City of Valparaiso
Pathways and Greenways Update

March 2017

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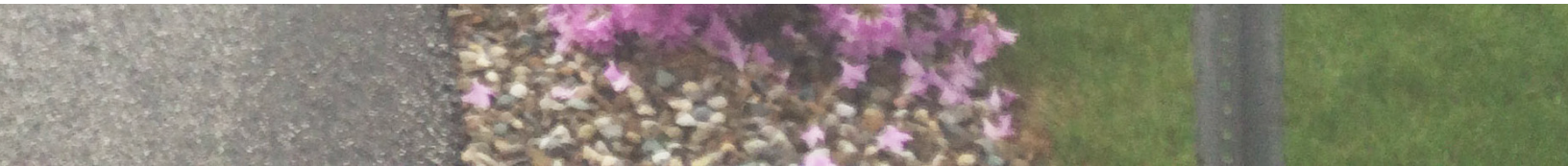

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VPRD STAFF

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Steve Antonetti

CITY PLANNER

Tyler Kent

CITY ENGINEER

Tim Burkman

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CHAPTER ONE - INTRODUCTION

Valparaiso is well served by a range of pathway options, including an extensive off-street multi-use trail and sidewalk network that is augmented by a range of on-street facilities. This network allows residents to connect with a vast majority of the community as pedestrians and/or cyclists and represents an effective investment in the broader sustainability of the City and region. By reducing auto dependency, the City is providing environmental benefits through the reduction of vehicle emissions and run-off into regional waterways. It is also providing economic return through increased spending associated with increased mobility as well as the extension of roads and auto-infrastructure lifespans that can free these funds for other uses. Finally, a healthier, more connected community achieves the goals of social sustainability.

BACKGROUND

The Valparaiso Pathways and Greenways Master Plan Update builds on previous studies conducted in 2005 and 2010 that laid the groundwork for the successful, comprehensive pathways system enjoyed today by Valparaiso's residents and visitors. Like the 2005 Pathways and Greenways Master Plan, this plan takes a fresh and detailed look at the community and existing facilities to determine the best mix of capital improvements and operational measures to serve it. While many of the concepts from previous studies are carried forward, new ideas and approaches have emerged based on over ten years of lessons learned and feedback from today's pathway enthusiasts and potential users.

The planning process has included significant input from City and Parks and Recreation staff, pathway stakeholders and the general public, supplemented by hand's-on "ground truthing" done from a user's perspective. This document has been produced in tandem with the Parks and Recreation Master Plan, sharing input from community surveys, stakeholders and community meeting input and should be considered a companion document.

WHAT ARE PATHWAYS AND GREENWAYS

Pathways and greenways are corridors of protected open space managed for conservation, recreation and alternative transportation purposes. Greenways often follow natural land or water features, and link nature areas, parks, schools, cultural features, destination places and historic sites with each other and with populated areas in the City. Greenways can be publicly or privately owned and some are developed as a result of public/private partnerships.

The goal of the updated Pathways and Greenways Master Plan is to positively improve the impact that pathways can provide to citizens and visitors in Valparaiso. Pathways promote health and wellness, improve connectivity, ease transportation from one site to another and serve as a catalyst for economic development. The benefits of Pathways and Greenways include:

- Making communities better places to live by preserving and creating open spaces;
- Encouraging physical fitness and healthy lifestyles;
- Creating new opportunities for outdoor recreation and non-motorized transportation access to key destinations in the City;
- Strengthening the local economy;
- Connecting the community to schools, attractions and parks;
- Protecting the environment; and
- Preserving culturally and historically valuable areas in the City.

PRIORITIZED FACILITY NEEDS ASSESSMENT

The purpose of the Facility Needs Assessment is to provide a prioritized list of facility/ amenity needs for the residents of the City of Valparaiso. The Needs Assessment evaluates both quantitative and qualitative data. Quantitative data includes the statistically valid Community Survey, which asked 415 households located in the Valparaiso area to list unmet needs and rank their importance. Qualitative data includes resident feedback obtained in Focus Group meetings and Key Leader Interviews.

Priority Rankings provide a hierarchal representation of community desire that VPRD can use as a foundation in future programmatic decisions. Priority Rankings combine community need and importance (as learned from the survey) with information gleaned from other public engagement processes and technical research to produce a weighted ranking relative to the items included in the analysis.

- Community Survey
    - o Unmet facility need: Households were asked if they have a need for a particular facility. If yes, respondents were then asked to identify to what degree their need is currently being met (i.e., 0%, 25%, 50%, 75%, or 100%). Survey respondents were asked to identify their need for 27 different facilities.

    - o Facility importance: Households were asked to rank their top four most important facilities.

- Consultant Evaluation
    - o Factor derived from the consultant evaluation of facility priority based on survey results, demographics, trends and overall community input. Weighted value of 4.

These weighted scores were then summed to provide an overall score and priority ranking for the system as a whole. The results of the priority ranking were tabulated into three categories: High Priority (1), Medium Priority (2), and Low Priority (3).

The combined total of the weighted scores for Community Unmet Needs, Community Importance and Consultant Evaluation is the total score based on which the Facility/Amenity and is determined. Since this is a community-wide survey, it is obvious that amenities that benefit the widest demographic cross-sections of the community would tend to be ranked higher than those that serve a niche market. Therefore, it is typical in such assessments nationwide that broad categories, such as trails or neighborhood parks, tend to rank higher than individual facilities.

The Master Plan for the Parks and Recreation Department included developing a random household citizen survey. The citizen survey indicated that Pathways and Greenway development was the number one amenity that the community desired. Full survey results are included within the Valpo Parks System Master Plan and the Appendix of this report.

USER TYPES AND DEMOGRAPHICS

Valparaiso, like many successful livable-walkable communities, has embraced a robust, active transportation network that is used by a range of users. Over the past ten years, the City has constructed over thirteen miles of off street multi-use pathways and over two miles of on-street bike lanes that tie into an on-street network of signed bike routes that connect throughout Porter County. At the time of the 2010 "Trails" master plan, only two miles of the system had been constructed.

Like many of their peers, Valparaiso's cyclists fall into four tiers of user "comfort" that aligns with a desired pathway type. The City of Portland Office of Transportation (Roger Geller, Bicycle Coordinator) published a highly relevant study that identified four types of riders, something also applicable to Valparaiso based on the planning team's observations.

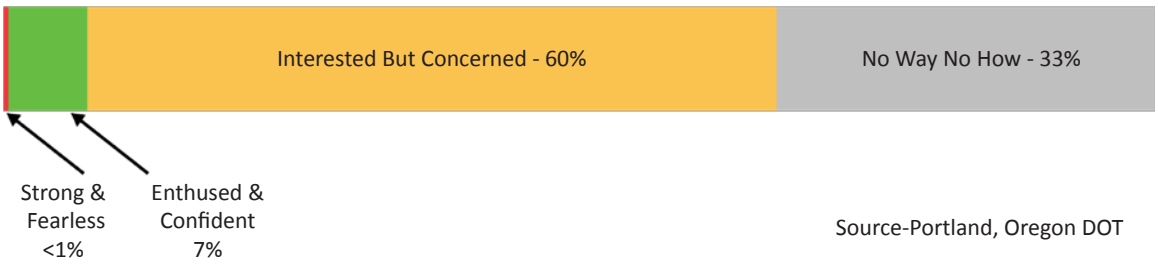
1.) The **"Strong and Fearless"**, representing less than 1% of total population and typified by cyclists who will ride urban roadways regardless of condition. This group is currently well served in Valparaiso via a comprehensive street grid and on-street bike routes and facilities.

2.) The **"Enthused and Confident"**, representing between 5-10% of total population and typified by people who have been attracted to Valparaiso by the significant advances made in the active transportation network, are comfortable sharing the roadway with automobile traffic, but prefer to do so operating on their own facilities. They appreciate bicycle lanes and bicycle boulevards. The planning team has observed that there is an opportunity to capture a greater percentage of this user with increased emphasis on enhanced on-street facilities.

3.) The **"Interested but Concerned"** represents roughly 60% of the total population and typified by people who are curious about cycling, enjoy riding occasionally, but are afraid to ride with cars. They would likely ride if they felt safer on the roadways but most would only ride on shared paths, protected facilities or low traffic local streets. This is the majority of the population and a group currently well served by Valparaiso's pathways network.

4.) The **"No Way, No How"** represents roughly 30% of the total population and they are not interested in cycling and will not bicycle regardless of infrastructure.

Four Types of Cyclists
By Proportion of Population



Source-Portland, Oregon DOT

EXISTING SYSTEM TYPES

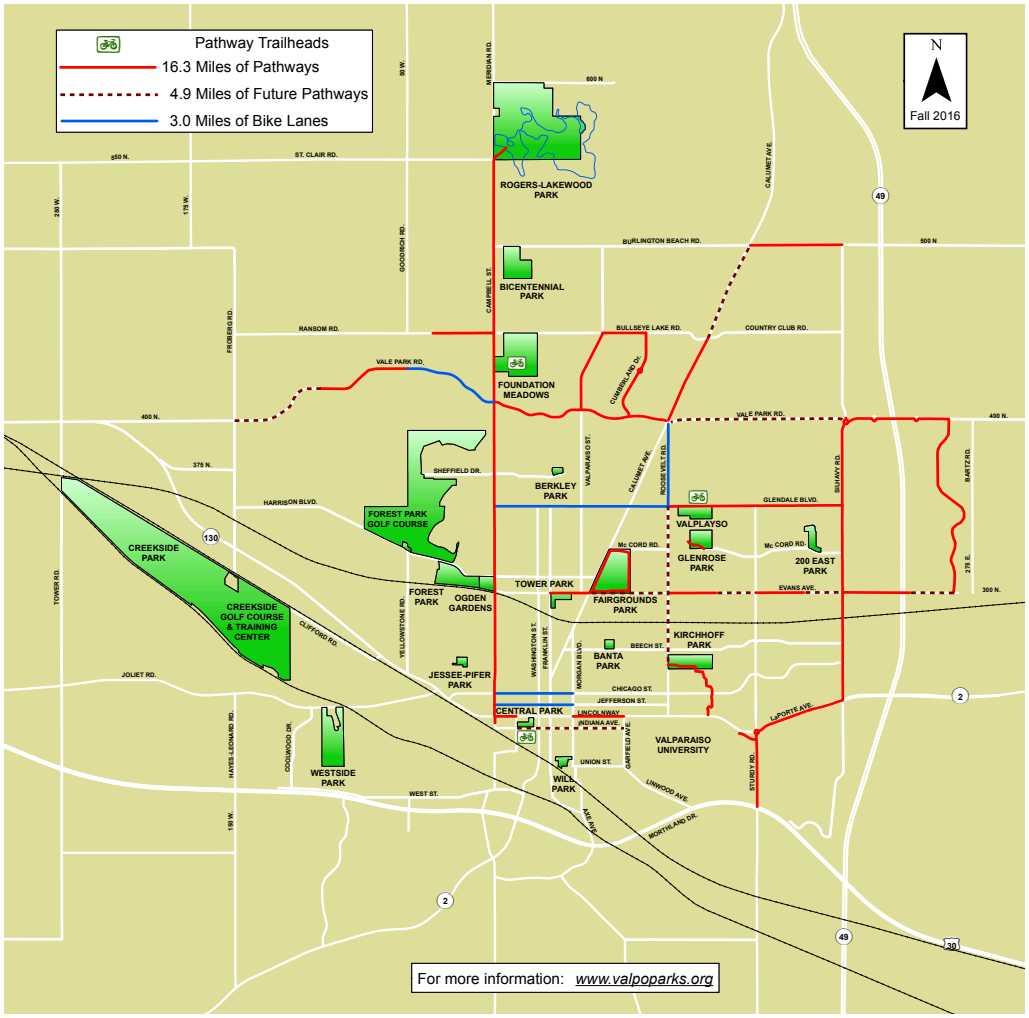


Fig. 1.1: Existing pathway system

The majority of Valparaiso's active transportation investment has catered to the third group and, for the most part, has been successful. It is an extensive network of predominantly 8' wide concrete, separated pathways that serve the core population and downtown, filling selected gaps and incorporating wayfinding, amenities and operational refinements will make the system even more useful for this group as well as pedestrians and non-cyclists who share the pathway system.

The remaining facilities have primarily targeted groups one and two with limited success, according to stakeholder feedback and team observations. This group has stressed the need of balancing the off-street pathway system with more and improved on-street options, and to make operational refinements to the entire system to improve function and safety for both transportation and recreation cyclists. There has also been an increased focus on strengthening regional connectivity to surrounding trail networks and destinations, such as Indiana Dunes National Lakeshore to the north.

This document recognizes the great work completed to date that influences components of this plan, including the extensive separated and on-street facilities already constructed and maintained by the City. The planning team obtained previous studies from Valparaiso Parks, met with the opportunities associated with Valparaiso's path and greenways network. The results of the Valparaiso Pathways Committee on April 13, 2016 and key trail stakeholders during the planning process to understand issues and Pathways Committee Meeting was summarized in a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) highlighted below.

SWOT ANALYSIS

On April 13, 2016, members of the planning team participated in one of Valparaiso's monthly Pathways Committee meeting and led a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis with the group. The following is a general summary of findings from this meeting. A complete version of meeting notes is included in the Appendix.

Strengths: The group felt that the existing network of well-maintained, off-street pathways and on-street facilities was a strength to build on, as was general biking interest and culture in Valparaiso. They also felt the current system provided strong health and wellness benefits as well as a viable transportation alternative to the automobile that connect many of the City's parks and community destinations.

Weaknesses: The group would like to see more miles, more loops, more attention paid to on-street facilities. Additionally, an increased focus on biker safety, awareness and education, including both operational and physical refinements based on lessons learned to date.

Opportunities: The group identified a number of specific local and regional connections that should be further explored to enhance the existing system. In addition, there was emphasis on more diverse programming associated with the trails, leveraging of utility corridors as additional linkage opportunities and focused attention on bike lane design and locations. In addition to City-focused suggestions, the group offered suggestions for better regional integration that could improve connectivity, tap tourism dollars and raise awareness in Valparaiso for those outside the community.

Threats: The group discussed a number of cultural threats, including impacts of potentially changing politics, increased automobile usage with low fuel costs, lack of awareness and education relating to proper bike use and safety and general complacency based on success to-date that could impact political will to complete the total vision.

PREVIOUS PLANNING STUDIES

In addition to the previously completed Pathways and Greenways Master Plans from 2005 and 2010, the project team also reviewed the following documents for incorporation into this master plan.

- U.S. 30 Corridor Plan (2011)
- S.R. 49 Corridor Plan (2013)
- Valpo NEXT: Citywide Vision Plan (2014)
- Creative District Plan (2015)
- NIRPC Greenways & Blueways 2020 Plan (2016)

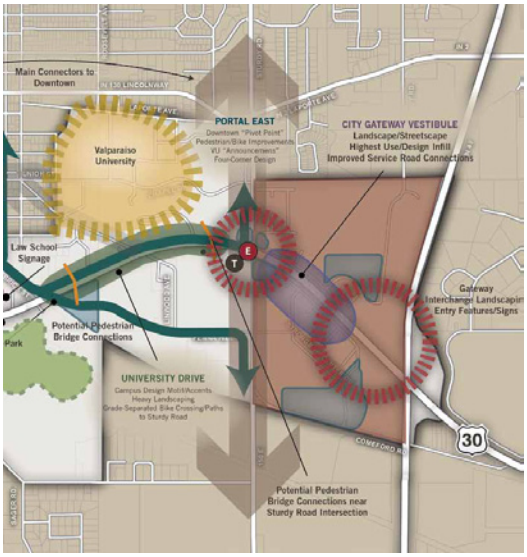


Fig. 2.1: U.S. 30 Corridor Plan (2011). Connectivity and placemaking study for U.S. 30.

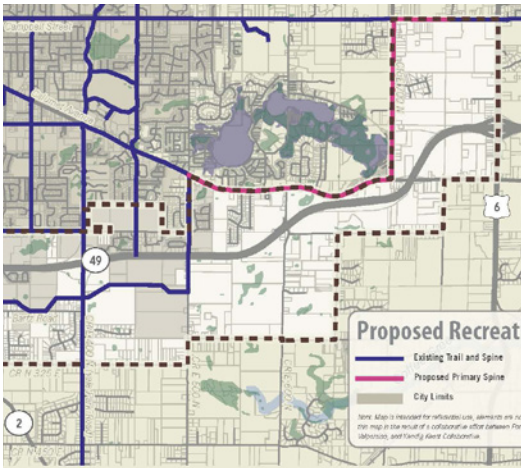


Fig. 2.3: State Route 49 Corridor Plan (2013). Proposed Recreational Trails map.

Fig. 2.2: Creative District Plan (2015). Indiana St. streetscape rendering for Arts & Cultural District

Municpality	In Miles		
	Trail	Funded	Future
Burns Harbor	0.0	1.0	1.1
Chesterton	7.3	0.8	3.1
Crown Point	3.3	0.0	3.3
Dyer	1.3	0.0	0.0
East Chicago	2.3	0.7	1.0
Gary	12.2	1.5	8.6
Griffith	3.3	1.9	0.0
Hammond	25.1	4.7	3.2
Hebron	0.0	0.0	2.1
Highland	9.2	0.0	0.0
Hobart	7.6	0.0	0.0
Lake County	0.0	0.0	5.8
Lake Station	3.5	0.0	0.0
LaPorte County	2.9	1.0	30.1
LaPorte, City	0.0	2.8	0.0
Merrillville	10.8	2.0	4.6
Michigan City	0.8	2.9	5.6
Munster	15.9	2.0	0.0
Ogden Dunes	0.0	0.0	3.7
Portage	10.7	6.0	1.1
Porter, Town	6.4	0.0	0.0
Porter County	9.2	4.8	27.1
Schererville	6.8	4.5	0.0
St. John	3.4	0.0	0.0
Valparaiso	14.1	8.5	0.0
Whiting	2.1	0.0	0.0
Totals	158.4	45.0	100.5

Fig. 2.4: NIRPC G&B 2020 Plan (2016). Total off-road multi-use trails in NIRPC region.

SERVICE AREAS

With over 16 miles of off-street pathways and three miles of on-street bike facilities, Valparaiso is well served by a comprehensive active transportation network that offers residents and visitors with a viable alternative to the automobile for daily transportation needs as well as recreation and fitness benefits. The efforts over the past ten years have created many linkages but the vision is not yet complete and some service gaps exist. The illustrations on the following pages highlight quarter and half-mile service areas for both on and off-street facilities. The figure highlights neighborhoods, attractions and destinations within a five or ten minute walk, as well as those not currently served. This is a useful as a tool to understand where additional connectivity should generally be focused, taking into account other factors such as physical barriers that may make a direct linkage more complex and circuitous. Generally, residents are well served within a half-mile with the potential to increase coverage by filling key gaps through an improved on-street network, as illustrated later in this document.

The below diagram represents both a half and quarter mile service area from each street identified as excellent or good for on street riding by NIRPC. The map also includes the existing bike facilities as they directly correlate to the connectivity of outlying developments and expansion zones.

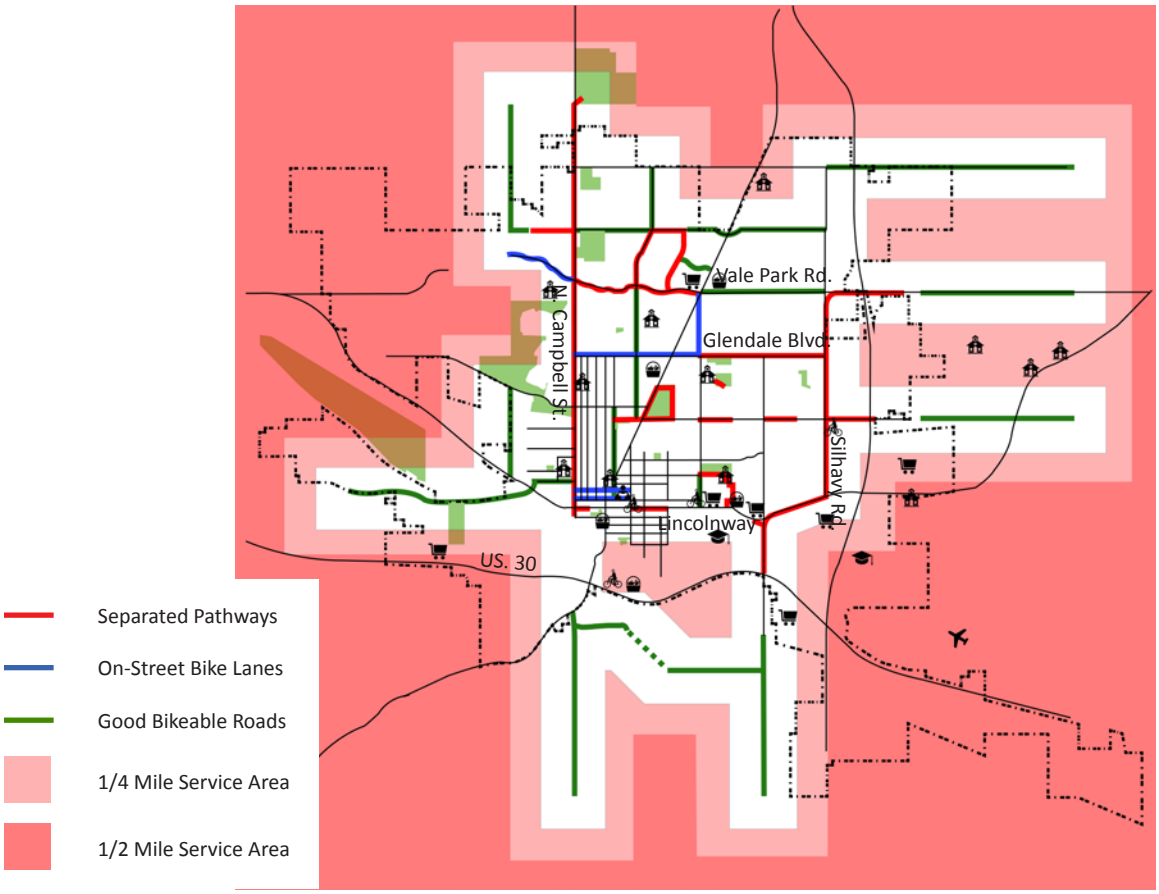


Fig. 2.5: NIRPC Greenways and Blueways 2020 Map Service Areas

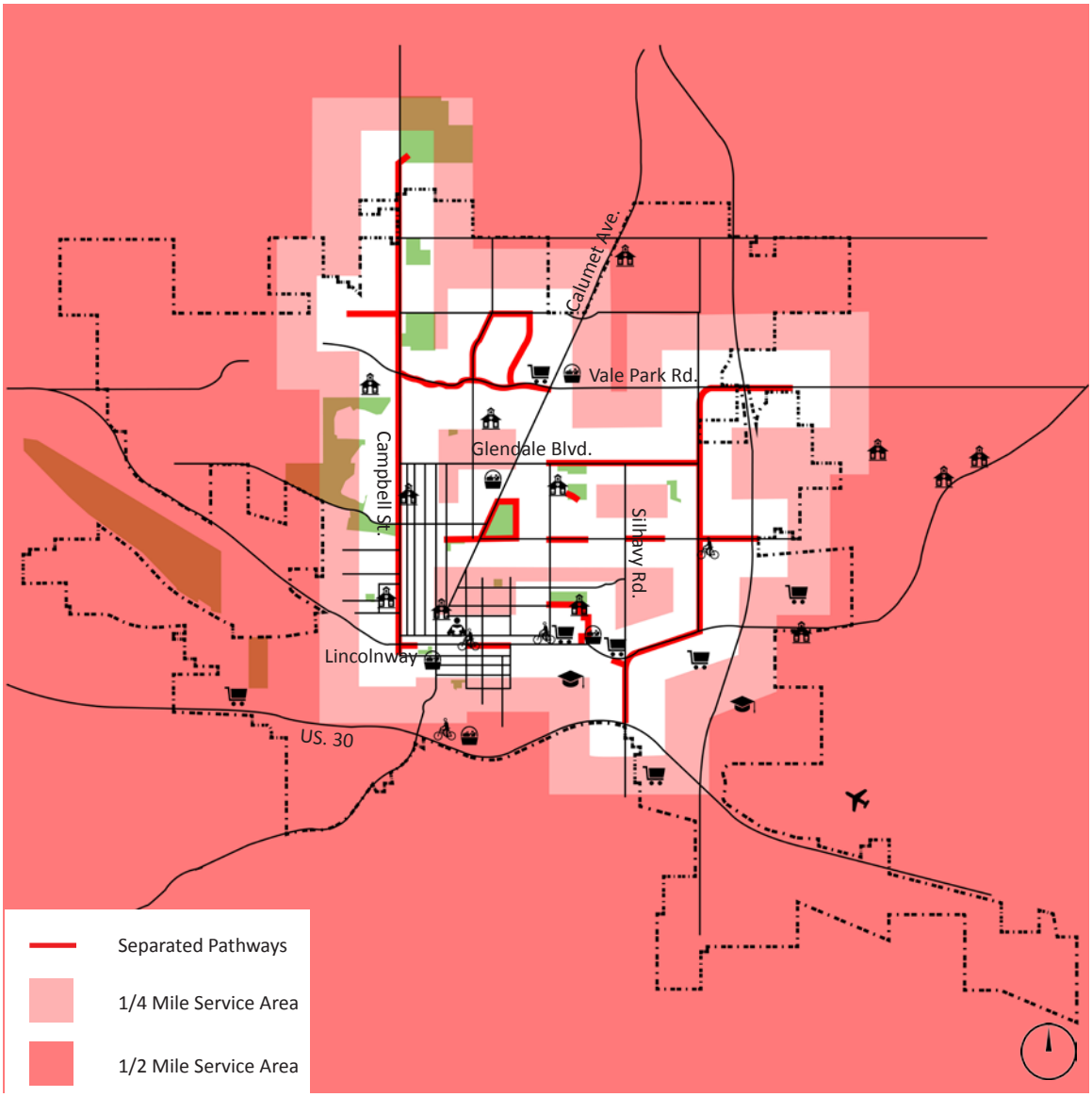


Fig. 2.6: This diagram represents both a half and quarter mile service area from each separated pathway segment within the city.

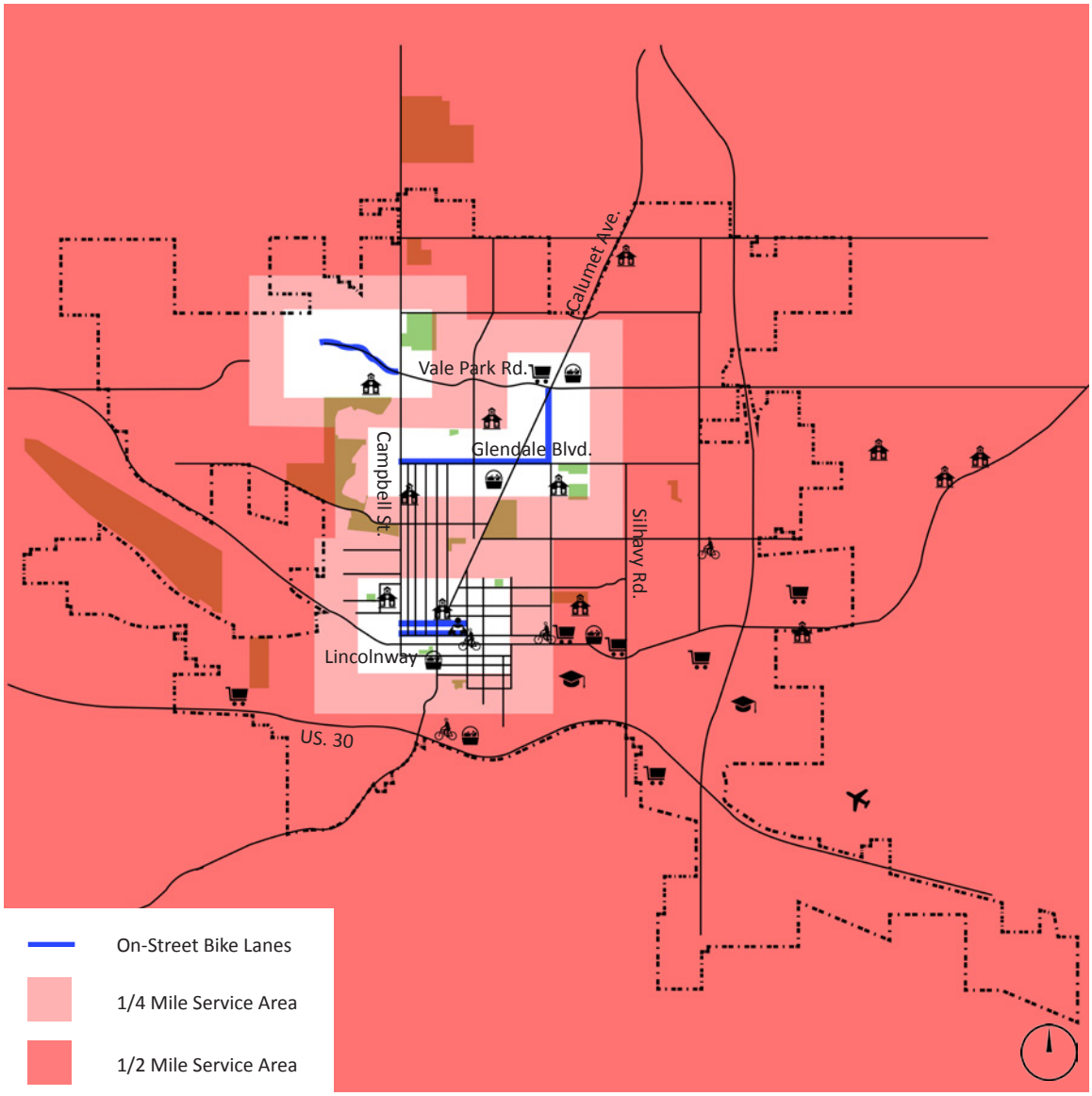


Fig. 2.7: This diagram represents both a half and quarter mile service area from each existing bike lane within the city.

TRAIL CONDITIONS AUDIT

In producing a high-level snapshot of existing conditions of Valparaiso's pathways network, the planning team ground-truthed the City's greenways and trails. A key objective of this effort was to identify deficiencies to the trails as well as opportunities for enhancements to the extensive existing network. To do this, members of the planning and Valparaiso Parks team toured the existing trail system by bike on May 11, 2016 and have conducted multiple windshield surveys of the community to inventory key elements, including connectivity, wayfinding, rider experience and general condition of existing facilities.

The team also collected field data through the use of photography and field-based map annotations. Data collected included planning-level information on trail width, intersection treatments, transitions, surface type, pavement and shoulder condition, bollards, crossing locations, striping, wayfinding and regulatory signing, lighting, bridges, railroad crossings, drainage, adjacent buffers and barrier treatments, and vegetation encroachment. This data was used throughout the project to assess existing conditions and then as the basis for developing project recommendations as outlined in this report.

The following sections outline key findings from this inventory and are covered in greater detail in the following categories:

CONNECTIVITY
- A. Destinations
- B. Regional Linkages
- C. Sidewalk Continuity
- D. Transitions
- E. Intersections

USER EXPERIENCE
- A. Character and Amenities
- B. Signage and Wayfinding
- C. Decision Points

OPERATIONS AND MAINTENANCE
- A. Trail Types and Conditions
- B. Clear Zones and Structures

CONNECTIVITY

Valparaiso has done a tremendous job over the past ten years building new separated pathways where possible and retrofitting existing roads to accommodate active transportation uses. Today, pathways connect the majority of Valparaiso's existing neighborhoods together and to key destinations in the community, utilizing the city grid as a primary tool. They provide locations for cyclists and pedestrians to travel, recreate, exercise, commute and create a sense of community within neighborhoods.

The following pages highlight findings from the team's May 11, 2016 bike tour assessment as well as follow-up windshield survey and data assessment. Findings are organized into the following categories relating to issues and opportunities observed during the ride:

A. Destinations
B. Regional Linkages
C. Sidewalk Continuity
D. Transitions
E. Intersections

Placemaking signage example at ValPLAYso

A. DESTINATIONS

Observation of many successful community pathway systems around the country tells us that the most popular, heavily used and effective systems are typically ones that engage a wide range of destinations. Valparaiso is fortunate to have such a system which engages parks and open spaces, shopping, business districts, major employers, schools and higher learning institutions, senior facilities, health care and many of the amenities that make Valparaiso the livable, walkable community it is.

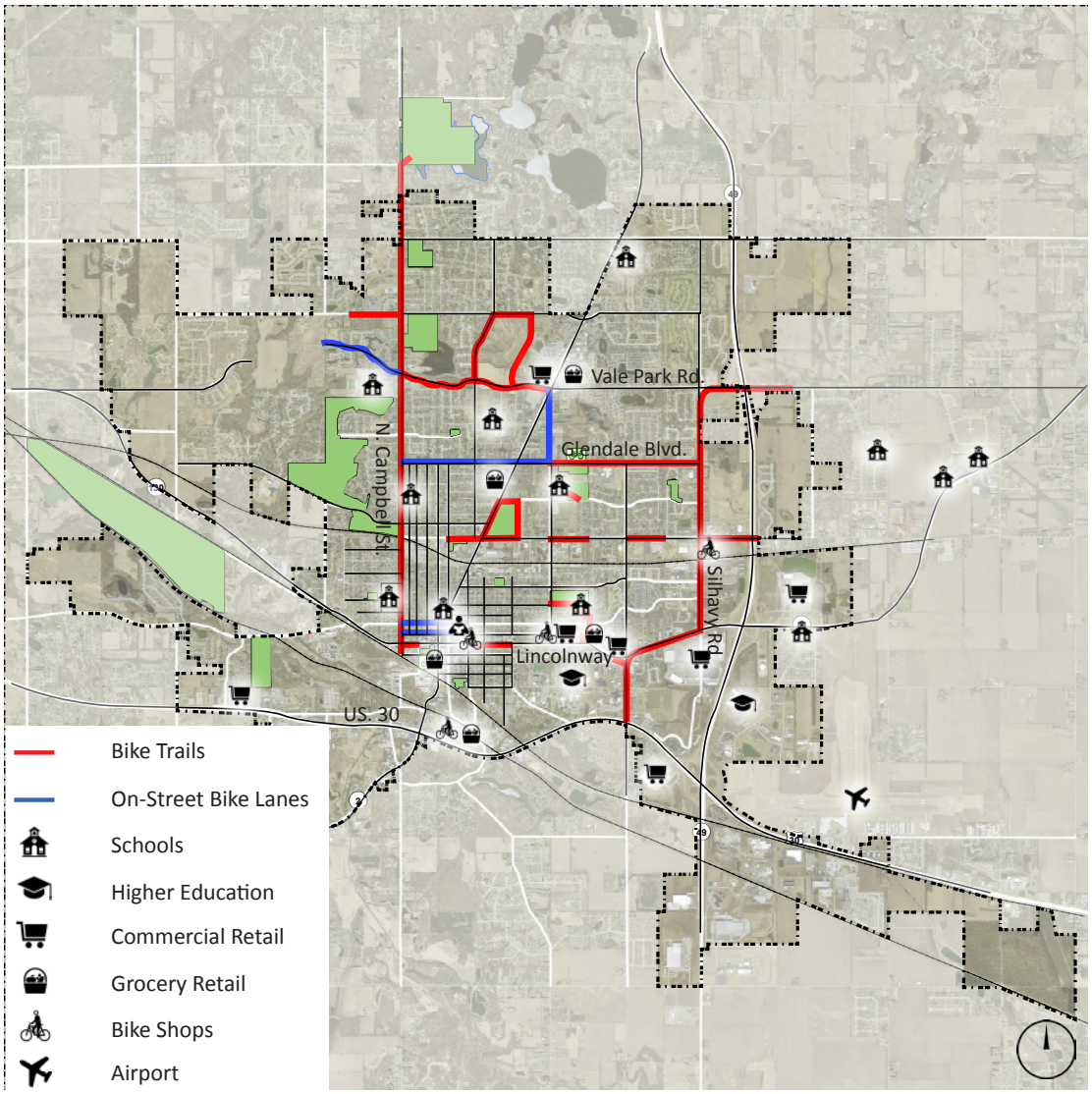


Fig. 2.8: Highlights a range of local destinations in the City logically serviced by bikes and pedestrian and the pathway system's current connectivity to and between them. This connectivity has the potential to reduce vehicle trips in the city but also make the system itself a richer, more interesting and diverse system by their presence.

Valparaiso University Campus

Parkview Elementary School and Kirchhoff Park

ValPlayso Park

Tower Park

The above photos illustrate how the current pathway network effectively connects to many of Valparaiso's commercial and civic destinations and where improvements may be considered to enhance the current service level.

Ambiguous trail terminus at Valparaiso Market Place

Un-served bike shop on Silhavy Road

Un-served senior center on Silhavy Road

Typical at-grade rail road crossing trail gap

The existing pathway network, for the most part, does a very effective job of providing valuable linkages to Valparaiso's destinations. However, as illustrated on this page, there are opportunities for refinements through physical linkages and/or wayfinding and signage to make it more effective and user friendly.

B. REGIONAL LINKAGES

One of the findings from stakeholder meetings was a desire and opportunity to be better connected by Valparaiso's pathways system to regional destinations and attractions outside of the city. Valparaiso is well situated within a reasonable riding distance to Indiana Dunes National Lakeshore and State Park, regional trails, surrounding communities and even Chicago and Michigan for the more ambitious cyclist or trail-to-transit enthusiast. If better connected physically and programmatically, Valparaiso could play an important role in regional tourism initiatives to extend the stay at Indiana Dunes National Lakeshore, providing an attractive urban lodging and shopping destination. This in turn could result in very positive financial yields for the city and elevate it's stature in the state and beyond as a livable, walkable, healthy tourist destination.

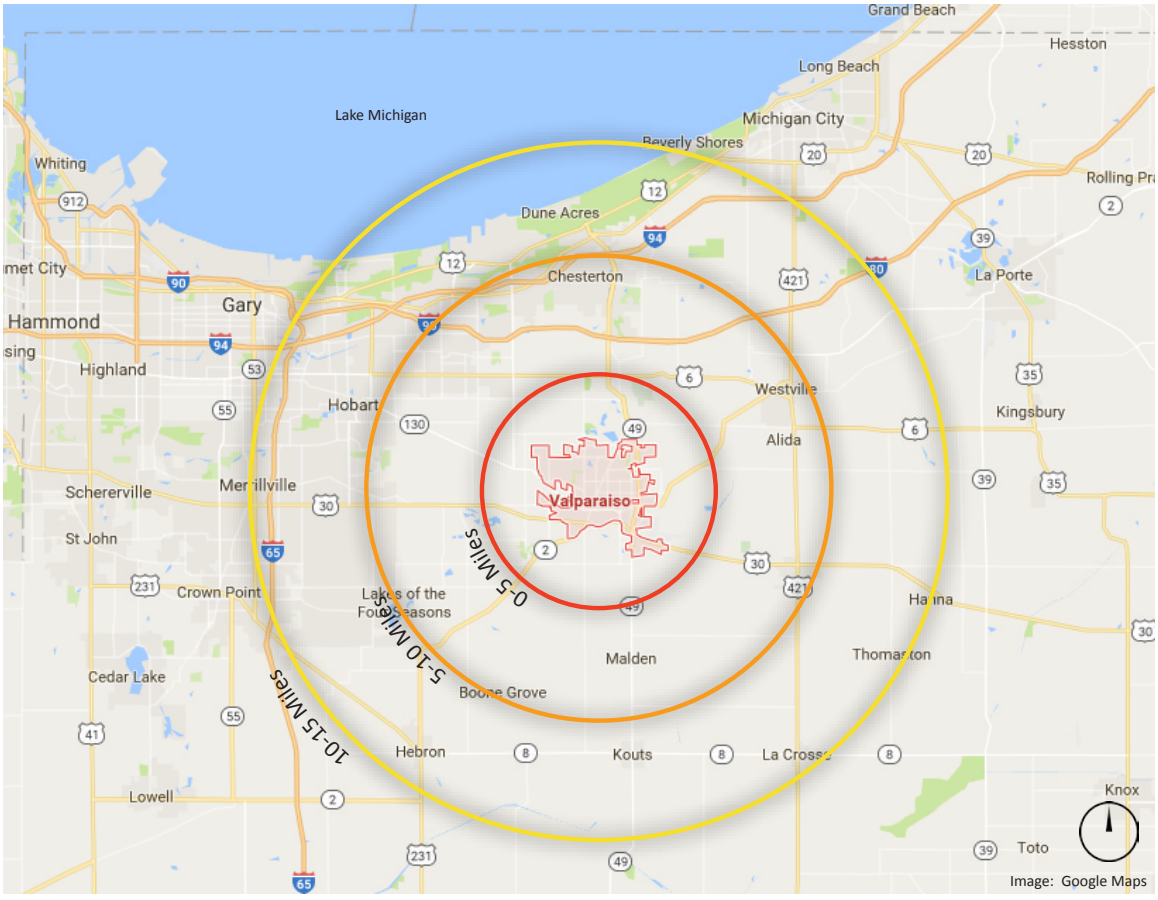


Fig. 2.9: Identifies the wealth of regional destinations potentially served by Valparaiso with regional linkage enhancements.

Valparaiso is located at the junction of multiple priority regional trail corridors as outlined on the map below. This includes the Dunes-Kankakee, Wheeler Corridor, and SR 2 Corridor. US. 30 also has potential as a regional linkage as plans for that roadway progress.

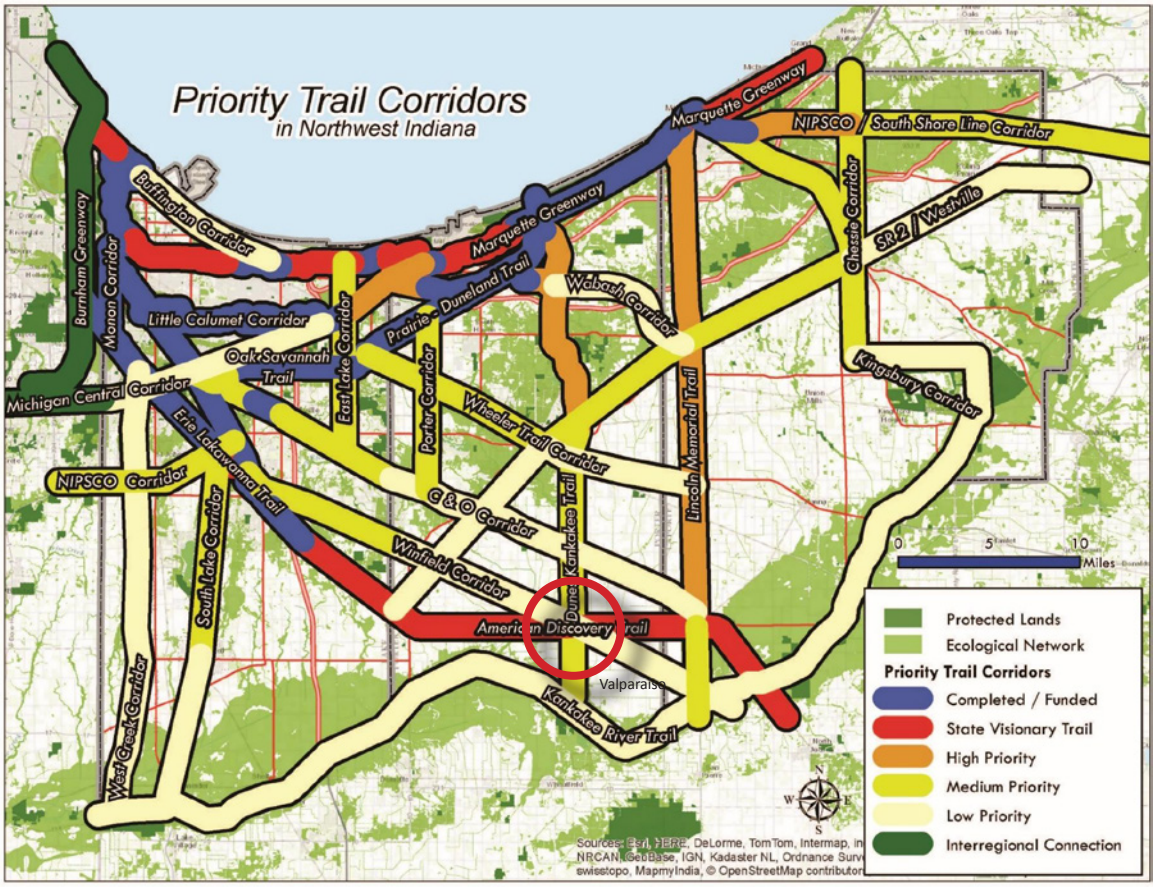


Fig. 2.10: Highlights NIRPC's proposed regional trail corridors and linkages that could be leveraged by Valparaiso to achieve the goal of regional connectivity while also providing enhanced service area coverage in the city's growth areas.

Typical roadway with adjacent sidewalks and pathways.

Unfinished sidewalk terminating at a commercial property.

Sidewalks frequently terminate at residential driveways.

Development patterns restricted the overall connectivity of the sidewalk system.

The majority of Valparaiso's core development areas are connected by a street grid flanked by concrete sidewalks on at least one side of the street. This sidewalk network provides a comprehensive pedestrian system that complements the multi-use pathway and on-street facilities that target cyclists as well. Like the pathway system, there are gaps and inconsistent standards that represent opportunities to expand and enhance the existing network. The photos on this page illustrate typical conditions encountered by the planning team.

Unmarked pathway-to-sidewalk and bus staging area at Parkview Elementary School

As in other images, sidewalks abruptly change into trails with little to no warning.

Abrupt transition between pathway phases along Evans Ave.

Unclear transition from pathway into park feature at ValPlayso Park.

As an evolving system over the past decade, it is understandable that there are instances where the transition between one facility to another presents both an opportunity and challenge. They are opportunities as decision points in many cases where the user may benefit from a transitional node that includes wayfinding, furnishings or other trail amenities that make a brief pause into a positive experience. Conversely, these transitions can be a significant challenge when they impact function, safety and general user experience and comfort. Images on this page illustrate a range of transitions encountered during inventory and analysis.

E. INTERSECTIONS

Typical neighborhood street crossings for both pathways and sidewalks.

Roundabout intersection on Vale Parkway at Silhavy Road with bicycle shoulder.

Urban intersection at the cross roads of Vale Park Drive and Campbell St.

Large-scale, high volume highway intersection at U.S. 30 with stormwater and maintenance challenges

Roadways

Valparaiso's cyclists and pedestrians benefit from a robust grid-based pathway system that is beneficial as a connective system and challenging in that it includes many intersections to navigate along the way. In many cases these intersections are easily navigated residential streets where low speeds and clear sight lines allow safe mixing of modes. However, Valparaiso is also connected by a number of high-volume highways, regional arterials and specialty intersection types that require a more complex level of technical solution to manage all modes effectively. In all cases, clear, well-marked and maintained intersections that utilize the most current best practices are important to the comfort and safety of all transportation modes. The images on this page illustrate typical findings during inventory and analysis.

Overgrown vegetation and no material differentiation at residential driveway.

Material differentiation but operational impediments.

Ambiguous intersection of pathway and service drive on Silhavy Road.

Poorly marked parking lot crossing at Tower Park.

Driveways

Valparaiso's pathway system, in most cases, represents and enhanced sidewalk consisting of an 8' wide concrete trail on one side of the street, augmented by narrower concrete sidewalks on the opposite side of the street. One of the challenges of this system, especially in densely populated residential neighborhoods, is a high number of driveway crossings. Many of the pathways intersect both driveways and parking areas, sometimes service drives as well, with minimal indication of the crossing. In some cases there is a material change between the trail and driveway that starts to distinguish a hierarchy and tactile warning for both modes. In other cases there is very little distinction and operations and maintenance challenges such as overgrown vegetation and placement of trash containers that creates functional and safety challenges for both modes. Images on this page illustrate typical findings during inventory and analysis.

Railroads

It is notable that Valparaiso's pathways cross multiple freight rail lines in multiple locations with some crossing at grade and others separated by bridge structures. Each presents an opportunity to enhance the pathway system. Grade separated structures like those along Campbell may provide a vehicle-free, rails-and-trails corridor with cooperation and creativity. There are also opportunities for trail widening and improvements on existing bridges or underpasses such as the Joliet Road bridge or Washington Street underpass to improve and/or extend the existing network.

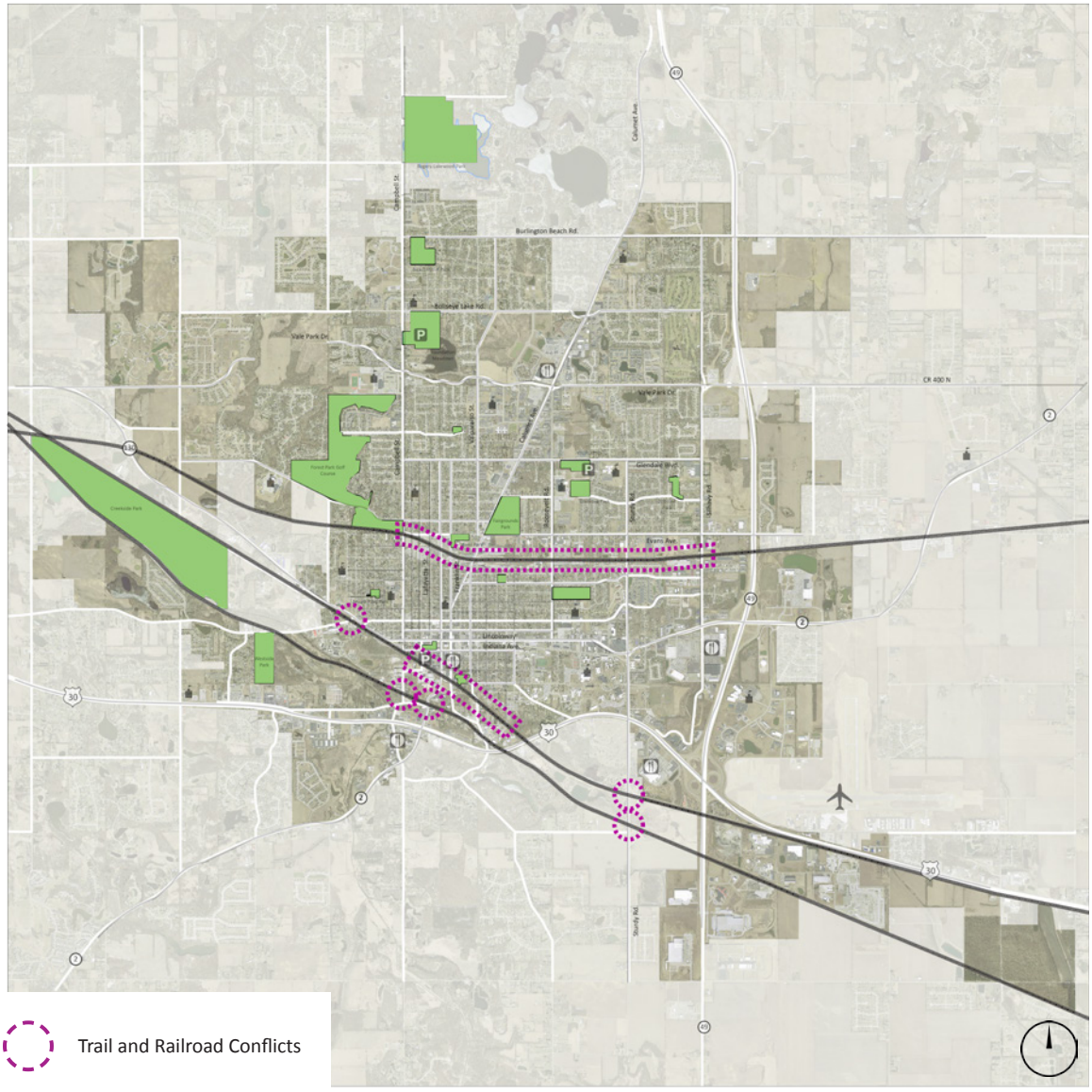


Fig. 2.11: Identifies areas of conflict between the trail system and the railroads that run through the city.

Pedestrian crossing trail gap on Roosevelt Road.

Pathway railroad crossing gap on Silhavy Road.

Grade separated facility and connection opportunity at Campbell.

Pathway enhancement opportunity on Joliet Road Bridge.

Pathway enhancement opportunity on Washington Street Underpass.

Conversely, all observed at-grade crossings represent significant gaps in the network, with pathway improvements stopping short of the tracks and leaving the user to navigate at their own risk. It is imperative to revisit and fill these gaps and stress collaboration with railroads as a requirement on all future crossings. Photos on this page illustrate typical findings during inventory and analysis.

USER EXPERIENCE

Successful pathway systems connect users to and between their desired destinations while also linking them to the cultural fabric of a community. Valparaiso's pathway system achieves both of these missions, providing residents with a valued recreational and transportation system and a diverse user experience along the way. From parks to central business districts, from universities to senior centers, a ride along the City's pathways provides a glimpse of Valparaiso's community fabric. During the May 11 bike tour, the team attempted to document and understand what the current pedestrian or cyclist experiences along the existing network and how it might be enhanced.

The following pages highlight findings from the team's assessment as well as follow-up windshield survey and data assessment. Findings are organized into the following categories relating to issues and opportunities observed during the ride:

A. Character and Amenities
B. Signage and Wayfinding
C. Decision Points

A. CHARACTER AND AMENITIES

Riders of the Valparaiso pathway network encounter a host of different settings along the way, ranging from passive, natural landscapes to urban art installations and performance venues. This richness of experience contributes to a successful user experience through greater visual interest and diversity as well as basic comfort provided by trail-side amenities such as benches, shade, support facilities and, in some cases, Parks and Recreation staff. The photos on the following pages illustrate the character and amenities encountered during the inventory and analysis phase.

Central Park and Downtown arts and culture

"Life Trail" fitness stations along Fairgrounds Park Loop trail

Public art installations along the Cumberland loop

Engaging park and play environment at ValPlayso Park

Ecological education and demonstration projects

Large scale natural areas, passive recreation and picnicking in Rogers-Lakewood Park and other open space corridors.

B. SIGNAGE AND WAYFINDING

Shared signage between off-street pathways and on-street bike routes on Silhavy Road.

Signage family along Campbell Street pathway spine.

Opportunity for enhanced wayfinding at major intersection decision point.

Unclear and underscaled wayfinding at trail junction along LaPorte Avenue.

A well-conceived and executed signage and wayfinding system can be a major contributor to a quality user experience, especially on a comprehensive system like Valparaiso's. During inventory and analysis the team observed a general lack of continuity on this important component, resulting in a level of ambiguity to an unfamiliar user. This is especially true at major decision points between trail segments or major intersections. This is further compounded by a lack of visual differentiation between the concrete pathways and sidewalks. Photos on the following pages highlight the team's finding on this project component.

Unmarked decision point at Valparaiso Market Place.

Opportunity for enhanced wayfinding at major intersection decision point at US 30.

Complex intersection and decision point with minimal trail signage.

Opportunity for enhanced wayfinding at major intersection and decision point.

C. DECISION POINTS

A trail system as comprehensive and complex as Valparaiso's includes many "decision points" that are opportunities to provide important data to riders to ground and direct them to their desired destination. Much of this is covered in a comprehensive wayfinding and signage strategy that includes a hierarchy of signage consistent with location. One important element of this hierarchy is the trailhead – a place of beginning and ending of the trail journey typically including locational maps, directional signage, seating, site furnishings, shade and a level of parking. Valparaiso recently installed a trailhead prototype adjacent to the parking lot in Foundation Meadows Park as well as elements of a trailhead in Central Park as illustrated in the photos below. Based on the number of access and decision points in the Valparaiso pathway system, there are opportunities for a number of additional trailheads as well as the potential for a variety of different scales tailored to location, character and budgets.

Trailhead marking the trail system throughout Valparaiso, located at Central Park Plaza.

Trailhead signage located at Fountain Meadows Park.

Central Park trailhead

OPERATIONS AND MAINTENANCE

The value of any public investment is often heavily influenced by its condition, making a community's ability to effectively operate and maintain a public amenity equally important to constructing it in the first place. During the team's inventory and analysis activities, general operations and maintenance (O & M) was observed and documented on the following pages. For the most part, the system in excellent condition thanks to quality construction and regular staff attention to O & M. The following pages highlights general O & M findings, organized into to sections:

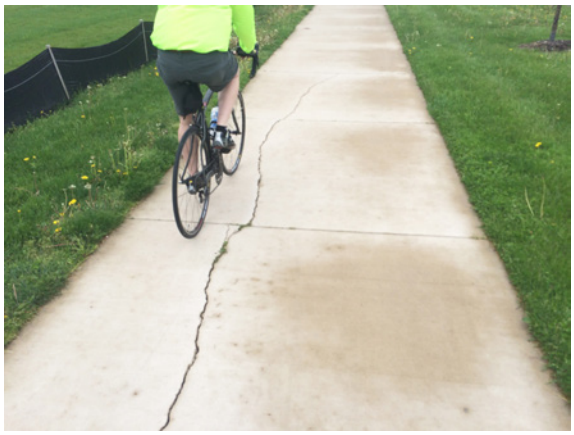
This section includes the following:

A. Trail Types and Conditions
B. Clear Zones and Impediments

A. TRAIL TYPES AND CONDITIONS

While the majority of the pathways system is comprised of 8' wide concrete separated trails, Valparaiso's system does include a range of other trail types and materials that each have their own unique O & M needs and procedures. Furthermore, many of these alternative types are at a different stage in their useful lifespan and may need a different level of attention than recently constructed concrete pathways. Ultimately, Valparaiso Parks and Recreation will need to look holistically at each type and location to develop a comprehensive, proactive O & M strategy, including a dedicated budget, for existing trails and those added in the future. The images on the following pages highlight the range of trail types and materials encountered by the planning team.

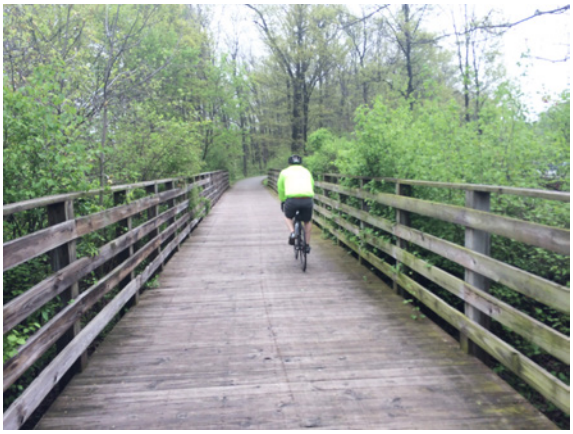
Typical concrete pathway in good condition.



Cracking found in selected sections of concrete pathway system.

US 30 intersection with poor condition crosswalk markings and drainage challenges.

Typical on-street bike lane on Glendale Boulevard with aging markings.

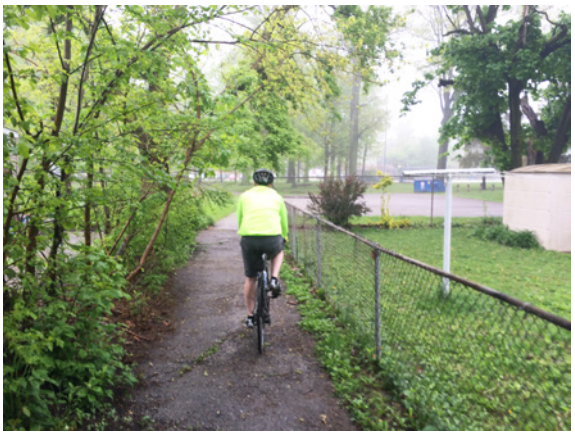


Wood boardwalk segment with unique O&M considerations.

Aging bituminous trail on Cumberland Loop reaching end of useful lifespan for surface and markings.

B. CLEAR ZONES AND STRUCTURES

Most of the trails visited by the planning team have been designed and maintained to American Association of State Highway and Transportation Officials (AASHTO) standards in terms of width and clear zones. These standards provide a comfortable riding experience that is safe for typical use and both bikes and pedestrians. There were a handful of segments as illustrated on the following pages where maintenance practices or materials are not meeting contemporary standards.



Large, overgrown vegetation and adjacent fencing creates physical impediments along segments of the connector trail between LaPorte Road and Kirchhoff Park.

Overgrown vegetation creates visual barrier and blind trail curve.

Trail with adjacent fence and no clear zone along Evans Avenue.

Drainage grate with open slots parallel with traffic flow creates potential to capture narrow tires.

Fixed, low bollard not to contemporary standards and creates potential obstruction hazard.

Residential trash bins create impediment to pathway use.

Snow piling onto pathways from adjacent property owners should be discouraged through City ordinances.

CHAPTER THREE - RECOMMENDATIONS

The City's efforts over the past ten years have left a great legacy for today and tomorrow's residents that can now be built on and refined to make it one of the premier systems in Indiana. This plan aims to reinforce and enhance Valparaiso's pathway network by implementing the following principles which provide the framework for this plan's recommendations:

1. Fill physical and service gaps
2. Establish a clear hierarchy and brand
3. Enhance safety, operations and maintenance

FILL PHYSICAL AND SERVICE GAPS

The City has already implemented over 16 miles of off-road pathways and 3 miles of on-street bike lanes over the past 10 years. While a great system exists, gaps and additional service areas have been reviewed with City staff, stakeholders and the general public to provide a consolidated pathways and greenways master plan for the continued growth and expansion of the system. The new system places every resident of Valparaiso at a minimum of half mile from either an on or off-street bicycle facility. In most cases, residents are closer to a quarter mile away rather than half mile. The system additionally provides connectivity and linkages to both local and regional destinations.

The master plan shown (Figure 3.1) includes existing and proposed pathways, both within the municipal limits of Valparaiso and the surrounding townships and counties for regional connectivity. The proposed pathways indicate general corridors of connectivity; exact alignments and designs should be further evaluated as described within the Implementation chapter of this report.

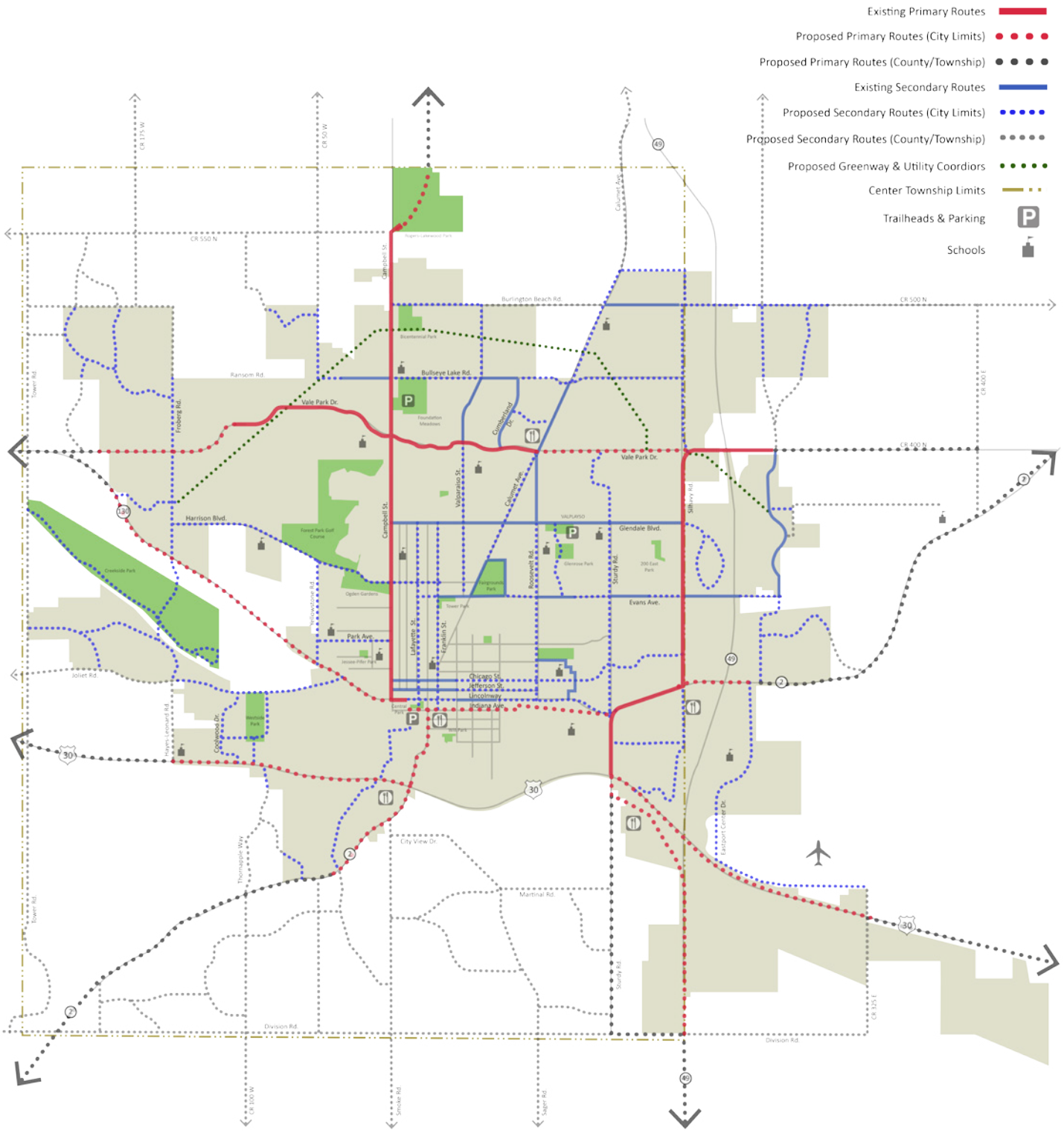


Fig. 3.1: Pathways & Greenways Master Plan

As shown on the overall master plan, a hierarchy of trails has been developed to provide primary and secondary pathways corridors and associated typologies to guide the implementation of the system. Recommendations within this section of the report additionally include:

A. Hierarchy Typologies
B. Loops & Spines
C. Decision Points
D. Placemaking & Branding

A. HIERARCHY TYPOLOGIES

Through the development of the master plan and identification of the pathway corridors, the project team established a hierarchy of pathway typologies. The system hierarchy provides the City opportunities to prioritize implementation and determine the level of amenities and construction details for the following typologies:

1. Primary Corridors
2. Secondary Corridors
3. Tertiary & Greenway Corridors

1. PRIMARY CORRIDORS

The master plan identified the primary pathway corridors that will serve as the primary transportation routes within Valparaiso and connections to regional pathways and destinations. Primary corridors would also include the highest level of wayfinding and site amenities, while maximizing the width of the pathways. As future trailheads for the pathway system are developed, consider locations adjacent to primary corridors to provide system maps and parking for pathway users.

The plan (Figure 3.2) shows all the existing and proposed primary corridors identified within the system. The following pages provide variety of prototypical cross sections that could apply within these corridors; depending on the location, existing right-of-way and other engineering factors identified as the implementation is further evaluated. Primary corridors should include the highest amount of amenities, placemaking elements and trailheads.

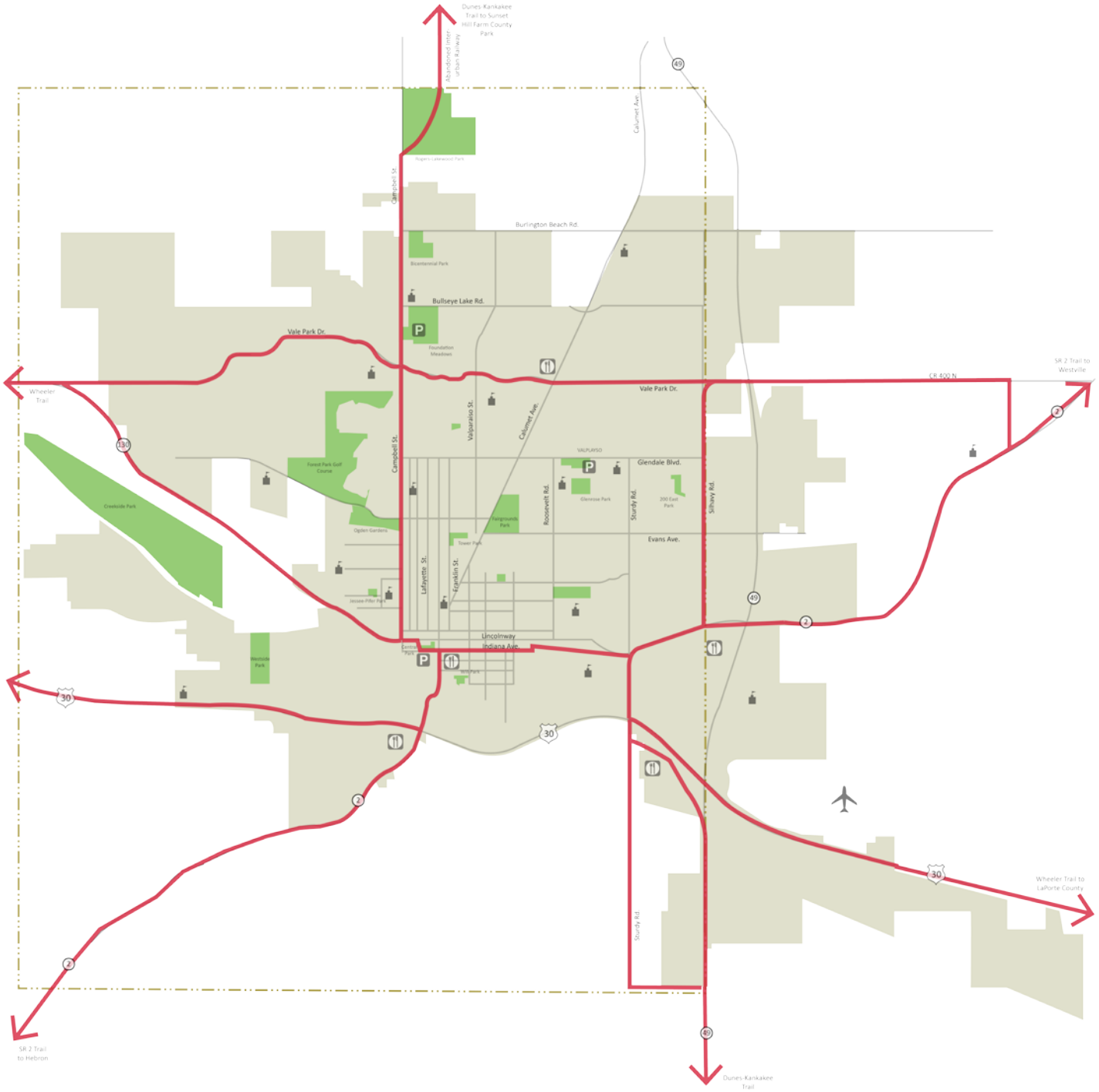


Fig. 3.2: Primary Corridors Plan

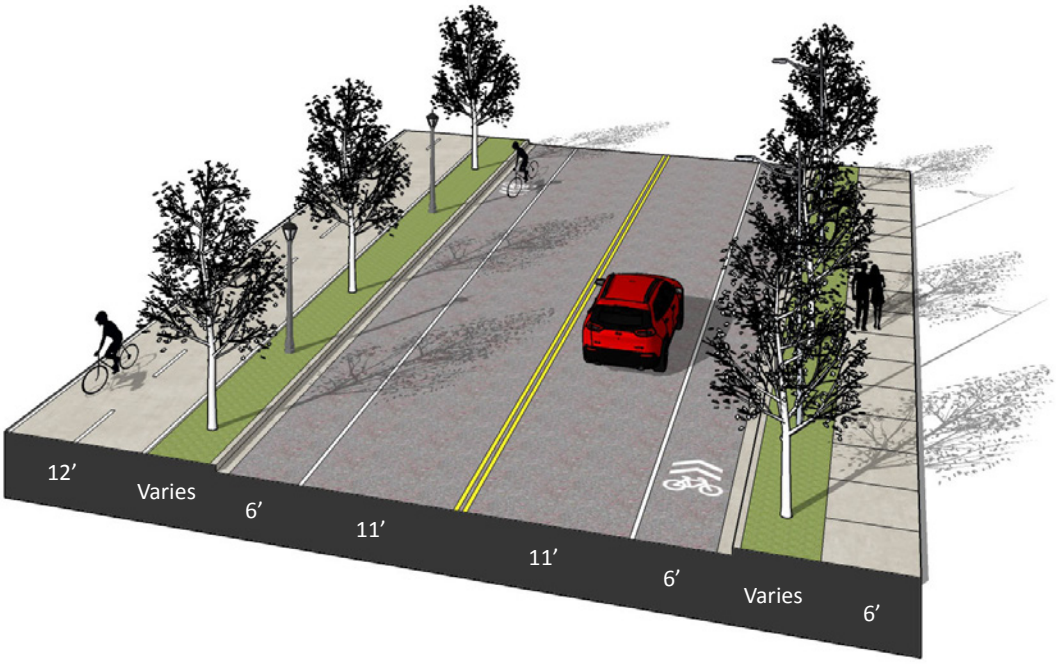


Fig. 3.3: New construction emphasizing 12’ bike trails and on street bike lanes

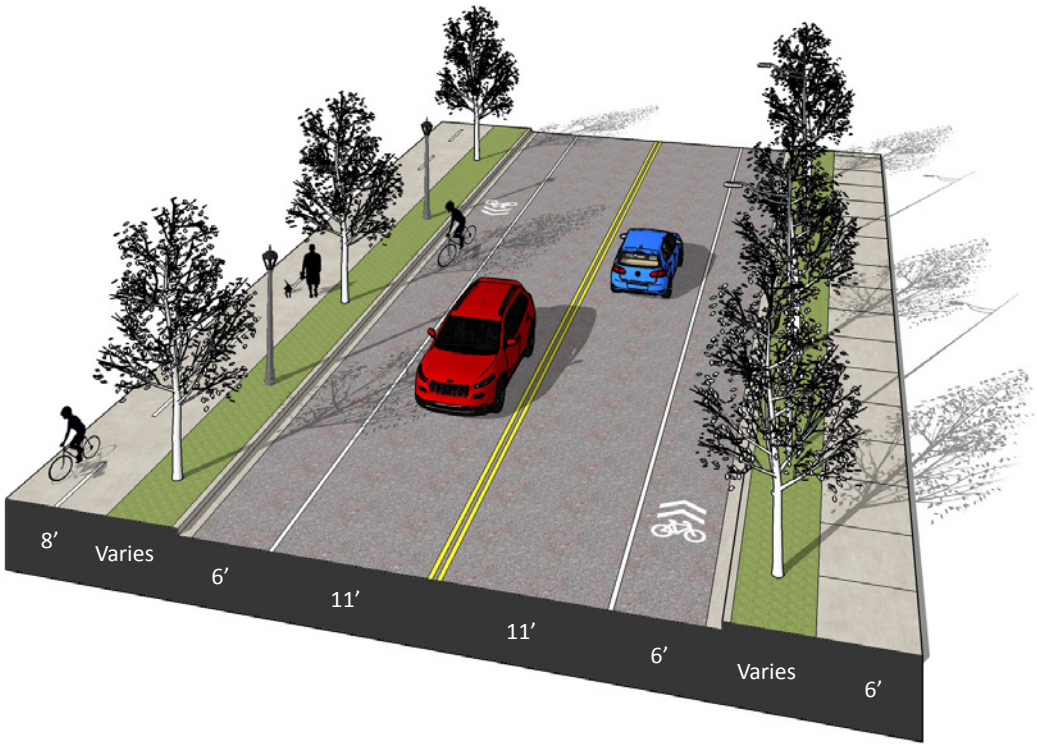


Fig. 3.4: Infill construction emphasizing filling the gaps in existing trail segments. Include bike lanes when possible in street rehab projects.

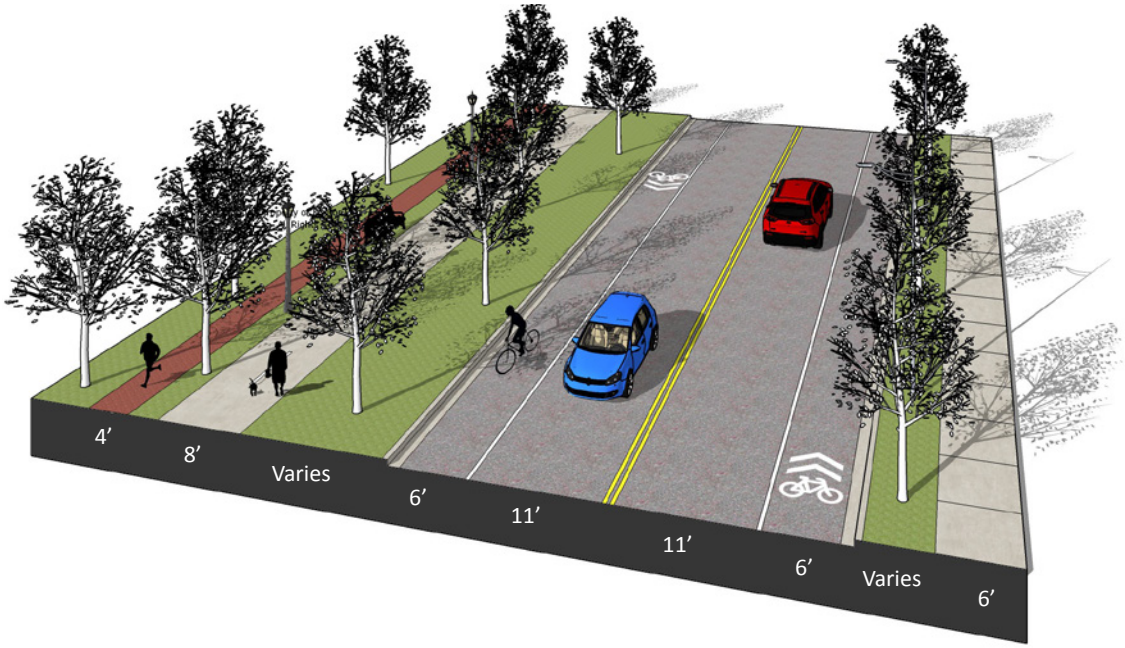


Fig. 3.5: Throughout park sections, look at incorporating a soft surface trail for joggers to utilize.

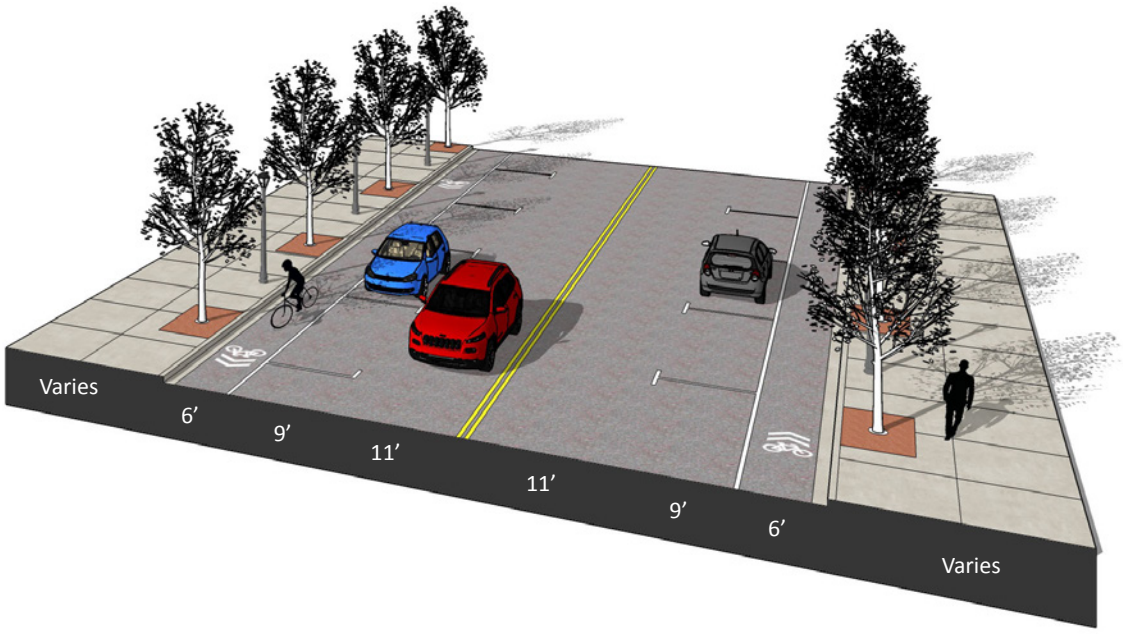


Fig. 3.6: In urban areas such as downtown, incorporating protected bike lanes with parking help to increase user safety and promote the use of the facilities.

2. SECONDARY CORRIDORS

To provide an expanded network and connectivity to the primary system, a secondary pathways typology has been developed. Secondary corridors (Figure 3.7) shows all the existing and proposed secondary corridors identified within the system. The following pages provide variety of prototypical cross sections that could apply within these corridors; depending on the location, existing right-of-way and other engineering factors identified as the implementation is further evaluated. Secondary corridors should include wayfinding elements and strategically placed amenities.

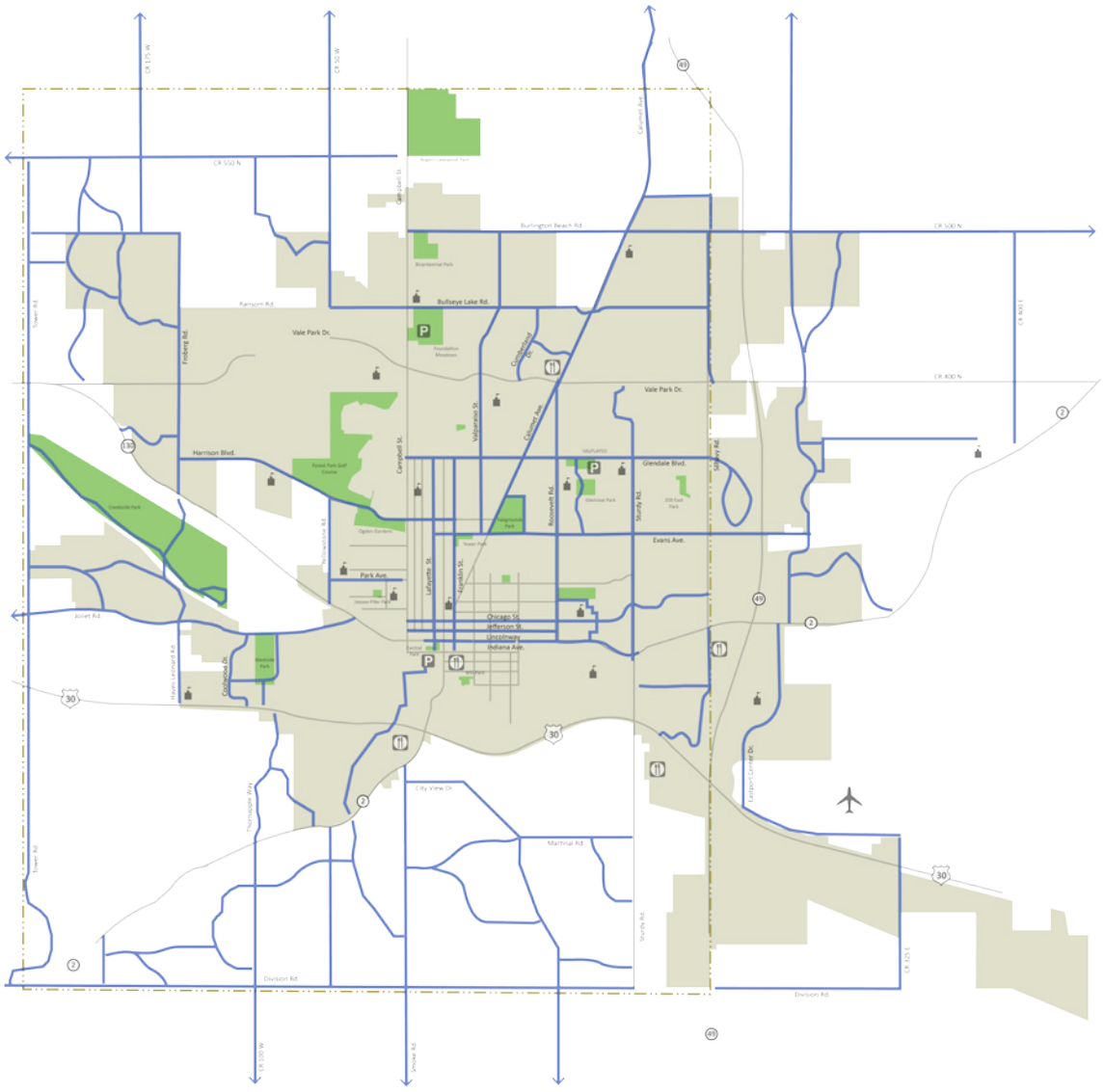


Fig. 3.7: Secondary Corridors Plan

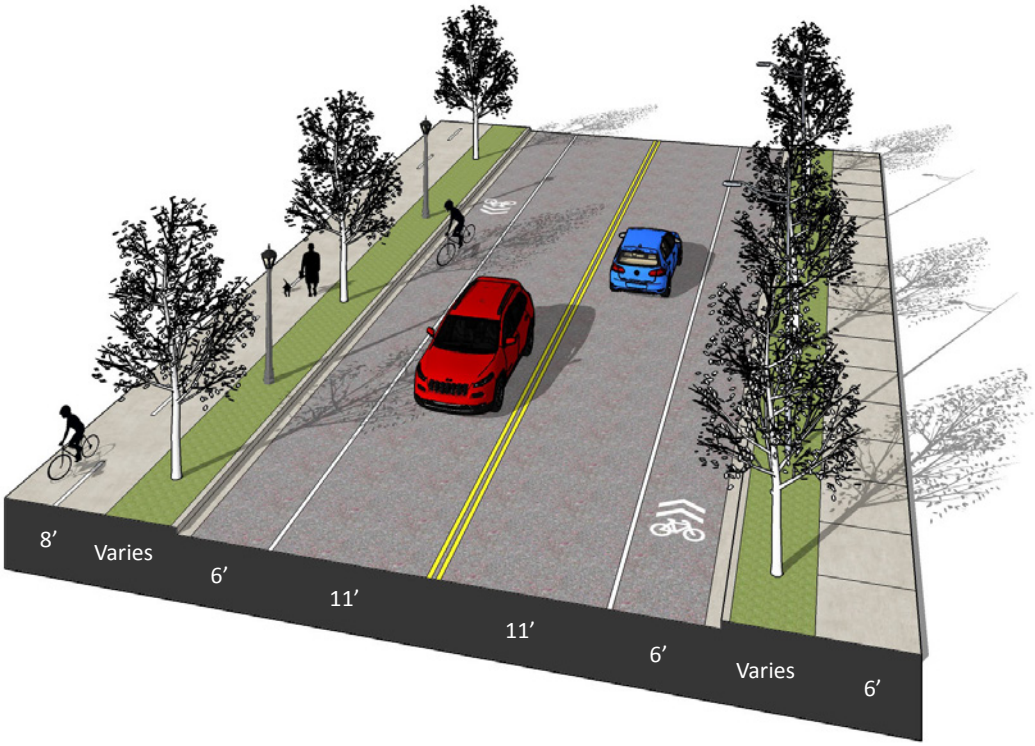


Fig. 3.8: Infill construction emphasizing filling the gaps in existing trail segments. Include bike lanes when possible in street rehab projects.

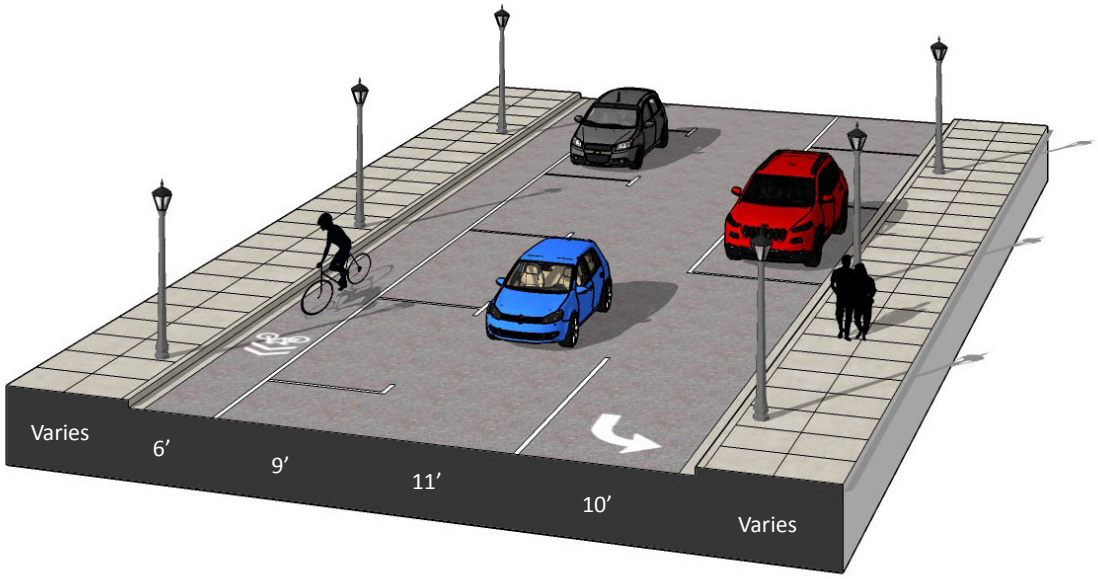


Fig. 3.9: On one way streets, incorporating protected bike lanes increases safety.

3. TERTIARY & GREENWAY CORRIDORS

Tertiary corridors are all the other remaining existing and proposed vehicular routes throughout the project area. Tertiary routes promote a "Complete Streets" approach by accommodating motorized and non-motorized circulation. Sidewalks and on-street bike sharrows should be incorporated throughout the City.

Greenway corridors utilize existing open space (parks, utility corridors, drainage easements, etc.) to complement the pathways systems with routes removed from vehicular traffic. The project team identified some neighborhood pathways existing in the NIPSCo easement on the north side of the City, and deemed the entire corridor worthy of further evaluation. Additional opportunities should be evaluated by City staff as development continues throughout and around the City.

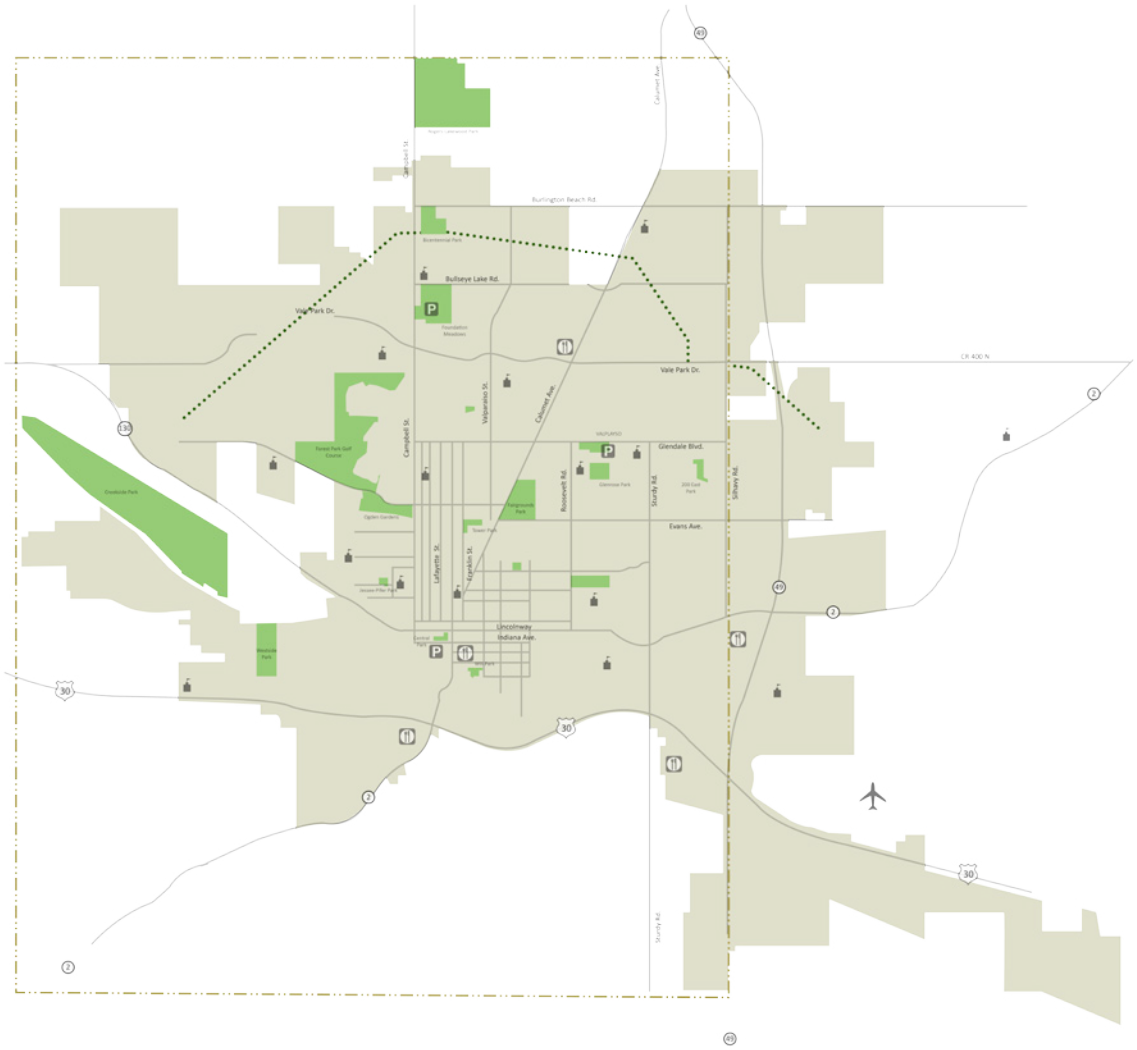


Fig. 3.10: Tertiary & Greenway Corridors Plan

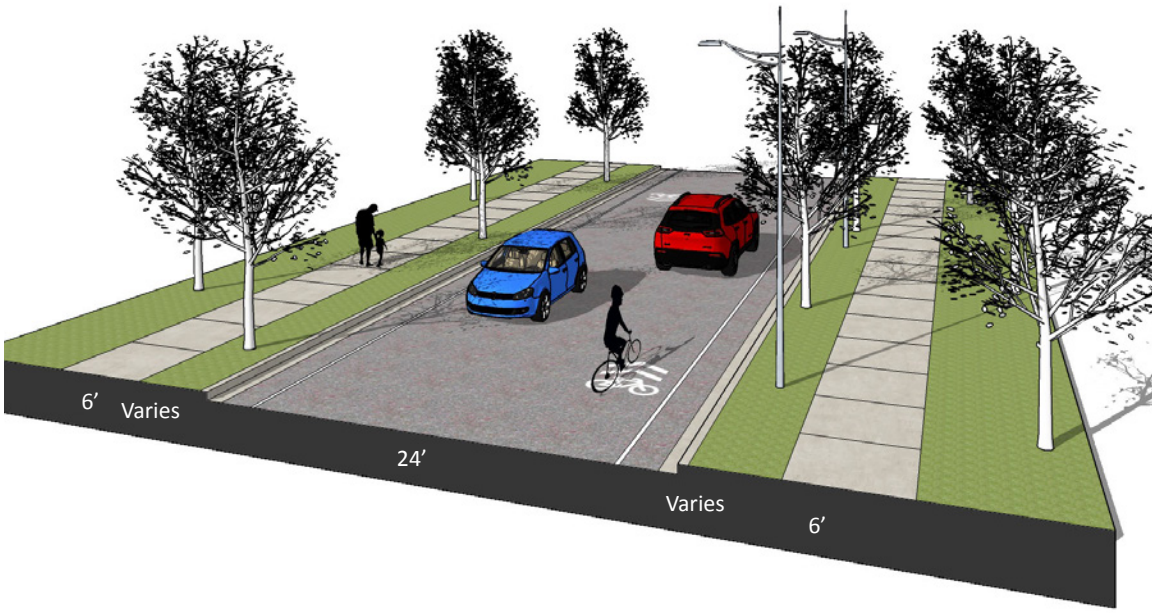


Fig. 3.11: Tertiary routes are used to connect to primary and secondary routes. These routes utilize the existing grid system, incorporating shared lanes on the residential streets.

Fig. 3.12: Consider partnerships with local utility easements and protected open spaces for greenway expansions throughout the area.

B. LOOPS & SPINES

As the pathways systems is further implemented, a series of loops and spines will be developed. These loops and spines provide recreational, transportational and branding opportunities for the City. A series of three loops were identified through the primary corridors plan (west, east and core). Each of these loops is approximately the same distance (7.5-7.7 miles), and provides the users fun and challenging routes to enjoy different areas of the City.

The spine structure creates easy and accessible access for all users. The combination of primary and secondary corridors link all major populations, attractions and parks to provide a convenient non-motorized transportation system. Both loops and spines offer potential for branding opportunities, which could be completed in a comprehensive City-wide effort or through local placemaking efforts as the pathways are constructed.

Fig. 3.13: Proposed Pathways loop system

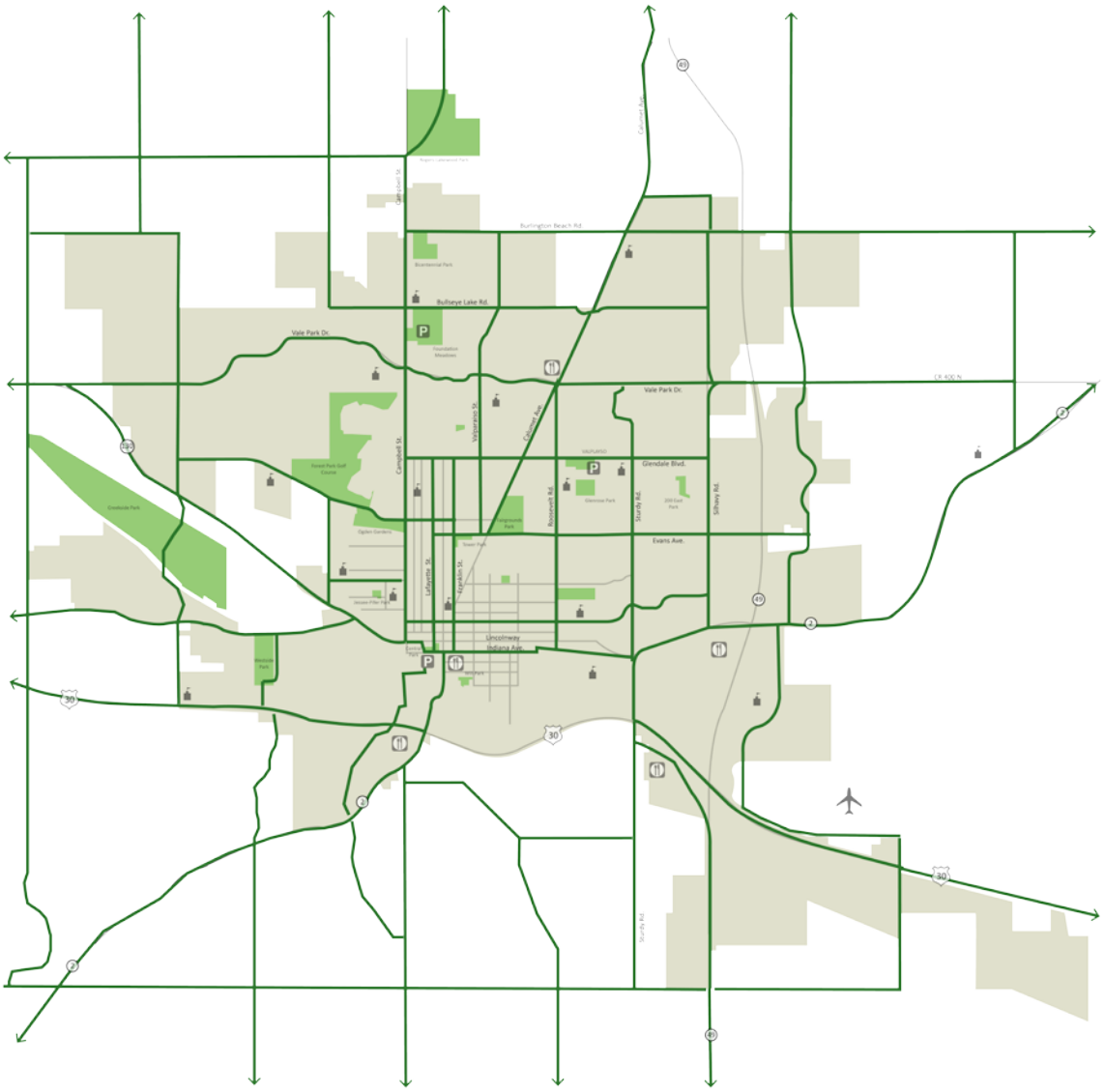


Fig. 3.14: Proposed Pathways spine structure.

C. DECISION POINTS

Potential decision points have been developed through the pathways master planning process. The project team noted these potential locations as either major decision points (intersections of primary pathways and existing trailheads) and minor decision points (other remaining critical wayfinding locations). Wayfinding signage is an important element for orienting and safely directing traffic, both motorized and non-motorized through and throughout the City and project area. Potential major decision point locations are indicated on Fig 3.17, however these locations are preliminary and should be further evaluated through a comprehensive City-wide wayfinding signage master plan.

Fig. 3.15: Prototypical major decision point kiosk with Pathways system maps and information. Amenities should include seating, bike repair, placemaking elements and parking (when possible).

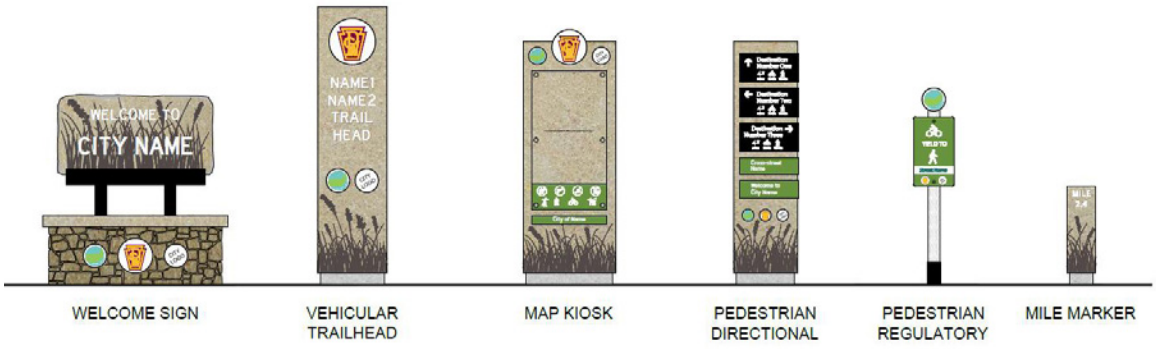


Fig. 3.16: Example of system wayfinding signage family, as developed by NIRPC. A comprehensive City wayfinding and gateway signage master plan is recommended. NIRPC released the Unified Trail Wayfinding Guide in 2016 which mandates a standardized wayfinding design for all federally-funded projects. Coordinate designs with NIRPC when federal funding is anticipated for implementation.

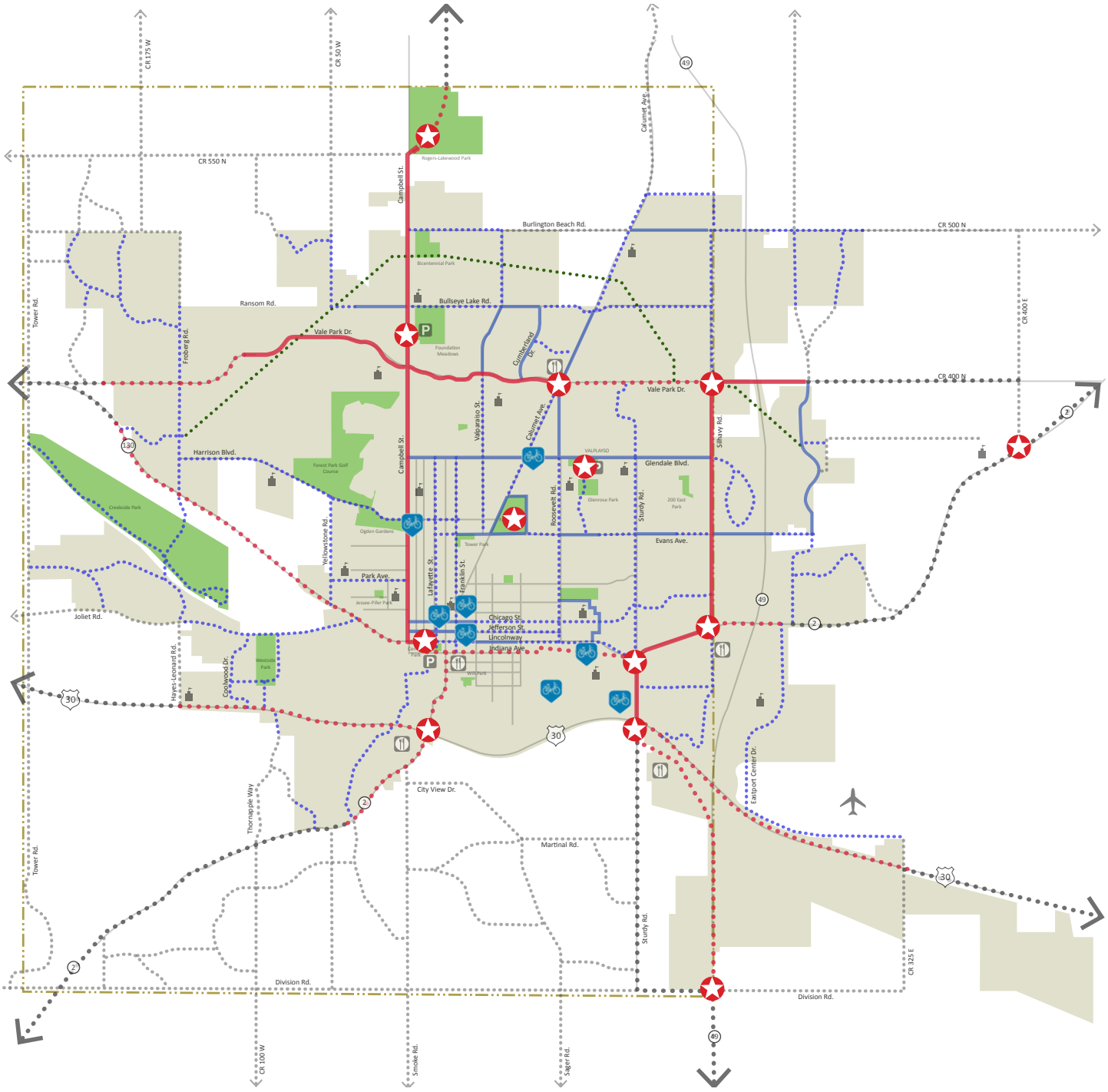


Fig. 3.17: Primary decision point locations (red stars) could serve as trailheads and system information. Bike rental/sharing station locations are shown as .

MINOR DECISION POINTS

Potential minor decision point locations are indicated on Fig 3.19, however these locations are preliminary and should be further evaluated through a comprehensive wayfinding signage master plan. Minor decision points should primarily address system wayfinding and include seating and waste amenities, where feasible.

Fig. 3.18: Conceptual rendering of system wayfinding signage incorporated at a minor decision point.

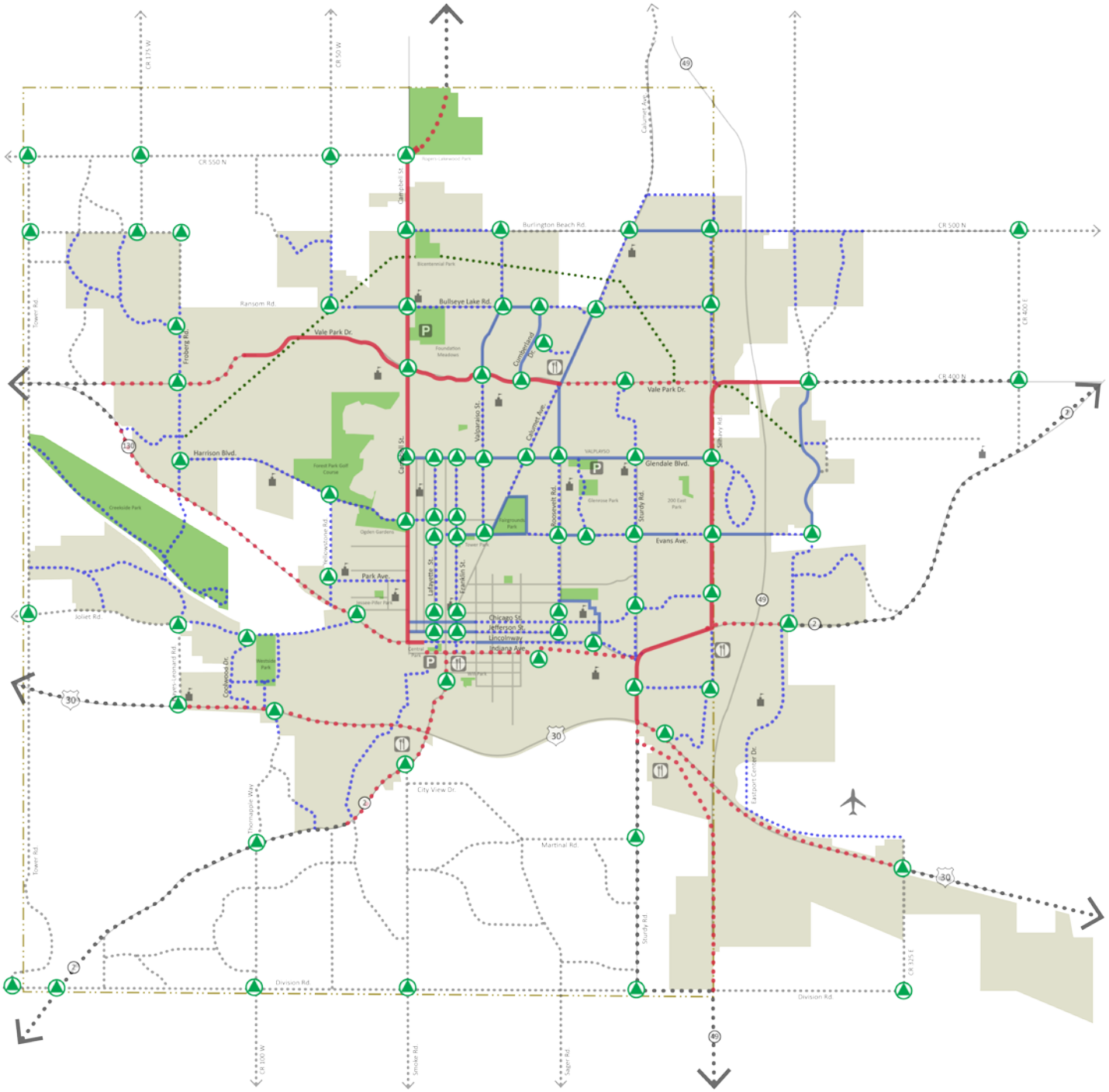


Fig. 3.19: Minor decision locations can be served with unified system wayfinding signage. Incorporate amenities such as seating and waste receptacles at minor decision locations to serve users and ease maintenance operations.

D. PLACEMAKING AND BRANDING

Placemaking is a critical element of creating a unique and special system for the City. The City has taken steps toward the development of a Pathways system brand with the creation of a logo and website with updated system maps. To further the branding of the system, a standardization of color, fonts and materials on signage and other amenities on the pathways will help reinforce the brand and provide a user-friendly, cohesive network. Below are some of the opportunities to develop to achieve a custom aesthetic for the area.



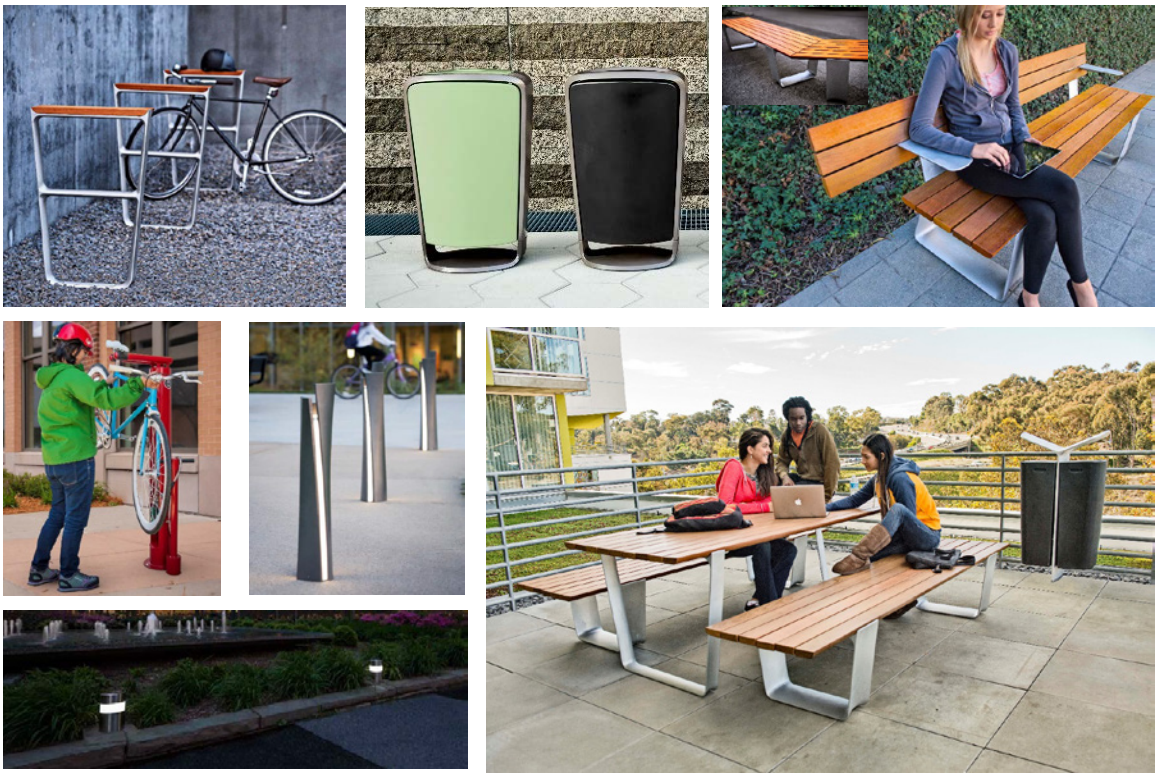
Traffic calming and crosswalk ideas. Bottom right image shows a pedestrian hybrid beacon.

Traffic Calming & Crosswalks

INDOT and Federal Highway Administration (FHWA), recommend that crosswalks are subdued solid colors and traditional paving patterns (i.e. brick) so as not to be a source of distraction. However, these are recommendations and the Town can consider more intricate crosswalk designs within City owned right-of-way and especially in low volume roadways. These elements will help calm traffic through the area, along with regular enforcement of traffic laws. Additionally, signalized intersections such as pedestrian hybrid beacons could be considered to stop traffic.

Site Furnishings

Currently very few site amenities are found along the Pathways system. Furnishings such as benches, waste receptacles and bike racks should be included in the project area. This report recommends the standardization of Pathways furnishings family that will both reinforce the brand while easing maintenance and capital costs. The City should work in conjunction with local artists and fabricators to develop custom and unique furnishings for the Arts & Cultural District and other specialty districts of the City.



Standardized catalog site furnishing family example.

Customized site furnishing examples.

ENHANCE SAFETY, OPERATIONS AND MAINTENANCE

Currently, the Valparaiso Parks Department provides regular maintenance on all the existing pathways throughout the City, both within the parks and on street right-of-way. Typical maintenance includes:

- Inspecting and replacing bicycle and pedestrian routes and roadway signs,
- Repairing cracks and holes in bicycle and pedestrian routes surface,
- Sweeping routes to remove loose gravel, sand, garbage, leaves, etc.
- Removing dead or dangerous tree limbs and regular pruning of vegetation along the bicycle and pedestrian routes,
- Removing snow and ice (prioritize routes to schools),
- Assuring that there is positive drainage off of and away from the trail segment, and
- Documenting regular inspection to limit risk and liability.

As the pathways system expands so will the cost of maintenance. Average costs to maintain a mile of pathways to the standards listed above are approximately $12,000 a mile, each year. The City may wish to consider promoting an “adopt a trail” program where the adjacent property owners, schools, utilities, developers and businesses along the pathway to sponsor and develop their portion of the Pathway through a cooperative agreement with the City.

The selection of materials for the pathways is a critical element in understanding long term maintenance and life-cycle costs. Pathways should be developed with considerations for all non-motorized activities including walking, jogging, biking, roller blading, baby strollers and wheelchairs. Paved surfaces provide lower maintenance costs and increased accessibility over soft trails, however they come at a much greater capital cost. The matrix in Fig 3.20, describes the advantages and disadvantages of the various products that are available for pathways, and their anticipated capital construction costs.

Surface Material	*ADA Compliant*	*Advantages*	*Disadvantages*	*Estimated Average Construction Cost per square foot.*
Asphalt	Yes	Asphalt works well for bicycle commuters and inline skaters, which is a reason it is often used in urban areas. Flexible surface that requires use to remain pliable and will last longer with heavy use	High capital cost. Requires regular, minor maintenance such as crack patching, yet has a life expectancy of 7 to 15 years. It typically can't be used by equestrians.	$4.00
Concrete	Yes	Concrete is usually the longest lasting of the hard surface materials, but it is also one of the most expensive. Well-maintained concrete can last 25 years or more. The surface is appropriate for urban areas with severe climate swings and a susceptibility to flooding.	High capital cost. Taxing on runners' lower limbs, and is thus unpopular with that significant user group. Adjacent soft-surface treads can accommodate runners and equestrians where concrete is necessary for the main trail.	$5.00
Crushed Stone	Varies	Lower capital cost. Holds up well under heavy use and can complement the aesthetic of the natural landscape. It can also accommodate nearly every trail user (with the exception of inline skaters) if crushed and compacted properly.	High maintenance costs to maintain surface accessibility. Surface can rut or erode with heavy rainfall. Not for areas prone to flooding or severe slopes.	$2.50
Boardwalk	Yes	Environmentally friendly solution in wet or ecologically sensitive areas. Natural appearance and low maintenance.	High capital cost. Costly to repair. Slippery when wet.	$40

Fig. 3.20: Pathway materials matrix

Surface Material	*ADA Compliant*	*Advantages*	*Disadvantages*	*Estimated Average Implementation Cost per mile (includes projected 20% soft costs).*
Resin-based stabilized material	Varies	Tree product that binds aggregate or soil particles together. A resin-based trail surface impacts the environment less than asphalt and can be cheaper. The aesthetics also better match the surrounding environment.	Not appropriate for all sites and locations. May be costly in some cases.	Varies
Soil Cement	Varies	Soil cement is a mixture of pulverized native soil, Portland cement and water, rolled and compacted into very dense surface. Low capital cost.	Surface wears unevenly and drainage is very important to prevent erosion. Difficult to achieve correct mix.	$2.00
Recycled Materials	Varies	Various recycled materials, such as old rubber tires worked into concrete on are becoming more popular.	No extensive testing to know longevity or wear tendencies.	Varies
Natural Earth	No	Trails with a natural earth surface offer inexpensive maintenance costs limited primarily to fixing drainage problems, repairing eroded areas and removing vegetation. The trail can usually be built and maintained by volunteers.	Dusty, ruts when wet, not an all-weather surface, an be uneven and bumpy. Limited use and likely non ADA accessible.	$1.50
Wood Chips	No	Low capital cost. Wood chips blend well with the natural environment and can work well as a parallel tread for runners and equestrians next to an asphalt or concrete trail.	Decomposes rapidly, cannot accommodate wheelchair use and requires constant maintenance to keep the width and surface steady. The entire surface needs replacement every two years.	$2.50

Fig. 3.20: Pathway materials matrix

CHAPTER FOUR - IMPLEMENTATION STRATEGY

The City's efforts over the past ten years have left a great legacy for today and tomorrow's residents that can now be built on and refined to make it one of the premier systems in Indiana. The system will take years to complete all the proposed linkages identified in this plan, therefore a prioritization plan has been included to help the City focus efforts in completing the primary corridors and other locations identified throughout the planning process. As discussed previously in this report, the corridors identified within this report are preliminary guidelines on connectivity and exact routing, cross sections and engineering details should be further evaluated within schematic design for each proposed segment.

Grand opening of Vale Park West pathway (November 2016)

PHASING AND PRIORITIES

Phasing and prioritization is important when beginning to implement a master plan of this scope and complexity. While over 44 additional miles of pathways are proposed within the master plan, many of these routes are currently outside of the municipal limits of the City. For the proposed pathways identified within the City, a total of 5.8 miles were determined as a priority need for implementation within the next five years. The priority pathways are listed below and indicated in blue dotted lines on Figure 4.1.

- Vale Park Drive
  - Silhavy Road to Calumet Avenue
  - Winter Park to Froberg Road
- Indiana Avenue
  - Central Park to Garfield Avenue
- Calumet Avenue
  - Bullseye Lake to north City limits
- Evans Avenue
  - Calumet Avenue to Roosevelt Road
  - Monicello Park to Sturdy Avenue
  - Cortland Drive to Silhavy Road
  - State Route 49 to Memorial Parkway
- Roosevelt Road
  - Glendale Boulevard to Lincolnway

Valpo Pathways Implementation Plan

Recommendations	Group Responsible	Short Term Goals (2017-18)	Mid Term Goals (2020)	Long Term Goals (2022)
Complete missing pathway linkages	Director; Maintenance Director; City Leadership Team; Pathways Committee Partners; NIRPC	Design and engineer Primary Pathways to complete the central loop of the system (Vale Park & Indiana Ave./V.U.). Evaluate existing right-of-way and need for property acquisition.	Construct Primary Pathways to complete the central loop of the system (Vale Park & Indiana Ave./V.U.).	Consider Pathways Master Plan update for prioritization of additional pathways.
Expand the Pathways system	Director; Maintenance Director; City Leadership Team; Pathways Committee Partners; Porter County; NIRPC	Evaluate connections to south Center Township and Heavlin School. Continue dialogue with NIRPC, Porter County and others to prepare linkages to regional trails, as funding is available.	Design and engineer connections to south Center Township and Heavlin School. Leverage new developments for additional linkages	Construct connections to south Center Township and Heavlin School. Consider Pathways Master Plan update for prioritization of additional pathways.
Develop branding and design standards for wayfinding and trailheads	Maintenance Director; City Leadership Team; Pathways Committee Partners; NIRPC	Prepare a branding and wayfinding master plan for the pathways system. Work in conjunction with other City Departments and NIRPC.	Implement new branding and designs within the downtown core and other established pathway routes and loops.	Expand the branding and wayfinding into Center Township and municpal boundaries for regional trail linkages.
Address repair and replacement needs for existing pathways	Director; Maintenance Director;	Develop repair and replacement plan and schedule for existing pathways. Provide annual visual inspection of all pathways and consider pavement life expecancies as described within the Pathways Master Plan.	Provide repairs and replacements of existing Primary Pathways and critical linkages to schools and parks. Update repair and replacement plan annually, through visual inspection.	Provide repairs and replacements of existing Secondary Pathwayss. Update repair and replacement plan annually, through visual inspection.
Develop maintenance management plan for pathways system.	Director; Maintenance Director;	Develop prioritization plan for existing pathway maintenance elements for snow removal, mowing, etc. Coordinate with maintenance management plans for parks.	Update maintenance plan, as new pathways and development occurs.	Update maintenance plan, as new pathways and development occurs.

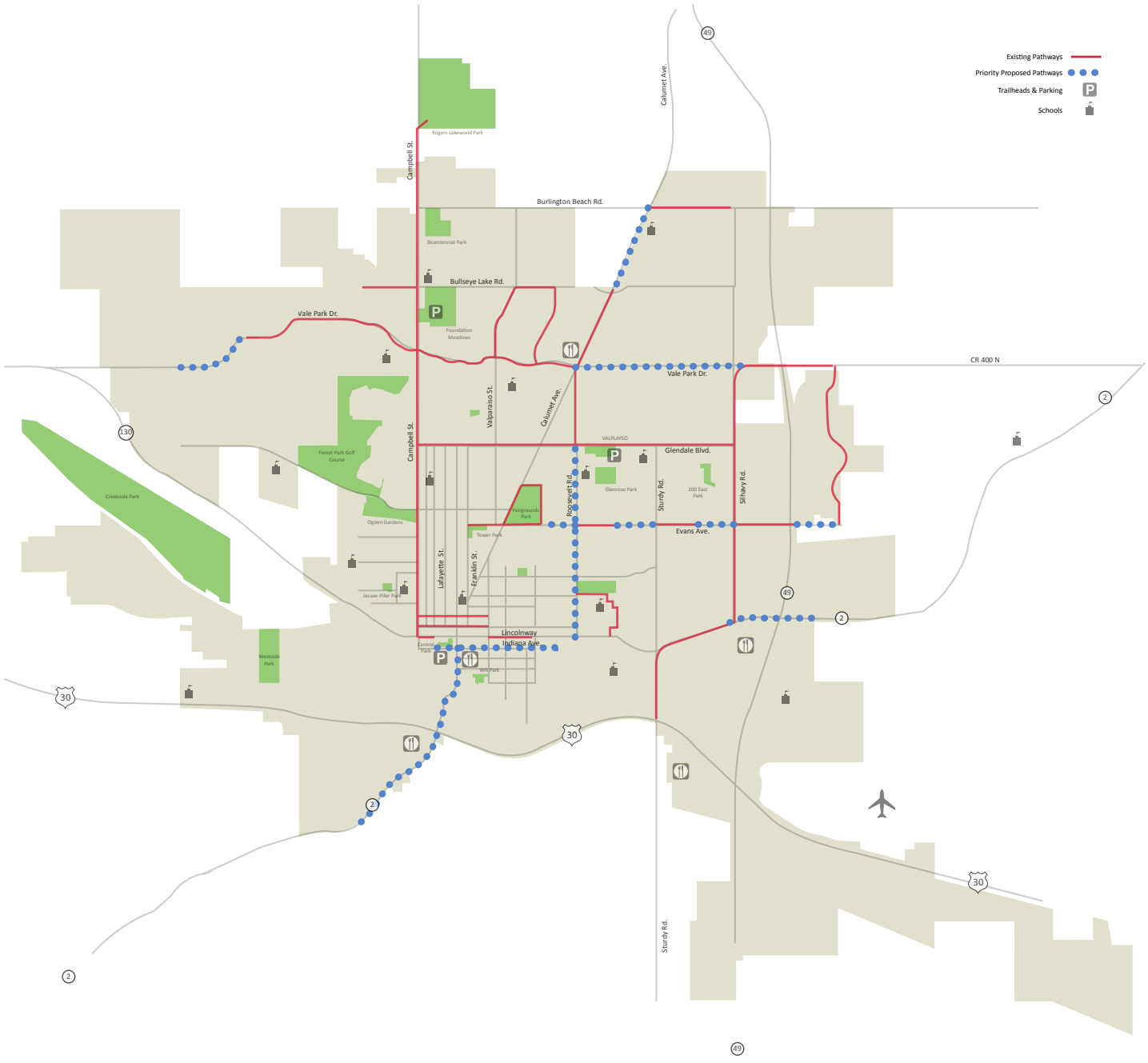


Fig. 4.1: Priority development corridors as identified throughout the master planning process.

IMPLEMENTATION COSTS & FUNDING OPPORTUNITIES

On average in the northwest Indiana region, new construction of a 10 foot wide paved pathway is roughly $500,000 per mile, depending on site conditions and other engineering factors. When the City adds in the cost of design, engineering, Pathway amenities and signage the cost per mile will be approximately $400,000 - $650,000 a mile, depending on the pathway width and typology. The goal is to get another 5.80 miles of Pathway Trail on the ground in the next five years which will focus on completing the majority of the primary pathways identified in this report. Total costs estimate will be approximately $3.3 million dollars. A breakdown of all the proposed trails costs to fully implement the master plan are shown in Figure 4.2.

FUNDING OPPORTUNITIES

Transportation projects open up other potential source of funding and partnership opportunities involving federal, state, local and private resources. INDOT administers a number of different funding programs available through the Federal Highway Administration to perform transportation improvements in local communities. The City should continue to coordinate with NIRPC and monitor funding cycles for:

- Highway Safety Improvement Projects (HSIP): 90% project funding
- Congestion Mitigation and Air Quality (CMAQ): 80% project funding
- Surface Transportation Programs (STP): 80% project funding
- Transportation Enhancements (TE):80% project funding
- Safe Routes to School: 80% project funding

The eligibility requirements for the funding sources vary, but many of the projects are eligible under multiple programs. In addition, seek dedicated funding from the following sources:

- Local Redevelopment and TIF money
- Locally as well as an Adopt-a- Trail Program with other entities such as the schools, University, local businesses, utility agencies and developers to develop local pathways
- Land and Water Conservation Fund
- Flood Control dollars from U.S. Corps of Engineers
- CDBG monies
- Private Donations
- County and Township partnerships

PRIORITY PATHWAYS						
Location	***Segment***	***Miles***	***Existing ROW***	***Typology***	***Sponsor***	***Estimated Total Project Costs***
Vale Park Dr.	Silhavy to Calumet	1.10	40'-60'	Primary	Valpo	$ 721,875.00
	Winter Park to Froberg Rd	0.60	100'	Primary	Valpo	$ 393,750.00
Indiana Ave.	Central Park to Garfield	0.65	80'	Primary	Valpo	$ 426,562.50
Calumet St.	Bullseye Lake to City Limit (north)	0.90	60'	Secondary	Valpo	$ 461,250.00
Roosevelt Rd.	Glendale Blvd. to Lincolnway	1.25	60'	Secondary	Valpo	$ 640,625.00
Evans Ave.	Calumet to Roosevelt	0.50	40'-50'	Secondary	Valpo	$ 256,250.00
	Monticello Park to Sturdy	0.25	80'	Secondary	Valpo	$ 128,125.00
	Cortland Dr. to Silhavy	0.25	60'-80'	Secondary	Valpo	$ 128,125.00
	SR 49 to Memorial Pkwy.	0.30	40'-60'	Secondary	Valpo/County	$ 153,750.00
PRIORITY PATHWAYS TOTALS		**5.80**				**$ 3,310,312.50**
LONG TERM PATHWAYS						
Vale Park Dr.	Froberg Rd to City Limit (west)	1.00	60'-90'	Primary	Valpo	$ 656,250.00
	City Limit (west) to SR 130	0.35	40'	Primary	County	$ 229,687.50
US 30	City Limits	5.40	200'**	Primary	Valpo/INDOT	$ 3,543,750.00
Sturdy Rd.	US 30 to Lincoln Hwy	0.50	50'	Primary	County	$ 328,125.00
Comeford Rd.	Sturdy to SR 49	0.60	50'-80'	Primary	Valpo	$ 393,750.00
SR 49	Lincoln Hwy. to Division Rd.	1.15	80'+**	Primary	Valpo/INDOT	$ 754,687.50
Washington St.	Lincolnway to US 30	0.65	60'	Primary	Valpo	$ 426,562.50
SR 2	US 30 to City Limit (South)	1.20	60'**	Primary	Valpo/INDOT	$ 787,500.00
	Sturdy to City Limit (east)	1.35	80'+**	Primary	Valpo/INDOT	$ 885,937.50
SR 130/Lincolnway	Campbell to Clifford	0.75	60'	Primary	Valpo	$ 492,187.50
	Clifford to 250W	2.40	70'	Primary	County	$ 1,575,000.00
LaPorte Ave.	Garfield to VU campus	0.80	60'	Primary	Valpo/VU	$ 525,000.00
Silhavy St.	Burlington Beach to to Vale Park Dr.	1.05	40'-70'	Secondary	Valpo	$ 538,125.00
	LaPorte Ave. (SR2) to US 30	1.15	60'	Secondary	Valpo	$ 589,375.00
Calumet St.	Vale Park to Fairground Park	0.80	60'	Secondary	Valpo	$ 410,000.00
Burlington Beach	Campbell to Cardinal	1.05	70'	Secondary	Valpo	$ 538,125.00
	Cardinal to Calumet	0.45	40'	Secondary	County	$ 230,625.00
	Silhavy to 300E	1.00	40'-60'	Secondary	County	$ 512,500.00
Bullseye Lake/Country Club/Ransom Rd.	Silhavy to Calumet	0.80	40'-60'	Secondary	Valpo	$ 410,000.00
	Calumet to Cumberland	0.40	60'-70'	Secondary	Valpo	$ 205,000.00
	Valparaiso St. to Campbell	0.65	50'-60'	Secondary	Valpo	$ 333,125.00
	Lake Meadow to Froberg (150W)	1.15	40'-100'	Secondary	Valpo	$ 589,375.00
Froberg (150W)	Ransom Rd. to SR 130	1.25	50'-70'	Secondary	Valpo	$ 640,625.00
Harrison Blvd.	Campbell to Froberg (150W)	1.60	60'-70'	Secondary	Valpo	$ 820,000.00
	Valparaiso St. to Campbell	0.65	50'-70'	Secondary	Valpo	$ 333,125.00
Valparaiso St.	Burlington Beach to Bullseye Lake	0.50	60'	Secondary	Valpo	$ 256,250.00
	Vale Park to Evans Ave.	1.10	40'-60'	Secondary	Valpo	$ 563,750.00
Sturdy Rd.	Glendale Blvd. to Lincolnway	1.35	50'-60'	Secondary	Valpo	$ 691,875.00
Washington St.	Glendale Blvd. to Lincolnway	1.25	66'	Secondary	Valpo	$ 640,625.00
Franklin St.	Glendale Blvd. to Lincolnway	1.25	60'	Secondary	Valpo	$ 640,625.00
Joliet Rd.	Lincolnway (SR 130) to Hayes Leonard	1.20	60'	Secondary	Valpo	$ 615,000.00
Eastport Center (Commercial)	Evans to US 30	1.95	**	Secondary	Valpo/Private	$ 999,375.00
Chicago St.	Morgan to Silhavy	1.65	66'	Secondary	Valpo	$ 845,625.00
Jefferson St.	Morgan to Roosevelt	0.60	66'	Secondary	Valpo	$ 307,500.00
LONG TERM PATHWAYS TOTALS		**39.00**				**$ 22,309,062.50**

Fig. 4.2: Total estimated cost for priority and long term pathway implementation. Rights-of-way indicated in RED denote potential needs for property acquistion based on the proposed master plan typologies.

VALPARAISO Pathways

Valpo Parks

pros consulting INC.

SEH of Indiana