

A CONNECTED WORTHINGTON BICYCLE AND PEDESTRIAN MASTER PLAN 2019



planning
NEXT

RESOLUTION NO. 29-2019
(As Amended)

Adopting a Bicycle and Pedestrian Master Plan for
the City of Worthington.

WHEREAS, Bicycle and Pedestrian access has been a stated priority of the
Worthington City Council; and,

WHEREAS, Worthington City Council appointed a Bicycle and Pedestrian
Advisory Board made up of Worthington residents to make recommendations on bicycle
and pedestrian accommodations in Worthington; and,

WHEREAS, the Bicycle and Pedestrian Advisory Board made a recommendation
to City Council to allocate funding to hire a consultant team to gather community input and
create a Bicycle and Pedestrian Master Plan to guide future projects and investments; and,

WHEREAS, the Bicycle and Pedestrian Advisory Board, with the assistance of a
professional consulting team and staff has completed a process involving community input
and dialogue including walk audits, community workshops, stakeholder meetings, on-line
input opportunities, public presentations, open houses, a City Council workshop, and input
from a steering committee of community representatives; and,

WHEREAS, the adoption of the Bicycle and Pedestrian Master Plan represents the
acknowledgement that city streets should be designed to appropriately accommodate all
forms of transportation, including vehicular, bicycle and pedestrian; and,

WHEREAS, Council supports integrating alternative forms of mobility, including
bicycle and pedestrian transportation, as non-exclusive factors to be considered, where
appropriate, in future transportation related decisions; and,

WHEREAS, the Bicycle and Pedestrian Master Plan will provide an additional tool
available to staff and Council in the planning and prioritization of future transportation
related initiatives and projects.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Municipality of
Worthington, County of Franklin, State of Ohio:

SECTION 1. That the Worthington City Council adopts the attached Bicycle and
Pedestrian Master Plan for the City of Worthington as an expression of aspirations and not
as a commitment to proceed with any specific project.

SECTION 2. That the City Manager and his designees will utilize the Bicycle and
Pedestrian Master Plan as one guideline to inform future decisions regarding how bicycle
and pedestrian accommodations may be included, where appropriate in future
transportation related initiatives and projects.

RESOLUTION NO. 29-2019
(As Amended)

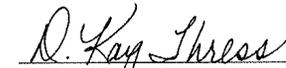
SECTION 3. That the Clerk be and hereby is instructed to record this Resolution
in the appropriate record book upon its adoption.

Adopted June 17, 2019



President of Council

Attest:



Clerk of Council



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ACKNOWLEDGMENTS

The following individuals, departments and agencies were consulted during the development of this Bicycle and Pedestrian Master Plan:

CITY OF WORTHINGTON

- Matthew H. Greeson, City Manager
- Robyn Stewart, Assistant City Manager
- Darren Hurley, Parks & Recreation Director
- Celia Thornton, Parks & Recreation Project Supervisor
- Lee Brown, Planning & Building Director
- Robert Wetmore, Engineer & GIS Manager
- Dan Whited, Service & Engineering Director
- Worthington Fire Department
- Worthington Police Department

WORTHINGTON CITY COUNCIL

- Bonnie Michael, President
- Rachael Dorothy
- Doug Foust
- Beth Kowalczyk
- Scott Myers
- David Robinson
- Doug Smith

WORTHINGTON BICYCLE AND PEDESTRIAN MASTER PLANNING STEERING COMMITTEE

- Randy Banks, Worthington Schools
- Michael Bates, Bike & Pedestrian Advisory Board
- Lee Brown, Planning & Building Director
- Rachael Dorothy, City Council
- Ed Hoffman, Municipal Planning Commission
- Darren Hurley, Parks & Recreation Director
- Gary Schmidt, Bike & Pedestrian Advisory Board
- Sergeant Tige St. John, Worthington Police Department
- Celia Thornton, Parks & Recreation Project Supervisor
- John Stephan, Bike & Pedestrian Advisory Board
- Scott Ulrich, Columbus Public Health
- Dan Whited, Service & Engineering Director

WORTHINGTON BICYCLE AND PEDESTRIAN ADVISORY BOARD

- Kelly Whalen, Chair
- Michael Bates, Vice Chair
- Katelyn Burkley
- Larry Creed
- Ann Horton
- Emma Lindholm
- Eugenia Martin
- Gary Schmidt
- John Stephan

OTHER CONTRIBUTORS

- Central Ohio Transit Authority (COTA)
- City of Columbus
- City of Westerville
- Columbus Public Health
- Franklin County Engineer
- Mid-Ohio Regional Planning Commission (MORPC)
- Ohio Department of Transportation (ODOT) District 6
- Old Worthington Partnership
- Worthington City Schools
- Worthington Libraries

CHAPTER 1. THE DISCOVERY PHASE





INTRODUCTION

In May 2018, the City of Worthington selected the Consultant team of Blue Zones LLC and Planning NEXT to engage the community in creating a Bicycle and Pedestrian Master Plan to guide the development of bicycle and pedestrian routes, linking activity centers within the City, as well as the regional network.

The development of this Plan was accomplished through the following key activities:

- Robust public input to develop a clear vision for bicycling and walking, identifying gaps and barriers, both perceived and actual, in the existing network where high priority routes are disconnected;
- Development of a methodology for prioritizing projects, including identifying non-disruptive routes in historic Worthington, family-friendly routes, and a tiered network that serves experienced riders and less experienced riders, and all ages and abilities of people on foot and bike;
- A system that features a first and last mile approach that maximizes use of transit, Safe Routes to School, and use of main streets and parks where people walk or bike rather than drive to these destinations;
- Design guidance into the City's road standards through best practices that can be applied to a typology of streets; and
- A focus on encouraging walking and biking, not just as a viable, but as preferred modes of transportation, while maintaining safe, effective and efficient means of accommodating vehicular traffic within and through the Worthington.



VISION: A CONNECTED WORTHINGTON

We shape our world, and then our world shapes us. After thousands of years of building cities in healthy, productive, traditional, practical, and sustainable ways -- around the human footprint -- we lost our bearing, producing towns and cities that induce isolation, sprawl, auto dependency, sedentary behaviors, poor air and unhealthy habitats. On our current course, health professionals predict that 50% of Americans will be obese by the year 2050, and that today's children may not live as long as their parents.

With this Bicycle and Pedestrian Master Plan, the Worthington community is identifying pathways to a more resilient economy, healthier lifestyles and improved well-being. Worthington has much to protect, and while no single plan will get us to where we want to be, this document guides the development of bicycle and pedestrian infrastructure to support active transportation so that the healthy choice becomes the easy choice.

This Plan is intended to be used regularly to guide decisions regarding cycling, walkability, proposed development, capital improvements, and annual budgeting. For the Plan to be implemented, strategic approaches in both the use of capital improvement dollars and in the acquisition of grant monies are required. This document prioritizes projects to encourage collaboration between planners, policymakers, and private developers. Approval of development proposals should reference this Plan to ensure when public and private projects are taking place, they meet the criteria set forth herein. In this way, Worthington will strategically advance its infrastructure, leveraging investments year-on-year and, in time, resulting in significant change over time.

Given funding limitations, strategic implementation of recommendations is necessary for improving conditions for walking and cycling in Worthington.

Images: Walking Audit Participants, Worthington, Ohio



A project is more likely to succeed if motivated individuals set a course to accomplish their shared goals, together.

When people walk together, they are not only in step with one another, they discover, dream, and achieve together.

DAN BURDEN



COMMUNITY ENGAGEMENT

To ensure that the planning process for Worthington was open, inclusive and transparent, community engagement was fundamental to the development of the Plan. Following is a summary of the engagement process, which included opportunities for face-to-face interaction at key moments, as well as stakeholder interviews, walking audits, community presentations and workshops, as well as opportunities for online participation. A summary of community engagement follows, which is described in this section. Comments received are included in the Appendices of this document.

June 2018: Existing Conditions Assessment

- Discovery Tour
- Stakeholder Meetings

August 2018: Community Engagement

- Community Walk Audits
- Community Workshop
- Stakeholder Meetings
- Summer in the 614 Festival Booth

August - October 2018: On-Line Engagement

- Project Webpage
- Geowiki Map

November 2018: Staff and Stakeholder Engagement

- Bicycle and Pedestrian Steering Committee Presentation
- Bicycle and Pedestrian Advisory Board Presentation

February 2019: Draft Plan Presentation

- Community Open House
- Steering Committee Meeting
- City Council Presentation

May 2019: Final Plan Presentation

- City Council Presentation



Image Top: Staff and Planning Team Discovery Tour

Image Middle: Stakeholder Interviews

Image Bottom: Rainy Day Walking Audit

Image Right: Community Workshop

COMMUNITY ENGAGEMENT

Community engagement included:

Steering Committee: The Worthington Bicycle and Pedestrian Steering Committee provides oversight and local expertise on core elements in both the methodology and calibration of tools, to meet local and regional active transportation needs. This Steering Committee was consulted throughout this planning process to ensure Plan elements are well-focused and coordinated across agencies, organizations and initiatives. This included on-site meetings in June, August and November 2018, as well as a review role throughout.

Discovery Tour: In June of 2018, the project team conducted a tour of the community with City staff. The tour provided the opportunity to develop a shared perspective on existing conditions and discuss relevant best practices, while examining local conditions in Worthington.

Stakeholder Interviews: The project team met with regional stakeholders to gain insight about the numerous agencies and disciplines that impact and are impacted by Plan recommendations. Coordination with the Mid-Ohio Regional Planning Commission (MORPC) occurred throughout this project.

Walking Audits: In August of 2018, the project team conducted several walking audits with community members. These walks were located in strategic portions of the community and participants engaged in an open conversation with the project team.

Community Workshop: In August 2018, community members met with the project team and the Mid-Ohio Regional Planning Commission (MORPC) staff about key design considerations. The project team presented to the Worthington community on impressions of existing conditions, which included an overview of the bicycle and pedestrian principles, as well best practices to prepare participants to generate ideas for their town. Then, attendees were put to work, mapping out issues and ideas.



Twenty ideas were generated and participants were asked to vote for the top five, prioritizing these ideas.

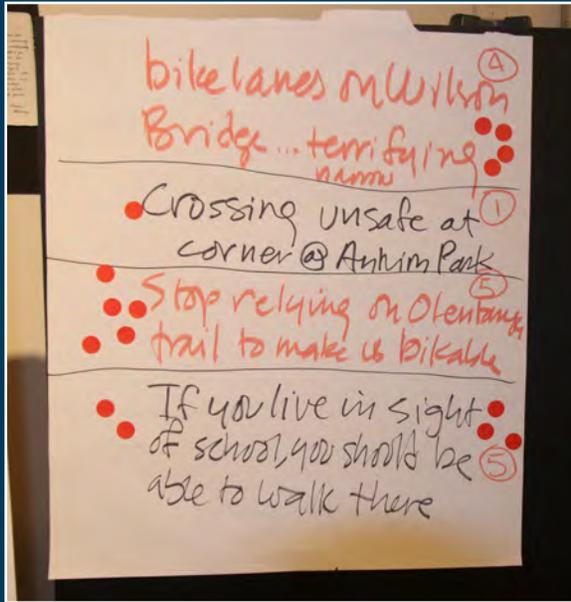
Online Engagement: After the August workshop, a digital format was replicated to allow individuals who were unable to attend the public meetings the opportunity to provide input. Through this online map, issues and opportunities were identified. This input was crucial in decision-making as the map attracted 350 unique logins with more than 600 comments. A dedicated City-hosted website also served as a portal for communicating with residents and visitors. The homepage for the Bike and Pedestrian Master Plan provided a repository for Plan activities and updates.

Summer Events: The project team hosted a table at the popular Summer in the 614 Festival. Neighbors and visitors stopped by to talk about bicycling and walking in Worthington, mapping areas of concern and ideas for improving walking and cycling in Worthington.

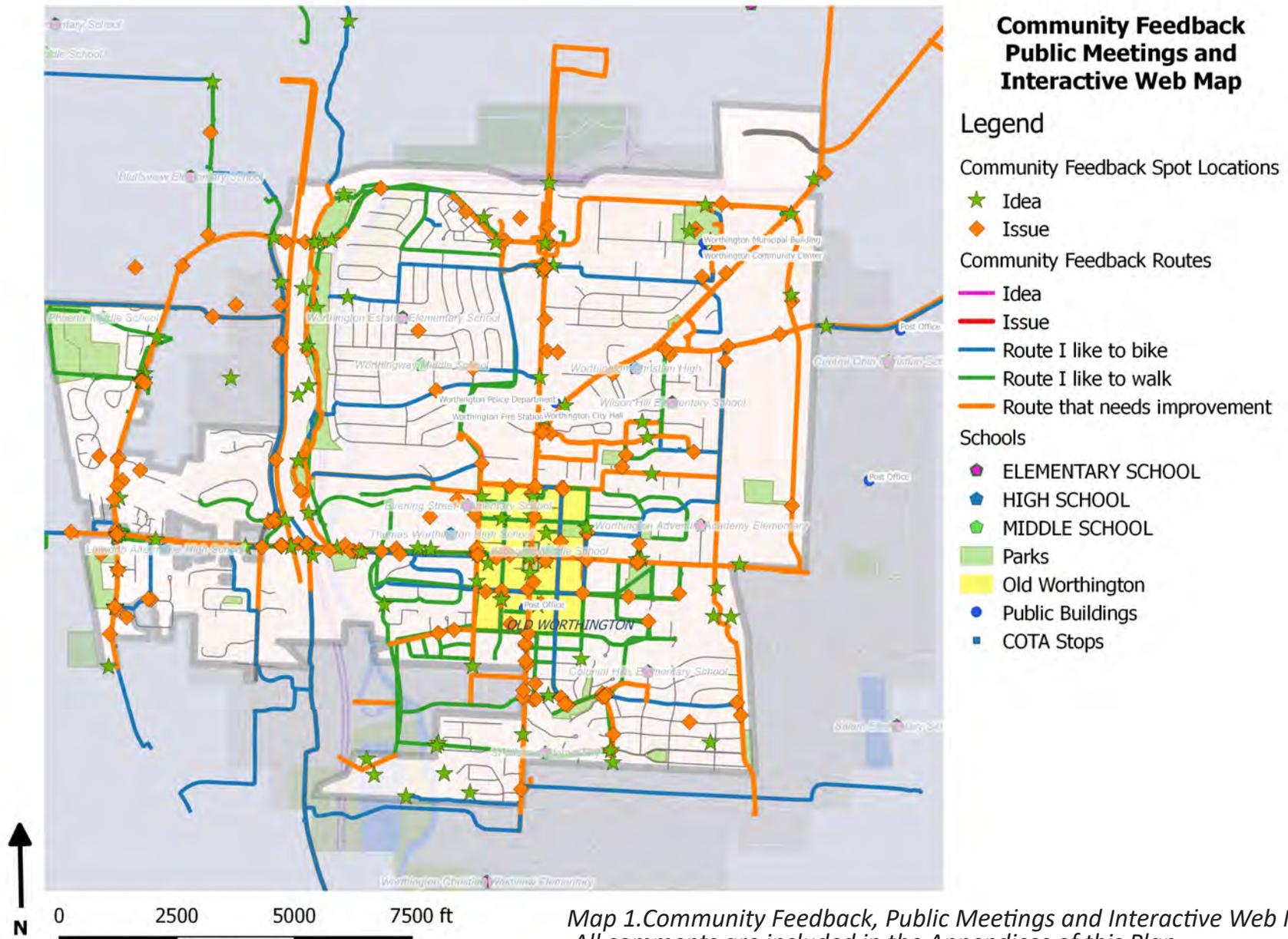
Draft Plan Open House: In February, city staff and the project team presented boards of the work thus far and the draft Plan recommendations. The Open House format offered visitors the chance to review materials at their own pace and ask questions of the project team.

Final Plan Presentation: In May, the project team presented *A Connected Worthington, Bicycle and Pedestrian Master Plan (2019)* to the City Council for adoption.

COMMUNITY ENGAGEMENT



MAP #1. COMMUNITY FEEDBACK



STAKEHOLDER MEETINGS



STAKEHOLDER MEETINGS

Stakeholder conversations provided insight about the numerous agencies and disciplines that impact and are impacted by Plan recommendations. The project team met with the following stakeholders during the Plan development process:

- Bicycle and Pedestrian Advisory Board
- Worthington Bicycle and Pedestrian Steering Committee
- Central Ohio Transit Authority (COTA)
- Franklin County Engineer
- Ohio Department of Transportation (ODOT) District 6
- Mid-Ohio Regional Planning Commission (MORPC)
- Old Worthington Business Association
- City Manager
- Planning & Building Department
- Service & Engineering Department
- Parks & Recreation Department
- Police Department
- Fire Department
- Westerville
- Columbus

The *Worthington Bicycle and Pedestrian Steering Committee* was consulted throughout this planning process to ensure Plan elements are well-focused and coordinated across agencies, organizations and initiatives. This included on-site meetings in June, August and November 2018, as well as a review role throughout. Steering Committee members are as follows:

- Randy Banks, Worthington Schools Representative
- Mike Bates, Bike & Pedestrian Advisory Board
- Lee Brown, City Planning Department
- Rachael Dorothy, City Council
- Ed Hoffman, City Planning Commission
- Darren Hurley, City Parks & Recreation Department
- Gary Schmidt, Bike & Pedestrian Advisory Board
- Celia Thornton, Parks & Recreation Project Supervisor
- Sgt. Tige St. John, Worthington Police Department
- John Stephan, Bike & Pedestrian Advisory Board
- Scott Ulrich, Columbus Public Health
- Dan Whited, City Service & Engineering Department



KEY MESSAGES

Based on the community engagement, a series of key messages emerged, as follows:

Connect Linworth: The Linworth neighborhood is separated from the rest of the city with the river and SR315 serving as physical barriers to connection. Additionally, roadways in this portion of the city have little in the way of bicycle and pedestrian amenities.

Improve Dublin-Granville: A wide five-lane road leads vehicular traffic from Old Worthington to SR315. Travel speeds along this corridor are typically faster than posted limits and prohibits walkability from neighborhoods to the south with connecting to the many civic amenities in the area. Similarly, the Dublin-Granville bridge over SR315 is a barrier for residents on the west side of the state route as they feel unsafe crossing.

Ensure Neighborhood Preservation: Maintaining the character of individual neighborhoods is important to residents across the city. Many participants noted that monitoring through traffic in residential neighborhoods impacts their walkability. Repairs and additions to the existing sidewalk network were also noted as a priority, specifically in the older neighborhoods that may not have required sidewalks in the past.

Advance the Regional Bike Network: The Central Ohio Greenways and specifically the Olentangy Trail are an amazing asset for the community but there are few opportunities for connection to Worthington proper. Similarly, participants noted wanting connections to the adjacent communities of Dublin and Westerville which each boast their own trail networks.

Improve Walkability in Old Worthington: Sidewalk conditions and walkability are critical to the function of Old Worthington. Many noted the condition of the brick sidewalks as well as the level of safety when crossing High Street.

This vision for a safe and connected Worthington is based on a number of values that were endorsed by the community:

- Provide greater connectivity among major corridors and destinations;
- Make walking and bicycling safe for residents of all ages and abilities;
- Develop sound policies and tools to meet the needs of all modes and build Complete Streets;
- Utilize a comprehensive “Five E’s” strategy with inter-departmental and inter-agency coordination to advance a culture supportive of active transportation:
 - Engineering;
 - Education;
 - Enforcement;
 - Encouragement; and
 - Evaluation

Chapter 3 presents recommendations based on community input, existing conditions analysis, stakeholder interviews, funding opportunities and the resulting prioritization scheme.

“

This is a great start,
but let’s not stop here.
- Participant

”



CHAPTER 2. EXISTING CONDITIONS ANALYSIS





EXISTING CONDITIONS

The mobile Discovery Tour provided the opportunity to develop a shared perspective on existing conditions and discuss relevant best practices, while examining local conditions in Worthington. The Discovery Tour included two elements:

1. Active Transportation Toolbox Training for key City staff;
2. A mobile bus tour of Worthington, focusing on key points of interest. This included: High Street-Wilson Bridge Road Intersection; Linworth Road Corridor; Olentangy River Trailhead; SR 161 Corridor; Old Worthington; and Worthington-Galena/Schrock Roads.

While no part of Worthington is more than a few miles from downtown, depending on where residents live, the barriers may leave no choice but to drive. Yet, most trips within Worthington are of reasonable bicycling or walking distance. Key issues include:

- Fairly good sidewalk coverage exists, but gaps are found on important roads;
- Older areas are in a grid pattern, while newer areas are less connected;
- There is some access to regional bikeways;
- Linear barriers (freeways, railroads, high-stress roadways) and key connecting streets are not desirable for bicycling and walking;
- There are many opportunities to link neighborhoods and to make walking and bicycling trips possible. Currently, barriers divide the City of Worthington into six pockets. A bikeable, walkable Worthington will need to be connected to allow residents to have real transportation choices.



Image Above: Walking Audit Participants

Image Below: Physical barriers across Worthington result in “six Worthingtons”



KEY CORRIDORS

Based on community and stakeholder engagement, eight key corridors were identified for existing conditions assessment:

- W. Dublin Granville Rd. (west of SR 315)
- W. Dublin Granville Rd. (from SR 315 to downtown)
- E. Dublin Granville Rd. (east of downtown)
- High Street at Dublin Granville Rd. (downtown)
- N. High Street
- Worthington-Galena Rd.
- Wilson Bridge Rd.
- Linworth Rd.

The following pages present the significant barriers to active transportation in Worthington, which will be addressed in Chapter 3. Recommendations and Chapter 4. Implementation Toolbox.



Images Above and Below: Higher design speeds of streets encourages motorists to drive faster than the desired speed. From residential areas to major corridors, there is an abundance of signage reminding motorists to watch their speed.



W. DUBLIN GRANVILLE ROAD



Pedestrians are hidden by vehicles, utilities and landscaping. Crosswalks and crossing signals are missing, leaving it up to the pedestrian to choose when to cross. In some areas, this exposes pedestrians to a multiple threat crash. Bicyclists are not accommodated and culverts, drainage and rough edges are dangerous. The scale of signage is geared to motorists and pedestrian amenities such as seating, litter cans and lighting are absent.

E. DUBLIN GRANVILLE ROAD



A gateway feature here could better establish place. Overly-wide travel lanes encourage speeding and fail to notify motorists that they are entering a community. This is an ideal candidate for reallocation of space to improve behaviors and support all modes of transportation. Pedestrian crossings are missing and high-visibility crossings, with pedestrian-scaled lighting, are encouraged.

HIGH STREET AT DUBLIN GRANVILLE ROAD



This intersection serves as the focal point of downtown Worthington and a gateway feature is needed. Walking is uncomfortable at peak times, due to the narrow sidewalks adjacent to speeding vehicles. A pedestrian-actuated hybrid signal aims to address safety and is improving the yielding behavior of motorists.

N. HIGH STREET



High Street is a high volume street which also serves as a critical transit linkage, connecting residents to Columbus and the region. Many locations could benefit from better bicycle and pedestrian connections to the transit system. The intersection at Wilson Bridge Road is a daunting obstacle for bicyclists and pedestrians alike. There is a strong desire to connect to the Olentangy Trail, but it is not easily accessed from the east. The speed and scale of N. High

Street changes quickly, from 25MPH to 45MPH, before reaching I-270. As the context changes, the look and feel of the street also changes, becoming much less inviting to active transportation.

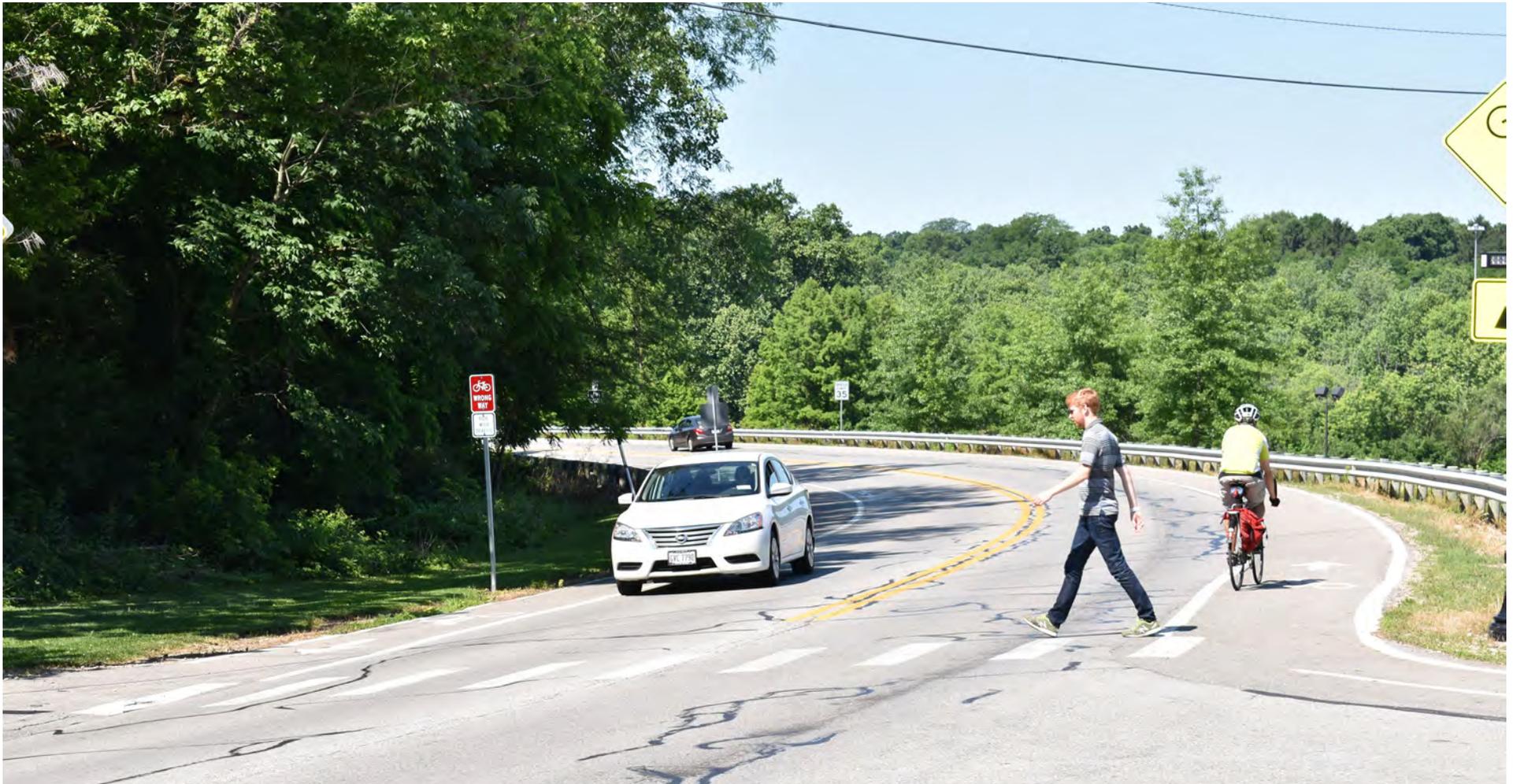
WORTHINGTON-GALENA ROAD



Worthington-Galena has a posted speed limit of 25MPH, but there are numerous signs in the community asking motorists to slow down. The paved surface is only 22' without curb-and-gutter, and there are guard rails along much of the corridor. The guard rails, while providing a buffer for the modest pedestrian path along the road, reinforce the notion that this is a dangerous roadway. The roadway travels diagonal for the most part, resulting in skewed

intersections such as the above example at Schrock Road. These intersections have poor sight lines and are difficult to navigate whether by foot, by bike or automobile.

WILSON BRIDGE ROAD



Wilson Bridge Road provides a critical east-west connection in North Worthington. There are bicycle lanes along the western section, but there is no facility to get beyond High Street and connect to the east where the community recreation center is located. The Olentangy Trail is easily accessible via the connecting path from Wilson Bridge Road. East of High Street, Wilson Bridge Road operates with three travel lanes (including a shared left-turn) and to the west, there

are two lanes. As the street approaches High Street from each direction, the roadway expands to six lanes.

LINWORTH ROAD



The intersection of Linworth at SR 161 frequently backs up at peak times. Despite some recent changes by ODOT, the intersection creates a barrier for those walking or bicycling. Notice how the cyclist is crossing away from the intersection in the image above. Linworth north of SR 161 lacks bicycling and walking facilities with sidewalks intermittently provided along some of the residential developments to the west, but not connecting outside of the

neighborhood. Development has gradually increased traffic volumes and is changing the rural feel of the corridor, creating the need to provide more infrastructure to support all modes. The goal is to ensure that investments in infrastructure build upon one another, developing the local bike and pedestrian network, rather than conflicting with one another.



EXISTING BICYCLE FACILITIES



Image Above: Regional trails, such as the Olentangy River Trail provide convenient access to regional destinations from Worthington.



Image Above: A lack of dedicated facilities on major streets (US 23, SR 161) leaves bicyclists with limited options for routes.



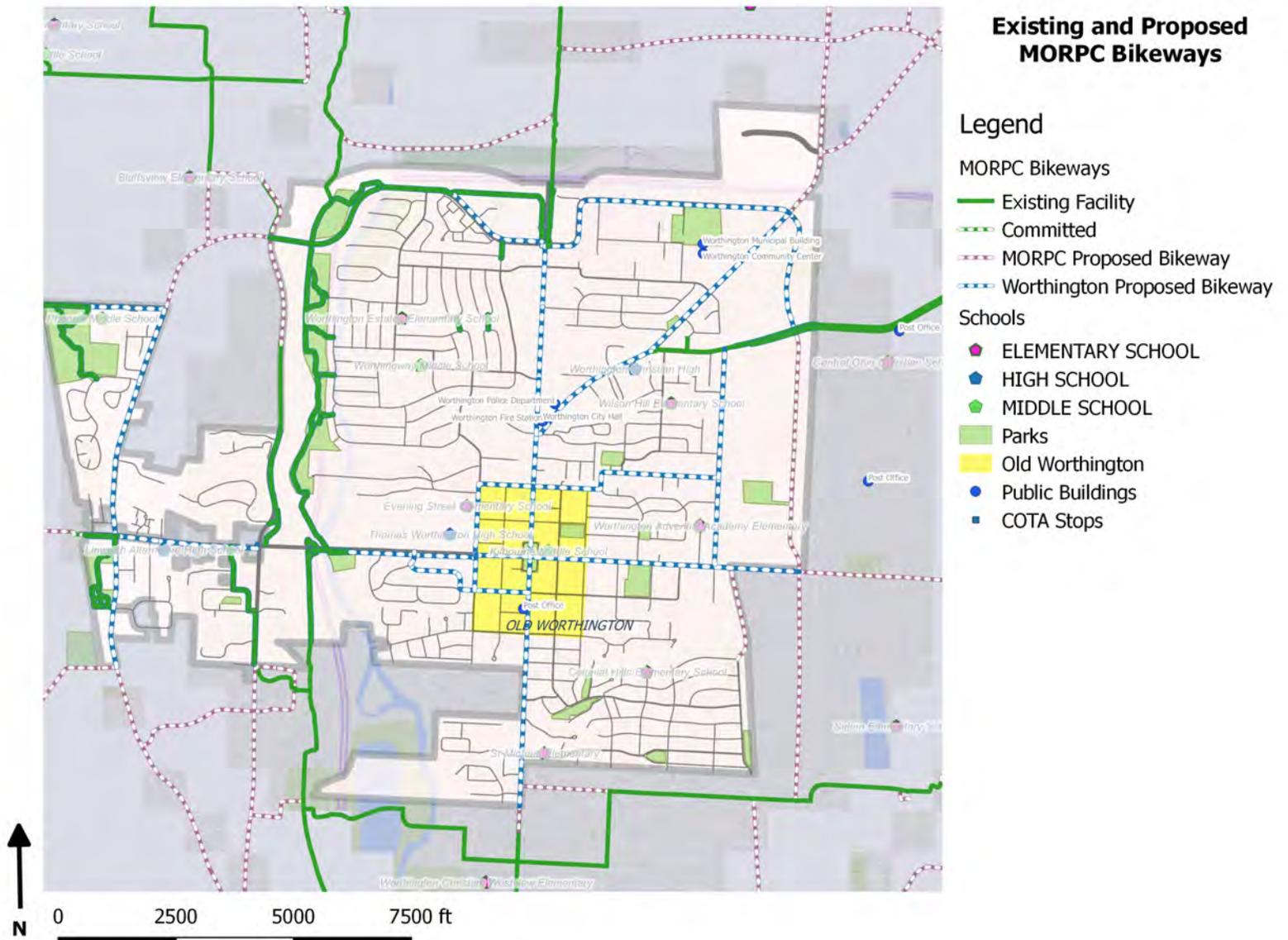
Image Above: Bicycling creates opportunities for all ages. Children in Worthington can particularly benefit from safe routes for bicycling.



Image Above: Opportunities exist for routes, such as the service road south of W. Dublin Granville Rd, which has recently been formalized as a connection.

MAP #2. EXISTING AND PROPOSED MORPC BIKEWAYS

Worthington has great proximity to regional trails with the Olentangy River Trail running north-south through the City, and the Alum Creek Trail a few miles to the east. There is a need to create connections both on- and off-street to complete the network.



EXISTING PEDESTRIAN FACILITIES



Image Above: Close to downtown, the sidewalks and street crossings provide an environment that invites persons of all ages to walk. Walkability is the key to the sense of place that is Worthington



Image Above: There are a number of streets without sidewalks even in close proximity to downtown. Low speed and volume streets may not need them.



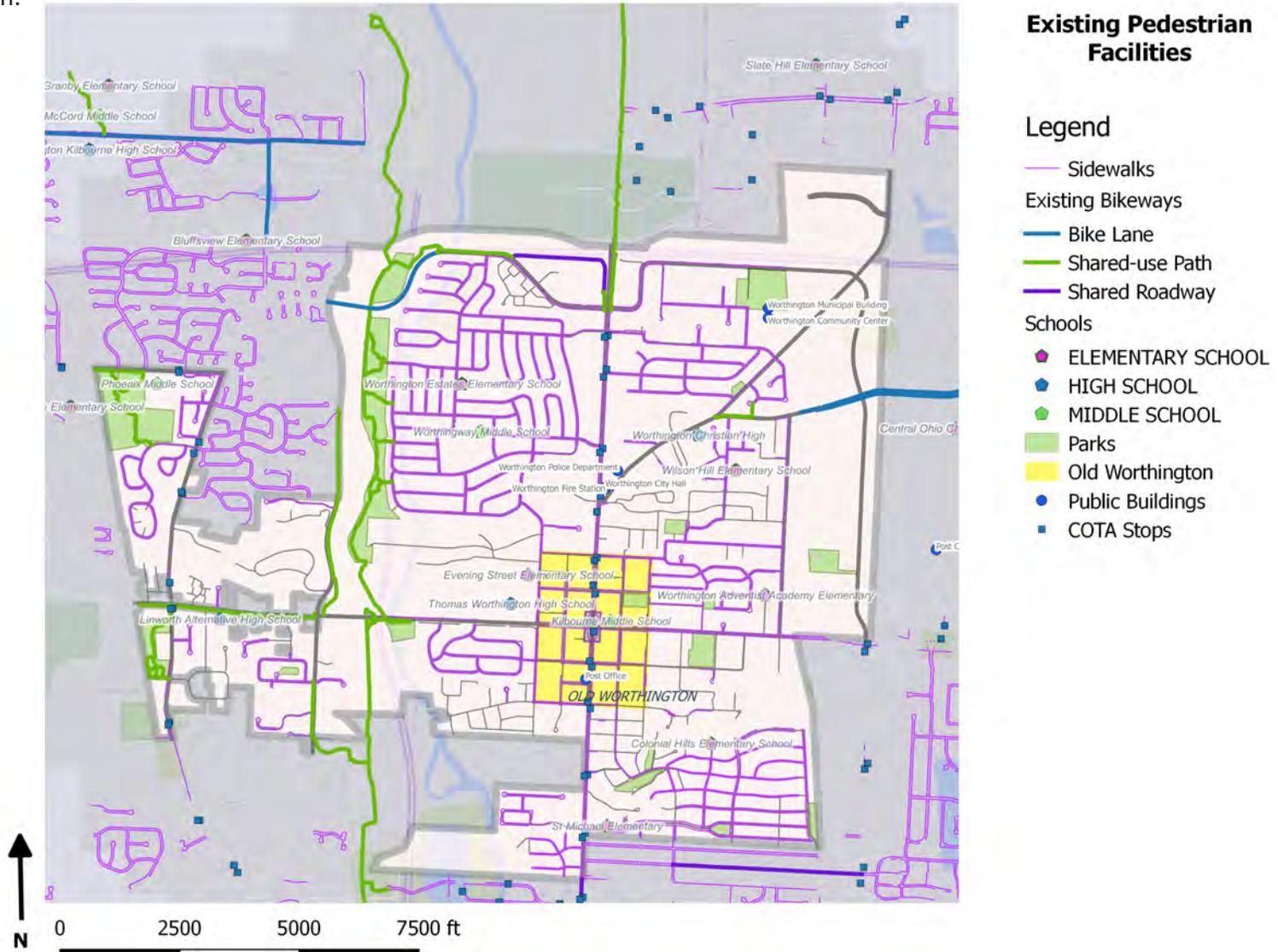
Image Above: Outside of the downtown, many locations are dominated by automobiles and unfriendly for pedestrians, such as the intersection of 161 and Linworth.



Image Above: Many of the historic brick walkways in Old Worthington are in poor condition and pose barriers to accessibility.

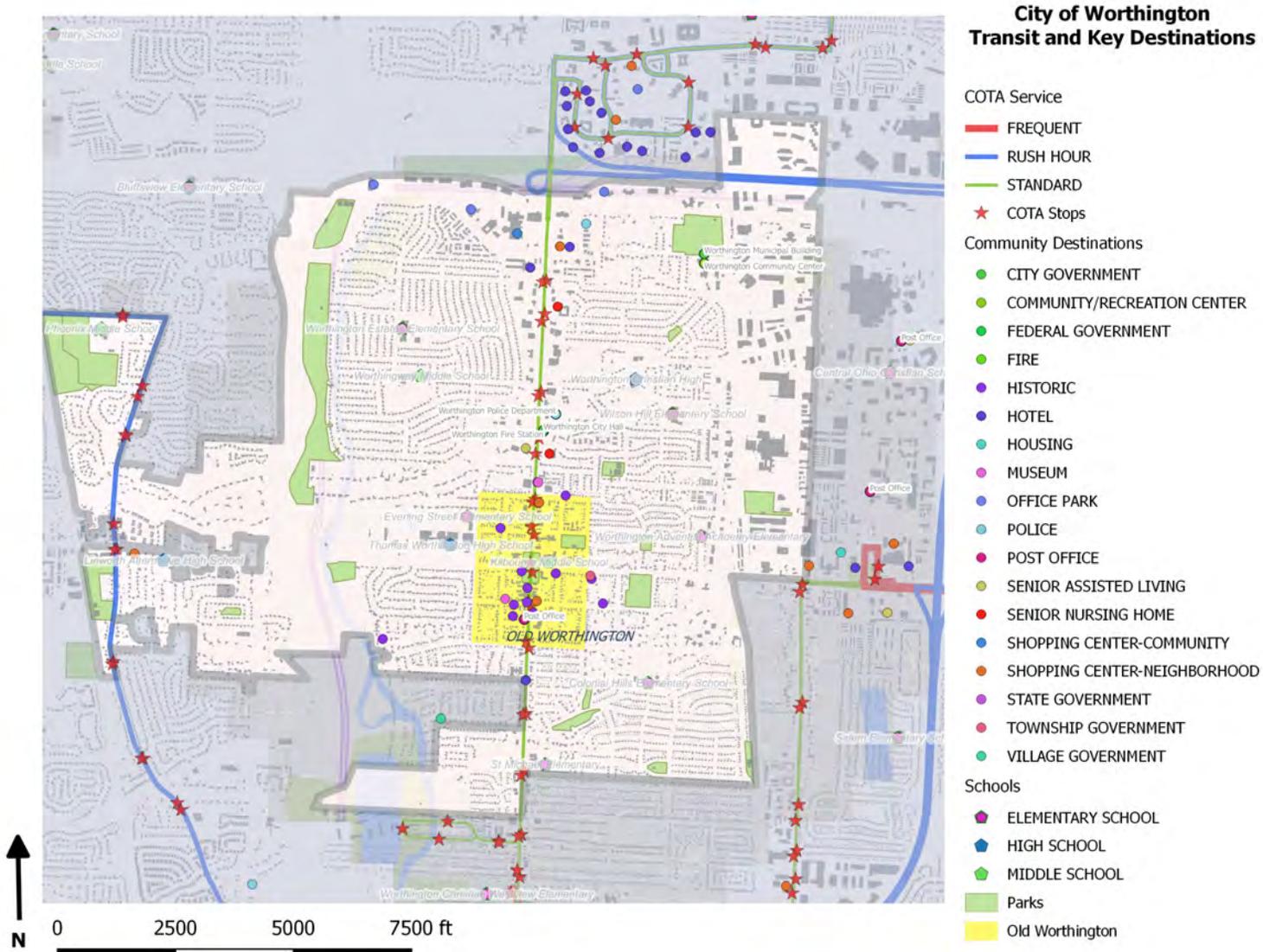
MAP #3. EXISTING PEDESTRIAN FACILITIES

Despite the barriers, Worthington has great assets, traditional development patterns and sidewalks along many streets. Improving the quality and consistency of the sidewalk network and providing better access to the regional bicycle network is the key to a more walkable/ bikeable Worthington.



MAP #4. TRANSIT AND KEY DESTINATIONS

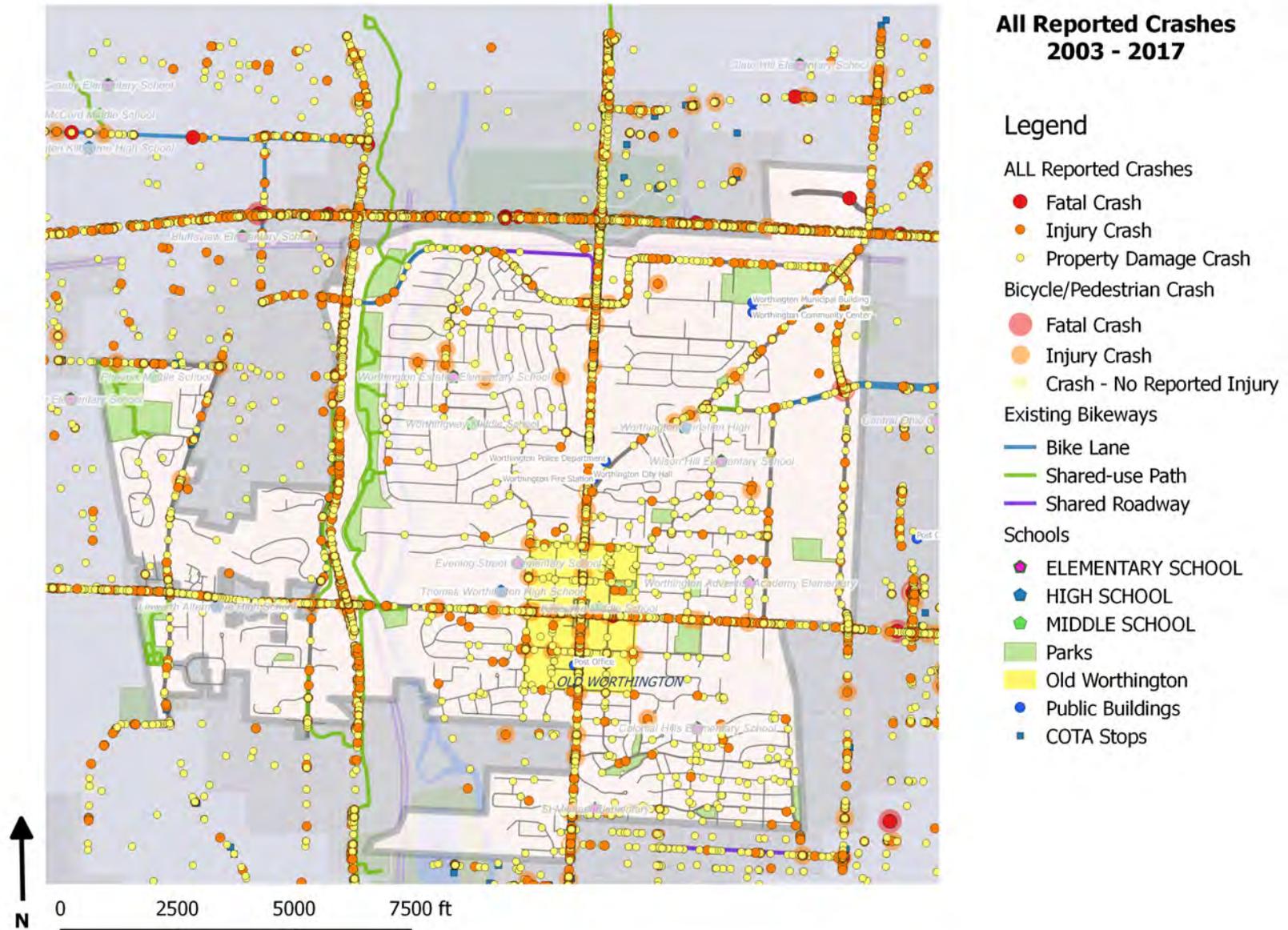
The #2L (Now 102) N. High Street/Polaris PKWY route connects all of High Street through Worthington and to downtown Columbus. East-west transit service is lacking, but COTA would like to extend Route 35 Dublin-Granville west of High street to a suitable turnaround, which needs to be identified.





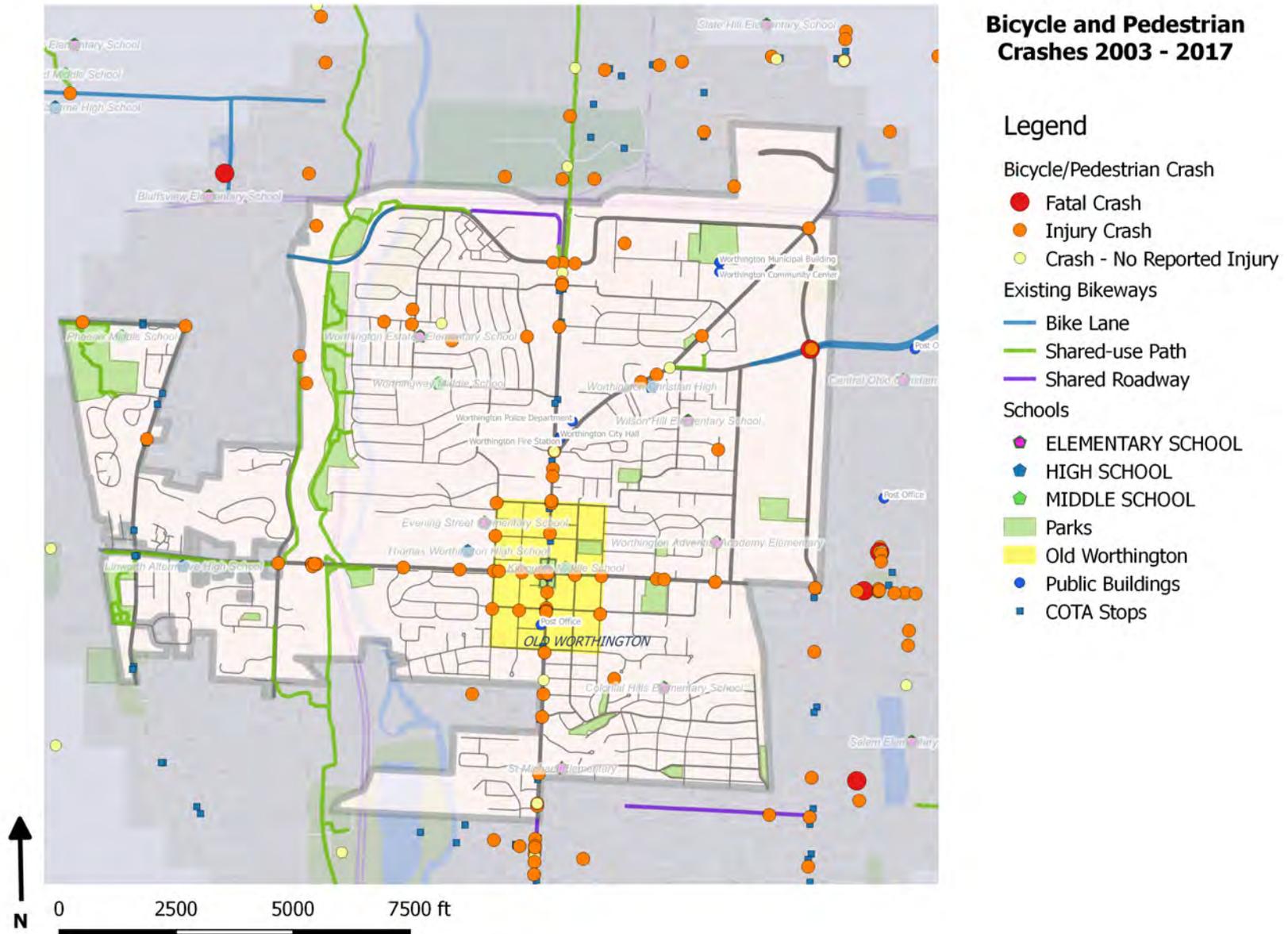
MAP #5. ALL CRASH DATA: 2003 - 2017

It should be noted that speed plays a role in both the severity and incidence of fatal and injurious crashes, as depicted in the map below.



MAP #6. BIKE AND PEDESTRIAN CRASH DATA: 2003 - 2017

Between 2003 and 2017, bicycles and pedestrians accounted for 1.36% of crashes; 4.68% of injuries and 25% of fatalities.



CHAPTER 3. RECOMMENDATIONS





RECOMMENDATIONS

This chapter lays out the plan for completing a connected active transportation network for Worthington. The completed network builds upon existing facilities with a focus on connections within Worthington as well as the regional system. The recommendations contained in this Plan have been developed in concert with the development of the city’s new Complete Streets policies and implementation approach. Specific facilities have been identified based on newly adopted street classifications and design standards developed by city staff and the Mid-Ohio Regional Planning Commission (MORPC) as part of a technical assistance grant awarded to Worthington in 2018 (See Appendix D MORPC Complete Streets Policy and Implementation Toolkit)

ACTIVE TRANSPORTATION PROJECT CATEGORIES: The bulk of Plan recommendations are identified as active transportation corridors. These projects recommend specific bicycle facility types with the aim of improving network connections throughout Worthington.

PRIORITIZATION CRITERIA: For purposes of evaluating the identified projects against one another in terms of relative impact and importance to the community, the project team, using community feedback and direction from the City staff and the project advisory committee, developed a prioritization scheme. The scheme identified seven categories of data that were mapped and available for the City of Worthington. The candidate Active Transportation projects and challenging intersections were then analyzed using GIS to determine the extent to which they had proximity or connections to these features. The features were also assigned relative weighted values to emphasize key features such as schools and safety. See the Project Scoring Table for weighting. The project listings are grouped and organized by rank from highest to lowest scoring.

ACTIVE TRANSPORTATION PROJECT CATEGORIES

For purposes of implementation planning the Active Transportation Projects have been assigned categories based on factors related to both magnitude of cost and complexity of implementation. Based on this the plan identifies three Active Transportation Project Categories:

Tier 1: Projects that are in a high state of project readiness and either have lower costs or are currently identified with another project planning effort. These projects are the “low-hanging fruit” and should be the primary focus of short-term implementation.

Category	Scoring Measure	Weight
Schools	Proximity to schools	29.4%
Destinations	Proximity to community destinations	14.7%
Transit	Proximity to COTA stops	8.8%
Parks	Access to Parks	5.9%
Existing Network	Connection to existing Bike/Ped facility	14.7%
Downtown Worthington	Connect to or within Old Worthington	5.9%
Safety	Previous Bike Ped crashes 2003-2017	20.6%
Safety	Previous any crashes 2003-2017	8.8%

Above: Table #1. Prioritization Scheme with Weighted Values

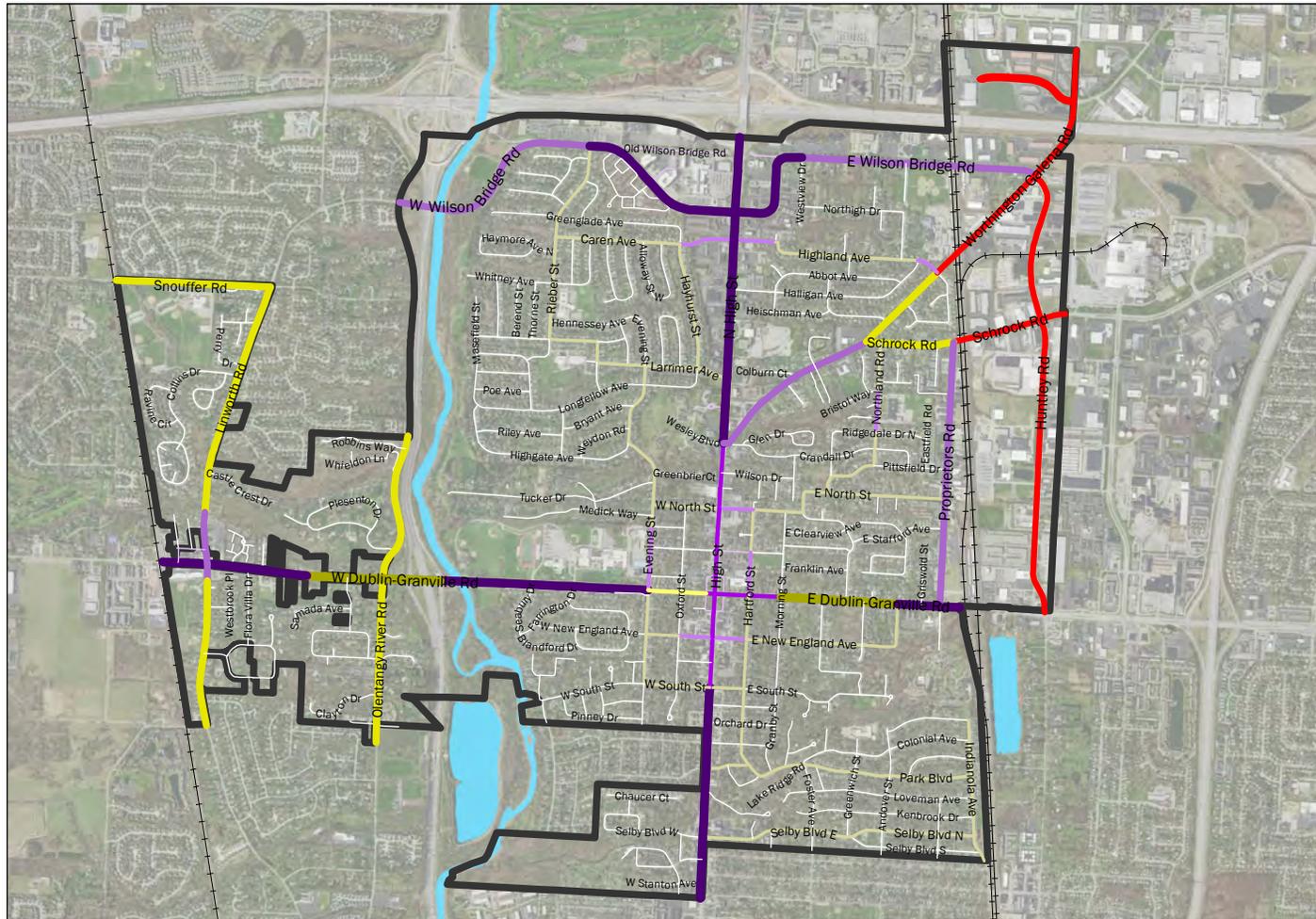
Tier 2: Projects that have greater degree of complexity and/or costs that may need some feasibility study or may be a better candidate for larger capital projects, such as street reconstruction. These projects may require the City to seek innovative funding to supplement the limited resources currently available for bicycle and pedestrian projects in the capital program.

Tier 3: These projects present a number of challenges to implementation, including, but not limited to, high costs, required multi-jurisdictional cooperation, further feasibility analysis, and/or overcoming significant existing barriers. These projects will advance only through thoughtful planning processes and are good candidates for inclusion in the regional bicycle and pedestrian plan, as they are best funded through larger capital grant programs or in coordination with large capital projects.

COST OPINIONS

Cost estimations have been developed based on similar cost experiences for on- and off-street bicycle projects. These costs are intended to provide a rough estimation of cost magnitude and do not account for unknown factors that may impact estimation during project engineering.

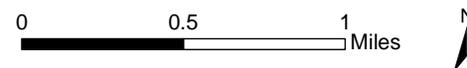
MAP #7. WORTHINGTON STREET CLASSIFICATIONS (MORPC)



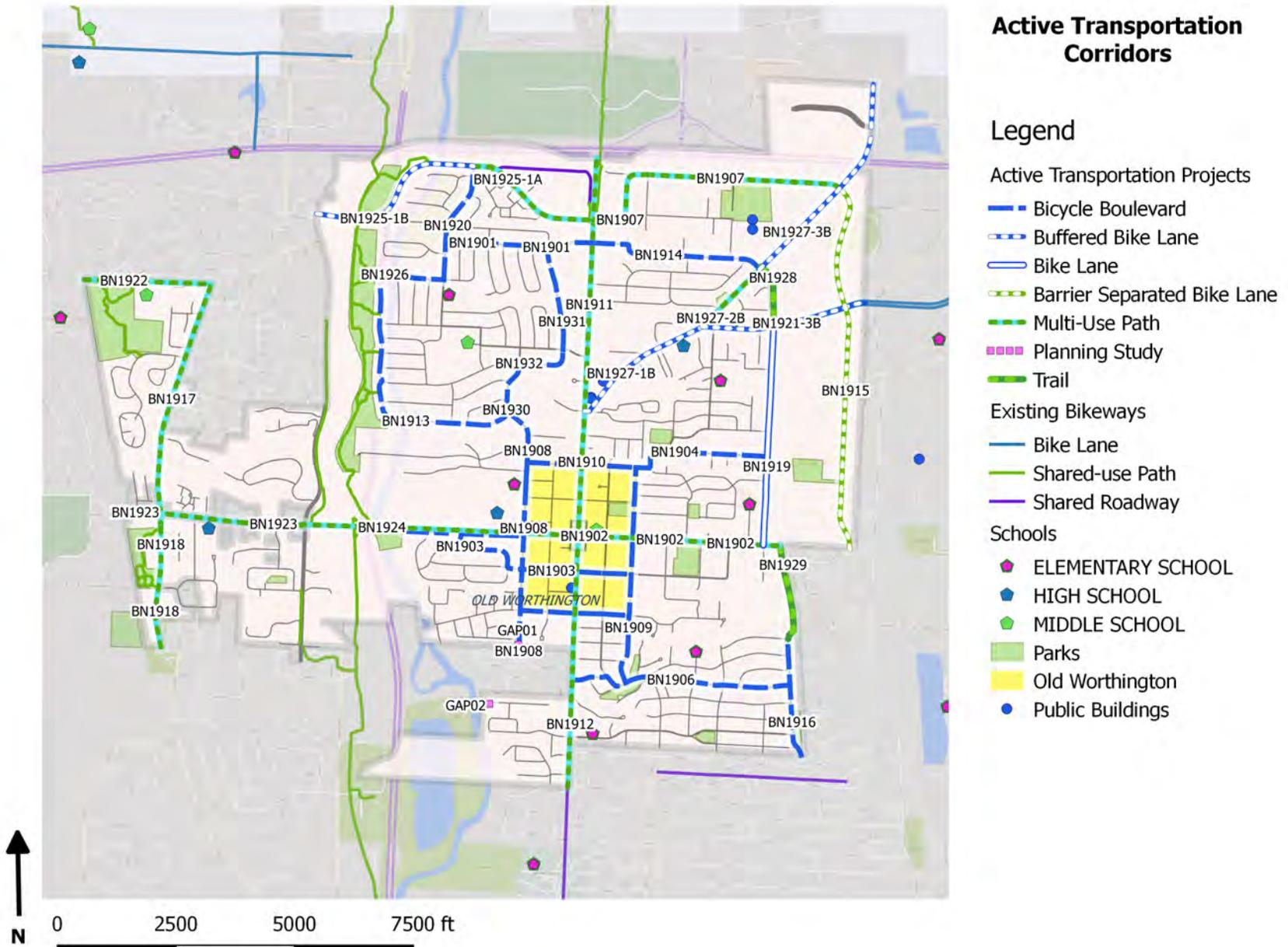
Worthington Streets
Context, Classification

- Commercial/Industrial - Avenue
- Mixed Use - Boulevard/Parkway
- Mixed Use - Avenue
- Mixed Use - Main Street
- Mixed Use - Neighborhood Connector
- Mixed Use - Street
- Residential - Boulevard/Parkway
- Residential - Avenue
- Residential - Main Street
- Residential - Neighborhood Connector
- Residential - Street

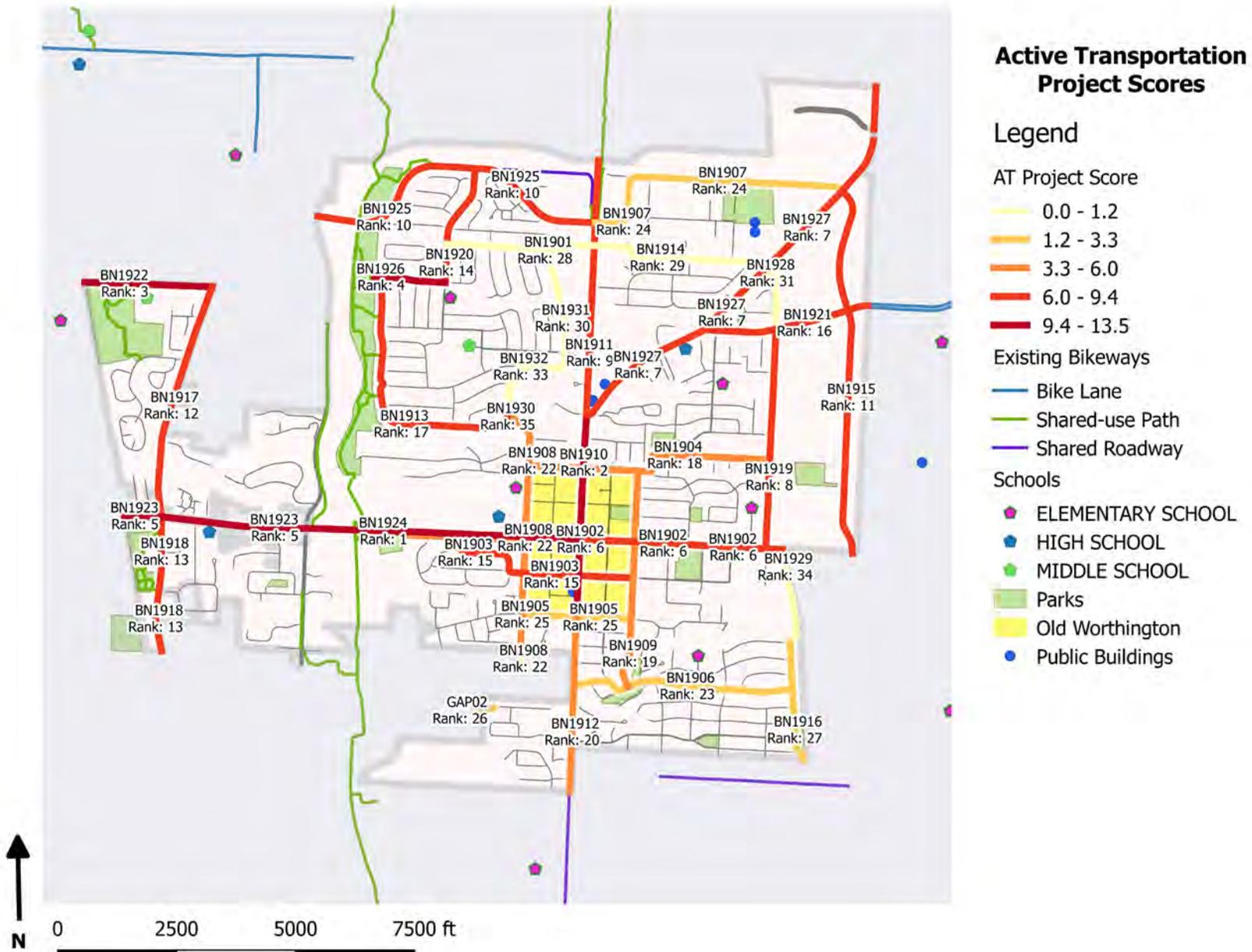
morpc The information shown on this map is compiled from various sources made available to us which we believe to be reliable. N:\ArcGIS\GORE\insight_2050_Tra Program\Worthington_Rc.mxd 11/27/2018



MAP #8. ACTIVE TRANSPORTATION CORRIDORS



MAP #9. RANKED ACTIVE TRANSPORTATION PROJECTS



RANKED ACTIVE TRANSPORTATION PROJECTS

For purposes of evaluating the identified projects against one another in terms of relative impact and importance to the community, the project team, using community feedback and direction from the staff and advisory committee, developed a prioritization scheme. The scheme identified seven categories of data that was mapped and available for the City of Worthington. The candidate Active Transportation projects and challenging intersections were then analyzed using GIS to determine

the extent to which they had proximity or connections to these features. The features were also assigned relative weighted values to emphasize key features such as schools and safety. The following tables present the final scores for these projects with weighted score results for each feature.

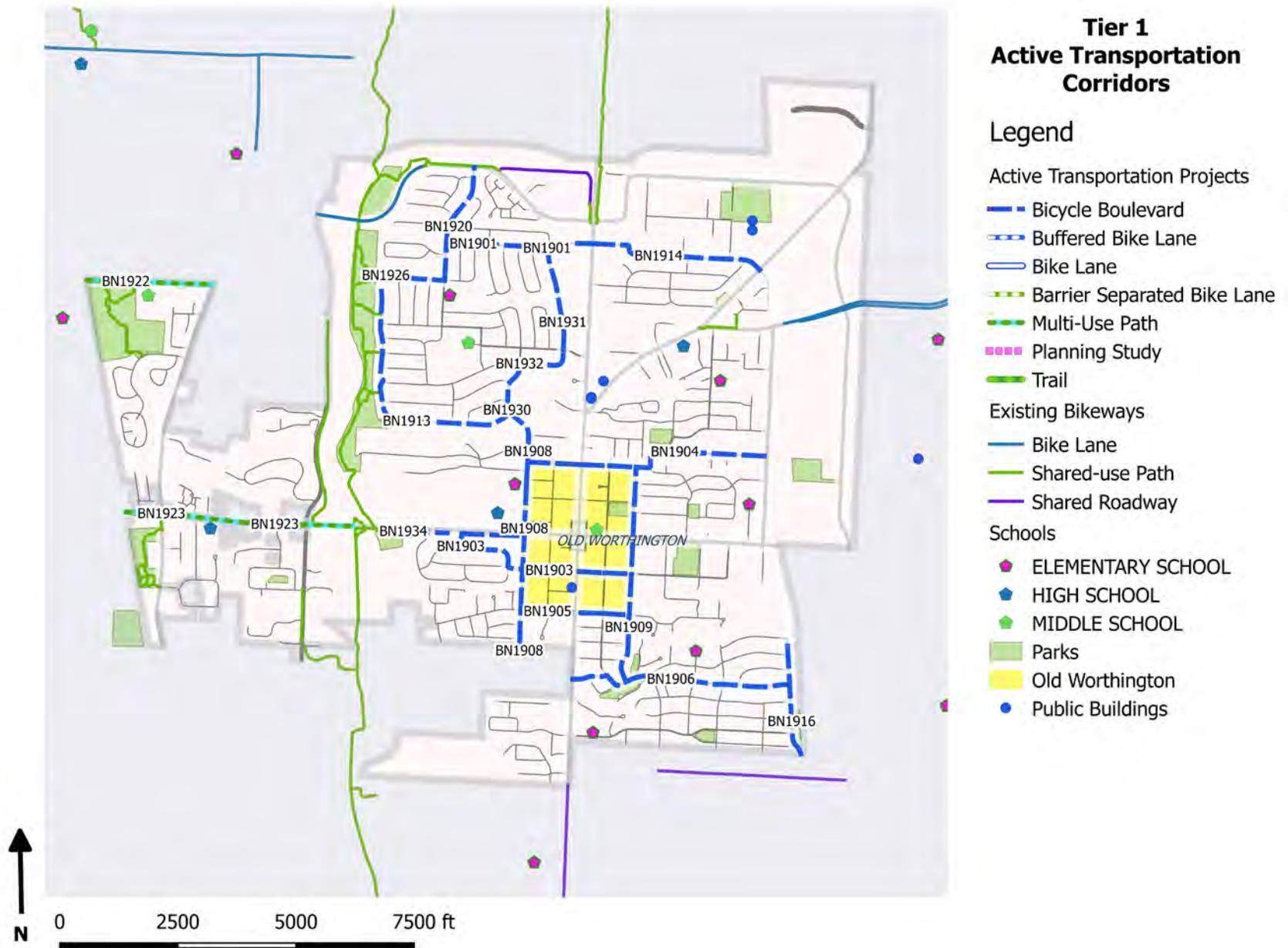
Rank	Project ID	Location	Project Extent	Recommendation	Score
1	BN1924	W Dublin-Granville Rd	E Ramp SR 315 to High St	Multi-use path	13.547
2	BN1910	High St	Worthington Galena Rd to South St	Multi-use path	12.178
3	BN1922	Snouffer Rd	West City Limit to Linworth Rd	Multi-use path	11.547
4	BN1926	Whitney Ave	West Terminus to Rieber St	Bicycle boulevard	11.261
5	BN1923	W Dublin-Granville Rd	West City Limit to E ramp SR 315	Multi-use path	10.3
6	BN1902	E Dublin-Granville Rd	High St to East City Limit	Multi-use path	9.367
7	BN1927-1B	Worthington Galena Rd	High St to Schrock Rd	Buffered bike lane	8.571
7	BN1927-2B	Worthington Galena Rd	Schrock Rd to Highland Ave	Multi-use path	8.571
7	BN1927-3B	Worthington Galena Rd	Highland Ave to North City Limit	Buffered bike lane	8.571
8	BN1919	Proprietors Rd	Schrock Rd to E Dublin Granville Rd	Bike lane	8.165
9	BN1911	N High St	North City Limit to Worthington Galena Rd	Multi-use path	8.138
10	BN1925-1A	W Wilson Bridge Rd	Rieber St to High St	Multi-use path	7.996
10	BN1925-1B	W Wilson Bridge Rd	West City Limit to Rieber St	Buffered bike lane	7.996
11	BN1915	Huntley Rd	Worthington Galena to E Dublin Granville Rd	Barrier-separated bike lane	7.915
12	BN1917	Linworth Rd	Snouffer Rd to W Dublin Granville Rd	Multi-use path	7.908
13	BN1918	Linworth Rd	W Dublin Granville Rd to South City Limit	Multi-use path	7.814
14	BN1920	Rieber St	W Wilson Bridge Rd to Whitney Ave	Bicycle boulevard	7.541
15	BN1903	E New England Ave	W Dublin Granville Rd to High St	Bicycle boulevard	7.531
16	BN1921-2B	Schrock Rd	Worthington Galena Rd to Proprietors Rd	Buffered bike lane	7.223
16	BN1921-3B	Schrock Rd	Proprietors Rd to East City Limit	Buffered bike lane	7.223

RANKED ACTIVE TRANSPORTATION PROJECTS

Rank	Project ID	Location	Project Extent	Recommendation	Score
17	BN1913	Masefield St	North of Lambourne Ave (Terminus) to Evening St	Bicycle boulevard	7.009
18	BN1904	E North St	Evening St to Proprietors Rd	Bicycle boulevard	6.047
19	BN1909	Granby St	E North St to Park Blvd	Bicycle boulevard	5.996
20	BN1912	N High St	South St to South City Limit	Multi-use path	5.84
21	BN1934	W Dublin-Granville Rd (Service Drive)	Olentangy River Trail to Evening St	Bicycle boulevard	5.763
22	BN1908	Evening St	Highgate Ave to South City Limit (Street Terminus)	Bicycle boulevard	4.789
23	BN1906	Park Blvd	High St to Indianola Ave	Bicycle boulevard	3.325
24	BN1907	E Wilson Bridge Rd	High St to Worthington Galena Rd	Multi-use path	3.158
25	BN1905	E South St	Evening St to Morning St	Bicycle boulevard	2.59
26	GAP02	Northbrook neighborhood to Riverlea	Northbrook neighborhood to Riverlea	Planning study	2.519
27	BN1916	Indianola Ave	Park Overlook Dr to South City Limit	Bicycle boulevard	2.017
28	BN1901	Caren Ave	Rieber St to High St	Bicycle boulevard	1.213
29	BN1914	Highland Ave	High St to Worthington Galena Rd	Bicycle boulevard	1.024
30	BN1931	Hayhurst St	Caren Ave to Larrimer Ave	Bicycle boulevard	0.31
31	BN1928	Trail Connection NE	Worthington Galena Rd to Intersection Schrock Rd/ Proprietors Rd	Trail	0.075
32	GAP01	Evening Street Gap	Evening St Connection to Pioneer Ct (Riverlea)	Planning study	0.037
33	BN1932	Longfellow Ave	Evening St to Larrimer Ave	Bicycle boulevard	0.024
34	BN1929	Trail Connection Indianola connector	Dublin Granville Rd at East City Limit to North Terminus of Indianola Ave	Trail	0.021
35	BN1930	Evening St	Longfellow Ave to Highgate Ave	Bicycle boulevard	0.017

Above: Table #2. Ranked Active Transportation Projects

MAP #10. TIER 1 ACTIVE TRANSPORTATION CORRIDORS



TIER 1 CORRIDOR PROJECTS

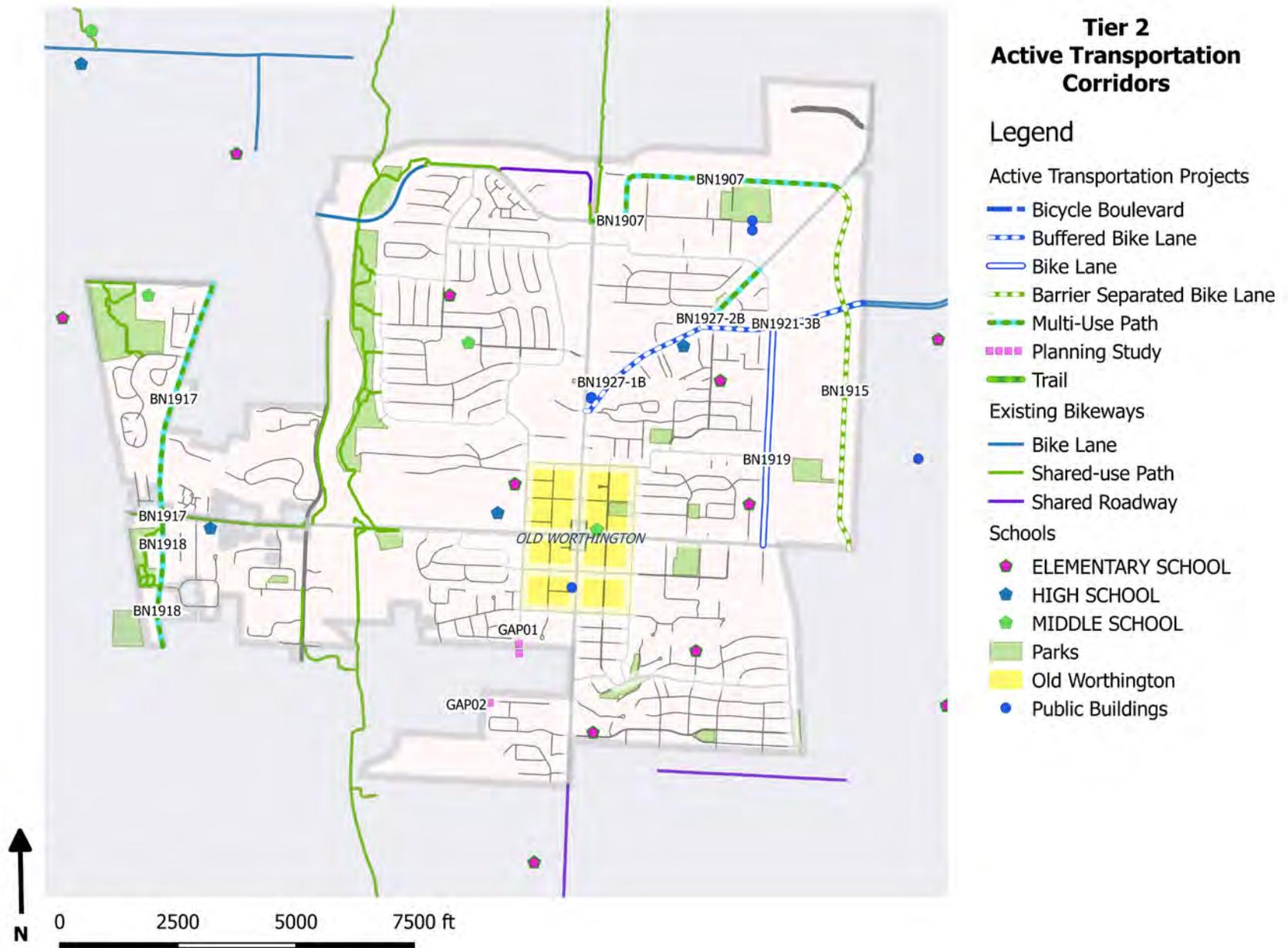
TIER 1 PROJECTS: Projects that are in a high state of project readiness and either have lower costs or are currently identified with another

project planning effort. These projects are the “low-hanging fruit” and should be the primary focus of short-term implementation.

Rank	Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Score
3	BN1922	Snouffer Rd	West City Limit to Linworth Rd	Multi-use path	0.506	11.547
4	BN1926	Whitney Ave	West Terminus to Rieber St	Bicycle boulevard	0.282	11.261
5	BN1923	W Dublin-Granville Rd	West City Limit to E ramp SR 315	Multi-use path	0.913	10.3
14	BN1920	Rieber St	W Wilson Bridge Rd to Whitney Ave	Bicycle boulevard	0.483	7.541
15	BN1903	E New England Ave	W Dublin Granville Rd to High St	Bicycle boulevard	0.803	7.531
17	BN1913	Masefield St	North of Lambourne Ave (Terminus) to Evening St	Bicycle boulevard	1.015	7.009
18	BN1904	E North St	Evening St to Proprietors Rd	Bicycle boulevard	1.023	6.047
19	BN1909	Granby St	E North St to Park Blvd	Bicycle boulevard	0.866	5.996
21	BN1934	W Dublin-Granville Rd (Service Drive)	Olentangy River Trail to Evening St	Bicycle boulevard	0.392	5.763
22	BN1908	Evening St	Highgate Ave to South City Limit (Street Terminus)	Bicycle boulevard	0.945	4.789
23	BN1906	Park Blvd	High St to Indianola Ave	Bicycle boulevard	0.902	3.325
25	BN1905	E South St	Evening St to Morning St	Bicycle boulevard	0.434	2.59
27	BN1916	Indianola Ave	Park Overlook Dr to South City Limit	Bicycle boulevard	0.471	2.017
28	BN1901	Caren Ave	Rieber St to High St	Bicycle boulevard	0.59	1.213
29	BN1914	Highland Ave	High St to Worthington Galena Rd	Bicycle boulevard	0.707	1.024
30	BN1931	Hayhurst St	Caren Ave to Larrimer Ave	Bicycle boulevard	0.414	0.31
33	BN1932	Longfellow Ave	Evening St to Larrimer Ave	Bicycle boulevard	0.223	0.024
35	BN1930	Evening St	Longfellow Ave to Highgate Ave	Bicycle boulevard	0.209	0.017

Above: Table #3. Tier 1 Corridor Projects

MAP #11. TIER 2 ACTIVE TRANSPORTATION CORRIDORS



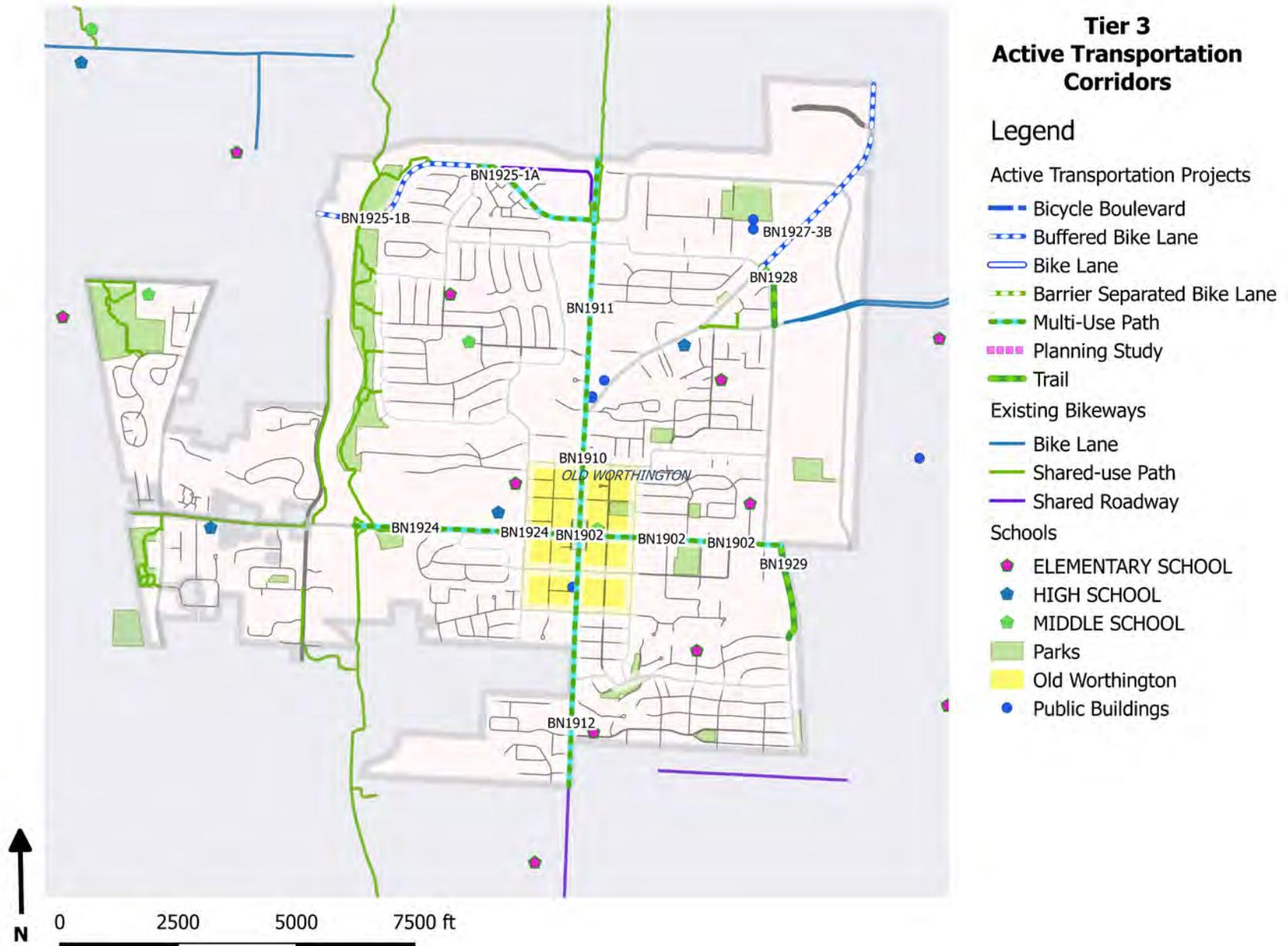
TIER 2 CORRIDOR PROJECTS

TIER 2 PROJECTS: Projects that have greater degree of complexity and/or costs that may need some feasibility study or may be a better candidate for larger capital projects, such as street reconstruction. These projects may require the City to seek innovative funding to supplement the limited resources currently available for bicycle and pedestrian projects in the capital program.

Rank	Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Score
7	BN1927-1B	Worthington Galena Rd	High St to Schrock Rd	Buffered bike lane	0.591	8.571
7	BN1927-2B	Worthington Galena Rd	Schrock Rd to Highland Ave	Multi-use path	0.324	8.571
8	BN1919	Proprietors Rd	Schrock Rd to E Dublin Granville Rd	Bike lane	0.87	8.165
11	BN1915	Huntley Rd	Worthington Galena to E Dublin Granville Rd	Barrier-separated bike lane	1.47	7.915
12	BN1917	Linworth Rd	Snouffer Rd to W Dublin Granville Rd	Multi-use path	0.944	7.908
13	BN1918	Linworth Rd	W Dublin Granville Rd to South City Limit	Multi-use path	0.534	7.814
16	BN1921-2B	Schrock Rd	Worthington Galena Rd to Proprietors Rd	Buffered bike lane	0.287	7.223
16	BN1921-3B	Schrock Rd	Proprietors Rd to East City Limit	Buffered bike lane	0.378	7.223
24	BN1907	E Wilson Bridge Rd	High St to Worthington Galena Rd	Multi-use path	1.135	3.158
26	GAP02	Northbrook neighborhood to Riverlea	Northbrook neighborhood to Riverlea	Planning study	0.049	2.519
32	GAP01	Evening Street Gap	Evening St Connection to Pioneer Ct (Riverlea)	Planning study	0.047	0.037

Above: Table #4. Tier 2 Corridor Projects

MAP #12. TIER 3 ACTIVE TRANSPORTATION CORRIDORS



TIER 3 CORRIDOR PROJECTS

TIER 3 PROJECTS: These projects present a number of challenges to implementation, including, but not limited to, high costs, required multi-jurisdictional cooperation, further feasibility analysis, and/or overcoming significant existing barriers. These projects will advance only through thoughtful planning processes and are good candidates for inclusion in the regional bicycle and pedestrian plan, as they are best funded through larger capital grant programs or in coordination with large capital projects.

Rank	Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Score
1	BN1924	W Dublin-Granville Rd	E Ramp SR 315 to High St	Multi-use path	0.903	13.547
2	BN1910	High St	Worthington Galena Rd to South St	Multi-use path	0.804	12.178
6	BN1902	E Dublin-Granville Rd	High St to East City Limit	Multi-use path	0.806	9.367
7	BN1927-3B	Worthington Galena Rd	Highland Ave to North City Limit	Buffered bike lane	0.859	8.571
9	BN1911	N High St	North City Limit to Worthington Galena Rd	Multi-use path	1.005	8.138
10	BN1925-1B	W Wilson Bridge Rd	West City Limit to Rieber St	Buffered bike lane	0.734	7.996
10	BN1925-1A	W Wilson Bridge Rd	Rieber St to High St	Multi-use path	0.555	7.996
20	BN1912	N High St	South St to South City Limit	Multi-use path	0.692	5.84
31	BN1928	Trail Connection NE	Worthington Galena Rd to Intersection Schrock Rd/ Proprietors Rd	Trail	0.256	0.075
34	BN1929	Trail Connection Indianola connector	Dublin Granville Rd at East City Limit to North Terminus of Indianola Ave	Trail	0.382	0.021

Above: Table #5. Tier 3 Corridor Projects

CROSSING CHALLENGES

The pedestrian projects identified in this Plan reflect connectivity challenges as identified during the engagement process and data analysis. These projects are categorized by the type of location and its features, and in order by project scoring from the highest to lowest in each. The categories include:

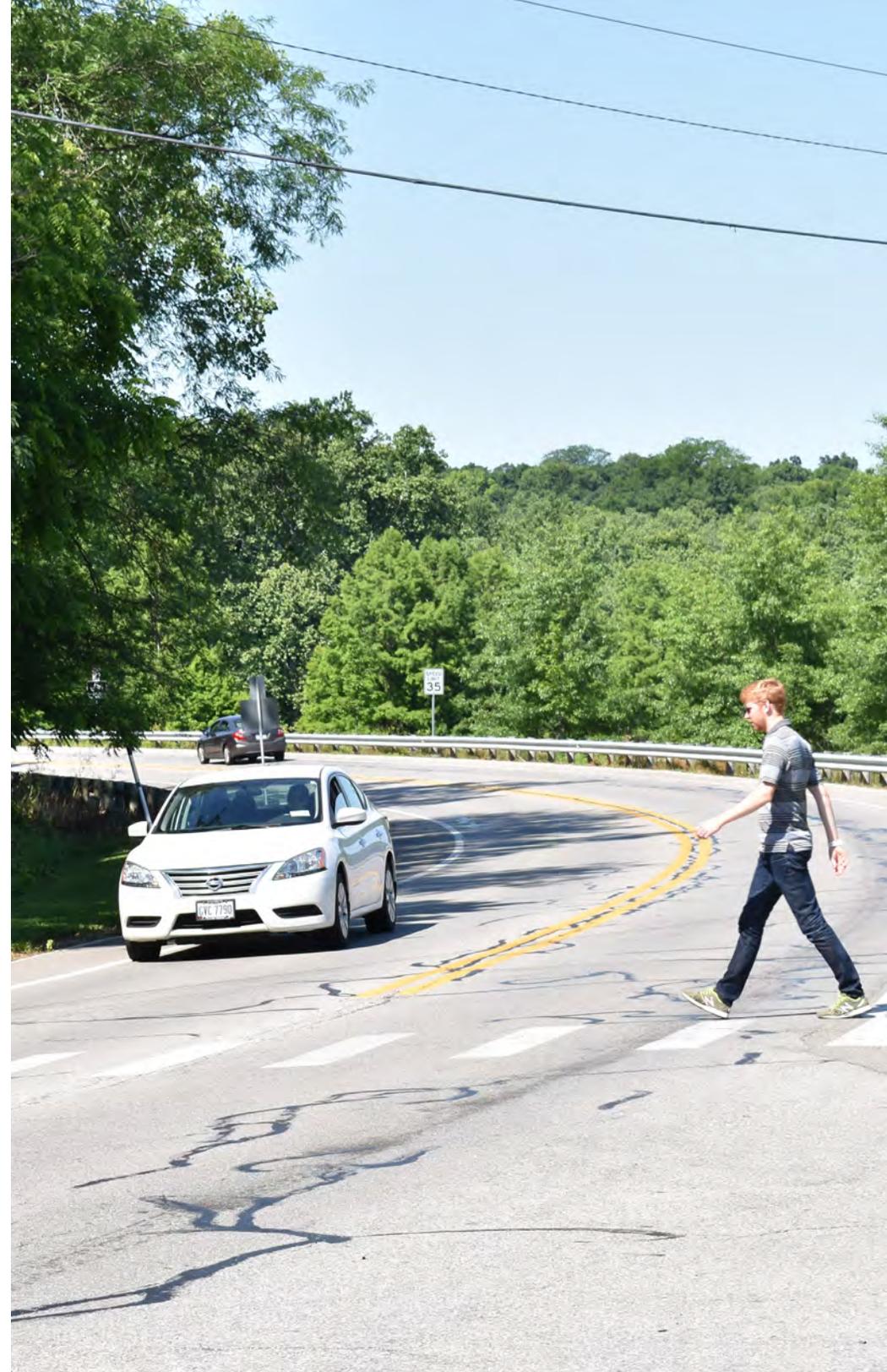
UNCONTROLLED CROSSINGS: This includes intersections or mid-block locations where crosswalks exist (marked and unmarked), or are needed to improve safe crossing for pedestrians;

SIGNALIZED CROSSINGS: This includes intersections and locations currently controlled by signals, where there may be opportunities to improve safety and convenience for pedestrian crossings;

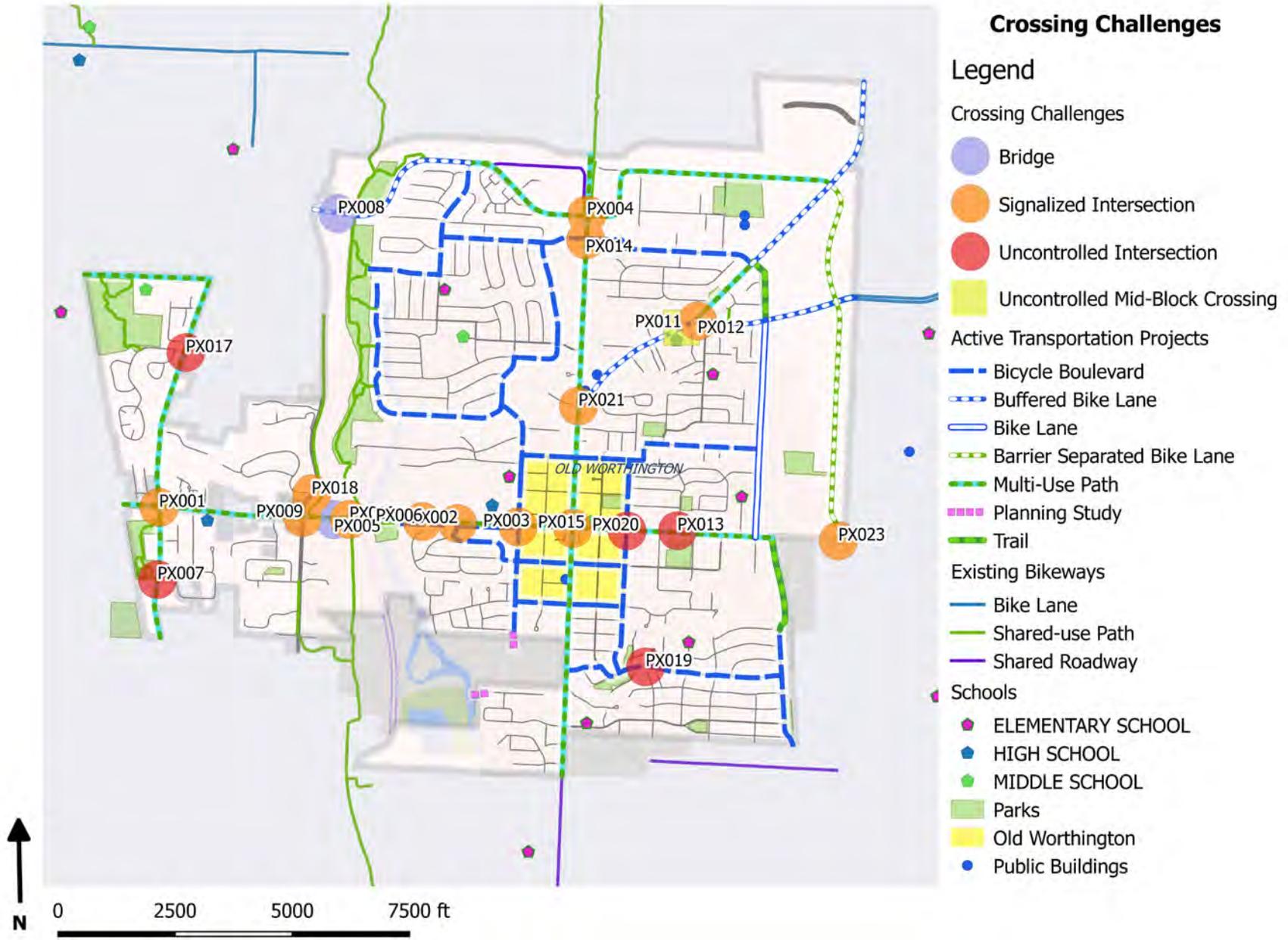
BRIDGES: Walkways across bridges are especially important from a connectivity standpoint as alternatives often involve significant distances to overcome;

The Plan does not make specific recommendations for signalized crossing locations or bridges. These locations are flagged to ensure that these challenges are understood and allow for efforts to improve these conditions whenever the city undertakes modifications to the infrastructure or operations, as these present the best opportunities to improve crossing conditions.

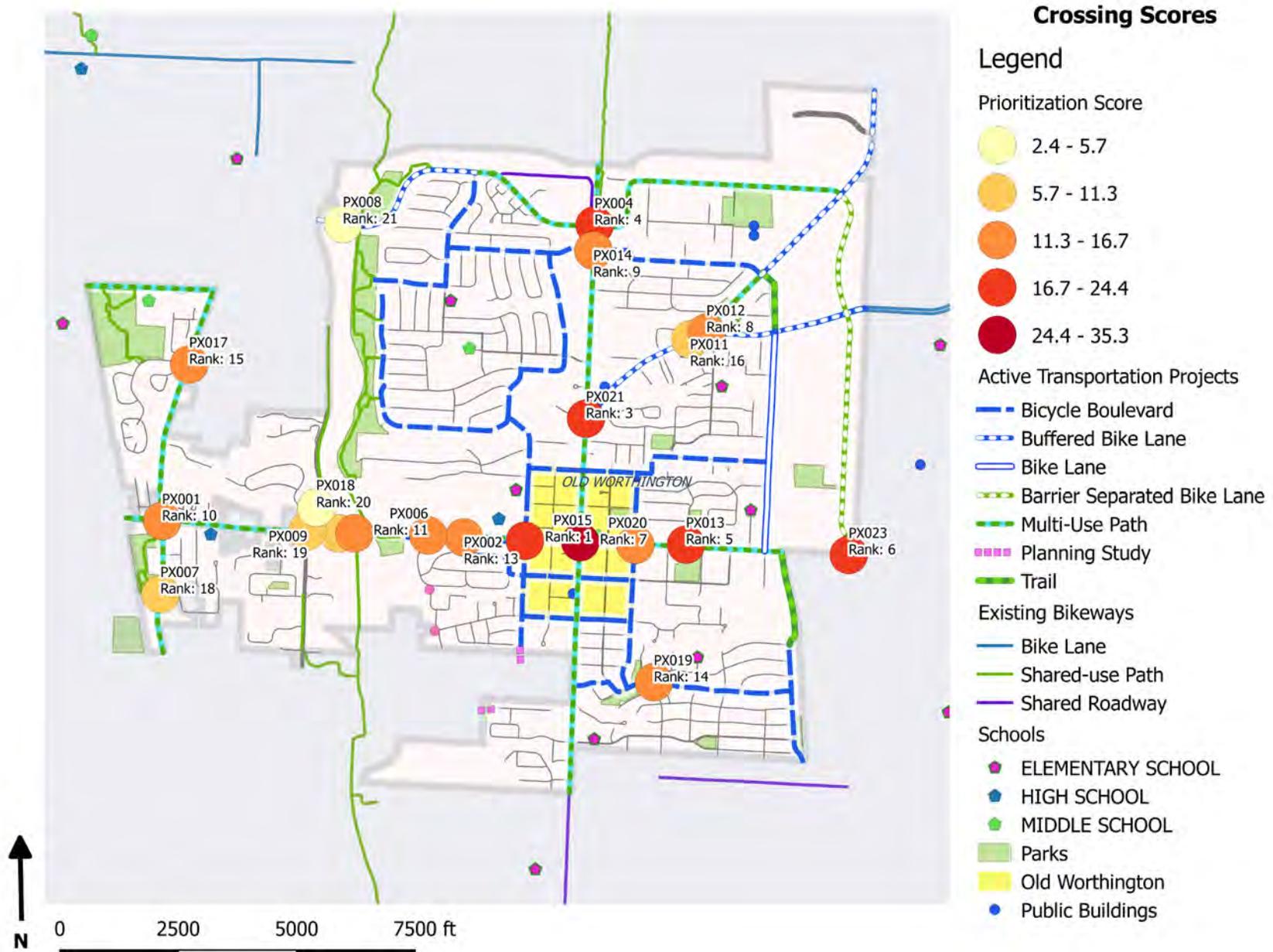
The Plan does identify a toolbox or options to address crossing safety at uncontrolled crossing locations. Modifications to these locations should be based on engineering judgment and reference the 2018 FHWA-EDC Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations. Illustration of this application can be found in Chapter Four of the Plan.



MAP #13. CROSSING CHALLENGES



MAP #14. RANKED CROSSING PROJECTS

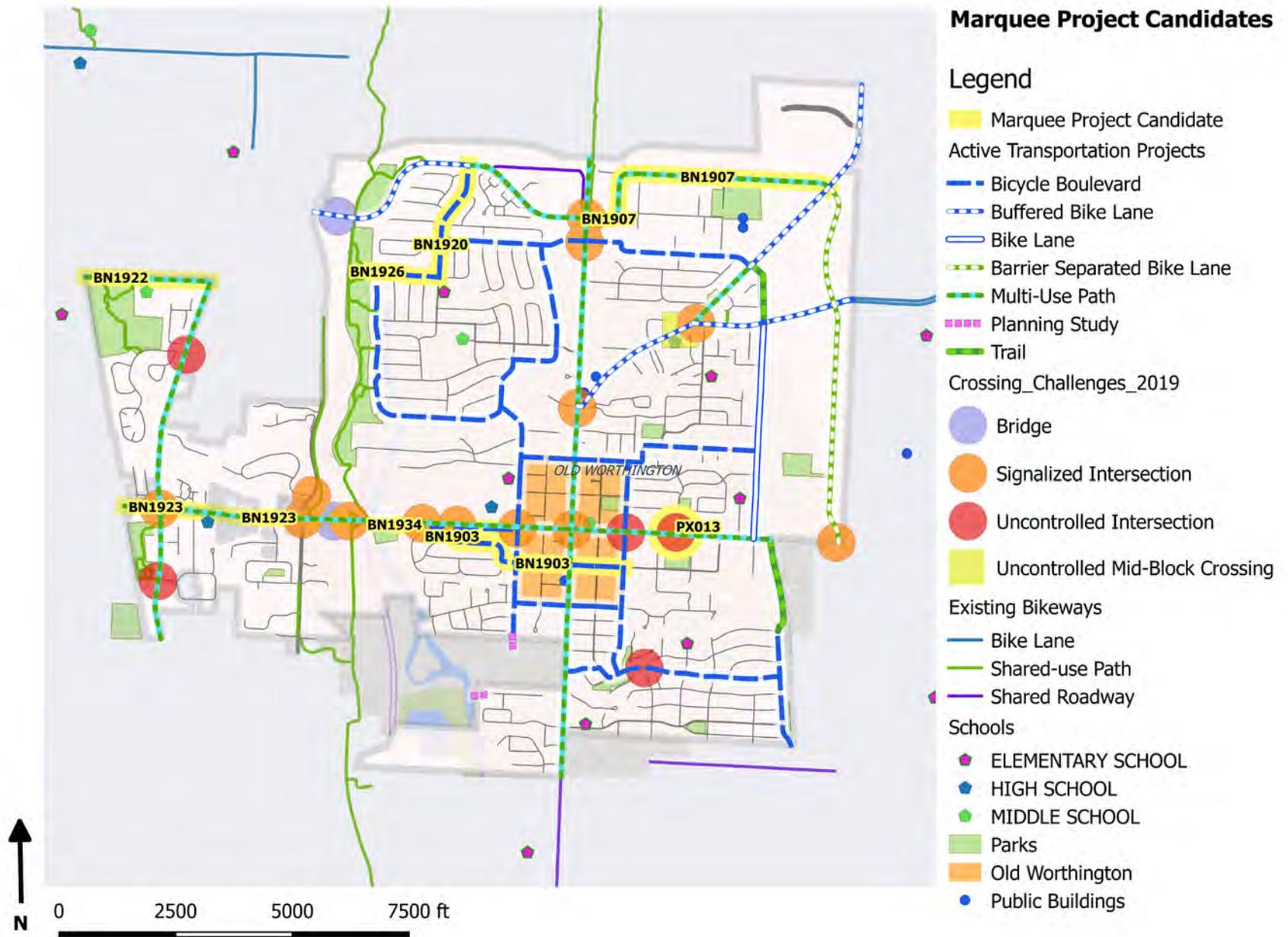


RANKED CROSSING PROJECTS

Rank	BP_ID	Location	Type	Total Score
1	PX015	High St at Dublin Granville	Signalized Intersection	35.332
2	PX003	Dublin Granville at Evening	Signalized Intersection	24.400
3	PX021	High St at Worthington Galena	Signalized Intersection	22.887
4	PX004	High St at Wilson Bridge Rd	Signalized Intersection	20.143
5	PX013	Dublin Granville at Pingree	Uncontrolled Intersection	19.932
6	PX023	Dublin Granville Rd at Huntley/Sinclair Rd	Signalized Intersection	19.845
7	PX020	Dublin Granville at Morning	Uncontrolled Intersection	16.724
8	PX012	Worthington-Galena Rd at Schrock Rd	Signalized Intersection	15.668
9	PX014	High St at Caren Ave	Signalized Intersection	15.180
10	PX001	Dublin-Granville at Linworth	Signalized Intersection	14.925
11	PX006	Dublin Granville at Seabury	Uncontrolled Intersection	14.722
12	PX022	Dublin Granville Rd at Exit SR-315 (East)	Signalized Intersection	14.110
13	PX002	Dublin-Granville at Farmington	Signalized Intersection	13.827
14	PX019	Park Blvd at Foster/Colonial Ave	Uncontrolled Intersection	13.707
15	PX017	Linworth Rd at Collins Dr	Uncontrolled Intersection	13.424
16	PX011	Worthington-Galena Rd at Worthington Christian HS	Uncontrolled Mid-Block Crossing	11.322
17	PX005	Dublin Granville Rd at SR 315	Bridge	10.977
18	PX007	Linworth Rd at Linworth Park	Uncontrolled Intersection	10.721
19	PX009	Dublin Granville Rd at Olentangy River Rd	Signalized Intersection	7.583
21	PX018	Olentangy River Rd at Pleasanton	Signalized Intersection	5.484
22	PX008	Wilson Bridge Rd over SR 315	Bridge	2.532

Above: Table #6. Ranked Crossing Projects

MAP #15. MARQUEE PROJECT CANDIDATES



MARQUEE PROJECT CANDIDATES

The adoption of this Plan will result in an enormous amount of work to advance implementation. Getting started is a daunting task that can benefit from a boost to get things moving. With this in mind, the project team has identified a list of Marquee Projects that reflect actions that can be undertaken immediately upon adoption of the Plan. These recommendations reflect projects that have high-readiness for implementation and reasonable cost that can be programmed in the coming year. These projects represent opportunities for staff and the Bicycle and Pedestrian Advisory Board to make some immediate progress with the Plan and generate excitement within the community. It is not

anticipated that all of these projects will be completed in a single year, rather, this is the list of best opportunities to make some immediate impacts in Worthington. Staff and the Bicycle and Pedestrian Advisory Board should have the final say in which projects advance first, and this list should not limit consideration of other projects if circumstances shift priorities.

ACTIVE TRANSPORTATION PROJECT CANDIDATES

Tier	Rank	Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Score
1	3	BN1922	Snouffer Rd	West City Limit to Linworth Rd	Multi-use path	0.506	11.547
1	4	BN1926	Whitney Ave	West Terminus to Rieber St	Bicycle boulevard	0.282	11.261
1	5	BN1923	W Dublin-Granville Rd	West City Limit to E ramp SR 315	Multi-use path	0.913	10.3
1	14	BN1920	Rieber St	W Wilson Bridge Rd to Whitney Ave	Bicycle boulevard	0.483	7.541
1	15	BN1903	E New England Ave	W Dublin Granville Rd to High St	Bicycle boulevard	0.803	7.531
1	21	BN1934	W Dublin-Granville Rd (Service drive)	Olentangy River Trail to Evening St	Bicycle boulevard	0.392	5.763
2	24	BN1907	E Wilson Bridge Rd	High St to Worthington Galena Rd	Multi-use path	1.135	3.158

Above: Table #7. Active Transportation Project Candidates

UNCONTROLLED INTERSECTION CANDIDATE

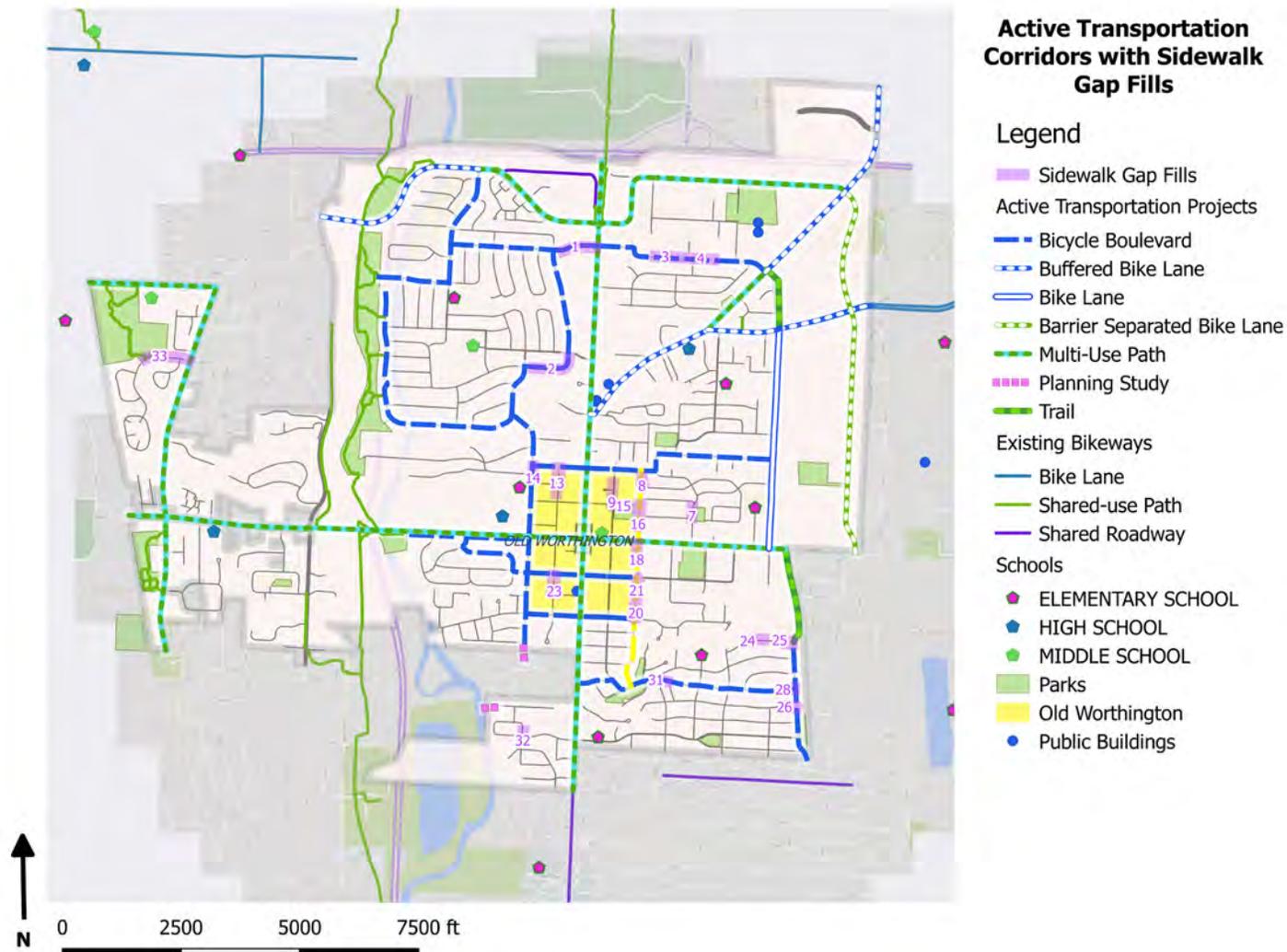
Tier	Rank	Project ID	Location	Project Extent	Score
1	5	PX013	Dublin Granville at Pingree	Uncontrolled Intersection	19.932

Above: Table #8. Uncontrolled Intersection Candidate

MAP #16. SIDEWALK GAPS TO FILL

This Plan does not propose specific sidewalk infill projects as part of the bicycle and pedestrian program. The magnitude of cost associated with sidewalk infill, as well as other bike and pedestrian accommodations, far exceeds available resources. If additional funding can be secured, that funding can be combined with City's annual CIP Street and Sidewalk

Improvement Program, so that those projects could be completed in conjunction with routine maintenance and reconstruction of City streets. Where sidewalk gaps exist along these corridors, the plan references the city's Sidewalk Gap Fill program (see Appendix C Worthington Gap Fill Program and Cost Opinions).





COSTINGS

COSTINGS

These estimates are based on unit costing and do not take into account specific site analysis or impending issues such as right of way acquisition, utility constraints and other challenges that may impact the cost for any specific project.

Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Rounded Estimate
BN1915	Huntley Rd	Worthington Galena to E Dublin Granville Rd	Barrier-separated bike lane	1.470	\$203,000
BN1901	Caren Ave	Rieber St to High St	Bicycle boulevard	0.590	\$22,000
BN1903	E New England Ave	W Dublin Granville Rd to High St	Bicycle boulevard	0.803	\$30,000
BN1904	E North St	Evening St to Proprietors Rd	Bicycle boulevard	1.023	\$39,000
BN1905	E South St	Evening St to Morning St	Bicycle boulevard	0.434	\$17,000
BN1906	Park Blvd	High St to Indianola Ave	Bicycle boulevard	0.902	\$34,000
BN1908	Evening St	Highgate Ave to South City Limit (street terminus)	Bicycle boulevard	0.945	\$36,000
BN1909	Granby St	E North St to Park Blvd	Bicycle boulevard	0.866	\$33,000
BN1913	Masefield St	North of Lambourne Ave (Terminus) to Evening St	Bicycle boulevard	1.015	\$38,000
BN1914	Highland Ave	High St to Worthington Galena Rd	Bicycle boulevard	0.707	\$27,000
BN1916	Indianola Ave	Park Overlook Dr to South City Limit	Bicycle boulevard	0.471	\$18,000
BN1920	Rieber St	W Wilson Bridge Rd to Whitney Ave	Bicycle boulevard	0.483	\$18,000
BN1926	Whitney Ave	West Terminus to Rieber St	Bicycle boulevard	0.282	\$11,000
BN1930	Evening St	Longfellow Ave to Highgate Ave	Bicycle boulevard	0.209	\$8,000

COSTINGS

Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Rounded Estimate
BN1931	Hayhurst St	Caren Ave to Larrimer Ave	Bicycle boulevard	0.414	\$16,000
BN1932	Longfellow Ave	Evening St to Larrimer Ave	Bicycle boulevard	0.223	\$9,000
BN1934	W Dublin-Granville Rd (Service drive)	Olentangy River Trail to Evening St	Bicycle boulevard	0.392	\$15,000
BN1919	Proprietors Rd	Schrock Rd to E Dublin Granville Rd	Bike lane	0.870	\$74,000
BN1921-2B	Schrock Rd	Worthington Galena Rd to Proprietors Rd	Buffered bike lane	0.287	\$137,000
BN1921-3B	Schrock Rd	Proprietors Rd to East City Limit	Buffered bike lane	0.378	\$53,000
BN1925-1B	W Wilson Bridge Rd	West City Limit to Rieber St	Buffered bike lane	0.734	\$349,000
BN1927-1B	Worthington Galena Rd	High St to Schrock Rd	Buffered bike lane	0.591	\$281,000
BN1927-3B	Worthington Galena Rd	Highland Ave to North City Limit	Buffered bike lane	0.859	\$119,000
BN1902	E Dublin-Granville Rd	High St to East City Limit	Multi-use path	0.806	\$299,000
BN1907	E Wilson Bridge Rd	High St to Worthington Galena Rd	Multi-use path	1.135	\$241,000
BN1910	High St	Worthington Galena Rd to South St	Multi-use path	0.804	\$299,000
BN1911	N High St	North City Limit to Worthington Galena Rd	Multi-use path	1.005	\$373,000
BN1912	N High St	South St to South City Limit	Multi-use path	0.692	\$257,000
BN1917	Linworth Rd	Snouffer Rd to W Dublin Granville Rd	Multi-use path	0.944	\$201,000
BN1918	Linworth Rd	W Dublin Granville Rd to South City Limit	Multi-use path	0.534	\$114,000
BN1922	Snouffer Rd	West City Limit to Linworth Rd	Multi-use path	0.506	\$108,000

COSTINGS

Project ID	Location	Project Extent	Recommendation	Project Length (mi)	Rounded Estimate
BN1923	W Dublin-Granville Rd	West City Limit to E ramp SR 315	Multi-use path	0.913	\$194,000
BN1924	W Dublin-Granville Rd	E ramp SR 315 to High St	Multi-use path	0.903	\$335,000
BN1925-1A	W Wilson Bridge Rd	Rieber St to High St	Multi-use path	0.555	\$118,000
BN1927-2B	Worthington Galena Rd	Schrock Rd to Highland Ave	Multi-use path	0.324	\$69,000
GAP01	Evening Street Gap	Evening St Connection to Pioneer Ct (Riverlea)	Planning study	0.047	\$35,000
GAP02	Northbrook neighborhood to Riverlea	Northbrook neighborhood to Riverlea	Planning study	0.049	\$35,000
BN1928	Trail Connection NE	Worthington Galena Rd to Intersection Schrock Rd/ Proprietors Rd	Trail	0.256	\$136,000
BN1929	Trail Connection Indianola connector	Dublin Granville Rd at East City Limit to North Terminus of Indianola Ave	Trail	0.382	\$203,000

Above: Table #9. Costings

Recommendation	Project Length (mi)	Rounded Estimate
Barrier-separated bike lanes	1.5	\$203,000
Bicycle boulevards	9.8	\$371,000
Bike lanes	0.9	\$74,000
Buffered bike lanes	2.8	\$939,000
Multi-use paths	9.1	\$2,608,000
Planning studies	0.1	\$70,000
Trails	0.6	\$339,000
	Length (MI)	Round Estimate
Total	24.8	\$4,604,000

CHAPTER 4. IMPLEMENTATION TOOLBOX





MOVING FORWARD

The City desires a Bike and Pedestrian Master Plan that assists the community in endorsing projects, identifying treatment types, leveraging complementary initiatives, securing funding and ensuring strategic investment in active transportation infrastructure over time. In this way, Worthington will continually advance an active community environment.

This section identifies four project types that have emerged and offers a toolbox of treatment options to consider. The four project types are as follows:

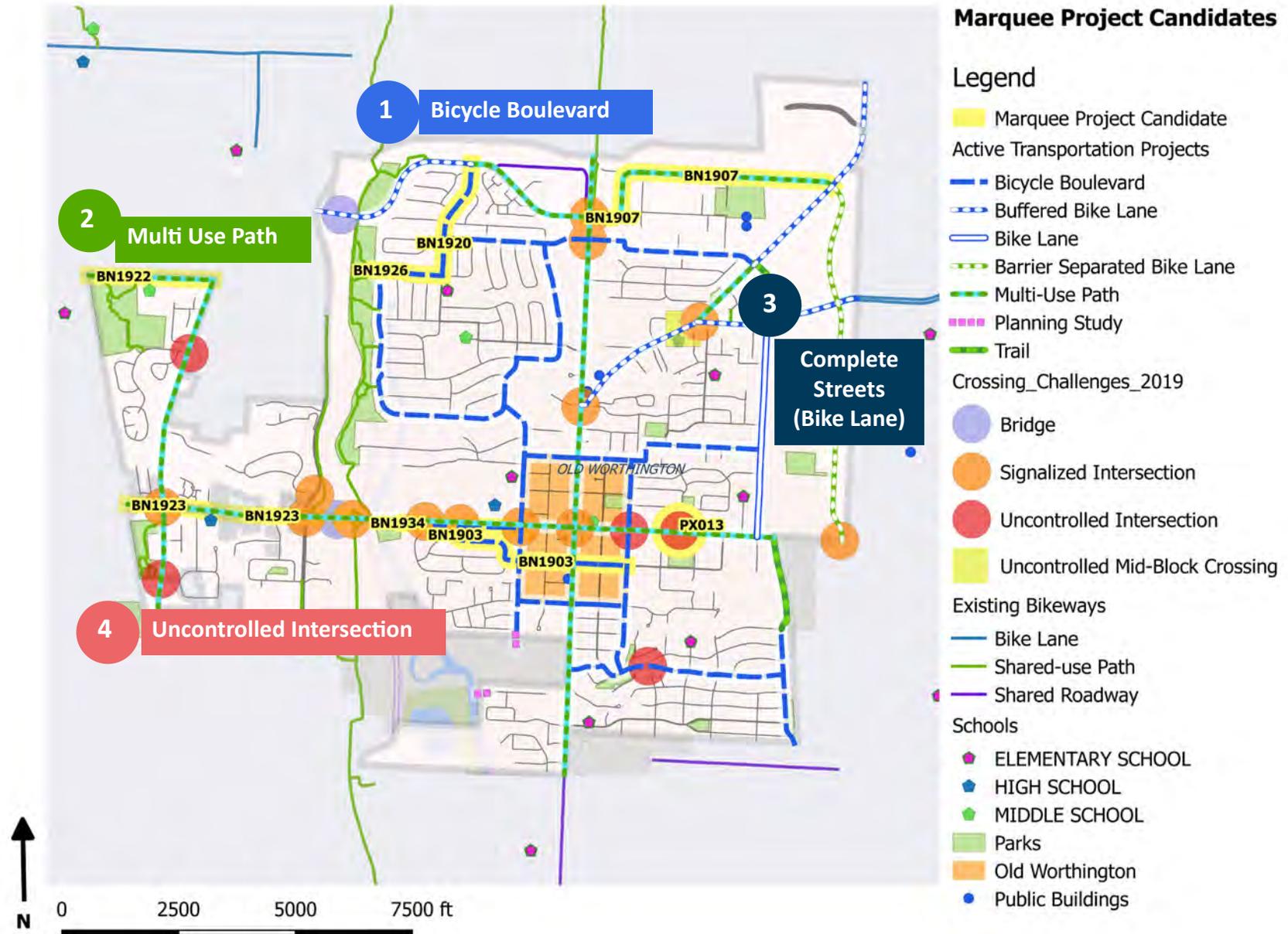
1. Bicycle Boulevards
2. Multi-Use Paths
3. Complete Streets (Bike Lanes)
4. Uncontrolled Crossings

While every project is context-specific, this Implementation Toolbox includes treatments and features to consider when advancing initiatives.

The recommendations in this plan have been developed based on the new street typologies developed as part of the city's Complete Streets Toolkit. The Complete Streets Toolkit (Appendix D) provides a number of key resources and guidance for project implementation. The following pages highlight specific examples of facility types recommended by this Plan. These are intended to supplement the Complete Streets toolkit with specific examples of what Worthington-appropriate facilities might look like when constructed.



MARQUEE PROJECT CANDIDATES



1. BICYCLE BOULEVARDS

Bicycle boulevards, or neighborhood greenways, are slow-speed, low-volume streets that are shared by people driving and bicycling. It includes improvements that calm traffic and give people bicycling priority.

A target speed of 20 MPH is achieved through the use of traffic calming tools such as mini-circles, raised tables, short medians and chicanes. Bicycle Boulevards provide direct access to destinations and are easy to find and follow through the use of wayfinding treatments with pavement markings and signage.

Worthington has several marquee opportunities for bicycle boulevards to better connect people to parks, schools, and downtown, these include:

- Whitney Ave from West Terminus to Rieber St (Project ID: BN1926)
- Rieber St from W. Wilson Bridge Rd to Whitney Ave (Project ID: BN1920)
- E. New England Ave from W. Dublin Granville Rd to High St (Project ID: BN1903)
- Service Drive from Olentangy River Trail to Evening St (Project ID: BN1934)

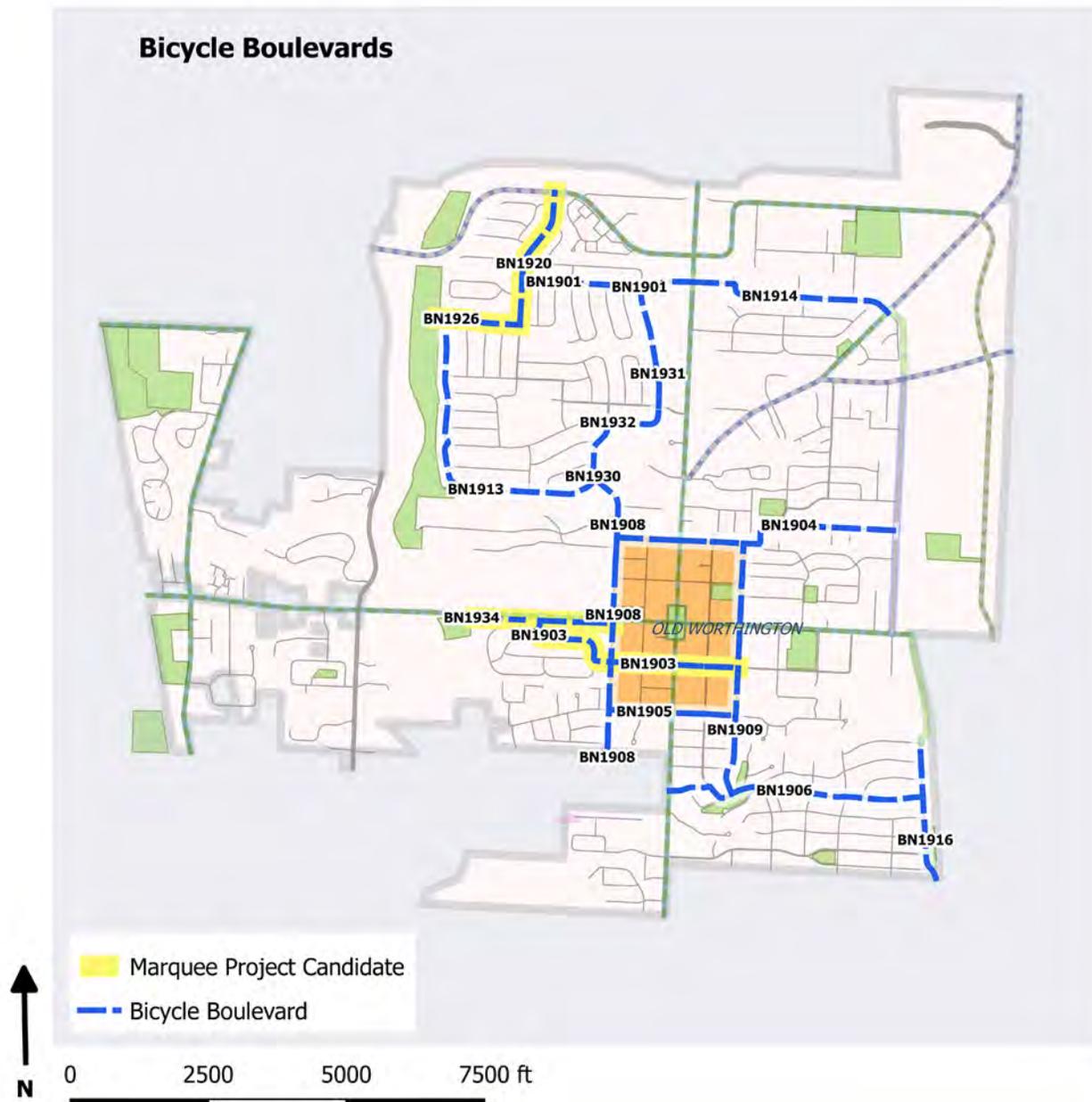
The tools presented in this section not only benefit people on bikes, but also help create and maintain quiet streets that benefit residents and improve street safety for all users.

The map on the following page presents the bicycle boulevard opportunities for Worthington.

Image Right: Speed kills. A target speed of 20MPH in residential areas should be planned, designed and enforced.

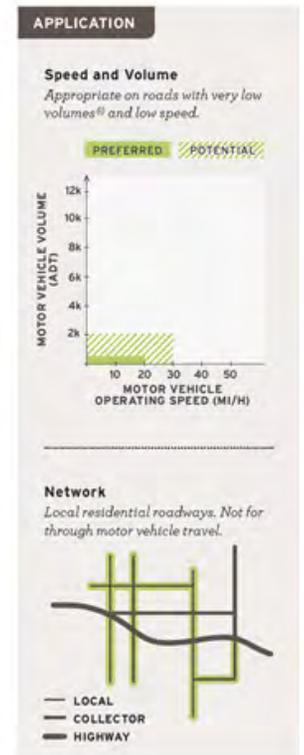
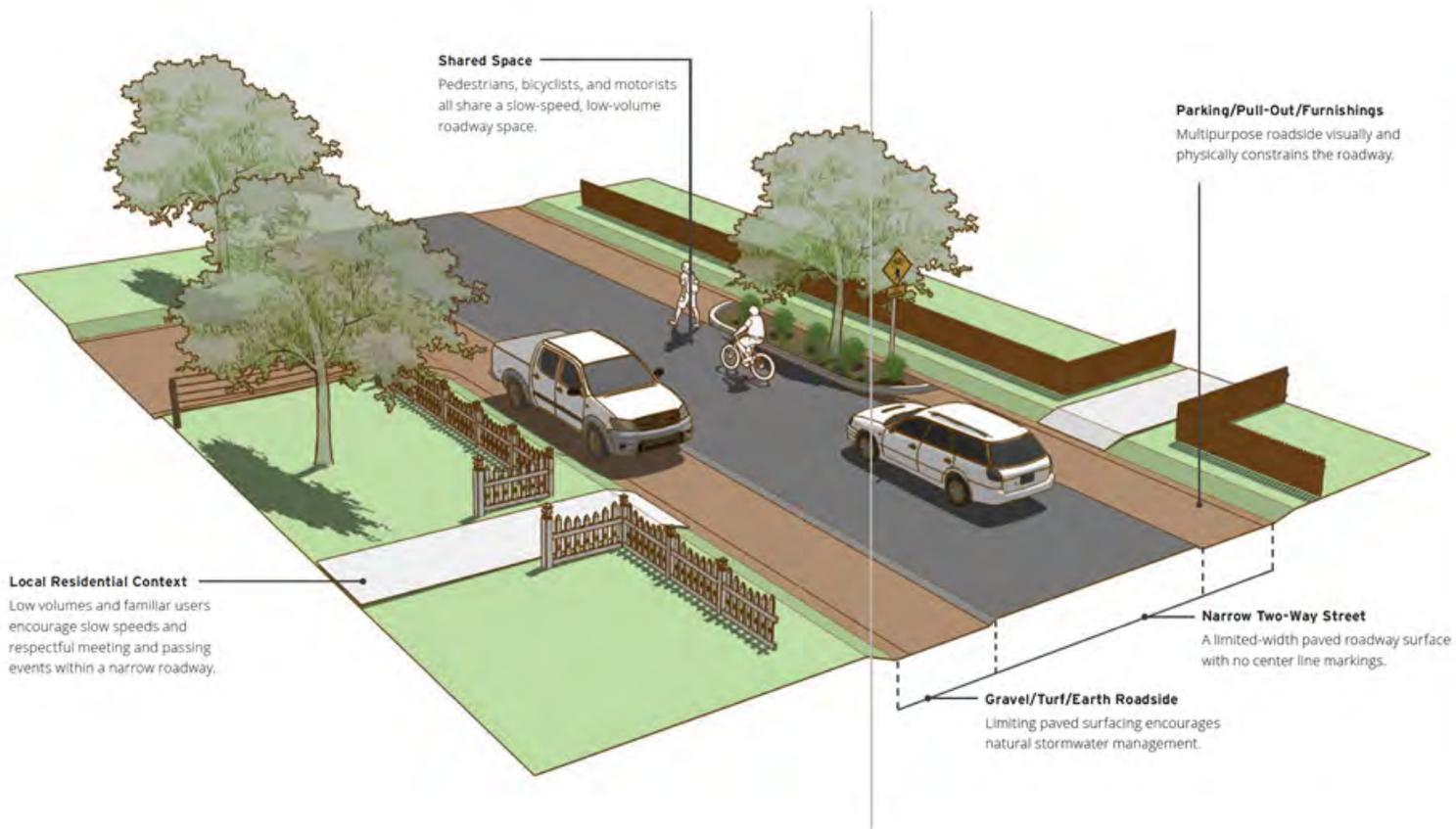


MAP #17. BICYCLE BOULEVARDS



BICYCLE BOULEVARDS AS SHARED STREETS

As implementation of Bicycle Boulevards becomes more common here in the United States, the practical applications for these facilities are expanding. The *Small Town and Rural Multimodal Networks Design Guide (FHWA 2016)* identifies numerous context applications for advisory shoulders along low-volume, low-speed streets to accommodate bicycles and pedestrians within the roadway where sidewalks are lacking or infeasible.



BICYCLE BOULEVARDS AS SHARED STREETS



Image Above: Courtesy of Small Town and Rural Multimodal Design Guide (FHWA 2016)

NEW ENGLAND AVENUE

EXISTING CONDITIONS



BETTER MANAGE TRAFFIC AND SPEEDS: Speeding remains an issue on New England Avenue due to the long and straight street that lacks vertical height and a sense of enclosure. The lack of visual cues creates a “shot-gun” effect, inducing motorists to speed. To control speeds and manage traffic while prioritizing the connection of Olentangy River Trail to downtown, Worthington envisions a bicycle boulevard from the trail along Service Drive, Evening Street and New England Avenue, with better managed intersections by applying new traffic calming tools.

SPEED MANAGEMENT TOOL: MINI-CIRCLE

TOOLS FOR CHANGE



BETTER MANAGE TRAFFIC AND SPEEDS: Mini-circles or neighborhood traffic circles are one of the most popular and effective tools for calming traffic in neighborhoods. Seattle has 1,200 mini-circles, which have led to a reduction in intersection crashes by 90%. They are the best neighborhood safety feature of any treatment type. These inexpensive features do not interrupt drainage, and provide approximately 15 feet of clearance from the corner to the widest point on the circle on all three or four legs. Mini-circles bring speeds down to levels where motorists are more

courteous to pedestrians and bicyclists and they allow all types of turns, including U-turns, which can assist with school area traffic management. Crosswalks and shared lane markings (sharrows) can be marked to further clarify where pedestrians should cross and that bicyclists have priority. A common engineering mistake is to put in four way stops around a mini-circle rather than yield signs.

SPEED MANAGEMENT TOOL: CREATING PINCHPOINTS

TOOLS FOR CHANGE



SHORT MEDIUM: This creates a pinchpoint at the center of the roadway, slowing motorists. Paired with a mid-block crossing location, short medians can reduce pedestrian crossing distances and improve the yielding behavior of motorists. The raised area provides space for trees, art, and other features that help to further slow speeds and beautify the street.

CHICANE-EFFECT: Offset curb extensions on residential streets can create a chicane effect that slows traffic. As pictured, the curb extensions can be designed with a 1-2 foot gap from the curb to avoid costly drainage impacts.

Worthington can achieve a reduction—20MPH is plenty— in motorists speeds by applying a variety of traffic calming techniques along the designated bicycle boulevards, near schools, and near other key destinations where people walking and bicycling should be a priority. Consider the following tools to encourage motorists to drive at target speed:

SHORT MEDIUM: Short medians bring down speeds where people should be expected. Short medians are placed away from intersections, but they can be located near driveways. These inexpensive features do not interrupt drainage; they bring speeds down to levels where motorists are more courteous to pedestrians; and they allow U-turns, which can assist with area traffic management. Short medians also serve as gateways, announcing arrival at an important location, such as a school. They work well in snow cities, as well as temperate climates.

INTERSECTION CHICANE: An intersection chicane includes curb extensions on one side of the intersection and a median on the opposite side. This combination of treatments brings the motorist toward the center, then brings them back toward the side, creating a deflection path brings speeds down to the desired level. All raised areas become gardens for the neighborhood. Both sides of the intersection are narrowed, minimizing crossing distances and time. Intersection chicanes can be used on streets with volumes as high as 12,000 daily trips. Emergency responders and transit providers generally prefer chicanes to more intrusive four-way stops.

DIVERTER: A traffic diverter breaks the street grid while maintaining access and permeability for pedestrians and bicyclists. Diverters are commonly used with bicycle boulevards to reinforce the bicycle and pedestrian priority of the street. In many ways, the trail sections along Service Drive act as a traffic diverter.

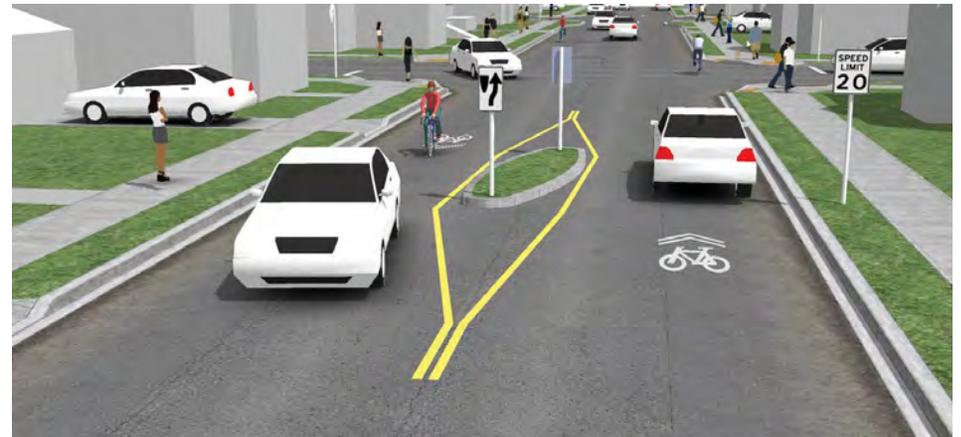


Image Top: Short median graphic by NACTO;

Image Bottom: A large vehicle being deflected through a neighborhood intersection chicane (Santa Barbara, CA)

CHICANE: Chicanes work well on residential or low volume downtown streets, slowing motorists speeds. Chicanes are offset curb extensions that can be designed using a 45 degree return angle or a more gradual taper and transition, resulting in an S-shaped roadway. Chicanes increase the amount of space available to green the street or activate it using benches, bicycle parking, and other amenities.

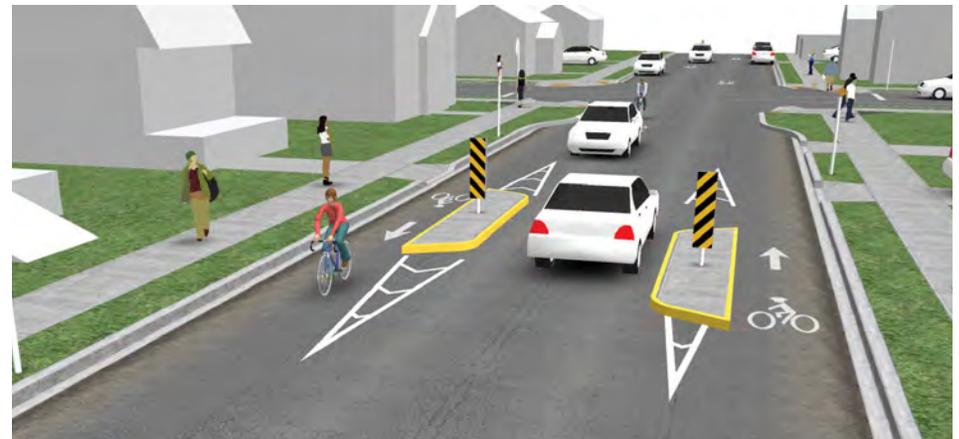
CHOKERS OR PINCHPOINTS: Chokers or pinchpoints create a traffic calming effect by restricting motorists from operating at high speeds on local streets. Based on the design, chokers can expand the sidewalk realm for pedestrians, become a place to plant street trees to further narrow the overall profile of the street, a space for bicycle parking, or can act as a channelized island and provide a buffered or separated section for a person biking.

LANE SHIFT: A lane shift horizontally deflects a vehicle and may be designed with striping, curb extensions, or on-street parking. It is a form of a chicane and when combined with lane narrowing can create a pinchpoint where an oncoming motorist has to yield to the person driving through.

Below Left: A lane shift designed with curb extensions horizontally deflects a motorist and narrows the roadway creating a pinchpoint (Brighton, MI);
Below Right: The combination of curb extensions and a short median creates another pinchpoint design (Columbus, OH);
Next Page: Short median with crossing (Saugutuck, MI)



Top Image: Chicanes are used to slow speeds near a park (Boise, ID);
Middle Image: Choker or pinchpoint graphic by NACTO;



TOOLS FOR CHANGE



SPEED MANAGEMENT TOOL: PAVEMENT MARKINGS

TOOLS FOR CHANGE



Note: Advisory bike lanes or “dashed bicycle lanes” are a newer treatment type in the United States. In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the MUTCD.

TWO-WAY TRAVEL LANES: Streets with an advisory bike lanes accommodate low to moderate volumes of two-way motor vehicle traffic and provide a prioritized space for people biking without having to widen the paved surface (as space permits). The center two-way travel lane width is 10-18 feet, with the preferred width of 13.5-16 feet. In general, the centerline is not marked. Where curves, hill crests, approaches to intersections, or bridges are present, a short section may be marked with center line pavement markings. When two motorists meet, motorists may need to encroach into the advisory bike lane space at which point, the motorist must yield to bicyclists (or pedestrians) before passing.

ADVISORY BIKE LANES: The advisory bike lane or dashed bicycle lanes, marked with a dashed white lane line, is a visually distinct area. Consider using contrasting paving materials between the advisory bike lane and center travel lane to further differentiate the street space. The preferred width of an advisory bike lane is 6 feet. The absolute minimum width is 4 feet when no curb and gutter is present. Advisory bike lanes clarify positioning and yield priority on roads that are too narrow to provide exclusive bicycle travel space.

SPEED MANAGEMENT TOOL: PAINTED INTERSECTIONS

TOOLS FOR CHANGE



*Bicycle Boulevard, Portland, OR
Photo By: Samantha Thomas*

SHARROWS OR SHARED LANE MARKINGS: For lower speed streets, a sharrow or “shared lane marking” - usually painted - is placed in the center of a travel lane to alert motorists and bicyclists alike to the shared use of the lane. Sharrows reinforce the legitimacy of bicycle traffic on the street, encourage bicyclists to position themselves in the lane, away from parked cars where they are at risk of being doored, and provide a wayfinding element along bike routes or bicycle boulevards. Sharrows work on low volume, low speed streets and should not be considered as a substitute for bike lanes, cycle tracks, or other separation treatments. Markings should be placed in the center of the travel lane.

STREET PAINTINGS: Street paintings are creative placemaking and community-building activities for residential intersections and mid-block locations on residential streets. Throughout Portland, Oregon, and a growing number of cities, neighborhoods are designing, implementing, and maintaining street paintings to further their ownership of place.

2. MULTI-USE PATHS & TRAILS

A multi-use, or shared-use, path is designed both for transportation and recreational purposes and are used by bicyclists, pedestrians, and other non-motorized users. They typically are separated from motorized traffic by an open space or barrier within the street or other independent right-of-way, such as utility corridor, abandoned railroad, and park.

The desirable paved width of a shared-use path, excluding the shoulders on either side, is 12 feet. The minimum paved width is 10 feet. A context sensitive approach should be taken to ensure the path design addresses driveways, streets, and intersections with care. Signage and wayfinding are necessary components due to the mix of users and speeds of path users.

Within Worthington the following streets were identified as multi-use path marquee projects:

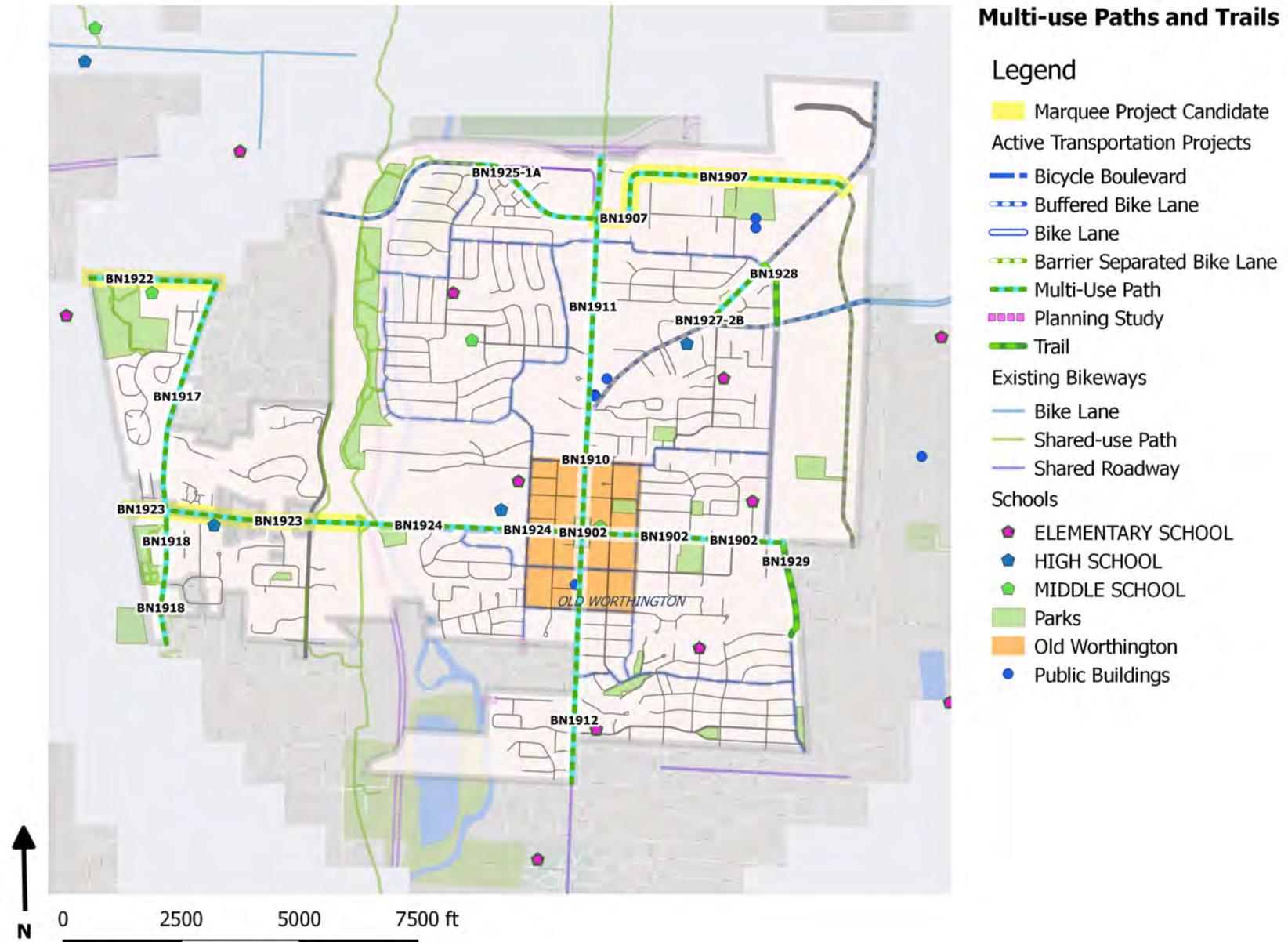
- Snouffer Rd from West City Limit to Linworth Rd (Project ID: BN1922)
- W. Dublin-Granville Rd from West City Limit to E. ramp of SR 315 (Project ID: BN1923)
- E. Wilson Bridge Rd from High St to Worthington Galena Rd (Project ID: BN1907)

The map, at right, presents multi-use path and trail opportunities for Worthington.

Image Right: The Midtown Greenway a multi-use path in Minneapolis, MN, Photo courtesy The Greenway Guy



MAP #18. MULTI-USE PATHS AND TRAILS



TOOLS FOR CHANGE: MULTI-USE PATHS & TRAILS

MULTI-USE PATH: An off-street shared-use trail for bicyclists and pedestrians connects two or more points of interest. It is a paved or natural surface that is fully separated from motor vehicles. A shared-use path is 12-feet wide for people walking in both directions. Painted stripes and other wayfinding indicate type of and direction of travel.

LEARN FROM INDIANAPOLIS CULTURAL TRAIL: The Cultural Trail is an eight mile trail that runs through the heart of downtown Indianapolis, connecting some of city's most popular cultural destinations and neighborhoods. In many sections, travel and/or parking lanes were converted to trail space. The trail features ample room for people walking, biking, scooting, and using wheel chairs or pushing strollers. Most of the time, users are in separate spaces delineated through the use of pavement texture, green landscaping (including bioswales) and other public space amenities such as art and benches. Strong wayfinding, trail signage, and high visibility crossings and intersection treatments reinforce the shared environment.



Top Image and Opposite Page: Trail signage and crossing treatments along the Cultural Trail, Indianapolis, IN (Photos: Rundell Ernstberger Associates, LLC) ;

Bottom Image: People enjoying the Cultural Trail. Photo by Max Grinnell.



TOOLS FOR CHANGE



3. COMPLETE STREETS

In general, Worthington can use this Plan to support the implementation of the new Complete Streets policy - ensuring all street users and people of all ages and abilities have safe, comfortable, and convenient access. Over time, there are opportunities to right-size streets to make walking, biking and using transit more comfortable by putting streets on a 'road diet.' A road diet involves narrowing or eliminating travel lanes to improve safety for pedestrians, bicyclists and motorists. In general, road diets consist of the conversion of 4-lane roads to 3-or 2- lane roads or 3-lane roads to two-lane roads, but even overly wide 2-lane roads can be right-sized. The additional space can be reallocated for bicycle

lanes, buffered bike lanes, cycle tracks, sidewalks, planter strips for street trees, a bus stop, a separated multi-use trail, and/or on-street parking - thereby completing the street. While there are numerous opportunities, an early win is to right-size Proprietors Rd from Schrock Rd to E. Dublin-Granville Rd. Proprietors Rd. has 30 feet of right-of-way between curbs. It is a strong candidate for a Complete Street project. Using just paint, the street can be re-striped to include two 10-foot travel lanes and two 5-foot bike lanes. Refer to the MORPC Complete Streets Toolkit and the new street design matrix to match the street typology with appropriate configurations.



PROPRIETORS RD BETWEEN E. DUBLIN-GRANVILLE AND SCHROCK RD

TOOLS FOR CHANGE



BUILDINGS ARE ORIENTED TO THE STREET: Promote building and site designs that face and are built-to the street, enhancing the pedestrian and overall street experience with windows, entrances, pathways, porches, and other features that provide natural surveillance or “eyes on the street.”

BIKE LANES: One of the most cost effective ways to reduce speed while improving overall vehicular flow and creating improved conditions for bicycling and walking, is the conversion of overly wide lanes to bike lanes. Bike lanes should be at least 5 feet wide (6 feet is ideal) and seamless. Thick striping (8-10 inch edge stripes) and regular green markings at driveways, intersections and other points of conflict remind drivers to anticipate bicyclists. Bike lanes have an added benefit to pedestrians by providing a buffer to moving traffic.

CENTERLINE REMOVAL: On streets that are overly-wide or streets where a centerline exists and traffic volumes are under 6,000 vehicles a day, consider removing the yellow centerline and instead paint bold edge stripes (8-10 inches) to mark the edge of the travel lane.

10-FOOT TRAVEL LANES: Travel lane widths of 10 feet are appropriate in urban areas where speeds should be low and have a positive impact on a street’s safety without impacting operations. Narrower streets have other benefits, including reduced crossing distances, shorter signal cycles, less stormwater, and less construction material to build and maintain.

COMPLETE STREETS: A context sensitive approach to street design, ensuring all street users and people of all ages and abilities have safe, comfortable, and convenient access



BUILDINGS WATCH OVER THE STREET AND PROVIDE OPPORTUNITIES TO FOSTER STREET/SIDEWALK LIFE

STREET TREES PROVIDE SHADE, GREENING AND COOLING THE STREET

INTERSECTION TREATMENTS HELP MANAGE SPEEDS AND CREATE GATEWAYS

ON-STREET PARKING ADDS AN ADDITIONAL BUFFER TO SIDEWALK

BIKE LANES ENCOURAGE ACTIVE MODES OF TRAVEL

MEDIANS VARY IN TYPE, COLOR, TEXTURE, AND SIZE



Oak Park, Illinois, has created a main street which accommodates motor vehicles yet encourages active transportation for all ages. The proper placement of furniture and amenities, along with street trees and landscaping, beautifies the environment and creates a place that

residents are proud of and visitors want to return to. The desire to ensure historic preservation alongside development makes Oak Park a good example for Worthington to learn from.

TOOLS FOR CHANGE: BUFFERED BIKE LANES

Buffered bike lanes add a 2.5-3 foot (typically) painted buffer to a bike lane, creating a little more separation between people biking and driving. The painted buffer is marked with two solid white lines with diagonal hatching in between. On-street parking, planters, posts or bollards, or other vertical material can also act as an additional buffer to a bike lane. Adding more separation between people biking and driving makes bicycling more comfortable for a wider cross-section of people, especially

children and older adults who prefer not to ride adjacent to moving traffic. Colored pavement may be used for increased visibility within conflict areas (i.e. major driveways) or across intersections. Streets that have higher travel speeds and volumes, and where there are extra lanes or extra lane width, a buffered bike lane or fully separated or raised cycle track are tools to consider.



STRIPED BUFFER

Gainesville, FL



PARKED CARS

Cambridge, MA



PLANTERS

Portland, OR



**RAISED BIKEWAY
OR CYCLE TRACK**

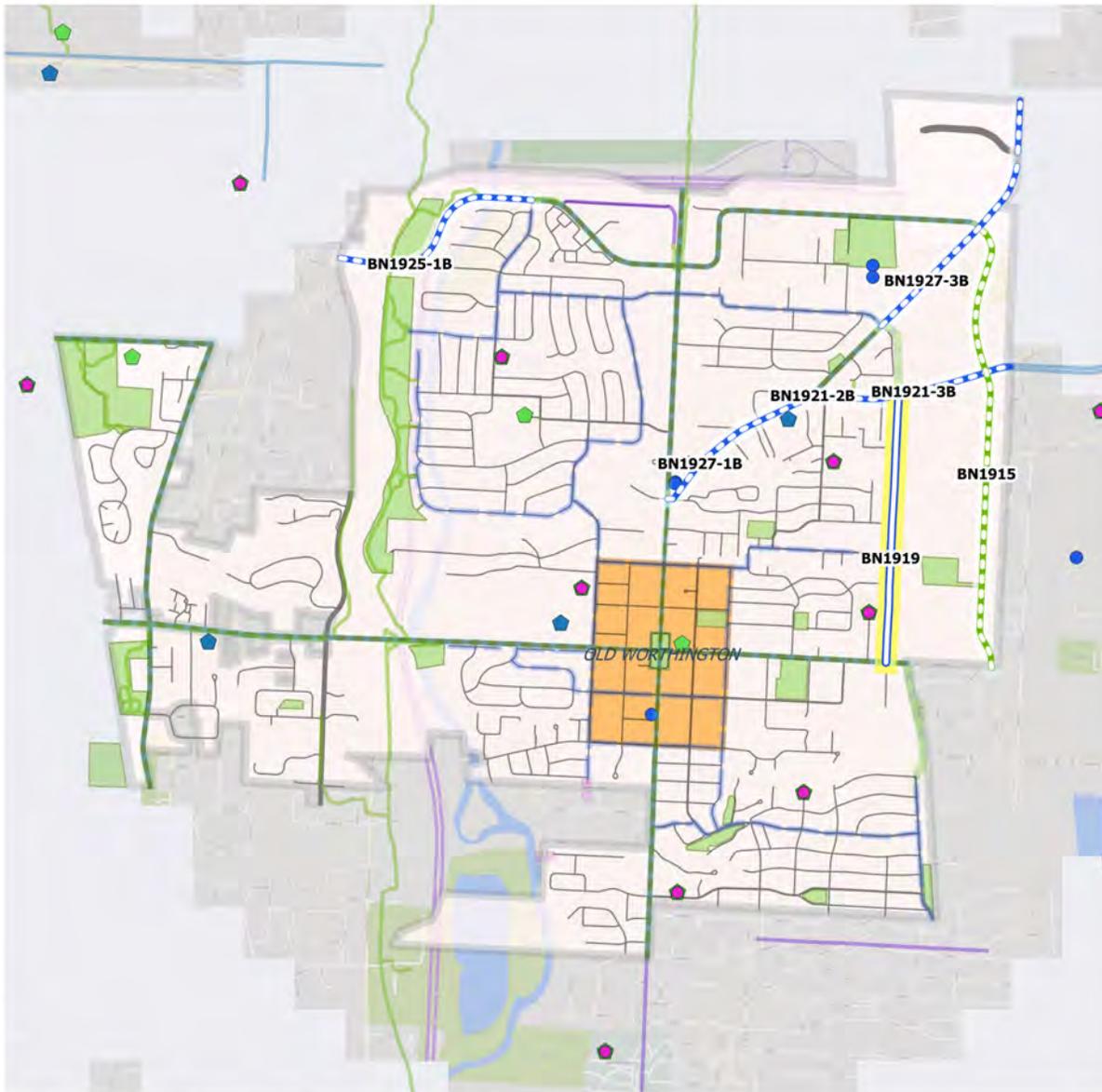
Missoula, MT

MAP #19. ON-STREET BIKE LANES

On-Street Bike Lanes

Legend

- Marquee Project Candidate
- On-Street Bike Projects
 - Buffered Bike Lane
 - Bike Lane
 - Barrier Separated Bike Lane
- Existing Bikeways
 - Bike Lane
 - Shared-use Path
 - Shared Roadway
- Schools
 - ELEMENTARY SCHOOL
 - HIGH SCHOOL
 - MIDDLE SCHOOL
- Parks
- Old Worthington
- Public Buildings



0 2500 5000 7500 ft

4. UNCONTROLLED CROSSINGS

Intersections are a critical component of street design; they are locations where various movements of motorists, pedestrians and bicyclists converge. Well-designed intersections address the mobility and safety needs of all users. Intersections, by design, should reduce conflict between users, by ensuring a high level of visibility, facilitating eye contact and awareness between users, enhancing stopping or yielding compliance, and denoting a clear right-of-way to movement.

Intersections and intersection crossings can be both controlled (i.e. traffic signal, stop signs, roundabouts) or uncontrolled (i.e. no traffic control). Where crosswalks are marked outside of intersections, these are mid-block crossings and also require special attention to ensure that appropriate measures are included to make crossing safe and convenient.

Uncontrolled intersection crossings occur where sidewalks or other designated paths intersect a street at a location with no traffic control, which includes non-intersection or mid-block locations. These locations often correspond to higher pedestrian crash rates due to inadequate crossing treatments and design.

This Plan has identified five key uncontrolled crossing locations:

1. Dublin-Granville Rd at Pingree Dr (Project ID: PX013)
2. Dublin-Granville Rd at Morning St (Project ID: PX020)
3. Linworth Rd at Collins Dr (Project ID: PX017)
4. Linworth Rd at Linworth Park (Project ID: PX007)
5. Worthington-Galena Rd at Worthington Christian High School (Project ID: PX011)

By focusing on these uncontrolled intersections and mid-block crossing locations, Worthington can improve safety for pedestrians and promote a more age-friendly, active-living environment that improves the connections between key community destinations like Linworth Park, East Granville Park, and schools.

1



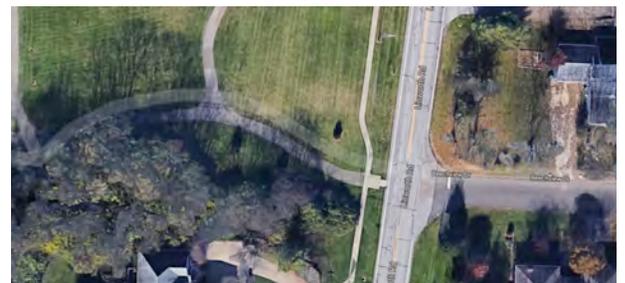
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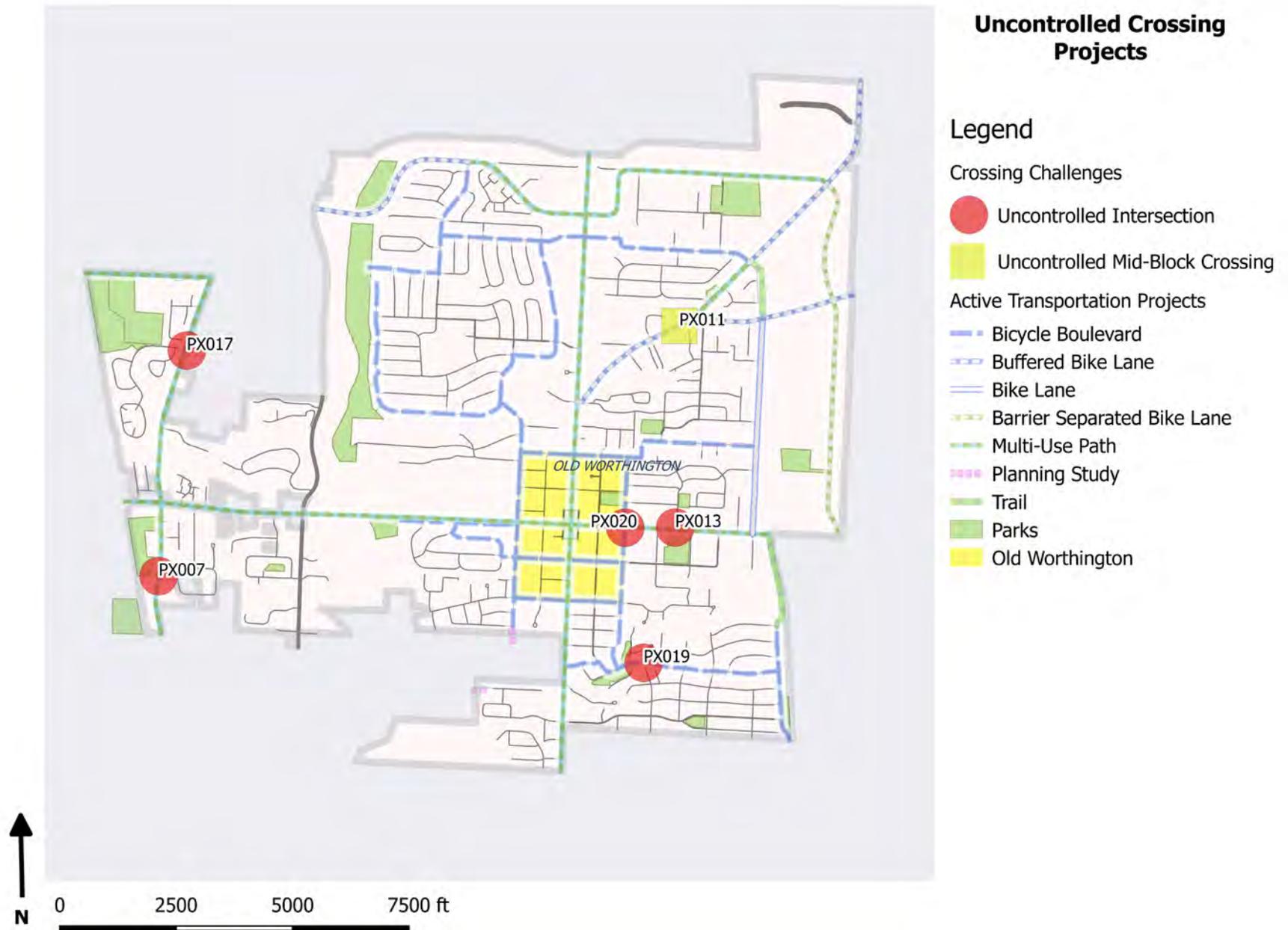
4



5



MAP #20. UNCONTROLLED CROSSING PROJECTS





IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

Identifying appropriate features for uncontrolled crossings has been simplified based on the recent publication of *The Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (FHWA Every Day Counts 2017)*. Table 1 in the guide provides a matrix to identify suitable countermeasures based on existing roadway conditions.

Roadway Configuration	Speed Limit								
	≤30 mph			35 mph			≥40 mph		
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	1 2 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7
3 lanes with raised median*	1 2 3 4 5	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7
3 lanes w/o raised median†	1 2 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7
4+ lanes with raised median‡	1 3 5	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7
4+ lanes w/o raised median‡	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 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,

- 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/>).

Above: Table #10. Application of Pedestrian Crash Countermeasures by Roadway Feature

IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

EXAMPLE #1: PINGREE DR. AT DUBLIN GRANVILLE ROAD (PX013)

Existing conditions:

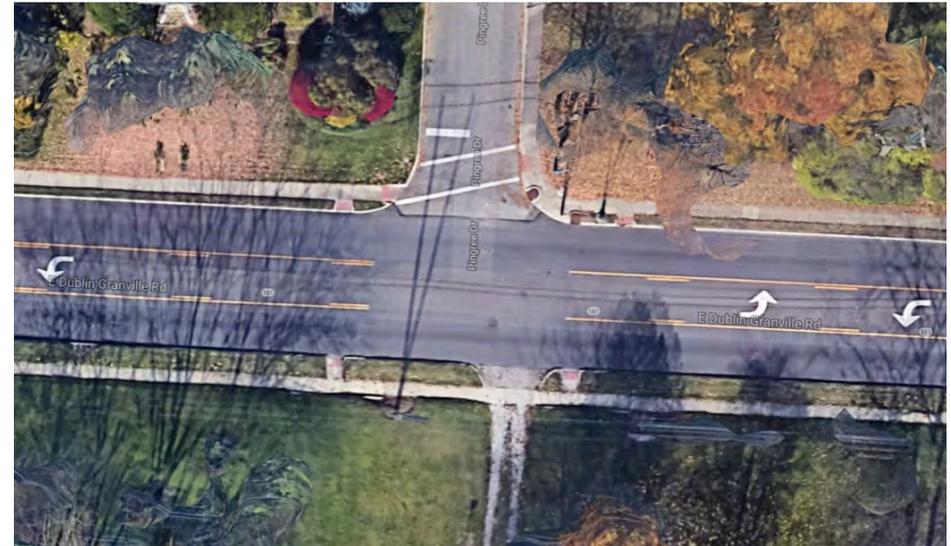
- Three lanes of travel (without raised median)
- Posted Speed: 35 mph
- Average Annual Daily Traffic (AADT): 15,900

Treatments that should always be considered:

- 1 – High Visibility Crosswalk Markings
- 3 – Advance Stop Here for Pedestrian sign and stop bar
- 7 – Pedestrian Hybrid Beacon (also RRFB)¹

Additional candidate treatments:

- 5 – Curb extensions
- 6 – Pedestrian refuge island



¹At the time of the guide publication, the Rectangular Rapid Flash Beacon (RRFB) was not approved due to a regulatory patent issue. The issue was resolved and interim approval given to the RRFB in March 2018. It is anticipated that updates to the guide will include RRFB as an recommended treatment in conditions suitable for Pedestrian Hybrid Beacons based on similar rates of effectiveness.

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Speed Limit																	
	≤30 mph			35 mph			≥40 mph			35 mph			≥40 mph					
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000			Vehicle AADT >15,000			Vehicle AADT >15,000					
2 lanes*	1	2	3	4	1	3	1	3	1	3	4	1	3	1	3	4	1	3
3 lanes with raised median*	1	2	3	4	1	3	1	3	1	3	4	1	3	1	3	4	1	3
3 lanes w/o raised median†	1	2	3	4	1	3	1	3	1	3	4	1	3	1	3	4	1	3
4+ lanes with raised median‡	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3
4+ lanes w/o raised median‡	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3	1	3

*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,

- 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/>).

IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

EXAMPLE #2: DUBLIN-GRANVILLE AT MORNING STREET (PX020)

Existing conditions:

- Three lanes without raised median
- Posted Speed: 35 mph
- Average Annual Daily Traffic (AADT): 17,000

Treatments that should always be considered:

- 1 – High Visibility Crosswalk Markings
- 3 – Advance Stop Here for Pedestrian sign and stop bar
- 7 – Pedestrian Hybrid Beacon (also RRFB)¹

Additional candidate treatments:

- 5 – Curb extensions
- 6 – Pedestrian refuge island

¹At the time of the guide publication, the Rectangular Rapid Flash Beacon (RRFB) was not approved due to a regulatory patent issue. The issue was resolved and interim approval given to the RRFB in March 2018. It is anticipated that updates to the guide will include RRFB as an recommended treatment in conditions suitable for Pedestrian Hybrid Beacons based on similar rates of effectiveness.



Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Speed Limit								
	≤30 mph			35 mph			≥40 mph		
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	1 2 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5
3 lanes with raised median*	1 2 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5
3 lanes w/o raised median [†]	1 2 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5	1 3 4	1 3 5	1 3 5
4+ lanes with raised median [‡]	1 3	1 3 5	1 3 5	1 3	1 3 5	1 3 5	1 3	1 3 5	1 3 5
4+ lanes w/o raised median [‡]	1 3	1 3 5	1 3 5	1 3	1 3 5	1 3 5	1 3	1 3 5	1 3 5

*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,

- 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: Zogger, 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/>).

IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

EXAMPLE #3: LINWORTH RD AT COLLINS DR (PX017)

Existing conditions:

- Two lanes
- Posted Speed: 35 mph
- Average Annual Daily Traffic (AADT): 7,500

Treatments that should always be considered:

- 1 – High Visibility Crosswalk Markings
- 3 – Advance Stop Here for Pedestrian sign and stop bar

Additional candidate treatments:

- 5 – Curb extensions
- 6 – Pedestrian refuge island
- 7 – Pedestrian Hybrid Beacon (also RRFB)¹

¹At the time of the guide publication, the Rectangular Rapid Flash Beacon (RRFB) was not approved due to a regulatory patent issue. The issue was resolved and interim approval given to the RRFB in March 2018. It is anticipated that updates to the guide will include RRFB as an recommended treatment in conditions suitable for Pedestrian Hybrid Beacons based on similar rates of effectiveness.

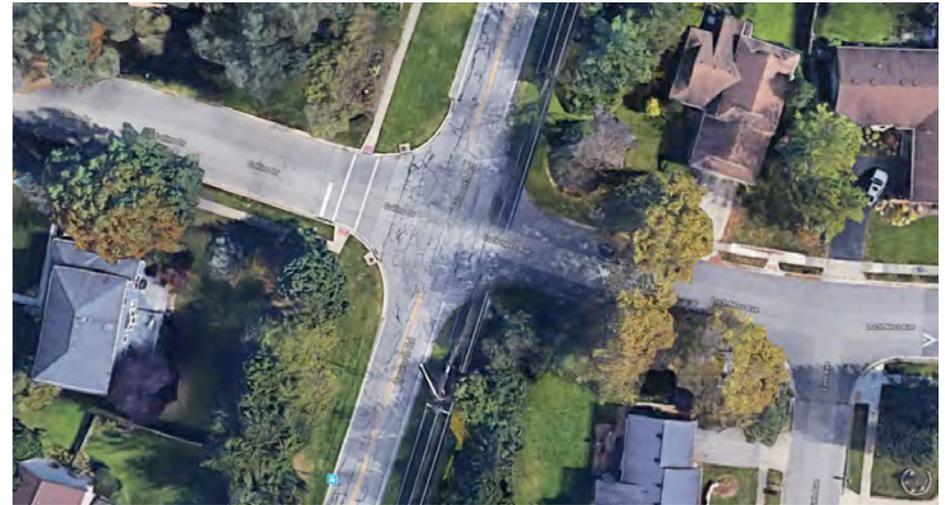


Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Speed Limit									
	≤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*	1 2 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	
3 lanes with raised median*	1 2 3 4 5	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	
3 lanes w/o raised median†	1 2 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	
4+ lanes with raised median‡	1 3 5	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	1 3 5 7	
4+ lanes w/o raised median‡	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	

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

Given the set of conditions in a cell,
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 4 In-Street Pedestrian Crossing sign
 5 Curb extension
 6 Pedestrian refuge island
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IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

EXAMPLE #4: LINWORTH RD AT LINWORTH PARK / BEECHVIEW DRIVE (PX007)

Existing conditions:

- Two lanes
- Posted Speed: 35 mph
- Average Annual Daily Traffic (AADT): 6,000

Treatments that should always be considered:

- 1 – High Visibility Crosswalk Markings
- 3 – Advance Stop Here for Pedestrian sign and stop bar

Additional candidate treatments:

- 5 – Curb extensions
- 6 – Pedestrian refuge island
- 7 – Pedestrian Hybrid Beacon (also RRFB)¹

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Roadway Configuration	Speed Limit									
	≤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*	1 2 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 5 6 7
3 lanes with raised median*	1 2 3 4 5	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 5 7
3 lanes w/o raised median†	1 2 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 4 5 6 7	1 3 5 6 7	1 3 5 6 7	1 3 5 6 7
4+ lanes with raised median‡	1 3 5	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 4 5 7	1 3 5 7	1 3 5 7	1 3 5 7
4+ lanes w/o raised median‡	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 4 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 4 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8	1 3 5 6 7 8

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IDENTIFYING COUNTERMEASURES FOR UNCONTROLLED CROSSINGS

EXAMPLE #5: WORTHINGTON-GALENA RD AT WORTHINGTON CHRISTIAN HIGH SCHOOL (PROJECT ID: PX011)

Existing conditions:

- Two lanes
- Posted Speed: 35 mph
- Average Annual Daily Traffic (AADT): 9,800

Treatments that should always be considered:

- 1 – High Visibility Crosswalk Markings
- 3 – Advance Stop Here for Pedestrian sign and stop bar

Additional candidate treatments:

- 5 – Curb extensions
- 6 – Pedestrian refuge island
- 7 – Pedestrian Hybrid Beacon (also RRFB)¹

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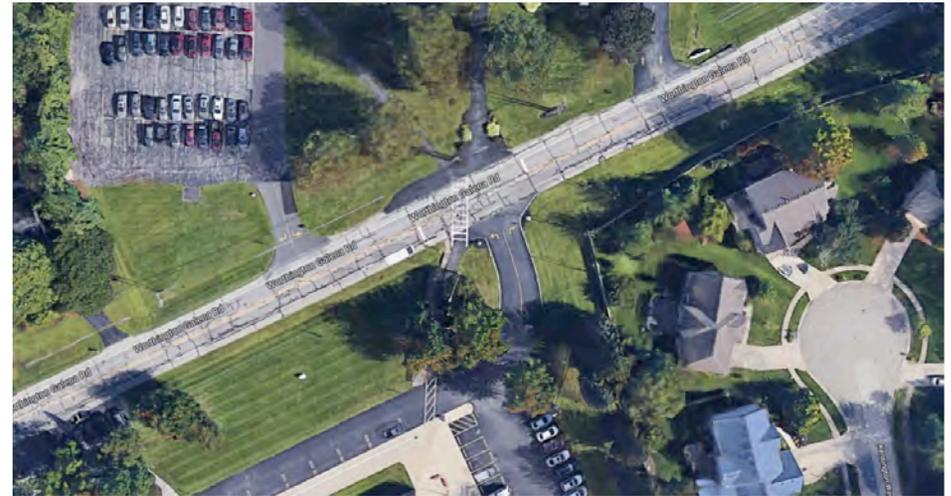


Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Speed Limit								
	≤30 mph			35 mph			≥40 mph		
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	1 2 3 4	1 3	1 3	1 3 4	1 3 4	1 3	1 3 4	1 3 4	1 3 4
3 lanes with raised median*	1 2 3 4	1 3	1 3	1 3 4	1 3 4	1 3	1 3 4	1 3 4	1 3 4
3 lanes w/o raised median [†]	1 2 3 4	1 3	1 3	1 3 4	1 3 4	1 3	1 3 4	1 3 4	1 3 4
4+ lanes with raised median [‡]	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3
4+ lanes w/o raised median [‡]	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3	1 3

*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,

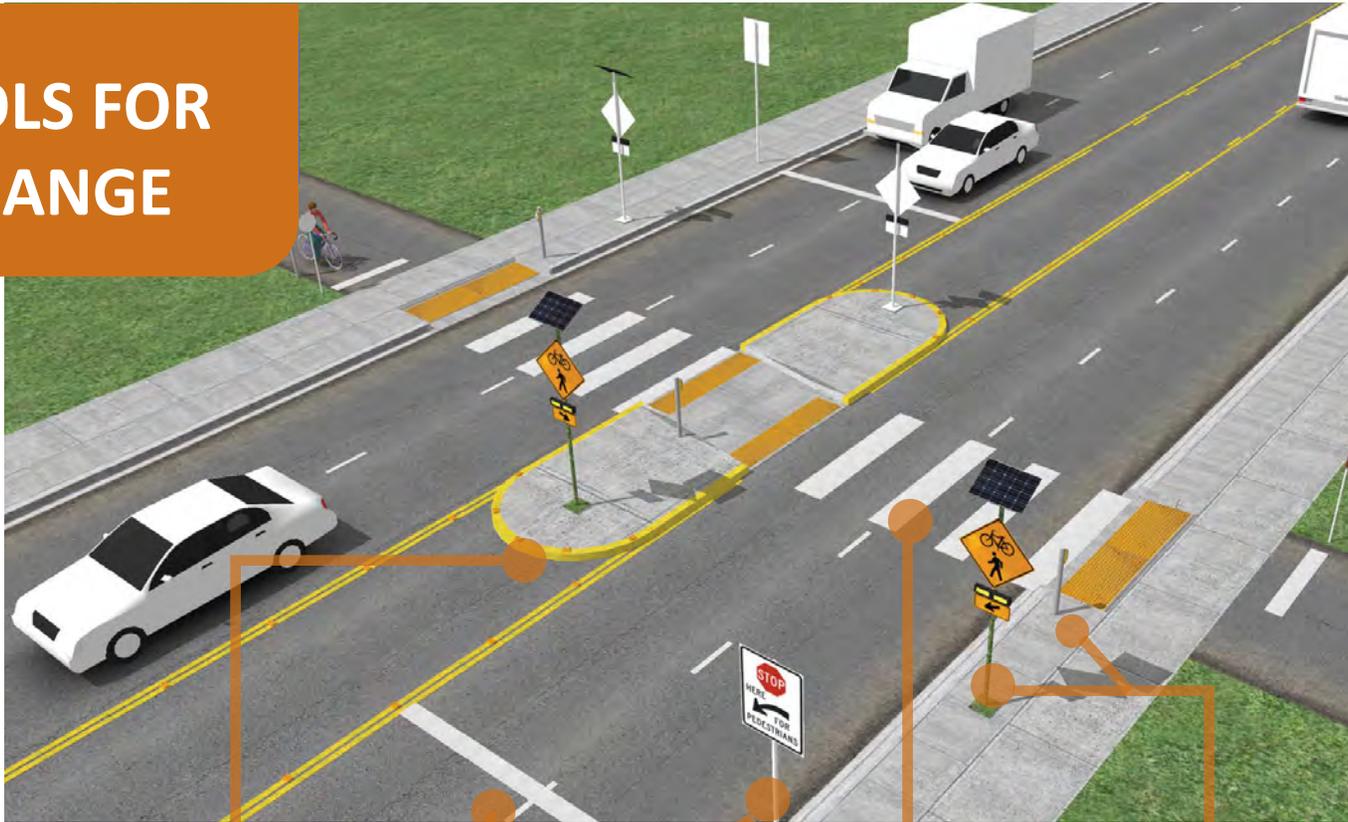
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TOOLS FOR CHANGE



**PEDESTRIAN
CROSSING ISLAND**

**ADVANCED STOP HERE
FOR PEDESTRIANS SIGN
& STOP BAR**

**HIGH VISIBILITY
CROSSWALK
MARKINGS**

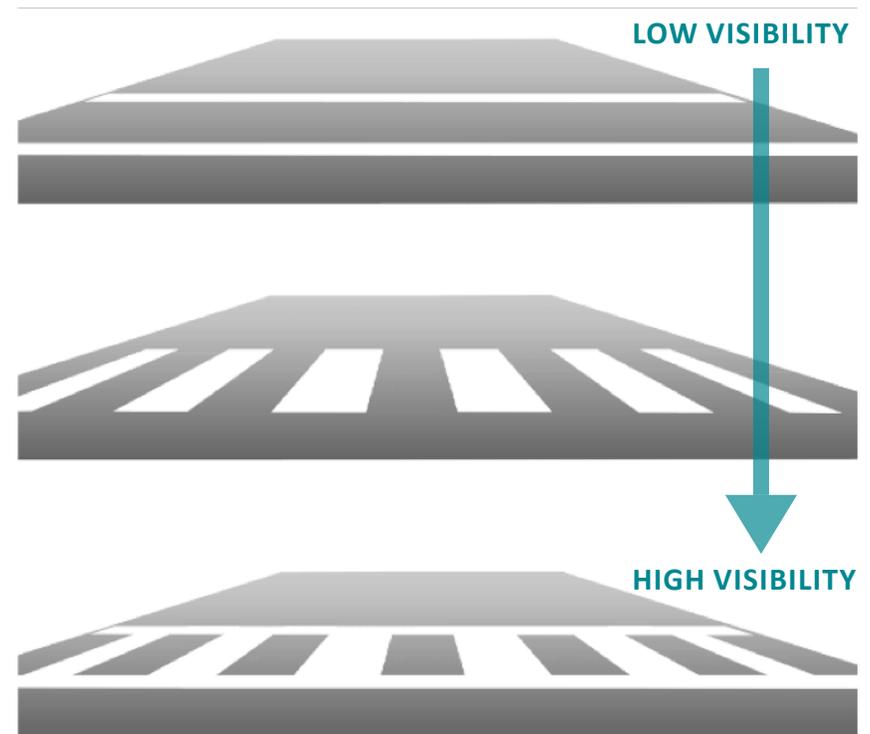
**RECTANGULAR RAPID
FLASH BEACON (RRFB)
ACTIVATED BY PERSON
WALKING OR BIKING**

HIGH VISIBILITY CROSSWALK MARKINGS: Crossings should be well placed and located where there is a strong desire to cross, sight distances are good, and speeds are controlled. The visibility of crosswalks to the driver varies by type. Piano key or ladder-style markings are the most visible. All five marquee crossing locations should include high visibility crosswalk markings on all or appropriate legs of the intersection.

ADVANCED STOP HERE FOR PEDESTRIAN SIGN & STOP BAR: Advance stop here signs and stop bars are placed 30-50 feet in advance of the marked crosswalk. This treatment can be used at any uncontrolled crossing location, but has the highest benefit on streets with four or more lanes or streets with speed limits of 35 mph or greater as it helps improve sightlines and reduce the multiple-threat crash—where a stopped motorist screens a person crossing and the approaching motorist does not see the person crossing and does not have enough stopping time.

PEDESTRIAN HYBRID BEACON (OR HAWK) A pedestrian hybrid beacon, also known as a High-intensity Activated Crosswalk (HAWK). Hybrid beacons are used to improve pedestrian and bicycle crossings of major streets in locations where side-street traffic volumes do not support installation of a conventional traffic signal. Hybrid beacons also can be used at mid-block crossing locations, for example at schools or trails. Hybrid beacons must be actuated by a person walking or biking, at which point the beacon begins flashing yellow, changes to steady yellow, then displays a solid red. During the solid red phase, drivers must stop and remain stopped. Prior to returning to no indication (beacon is dark, off) the beacon displays an alternating flashing red that allows drivers to stop and then proceed if clear, as they would a stop sign.

RECTANGULAR RAPID FLASH BEACONS (RRFB): Rectangular rapid flash beacons use an irregular flash pattern similar to emergency flashers on police vehicles and can be installed on either two-lane or multi-lane streets. These active warning beacons alert drivers to yield where people walking and bicycling have the right-of-way crossing a street.



Hybrid Beacon in Phoenix, AZ
Photo: www.pedbikeimages.org; Mike Cynecki

CURB EXTENSIONS: The length of a corner curb radius, known also as a curb return radius, has a significant effect on the overall operation and safety of an intersection. Smaller turning radii increase pedestrian safety by shortening crossing distances, increasing pedestrian visibility, and decreasing vehicle turning speed, all of which provide a visual cue to drivers that it is a pedestrian-oriented street and people are more likely to be present. Throughout Worthington there are opportunities to shorten the crossing distance at intersections by installing curb extensions, or bulb-outs. Curb extensions inset parking, reduce the crossing distance and exposure time for a person on foot. They also provide neighborhood placemaking and greening opportunities for benches, street trees, and/or rain gardens.



RAISED TABLE CROSSINGS: At key access points to bus stops, schools, parks, and at intersections with local streets or right-only channelized turn-lanes (as pictured on right), raised table crossings increase visibility, yielding behavior, and create a safer pedestrian crossing environment.



PEDESTRIAN CROSSING OR REFUGE ISLAND: Pedestrian crossing or refuge islands are one of the best tools for simplifying the crossing of wide streets. Used with curb extensions, they get pedestrians out beyond parked cars and other visual obstructions. Crossing islands are used on all categories of streets with the highest return on investment when they create more courteous yielding behaviors by motorists. Well designed crossing islands achieve yielding rates above 80-percent. Other tools such as Rapid Flash Beacons or raised table crossings are used when it is necessary to increase yielding behavior.



Images Right: Curb extensions increase the overall visibility and reduce the crossing distance for pedestrians. Painted curb extensions are low-cost and allow the community to test out the treatment in different locations, Austin, TX

TOOLS FOR CHANGE: UNCONTROLLED CROSSINGS



*Refuge Island,
Asheville, NC*



*Refuge Island,
Bellevue, WA*

TOOLS FOR CHANGE: RAIL CROSSINGS

BICYCLE SNEAK: A short section of pathway that angles out to provide a greater, and safer, angle for bicyclists to cross the rail tracks. The angle of crossing should be no less than 45 degrees, either on street or on a separated path. Ideally the angle would be greater than 60 degrees for the highest level for riders. The sneak can be marked, raised or otherwise protected by using a separate trail depending on the level of vehicular traffic on the associated roadway. Associated warning signage and markings should be included ahead of the crossing.

LEARN FROM CAMP CHASE TRAIL: Camp Chase Trail in western Columbus and part of the Central Ohio Greenways improved several rail crossings in the spring of 2019. Previous crossings forced riders to either hop the tracks, walk their bicycles, or risk crossing it. The new multi-use path routes riders at a safer angle, allowing riders to cross perpendicular and decreasing the contact with the rail itself. The pictured crossing also features a concrete bed for the track which performs best compared with asphalt, rubber and wood crossings. This concrete crossing also limits the flange opening between the rail and roadway surface, limiting the chance for it to catch a bicycle wheel.



Top Images: An example of a shared bicycle lane going onto a multi-use path to cross at a safer angle; Diagram of a similar situation to provide greater safety for the rider (Photos: ilovebicycling.com, FHWA) ;

Bottom Image: Recently improved Camp Chase Trail rail crossing (Photo: Friends of the Camp Chase Trail).

FUNDING

The *Worthington Bicycle and Pedestrian Plan* provides a long-term vision for the development of a community-wide cycling and walking network usable by all residents for all trip purposes. The following funding opportunities should be utilized, as possible, leveraging local resources including the City budget to obtain grants at regional, state and federal levels. Collaborating with both public and private entities, in combination with publicly-available dollars, can be critical for larger scale projects. Outlined below is a list of potential funding resources for bike and pedestrian projects and programs:

- *Transportation Alternatives Program (TAP), includes Safe Routes to School (SRTS) Program:* TAP provides funds for projects advancing non-motorized transportation facilities, historic transportation preservation, and environmental mitigation and vegetation management activities. This includes, but is not limited to, safe routes to schools grants. SRTS grants can be used to identify and reduce barriers and hazards to children walking or bicycling to school (70 to 90 percent of funds) or for non-infrastructure encouragement and education programs (10 to 30 percent). Eligible projects must be within two miles of a school and are fully funded with no local match requirement. One infrastructure and/or non-infrastructure application will be accepted, with three projects maximum that can be funded per school district. There is a \$400,000 funding limit for the total infrastructure project application and \$60,000 maximum for non-infrastructure projects. Funds are issued by the Ohio Department of Transportation (ODOT) / Metropolitan Planning Organization (MPO).
- *Safety Program:* Funding supplied for engineering improvements at high-crash and severe-crash locations. Example improvements include: signage, signals, pavement markings and guardrails. These monies can be used in all stages of a project and usually require a minimum of 10% local match. Funds are issued by ODOT.



- *Surface Transportation Block Grant Program*: Offers the most flexible eligibilities among Federal-aid highway programs. Issued by ODOT, the MPO and Franklin County Engineers Association.
- *Congestion Mitigation Air Quality*: This program was implemented to support surface transportation projects and other related efforts that contribute air quality and provide congestion relief. It is issued by the MPO within Environmental Protection Agency designated air quality areas.
- *State Capital Improvement Program*: Eligible projects are for improvements to roads, bridges, culverts, water systems, etc. These grants are available for up to 90% of total project cost on repair projects and 50% for new projects. It is issued by Ohio Public Works Commission (OPWC).
- *Recreational Trails Program*: Issued by the Ohio Department of Natural Resources (ODNR).
- *Clean Ohio Trails Fund*: The funds work to improve outdoor recreation opportunities by funding trails for outdoor pursuits. Projects may include; links to regional or statewide trail systems, natural corridor preservation, or linking commuter access corridors. Issued by ODNR.
- *County and municipal bridge program*: Program provides funds for bridge replacement or major bridge rehabilitation projects. ODOT provides up to 80% of eligible costs with a maximum of \$20m per project. It is issued by Franklin County Engineers Association and ODOT.
- *Section 402 Federal, State and Community Highway Safety Funds*: Funds are awarded to traffic safety projects that will have the largest impacts on reducing crashes and significantly improve traffic safety systems. Funds are issued by Ohio Department of Public Safety.
- *Federal Transit Administration Funds*: Issued by ODOT and the Federal Transit Administration.
- *Community Development Block Grant*: A flexible program that provides communities with resources to address a wide range of unique community development needs. Issued by Housing and Urban Development, CDBG works to ensure affordable housing is made available in communities. HUD determines the amount of each grant using a formula measuring community need, population, and other criteria.
- *Rivers, Trails, and Conservation Assistance Program*: This program supports community-led natural resource conservation and outdoor recreation projects. It is issued by the U.S. National Parks Service.
- *Land and Water Conservation Fund*: This fund is used to conserve lands and improve outdoor recreation opportunities throughout the nation. It requires at least 40% of funds to be used by federal agencies and at least 40% to be allocated to the states.
- *Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities*: This fund provides capital and operating grants for public transportation services to meet mobility standards. Funds can be used to improve mobility by removing barriers to transportation services and expanding mobility options. Applications are due in February each year. Issued by MORPC.
- *Local Injury Prevention Grant*: This grant aims to lower the number of injuries through different programs and safety improvements. One specific example that has been conducted in the past is a free bicycle helmet program for school aged children. Issued by the Centers for Disease Control and Prevention and the Ohio Injury Prevention Partnership.

ENCOURAGEMENT

There are many opportunities for advancing walkability and bikeability in Worthington. This section explains several ways in which education and training can be some of the most economically-impactful investments. Some opportunities also serve as community building efforts and can be funded in collaboration with regional partners such as MORPC or the City of Columbus.

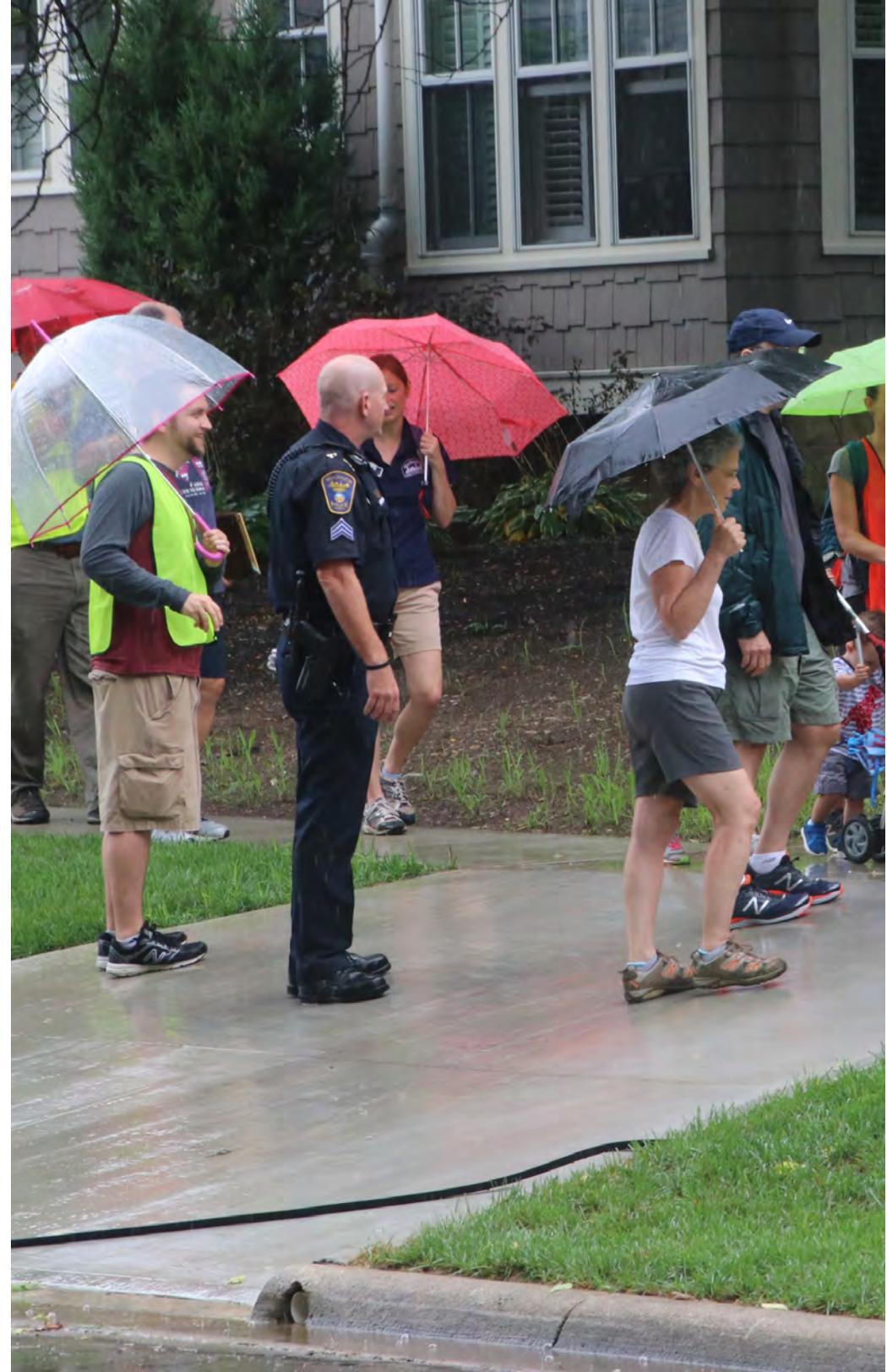
Bicycle and Pedestrian Law Enforcement

Officers are talented observers. They can often cite what motorists, pedestrians and bicyclists are doing wrong that will lead to a crash. They also understand what is fair and effective. If they warn or cite pedestrians or bicyclists, they know that their work must also identify those actions of motorists leading to the greatest harm.

Being able to pinpoint dangerous behaviors and locations where crashes are more prevalent can help law enforcement officers better target their enforcement efforts. Speeding and drunken driving are the two most significant causes of crashes with pedestrians and bicyclists, and focusing on both provides effective means of reducing crashes.

A pedestrian crosswalk sting program is among the most effective to teach motorist compliance with the law. Officers issue warnings the first week, with major media coverage, then issue citations the second week. Some cities using this practice state that they nearly eliminate unsafe motorist behaviors.

Review the crash data hotspots identified on Map # 5 (All Crashes) and Map #6 (Pedestrian and Bicycle Crashes) to identify opportunities for targeted enforcement and media engagement.



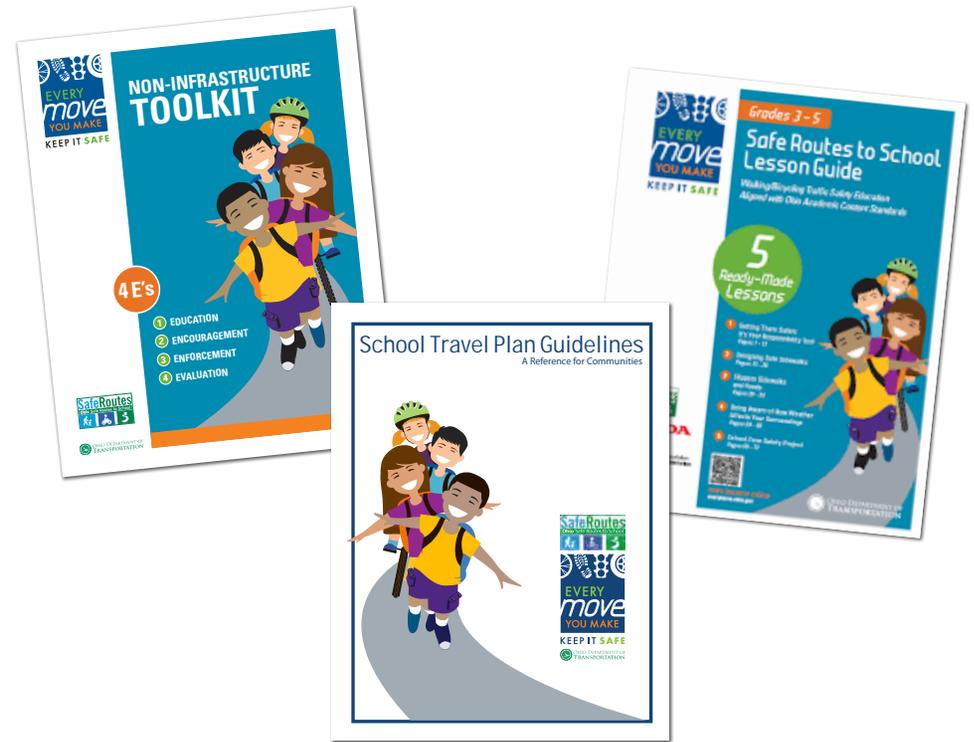
Safe Routes to Schools

A Safe Routes to School (SRTS) strategy advances three core objectives:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school;
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Worthington's SRTS program can enhance children's health and well-being and ease traffic congestion near schools. Actions include:

- *Organize a SRTS Task Force:* This includes parents, children, teachers, principals, city and school staff members, elected officials, major employers and business leaders, community groups, law enforcement and emergency responders.
- *Commit to Education, Encouragement and Enforcement Efforts:* Teaching children basic pedestrian and bicycle skills is vital to the success of a SRTS program. Cycling rodeos and obstacle courses are fun activities that improve students' skills and confidence.
- *Ensure Quick Wins:* Choose the Short-Range Bike and Pedestrian projects identified within this Plan which are within two miles of schools to implement. Engage Worthington School District to modify school transportation policies to promote walk and bikeability for students
- *Apply for Funding:* There are low-cost engineering solutions that can be put into place in a relatively short amount of time by working with city and county officials. Several grant opportunities also exist specifically for SRTS and are outlined in Chapter X, Funding Sources.
- *Collaborate with regional entities:* The City of Columbus, ODOT and MORPC all have SRTS programs and funding available. Staff and the newly formed task force should leverage these partnerships to advance the mission in Worthington.



Above: ODOT has several materials in print, digital, and video form to help communities establish and run an SRTS program.

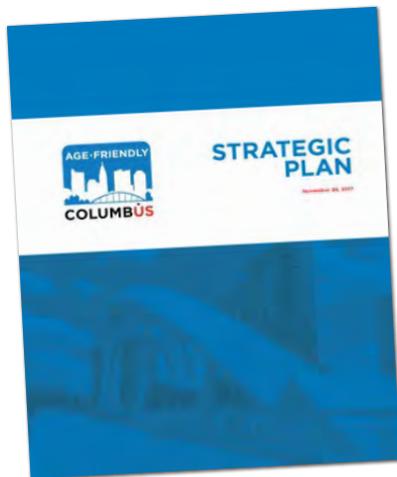


Above: City of Columbus' SRTS program has a dedicated webpage and contact person.

Age Friendly Columbus

As part of this connection, Age-Friendly Columbus can assist in developing an Age-Friendly Plan specific to Worthington that would then be adopted. Several actions that are currently in the Age-Friendly Columbus Strategic Plan that would be directly relevant to the Worthington Bicycle and Pedestrian Plan include:

- *Research and design “Safe Routes for All” program to assess, report upon and map safe routes in neighborhoods with a dense population of vulnerable older adults;*
- *Pilot increased crossing times at major activity hubs;*
- *Ensure safe connections to public transportation by analyzing last-mile connections in vulnerable population neighborhoods;*
- *Create an Age-Friendly Event Planning guide to help reduce barriers to attendance for older adults and individuals with disabilities. Thus encouraging public and private events to accommodate guests of all ages;*
- *Adopt inclusive and accessible practices and standards across City departments, buildings and spaces. In doing so, work should be done in evaluating outdoor and indoor spaces for Age-friendliness according to the adopted standards.*



Trial Demonstration Projects

Demonstration or ‘pop-up’ projects are small scale interventions that are quick, often temporary, and cheap. The aim is an incremental approach to: encourage people to work together, expand public participation, discover what works and doesn’t, and deliver public projects faster.

Valparaiso, Indiana, has annually held Better Block programs that close a portion of downtown and allow demonstration areas. Pictured below is an example of one such event during which participants painted a walking and biking path on an existing row of parking. In areas of Worthington that have skepticism around a bicycle lane, a demonstration project as part of a summer event or block party, would be a great opportunity to test transportation options. Some demonstrations last only a day, while others may last through a summer.

The City of Columbus has used similar tactics on Broad Street in downtown Columbus to test the addition of a shared bike and bus lane that was later made permanent.



Above: Demonstration projects in Valparaiso, IN (left) and Columbus, OH (right)

Bicycle Friendly Community

More than 450 communities have achieved bicycle friendly recognition. The program provides a roadmap to building a Bicycle Friendly Community for communities of all shapes and sizes. The rigorous application process is an educational tool in itself and includes an opportunity for local bicyclists and the City to provide input on their experiences and perceptions of bicycling in their community.

Ohio is ranked 18th for bicycle-friendly status, with 17 communities and 5 bicycle friendly universities. Westerville and Athens, Ohio have achieved Bronze status. Worthington should strive for designation as a bicycle-friendly community. Applications are accepted in the fall and spring, which gives applicants months to complete the application process.

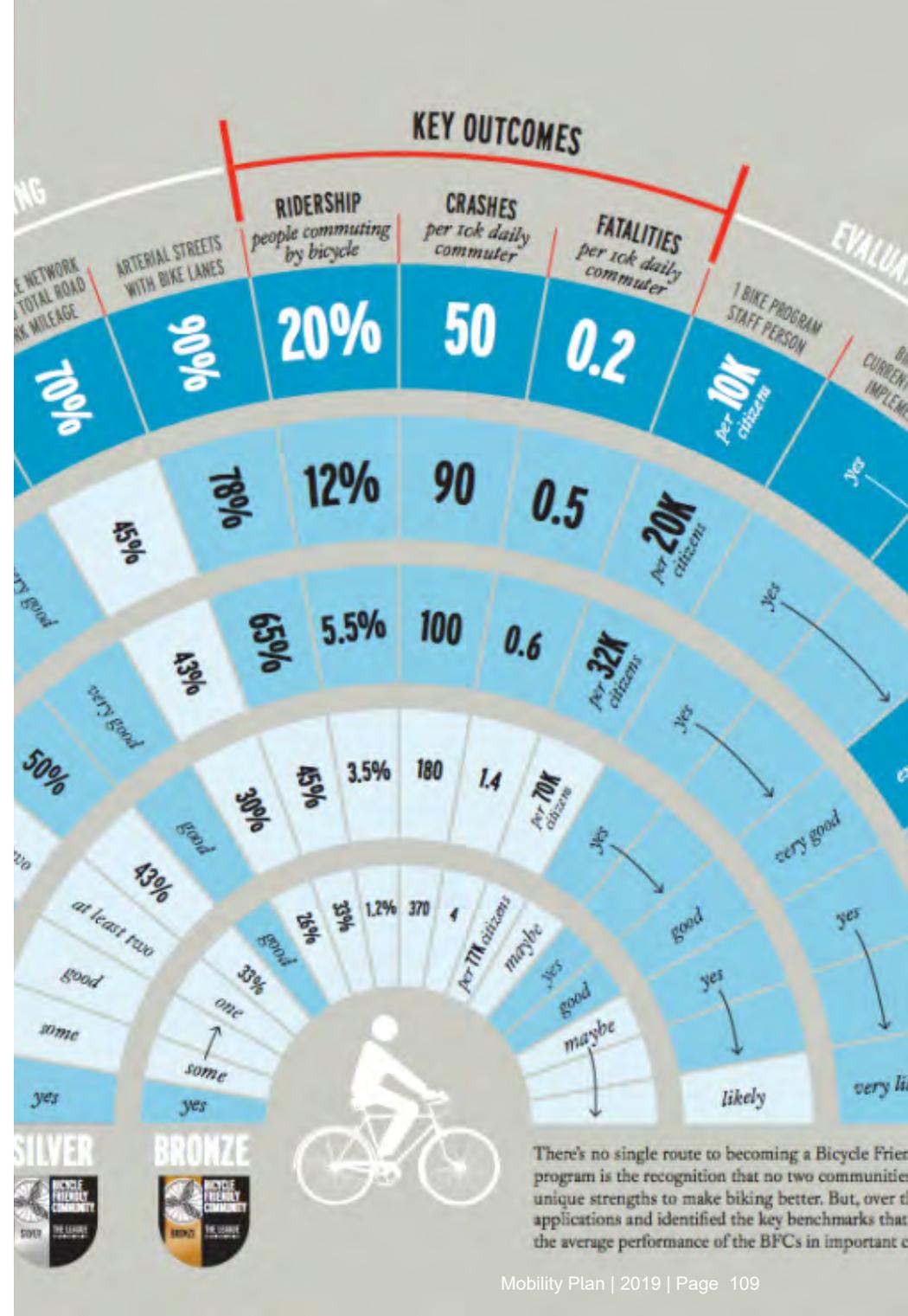
The application asks questions about the community's engineering, education, encouragement, enforcement and evaluation efforts. This comprehensive questionnaire is designed to yield a holistic picture of an applicant community's work to develop, support and promote bicycling. This also provides a metric for which community members, council, and the Bike and Pedestrian Board can measure progress. It can be difficult to show results of progress outside of new trail miles for example. The Bicycle Friendly Community system can be a tool moving forward to explain and quantify the advancement of the community.

“

It built recognition of what we have done, which helps getting funding for the very long list of what we still have to do. Having the honor actually made it easier for us to give a frank assessment of where we lag and help build political support for future phases.”

”

Wayne Feiden
 Director of Planning and Development
 Northampton, MA



APPENDICES





APPENDICES: TABLE OF CONTENTS

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APPENDIX A. LITERATURE REVIEW

APPENDIX A. LITERATURE REVIEW

The following key documents were reviewed by the project team for purposes of identifying plans, policies and practices that influence, overlap or inform the project study process. The summary includes documents identified by the project team and the City of Worthington that are relevant to the development of a strategic bicycling and walking implementation plan. The documents have been organized based on the following scheme: Plans; Studies and Reports; Maps and Data; and Other Documents

PLANS

Park Master Plan, City of Worthington, Department of Parks and Recreation, 2017

Description: Long range plan for the City's 221 existing acres and planned renovations. Document includes a summary of public including survey results. Each park's future renovations are listed with a conclusion piece listing a few potential new park sites.

Key Takeaways: The survey results provide insight into how Worthington residents see and use their park system. This is information that will likely be useful to walkability and bikeability in the future. The majority of park renovations listed are standard (i.e. new parking lot, provide drainage, or add basketball court). Four specific sites are called out as potential future park space locations. It may be useful to discuss these opportunities with City staff and to understand the likelihood of acquisition. Planning for connectivity to those locations now would be important.

Old Worthington Bicycle Plan, City of Worthington, 2017

Description: Final product of the four-part Old Worthington Mobility Study, that includes the Phase 2 High Street Pedestrian Crossings (2015 see below under studies and reports) and Phase 3 Pedestrian Access Route

Plan (2017 see below under studies and reports), this study included a detailed assessment of bicycling, walking and accessibility conditions within the Worthington Historic District.

Key Takeaways: This is a fairly recent plan, but may not be the best resource for guiding current planning efforts. Beyond having an extremely limited geographic scope (two-blocks each direction from High Street/Granville Road), the study recommends some strategies that may need to be revisited if we are to best serve the comfort and safety of bicyclists and pedestrians in Worthington. The study identifies Complete Street principles as the basis for analyses and implementation and recommends the City adopt a strong Complete Streets policy. The conditions assessment is fairly detailed with this effort, but the recommendations are unambitious and, in some cases, do not align with best practices for bicycling and walking. Concerns or limitations with the approach and recommendation include:

- The bicycle user typology (expert, casual, and amateur) is based on outdated practice. It is now considered better practice to use the "Portland" typology (Strong and Fearless, Enthusiastic and Confident, Interested but Concerned, and No-way No-How) in conjunction with Level of Traffic Stress (LTS) to develop recommendations to attract new bicyclists.
- Recommendations for street treatments do little to improve bicycle comfort or safety (see table below).
- The numerous recommendations to use "Bikes May Use Full Lane" (BMUFL – MUTCD R4-11) as a facility type are not supported by evidence to demonstrate any improvements in comfort or safety based on installation of this sign type.
- Bicycle Boulevard recommendations include adding centerlines to residential, low-volume streets with signage and possibly colored pavement. This is not current practice for bicycle

boulevards and would most likely result in a more car-centric street with sign and paint clutter.

- There is little to no consideration for any on-street dedicated bicycle space.

Age-Friendly Columbus Strategic Plan, City of Columbus, 2017

Description: The Age-Friendly Strategic Plan sets forth a three-year city-wide action plan. It is also intended to be a resource to strengthen quality of life for people of all ages across Franklin County and Central Ohio. The actions are organized around six main goals with strategies to complete each action and follow-up documentation.

Key Takeaways: A vision statement that includes transportation options, the plan has direct ties to the pedestrian and bicycling environment, noting, “Age-Friendly Columbus is a place that is vibrant and livable for all ages, where daily life is healthy, safe and comfortable. People are well-connected via transportation options, a variety of communication methods and plentiful social activities. The community is enriched by the wisdom of the experienced and the creation of intergenerational relationships.” Two of the goals have direct relationships: outdoor spaces/buildings and transportation. Both of these aim to provide safer options and routes, making each more accessible to a wider population. These are principles that can be utilized throughout Worthington. Many of the actions under each of these goals are programmatic in nature, as opposed to physical routes or designed spaces. An overarching idea from this plan is that communication is nearly as important as the actual improvements that are made. If individuals are not aware of their options, then the changes made are not effective. Getting information out to different networks, providing safe streets maps, and promoting transportation resources, for example, are all important.

Central Ohio Greenways Strategic Plan, Mid-Ohio Regional Planning Commission, 2016

Description: A strategic plan developed by the Mid-Ohio Regional Planning Commission (MORPC) to help the COG Board with a vision, mission, and overall structure. The document creates four working groups that are

each tasked with certain elements of greenways implementation: trail development; programming; partnership; and marketing. Each working group has specific actions to be completed within five years of the plan’s adoption. Included as a separate deliverable is a Best Practices report that compares seven case studies and draws upon the accomplishments of each for how the COG Board should move forward.

Key Takeaways: Though Worthington has a connection to the COG network, the Strategic Plan is focused on their Board’s functionality and programming. The document is also regional in nature due to the extents of the trails; there is little in the way of detailed recommendations. It is important to note how both the COG Board and the Strategic Plan see the greenways as not just recreational amenities but commuter corridors. The sentiment is noted in new vision and mission statements. This is an important distinction moving forward, as central Ohio has typically used these for leisure, but in recent years, bicycle commuting has shown significant growth. Since the completion of this plan, the Trail Development’s working map has traveled to surrounding counties and been marked on by staff, elected officials, and bike enthusiasts. This may be a resource for desires for connection points and potential routes.

City of Worthington Comprehensive Plan, City of Worthington, 2005

Description: An update to the 1988 Comprehensive Plan, this document covers many facets of the community including, but not limited to, existing conditions, strategic corridors, public outreach, and implementation steps.

Key Takeaways: Given the age of the document, portions are outdated. Several of the development area strategies have not materialized. The section on Parkland Development tells the general story of connectivity east-west in the northern portion of the City but that there is little connectivity for cyclists in the southern portion. Existing development focus has been on separated bike paths, primarily for recreational use. One recommendation is “interconnect neighborhoods with sidewalks and paths.” As part of this, the plan mentions that every public road should have

at least one sidewalk and major roads should include a bikeway. “Adopt a citywide bike plan” is another recommendation that directly relates to this project, but gives general statements about implementation. A few of the strategic development areas do focus on increasing walkability within downtown. Several of these developments have not come to fruition, but the proposed patterns promote walkability and downplay vehicular traffic expansion.

1997 Sidewalk Study Master Plan, City of Worthington, 1997

Description: Provides a detailed inventory of sidewalk presence and assessment of sidewalk conditions for the city-wide street network.

Key Takeaways: Although being twenty years old, the sidewalk study utilized a sound prioritization system for addressing repair of aging sidewalks. Additionally the range estimations for infill, based on degree of constructibility, is likely still relevant, and these data could be compared against current inventory to benchmark the progress that has been made over two decades. There is reason to examine replicating this inventory on an ongoing basis which may require less time and resources given advances in GIS and automated sensing technologies.

STUDIES AND REPORTS

Old Worthington Mobility Study: Phase 3 – Pedestrian Access Route Plan Final Report, City of Worthington, 2017

Description: Detailed assessment and inventory of conditions within a two block radius of High Street and Granville Road with regard to ADA compliance.

Key Takeaways: The report identifies a number of gaps in both the sidewalk network and accessibility features (ramps, sidewalk width, obstructions, vertical elements, etc.) and identifies costs associated with bringing features into compliance. While this report is at a level of detail beyond what can be accomplished for the entire city, it provides a good lens and approach for inventory and gap identification on a block-by-block basis.

EEDS Alternative Transportation Recommendations in Old Worthington, OSU School of Environmental and Natural Resources, 2016

Description: Student project studying an electric vehicle charging station and bicycle connectivity in downtown Worthington. Research methodology, data, and recommendations are provided for both items.

Key Takeaways: Focusing on the bicycle portion of this study, research is centered around accessibility from the Olentangy Greenway to downtown Worthington. Using the current route, the study suggests sidewalk and wayfinding improvements in order to capitalize on the up to 1,400 users per day on the greenway. A few options are presented in terms of funding strategies through various grants, sidewalk improvement costs via MORPC, and signage guidelines. Approaches and recommendations are more strategic with few implementation details provided.

Old Worthington Mobility Study: Phase 2 – High Street Pedestrian Crossings Report, City of Worthington, 2015

Description: This study provides detailed assessment of street crossing facilities and volumes in Historic Worthington with the aim to identify pedestrian feature improvements along High Street.

Key Takeaways: Very specific focus on the uncontrolled High Street crossings at Short Street and Village Green. Detailed analyses of conditions of travel volumes was used to evaluate three alternative crossing treatments for each location: 1) Advance signage and markings; 2) Overhead flashing beacons and markings with signage; 3) Pedestrian Hybrid Beacon (HAWK signal). In both cases, the evaluation led to recommending the HAWK signal. It should be noted that the Rectangular Rapid Flash Beacon (RRFB) was not considered in the alternatives (possibly because the timing was before receiving interim approval from Federal Highway Administration (FHWA) prior to being rescinded due to a patent dispute and recently re-approved). Raw data from this study could be of use, due to the use of Mio-vision to use video to gather detailed turning and crossing movements for all modes at each intersection.

City of Worthington Wilson Bridge Road Corridor Enhancement Presentation, Municipal Planning Commission, 2015

Description: Plan outlines the existing conditions along Wilson Bridge Road between the railroad track to the east and SR315 to the west. This stretch includes a node of mixed-use at the High Street intersection, two large stretches of office space, and single family residential to the south. Six focus areas are analyzed through pictorial diagrams. Each location has a before/after with transformations with complete streetscape and visual gateway elements.

Key Takeaways: The enhancements proposed are mainly aesthetic in nature. There are a couple instances of crosswalk striping and proposed multi-use trails but no other changes to the roadway proper. Estimated prices are given for each focus area which do allow for a sense of scale to elected officials in terms of what is attainable for the given prices. It is unclear, though, which improvements have been thoroughly vetted by engineers and which are hypothetical.

Bike and Pedestrian Steering Committee Recommendations to City Council, City of Worthington, 2014

Description: Report developed out the formation of the bicycle and pedestrian steering committee in the fall of 2013 with the goal of compiling a list of priority recommendations for city council.

Key Takeaways: The report encapsulates the benefits of bicycling and walking for Worthington including: quality of life, health promotion, environmental sustainability, and economic benefits. The identification of initial goals should be a starting point for this strategic implementation plan effort and provides a vision that can readily be adapted to the plan. Specifically, this report identifies the need for the strategic implementation plan and outlines anticipated strategies and performance measures to be considered, including:

Strategies:

- Develop a long range vision of a “Connected Worthington.”
- Develop pedestrian and bicycle linkages between neighborhoods

and natural areas, recreation facilities and education centers and other connecting trails.

- Identify what improvements would be recommended along various paths understanding not everything will be needed along all pathways.
- Establish high need areas for restrooms (ADA and Family Oriented), air & simple tool stations, rest stops and parking.
- Assess the need for separation of paths in high traffic areas such as between Wilson Bridge Road and Antrim Park heading south:
 - a. High speed bike trail
 - b. Family or casual speed bike trail
 - c. Running trail
 - d. Dog walking trail
- Locate where bicycle racks may be needed adjacent to pocket parks, fishing or water access points, tennis courts, soccer fields, baseball/softball fields, etc.
- Identify and implement water stops.
- Develop an arterial plan coming from and leading to major bike/pedestrian pathways.

Performance Measures:

- Increased usage of trails for a variety of levels and types of bike riders/walkers/runners.
- Fewer crash incidents.
- Bicycle and pedestrian Master Plan completed and adopted by Council.
- Creation of a standing Advisory Committee.

This report should be used as a key reference, as much of the work and conversations that shaped this document are likely still quite relevant for the city.

Columbus Trail Count Report, MORPC, 2012

Description: Study conducted in 2012 by MORPC, analyzing data at ten

locations on the Central Ohio Greenway trail system, including three locations where two years of continuous data has been collected.

Key Takeaways: The count program includes a permanent count station at Antrim Park (Highest count location on the system (~29,000 monthly users; 780/day) on the Olentangy River Trail just south of the trail approach into Worthington and short duration counts at Worthington Hills Market (~21,000 monthly users; 660/day) north of the city. Recommendations include better accommodation of trail access during construction projects, considerations for widening trails where volumes are higher, and the need for more complete volume data collection.

STUDIES AND REPORTS

Projects Underway, City of Worthington, 2013

Description: A map displaying planned and underway bicycle and pedestrian projects in and immediately surrounding Worthington. Also available as an interactive map arcg.is/1DHlual

Key Takeaways: This map provides a useful snapshot of existing bicycle and pedestrian projects that may fill gaps in the existing facility inventory and should be noted when identifying needs and recommendations for the Strategic Bicycling and Walking Implementation Plan.

Phase 2 – High Street Pedestrian Crossings, Appendix A: Traffic Count Data, City of Worthington (DLZ), 2015

Description: This document provides detailed documentation of traffic counts, turning movement, pedestrian and bicycle movements and crash data compiled and analyzed to develop recommendations for the Phase 2 report.

Key Takeaways: Provides a detailed snapshot of travel behavior and conflicts along High Street in Old Worthington. Turning movements and traffic volumes may be useful for examining basic feasibility of potential treatment recommendations along High Street.

Walks and Paths, City of Worthington, 2013

Description: A 36x36 map of the 2013 inventory of sidewalks, curb ramps, and marked and unmarked crosswalks. Also includes features and points of interest, including:

- Schools (Elementary, Middle and High)
- City Offices
- Fire/Police Departments
- Community Buildings
- Libraries
- Public Parking
- Post Offices
- Places of Worship
- Cemeteries
- Transit Stops
- Bicycle Racks

Key Takeaways: The map is a useful snapshot of bicycle and pedestrian support networks but will need to be analyzed and updated with available GIS data and field data verification where needed.

GIS data files from Mid-Ohio Regional Planning Commission (various dates of publication)

Description: A number of data layers have been obtained from the MORPC GIS portal. These layers will be used to develop maps of existing conditions across Worthington and adjacent neighborhoods. The following is a summary of the layers and data types obtained from MORPC.

OTHER DOCUMENTS

EMH&T Ped-Bike Board Response, EMH&T, 2016

Description: Signage design guidelines and locations.

Key Takeaways: Presentation covers the gamut for signage typologies and how each should be handled. This includes signs at both vehicular, pedestrian, and bicycle scales. Entry features and building signage are also considered in the graphic package. Construction details are not provided, but dimensions are included. The current plan does not outline bicycle routes and all pedestrian signage is contained within the couple blocks of downtown Worthington. Signage locations are specified via the program, but may need to be revisited as routes for bicycles and pedestrians are added or changed in future efforts.

Recommendations for bike parking in Worthington, Fred Yaeger and Lisa Staggenborg, 2010

Description: An excerpt from an unknown document (2010) provides a table identifying 10 locations where bicycle parking should be considered and recommends 37 inverted “U” racks. It is unclear if any or all of these racks were procured and installed.

Key Takeaways: Support for consideration of bicycle parking recommendations for the study included reference to the Association of Pedestrian and Bicycle Professionals (APBP) Bike parking guidelines.

LITERATURE REVIEW: CONCLUDING THOUGHTS

This summary is intended to serve as documentation of materials and data that are reviewed and considered to inform the project planning process. The items included have been identified by Worthington staff and project team members based on the potential relevance to bicycling and walking in and around Worthington. The data and information gleaned from these resources provide a foundation for the development of recommendations and implementation strategies.

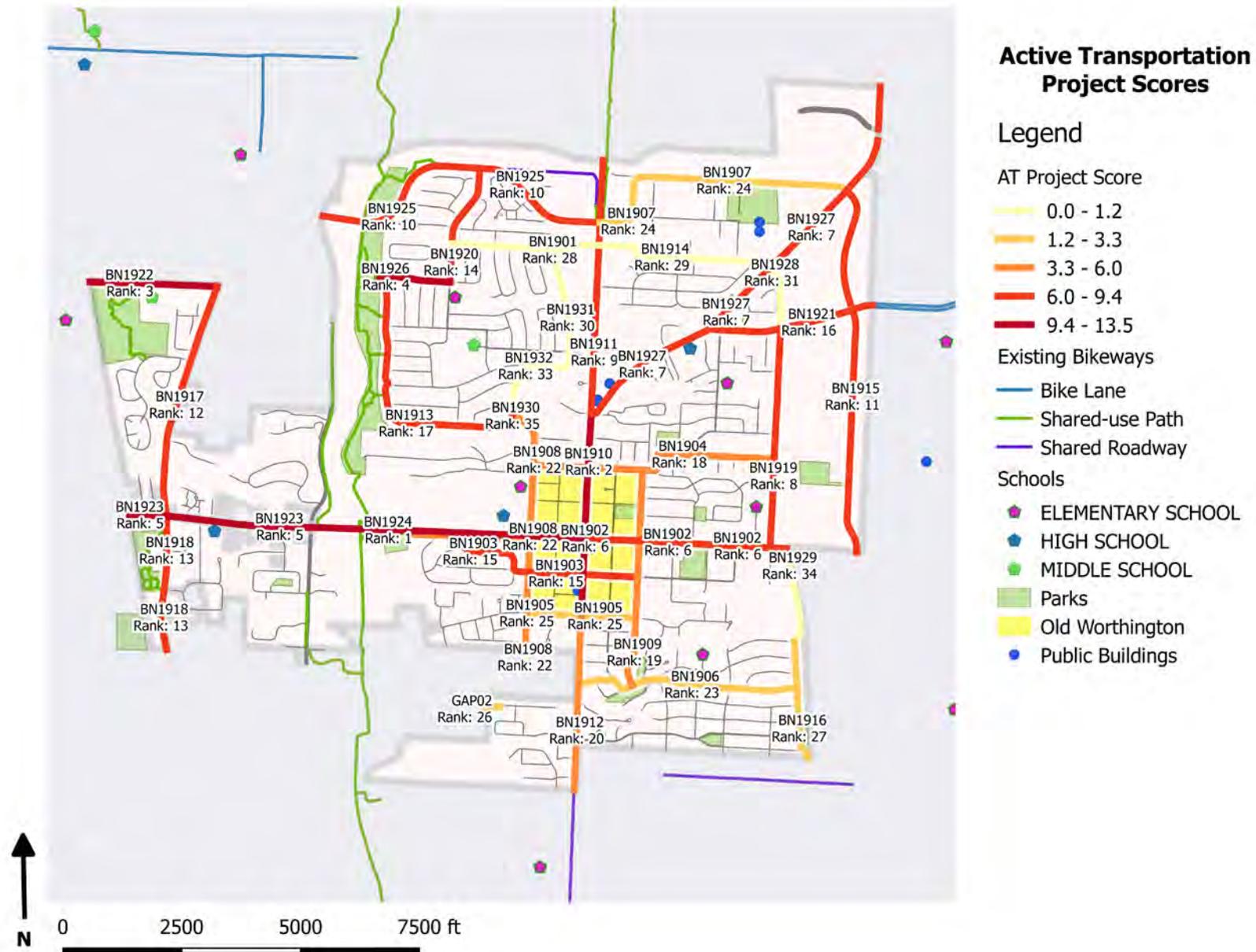
APPENDIX B. PRIORITIZATION METHODOLOGY

PRIORITIZATION CRITERIA

For purposes of evaluating the identified projects against one another in terms of relative impact and importance to the community, the project team, using community feedback and direction from the City staff and the project advisory committee, developed a prioritization scheme. The scheme identified seven categories of data that were mapped and available for the City of Worthington. The candidate Active Transportation projects and challenging intersections were then analyzed using GIS to determine the extent to which they had proximity or connections to these features. The features were also assigned relative weighted values to emphasize key features such as schools and safety. This section includes the maps of the final scores for these projects and tables with weighted score results for each.

Category	Scoring Measure	Weight
Schools	Proximity to schools	29.4%
Destinations	Proximity to community destinations	14.7%
Transit	Proximity to COTA stops	8.8%
Parks	Access to Parks	5.9%
Existing Network	Connection to existing Bike/Ped facility	14.7%
Downtown Worthington	Connect to or within Old Worthington	5.9%
Safety	Previous Bike Ped crashes 2003-2017	20.6%
Safety	Previous any crashes 2003-2017	8.8%

RANKED ACTIVE TRANSPORTATION PROJECTS



PRIORITIZATION OF ACTIVE TRANSPORTATION PROJECTS

BP_ID	BP-ST	BP_EXT	Bike Ped Crash	All Crash	COTA	Existing Network	Parks	Point of Interest	Schools	Old Worthington	Total Score	Rank
BN1901	Caren Ave	Rieber St to High St	0.823	0.110	0.071	0.000	0.000	0.209	0.000	0.000	1.213	28
BN1902	E Dublin-Granville Rd	High St to East City Limit	1.507	0.673	0.052	0.000	2.000	0.767	2.368	2.000	9.367	6
BN1903	Farrington Dr/Sinsbury Dr/New England Ave	W Dublin Granville Rd to High St	1.511	0.156	0.104	0.000	0.000	1.385	2.375	2.000	7.531	15
BN1904	North St	Evening St to Proprietors Rd	0.475	0.115	0.041	0.000	2.000	0.484	0.933	2.000	6.047	18
BN1905	South St	Evening St to Morning St	0.280	0.117	0.193	0.000	0.000	0.000	0.000	2.000	2.590	25
BN1906	Southington Ave/Park Blvd	High St to Indianola Ave	0.135	0.039	0.093	0.000	2.000	0.000	1.058	0.000	3.325	23
BN1907	E Wilson Bridge Rd	High St to Worthington Galena Rd	0.214	0.399	0.000	0.000	2.000	0.545	0.000	0.000	3.158	24
BN1908	Evening St	Highgate Ave to South City Limit (street terminus)	0.514	0.125	0.000	0.000	0.000	0.131	2.019	2.000	4.789	22
BN1909	Morning St/Granby St	E North St to Park Blvd	0.280	0.043	0.000	0.000	2.000	0.571	1.101	2.000	5.996	19
BN1910	High St	Worthington Galena Rd to South St	3.325	0.784	0.573	0.000	2.000	2.308	1.187	2.000	12.178	2
BN1911	N High St	North City Limit to Worthington Galena Rd	1.087	0.653	0.291	5.000	0.000	1.107	0.000	0.000	8.138	9
BN1912	N High St	South St to South City Limit	1.405	0.335	0.363	0.000	0.000	0.358	1.379	2.000	5.840	20
BN1913	Masefield St/Highgate Ave	North of Lambourne Ave (Terminus) to Evening St	0.000	0.009	0.000	5.000	2.000	0.000	0.000	0.000	7.009	17
BN1914	Highland Ave	High St to Worthington Galena Rd	0.687	0.103	0.059	0.000	0.000	0.175	0.000	0.000	1.024	29

PRIORITIZATION OF ACTIVE TRANSPORTATION PROJECTS

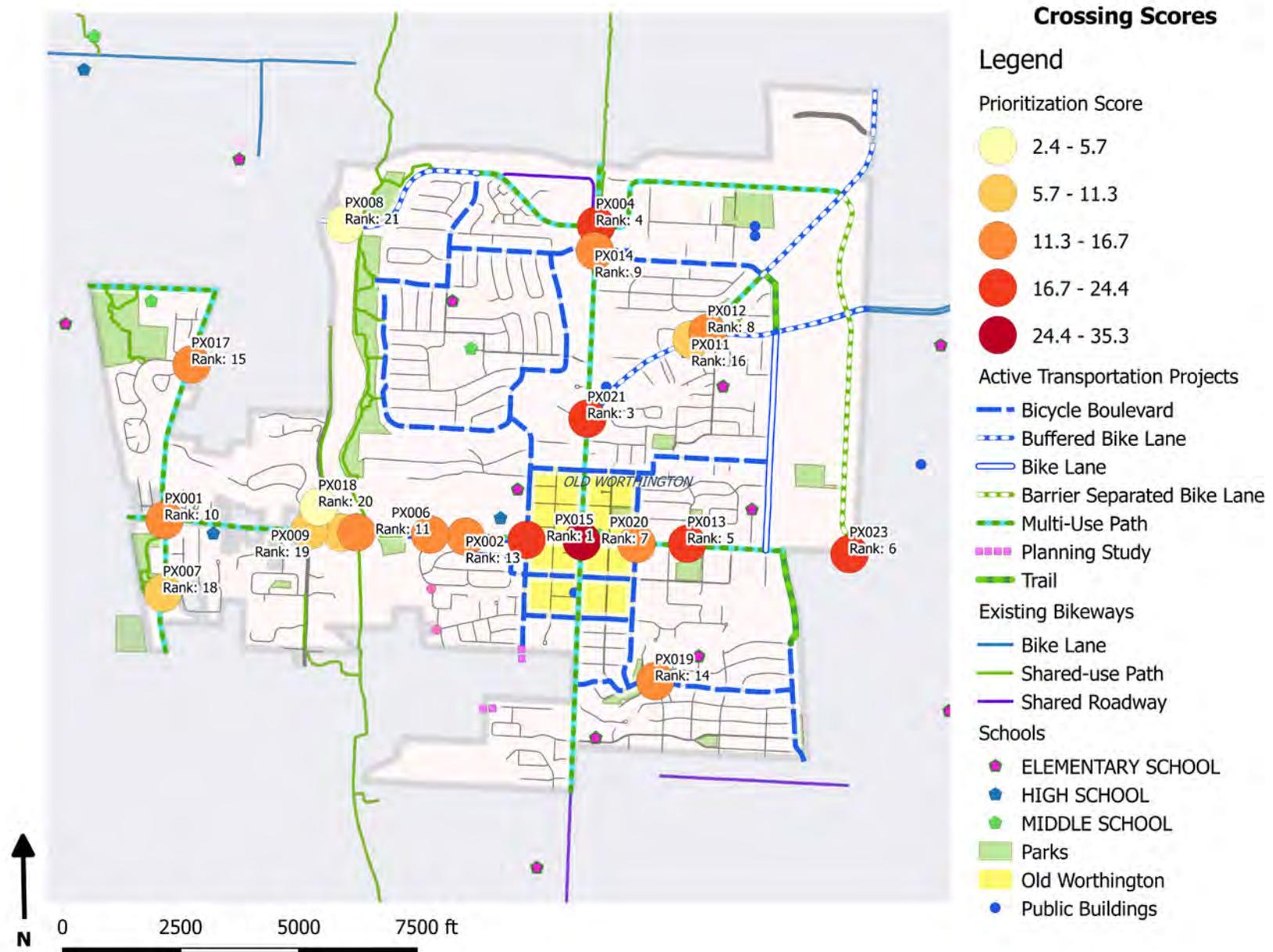
BP_ID	BP-ST	BP_EXT	Bike Ped Crash	All Crash	COTA	Existing Network	Parks	Point of Interest	Schools	Old Worthington	Total Score	Rank
BN1915	Huntley Rd	Worthington Galena to E Dublin Granville Rd	0.413	0.389	0.028	5.000	2.000	0.084	0.000	0.000	7.915	11
BN1916	Indianola Ave	Park Overlook Dr to South City Limit	0.000	0.017	0.000	0.000	2.000	0.000	0.000	0.000	2.017	27
BN1917	Linworth Rd	Snouffer Rd to W Dublin Granville Rd	0.257	0.209	0.310	5.000	2.000	0.131	0.000	0.000	7.908	12
BN1918	Linworth Rd	W Dublin Granville Rd to South City Limit	0.000	0.269	0.314	5.000	2.000	0.232	0.000	0.000	7.814	13
BN1919	Proprietors Rd	Schrock Rd to E Dublin Granville Rd	0.000	0.069	0.000	5.000	2.000	0.000	1.096	0.000	8.165	8
BN1920	Rieber St	W Wilson Bridge Rd to Whitney Ave	0.502	0.065	0.000	5.000	0.000	0.000	1.973	0.000	7.541	14
BN1921	Schrock Rd	Worthington Galena Rd to East City Limit	0.547	0.242	0.000	5.000	0.000	0.000	1.434	0.000	7.223	16
BN1922	Snouffer Rd	West City Limit to Linworth Rd	0.480	0.135	0.165	5.000	2.000	0.000	3.768	0.000	11.547	3
BN1923	W Dublin-Granville Rd	West City Limit to E ramp SR 315	1.196	0.832	0.092	5.000	2.000	0.135	1.044	0.000	10.300	5
BN1924	W Dublin-Granville Rd	E ramp SR 315 to High St	1.479	0.634	0.046	5.000	2.000	0.274	2.113	2.000	13.547	1
BN1925	W Wilson Bridge Rd	West City Limit to High St	0.188	0.328	0.000	5.000	2.000	0.479	0.000	0.000	7.996	10
BN1926	Whitney Ave	West Terminus to Rieber St	0.863	0.009	0.000	5.000	2.000	0.000	3.389	0.000	11.261	4
BN1927	Worthington Galena Rd/ Sancus Blvd	High St to North City Limit	0.479	0.205	0.000	5.000	2.000	0.349	0.538	0.000	8.571	7
BN1928	West of RR Corridor	Worthington Galena Rd to Intersection Schrock Rd/Proprietors Rd	0.000	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.075	31

PRIORITIZATION OF ACTIVE TRANSPORTATION PROJECTS

BP_ID	BP-ST	BP_EXT	Bike Ped Crash	All Crash	COTA	Existing Network	Parks	Point of Interest	Schools	Old Worthington	Total Score	Rank
BN1929	West of RR Corridor	Dublin Granville Rd at East City Limit to North Terminus of Indianola Ave	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.021	34
BN1930	Evening St	Longfellow Ave to Highgate Ave	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.017	35
BN1931	Hayhurst St	Caren Ave to Larrimer Ave	0.293	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.310	30
BN1932	Longfellow Ave	Evening St to Larrimer Ave	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.024	33
BN1934	W Dublin-Granville Rd (Service Dr)	Olentangy River Trail to Evening St	0.928	0.406	0.000	0.000	2.000	0.000	2.429	0.000	5.763	21
GAP01	Evening St Connection to Pioneer Ct (Riverlea)		0.000	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.037	32
GAP02	Northbrook neighborhood to Riverlea		0.000	0.000	0.000	0.000	0.000	2.519	0.000	0.000	2.519	26

Above Table #11. Prioritization of Active Transportation Projects

RANKED CROSSING SCORES



PRIORITIZATION OF RANKED CROSSING PROJECTS

BP_ID	Location	Type	Bike Ped Crash	All Crash	COTA	Existing Network	Parks	Point of Int.	Schools	Old Worthington	Total Score	Rank
PX001	Dublin-Granville at Linworth	Signalized Intersection	0.000	1.234	3.000	5.000	2.000	0.357	3.333	0.000	14.925	10
PX002	Dublin-Granville at Farmington	Signalized Intersection	0.000	0.161	0.000	5.000	2.000	0.000	6.667	0.000	13.827	13
PX003	Dublin Granville at Evening	Signalized Intersection	1.750	0.793	0.000	5.000	2.000	2.857	10.000	2.000	24.400	2
PX004	High St at Wilson Bridge Rd	Signalized Intersection	7.000	3.000	3.000	5.000	0.000	2.143	0.000	0.000	20.143	4
PX005	Dublin Granville Rd at SR 315	Bridge	7.000	1.977	0.000	0.000	2.000	0.000	0.000	0.000	10.977	17
PX006	Dublin Granville at Seabury	Uncontrolled Intersection	0.875	0.181	0.000	5.000	2.000	0.000	6.667	0.000	14.722	11
PX007	Linworth Rd at Linworth Park	Uncontrolled Intersection	0.000	0.030	0.000	5.000	2.000	0.357	3.333	0.000	10.721	18
PX008	Wilson Bridge Rd over SR 315	Bridge	0.000	0.532	0.000	0.000	2.000	0.000	0.000	0.000	2.532	22
PX009	Dublin Granville Rd at Olentangy River Rd	Signalized Intersection	0.875	1.375	0.000	0.000	2.000	0.000	3.333	0.000	7.583	19
PX011	Worthington-Galena Rd at Worthington Christian HS	Uncontrolled Mid-Block Crossing	2.625	0.030	0.000	0.000	2.000	0.000	6.667	0.000	11.322	16
PX012	Worthington-Galena Rd at Schrock Rd	Signalized Intersection	1.750	0.251	0.000	5.000	2.000	0.000	6.667	0.000	15.668	8
PX013	Dublin Granville at Pingree	Uncontrolled Intersection	1.750	0.110	0.000	5.000	2.000	1.071	10.000	0.000	19.932	5
PX014	High St at Caren Ave	Signalized Intersection	4.375	0.662	3.000	5.000	0.000	2.143	0.000	0.000	15.180	9
PX015	High St at Dublin Granville	Signalized Intersection	6.125	2.207	3.000	5.000	2.000	5.000	10.000	2.000	35.332	1
PX017	Linworth Rd at Collins Dr	Uncontrolled Intersection	0.000	0.090	3.000	5.000	2.000	0.000	3.333	0.000	13.424	15

PRIORITIZATION OF RANKED CROSSING PROJECTS

BP_ID	Location	Type	Bike Ped Crash	All Crash	COTA	Existing Network	Parks	Point of Int.	Schools	Old Worthington	Total Score	Rank
PX018	Olentangy River Rd at Pleasanton	Signalized Intersection	0.000	0.151	0.000	0.000	2.000	0.000	3.333	0.000	5.484	21
PX019	Park Blvd at Foster/Colonial Ave	Uncontrolled Intersection	0.000	0.040	0.000	5.000	2.000	0.000	6.667	0.000	13.707	14
PX020	Dublin Granville at Morning	Uncontrolled Intersection	0.875	0.301	0.000	5.000	2.000	3.214	3.333	2.000	16.724	7
PX021	High St at Worthington Galena	Signalized Intersection	2.625	0.381	3.000	5.000	2.000	3.214	6.667	0.000	22.887	3
PX022	Dublin Granville Rd at Exit SR-315 (East)	Signalized Intersection	7.000	0.110	0.000	5.000	2.000	0.000	0.000	0.000	14.110	12
PX023	Dublin Granville Rd at Huntley/Sinclair Rd	Signalized Intersection	2.625	2.458	3.000	5.000	2.000	1.429	3.333	0.000	19.845	6

Table #12. Prioritization of Ranked Crossing Projects

APPENDIX C.
CITY OF WORTHINGTON
SIDEWALK GAP FILL PROGRAM

APPENDIX C. SIDEWALK GAP FILL PROGRAM

Worthington Codified Ordinance Petition Process for Sidewalks

In 2002, the City Council adopted an ordinance (905.08) creating a petition process for sidewalks. It says “The Director of Service shall cause sidewalks to be installed within the public right of way of any block, upon receipt of a written petition signed by the owners of not less than fifty-one percent (51%) of the platted lots on said block, if.” The ordinance goes on to define blocks, owners and what the City and property owners will be obligated to pay, respectively. This process applies to properties that do not have a sidewalk in the right of way or the sidewalk does not meet specifications of the Codified Ordinances. Specifically, the ordinance requires the City to pay for plans and specifications, costs for advertising, bidding and construction inspection; costs for the assessment process (Assessment Equalization Board), and 50% of the cost of construction.

Property owners would be obligated to pay for 50% of construction costs. This 50% is apportioned to property owners based upon a cost per lineal foot methodology. Owners can pay cash within 60 days or over 5 years at an interest rate set by the City Council. At this point, no projects have been constructed using this process since its adoption in 2002.

The City Council may also use provisions of the Ohio Revised Code to implement sidewalk projects using special assessment financing. Utilization of provisions of Chapter 727 or 729 would allow the City Council to levy special assessments with or without a petition (depending on which statute is used), have the City pay more or less than 50% (minimum of 2%, plus the cost of intersections), and determine a shorter or longer period of time for property owners to pay the assessment. The longest time periods for pay off would be either the life of the improvement or the time of maturity of the debt instrument used to finance the project.

Therefore, while there is a structured petition and special assessment process available to citizens in the Codified Ordinances as well as the Ohio Revised Code, the City Council has options as to how it wants to finance sidewalk projects.

Why Cities Use Special Assessments

Since the City of Worthington does not often utilize special assessments to construct projects, I thought it might be helpful to overview why cities use such mechanisms to fund projects. The rationale for utilizing a special assessment, rather than the general fund or other City revenues, is that the project primarily benefits a specific property or group of properties, not necessarily the City at-large. In addition to having those who benefit most pay the cost of the improvement, they are also used to ensure a fair and equitable approach to financing different infrastructure.

Many of Worthington’s sidewalks were required to be installed at the time developments were approved. The developer bore the cost and passed that cost on through the sale of the property to the initial owners. At that point, it became an asset to both the community as part of a sidewalk system, as well as had value to the property owner. Property owners become responsible for

maintenance and, in some cases, owners may have partially or fully paid for the replacement of said sidewalk during the life of owning the home. Cities sometimes fund new sidewalks by special assessment because they benefit the specific property and, likewise, because other property owners may have already borne the cost of their own sidewalks.

The Worthington Codified Ordinances contemplates a balance between the benefit (value, access, etc.) to the individual property owner and the interest all residents have in accessing a sidewalk system. Arguably, previous Councils amended the Codified Ordinances to provide 50% percent of any project costs in order to demonstrate sidewalks were a priority and to balance the individual interest/benefits with those of the whole system.

Options Available to the City Council

- a. Do nothing
- b. Ask that residents submit a petition under Section 905.08 of the Codified Ordinances, which would require construction of the sidewalk and assessment in accordance with the code provisions.
- c. Initiate a project for special assessment utilizing provisions of the Ohio Revised Code and determine cost share, term and interest rate
- d. Refer the project request and approach to financing sidewalks to the new Bicycle and Pedestrian Advisory Board
- e. Defer for discussion during the Capital Improvement Program development process
- f. Some combination of above

Key	Road	Est. Cost	Notes
1	Caren Ave	\$41,286.67	Cost doesn't include landscape removal
2	Longfellow Ave	\$57,500.42	
3	Highland Ave	\$48,809.23	
4	Highland Ave	\$33,897.87	Some grading
5	Morning St	\$11,187.96	Cost doesn't include pole relocation
7	Pingree Dr	\$16,194.92	Cost doesn't include landscape removal
8	Morning St	\$20,574.93	
9	Hartford St	\$23,513.20	Cost doesn't include landscape removal
10	Hartford St	\$11,477.40	
11	Oxford St	\$40,042.85	Near property line. Cost doesn't include landscape removal
12	Oxford St	\$17,768.30	
13	Oxford St	\$34,519.17	Behind trees. Cost doesn't include landscape removal
14	Evening St	\$15,280.65	Cost doesn't include landscape removal
15	Stafford Ave E	\$38,168.86	Walk would have to encroach onto parcel at parking lots
16	Morning St	\$33,220.27	
18	Morning St	\$33,524.21	Cost doesn't include landscape removal. Substantial landscaping at 707
19	Morning St	\$21,322.08	Cost doesn't include landscape removal - hedges at south end. Possible pole relocation.
20	Morning St	\$42,236.67	Cost doesn't include landscape removal. Large trees at south end would have to be removed
21	Morning St	\$19,550.44	
22	Oxford St	\$22,793.49	Behind trees on south part
23	Oxford St	\$38,385.67	Cost doesn't include landscape removal. 59 New England has new trees
24	Park Overlook Dr	\$40,441.50	Cost doesn't include landscape removal
25	Park Overlook Dr	\$10,087.00	
26	Loveman Ave	\$14,179.89	
27	Park Overlook Dr	\$12,892.28	
28	Park Blvd	\$13,963.30	
29	Park Blvd	\$13,607.83	
30	Loveman Ave	\$11,705.82	
31	Park Blvd	\$17,559.72	Would need to rework the ramps and wall at Foster. Grading
32	Northbrook Dr E	\$ 4,735.18	
33	Collins Dr	\$57,728.39	Trees in normal SW location. Remove trees or place behind curb / behind trees toward west. Cost of tree removal not included

Table #13. Possible Sidewalk Gap Infill Key

APPENDIX D.
MORPC COMPLETE STREETS POLICY
& IMPLEMENTATION TOOLKIT

APPENDIX D. MORPC COMPLETE STREETS POLICY & IMPLEMENTATION TOOLKIT

BACKGROUND

Complete Streets are roadways that are designed to consider all transportation user types. Incorporating Complete Streets principles into project design, construction and maintenance such as resurfacing and reconstruction can improve transportation system safety, accessibility, efficiency, and capacity.

In terms of safety, a study of reconfigured streets in New York City showed a 35 percent decrease in injuries to all street users after protected bike lanes, pedestrian islands, and other Complete Streets components were added. Those same components can increase accessibility by clearly welcoming bicyclists, pedestrians, and other users— including children. The safe use of this public space by a greater variety of users makes the street more efficient, with more people able to comfortably use different parts of the right-of-way.

It may seem counterintuitive in a car-focused culture, but a complete street with fewer automobile lanes can increase capacity. That's because a typical car (6 feet by 15 feet) can take up 90 square feet on the roadway – not including the full lane width or safe distance between vehicles. Thus, increasing capacity for automobiles most likely would require a costly widening of the right-of-way – which would both reduce adjacent non-roadway space and significantly affect the existing built environment and open space. Carving out space on limited right of way for higher volume passenger vehicles (i.e. buses) and smaller/slow speed modes (pedestrians, cyclists, scooters, etc.) may move fewer cars but more people.

As a result, Complete Streets can provide many benefits to residents,

business owners, developers, and communities as a whole. Complete Streets can increase property values, economic growth, and economic stability. Roadways designed for Complete Streets can reduce crashes, improve public health, reduce harmful emissions, and reduce the overall demand on a community's roadways by providing safe, convenient, reliable, and affordable transportation options.

GOALS

The purpose of this policy is to promote development and redevelopment of public right-of-way within the City of Worthington to accommodate all users including pedestrians, cyclists, transit, and motorized vehicles. The goals include:

- *Create a safe and equitable transportation network for all City of Worthington residents regardless of age, gender, ability, or status. The City recognizes that a safe and equitable transportation network is one that accommodates pedestrians, cyclists, transit users, school bus riders, automobile drivers, commercial vehicles, emergency responders, and other users through appropriate infrastructure and equitable access to work, school, worship, and play.*
- *Create a transportation network that contributes to neighborhoods' sustainability and all residents' quality of life. The City recognizes that Complete Streets roadways can improve roadway safety, enhance the livability of the built environment, reduce municipal and household costs, maximize roadway capacity, and support economic development – especially when well-integrated with adjacent land uses and applied in a context sensitive way.*

OBJECTIVES

In accordance with nationally adopted Complete Streets principles, and the City’s goals to connect and expand the many miles of multi-use trails, dedicated bike paths, and shared roadways, the City will:

- *Identify opportunities and funding sources to improve non-motorized facility connections from residential neighborhoods to local parks, schools, civic spaces, commercial centers, regional trails, and other residential neighborhoods.*
- *Solicit funding for street improvements that will enhance the safety of the City’s multimodal network.*
- *Integrate sustainable design treatments, including incorporation of Green Stormwater Infrastructure and Low Impact Development, wherever financially and logistically feasible in order to improve water and air quality, reduce flooding risks, and enhance community livability.*
- *Partner with private, public, and nonprofit entities to leverage new and emerging transportation technologies in a way that maximizes safety, equity, sustainability, and affordability for the City and its residents.*
- *Collaborate with state, regional, and neighboring jurisdictions to promote the City’s multimodal network connectivity to the surrounding region.*
- *Enhance coordination among relevant City Departments and agencies in order to maximize fiscal resources.*
- *Ensure that safe sidewalks, crosswalks, waiting areas, and other features provide the first-/last-mile “connective tissue” between transit stops and the homes of transit users.*

POLICY REQUIREMENTS

Feasibility consideration for Complete Streets elements and facilities will be made at each phase of every infrastructure or transportation project including planning, design, construction, and reconstruction. Consideration for Complete Streets principles – including equity, sustainability, and

accessibility – will be incorporated into the maintenance phase of every infrastructure or transportation project. The City will assess projects’ impacts on pedestrians, bicyclists, and transit users of all ages and abilities, as well as motorists, emergency services, commercial vehicles. Exceptions from feasibility consideration will be made for infrastructure and transportation projects only in the following cases:

- *Specific users are legally prohibited on the roadway (such as expressways or pedestrian malls)*
- *The costs of providing Complete Streets facilities will be excessive when compared to the determined existing and future need or expected use of the facilities*
- *Based on projections involving population, employment, and/or traffic volumes, there is an absence of current and future need*

If the City makes exceptions from feasibility consideration, it will provide a detailed explanation of the reason(s) for the exceptions.

The City will establish and monitor performance metrics that assess the transportation network’s impact on accessibility, safety, multimodal mobility, sense of place, equity, economic development, and the natural environment.

The City will consult national and regional best practices in design when developing or redeveloping roadways. Design standards will be based on roadways’ safety performance, land use characteristics, functional classification, context-sensitive classification, and requirements set forth by City Codified Ordinance and the Manual of Uniform Traffic Safety Devices.

The City will work to incorporate Complete Streets principles into all future plans, manuals, policies, and programs that are relevant to transportation, infrastructure, or development to the maximum extent practicable.

The City will follow the context-sensitive street design and implementation guidance detailed in the 2019 Bicycle and Pedestrian Master Plan and 2018-2019 insight2050 Technical Assistance Program Toolkit.

Implementation Toolkit

Part II: Roadway Classifications, Land Use Considerations, & Design Guidelines

Insight2050 Technical Assistance Program:
City of Worthington Complete Streets Policy Project

MORPC
2/13/2019





The insight2050 Technical Assistance (TA) Program provides assistance from MORPC staff to local government members within the boundary of the metropolitan planning organization (MPO) for the planning of transportation and community development efforts related to the findings of insight2050 and goals of MORPC's Metropolitan Transportation Plan.

Through the TA Program, MORPC staff will assist member communities with specific planning services related to transportation, air quality, traffic, and other projects that support consideration of transportation in land use planning and/or demonstrate the benefits of various modes of transportation.

MORPC does not discriminate on the basis of age, race, color, national origin, gender, sexual orientation, familial status, religion or disability in programs, services or in employment. Information on non-discrimination and related MORPC policies and procedures is available at www.morpc.org.

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How to Use this Resource

Part 2 of the Implementation Toolkit is meant to be an internal resource for City of Worthington staff as they work towards implementing the city’s Complete Streets policy. It contains a brief discussion of federal roadway classifications and offers a context-sensitive roadway typology that is specific to the City of Worthington. Section 2 discusses land use considerations as they relate to creating Complete Streets and a healthy community that can meet present and future transportation and development demands. Section 3 connects the previous two sections by providing street design guidelines that integrate transportation and land use. The guidelines are in matrix format and can be used by city staff as a “menu of options” for creating streets that support safe active transportation options while accommodating all necessary vehicle traffic.

This Implementation Toolkit follows local, state, and regional best practices and was developed through an iterative process with community stakeholders. Content for the street design matrices was composed from MORPC’s Complete Streets Toolkit, Institute of Transportation Engineers (ITE) and Congress for New Urbansim’s (CNU) Designing Walkable Urban Thoroughfares report, and best practices from the National Association of City Transportation Officials (NACTO).



Picture sources: MORPC

Section 1: Roadway Classifications

As the City of Worthington strives for a focused growth approach to development and a transportation network that follows the ideals of Complete Streets, it is important to highlight the inherent connection between movement and place. Standard roadway classifications reflect a hierarchy of vehicle capacity. They do not fully capture the relationship between movement and place because they do not account for contextual changes in land use, multimodal capacity, and/or other community initiatives. This document aims to be a holistic resource by integrating roadway classifications, land use considerations, and street design guidelines.

When classifying roads we can take into account the capacity for streets to move pedestrians, cyclists, transit riders, emergency vehicles, and various other non-vehicle roadway users that rely on a safe and connected transportation network. The City of Worthington and MORPC worked together to develop a context-sensitive roadway classification system that considers multimodal mobility, development intensity, flexible design, and surrounding land uses. The system was developed following guidance and best practices from ITE, CNU, and the Ohio Department of Transportation (ODOT).

While the Context-Sensitive Roadway Classifications defined on page 7 are a useful tool for implementing Complete Streets in the City of Worthington, the Federal Highway Administration (FHWA) Functional Roadway Classifications defined on

page 6 are also important. The Functional Roadway Classification system assigns typologies based on a roadway’s role in providing access and mobility in the region. A roadway’s FHWA Federal Classification is closely connected to eligibility for federal funds. The table below shows the relationship between the Functional Roadway Classification system and the Context-Sensitive Roadways Classification system. Read the table horizontally to understand the Context-Sensitive typologies associated with a roadway’s existing functional classification.

The Context-Sensitive Roadway Classifications provide more detail than the FHWA Functional Roadway Classifications and can help the City of Worthington develop and retrofit a transportation network that is safe, efficient, and equitable for all of the city’s residents and visitors.

		Context-Sensitive Roadway Classifications					
		Freeway/ Expressway	Boulevard/ Parkway	Avenue	Main Street	Neighborhood Connector	Street
FHWA Functional Roadway Classifications	Expressway	██████████	██████████				
	Principal Arterial	██████████	██████████	██████████	██████████		
	Minor Arterial		██████████	██████████	██████████		
	Collector			██████████	██████████	██████████	
					██████████	██████████	██████████
	Local					██████████	██████████

1.1 FHWA Federal Roadway Classifications

Expressway	Expressways offer a high level of vehicle mobility, typically on roadways with a physical barrier between directional travel lanes. Expressways do not allow access to adjoining land uses. ¹
Principal Arterial	Principal Arterial roads also provide a high level of vehicle mobility in both rural and urban areas. Unlike expressways, Principal Arterials provide access to adjacent land uses. ¹
Minor Arterial	Minor arterial roads provide connectivity between the Principal Arterial system and provide vehicle mobility for moderate length trips. Minor arterials in rural contexts tend to have higher travel speeds and minimum interference. ¹
Collector	Collector roads provide connections between the arterial network and local roads. Subtle differences between Major and Minor collector roads generally involve speed limit, traffic volumes, travel lanes, and curb cuts. ¹
Local	Local roads provide direct access to abutting land uses, typically local residences and businesses. The majority of roadways in the United States are classified as local. ¹

1. ODOT, [Highway Functional Classification System: Concepts, Procedures, and Instructions](#)

1.2 Context-Sensitive Roadway Classifications

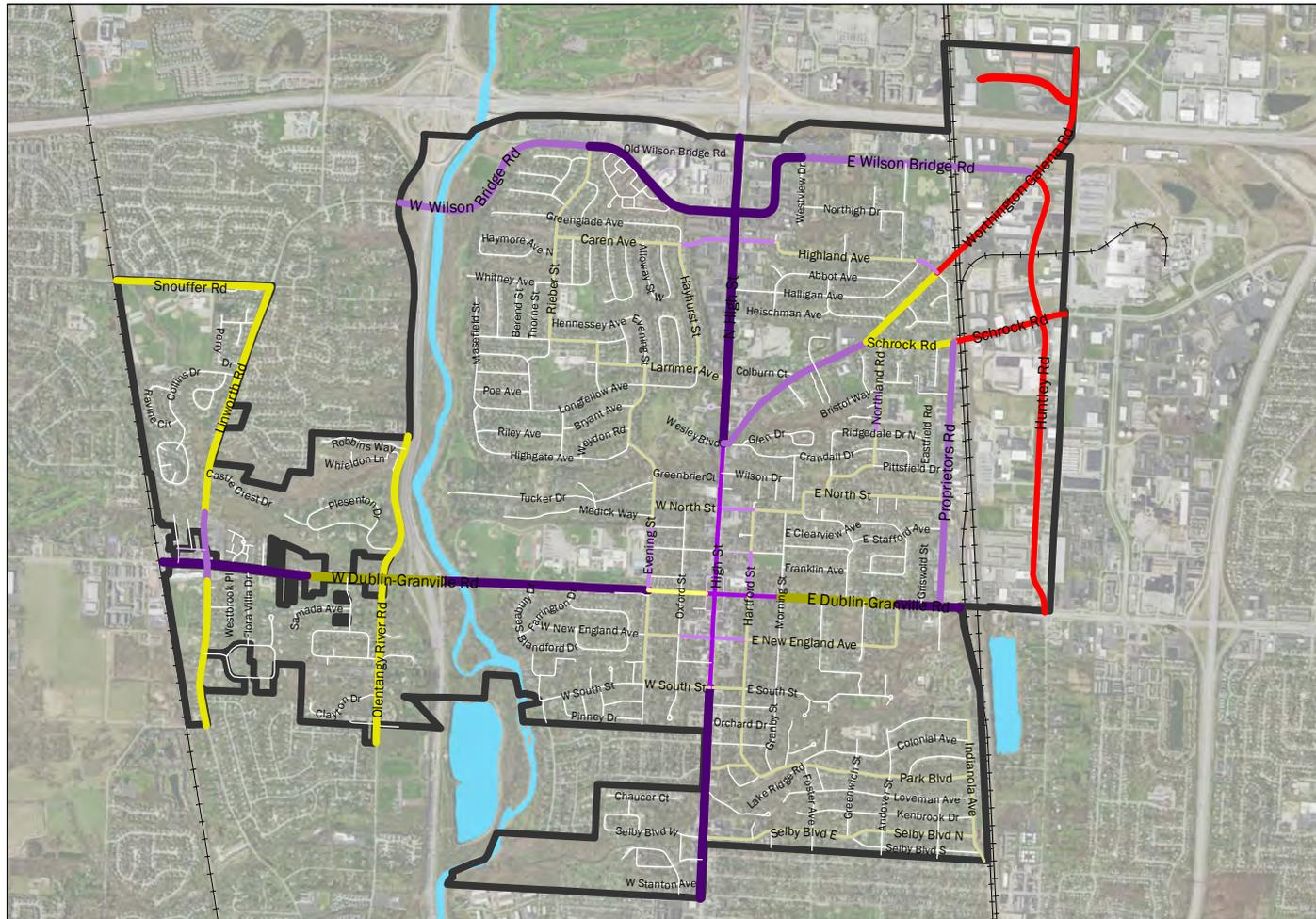
Freeway / Expressway	Freeways and expressways are high-speed roadways (50 mph or more) that accommodate large amounts of vehicle traffic and prohibit pedestrian access. They are either partially or completely controlled access and typically have 4 or more lanes. Freeways and expressways can include tollways, high-speed parkways, and limited-access thoroughfares with occasional at-grade intersections. ²
Parkway	Parkways constitute high-capacity, multi-lane, high- or medium- speed thoroughfares that offer connections to other high-capacity regional roads. Parkways generally have landscaping on each side and a landscaped median. Due to high speeds and high volumes of vehicles, active transportation facilities are typically separated from travel lanes on these roadways. Parkways should appropriately accommodate transit. They are functionally classified as Principal or Minor Arterials. ²
Boulevard	Boulevards are walkable, low-speed (35 mph or below) divided thoroughfares, functionally classified as either Principal Arterials or Minor Arterials depending on the context. They typically have 3 to 4 travel lanes. These roads are designed to accommodate "both through and local traffic, pedestrians, and bicyclists...[and] high ridership transit corridors." Boulevards provide connectivity between the arterial roadway system and provide vehicle mobility for long to moderate length trips. They are the primary routes for goods movement and emergency response routes. ^{1,2}
Avenue	Avenues are low-to-medium speed (25 to 35 mph) walkable roadways that generally have 2 to 4 travel lanes. They provide vehicle mobility for moderate to short trips, while offering primary pedestrian and bicycle routes. They are classified as either Minor Arterial or Collector roads. Avenues provide connections between the arterial network and local roads, and provide access to abutting local development is a main function. ^{1,2}
Main Street	Main Streets are a specific type of Avenue that offers access along the Town Center. They are categorized by low speeds and prioritized design for pedestrian and bicycle facilities. Pedestrian-oriented streetscapes, street furniture, on-street parking, and access to commercial and/or mixed-use districts are typical of Main Streets. Main Streets can include all functional classifications except Expressway depending on context. ³
Neighborhood Connector	Neighborhood Connectors are another type of Avenue roadway. They primarily function to connect neighborhood roads to higher-capacity Avenues and Boulevards. Neighborhood Connectors are characterized by less through traffic than typical Avenues or Main Streets. ³
Street	Streets are categorized as low-speed (25 mph), walkable roadways which primarily function to provide access to adjacent land for local vehicle, pedestrian, or bicycle traffic. Streets are designed to connect residential areas with other neighborhoods and may also offer connections to the arterial network. Streets are functionally classified as Local roads and typically have 2 travel lanes. In urban contexts, streets include alleyways and private roads. ^{1,2}

2. CNU & ITE, [Designing Walkable Urban Thoroughfares: A Context Sensitive Approach](#)

3. Boston Transportation Department, [Street Types](#)



City of Worthington Context- Sensitive Roadway Classifications



Worthington Streets	
Context, Classification	
—	Commercial/Industrial - Avenue
—	Mixed Use - Boulevard/Parkway
—	Mixed Use - Avenue
—	Mixed Use - Main Street
—	Mixed Use - Neighborhood Connector
—	Mixed Use - Street
—	Residential - Boulevard/Parkway
—	Residential - Avenue
—	Residential - Main Street
—	Residential - Neighborhood Connector
—	Residential - Street

morpc The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
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 11/27/2018



Section 2: Land Use Considerations

Based on the 2014 insight2050 report, we expect the City of Worthington to see rapid population growth and demographic shifts over the next 30 years. That growth will be accompanied by shifting demands in housing and transportation—people will want more walkable communities with affordable transportation options, compact housing choices, and mixed-use environments where they can live, work, and play. Transportation and land use are inherently linked; mode choice is influenced not only by transportation infrastructure, but land use characteristics as well. Both transportation and land use have implications for density, public health, the environment, and economic development. A comprehensive, focused growth approach is one that integrates land use and transportation planning. From a Complete Streets perspective, supporting safe and equitable transportation options within any land use requires a balance between “Pedestrian Priority” and “Vehicle Priority”.

In a collaborative report meant to guide cities working towards a more active transportation-friendly network, ITE and CNU defined the range of Pedestrian Priority as:

Pedestrian Places—mixed-use areas with a significant pedestrian presence, not dominated by, and sometimes prohibiting, vehicles

Pedestrian Supportive—mixed-use areas with moderate to significant pedestrian presence

Pedestrian Tolerant—areas that minimally accommodate pedestrians but do not support a high level of pedestrian activity and are usually vehicle dominant

Pedestrian Intolerant—areas with little support for walking or that prohibit pedestrians are vehicle dominant

Opposite to the Pedestrian Priority range is Vehicle Priority, defined as:

Vehicle Place—roadways that prioritize vehicle movement with little to no consideration for multimodal mobility

Vehicle Supportive—roadways that still primarily prioritize vehicle movement, but with appropriate infrastructure to support multimodal transportation options

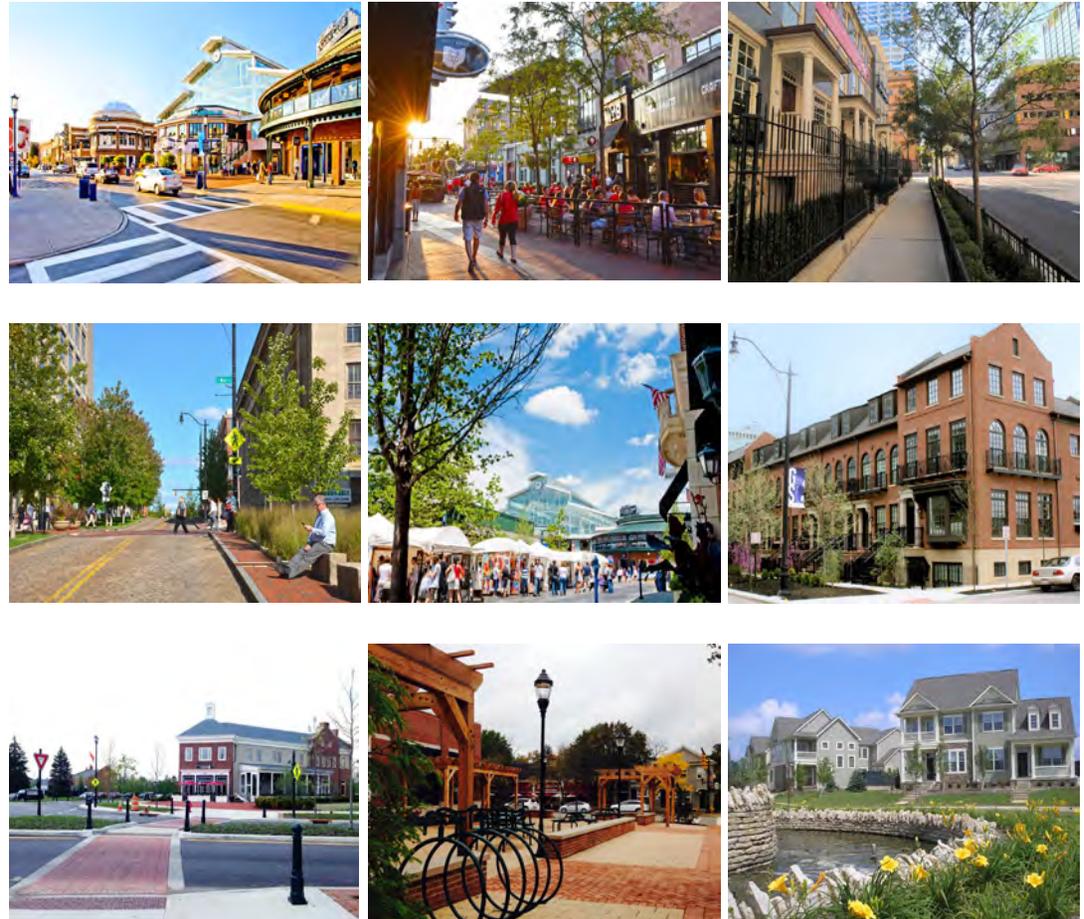
Vehicle Tolerant—areas that accommodate vehicle traffic, but have a well-connected multimodal network that encourages active transportation through street design and compatible land use

Vehicle Intolerant—areas that are primarily for pedestrians and may prohibit vehicle traffic altogether for special events or permanently

2.1 Pedestrian Places

Pedestrian Places prioritize pedestrians and cyclists and should support a wide range of land uses. In these spaces, **mixed-use, commercial retail, and commercial office** land uses should be prioritized. **Compact residential and civic** land uses are also encouraged. Street design and land use for Pedestrian Places should provide opportunity for social and economic activity through flexible and [design-oriented zoning codes](#), [placemaking](#), and [street furniture](#).

Pedestrian Places can range from vehicle supportive to vehicle intolerant. It is important that regardless of the level of vehicle capacity, pedestrian places provide infrastructure for safe and affordable multimodal transportation options that are accessible and inviting for all people.



Examples of Pedestrian Places from across the region—Worthington, Easton, Downtown Columbus, Dublin, New Albany, and Gateway District in Columbus. Sources: MORPC

2.2 Pedestrian Supportive Places

The infrastructure needed for a road to be Pedestrian Supportive will be different based on the road classification and adjacent land use. Regardless of vehicle capacity, Pedestrian Supportive roads require a well-connected active transportation network that gives users safe access to destinations and recreational amenities. Higher vehicle-capacity roads can support **mixed-use, commercial retail, and commercial office** land uses. Lower vehicle-capacity roads can support mixed-use, **neighborhood commercial, compact residential, civic, and institutional** land uses.

Flexible zoning practices, “[Park Once and Walk](#)” parking policies, [placemaking](#), and [design guidelines](#) are useful tools for creating roads that support active transportation options while still accommodating vehicle traffic.



Examples of Pedestrian Supportive roads from around the region and the country—London, New Albany, Bridge Street District in Dublin, Columbus, Westerville, Easton, and Kentlands, MD. Sources: MORPC, [DPZ](#)

2.3 Pedestrian Tolerant Places

Pedestrian Tolerant roads prioritize vehicle movement over multimodal transportation. They are often characterized by wide travel lanes, wide intersections, frequent curb cuts, dispersed land uses, large setbacks, and large amounts of surface parking. Low population density and development intensity are indications that Pedestrian Tolerant infrastructure may be sufficient to meet residents' multimodal needs. When striving for a focused growth approach to new development, Pedestrian Tolerant roads are suitable along **industrial, low density residential, and agricultural land uses.**

Pedestrian Tolerant roads may not encourage mode shift from single-occupancy vehicles to walking or cycling, but they do provide essential connections to jobs and other key services, particularly for low-income people. Pedestrian Tolerant roads must still be safe and accessible to all users. Where appropriate, principal arterials and minor collectors should prioritize additional intersection infrastructure and signage in order to increase pedestrian and cyclist safety, visibility, and comfort.

Examples of Pedestrian Tolerant roads from around the region— Columbus, Westerville, Easton, and Plain City. Sources: MORPC



2.4 Pedestrian Intolerant Places

Pedestrian Intolerant roads are not just those without any multimodal infrastructure – inadequate facilities can also render a street functionally Pedestrian Intolerant. Sidewalks that are not wide enough, lacking ADA ramps, or that are obstructed can create mobility challenges. Bike lanes on high speed, high vehicle capacity roads may intimidate all cyclists but the most experienced and confident ([less than 1% of riders](#)). Pedestrian Intolerant roads can encourage unsafe behavior that leads to collisions and injuries.

When coupled with dispersed commercial retail or commercial office uses, roads without sufficient multimodal infrastructure can encourage single-occupancy vehicle trips due to concerns about safety, inconvenience, and access to desired destinations. For those whose mobility options may be limited, Pedestrian Intolerant roads deny them the opportunity to safely get to the amenities they need and/or want. Aside from expressways or other roads where pedestrians are legally prohibited, it is almost never appropriate to completely exclude pedestrian infrastructure as doing so can disproportionately impact low-income families, the elderly, new Americans, people with disabilities, women, and/or people of color.

Examples of Pedestrian Intolerant roads from around the region and country—Polaris, Columbus, Gahanna, and Louisville, KY. Sources: MORPC



Section 3: Street Design Guidelines & Cross-Sections

The street design guideline matrices on the following pages aim to be holistic by integrating context-sensitive roadway classifications and land use characteristics. They are not meant to be prescriptive, but rather to offer a “menu of options” for developing or redeveloping a roadway into a Complete Street. The accompanying cross-sections are also not meant to be prescriptive, but to visualize the different ways Complete Streets design can be implemented on a roadway with a particular land use, roadway classification, and right-of-way width.

MORPC and the City of Worthington have developed the matrices and cross-sections to be context-sensitive for the City’s needs and community vision. The content in the matrices has been refined to reflect how the City of Worthington designs, develops, maintains, and redevelops its roadways. There are a total of three matrices, one for each type of land use within the city: Mixed-Use, Residential, and Industrial. The matrices contain Complete Streets design elements that have been compiled from MORPC’s Complete Streets Toolkit, ITE and CNU’s Designing Walkable Urban Thoroughfare report, and the NACTO website. For more information about a particular Complete Streets element within a matrix, see the glossary on page 24.

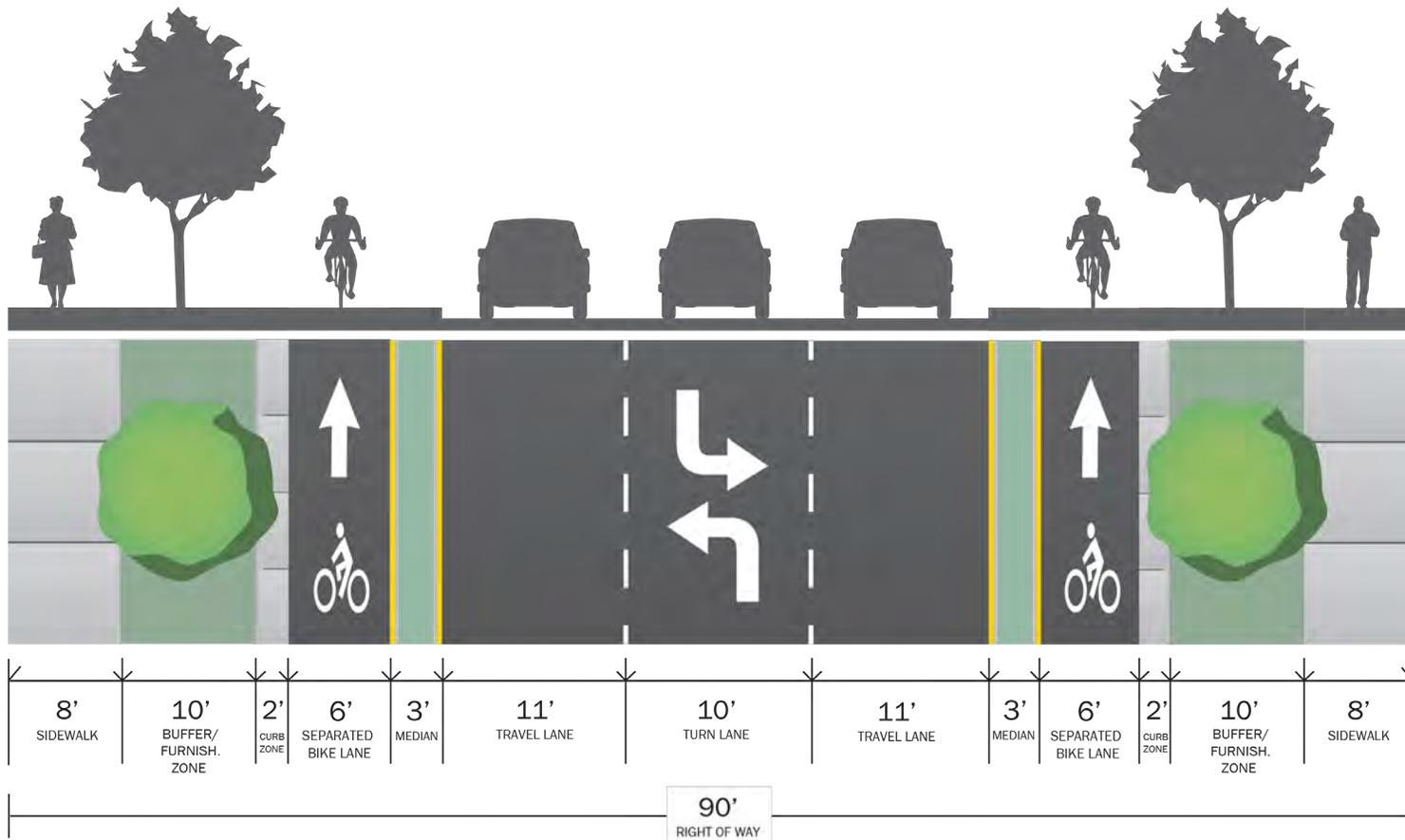
Mixed Use Street Design Guidelines

	Parkway	Boulevard	Avenue	Main Street	Neighborhood Connector	Street
Vehicle Zone Design						
Number of Lanes	4 - 6	4 - 6	2 - 4	2 - 3	2 - 3	2
Width of Lanes	11'	10' - 11'	10 - 11'	10'	10'	9 - 10'
Design Speed (mph)	30–35	30–35	25–35	20–25	25	15–25
Traffic calming	Raised / landscaped / striped medians Bus bulbs Striped chokers	Raised / landscaped / striped medians Roundabouts Striped chokers Bus bulbs Textured pavement (low impact)	Raised / landscaped / striped medians Roundabouts Striped chokers Textured pavement (low impact)	Striped chokers Textured pavement (low impact) Traffic circles	Striped chokers Traffic circles	Speed bumps Mini-traffic circle Striped chokers
Transit Considerations	Express	Express and Local	Local	Local	Local	Local and none
Freight Movement	Regional truck route	Regional truck route	Local truck route	Local deliveries only	Local deliveries only	Local deliveries only
Pedestrian Zone Design						
Curb Zone	0.5' - 1'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'
Buffer / Furnishings Zone	8' - 12' Grass / trees / landscaping / GSI Street lights / signage Bike racks Bus shelters / bus stops	8' - 12' Grass / trees / landscaping / GSI Street lights / signage Bike racks Bus shelters / bus stops	4' - 8' Grass / trees / landscaping / GSI Street lights / signage Bike racks Bus stops	4' - 6' Grass / trees / landscaping / GSI Street lights / signage Bike racks Bus shelters / bus stops	4' - 6' Grass / trees / landscaping / GSI Street lights / signage Bus stops	4' - 6' Grass / trees / landscaping / GSI Street lights / signage
Pedestrian Through Zone	6' - 12'	6' - 12'	6' - 12'	6' - 12'	6' - 8'	6' - 8'
Frontage Zone	0' - 2' Planters / landscaping Outdoor seating Moveable signage	0' - 6' Planters / landscaping Outdoor seating Moveable signage	4' - 12' Planters / landscaping Outdoor seating Café seating Moveable signage	4' - 12' Planters / landscaping Outdoor seating Café seating Moveable signage	2' - 6' Planters / landscaping Outdoor seating Moveable signage	2' - 6' Planters / landscaping Outdoor seating Moveable signage
Pedestrian Crossing	Marked crosswalks Signalized crosswalks Pedestrian refuge areas	Marked crosswalks Signalized crosswalks Pedestrian refuge areas	Marked crosswalks Signalized crosswalks Mid-block signalized crosswalks Pedestrian refuge areas Striped curb extensions	Marked crosswalks Signalized crosswalks Mid-block signalized crosswalks Striped curb extensions	Marked crosswalks Signalized crosswalks Striped curb extensions	Marked crosswalks Signalized crosswalks Striped curb extensions
Bicycle Zone Design						
Bicycle Zone	Barrier-separated bike lane 5' - 12' SUP ≥ 8'	Barrier-separated bike lane 5' - 12' Buffered bike lane 5' - 8' SUP ≥ 8'	Buffered bike lane 5' - 8' Bike lane 5' - 6' SUP ≥ 8'	Buffered bike lane 5' - 8' Bike lane 5' - 6' Sharrows Super sharrows SUP ≥ 8'	Buffered bike lane 5' - 8' Bike lane 5' - 6' Bike boulevard Sharrows Super Sharrows SUP ≥ 8'	Bike lane 5' - 6' Bike boulevard Sharrows
Bicycle Intersection Design	Bicycle refuge areas	Bicycle refuge areas	Intersection crossing markings	Intersection crossing markings	Intersection crossing markings	Intersection crossing markings
Parking Design	On-street parking Structured parking Screening Shared surface lots	On-street parking Structured parking Screening Rear / alley-access surface lots Shared surface lots	On-street parking Screening Rear / alley-access surface lots Shared surface lots Minimal curb cuts	On-street parking Screening Rear / alley-access surface lots Shared surface lots Minimal curb cuts	On-street parking Screening Rear / alley-access surface lots Shared surface lots	On-street parking Screening Shared surface lots

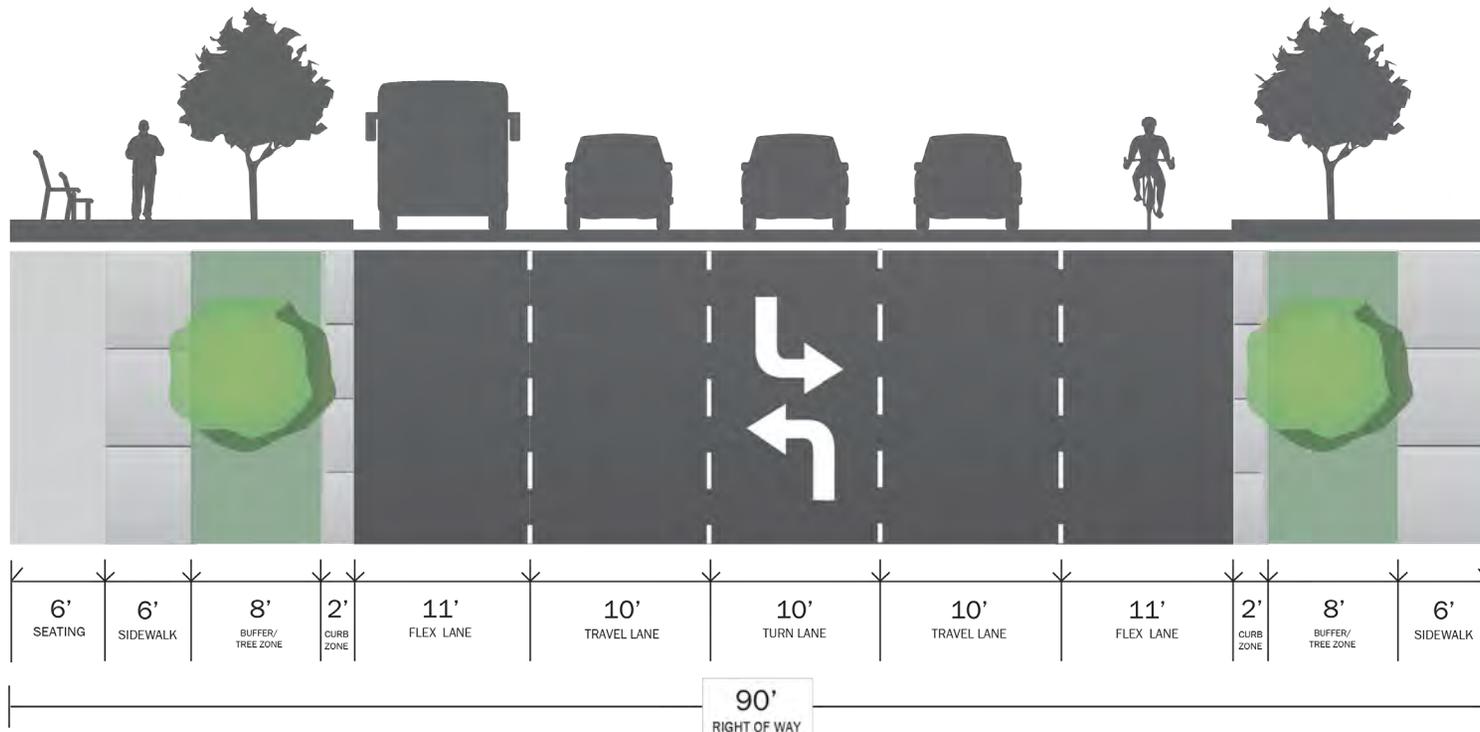
Mixed Use Flex Lane Design Guidelines

	Parkway	Boulevard	Avenue	Main Street	Flex Lane priorities by time of day
Flex Lane Design					
Early Morning (12 a.m. - 6 a.m.)	Commercial vehicle loading / drop-off	Commercial vehicle loading / drop-off	Commercial vehicle loading / drop-off	Commercial vehicle loading / drop-off	Priorities: Access for commerce
Morning (6 a.m. - 11 a.m.)	General purpose travel lane Bus only lane Low-speed motorized/non-motorized lane	General purpose travel lane Bus only lane Low-speed motorized/non-motorized lane	General purpose travel lane Low-speed motorized/non-motorized lane Food trucks / parklet / public art Short-term parking	General purpose travel lane Low-speed motorized/non-motorized lane Food trucks / parklet / public art Short-term parking	Priorities: Mobility Activation / greening
Mid-Day (11 a.m. - 4 p.m.)	Bus only lane Food trucks Short-term parking Low-speed motorized/non-motorized lane	Bus only lane Food trucks Short-term parking Low-speed motorized/non-motorized lane	Low-speed motorized/non-motorized lane Food trucks / parklet / public art Short-term parking	Low-speed motorized/non-motorized lane Food trucks / parklet / public art Short-term parking	Priorities: Activation / greening Access for people Mobility
Evening (4 p.m. - 9 p.m.)	General purpose travel lane Bus only lane Short-term parking	General purpose travel lane Bus only lane Low-speed motorized/non-motorized lane Short-term parking	General purpose travel lane Low-speed motorized/non-motorized lane Short-term parking	General purpose travel lane Low-speed motorized/non-motorized lane Short-term parking	Priorities: Mobility Access for people
Late Night (9 p.m. - 12 a.m.)	Commercial vehicle loading / drop-off Short-term parking General purpose travel lane	Commercial vehicle loading / drop-off Short-term parking General purpose travel lane	Commercial vehicle loading / drop-off Short-term parking General purpose travel lane	Commercial vehicle loading / drop-off Short-term parking General purpose travel lane	Priorities: Access for commerce Access for people Mobility

Mixed-Use Boulevard Example 1



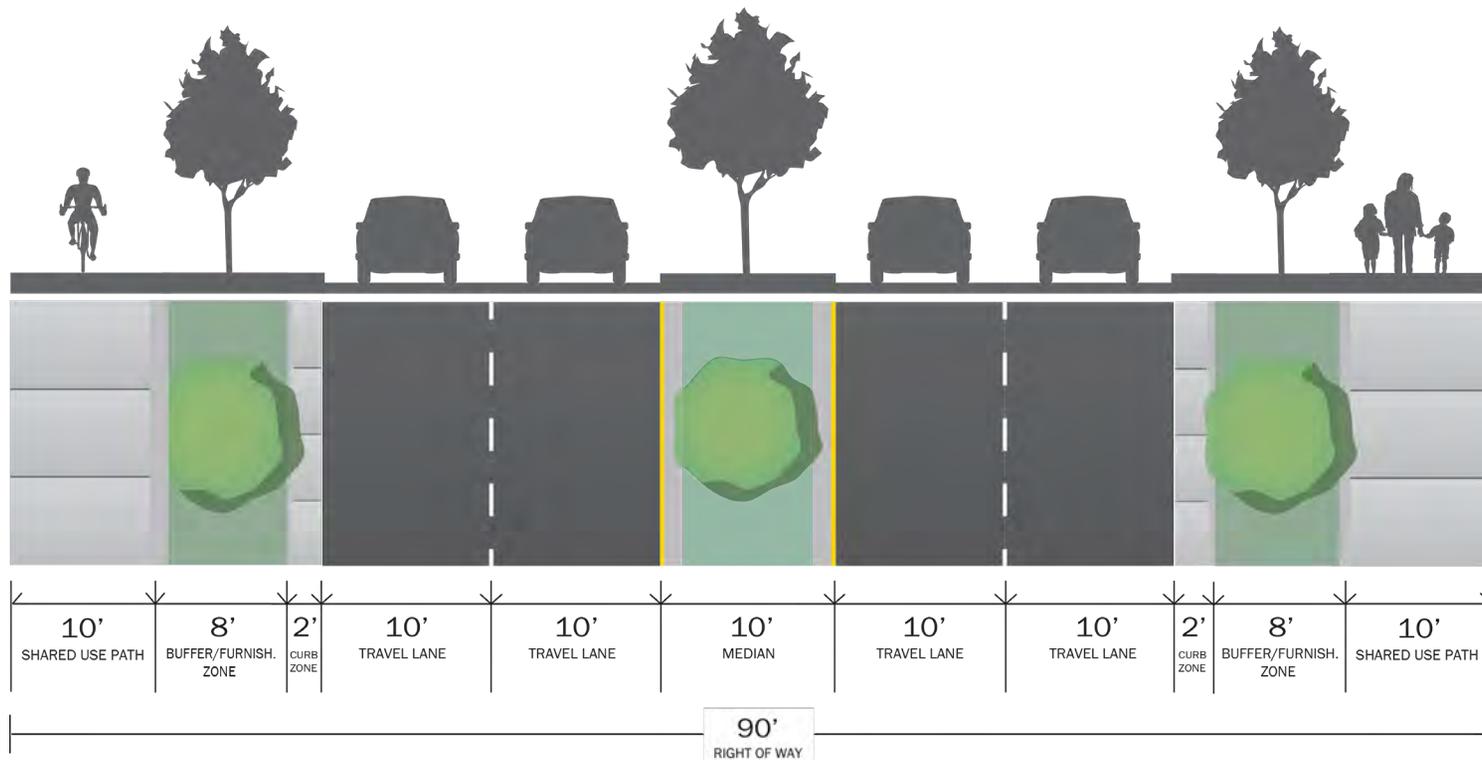
Mixed-Use Boulevard Example 2



Flex lanes manage sought-after curbside space by accommodating multiple functions throughout the day. For a roadway like the one shown above, this could include:

- On-street parking lane
- Bus-only lane
- Through bicycle traffic lane
- Through vehicle traffic lane

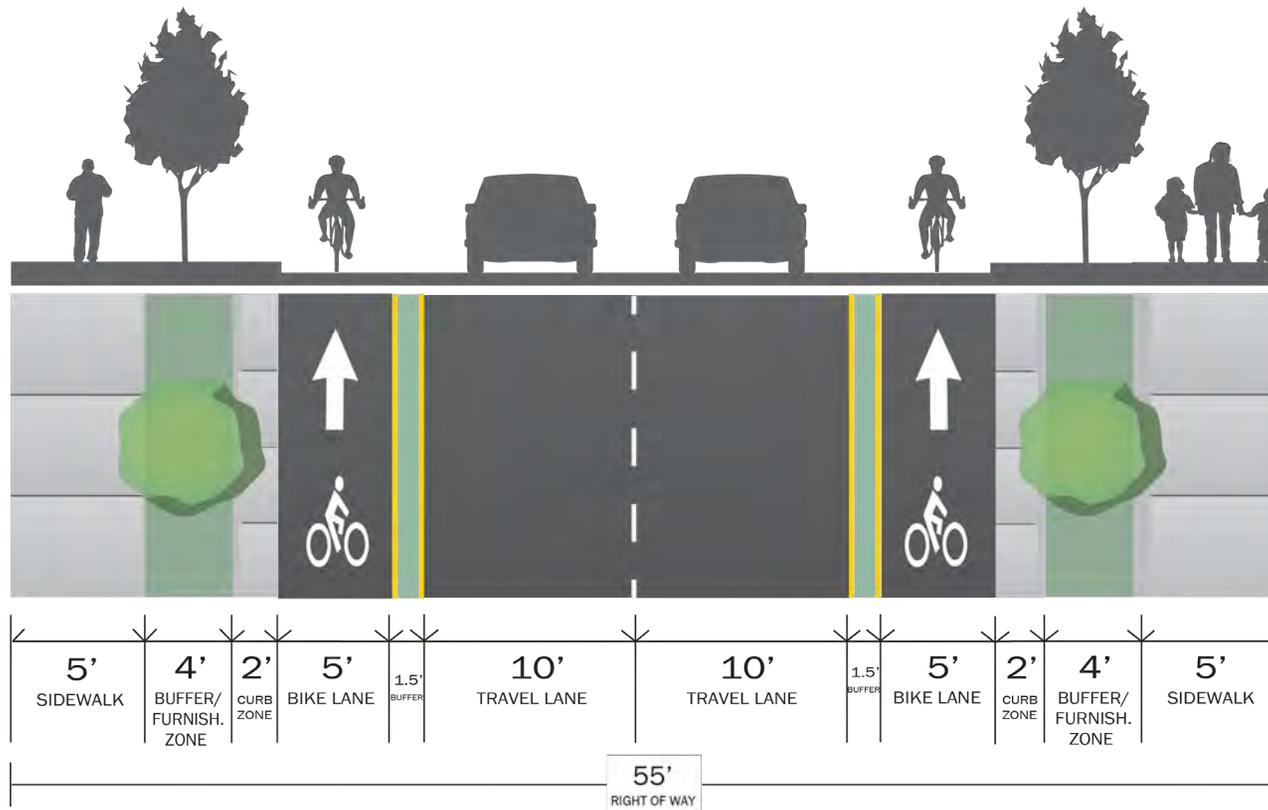
Mixed-Use Boulevard Example 3



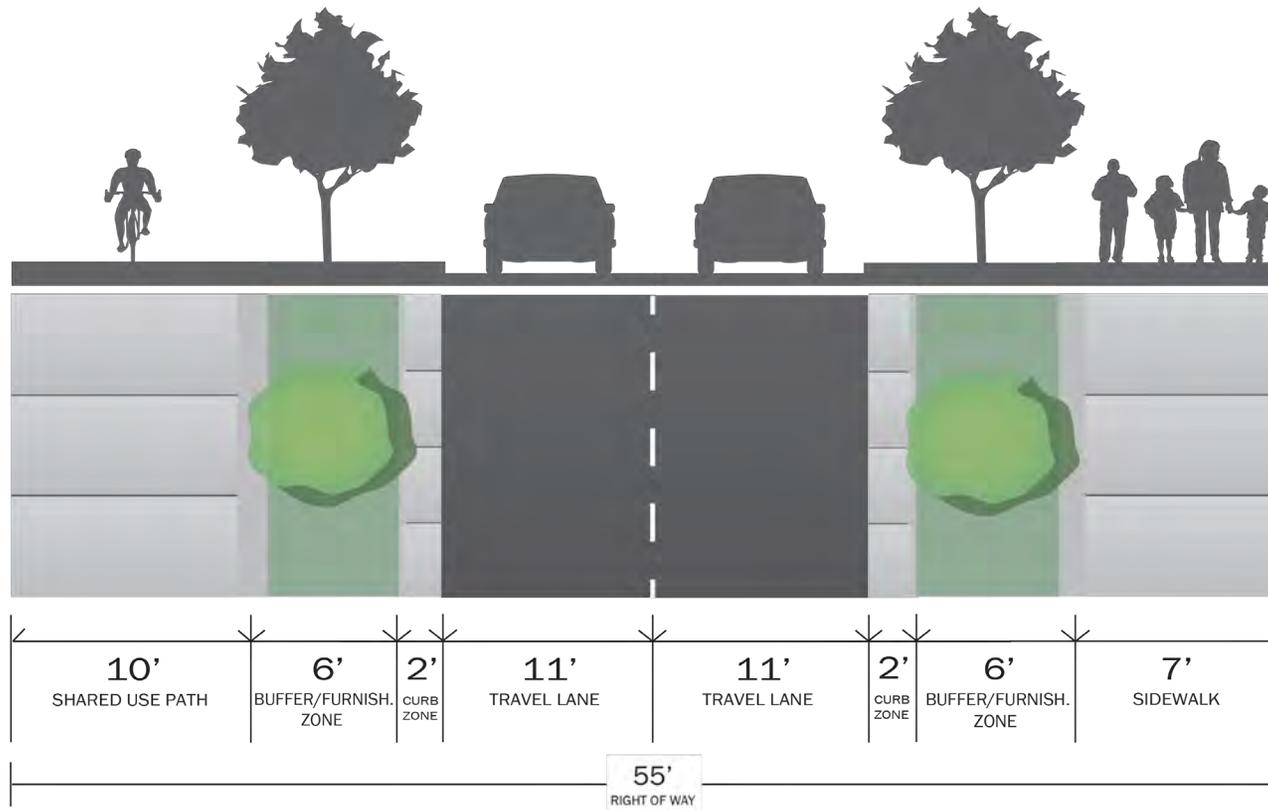
Residential Street Design Guidelines

	Parkway	Boulevard	Avenue	Main Street	Neighborhood Connector	Street
Vehicle Zone Design						
Number of Lanes	4 - 6	4 - 6	2 - 4	2 - 3	2 - 3	1 - 2
Width of Lanes	11'	10' - 11'	10 - 11'	10'	10'	9 - 10'
Design Speed (mph)	30–35	30–35	25–35	20–25	25	15–25
Traffic calming	Raised / landscaped / striped medians Striped chokers	Raised / landscaped / striped medians Roundabouts Striped chokers	Raised / landscaped / striped medians Roundabouts Striped chokers	Striped chokers Traffic circles	Striped chokers Traffic circles Speed bumps	Speed bumps Mini-traffic circle
Transit Considerations	Local and none	Local and none	Local and none	Local and none	Local and none	None
Freight Movement	Local deliveries only	Local deliveries only	Local deliveries only	Local deliveries only	Local deliveries only	Local deliveries only
Pedestrian Zone Design						
Curb Zone	0.5' - 1'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'	1.5' - 2.5'
Buffer / Furnishings Zone	4' - 12' Grass / trees / landscaping / GSI Street lights / signage Bus shelters / bus stops	4' - 12' Grass / trees / landscaping / GSI Street lights / signage Bus stops	4' - 6' Grass / trees / landscaping / GSI Street lights / signage Bus stops	2' - 6' Grass / trees / landscaping / GSI Street lights / signage Bus stops	2' - 4' Grass / trees / landscaping / GSI Street lights / signage Bus stops	2' - 4' Grass / trees / landscaping / GSI Street lights / signage
Pedestrian Through Zone	5' - 8'	5' - 8'	5' - 8'	5' - 8'	5' - 6'	5' - 6'
Frontage Zone						
Pedestrian Crossing	Marked crosswalks Signalized crosswalks Pedestrian refuge areas	Marked crosswalks Signalized crosswalks Pedestrian refuge areas	Marked crosswalks Signalized crosswalks Pedestrian refuge areas Striped curb extensions	Marked crosswalks Signalized crosswalks Striped curb extensions	Marked crosswalks Signalized crosswalks Striped curb extensions	Marked crosswalks Signalized crosswalks Striped curb extensions
Bicycle Zone Design						
Bicycle Zone	Barrier-separated bike lane 5' - 12' SUP ≥ 8'	Barrier-separated bike lane 5' - 12' SUP ≥ 8'	Buffered bike lane 5' - 8' Bike lane 5' - 6' Sharrows Super sharrows Bike boulevard SUP ≥ 8'	Buffered bike lane 5' - 8' Bike lane 5' - 6' Sharrows Super sharrows SUP ≥ 8'	Bike lane 5' - 6' Bike boulevard Sharrows Super sharrows SUP ≥ 8'	Bike lane 5' - 6' Bike boulevard Sharrows
Bicycle Intersection Design	Bicycle refuge areas Intersection crossing markings	Intersection crossing markings	Intersection crossing markings	Intersection crossing markings	Intersection crossing markings	Intersection crossing markings
Parking Design	On-street parking Screening (multifamily housing)	On-street parking Screening (multifamily housing)	On-street parking Screening (multifamily housing)	On-street parking Screening (multifamily housing)	On-street parking	On-street parking

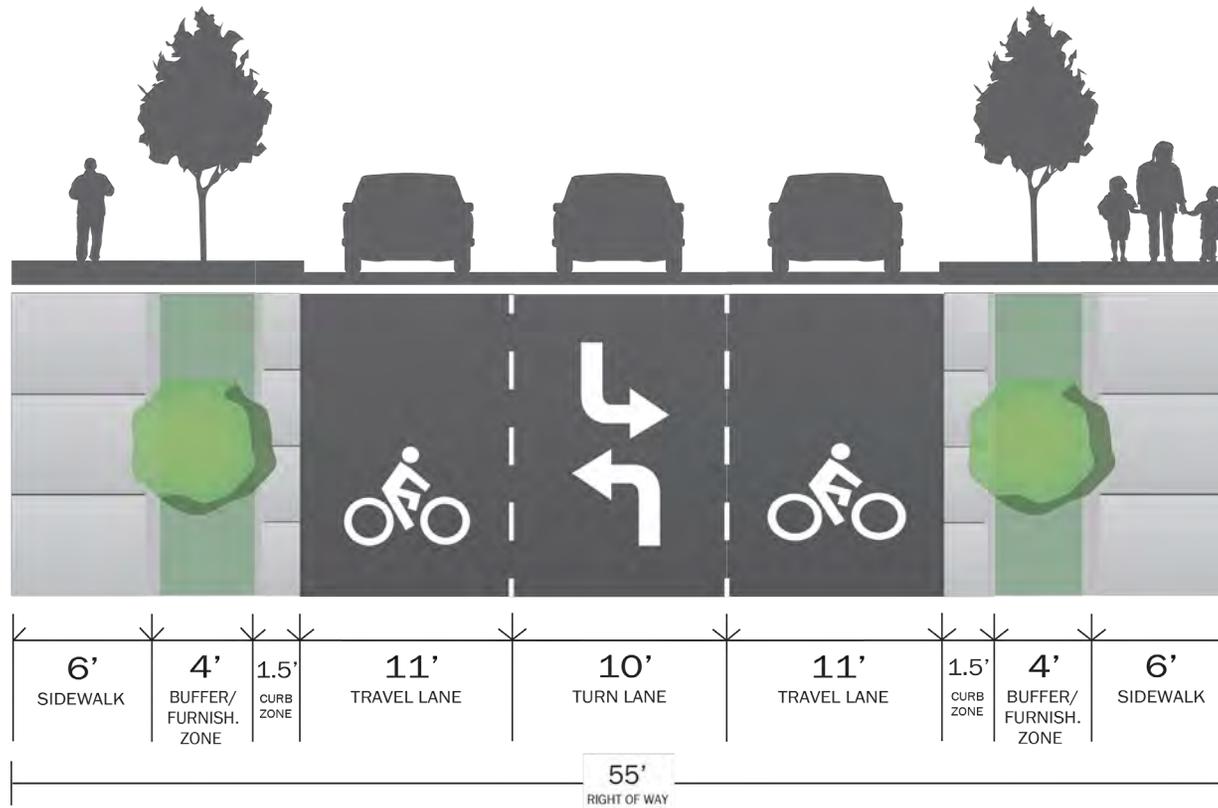
Residential Avenue Example 1



Residential Avenue Example 2



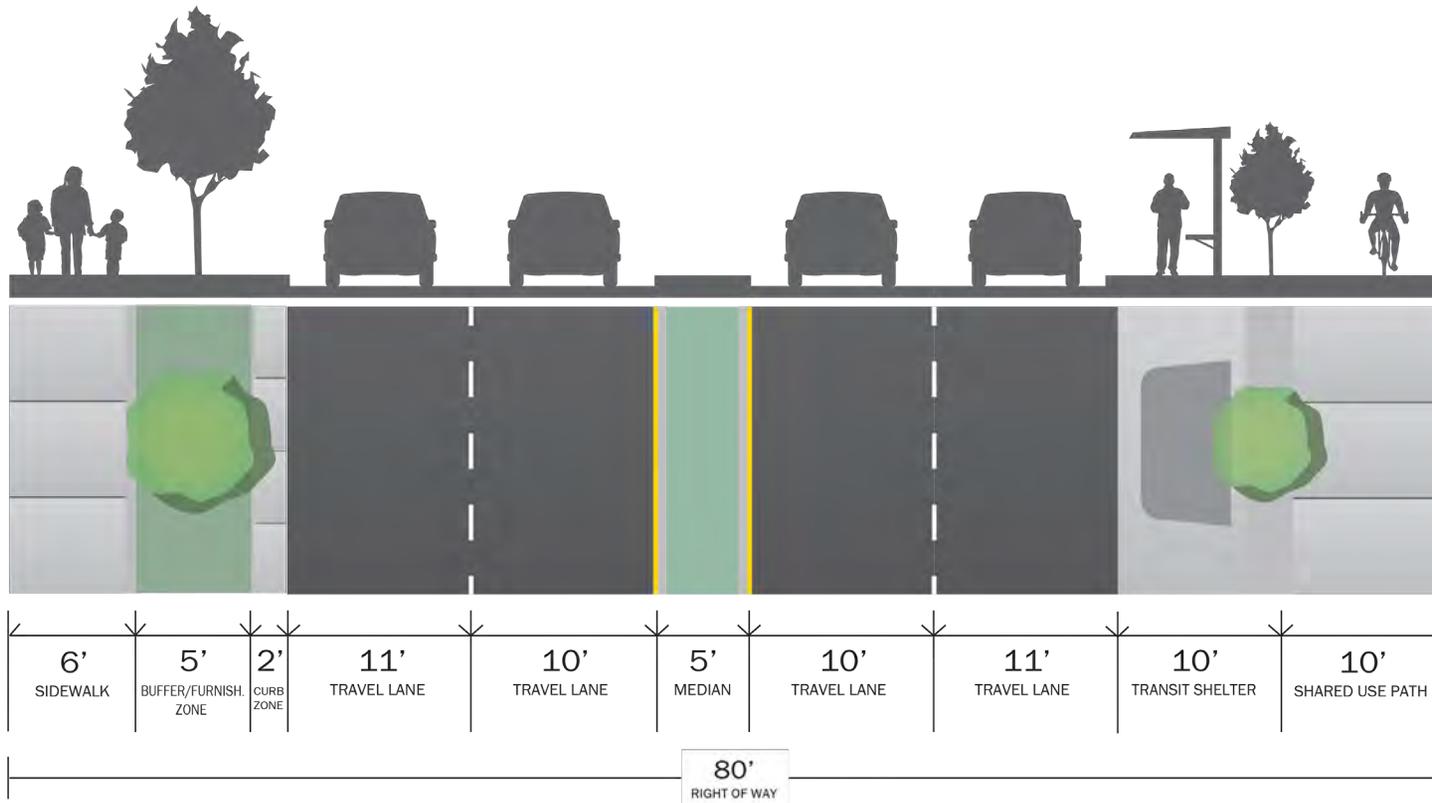
Residential Avenue Example 3



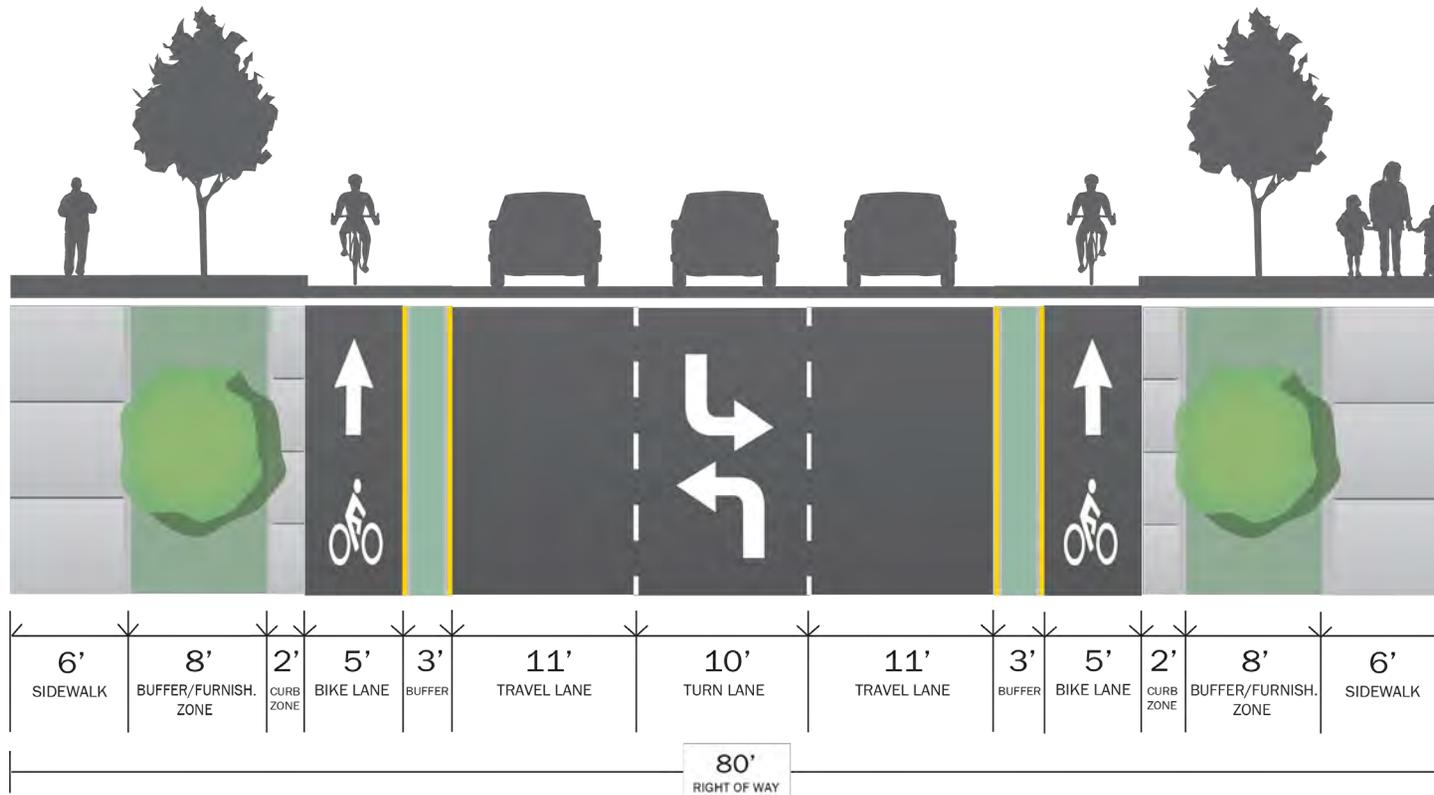
Industrial Street Design Guidelines

	Parkway	Boulevard	Avenue	Main Street	Neighborhood Connector	Street
Vehicle Zone Design						
Number of Lanes	4 - 6	5 - 6	2 - 4			
Width of Lanes	11'	10' - 11'	10 - 11'			
Design Speed (mph)	30–35	30–35	25–35			
Traffic calming	Raised / landscaped / striped median Striped chokers	Raised / landscaped / striped medians Striped chokers	Raised / landscaped / striped medians Striped chokers			
Transit Considerations	Express and Local	Express and Local	Express and Local			
Freight Movement	Regional truck route	Regional truck route	Regional & local truck route			
Pedestrian Zone Design						
Curb Zone	0.5' - 1'	1.5' - 2.5'	1.5' - 2.5'			
Buffer / Furnishings Zone	4' - 8' Grass / trees / landscaping / GSI Street lights / signage Bus shelters / bus stops	4' - 8' Grass / trees / landscaping / GSI Street lights / signage Bus shelters / bus stops	4' - 8' Grass / trees / landscaping / GSI Street lights / signage Bus shelters / bus stops			
Pedestrian Through Zone	5' - 8'	5' - 8'	5' - 8'			
Frontage Zone						
Pedestrian Crossing	Marked crosswalks Signalized crosswalks Pedestrian refuge areas Mid-block signalized crosswalks	Marked crosswalks Signalized crosswalks Pedestrian refuge areas Mid-block signalized crosswalks	Marked crosswalks Signalized crosswalks Pedestrian refuge areas Mid-block signalized crosswalks			
Bicycle Zone Design						
Bicycle Zone	Barrier-separated bike lane 5' - 12' Buffered bike lane 5' - 8' SUP ≥ 8'	Barrier-separated bike lane 5' - 12' Buffered bike lane 5' - 8' SUP ≥ 8'	Barrier-separated bike lane 5' - 12' Buffered bike lane 5' - 8' SUP ≥ 8'			
Bicycle Intersection Design	Bicycle refuge areas	Bicycle refuge areas	Bicycle refuge areas			
Parking Design	Screening Shared surface lots	Screening Shared surface lots	Screening Shared surface lots			

Industrial Avenue Example 1



Industrial Avenue Example 2

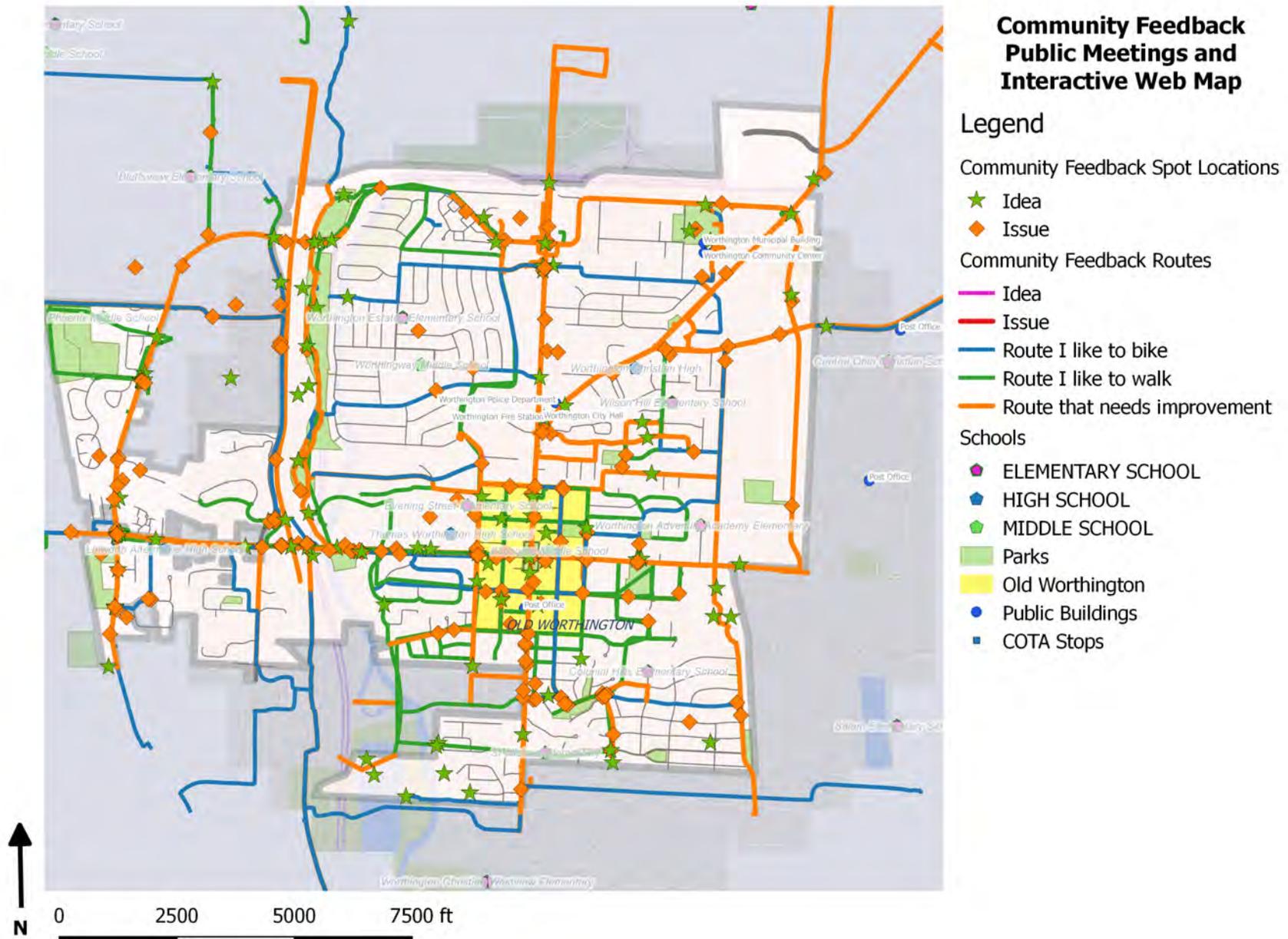


Complete Streets Elements Glossary

- [Barrier-separated bike lane](#)
- [Bicycle refuge area](#)
- [Bike boulevard](#)
- [Bike lane](#)
- [Buffered bike lane](#)
- [Bus bulb](#)
- [Bus shelter](#)
- [Bus stop](#)
- [Choker / curb extension](#)
- [Curb cuts](#)
- [Curb zone](#)
- [Flex lane](#)
- [Frontage zone](#)
- [Furnishings zone](#)
- [Green Stormwater Infrastructure \(GSI\)](#)
- [Intersection crossing markings \(bike\)](#)
- [Lane Width](#)
- [Metered on-street parking](#)
- [Mid-block signalized crosswalk](#)
- [Mini-traffic circle](#)
- [On-street parking](#)
- [Outdoor seating](#)
- [Parking lot design](#)
- [Pedestrian refuge area](#)
- [Pedestrian through zone](#)
- [Planters](#)
- [Raised median](#)
- [Roundabout](#)
- [Screening](#)
- [Shared parking](#)
- [Shared use path \(SUP\)](#)
- [Sharrows](#)
- [Signage](#)
- [Signalized crosswalks](#)
- [Super sharrows \(picture\)](#)
- [Speed bump](#)
- [Street furniture](#)
- [Structured parking](#)
- [Textured pavement](#)
- [Trees](#)

APPENDIX E. COMMUNITY COMMENTS

MAP OF COMMUNITY FEEDBACK



The following pages include each comment received. They are categorized by the source of their collection.

- *Public*: Comments submitted on-line via Geo-Wiki mapping.
- *Workshop*: Comments generated during the August Community Workshop
- *Fest614*: Comments generated at the August 2018, Summer in the 614 Festival.
- *Open House*: Comments generated at the February Open House located in the Worthington Community Center.
- *Open House SM*: Survey results collected online after the Open House through Survey Monkey.

Table #14. Community Comments

Comment Source	Comment
Workshop	TABLE 1 - 2 Lack of Linworth Road access to most anything (park paths, shopping, other neighborhoods)
Workshop	TABLE 1 - 4 Too wide, fast - hard to access businesses
Workshop	TABLE 1 - 5 Hard to bicycle to schools [ALL OVER]
Workshop	TABLE 1 - 6 Connect parts of town with other communities
Workshop	TABLE 1 - 6 Connect parts of town with other communities
Workshop	TABLE 1 - IDEA #1 Bike lanes, separate/protected bike lanes between major roads
Workshop	TABLE 2 - IDEA #3 Bus stop improvements (Caren/High)
Public	Huntley Road Intersection improvements much needed
Public	No easy/safe way for bikes to get from Greenglade cut-through to Kroger/mall without cutting through parking lots.
Public	Missing curb cut at end of sidewalk where Franklin Ave meets Morning St
Public	A crosswalk on the south side of 161 to cross Linworth Road is sorely needed.
Public	The sidewalk on the west side of the road is missing a critical connection over the creek which causes foot traffic to walk on the road which is already narrow due to the guard rails.

Public	The new connection from the park to Linworth Crossing floods whenever significant rain falls and stays wet for long periods. In addition mud washes into the path making it hazardous to ride a bike over.
Public	There is no sidewalk or bike lane along 315 as well as Olentangy River Rd to easily allow residents around Worthington Hills area to get to the bike path over by Hills Market. It is really dangerous to try to cross 315.
Public	Crossing to the Olentangy Trail from Plesenton Dr is dangerous as there is no crosswalk or signal here. It is hard to see around the bend and the noise from 315 makes it hard to hear traffic coming.
Public	The bike path ends at the alternative school and turns into a narrow sidewalk. It would be nice if path could continue to Villa Flora or Linworth Road ideally. This same section of sidewalk also floods.
Public	sidewalks not connected.
Public	sidewalks not connected
Public	the sidewalk doesn't connect on the south side of the street.
Public	Entering Crandall Drive from High Street, drivers must go up a hill and curve and it's 25MPH but people often speed up this hill. It's a safety hazard for pedestrians, without a sidewalk on Crandall Drive.
Public	People constantly run the Foster stop sign- making this a four way stop would be a huge help and would help deter speeders from the park or High St.
Public	Need a drinking fountain at trail head.
Public	It would be really nice to have more places to drop in kayaks and canoes along the path.
Public	I'd really like to be able to run/bike/walk north of hills.
Public	Ramp needed! No ramp to get up or down the curb - not handicap accessible or stroller accessible
Public	Nice to have a bike lane on Indianola, but there is a lot of gravel and dirt filling through this industrial area. Would be good to send a street sweep machine through occasionally
Public	Add crosswalk - hybrid beacon here for bike and ped crossing to school/park

Comment Source	Comment
Public	Crosswalk
Public	Four way crosswalk here
Public	This crossing point is extremely dangerous for bicyclists. I am particularly concerned about kids crossing not at the crosswalk but instead from the point at which the trail empties onto the freeway entryway. The pitch of the trail at this point of entry
Public	It would be extremely helpful to have a crosswalk here not only to assist bicyclists and pedestrians with crossing this busy road, but also to slow traffic along the route generally.
Public	It would be a huge lifestyle improvement for all living in the surrounding neighborhoods, and a boon to the businesses along 161, to have a side walk down Linworth Rd from 161 to Snouffer or even all the way through to Hard Rd (filling gaps, as there are
Public	It is extremely unsafe to access the bike path from Plesenton Drive which is the only means to do so since there are no sidewalks on the west side of Olentangy River Road. Between the blind curve and the 35 mph speed limit (which drivers routinely ignore
Public	Pothole, keeps getting larger each year
Public	Hybrid beacon needed
Public	Multi use path needed up and down Linworth
Public	Hybrid beacon needed
Public	Wider sidewalks up and down High street
Public	Sidewalks needed up and down street
Public	Speed limit needs to be reduced to 25
Public	Need bike lane from Evening Street to trail
Public	Need better enforcement against drivers running red lights all along 161 and High St.
Public	Drivers speeding along this street, where there a only a couple of blocks of sidewalk.
Public	There needs to be sidewalk in front of the school along 161 (from the pool driveway to Evening Street). One has to either cross the road, hoping that no one runs the light, then cross again at Evening Street, or walk through the school grounds during sc
Public	Speeding traffic on Indianola, Park Blvd, North and especially South Selby is hazardous to cyclists.

Public	I have a child that walks to Colonial Hills Elementary School along this route. Cars go very fast along this curve, and often are not watching for small children walking to school and crossing the road. It would be helpful to have a crosswalk on Hartford
Public	The sidewalk here ends at the alley - there is no way to access high street to head south safely via sidewalk and I would echo the speed of cars (and the sheer volume) coming up Hartford and turning onto Southington is an issue. At this point more houses
Public	There needs to be a cross walk here. This is a busy intersection and no safe way to cross the street without playing "frogger". It would provide access to the path up to Old Worthington. I don't think we need a light or anything, just simple
Public	Flashing crosswalk across Linworth Rd at Collins Drive to safely allow kids and families to cross to gain access to both Perry Park and the Olentangy bike path.
Public	Need left turn arrow from 161 E to Linworth Rd. north. It is very difficult to turn left and often is only possible when the light turns yellow.
Public	Narrow road and no sidewalks on Snouffer. It would be nice if there was a path that allowed access to Linworth as well as Olentangy.
Public	Pedestrian/bike trail between Dublin Granville and Indianola, through Harding Hospital property
Public	Potential trail/nature preserve for public use
Public	Wilson Bridge north to Hard Road could use improvements
Public	The sidewalks on High St. from Davis Estates are FAR too narrow for anyone, especially children to walk safely. Buses nearly knock you over. There's also a section of sidewalk that slopes into a ravine. It is impossible to walk side by side until yo
Public	The lack of sidewalks on Crandall and Ridgedale make it dangerous for children leaving school or traveling to/from the park. At least one side of these streets should have a sidewalk.
Public	This area needs sidewalks to keep children safe. That area is packed with cars and kids after school. Sidewalks would make it safer for the students of Wilson Hill.
Public	Please add a 4 way crosswalk at 161-Linworth.
Public	Cross-walk signals between neighborhoods - at this location (MacGregor Ave) or at the street to the south, Loch Ness Ave

Comment Source	Comment
Public	This is a dangerous spot, particularly when kids are walking/riding to/from school. I would love to see a traffic mirror where McCoy bends to meet South St.. A mirror would help cars, particularly ones coming down the hill from South St. see what/who
Public	better access and use of this parkland
Public	better connection needed for walking/biking
Public	Safer access from downtown Worthington to the Olentangy bike path would be great!
Public	better bike connections along 161
Public	have a multiuse path on this side of 161
Public	This 5-point intersection is the only one in Worthington and is super dangerous to cross. Kids cross daily to/from school, and I've repeatedly been denied a crosswalk there. There is no good route. The direction I was told to walk my kids has no sidewalk
Public	No easy route to get from Hard Rd and those Worthington Schools across 315 to the trail head. If this was connected, you could easily get from those schools over to downtown Worthington.
Public	Smokey row needs bicycle lane(s)
Public	Crosswalk across Linworth. There are many children that cross here on the way to and from Perry Park for playtime and soccer/baseball practices.
Public	Could we ever consider reordering the priorities at this light? I know this is a busy intersection for vehicular traffic. I also know as a pedestrian, when I press the walk sign, I have to wait a whole cycle before a walk sign is issued, making it clear
Public	add a cross walk or flashing lights so many families walk up the bike path on 161 and come through the neighborhood to get to the park but there is no cross walk or flashing lights and the cars come speeding over the hill
Public	The Crandall Dr./Worthington-Galena Rd. HighSt. intersection is difficult and unsafe to navigate as a pedestrian. It's the only intersection south of 270 that does not have sidewalks in Worthington. It would be a great improvement of safety and walkability
Public	Drivers cutting through Flora Villa and Beechview to access 161 and Linworth roads. Needs speed deterrence.

Public	Constant flooding from park/roadway causing flooding of basements in area, covering roadways in standing water.
Public	Unlock gate that prevents access to the cemetery. I would suggest making an opening that only pedestrians can access. Thus, allowing better foot traffic and still keeping down on car access down Stanton Ave.
Public	I would like to reiterate the value that would be added for Olentangy Highlands, Potter's Creek and Castle Crest residents if there were a path down Linworth Rd from Collins. Since the Shops at Linworth were built we have gone there many times to the re
Public	Create a small trail path from the SW edge of the cemetery to Board Meadows Blvd. There is already a cut in the fence with a beaten path. You might as well formalize it. It might be tricky because you may have to work with the city of Columbus and the appa
Public	There is a beaten path between Northbrook Dr and Melbourne that should be turned into a multi-use trail. The home owners off Northbrook would be butt hurt and probably NIMBY it from happening. But it's worth a shot to ask. Creates a solid connector, and
Public	I would like to see sidewalk continuation to the bus stops throughout Worthington, and if possible, some benches too. Many of my library patrons who take the bus experience mobility issues and would benefit from more accessible bus stops. Just about ever
Public	Part of Olentangy Trail between I-270 bridge and Gazebo just south of Hills needs more benches for us senior walkers.
Public	Bus stop should be covered, it's heavily used and there is no shade
Public	Would love to see a flashing lights crosswalk across Linworth Road connecting Olentangy Highlands and Potters Creek with access to Perry Park.
Public	Cars run this light all the time. It's just a matter of time before a kid gets hit even with the new timing system
Public	Dangerous for walking or biking
Public	Hard/Dangerous to turn from East Bound Wilson Bridge into park to get to bikepath. Eastbound traffic behind you won't see you because of the curve.
Public	Difficult hairpin turn to negotiate. Often gravel and other debris at bottom of hill right where people need to turn.

Comment Source	Comment
Public	Crosswalk
Public	People drive very fast down Linworth. With the slight hill to the south of Beechview, it's hard to see people coming from the south and makes crossing Linworth to go to the park challenging
Public	People cut through from 161-Linworth and go very fast through the neighborhood.
Public	Make sure ALL traffic signals are calibrated to detect bikes. It's nice that Worthington uses a dedicated light to notify the motorist the signal has detected their vehicle.
Public	The combined sidewalks/aprons make it difficult to walk, push a stroller, or let a child ride a bike.
Public	An idea would be to get rid of the sidewalks downtown and make the entire street level (no higher sidewalk). Then the city could get huge planters and use those to separate the pedestrian area from the street. These planters could be moved based on eve
Public	more bridges to cross the river
Public	A major factor in walkable/bikeable communities is the ability to connect everything to a mixed use trail. Worthington already has a good spine (the olentangy river trail). We should concentrate on making direct connectors to the trail that go to every
Public	5 way intersection with elementary school kids crossing to get to and from school (colonial, park, foster, lake ridge). No cross walk, no stop sign on Park-- please address! Children cross here to get to Colonial Elementary! Flashing stop signs to slo
Public	Speeding in this stretch has become a significant issue as drivers race to see just how fast they can get from Hartford to High, and vice versa. There are too many children in this stretch and an accident will occur if we can't better control this area.
Public	Walking up High Street feels very dangerous with the sidewalk right at the road and with cars flying by. Most families tend to walk up/down the alley to access Old Worthington. Not a current issue and feels safer than High but I think its important for t
Public	I find this intersection very challenging. When coming south on Morning, it's very difficult to see around brush in order to see cars/bikers coming up hill on westbound South.

Public	Keeping low hanging branches/brush would be helpful. Many places in this strip between St. Michaels and Old Worthington have low hanging branches that make walking/running/biking difficult.
Public	5+ kids (including my second grade twin boys) now walk across this intersection and it is not safe. Please add a crosswalk here.
Public	As previously stated, this intersection/ curve is quite dangerous and in need of a crosswalk. I have 2 young children that walk daily to the elementary school and must cross to the sidewalk.
Public	This part of the trail is prone to flooding. Either redirect the trail to parallel the chipped wood running path, provide an long bridge or raise the trail height with an earthen embankment; allow for drainage back to the river.
Public	This part of the trail is prone to flooding. Either redirect the trail to parallel the chipped wood running path, provide an long bridge or raise the trail height with an earthen embankment; allow for drainage back to the river.
Public	need something to either walk or ride
Public	need walking path on at least one side of the rd
Public	Drains on both sides are hard to see create a hazard. Recommend marking them so they are more visible.
Public	no sidewalks at all
Public	no side walks at all
Public	Half the north sidewalk's width is unusable because of the badly overgrown hedge, and the uneven brick makes footing tricky even in good weather.
Public	Bushes behind bus stop are overgrown and partially block sidewalk. It's an issue in snowy weather.
Public	The north side of 161 would be a great place for a community cleanup, cutting down all the honeysuckle to expose the nice trees and the flats fields beyond. It would turn an ugly view of Worthington into a pretty one.
Public	The north sidewalk from the end of the school fields to the 315N ramp is breaking down. It is never maintained in winter. The curb is failing. It is too narrow and too close to a dangerously busy highway. But it is the only pedestrian route from west

Comment Source	Comment
Public	A lot of the landscaping here hangs over the sidewalk and partially obstructs it. Could use a good pruning!
Public	A cycling/pedestrian connection from Troon Trail to Wilson Bridge Road would be a great connector to the Wilson Bridge Corridor. Right now it is either very unsafe or a long way around to the south.
Public	There is not a continuous sidewalk on Linworth from Hard Rd to Linworth/Wilson Bridge. This route passes Bluffsview Elementary school. Lots of people of all ages walk and ride bikes in the road and people drive SO fast on Linworth that it is dangerous. T
Public	Sidewalks need to be connected for safety on north side of street.
Public	Parking on Hartford makes for hairy travel, difficult to no visibility, and dangerous travel for pedestrians. Continuous sidewalks would be nice here, as well as street parking enforcement and/or elimination.
Public	have a paved path connecting the library and huntington parking lots. we often walk from one to the other and it's difficult getting through with a stroller
Public	Needs more sidewalks. Many people walk in this area and it is dangerous for both walkers and drivers.
Public	Add cross walk here like the one on Snouffer Rd by the tracks. This is a high traffic area for those crossing Linworth Rd. to access Perry Park.
Public	Add left turn signal to the traffic light.
Public	Needs a crosswalk
Public	Trees are overgrown causing a blind spot for traffic heading from Snouffer onto Olentangy River Rd. This is especially problematic for bikers who use Snouffer to get to Troon Trail bike path.
Public	I would like a cross walk from Olentangy Highlands to Potters Creek/Collins Drive. Thank you
Public	I would like a left turn signal from 161 E to Linworh Road N. Thank you.
Public	The 161 bridge crossing 315 needs to have a barrier (guardrail?) so that traffic zipping by doesn't jump the curb and take out pedestrians.

Public	The northerly portion of the Troon Trail Path needs a barrier/guardrail all the way up to the Troon Trail crossing, so that speeding cars don't go off-roading and take out a pedestrian and/or cyclist. Decreasing the speed on Olentangy most likely would
Public	I suggest an on/off ramp for bikes here, so that cyclists can enter the park as quickly as possible from the street. It really stinks to have to continue riding with traffic all the way up Wilson Bridge Rd (uphill, slowly) while cars whiz past you.
Public	Sidewalk needed on West South Street. No bus service here, so kids must walk to school. Cars routinely speed on South. It's only a matter of time before a tragedy happens here.
Public	
Public	SR-161 & Morning St intersection has curb cut ramps but no crosswalks. Crossing 35mph 161 is dangerous. At a minimum please add crosswalks to enhance driver awareness. Also consider adding pedestrian hybrid beacons as on High St at the library.
Public	SR-161 & Granville Park has curb cut ramps but no crosswalks. Crossing 35mph 161 is dangerous & discourages those north of 161 from using Granville Park. At a minimum please add crosswalks to enhance driver awareness. Also consider adding pedestrian h
Public	There is no marked bicycle route in Worthington between High St. and Bush Blvd. Designate a East West route through Worthington using lightly used residential streets not truck/care thoroughfares.
Public	Do something to get people to at minimum slow down at all these intersections
Public	Do something to the street to get people to slow down at this intersection
Public	Add bump outs at least on Selby to get people to slow down - bumpouts on Foster would be great too so vehicles don't just plow through the crosswalks too.
Public	Sign entrances in Worthington with bike/ped signs on how to get to other points of interest in Worthington - ie to downtown/library/community center from here and most entrances to the city.
Public	Make godown dog park accessible by walking/biking

Comment Source	Comment
Public	Add bike and ped access along this corridor
Public	Make this corridor and park accessible from walking or biking
Public	There is NO sidewalk here on the West side of the street! It ends at 601 Oxford Street. Children have to walk in the street on their way to school. We have on average 20+ children who do this DAILY. NOT SAFE! Short Street to Oxford is used as a "cut"
Public	This turn is dangerous when the route is crowded. A larger turning area would be helpful.
Public	I find this crossing to Linworth Park to be dangerous. As traffic is approaching from the south, there is a slight elevation change to the road which creates a bit of a blind spot.
Public	You are taking your life in your hands if you attempt to ride a bike through this chicane. Too narrow to safely accommodate cars and a bike
Public	Pedestrian bridge/Bike path extension to High Banks
Public	Rail road tracks are a hazard to bikers and pedestrians. Train gates are constantly malfunctioning
Public	Rail road tracks are a hazard to bikers and pedestrians. Train gates are constantly malfunctioning
Public	Rail road tracks are a hazard to bikers and pedestrians. Train gates are constantly malfunctioning.
Public	A crosswalk is necessary crossing Park Boulevard from Lake Ridge & west side of Foster. A terrible corner for pedestrians!
Public	This may be outside of Worthington's realm of influence but I would love to see some connectivity between Worthington Park Middle School, The Worthington Centre Plaza (With Kroger and the library), and Sharon Woods Metro Park. Maybe some protected pedest
Public	Walking from Caren and High to downtown Worthington is not pleasant. Trees and benches would help make up for the noise and pollution from the traffic.
Public	High is the most direct N/S route to downtown Worthington. We need benches and trees all along High Street to improve the look of the village and also to provide spots for seniors and those with young children to pause and refresh.

Public	Dangerous Intersection. West-bound traffic often does not see the stop sign at Olentangy River Rd and runs the red light. Needs to be more visible. Lots of accidents and therefore unsafe for bikers and pedestrians
Public	Dangerous Access from Plesenton--blind curve and extremely fast moving traffic
Public	Access to the bike trail very inconvenient and dangerous given the speed of traffic on 161. Access to trail very poorly thought out
Public	Bushes on the corner of the 315S to 161 ramp block the view. Drivers and pedestrians can't see each other approaching the intersection, and drivers coming off 315 are so focused on looking left they often don't check to the right before making the r
Public	Provide more pedestrian walkway designations throughout parking lot - lots of cars always thinking they have the right of way all the time
Public	This intersection is very dangerous to cross both on foot and bike. Cars exiting 315 southbound and turning right onto 161. It is very common for cars to proceed to turn right on red without stopping or at the very least stopping in the cross walk wait
Public	This is dangerous to cross here as cars rarely yield to pedestrians crossing even when the pedestrian has a WALK sign.
Workshop	Table 3 - Issue #1 Brick sidewalks are troublesome - in some disrepair
Workshop	Table 3 - Issue #3 Fill in sidewalk Gaps (community-wide)
Workshop	Table 3 Idea #2 Bulb intersection to slow traffic and improve walkability (161-23)
Workshop	Table 3 Idea #3 Crosswalk beacon or signal
Workshop	Table 3 Idea #6 Make bicycle connection from Colonial Hills to new facilities on Indianola Avenue (City of Columbus)
Public	The crossing light here does not work. There should also clearer road markings making it clear that the entire area in front of Troon Trail is a crossing point to the path.

Comment Source	Comment
Public	Car drivers pull up to this light and only look to their left before turning right on red. I think greater signage is needed on the off-ramp to warn of bicycles and pedestrians. Specifically, some LOOK RIGHT signage. Also, the overgrowth in the area
Public	This has been a gravel collection point for many years. My son crashed here years ago and my daughter almost did over the weekend as well.
Public	The posts should be removed from the walking/biking paths along here and up to Evening Street. They are a danger and I do not think they are needed to warn cars off traveling down the path.
Workshop	Table 4 Issue #3 Dangerous pedestrian and bicycle crossing
Public	This should be a marked and appropriately signaled bicycle and pedestrian crossing unless and until the far more dangerous Northeast path access/steep hill is addressed and fixed.
Workshop	Table 4 - Issue #7 No connections to public parks (pedestrians)
Workshop	Table 4 - Issue #11 No sidewalks - all of old Worthington - connect!
Workshop	Table 4 - Idea #3 Continue to make safer crossing (underpass?)
Public	Given the location of Evening Street Elementary, the arts center, and TWHS, it's shocking that there is not a wide, mixed-use path from High Street all the way to the 315 bridge on the north side of the street.
Public	There could be more bike racks downtown, perhaps also notices to please walk bikes on sidewalk areas on either side of High St.
Workshop	Table 4 - Idea #2 Create SAFE pedestrian crossings
Workshop	Table 4 - Idea #11 Connect sidewalks throughout old worthington
Public	Can we work to provide bicycle access to the community center? Wilson Bridge Road invites speeding cars and is not bicycle friendly.
Public	It is relatively dangerous for bicyclists that live between the golf course and the 315 to bike over to the commercial district near Sawmill Road. Bicycle lanes on 161 and/or Snouffer Road would facilitate this.
Public	It is relatively dangerous for bicyclists that live between the golf course and the 315 to bike over to the commercial district near Sawmill Road. Bicycle lanes on 161 and/or Snouffer Road would facilitate this.

Public	Cars hardly ever stop for pedestrians or bicyclists even when the lights are flashing at the crosswalk; this should be made to be more visible or put a signal that forces cars to stop as needed.
Public	It is difficult to safely enter/exit the trail with the lack of visibility for drivers heading Westbound on 161 and entering the ramp onto 315-N. There should be better signage at this corner and the gaping holes in the pavement at the trailhead should
Public	There are gigantic potholes at this intersection that are dangerous for cars and bicyclists alike.
Public	Bicycle lanes on both North and South side of the bridge would facilitate access to the trail.
Public	The bicycle lanes along Wilson Bridge Rd should continue along Linworth Rd down to 161 at least.
Public	Adding a crosswalk signal at Pleseanton and Olentangy River Road would make crossing Olentangy River Road much safer. It is hard to see around the bend of Olentangy River Road when crossing at this point and cars travel very fast along this stretch.
Public	allow low speed vehicles on 35 MPH streets - like scooters and golf carts
Public	Add marked/built pedestrian walkways throughout the parking lot for safety
Public	add more bike and pedestrian wayfinding signage to this park and to downtown
Public	We desperately need a walking/biking lane down Linworth to at least 161. Without a lane, we cannot walk/bike take advantage of the new retail and restaurants. A walking/biking path would greatly enhance our neighborhood and be a significant improvement
Fest614	High street and Wilson bridge is too wide, too fast, and has a 270 mentality as cars are exiting the highway. A safe crossing is needed at that intersection and at Caren. Both are dangerous. There is a current "hidden " sidewalk behind the Holiday
Fest614	Caren does not have sidewalks on both sides. It is one of the 2 exits out of the large Wo. Estates neighborhood. Crossing here is dangerous. There is also a bus stop nearby with little berm on the road, no seating or protection. The bus used to turn around

Comment Source	Comment
Fest614	There is a gap in the sidewalk on the west side of Hartford. This is a connector between senior housing and the library . Also a route for walking to Kilbourne Middle school and beyond. This should be a priority for sidewalks. Seriously.
Fest614	Hartford/Kilbourne Middle school greenspace:
Fest614	I drive this daily. Evening street (from Wo Estates) to 161. The road is narrow, very busy and not safe for bikes during peak school hours or rush hour. Kids and families are trying to walk to school. Can only go one way due to narrow sidewalks. Curve
Fest614	North Street is very busy for pedestrians. folks from Wo. Estates use it as route to Dairy Queen , Fresh thyme etc. Only has sidewalks on one side, no place for bikes.
Fest614	How about some sidewalks across the street from the school?
Fest614	The food pantry is over here. Can we find safe ways for folks to walk (or bike or even use a bus) to get there. People are coming from all over. Let's talk to the people in charge there and see if they can identify some solutions.
Fest614	Let's safely connect to the Ohio to Erie canal and resources for biking in Westerville. What a shame not to be connected to this asset.
Fest614	Looks like we are connected here but we are not. Great opportunity to talk with those at Boundless. They help special needs people. There may be some transportation and wellness needs that could be served with better walking connections to the community
Fest614	Political support for Olentangy connection to high banks park.
Fest614	Consider assigning improvements (including a restroom) of the entire Olentangy bike trail to the Metro Parks. We are paying taxes to them. This is a regional greenway. May open up funds for other improvements if they can take over some of the financial i
Fest614	Deadman's curve here. Crazy almost 360 degree turn. Also bridge here is ugly!
Fest614	North High Street a Dead space for walking and biking. Too fast, nothing to walk to,
Fest614	Good luck riding your bike on High Street or 161 if you are an average person. Absolutely not if you are my 12 year old kid.

Fest614	Speed trap. Maybe money from tickets could be designated for road improvements including sewers, multiuse path, solar operated speed signs. Moving to Worthington Galena/Shrock
Fest614	Make sure bike and pedestrian facilities are part of this redevelopment. A park would be great but regardless move buildings closer to high street for walkability. Have the business connect to high via sidewalk.
Fest614	Improve the crosswalk to the mall. It is on a diagonal and make it long.
Fest614	Great neighborhood where loads of us walk. Can get to the bike trail. Riding bike downtown is tough. Bus traffic during school on mj roads (Reiber and Larrimer) can make walking and biking for kids a challenge. Need safe routes to school, safe routes to
Fest614	Get ODOT to improve this bridge for pedestrian. Lots of folks running along here. Not me but I do drive by them. Just seems dangerous .
Fest614	Wide road looks like a runway. Not the entrance to our community. We have to decide if we are a cut thru or a place to live. Think enough real estate and connectivity have been sacrificed to 270 and 315. We need to reclaim our roads for our community
Fest614	161 is designated by the Central Ohio Greenways as a major east /west connector in the future. Are we planning for this? How can we be a part of that so it makes sense for our small community and our larger regional area.
Fest614	Continue to make bike and pedestrian connections here as road improvements take place. Huntley and Wilson Bridge could take some traffic off 161 which would be nice. Keep traffic moving here.
Fest614	We need safe routes to parks: all should be able to ride/walk to the rec center, to the Olentangy trail, and neighborhood park. later to High Banks or Sharon Woods (Metro parks). Plan for it.
Fest614	The old Anthem Building does not have any sidewalks connecting it to high Street. Some were actually removed. The City needs to monitor and code for sidewalks to connect in this area. There is also a connector for walkers behind All Saints Church....

Comment Source	Comment
Public	The bushes on the southeast corner block the view of cars turning from Morning Street on to North Street. This could be addressed by making the intersection an all-way stop or by removing the bushes.
Public	This is a troublesome crosswalk. Traffic coming from the north toward the 161 intersection travels faster than 35 mph and we have children wanting to cross there or are crossing there at risk of being hit. It isn't as bad for traffic heading north
Public	Place bigger sign(s) telling drivers to yield to pedestrians and bikers or just state look to your right before you turn left. People who don't know that drivers exiting 315 and planning to turn right only look to their left before turning will soon learn
Public	How about extending the path to Highbanks and beyond? I know that has been planned and fought over, but let's get it done!
Public	I think this is under study already, but an overpass for bikes and pedestrians over High Street would be fantastic. It would be more for convenience rather than safety compared to the Plesenton and 315 problems, but appreciated nevertheless.
Public	We should eliminate bollards here for bicyclist safety
Public	There used to be a sidewalk here connecting neighborhoods and it makes a great route for kids walking to school (Evening Street) and bikes trying to get to the Olentangy Trail. Neighbors fenced off this sidewalk. I'd like to see it reopened and widened
Public	Sidewalk access to Wilson Hill Elementary.
Public	Sidewalk gaps.
Public	Better connections across 315 and to Olentangy Highlands neighborhood.
Public	Increased crossing safety for kids going to the 3 schools who use the 161/Evening Street intersection.
Public	Traffic calming on South Street (main connector for Riverlea/Worthington). Perhaps add a stop sign at Weatherburn?
Public	Add a path/cut-through between neighborhoods. All these kids attend the same school.
Public	Connect Wilson Hill neighborhood to downtown Worthington.
Public	161 and High intersection needs safety improvements for pedestrians - perhaps an all stop for pedestrians).
Public	Sidewalk gaps throughout southwest quadrant of Old Worthington.

Public	Many South Street sidewalk maintenance issues.
Public	More direct access from trail to Wilson Bridge Road (coming from the west). This way you don't have to go all the way up the road and loop back around to trail).
Public	Signage and more water along Olentangy Trail.
Public	Bikehub at this end of the Olentangy Trail (similar to that at Olentangy Parklands and Wilson Bridge Road).
Public	Preserve (and improve) cut-through from Holiday Inn property to Villa Charmonte neighborhood (Greenglade).
Public	Preserve and improve cut-through between Northbrook/Davis Estates neighborhoods and Riverlea.
Public	continue to this new park area.
Public	Dangerous crossing for families
Public	Bike connections West to Dublin.
Public	Connections east to the Alum Creek Trail.
Public	Expand feel/character of Old Worthington (and speed limit) south to at least Selby Blvd.
Public	Getting from Potter's Creek neighborhood to shops/park at 161 and Linworth Rd. is too dangerous or lengthy. Need safer and more direct pedestrian and bike routes.
Public	Better trail or connection from Olentangy Trail to Village Green in Old Worthington.
Public	Better access to the Community Center.
Public	Better intersection at Schrock and Worthington Galena.
Public	Access from Riverlea to Antrim Park without going north to 161, or south along High Street and down Broadmeadows (both of which is dangerous, the 1st because of High St. traffic and the 2nd because the neighborhood on Broadmeadows is too dangerous to ride)
Public	Back of curb sidewalk that is too dangerous for walking (between wall and High Street). Traffic speed is 35mph but traffic often goes 45mph+.
Public	Sidewalk needs moved further off the street- not safe to walk on sidewalk in front of Rutherford Funeral Home (and all along this corridor) with HIGH SPEEDS on High Street.
Public	We would love to see a cross walk across Linworth Rd. to and from Potter's Creek-Olentangy Highlands. Collins Drive - Loch Ness

Comment Source	Comment
Public	Many brick sidewalks throughout Old Worthington are in atrocious condition. They are not passable for strollers or wheel chairs, and dangerous for the elderly and sight impaired. Also, many bushes have been allowed to grow over or into sidewalk areas.
Public	Brick sidewalks in poor condition (unusable for strollers, wheel chairs, elderly and sigh impaired). Also, bushes growing into sidewalk area.
Public	Concrete sidewalks throughout city need fixed. Some on City property (all along both sides of East 161 there are pipes sticking up and bad concrete) and also residents throughout the City haven't been made to maintain their concrete (or brick) sidewalks
Public	Sidewalks or bike paths needed all along Linworth Road in Worthington. Children and adults try to walk and ride this road with cars going over the posted 35 mph speed limit. Neighborhood on Castle Crest has no access or connectivity to anything else in
Public	Sidewalk or bike path needed along Linworth Road from Potter's Creek/Castle Crest neighborhoods to UDF and shops at Linworth/161.
Public	Sidewalks or bike paths needed to get from neighborhoods on both sides of Linworth Road to Perry Park, Linworth Park, and restaurants and shops in Linworth (Linworth/161 area).
Public	I bike a lot and use the Olentangy Trail several times a week. It would be great if there was a bike path on Linworth Road from Indian Hills to Snouffer Road. I know people are allowed to ride on Linworth, but it is too dangerous. I have to drive to g
Public	Sidewalks/paths needed along Linworth Road for residents in neighborhoods east of Linworth to access Linworth Park, each others neighborhoods and businesses at corner of Linworth/161.
Public	Back of curb sidewalks (or only separated by a foot or so of grass) along High Street are dangerous. Traffic regularly goes 45 mph plus on High Street.
Public	Worthington needs to adopt a TRUE complete streets policy.
Public	As a biker and walker, this intersection could use a stop sign or some sort of additional signage to slow traffic traveling up and down longfellow at guyer.

Public	The intersection of Evening and 161 is consistently problematic for walkers and riders. Additionally, the right turn off Evening onto 161, the sign that informs drivers to stop on red is pretty consistently ignored. Need better highlighting of that s
Public	Stafford seems to be a cut through for people trying to get to 161 but not wanting to go all the way up to 161 for the right turn, especially in the morning. With the number of kids needing to use the crosswalks, the amount of traffic cutting through s
Public	Signs warning of utility work set so that they completely block pedestrian access on sidewalks.
Public	Old, crumbling, limestone type sidewalks. All broken up and a tripping hazard.
Public	No sidewalks on either side of this road and many school children who walk use this route.
Public	A path is needed through this property (connecting Colonial Hills neighborhood to Proprietors Road).
Public	High Street crossing access to East Granville Road Park for neighborhoods north of S.R. 161.
Public	Second other commenter regarding the speed of vehicles around this corner. Small children are often walking in this area to get to the park at the bottom of the hill or to and from school.
Public	Would be great to have sidewalks that connect to High St. on one or both sides of the street to make it more walkable.
Public	People speed through this parking lot and are using it as a cut through to Wilson Bridge Road.
Public	Worthington is lucky to have COTA public transportation. Make sure it stays, can expand if necessary and encourage people to use it. I don't use it because driving is faster.
Public	Many cyclists use the 161 access road (going both directions). If you are a car turning right off 161 is would be easy to hit a cyclist (tight turn and driver has to look over shoulder- I live on Sandbridge and fear hitting someone with my car).
Public	No safe crossing for pedestrians and roads are dangerous. There are also not sidewalks everywhere (gaps). I'm a resident on Howard, but Foster, Park and Colonial Ave. are all used heavily by children.

Comment Source	Comment
Public	Bike trail ends at Troon Trail. An east/west connector is needed on Snouffer Road. It's not City of Worthington, but perhaps they could partner with Columbus.
Public	We need more wetlands/erosion prevention and nature areas along the Olentangy Trail and River.
Public	Need sidewalk/pedestrian access.
Public	Very glad for ped bridge over 270. Perhaps look at making it even better/safer?
Public	Formalize this hidden "goat trail" from Wilson Bridge to Olentangy Trail.
Public	Blind curve is dangerous on Olentangy Trail under bridge. Adding a mirror might help. Also, the turn coming off 161 is too sharp.
Public	Sidewalks are back of curb and VERY dangerous, not to mention is doesn't make walking pleasurable (actually discourages walking). Cars also regularly speed and are going 35 to 50 mph along this stretch. If one came up on a curb a pedestrian would have
Public	Cross walk needed - a connection between Olentangy Highlands neighborhood to Perry Park. Neighbors are currently signing petitions to get this done.
Public	Sidewalks need to be added to the 3 homes without them on the west side of Oxford. If that doesn't happen, can parking at least be restricted so that a protected lane can be put in on the west side of the street for people to walk on?
Public	Slow traffic through the historic district. It would be wise to consider speed bumps on High St from North to South Sts and on 161 from Morning to Evening Sts.
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Public	
Public	Slow traffic through the historic district. It would be wise to consider speed bumps on High St from North to South Sts and on 161 from Morning to Evening Sts.
Workshop	TABLE 1 - 1 Lack of clear bike lanes to encourage everyday, short trip biking or accessibility to schools.
Workshop	TABLE 1 - 3 Slow down speed to promote better pedestrian conditions

Workshop	TABLE 1 - IDEA #1 - Multi-purpose path along Linworth Road
Workshop	TABLE 1 - IDEA #3 Make UMCH area walkable, accessible, extend downtown feel to slow down traffic , encourage people to go here.
Workshop	TABLE 1 - IDEA #4 Narrow to 10' lanes [Road Diet?]
Workshop	TABLE 2 - IDEA #1 Sidewalk along north side
Workshop	TABLE 2 - IDEA #2 Sidewalk south side of Caren Ave
Workshop	TABLE 2 - #1 No sidewalks along Linworth Road
Workshop	TABLE 2 - #2 No room for bikes on Olentangy River Road [Add bike lanes?]
Workshop	TABLE 2 - #3 North High Street not Bike Friendly
Workshop	TABLE 2 #4 Connectivity west Worthington to east Worthington (overcoming the river and 315 as a barrier)
Public	Worthington-Galena Road is a major route for biking and walking but needs considerable improvement to make it accessible from Community Center to High Street. Should be a priority!
Public	My kids take the cut through by the pond to walk to Phoenix School and Perry Park. I've often wondered if this is advisable/ legal or if it could be improved.
Public	The village of Riverlea and city of Worthington should cooperate to re-open a pedestrian cut-through at Evening Street. It would be much safer than walking via High Street and/or South St. This walk-through used to be used by hundreds of kids and adults
Public	I am a casual biker who would ideally like to commute to work by bike occasionally. I am not confident biking on the road. This stretch is what inhibits me from biking from home to work. The road is narrow, busy, and high(er) speed. There is no mixed use
Public	The sidewalk between South and Selby along the west side of High Street is perilously close to traffic. It should be bumped back from the curb by several feet to improve pedestrian safety and experience.
Public	Incomplete or non-bike-friendly sidewalks from Franklin Ave to Village Green along Morning St & 161
Public	

Comment Source	Comment
Public	This is the best way to stay on a path and get to the Olentangy Bike path where I generally continue north or south. The path along 161 is quite bumpy and the path along Olentangy River Rd has a few hazardous drains (narrow bike tire could get stuck) also
Public	
Public	Inadequate on-street protected path for bicycles from Village Green to Olentangy River Trail along SR161
Public	
Public	It'd be nice if there were a pedestrian path from the end of Fox Lane into Kilbourne village for students heading to the pool, high school, bike path, etc.
Public	Interruption of sidewalk path from Franklin Ave to Morning St - duration is only 2 houses plus a small portion of the Kilbourne Middle School field
Public	The gap for getting between West Worthington and the Olentangy trail seems like as simple a fix as putting down pavement markings over the bridge to connect the two sections. As is you need to cross 161 which puts you on the wrong side of the street to c
Public	Inadequate on-street protected path for bicycles all along High St in Worthington. Discourages non-automobile use for short trips that are too far to walk but overkill to drive (e.g. Village Green to Worthington Mall). Contributing factor: no convenient
Public	Interruption of sidewalk path from SR 161 south on Morning St - duration is only a few houses but is closest to the busiest intersection, which discourages pedestrian/bike use
Public	Would love to see a sidewalk or bike/multiuse path along Linworth Road. This would help my kids get to the park (Perry) or to friends houses in Olentangy Highlands and Potters Creek. It would also provide a safe way to walk or bike to businesses on 161
Public	Would love to see a sidewalk or bike/multiuse path along Linworth Road. This would help my kids get to the park (Perry) or to friends houses in Olentangy Highlands and Potters Creek. It would also provide a safe way to walk or bike to businesses on 161
Public	route needs sidewalks on south side of street
Public	This route needs sidewalks on both sides of the street. sidewalks don't go the whole block.

Public	I'm a runner and it is difficult to cross 315 to get to the Olentangy bike path.
Public	The west side of the street needs sidewalks that connect so pedestrians don't have to cross the busy street or walk in the street until the sidewalks continue.
Public	Sidewalks need to go to the corner and would like to see a stop sign in this area on Indianola as many vehicles turn on park without looking for pedestrians.
Public	Being within a mile of Wilson Hill Elementary, we walk our children to school daily and have to use the street. I'd feel much safer if there were sidewalks on Crandall Drive. We are the first house on the right on Crandall (75) and have had many close calls
Public	I tried taking this route to our church by bike with my kids- very dangerous! But there is another family that takes this with their baby on their bike, which is risky. If there was a safe passage down Olentangy River Rd, south from Antrim to Meeklyn
Public	sidewalks are desperately needed on this part of the road- Foster hill makes it hard for cars to see pedestrians
Public	Bike to downtown for ice cream, farmer's market, etc.
Public	Bike to Hills Market. Would love to be able to go farther north.
Public	Bike to the fountains downtown.
Public	Would like a better way to access Bethel Rd.
Public	Need multiuse path all along Linworth
Public	Easier access for biking to downtown Worthington
Public	Sidewalk in terrible condition. Sidewalk too close to a road where cars typically travel faster than they should. A route I walk my kids to school everyday. Sidewalk also difficult for kids on bikes
Public	A cross walk is very much needed across Linworth Road so that Worthington residents can safely cross the busy street.
Public	Please add a crosswalk between Olentangy Highlands and Potters Creek across Linworth. Families cross here to visit Perry Park/sporting practices and it's dangerous. It could be a part of a bikepath to connect the existing paths at Perry Park.
Public	I would like safer access to the Worthingway/Worthington Estates neighborhood to make it easier to get to the Olentangy Bike Trail

Comment Source	Comment
Public	I would like safer access to the Olentangy bike trail and the Worthington Estates/Worthingway neighborhood from the Wilson Hill neighborhood
Public	Would be nice to safely bike to Linworth area
Public	Very difficult/un-safe to bike or walk through this area; Perry/ Snouffer park is used for many youth sports activities, so would be nice to bike or walk there from east of 315
Public	Challenging to get to/from Worthington Hills to Olentangy trail. Perhaps an overhead bridge would work here...
Public	Would be nice to be able to reach Antrim Lake & Olentangy trail from Riverlea
Public	Sidewalks/bike-lanes need expanded to improve safety and increase pedestrian activity
Public	Should continue bike trail and/or sidewalk north to Wilson Bridge Road. Cars drive very fast, with limited visibility of road
Public	Sidewalks would be awesome
Public	It would be amazing to have a bike path from Potters Creek/ Olentangy Highlands up Linworth to get to the new linworth center by walking or biking. There also should be cross walks on the South side of 161 across Linworth. There is one on the north side
Public	Extend bike path/side walk past Linworth center to JT's pizza.
Public	Although there is the steep access to Olentangy Bike Trail at 161 and 315, this is very steep and somewhat dangerous and I'm not sure cars pay attention when turning onto 315. It'd be nice if could just ride straight up 161 to schools and Old Worthington
Public	There is a designated bike trail part of the way along Wilson Bridge but it's narrow. Would be nice to have bike trail all along linworth road.
Public	Incomplete sidewalk stops after 777 morning st. No sidewalk through the middle school field(Hartford Park). Many children live on this street. With no sidewalk I see children riding their bikes in the street and parents pushing strollers in the street. A
Public	needs sidewalks desperately!
Public	Needs sidewalks!
Public	Sidewalk ends weirdly at the end of the parking lot. Please add sidewalks!

Public	Walking to Old Worthington and the library is one of the best parts of living in Worthington
Public	Access to Olentangy trail from this side of Rush Run is much needed. Broadmeadows is only accessible from High Street, and although High Street is "bike friendly", it's not. Broadmeadows is also a very busy street.
Public	Linworth needs a safe route for pedestrians/bikers to get to/from the Perry Park area. Right now people cut through neighborhoods or walk/run/bike on Linworth Road which is dangerous with low visibility and no sidewalk. Can we widen Linworth Road to accom
Public	It feels dangerous biking (or walking) up High St for us to get to Old Worthington!
Public	This is a dangerous stretch for bike riders. Walkers can get on the other side of the guard rail, but it would be much safer to have a bike lane and a sidewalk if possible.
Public	Bike Route to work
Public	161 needs bicycle lane(s)
Public	This would allow bike/walking access to the businesses at the Linworth shopping center. (my line should extend all the way from the shopping center to Snouffer road, although my own residence is in Potters Creek.)
Public	Pedestrian Crosswalk Needed (with flashing lights). MANY children cross Linworth between Potters Creek and Olentangy Highlands to access Perry Park.
Public	Extend path from the end of Troon Trail to entrance of Olentangy to allow WALKING.
Public	Very limited sidewalk here. Would like to be able to walk to Crosswoods area on one contiguous path.
Public	
Public	There is no safe side walk and direct line from my neighborhood to the Linworth school or Linworth park.
Public	Lots of walkers and bikers currently use the shoulder on this road, but there are too many close calls with cars to feel safe. The fact that people use it anyway means there is a demonstrated demand for this route to be made walkable/ bikeable. It's an
Public	getting to high street

Comment Source	Comment
Public	Wo-We (Worthington-Westerville) Connector
Public	No sidewalk on both sides of the street so you're forced to walk in yards or on the street. Parking is allowed on the street for short distance south of the intersection of Oxford and New England. During high traffic times (rush hour, farmers market, etc
Public	Create sharrows or bike boulevard to the cut in the fence at the SW corner of the cemetery.
Public	I know people have suggested creating some type of trail extension from Olentangy to High Street. However, that seems like it will get NIMBY'ed hard, especially from the 161 residents from Evening to High Street. This is a practical solution.
Public	I would love to see a continuation of the separated road on 161 all the way to downtown Worthington, but I understand there may be construction issues and issues with property lines. I would love to be able to bike to work!
Public	Sidewalk stops half a block from the intersection on one side of the street and only needs a small extension to complete
Public	Would love to see a bike/walking/running path along Linworth Rd connecting 161, all the way to Wilson Bridge to get on the bike path.
Public	My children walk this was to KMS and the library. Crossing anywhere on High or 161 is dangerous
Public	Route to work
Public	A continuous Bike path along SR-161 going W to connect with Dublin's Bike Paths along SR-161.
Public	Sidewalks
Public	sidewalks for kids walking to colonial hills
Public	crossing 161 is not bike or ped friendly unless at a light. biking 161 is not friendly either.
Public	There need to be a crosswalk at this intersection to get from the south side of 161 where the Olentangy trail is to the north side. The underpass is unacceptably dangerous for pedestrians and cyclists.
Public	Extend this trail to Wilson Bridge Rd. There is a bike lane on Wilson Bridge that takes the rider to Olentangy Park.

Public	A multi-use path is needed here to connect the Snouffer/Bride Water Blvd. crosswalk with the path on the east side of the RR. This would benefit walkers/joggers, children walking to Phoenix MS as well as cyclists.
Public	It would be nice to have a way for residents of potters creek and olentangy highlands to be able to get to the 161/linworth area. There are so many restaurants going in and even though it is close, the danger of walking on linworth forces residents to d
Public	Many families/residents use the Alley as a safer alternative to walking on the sidewalks up High.
Public	From Linworth to 161 to all the new shops and restaurants
Public	This would allow for people to bike down Wilson Bridge as a family and not on the main road
Public	better way to get to the bike path to access the Worthington Pools
Public	walking path to 161
Public	need a bike path for family not just rd
Public	a walking path
Public	There should be a path to walk/bike from Worthington to Dublin. I frequently see people walking along the roadway here.
Public	We do this almost daily.
Public	There is not a continuous sidewalk on Linworth from Hard Rd to Linworth/Wilson Bridge. This route passes Bluffsview Elementary school. Lots of people of all ages walk and ride bikes in the road and people drive SO fast on Linworth that it is dangerous. T
Public	I like to walk from the library to the park but there is some difficult to maneuver brick from Hartford almost all the way to the park. I would walk on the other side of 161 but there is no crosswalk close to the park, so I have to cross at Hartford.
Public	Bike route to Alum Creek Trail. The dedicated bike lane is a good start but would like to see physical separation from traffic. Gravel and glass hazard, too
Public	Northeast Loop
Public	Worth Hills Loop
Public	need the sidewalk completed on the west side, with a ramp at Franklin Ave and at Stafford

Comment Source	Comment
Public	finish the sidewalk on the east side
Public	It'd be nice if you could bike or walk the south side of hartford park, even better would be if there was a path around the whole of hartford park
Public	need a sidewalk
Public	Many people walk this to get to the school, high street, walking pets. School children take walking field trips to the nursing home, fire station, etc. The curves and hill make walking walking on the street a safety risk. Sidewalks would help!
Public	This needs sidewalks.
Public	This needs sidewalks.
Public	This needs complete sidewalks.
Public	I live on Bluffview Drive and have a child that walks or rides her bike to McCord Middle School. The space on Linworth Rd from the 207 overpass to Hard Rd does not have a side walk. People drive so fast on that road. I fear for her ever day she heads
Public	Roads too narrow for biking and/or limited sidewalks
Public	Worthington-Galena needs a multi-use trail, sidewalk or some type of walkway from Worthington Christian (where the sidewalk/trail ends) to High Street.
Public	A lot of pedestrians use this portion of Worthington Galena Rd to walk to the Worthington Park Shopping center where there is a library, grocery and other small businesses. The speed limit is 40 mph on that stretch of 2 lane road, and there is not safe f
Public	This stretch of Sancus goes down to two lanes and should be increased to four lanes to be consistent with traffic flow to the north (where it is 4 lanes north of Lazelle) and south (where it is 4 lanes south of Worthington Woods Blvd). Emergency vehicles
Public	I frequently bike this route to get by 71, 315, and the river.
Public	Needs sidewalks
Public	There is a missing section of sidewalk here, which forces people who walk, are in wheelchairs, drive scooters, and push strollers to walk on a busy street. The street also has parking on the West side, so pedestrians have to dodge in and out of those spa
Public	This is a missing section of sidewalk that forces pedestrians to walk in the street (especially if they're in wheelchairs, on scooters, or pushing strollers/wagons, etc.). It is a safety hazard to not have a complete sidewalk here.

Public	The brick sidewalk here is in need of serious repair. It is impossible to navigate for a wheelchair, and is a hazard for pedestrians as well.
Public	The current speed limit (35) should be lowered to 25 on this section. It is a busy thoroughfare for cars, but also for bikes and pedestrians. Also, there are 3 sections along this stretch that are school zones. However, the section by Kilbourne Middle Sc
Public	There needs to be a crossing here for the middle school students to walk from the school to the field (this is not a technical park, this is the middle school's athletic field and is maintained by them). Each school day, hundreds of students cross this s
Public	There needs to be a crossing to get across 161 to the park here. The closest crossings/lights are at Hartford and Proprietors. Pedestrians wait a long time and often run to cross 161 here because there's a hill crest around Andover St, so you can't see c
Public	
Public	This section feels like an extension of the highway. It needs some dedicated biking areas, better curb areas (furniture space and greenery to separate sidewalk from road), and vista terminations. Also, more pedestrian crossings would make the area safer
Public	If a path couldn't be made along Linworth Rd for pedestrian access, then a quick path from Potter's Creek across the stream would be really great! By bridging Potters Creek to Linworth, we will be encouraging healthy lifestyles. If needed, give a tax r
Public	Walking path from Potters Creek to Linworth - by avoiding the hassle of Linworth Rd. It would need a sidewalk and small bridge to cross the stream.
Public	This is from our house to downtown old worthington. It also encompasses a walking route my kids would take if they walked to school, which at this time is unsafe without sidewalks. We do not have buses.
Public	
Public	South - Selby - Foster - New England route
Public	Tucker - Bike path route
Public	bike path to mall route

Comment Source	Comment
Public	Very unsafe for children walking to school. No buses provided. Sidewalks needed to connect Andover to New England. Very unsafe due to cut through traffic from 161 to high street
Public	This my normal run route and is mostly in good shape other than pot holes along the Olentangy trail.
Public	Sidewalks in Old Worthington need repair. Bricks are slippery when wet and there are a few section of sidewalk that are uneven causing a walking hazard.
Public	This route includes the Olentangy trail along with the Alum Creek trail. There is no good way to get from the Olentangy to Alum Creek for casual cyclists. The designated bike routes are on heavily used car and truck routes and signage is very limited.
Public	161 route is too narrow as you head father west. I suppose you have to wait for the long term planning for the 161 corridor, but this is a route to nowhere.
Public	Great route!
Public	Needs to be more bike friendly.
Public	Any possible way to create something through the old Harding Hospital property?
Public	Add bike path extension along 315 to connect to high school
Public	Need bike lane or dedicated path to Polaris. Would be used a lot to bike to work for Chase employees.
Public	Need proper bike lane/multi-use path to Polaris area
Public	connect Olentangy Trail to Highbanks Metro Park
Public	Need better bike-lane/multi-use path. Wilson bridge road can get busy and congested.
Public	Bike path here would allow access from local neighborhoods to Linworth shopping areas.
Public	Add extension to bike path up to Snouffer. Also add path up snouffer - it's too dangerous to walk or bike down.
Public	Bike path here would allow bike and foot access from local neighborhoods to Linworth shopping areas. This is a relatively short distance that forces local residents to use cars because of how dangerous Linworth can be.

Public	Between Wilson Hill Elementary and High St. Sidewalks for safety and neighborhood appeal. The area is turning over with many young families moving in. The area should be more walkable and accessible to High St and School. Police patrolling will not
Public	A sidewalk should be added to the west side of Foster Avenue.
Public	This section of Colonial gets very crowed with buses and cars around school open & close. It would be much safer for drivers and pedestrians alike if this segment were to be labeled one-way in a westerly direction, and a DO-NOT-ENTER sign could be added
Public	There are constant issues with lack of consistant signage between what the school community requests of parents and drop off & pickup vs how the city could support the unique layout of this particular school. A sign at Greenwich & Colonial stating "LEFT
Public	Safe schools access. From Phoenix to Linworth Alternative and Olentangy Highlands/Potter's Creek neighborhoods to both schools.
Public	We need safe routes to walk to school from Perry to Linworth!
Public	High Street, from Caren through downtown Worthington needs to be more pedestrian friendly. It is the most direct route for residents to take to the downtown area. Could we create a more parklike atmosphere along High Street to encourage pedestrians?
Public	Biking or walking from the west side of Worthington, along 161, to the east side is extremely dangerous. The bike/ped xings are horrible over the 315 ramps. Simple changes would make them safer. Change the crosswalk sequence on the northbound 315 ramp
Public	This part of Linworth is particularly dangerous to walk/bike along as there is little, if any, shoulder. I have seen kids walking along this area and it is very scary. Having a dedicated sidewalk/ bikepath would reduce this risk and also allow Olentangy
Public	There needs to be a safe walkway or bike path to easily navigate Linworth road. It is very dangerous to walk/run along this section of Linworth. Someone is eventually going to be hit.

Comment Source	Comment
Public	I'd love to have a safe biking and walking lane for my family along Linworth. This would allow us to take our kids to Perry Park or for dinner/ice cream at the businesses at 161/Linworth.
Public	I'd like a safer way to cross 315 and the river. When I'm riding or walking alone it's fine but when I have young kids on bikes or strollers I feel very exposed when crossing the bridge and especially when using the crosswalks at the on/off ramp from 31
Public	Table 3 - Issue #3 Speeding and lane widths
Public	Table 3 - Issue #4 Speeds change but not obvious
Public	Table 3 - Issue #5 Lanes change from 2 to 1[northbound]
Public	Table 3 - Issue #6 Not bike accessible
Public	Table 3 - Issue #7a Cut-through Traffic (morning & Evening)
Public	Table 3 - Issue #7a Cut-through Traffic (morning & Evening)
Public	Table 3 Idea #1 Widen Trail - low visibility; high speed
Public	Table 3 Idea #4 Traffic calming
Public	Table 3 Idea #5 On-street parking
Public	Table 4 Issue #1 Speeding on N. High St. - walkability (no crossings)
Public	Table 4 Issue #2 Dangerous with no controlled pedestrian crossings
Public	Table 4 Issue #4 Bad Bicycle and Pedestrian connections to west Worthington (across 315)
Public	Table 4 Issue #5 No good bicycle pedestrian connections - need a car (need a northern east-west connection)
Public	Table 4 Issue #6 No safe bicycle or pedestrian accommodations along Linworth Road
Public	Table 4 - Issue #8a Sidewalks too close to streets and too narrow
Public	Table 4 - Issue #8b Sidewalks too close to streets and too narrow
Public	Table 4 - Issue #9 No sidewalks in front of High School - not safe for kids, bikes, pedestrians
Public	Table 4 - Issue #10 Too fast - people don't follow 35 mph speed limit
Public	Table 4 - Idea #1a Landscape Arch [transition - slow traffic]
Public	Table 4 - Idea #1b Make crossings more like downtown [Worthington]

Public	Table 4 - Idea #1c Too many lanes [remove]?
Public	Table 4 - Idea #1d Create bike lanes?
Public	Table 4 - Idea #9 Build sidewalk in front of TWHS
Public	Linworth Road needs improvement in safety starting from Castle Crest including bike path to 161 restaurants, ideally to include area to travel between Linworth and Perry Parks.
Public	There needs to be better pedestrian access along Linworth road
Public	I would like a bike path on Linworth Road from Rte 161 to at least Snouffer Rd. I live on Castle Crest and it is too dangerous to ride from my street to Olentangy Highlands or Perry Park. I have to drive.
Public	It would also be nice to have a bike path on Linworth Rd. from Rte 161 south to Indian Hills. Again, too dangerous to ride. Currently have to drive.
Public	a sidewalk along Linworth Rd North of 161 would connect us to the bike path and make it easier to get to new restaurants and shopping. Currently it is very dangerous to walk along this road
Public	Getting onto the bike path just East of 315 is very dangerous with kids.
Public	The biggest opportunity for us "west worthington"ers is to be more connected to central worthington. We'd like to eat, shop, mill around there more often, but we're actually more connected to Linworth and Dublin. The 315 overpass is a major hindrance,
Public	I would like to be able to bike and walk this route - along Linworth, from Snouffer Rd down to Indian Hills. At the very least, along Linworth from Snouffer to 161.
Public	I would like to be able to walk and bike this route - along Linworth, from Snouffer Rd down to Sedgwick Rd. At the very least, along Linworth from Snouffer to 161.
Public	The route along 161 from Olentangy River Rd to the east side of 315 is dangerous to walk or bike in its current state. Improved paths and crosswalks in this area would greatly help to improve safety, particularly the addition of a path and crosswalk on t
Public	add more bike and ped wayfinding signage to this park and to downtown
Public	add more bike and ped wayfinding signage to these playing fields and to downtown.

Comment Source	Comment
Public	This is a really dangerous bike/ped crossing - make it more accessible to people with a better grade or a light with only a ped signal with all cars stopping.
Fest614	need a safer way to ride bikes to downtown, even street, pool, dairy queen. Eve. street and north street not safe during peak hours.
Fest614	Safe route to ride bike - Worthington Estates east to rec center not that great due to poor crossing at high street and curves on highland.
Fest614	Safe way to cross Wilson bridge to get to mall. better biking to mall from Worthington Estates.
Fest614	High street not accessible to bikes. what can be done or identify safe connectr
Fest614	161 definite not bike friendly. Not really inviting for walkers except downtown.
Fest614	speed trap. ugly metal rails. narrow sloped black top that isn't wide enough.
Fest614	connections to rec center, connections to Indianola and to city of Columbus infrastructure/bike trail
Fest614	trying to get to High banks via Olentangy trail (safe routes to park) . Even this map thing doesn't let me do it!
Fest614	Safe routes to parks. Olentangy connect to Sharon Woods and to High Banks. Work with metro parks, MORPC, and other partners to connect Worthington and north end this way. We will be left behind.
Public	Dog walk to Dairy Queen!
Public	Dog Walk to Brueggers
Public	Bike Route to Norm & Gail's
Public	Shrock Rd/Alum Creek/Downtown CBUS/Olentangy
Public	My preferred route from southern Worthington to the Worthington Community Center via the Olentangy Trail is ride the trail north to Whitney, Reiber, Caren Ave., then cross High Street and take Highland Avenue to the Community Center.
Public	Sidewalk from High and along Crandall - or at least a sidewalk pilot demonstration.
Public	Better bike and pedestrian accommodations along Worthington Galena Road (used for walking to school and access between bike trails).

Public	Connect bike route all along Schrock Rd.
Public	More attractive guardrails and TRUE sidewalk.
Public	Unsafe area
Public	Unsafe route
Public	PLEASE help connect neighborhoods west of 315. We are Worthington residents who feel disconnected with our downtown and amenities, rec center, etc. Especially focus on the Wilson Bridge corridor as the 161 crossing is too far to justify a safe crossin
Public	Evening Street is too busy to bike during peak hours. This is also a major route for children walking to school and is very busy with vehicular traffic.
Public	We frequently walk to the farmer's market or to downtown, but the path isn't well maintained for pedestrians. It makes me nervous to walk this path with a stroller as cars exiting 315 aren't looking for pedestrians. There is often debris from the road
Public	This block of Oxford has no sidewalk and causes pedestrians to walk on the street and feel its a pedestrian safety concern. Oxford street can see a fair amount of traffic festivals and rush hour as people avoid the high street traffic. Usually cars are
Public	Need sidewalks/access all along Worthington Galena Road.
Public	Frequent walking route with kids and pet.
Public	Frequent biking route -- prefer High St. because it's faster, but often starts to feel unsafe once south of South St. Alternatively use Hartford
Public	No sidewalks on this street and people speed down it (a cut through). An additional all way stop sign at Weatherburn and traffic calming techniques would be helpful.
Public	Encompassing 2 comments - 1. Not safe for walking. 2. Not safe for biking. Improvements needed that will tie into Northeast Gateway project. Sidewalks needed on both sides and guardrail improvements, please.
Public	No berm north of 161 or sidewalks north or south. A multi-use trail, sidewalks or other facilities needed.
Public	I'm a 17 year old who would like bike lane access on High Street. I would love to ride my bike safely on High Street.

Comment Source	Comment
Public	I use Tucker to access the Olentangy Trail (which I frequently take to the Hills Market).
Public	No Access from Sancus to Worthington-Galena (and vice versa)-connection problem.
Public	Sidewalks needed.
Public	Sidewalks needed. Major connector and want to walk to a business on Huntley.
Public	Run at lunch and other times. Need sidewalks all along Huntley.
Public	Love Olentangy Trail, but need ways to help walkers/runners/ bikers to interact. Bikes go too fast, don't know when to slow down and rarely alert (need bells!). Also, if there is a way to connect it to other trails that would be great.
Public	So many kids walk/bike through this area, to and from school. The sidewalk is sloped, uneven, too close to guardrails, too close to road, and just not safe. It needs a major overhaul, both in regards to safety and aesthetics.
Public	The route I'm trying to propose goes from Snouffer towards 161 behind Perry Park and Brookside school. Following along beside the railroad tracks. There is a short paved path there that goes from Snouffer to Brookside, but it would be awesome if it wen
Open House SM	PX017 a crosswalk is not enough of a solution, there needs to be a Signalized Crossing. There a children who cross here to get to the park or to the Phoenix Middle School. Traffic moves fast on this road.

Open House SM	This is a good start, but let's not stop here! Funding and dedication will be required, but the end result will be a much more livable and desirable Worthington. Some changes may slow traffic and encourage those wishing to get somewhere quickly to select alternate routes; this would be a good result. For High North and South of Olde Worthington and SR-161 East and West of Olde Worthington, please adopt Mixed Use Boulevard Version 3. This will be much more pleasant and slow traffic. Selecting few variations and actively seeking continuity will help encourage understanding and use of the improvements. For residential avenues, Version 2 is the best, but I would suggest making the sidewalk on the one side smaller and adding periodic seating. Please avoid version 3. Focus on creating a safe place to cross High near Wilson Bridge, but it could be 1 street South and still work (maybe even better). Safe walking and biking along Proprietors, Worthington-Galena, and Shrock would be key improvements, especially to allow access to the Rec Center.
Open House SM	I would like to see Dublin-Granville Rd from Olentangy River Rd to Evening Street be made into a Mixed Use Boulevard Version 3. I live in west Worthington and would rather drive than walk or bicycle to downtown Worthington under the present conditions.
Open House SM	I'd make a couple of safety suggestions. 1) Have all cars stop at the intersection of High and New England Sts to allow pedestrians to cross to whatever corner they wish. It is a very busy intersection and not safe for pedestrians as it is. 2) Do not allow right hand turns at 161 and Evening St at any time. Many cars turn there and many people cross there going to both schools, the cultural arts center, the swimming pool and just walking making an unsafe intersection for pedestrians.

Comment Source	Comment
Open House SM	It seems as currently there is not a plan for implementation of the changes recognized as necessary. There are lots of good ideas here but a timeline would be helpful. "Short term" could mean a few weeks or a couple years. It is very important to me as an avid cyclist to see the projects completed as there are multiple places that even I avoid due to danger or lack of appropriate infrastructure. I very much appreciate the initiative taken to get this moving and look forward to enjoying the fruits of this study (hopefully sooner than later). While I understand that there is more emphasis on the old Worthington areas due to population and money I do hope that the Linworth area is not put on the back burner.
Open House SM	School access would be my first priority over all others.
Open House SM	Waste of time and money for something that is used by only a small number of Worthington Citizens. Has anyone taken a head count of the percentage of citizens who actually use these bike and walking plans? The few that are out running are frequently seen running in the street, rather than the paths and sidewalk that we have.
Open House SM	It looks good!
Open House SM	This is entirely skewed towards bike riders and walkers. I'm 70 years old and won't be doing much of that. I still need to get around and get into and through the city, ie, I need to drive. This will make it much more difficult to drive, and traffic will get even slower than now. 2. These plans are going to be very costly, with much expense even to secure wider rights of way. I live on Rieber; I will not give up my front yard for the planned bikeway without a fight and for no money. I suspect many others will feel the same way when 10-20 feet of our yards are devoted to bike lanes. We're only about 25 feet off the street as it is. 3. Finally, I think this is being designed for young people, with little regard for older folks. There are still alot of older people in Worthington who need to be considered as well. We drive; we don't ride bicycles very often at all.
Open House SM	My main priority is making bicycle commuting to work safer. I live in Colonial Hills and would like to commute via High St or Huntley/Sancus to Campus View, but right now it's too dangerous!

Open House SM	Be realistic about what the bulk of Worthington residents want. Yes, bikes are good, but let's not spend lots on projects that will be used by few (think Lime Bike). And let's not mess up vehicular traffic either. In parts of Columbus I have seen bike lanes created on major roads (Indianola and Fourth) in ways that worsen traffic with little apparent usage by bicycles. Be pragmatic and realistic. Don't let ideology drive policy.
Open House SM	I like the plan. I have lived here 22 years and I am an avid walker and sometime biker. My biggest criticism of Worthington is and has always been that there's too much through traffic. Worthington makes it way to too easy for people who don't live here to drive through here. As for downtown Worthington, there's too much traffic on Evening, North and 161. We should close off streets and make them less accessible. There should be more concern for residents and less concern for businesses. If you're not serving the interests of residents first, then maybe you don't want to be here. The 161/High Street intersection should be narrowed. Make the right lanes through town bikes only. There's plenty of east-west, north-south highway corridors. I-71 and 315 are major highways. 270 serves the northern east-west corridor and has been re-ramped to carry more traffic. There's absolutely no reason for cross-traffic to be on High Street or 161. If the city focused on pedestrians and bikers and less on cars, Worthington would be a nicer place to live. We want to be like Bexley NOT Upper Arlington. Keep high-rises and multi-level apartment buildings on the edges and preserve the middle of Worthington for people who live here. Worthington's charm will attract visitors, but Worthington's charm should be first reserved for people who live here and pay taxes. Here's a perfect example of what works and what doesn't. That restaurant in the Worthington Inn is out of business for a reason while a place like Whitney House thrives. No wonder if you live here. Whitney House treats Worthington residents like family. They're part of the community. Make this place better for bikers, dogs and pedestrians, not cars. Focus on businesses like Graeters and Whitney House that are community favorites. Sure we like visitors, but if you're in our house respect our rules. And if you want to open a business here then let it be a business that attracts people who live in Worthington first. Again look at Bexley and look at Upper Arlington. The comparisons should be obvious. Upper Arlington does not have a charming town center. Like Bexley, we do. And it would be even more charming and longer if we got rid of a lot of traffic on High north of 161.

Comment Source	Comment
Open House SM	Looks like a good bit of planning and work went into the Master Plan. Living along Worthington Galena Rd between High St and Worthington Christian, there needs to be some form of multi use trail along the road. The plan appears to address this issue.
Open House SM	I thought it was very interesting and comprehensive. My reaction is that it all sounds wonderful, but will take lots of money and time. I reviewed the various alternatives presented for residential -mixed use-industrial and could not decide if I liked one more than the other. I know that a shared bike/ pedestrian path can work, but it requires thought by both the biker and the pedestrian, however from a cost standpoint that would seem most efficient. I personally don't like riding my bike in the traffic lanes, however I see bikers do so. I live near the intersection of Linworth and 161 and regularly walk very carefully through the intersection.
Open House SM	Very excited at the thought of these improvements!
Open House SM	i like the plans where the biking traffic is separate from the auto traffic. i'd be more inclined to bike if i could do it away from cars and trucks. and it makes me nervous when i am driving to have bicycles in the mix. i never know what to do around them and its hard to pass them.
Open House SM	Wilson Hill neighborhood and the elementary feel very disconnected from most of Worthington for pedestrians and bicyclists. There are little to no sidewalks with many kids walking to schools. They have to walk through yards or dodge traffic which is especially difficult and dangerous during inclement weather. I appreciate the thoroughness of the master plan and look forward to it being developed further. I would love to see the streetscapes improved with amenities proposed such as better designated non-vehicular zones with trees and benching. It would be great to brick pave intersection similar to downtown Columbus or Dublin Bridge Park to slow cars and provide better awareness of objects crossing. I would support a city bond levy or something similar as a funding source.
Open House SM	Impressed with the details and online documents. Was unable to attend public presentations but very glad residents were invited to see and make comments at various stages of process. Lots of improvements suggested & well explained. Great to have guidelines in place as more development occurs (Harding property, UMCH, Wilson Bridge Gateway, etc). Need to preserve trees, historic look & feel while improving safety and walkability.

Open House SM	The plans surrounding 161 don't make sense to me. Currently the plans was to keep the mixed use path on the south side west of 315, but then have the mixed use path on the north side east of 315. The less crossing of 161 that occurs the better for both traffic and pedestrians. It makes sense to put the mixed use path on the north side of 161 in front of Thomas Worthington, but I think something needs to be done about the path to the west of 315. My suggestion would be to build some type of changeover lane underneath the overpass by the river that would allow bikers and pedestrians to change from the south to north side. Or a mixed use overpass could be used at olentangy river rd and 161.
Open House SM	Policy recommendations seem based upon single or limited opinions or experiences.
Open House SM	Looks like a lot of good work. I am disappointed that most meeting to hear about and give feedback were not available to those that work 8 to 5 and have the average 20-30 minute commute. I would really like to see a better way the those living in Pinney Village aka West South street could better access the Olentangy Trail from our neighborhood. Also a sidewalk on West South is desperately needed! Heavy foot traffic, strollers and dogs walking.
Open House SM	Don't turn Worthington streets into the disaster Columbus did with Indianola Ave.
Open House SM	Priority should be given to turning all of 161, all High street, and all Worthington-Galena Road into Mixed-Use Boulevards (version 3), with protected and buffered shared bike paths. The second priority should be to fix the brick sidewalks that are dangerous and unwalkable along New England. Third priority should be the remaining sidewalks in Kilbourne Village, which are difficult to run on, forcing many runners into the street.
Open House SM	I don't have any. It seems okay to me.
Open House SM	Obvious care and thought has gone into it. Not perfect, nothing is, but the areas spotlighted although not in my circle of concern at first, opened up the idea that I could go to Linworth, for example, on my bike rather than in my car. Would never have thought of biking to Rec Center, but if this comes to fruition...

Comment Source	Comment
Open House SM	There are other, higher priority expenditures on the City's plate so this plan should be phased in over decades. Some of the costs can be shifted to developers but Worthington has to be more friendly to these developers.
Open House SM	Impressive plan document...as a senior citizen I walk a lot and feel comfortable with that...I tend not to ride my bike on high street as it is a bit dangerous... My recommendation would be to over communicate not so much the plan itself but how it works...I moved to worthington a year ago and new very little about the plan...I would schedule times to communicate the use of the space for walking etc...video meetings and add to the website...would help me...
Open House SM	If you are going to be making changes on individuals streets before you start then you should directly request input particularly if there are different options available by either mailing a request for input or putting door hangers. That way the neighbors that are most likely to encounter the change on a regular basis have a say and do not feel people from outside their neighborhood are changing their neighborhood.
Open House SM	I agree with bikes using city streets when they comply with rules of the road and laws. I have seen many bikers ignoring stop signs, crosswalks and traffic lights as though they do not apply to them. I have seen many bikers reaching excessive speeds on the bike path along the river and having gross disregard for pedestrians. I am opposed to runners and walkers using the city streets for running and walking. They should use the sidewalks and paths that are provided for them.
Open House SM	I'd love to see a bike route that links Worthington to Polaris. I often bike from my home, 362 Crandall Dr. to the Polaris area, often in the morning with LOTS of traffic. I use either Worthington Galena to Orion to get to the East side of Polaris. Or I use Worth. Galena to Sancus or Old State if I want to go to the West side of Polaris. There is a "big risk" every time I travel these routes on my bike, for me. Avoiding cyclists on these routes causes traffic delays.
Open House SM	Sidewalks!!
Open House SM	How is City coordinating with adjacent municipalities in transportation plan? Are you communicating with Chase and other private organizations to determine ways to reduce grid lock?

Open House SM	I may have missed it, but I didn't see how the city would address the poorly maintained brick sidewalks. Will City take ownership of their maintenance to ensure economy of scale when problems are addressed? Is it possible for the city to own maintenance responsibility of all ARB district sidewalks? Similar to a winter maintenance program, include the trip hazard maintenance. I also didn't notice the problem of overgrown shrubberies which impact the access of existing sidewalks. These seem to be an issue in several areas of old worthington. Similarly, several sidewalks seem to be below grade so that mud and water collect. My vote for the East Dublin Granville MUP is the North side of the street. The south side is already further away from the road; moving the northside would be more comfortable for pedestrians / cyclists and take advantage of Winter Sun. It would also put the Northside more in line with sidewalks west of Morning St. Removing shrubberies will be necessary so residents have clear view of pedestrians/ cyclists. Elevating the MUP above grade and curbing would be recommended to correct some drainage issues. Has burying the utilities on that side of the street in conjunction with this project been considered? Free street tree replacement if existing trees need to be removed? It would seem easy to include requirements for crosswalk marking at Pingree and Morning the next time SR 161 is repaved. You know if we mark them this year, they'll tear it up and repave next year.
Open House SM	I see a lot of information about bike planning but what about sidewalk and pedestrian planning?I provided feed back via the interactive map and to Cecilia Thornton about an issue in the Old Worthington area specifically on Oxford St between Short St and New England. The sidewalk dead ends and car parking on the street is allowed on the west side of Oxford to the corner of Oxford and New England forcing pedestrians to walk in the street. How can this be addressed?Can we remove parking on that side of the street and add a bike/walk lane OR add a sidewalk?There is NO way to walk safely down that street. this is in the Old Worthington district and should be addressed, please reach out with questions, Slate Ribic 614-214-9220

Comment Source	Comment
Open House SM	After all this and still no plan for a Hartford Street sidewalk between North and Stafford Streets?What about the Safe Routes to School Strategy implementation? How does disregarding this area fit in with that? Near a school, library, retirement community, and downtown events, and you still can't find the justification for a sidewalk here??
Open House SM	Utterly disappointing that W. South Street between Evening Street and the river continues to be ignored. I fear it will take a dead school child attempting to walk to Evening Street, Kilbourne Middle, or Thomas before the concerns of the neighborhood are taken seriously. Cars absolutely FLY down this road as a cut through between 161 and Riverlea with little to no regard for pedestrians. I won't walk the half mile to town after dark. I can't let my children go a few houses over without fear they will be run down. As a neighborhood, we've asked time and again for more stop signs, speed bumps, dedicated bike lanes, something, anything to slow the traffic and again, NOTHING.
Open House SM	Overall, I think this is a good start. I appreciate the effort in developing the Master Plan. As a resident west of 315, my greatest concern is access to Perry Park. The Master Plan denotes the crossing at Linworth and Collins as an "Uncontrolled" crossing(PX017) and needs a crosswalk (pg 85). This is a terrible mistake. Linworth Road is hilly, and cars drive very fast. A crosswalk will be inadequate. Especially with children using this crosswalk, at a minimum the intersection requires some sort of signal.
Open House SM	Hello! I wanted to suggest additional sidewalk on New England starting at Morning St and heading east. New England gets a good amount of traffic and can get very congested during the farmers market. I've almost been hit a couple time pushing my kids in a stroller. Thanks!
Open House SM	Please consider adding a path on Linworth; there are so many neighborhoods that would benefit from this, especially with all of the new businesses at 161 & Linworth.

APPENDIX F. LIST OF MAPS AND TABLES

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APPENDIX G. RESOURCES

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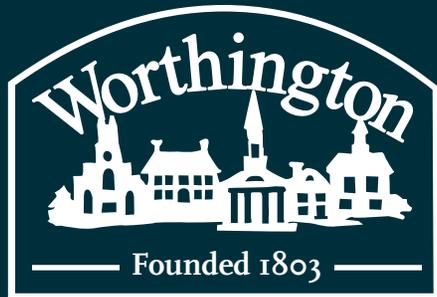
Guide for Improving Pedestrian Safety at Uncontrolled Intersections by U.S. Department of Transportation and Federal Highway Administration:
https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

Small Town and Rural Design Multimodal Networks

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf

Wayfinding Sharrow Guideline, Portland Bureau of Transportation (2011):

<https://nacto.org/wp-content/uploads/2010/08/Wayfinding-Sharrow-Guidelines.pdf>



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