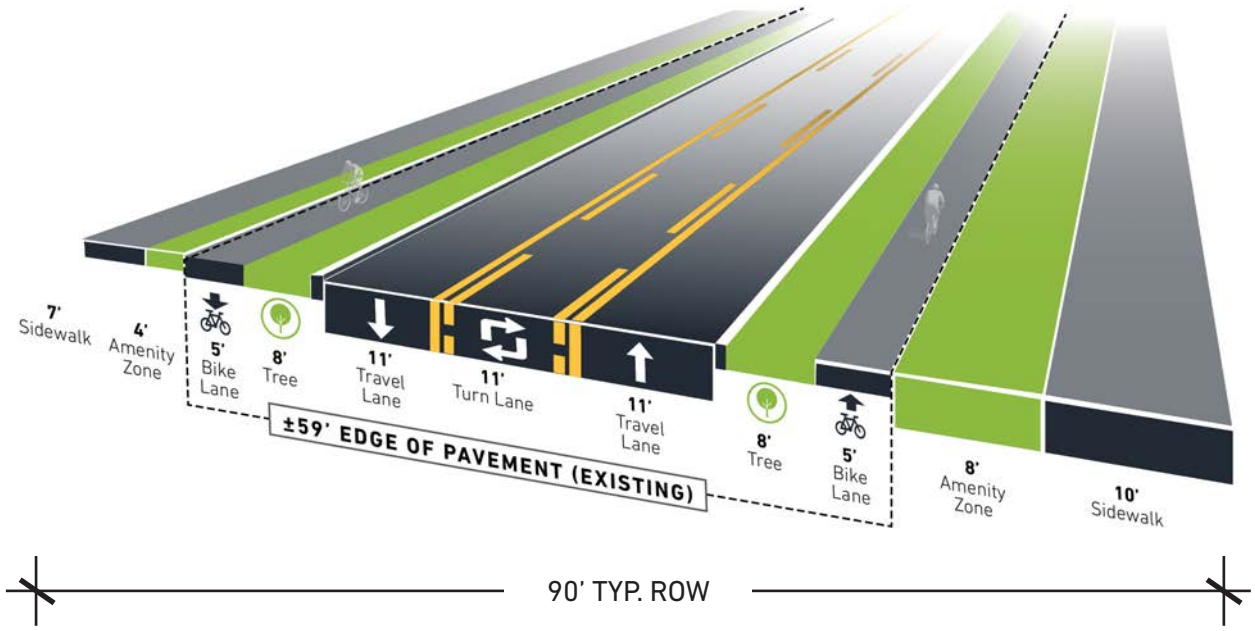
The preferred alternative for this segment of Mayfield Road includes completely separated bike facilities on each side of the street. This design would require moving the curbs on both sides or building new curb in the existing outer travel lanes. Because of the nature of constructing these facilities, this option represents a longer-term project.

Additionally, because this configuration narrows the actual curb to curb width, buses would have to stop in the travel lane to pick up passengers at bus stops. Without a second travel lane to pass the bus, motorists would be forced to wait behind the bus. This could potentially cause backups along the corridor.

In the near-term, it is recommended that a short portion of this segment be used for a pilot test of the road diet. Because this portion of the corridor already has a two-way center left-turn lane, a pilot test could easily block off the two outer lanes to repurpose for other uses. This would allow for testing of the proposed configuration for a temporary period to better understand the potential impacts on traffic flow.

NOACA's Street Supplies program offers a free library of materials that communities can borrow for street design demonstration installations that would be a helpful resource for this pilot test.

SEGMENT 4: PREFERRED DESIGN OPTION



Grade-Separated Bike Lane with Landscaped Buffer

Grade-Separated Bike Lane with Utility Buffer

Pilot Projects

Cities across the country are experimenting with temporary demonstrations and pilot project installations to test new designs in their streets and public spaces. These methods have been found to speed up the typical process for street design projects, while helping cities to understand the benefits as well as potential consequences of their designs. They also serve as an effective tool for public outreach.

Temporary Demonstration of Parking-Protected Bike Lane
Michigan Avenue - Lansing, MI

The temporary nature of these types of projects allows cities to test new design ideas without the costs and burden of a full construction project. If the design works as intended, the project can then move forward into full design and more permanent construction with the confidence that it will be worth the investment. If the design does not work as intended, the temporary materials can be removed and the street can go back to its previous state with minimal cost and effort.

These interim design strategies may not be the best solution for every space, and should still involve a stakeholder and community engagement process. The process should include clear communication about the objectives as well as the duration of the installation. A methodology should also be developed for how the project impacts will be measured and evaluated while the installation is in place.

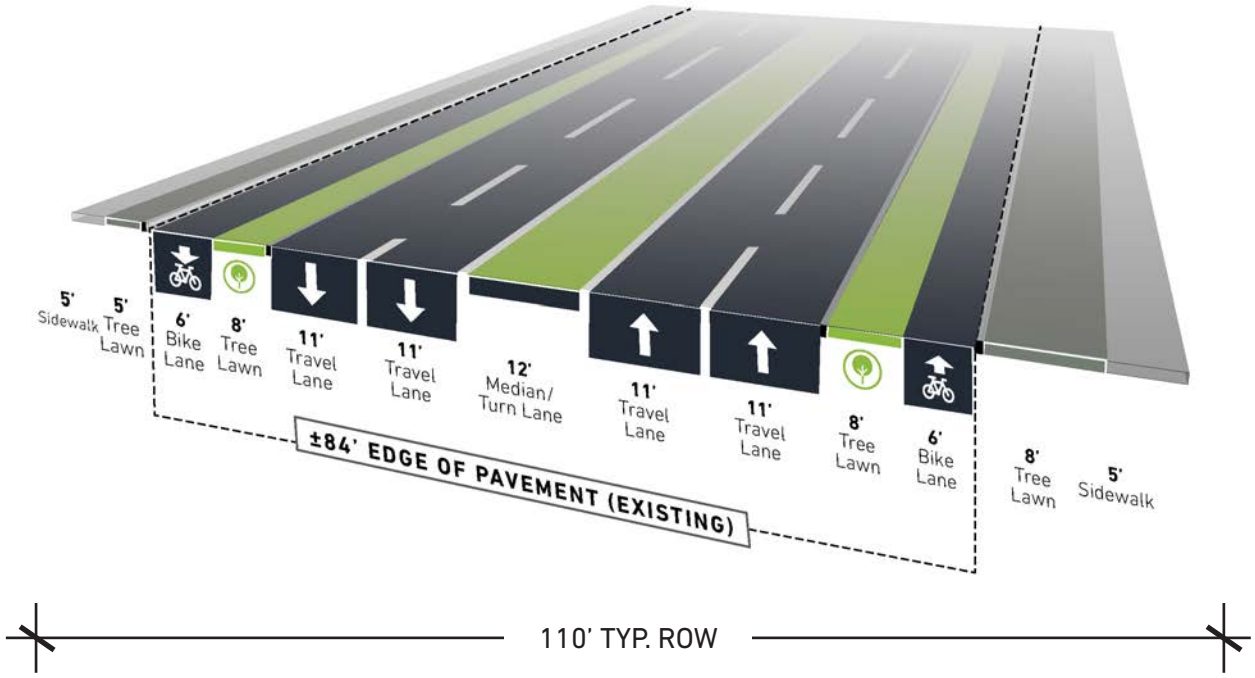
*The NOACA Street Supplies Program offers communities an opportunity to borrow resources to conduct pilot projects.

Types of Near-Term Project Applications from Quick Builds for Better Streets - *Source: Peopleforbikes.org*

Segment 5: Taylor Road to Inglewood Drive

The preferred alternative for this segment of Mayfield Road is a wider version of the preferred configuration for the previous segment (Coventry Road to Taylor Road). With an 84-foot existing curb to curb dimension, this segment of the road can retain two travel lanes in each direction and still accommodate a median-separated bike facility on each side.

SEGMENT 5: PREFERRED DESIGN OPTION



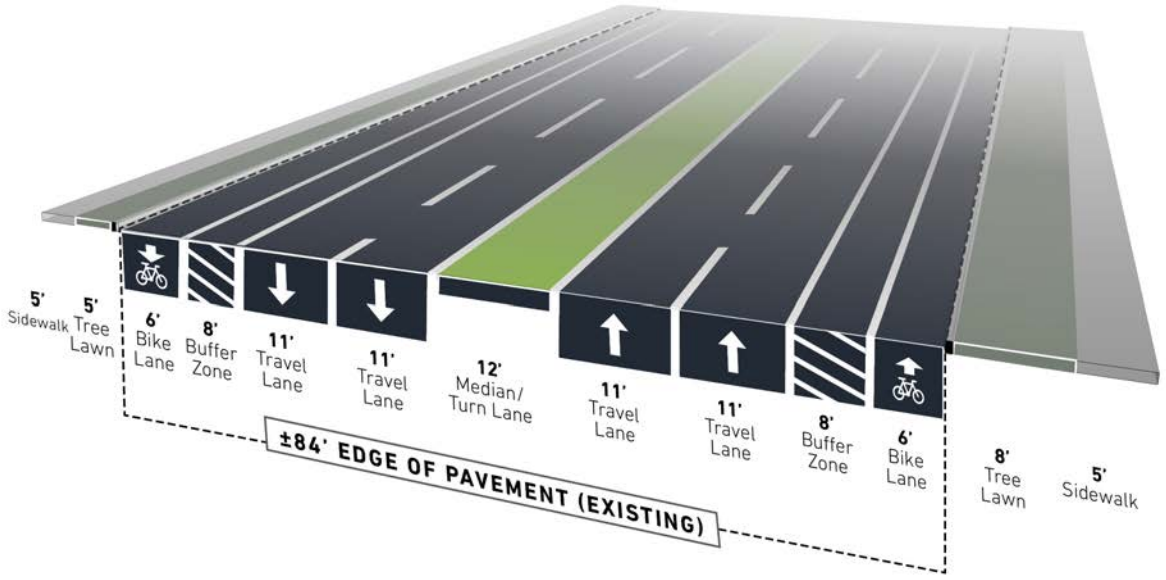
Median-Separated Bike Lane with Landscaping

Median-Separated Bike Lane with Landscaping

Grade-Separated Bike Lane with Landscaped Buffer

The preferred configuration for this portion of Mayfield Road requires significant reconstruction to move or build curbs for the protected bike facility, making it a longer-term project. A near-term option for this segment of Mayfield Road would be temporary re-striping of the outer travel lanes to accommodate buffered bike lanes. Additional design consideration will need to be given to the configuration at any bus stops in this location along the corridor to ensure appropriate and safe access is provided for all users.

SEGMENT 5: NEAR-TERM DESIGN OPTION



Buffered Bike Lane with Plastic Bollards

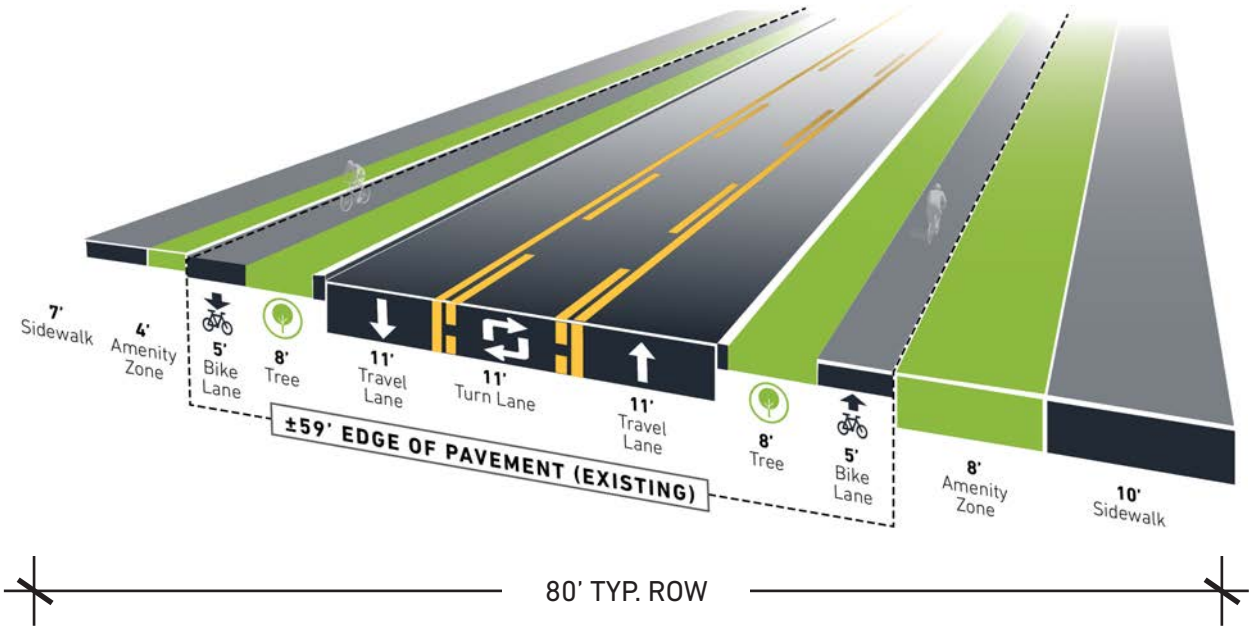
Buffered Bike Lane with Plastic Bollards and Wide Planters

Segment 6: Inglewood Drive to Woodrow Avenue

The preferred alternative for this segment of Mayfield Road is the same configuration as shown for the segment between Coventry Road and Taylor Road. The same concerns regarding transit operations and traffic flow exist within this segment as well.

In the near-term, any of the four communities could select a portion of this segment to pilot test the road diet within their own jurisdiction or as a combined effort between two neighboring jurisdictions.

SEGMENT 6: PREFERRED DESIGN OPTION



Grade-Separated Bike Lane with Landscaped Buffer

Grade-Separated Bike Lane with Utility Buffer

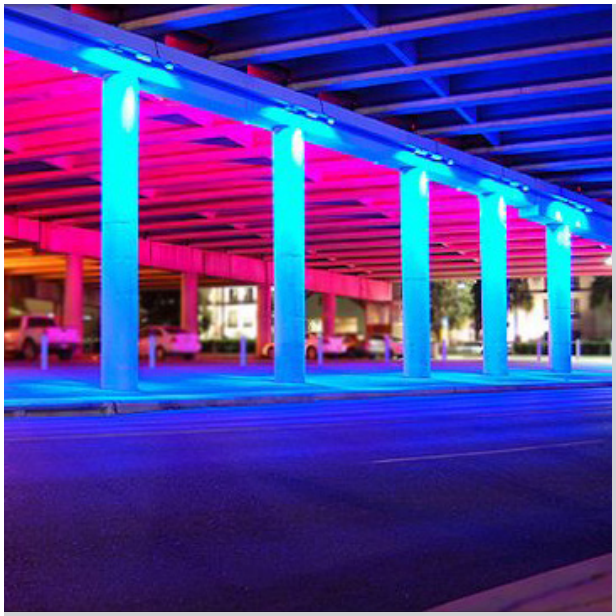
Segments 7 & 8:
Woodrow Ave to SOM Center Road

While the traffic volumes through these segments of Mayfield Road may be too high to alter the street configuration, there are still opportunities to improve conditions for walking and bicycling.

The portion of Mayfield that travels under the I-271 interchange has sidewalks on both sides with significant buffers between the street and sidewalk. Pedestrian crossings across Mayfield Road through this area are limited, but are marked across all freeway ramps. These crossings include basic pedestrian signage, but could be enhanced using higher visibility crosswalk markings as well as advance yield markings and signage to provide motorists with advance warning.

There is also adequate space through this area to expand the sidewalk into a shared use path that would also accommodate bicyclists and, if placed on the north side of Mayfield Road, would link into the planned shared use path for SOM Center Road.

The I-271 underpass itself represents a significant barrier for walking and bicycling. While sidewalks exist, the space is unappealing and uncomfortable for users not in a vehicle. Adding pedestrian-scale lighting or artistic enhancements to the underpass can help to soften the harsh environment for these users.



Artistic Underpass Lighting Helps Enhance Walkability

Art and Lighting in Underpasses Creates an Attraction

Artwork on Underpass Helps Brighten the Space

Artwork on Underpass Helps Brighten the Space

CHAPTER VI: IMPLEMENTATION

Implementation

This study outlines a community-based vision for the Mayfield Road corridor to realize its full potential as a vibrant, connected, mixed-use environment. Recent private and public investment along the corridor has kick-started this effort, but public intervention will be key to guiding future development and ensuring that each communities' goals are achieved.

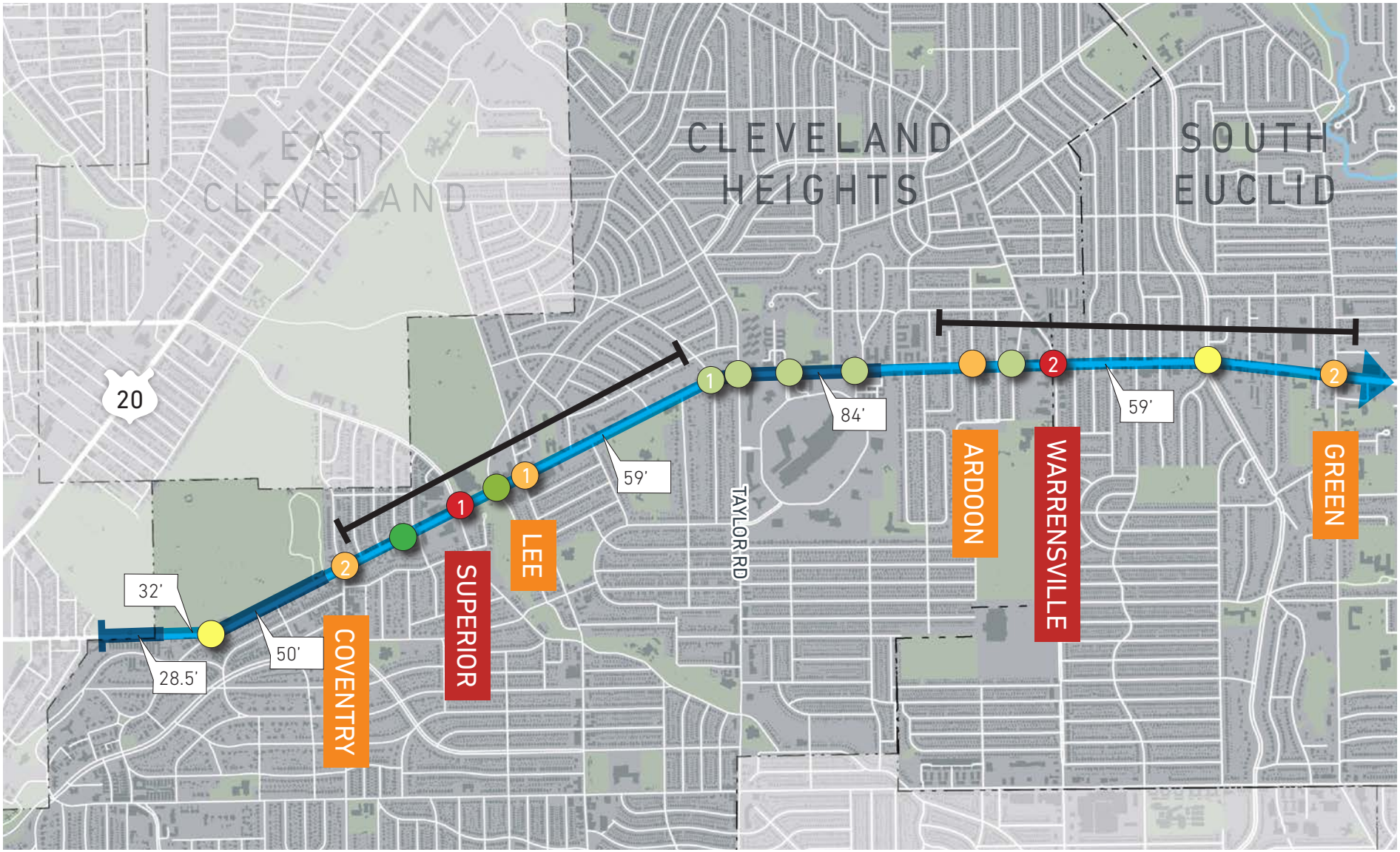
Implementation of the strategies and recommendations discussed in this report will require collaboration and coordination between the four communities involved in this study, as well as local, regional, and state agencies, community residents, and private property owners.

The following matrices were developed to help guide implementation of the recommendations described throughout this report. Prioritization of each strategy is suggested by the estimated timeframe for completion. However, these charts are intended as a flexible tool to help monitor success, and should be used as a working document.

Each community should conduct an annual review of the recommended strategies to track progress, refine the project descriptions, and adjust priorities. Priorities might change as different funding options become available, or as redevelopment occurs.

The estimated timeframes for the proposed strategies include:

- Near-Term: strategies that can be initiated within the next year, but may take up to three years for completion
- Mid-Term: strategies that might require one to three years, and potentially up to five years for implementation
- Long-Term: strategies that will take a minimum of five years to plan and coordinate implementation

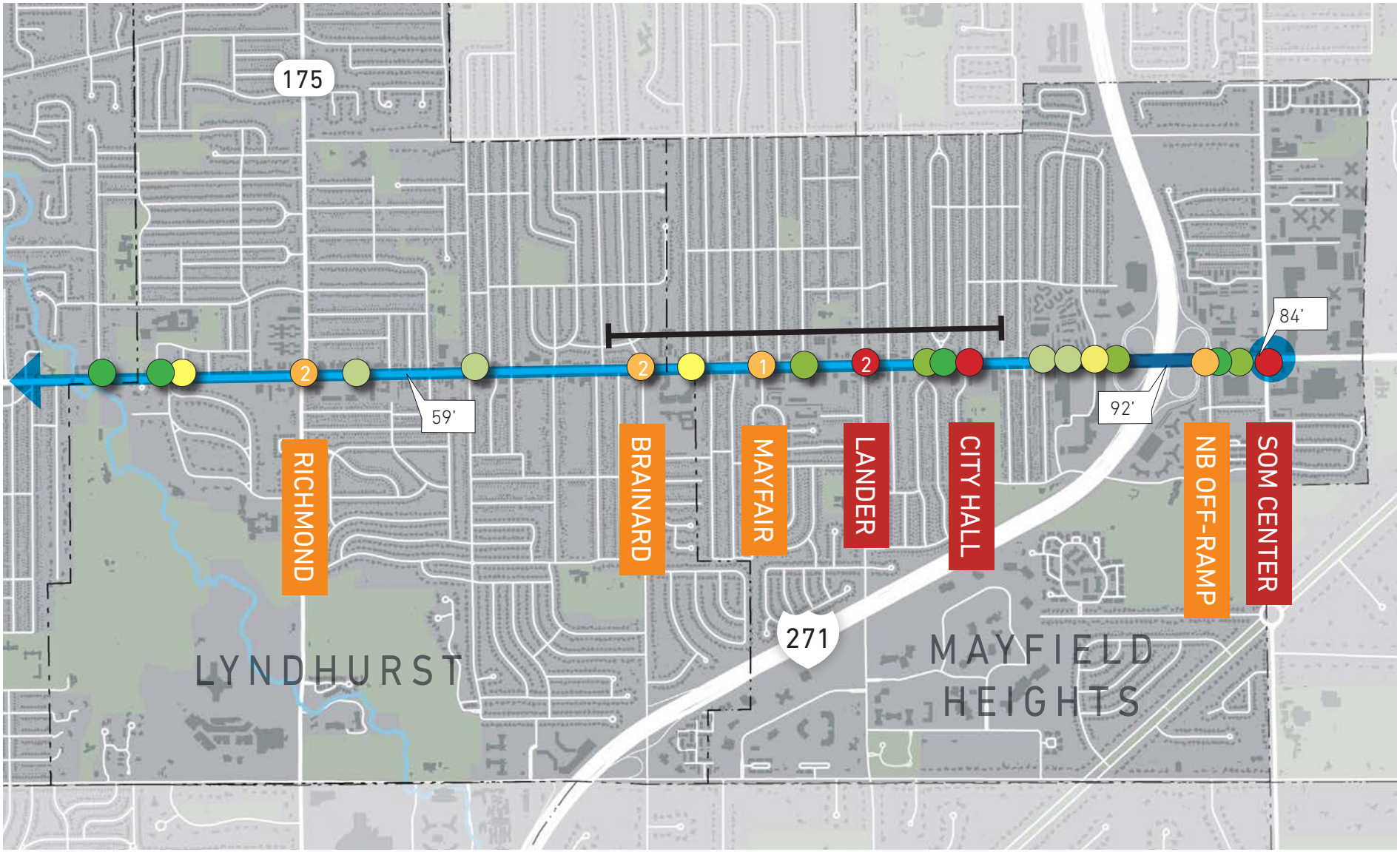


PILOT TEST LOCATIONS

(#) Number of Right-Turn Pockets Needed

#' Street Width Dimension

Potential Location for Road Diet Pilot Test



- 10 intersections along the corridor have right-turn volumes that would require right-turn pockets in at least one direction, which would have an impact on the potential road diet configuration
- A pilot test of the road diet would be most valuable if implemented in the areas indicated above to test the actual impacts

GENERAL CORRIDOR STRATEGIES

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Conduct a comprehensive traffic analysis to determine impacts of a full corridor road diet and finalize plans for roadway configuration	Near-Term	ODOT, NOACA, Cleveland Heights, South Euclid, Lyndhurst, Mayfield Heights	
Coordinate with ODOT to confirm requirements and submit a design exception for narrowing travel lanes to 11 feet wide	Near-Term	ODOT, NOACA, Cleveland Heights, South Euclid, Lyndhurst, Mayfield Heights	
Coordinate amongst neighboring jurisdictions to determine where common standards can be applied throughout the corridor	Near-Term	Cleveland Heights, South Euclid, Lyndhurst, Mayfield Heights	▸ This could include crosswalk markings, bus shelters, and other elements that are not unique to each community
Establish standards for implementation and maintenance of high-visibility crosswalk markings	Near-Term		
Install new crosswalk markings where current markings have faded	Near-Term		
Evaluate all intersections for pedestrian crossing improvements, particularly along school routes	Near-Term	Safe Routes to School	
Evaluate identified locations for addition of new marked pedestrian crossings	Near-Term		
Conduct annual walkability audits along the corridor to identify maintenance needs and capital improvement project needs	Near-Term	Property Owners	▸ Each community would conduct individually, potentially as part of larger citywide program

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Evaluate existing transit stops for accessibility and quality of amenities; establish community-specific standards for bus stops that fit within the relevant streetscape design standards	Near-Term	GCRTA, Property Owners	
Re-stripe the roadway to implement the near-term configuration options	Near to Mid-Term	ODOT, NOACA, Cleveland Heights, South Euclid, Lyndhurst, Mayfield Heights	▸ Re-striping will be dependent on results of comprehensive analysis
Upgrade existing transit stops as appropriate, based on new standards and results of evaluation	Mid-Term	GCRTA, Property Owners	
Regularly assess signal timing along the entire corridor to effectively coordinate signals across jurisdictional boundaries	Mid-Term	ODOT, NOACA, Cleveland Heights, South Euclid, Lyndhurst, Mayfield Heights	
Identify locations for and install landscaped medians in existing center two-way left-turn lanes	Mid-Term		
Reconstruct curb radii at intersections to minimum acceptable dimensions	Mid to Long-Term	ODOT	
Close nonconforming/unnecessary curb cuts as opportunities arise and install additional landscaped medians, as appropriate	Long-Term	Property Owners	
Coordinate burial or relocation of overhead utility lines and poles	Long-Term	Private Utility Companies, Property Owners	

CLEVELAND HEIGHTS STRATEGIES

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Conduct regular assessments and necessary maintenance of sidewalks and ADA accommodations along Mayfield Road	Ongoing	Property Owners	▸ Cleveland Heights Master Plan recommends continual sidewalk review and improvement city-wide as well as walkability surveys in all business districts
Install shared lane markings in the west-bound travel lane and bike lane markings in the east-bound bike lane for the short segment of Mayfield Rd east of E 126th St; include appropriate signage	Near-Term		
Evaluate feasibility of shared-use path in place of existing sidewalk on north side of Mayfield Road as long-term option between E 126th St and proposed trail on Monticello Blvd (the "Innovation Connector Trail")	Near-Term	NOACA, GCRTA, Property Owners	▸ Constraints may include utilities, ROW width, private property restrictions, existing buildings, existing bus stops, etc. ▸ Existing bus stops will need to be taken into consideration to ensure adequate access and potential upgrades for landing areas
Conduct parking assessment to determine if current Mayfield Road parking can be relocated	Near-Term		▸ Parking assessment should include adjacent off-street facilities ▸ Cleveland Heights Master Plan recommends a parking review in business districts and high-density residential areas
Pilot test a road diet between Coventry Road and Taylor Road by temporarily removing a single travel lane in each direction	Near to Mid-Term	NOACA, GCRTA	▸ Apply for use of NOACA Street Supplies materials for demonstration ▸ Consideration should be given to improving transit access for users during the pilot test

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Install gateway elements at Cleveland Heights boundaries east of E 126th Street and at Warrensville Center Road	Mid-Term		▸ Cleveland Heights Master Plan recommends installation of gateway signage at all City entrances
Develop and implement streetscape design standards for Mayfield Road	Mid-Term	Property Owners	▸ Standards could be developed as a city-wide resource with specific guidelines for Mayfield Road corridor
Update zoning code to include a design character overlay for Mayfield Road that works in combination with the streetscape design standards	Mid-Term		
Explore potential to create a new Special Improvement District (SID) along Mayfield Road; determine potential boundaries and appropriate properties to include	Mid to Long-Term	Existing Business Districts and Property Owners on Mayfield Road	▸ Could potentially include the Mayfield Road Commercial Target Area ▸ Could be established for larger area of Mayfield Road through a joint effort with adjacent communities

SOUTH EUCLID STRATEGIES

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Conduct regular assessments and necessary maintenance of sidewalks and ADA accommodations along Mayfield Road	Ongoing	Property Owners	▸ South Euclid Master Plan recommends improving sidewalks lacking ADA accessibility and pedestrian safety
Evaluate existing signal timing along Mayfield Road for potential system upgrades	Near-Term	NOACA	
Install additional gateway elements at South Euclid boundaries at Warrensville Center Road and east of Dorsh Road	Near-Term		▸ Signage already exists in these locations
Pilot test a road diet by temporarily removing a single travel lane in each direction	Near to Mid-Term	NOACA, GCRTA	▸ Apply for use of NOACA Street Supplies materials for demonstration ▸ Consideration should be given to improving transit access for users during the pilot test
Develop and implement streetscape design standards for Mayfield Road that incorporate existing South Euclid branded amenities	Mid-Term		▸ South Euclid Master Plan recommendation
Develop and implement a design character overlay for Mayfield Road that works in combination with the streetscape design standards	Mid-Term		▸ South Euclid Master Plan recommends a Form Based Code for Mayfield City Core
Prioritize and incentivize infill development along the corridor that complies with the design character overlay	Mid to Long-Term	One South Euclid, Property Owners	▸ South Euclid Master Plan recommendation
Implement the redevelopment strategies for Mayfield Road established in the South Euclid Master Plan	Mid to Long-Term	One South Euclid, Property Owners	▸ The strategies for the Potential Intensity Change Area of Mayfield City Core should be compatible with the design character overlay

LYNDHURST STRATEGIES

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Conduct regular assessments and necessary maintenance of sidewalks and ADA accommodations along Mayfield Road	Ongoing	Property Owners	
Assess conditions at intersections, particularly Richmond Rd and Brainard Rd; evaluate options for improving pedestrian safety and comfort	Near-Term	GCRTA	▸ Consider improvements to any existing bus stops at intersections
Re-assess signal timing to determine if recent re-timing is still functioning as intended; determine if coordination on a larger scale (with adjacent communities) is feasible	Near to Mid-Term	ODOT, South Euclid, Mayfield Heights	
Pilot test a road diet by temporarily removing a single travel lane in each direction	Near to Mid-Term	NOACA, GCRTA	▸ Apply for use of NOACA Street Supplies materials for demonstration ▸ Consideration should be given to improving transit access for users during the pilot test
Develop and implement streetscape design standards for Mayfield Road	Mid-Term		▸ Could include Lyndhurst-branded design elements
Update zoning code to include a design character overlay for Mayfield Road that works in combination with the streetscape design standards	Mid-Term		
Prioritize and incentivize infill development along the corridor that complies with the design character overlay	Mid to Long-Term	Property Owners	

MAYFIELD HEIGHTS STRATEGIES

STRATEGY	TIMEFRAME	POTENTIAL PARTNERS	NOTES
Conduct regular assessments and necessary maintenance of sidewalks and ADA accommodations along Mayfield Road	Ongoing	Property Owners	
Assess conditions at intersections; evaluate options for improving pedestrian safety and comfort	Near-Term	GCRTA	▸ Consider improvements to any existing bus stops at intersections
Study feasibility and potential design of a shared use path in place of the sidewalk on the north side of Mayfield Road through the I-271 interchange to connect into proposed SOM Center Rd path	Near-Term	ODOT, Cuyahoga County	
Re-assess signal timing to determine if recent re-timing is still functioning as intended; determine if coordination on a larger scale (wth adjacent communities) is feasible	Near to Mid-Term	ODOT, Lyndhurst, Mayfield Heights	
Install streetscape improvements per the standards established in the Mayfield Heights Commercial Corridor Design Manual	Near to Mid-Term	Property Owners	
Install pedestrian-scale or artistic lighting through the I-271 underpass	Mid-Term	ODOT	
Upgrade traffic signals along the corridor and coordinate with adjacent communities, if feasible	Mid to Long-Term	ODOT, NOACA	▸ Status of CMAQ application through NOACA?
Prioritize and incentivize infill development along the corridor that complies with the standards established in the Mayfield Heights Commercial Corridor Design Manual	Mid to Long-Term	Property Owners	

Changes in Mobility

New trends in mobility may require new types of infrastructure and technology in the future. Autonomous vehicles, ridesharing services, and other new mobility options could have a significant impact on the way we travel in the near future. Several recent advances in the world of transportation and mobility have already altered the way people move. Nationwide, services like Uber and Lyft, bikeshare programs, and electric scooters have altered the transportation status quo; impacting traffic flow and requiring a new approach to the way we think about our streets.

Early studies on the impacts of ridesharing services and other new mobility options have indicated that these services are pulling users from existing transit services and having little or negative impact on reduction in overall traffic volumes. Speculation on the impacts of potential future mobility options, such as autonomous vehicles, is just that. However, researchers agree that if autonomous vehicles are adopted with the same model of private vehicle ownership that we have today, there will still be a need to accommodate all of those vehicles.

While the potential impacts are still unknown, these new technologies and services will be a key consideration for any future projects. Emerging best practices in policy-making provide useful considerations. It can be expected that as ridesharing and vehicle autonomy increase, the need for curbside management - for pick-up and drop-off, loading/unloading, etc. - will become more critical. Curbside travel lanes could eventually be repurposed as flexible spaces, used for different purposes and by different users/ modes at different times of day.

Design geometries of roadways may change as well, with the potential for narrower travel lanes than currently recommended, or elimination of vertical curbs in high-pedestrian volume areas. While these opportunities are likely many years off, they could impact longer term and more comprehensive capital improvements, such as a major roadway rebuild, that could be pursued for Mayfield road in the future. It will be critical to ensure pedestrians and active transportation options are prioritized as new technologies advance.

Rideshare and Autonomous Vehicles are Impacting Mobility

Scooter and Bike Sharing Services are New to Many Cities