

RE-IMAGINE THE RAILWAY: STUDYING NEW USES FOR THE FORD SPUR

FINAL REPORT APRIL 2018

FORWARDED BY THE SAINT PAUL PLANNING COMMISSION JULY 2018



ACKNOWLEDGMENTS

The following key people and entities participated in the Re-imagine the Railway study. Their creativity, energy, and commitment were critical to the success of this effort.

City of Saint Paul: Mike Richardson, Anton Jerve, Reuben Collins, Taina Maki, Libby Kanter, Merritt Clapp-Smith, Kathleen Anglo, Mary Norton, Ellen Stewart

Saint Paul Planning Commission: Wendy Underwood

Ramsey County Regional Rail Authority: Kevin Roggenbuck

Ramsey County: Joe Lux, Ken Ioso

Metro Transit: Scott Thompson

Metropolitan Council: Heidi Schallberg

Minnesota Department of Transportation: Cameron Muhic

East Metro Strong: Will Schroeer

Saint Paul Public Schools: Jesse Mraz

Highland Business Association: Gary Moore

West 7th Business Association: Diane Gerth

Fort Road Federation: Betty Moran, Emily Northey

Highland District Council: Jeffrey Burton

Transit for Livable Communities / St. Paul Smart Trips:
Emma Pachuta, Amy Schwarz

Neighborhood House: Shad Klukas

Funding

This study (project # T14HP039) was funded through a U.S. Department of Transportation Investment Generating Economic Recovery (TIGER) Grant, along with other funding from the City of Saint Paul, Ford Motor Company Fund, and East Metro Strong.

This material is based upon work supported by the FHWA under Grant Agreement P-18. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the FHWA.



TABLE OF CONTENTS

- Executive Summary 5
- Introduction 9
- Community Engagement 15
- Design Concepts 19
- Environmental Screening..... 59
- Operations & Maintenance 61
- Next Steps & Implementation Strategies 65
- Appendices 69
 - A. Project Goals70
 - B. Open House Summaries.....73
 - C. Environmental Screening Report84
 - D. Detailed Cost Estimate111
 - E. Operations and Maintenance Report125

This page intentionally left blank

RE-IMAGINE THE RAILWAY: STUDYING NEW USES FOR THE FORD SPUR



EXECUTIVE SUMMARY

RE-IMAGINE THE RAILWAY: STUDYING NEW USES FOR THE FORD SPUR

Executive Summary

The purpose of this study is to re-imagine the potential of the Ford Spur, a five-mile rail corridor in Saint Paul. The Ford Spur connects the West 7th and Highland neighborhoods of Saint Paul and is owned by Canadian Pacific (CP) Railway. The Ford Spur was originally used to serve the Ford Twin Cities Assembly Plant (Ford Site), which closed in 2011 and is planned for mixed-use redevelopment. With the railway no longer in use, there is potential for the Ford Spur to be remade into a vibrant recreation and transportation resource that can serve Saint Paul residents well into the future.

This study examined opportunities to redevelop the railway to serve pedestrians and bicyclists for decades to come while evaluating scenarios with and without public transit. The Ford Spur study will not influence the decision whether or not to construct transit in the Ford Spur. This will be decided as part of the Riverview Corridor and Ford Corridor transit studies.

Vision of Ford Spur Reuse

This is a major opportunity to re-purpose the Ford Spur as a community asset, providing opportunities for trail-based transportation and recreation, as well as economic development. It has potential to be a landmark project in the city having a positive, transformational impacts on the neighborhoods along the corridor.

Potential Benefits of Ford Spur Reuse

- Improve bicycle and pedestrian safety and connectivity between the West 7th and Highland neighborhoods and Downtown.
- Provide transportation options to support Ford Site redevelopment.
- Provide additional affordable transportation options for residents.
- Support economic development
- Provide opportunities for people to be active and healthy.
- Provide new trail-based recreation opportunities and connect to existing parks and trails.
- Create new and distinctive public spaces that celebrate the West 7th and Highland neighborhoods.



Overview map of the Ford Spur alignment.

Preliminary Design Concepts

The scope of this study included preliminary design concepts for several locations along the five-mile length of the Ford Spur. There are two sets of concepts: one set showing pedestrian and bicycle trails in the Ford Spur, and another showing these trails next to transit within the Ford Spur right of way. The two sets of concepts were prepared recognizing that the Ford Spur right of way is being evaluated for future public transit by other studies.

KEY FEATURES OF THE DESIGN INCLUDE:

- Separated walking and bicycling trails
- Pedestrian and bicycle crossing treatments to promote safety
- Opportunities for trailheads, public art, and new public spaces

Next Steps

The focus of this study was to explore the feasibility of reusing the Ford Spur as a vibrant transportation and recreation trail. This study established the direction and key design considerations for reuse of the Ford Spur. Significant work remains before a new trail on the Ford Spur is open for public use.

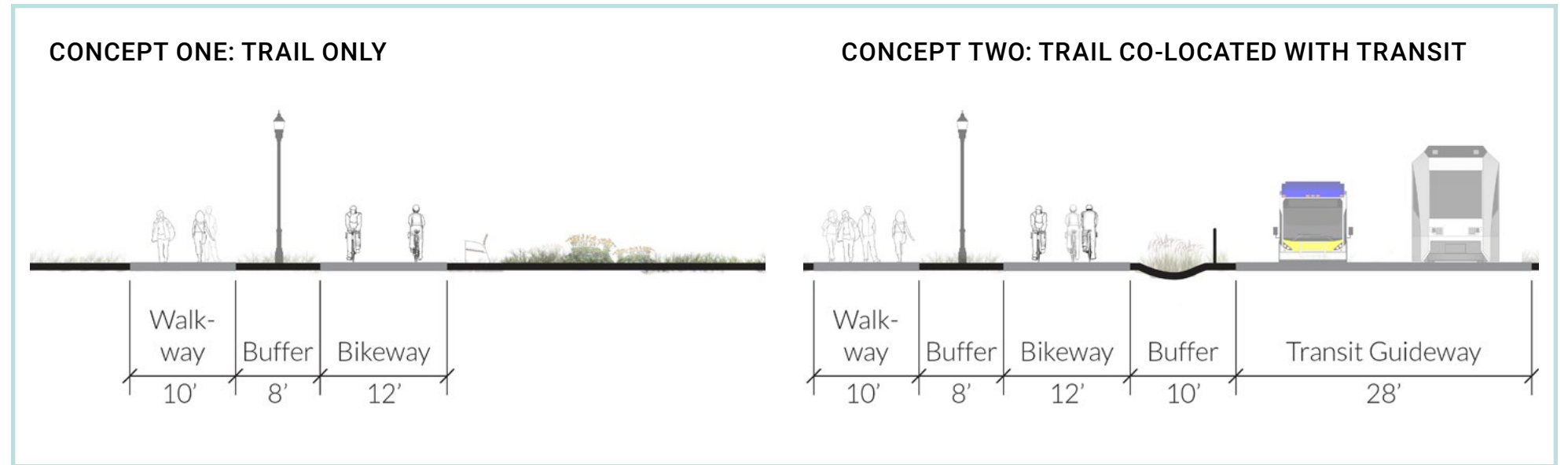
Funding

This study was funded through a U.S. Department of Transportation Investment Generating Economic Recovery (TIGER) Grant, along with other funding from the City of Saint Paul, Ford Motor Company Fund, and East Metro Strong.

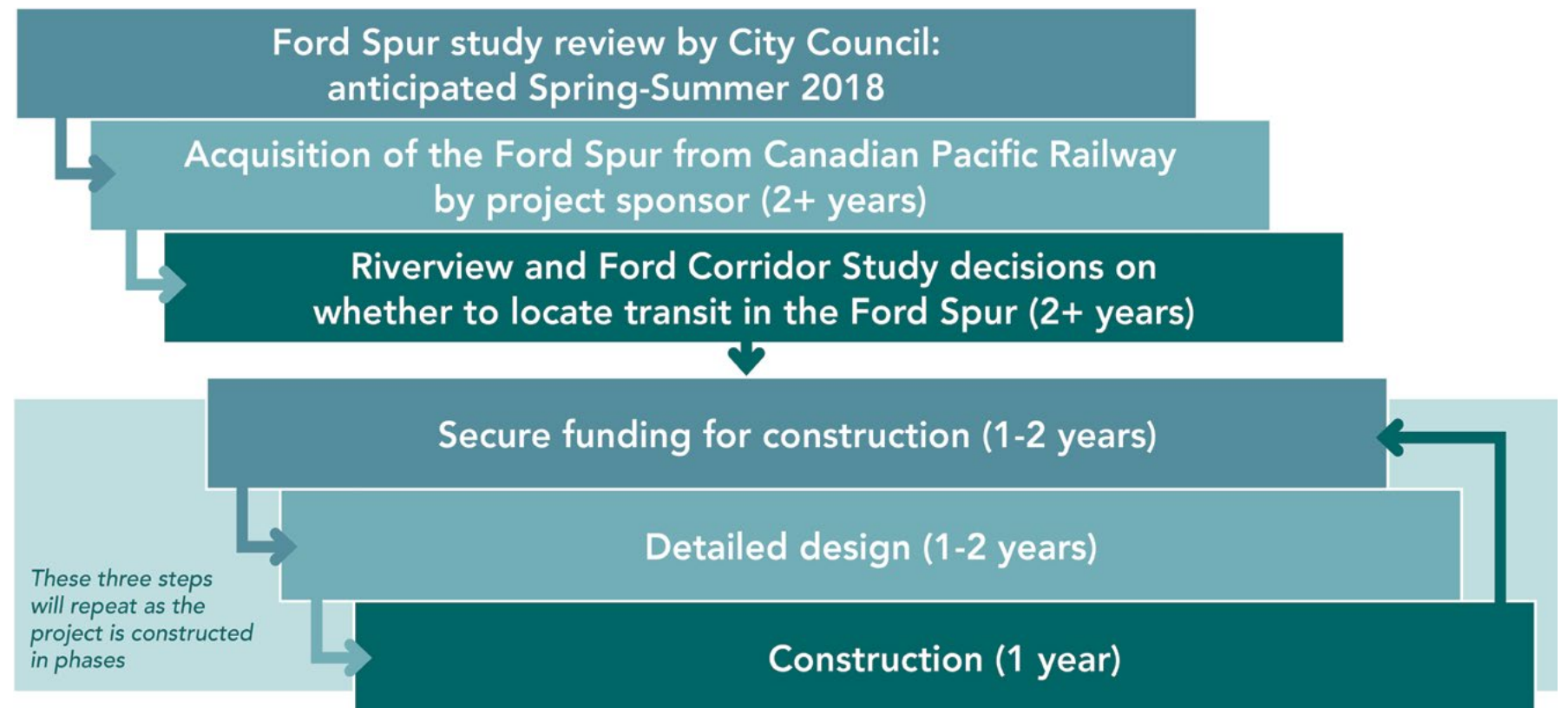
For More Information and to Get Involved

Visit the project website: www.stpaul.gov/fordspurstudy

Contact Mike Richardson, City of Saint Paul:
mike.richardson@ci.stpaul.mn.us or 651-266-6621



Two sections illustrating the two concept designs for the corridor: trail only, and trail co-located with transit.



Next steps in the project process. Note that some overlap may be possible with these steps.

This page intentionally left blank

INTRODUCTION

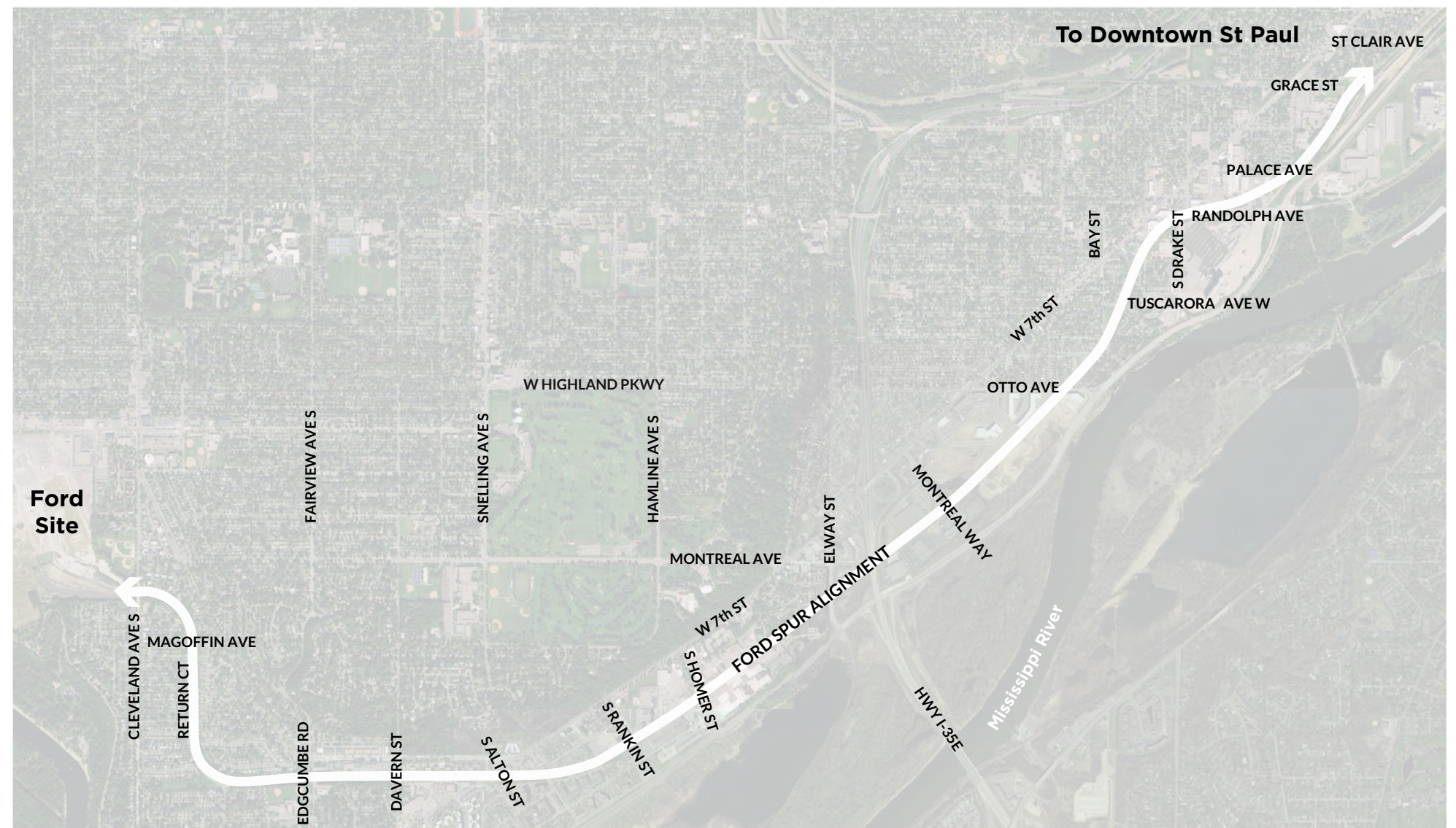
INTRODUCTION

The City of Saint Paul sees a major opportunity to re-purpose the Ford Spur, a five mile rail spur, as a community asset that provides opportunities for trail-based transportation, recreation, and economic development. It can be a landmark project having positive, transformational impacts on the neighborhoods along the corridor.

The Ford Spur railway corridor connects the West 7th and Highland neighborhoods of Saint Paul and is owned by Canadian Pacific (CP) Railway. The railway corridor was originally used to serve the Ford Twin Cities Assembly Plant (Ford Site), which closed in 2011 and is planned for mixed-use redevelopment. With the railway no longer in use, there is potential for the railway corridor to be remade into a vibrant recreation and transportation resource that can serve Saint Paul residents well into the future. This study examined opportunities to redevelop the railway corridor to serve pedestrians and bicyclists for decades to come, while evaluating scenarios with and without public transit. The Ford Spur study will not influence the decision whether or not to construct transit in the corridor. This will be decided as part of the Riverview Corridor and Ford Corridor transit studies, described further below.

Vision and Benefits of Ford Spur Reuse

- Improve bicycle and pedestrian safety and connectivity between the West 7th and Highland neighborhoods and Downtown.
- Provide transportation options to support Ford Site redevelopment.
- Provide additional affordable transportation options for residents.
- Support economic development.
- Provide opportunities for people to be active and healthy.
- Provide new trail-based recreation opportunities and connect to existing parks and trails.
- Create new and distinctive public spaces that celebrate the West 7th and Highland neighborhoods.



Overview map of the Ford Spur alignment.

Potential Benefits of Ford Spur Reuse

TRANSPORTATION

There is currently a lack of bicycle and pedestrian connectivity in the neighborhoods along the Ford Spur. West 7th Street is a continuous connection through the neighborhoods, but there are gaps in the sidewalk network and no bicycle facilities. West 7th Street is a four lane roadway with high traffic speeds and volumes. Today, it is not a comfortable place to walk or ride a bicycle. The Samuel Morgan Regional Trail follows the Mississippi River and provides a continuous and comfortable connection to Downtown Saint Paul, but it is not well-connected to residents or businesses in the neighborhoods because of the bluffs and traffic on Shepard Road.

Reuse of the spur is an opportunity to provide convenient trail access and connections into the heart of the West 7th and Highland neighborhoods, and to regional destinations in Downtown Saint Paul and Minneapolis. The Ford Spur connects across West 7th Street and I-35E, two major barriers to bicycling in Saint Paul.

Reuse of the Ford Spur is also an opportunity to provide transportation options for the redevelopment of the Ford Site. Additionally, the project has the potential to benefit low-income residents in the neighborhoods along the spur, by providing safe, convenient, and low-cost transportation options.

FACILITATING NEIGHBORHOOD CONNECTIONS

The Ford Spur connects the West 7th and Highland neighborhoods. Each is a vibrant urban neighborhood with diversity of residents: young families to seniors, and long-time to newly-arrived residents from all over the globe.

Today these neighborhoods do not feel connected, despite their proximity. They are separated by transportation barriers making walking and bicycling challenging. The Ford Spur passes through the heart of both the West 7th and Highland neighborhoods. Reuse of the spur is an opportunity to connect neighborhoods by opening up access to businesses, schools,



Ford Spur at Edgcumbe, an opportunity for a multimodal link into the neighborhood.

parks, and other destinations along the way. Residents and businesses can benefit from turning the spur into a community asset.

ECONOMIC DEVELOPMENT

Regionally and nationally, it is well-documented that investments in landmark trails pay economic development dividends. For many years residents and businesses have focused away from this corridor. Reuse of the spur will encourage people to re-orient themselves to the corridor and there will be opportunities for public art and placemaking to begin and to celebrate that transition. We see the Ford Spur as a place where people and businesses will want to be, and a place that will enhance their identity as a neighbor or business.

HEALTH

People are healthier when physical activity is built into their daily lives. Walking and bicycling are associated with numerous health benefits including heart health, weight management, reduction in diabetes incidence, reduced risk for several cancers, and improvements in mental health. Today, residents along West 7th experience health disparities. Data from the Centers for Disease Control and Prevention's 500 Cities Project shows rates of obesity, heart disease, and stress that are above the

citywide average. These residents could benefit from increased opportunities to be physically active.

Studies have shown that people are more likely to be active when they can easily access safe and comfortable places to walk and bike. While the Sam Morgan Regional Trail is proximate to the Highland and West 7th neighborhoods, there are few places to safely cross Shepard Road and access the trail.

Reuse of the Ford Spur provides an opportunity for people to use a trail while knitting together the fabric of their neighborhood. With an all ages and abilities design for the spur, a wide spectrum of residents can experience the health benefits of active transportation: from students walking and bicycling to schools, to older adults living in senior housing.

PLACEMAKING

There is great potential to create distinctive public spaces along the Ford Spur. In many locations, the right of way is wide enough to develop new public spaces along future trails. With the spur being tied closely into the West 7th and Highland neighborhoods, there is a great opportunity to work with residents to design spaces that celebrate the past and present of these historic and unique neighborhoods.

The current designs highlight several placemaking opportunities, such as an elevated trail along wetlands in Victoria Park, potential triangle parks between Bay and Drake Streets, and a play area where the spur bends near Worchester Avenue.

Relationship to Other Projects and Studies

This study is one of several projects and studies examining land use and transportation changes in Saint Paul.

RIVERVIEW CORRIDOR TRANSIT STUDY

The Riverview Corridor Pre-Project Development Study was recently completed by the Ramsey County Regional Rail Authority independently of this study. The focus of the Riverview study was to evaluate potential routes and modes for a transit connection between downtown Saint Paul and the Mall of America, which included the Ford Spur.

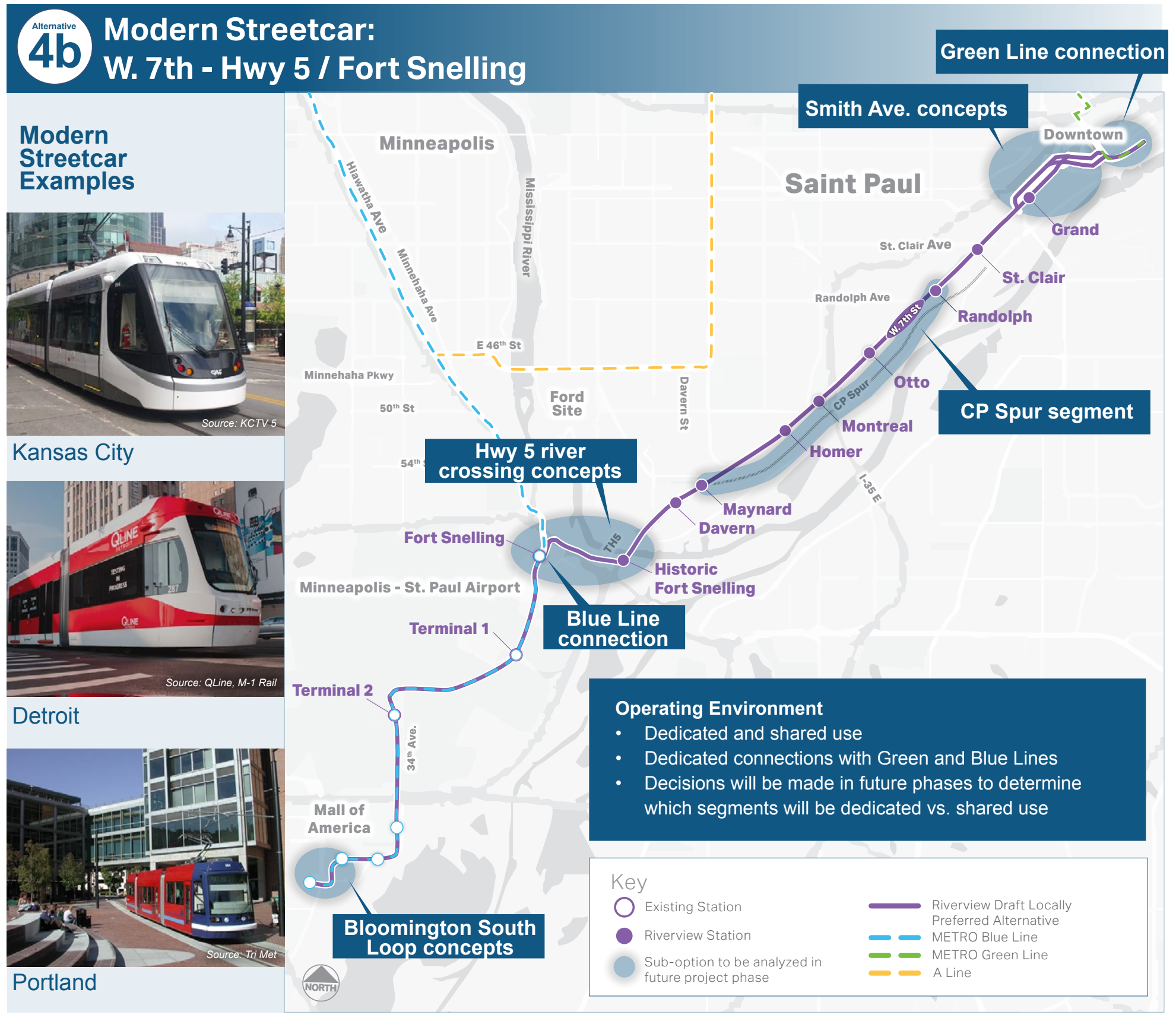
The Locally Preferred Alternative (LPA) selected for Riverview follows West 7th Street. However, the Riverview Corridor Draft Environmental Impact Statement (DEIS) will evaluate transit on the Ford Spur between W 7th Street and Randolph Avenue. The DEIS is expected to begin in summer 2018 and be completed within two to three years.

FORD CORRIDOR TRANSIT STUDY

The Ford Corridor Transit Study is expected to begin in 2018. Despite the selection of West 7th Street as the LPA, Ramsey County recognized the need to develop and deliver improved public transit in the Highland neighborhood and to future development on the Ford Site. Ramsey County has committed to undertaking an evaluation of how best to serve and connect the future redeveloped Ford Site to the future Riverview Corridor and the existing transit system with Saint Paul, Metro Transit, and other area stakeholders.

FORD SITE REDEVELOPMENT

A master plan for the Ford Site redevelopment was approved by City Council in 2017, and a developer may be under contract by late 2018. The master plan includes a trail connection to the Ford Spur, thus reuse of the Ford Spur has the potential to complement transportation and recreation options for future residents and workers



Riverview Corridor transit study preferred alternative as of December 2017.

Summary of the Spur Planning Process

The planning process began in February 2017 and was completed in March 2018. This was the first study to explore how the Ford Spur could be reused for walking and bicycling trails. The focus of this study was to evaluate the feasibility of its reuse and to develop design direction for trails with and without transit facilities. The study also included gathering key information to inform future stages of design, including a topographic survey and initial environmental screening. The scope of the study included the following elements:

- Community and agency engagement
- Review of previous plans and studies
- Development of project goals, evaluation criteria, and strategies for reuse
- Mapping existing conditions, opportunities, and constraints
- Topographic survey
- Environmental screening
- Development of conceptual and preliminary designs
- Operations and maintenance review
- Preliminary construction cost estimates

Study Funding and Agency Partners

The City of Saint Paul was the lead agency for this study. This study was funded through a U.S. Department of Transportation Investment Generating Economic Recovery (TIGER) Grant, along with other funding from the City of Saint Paul, Ford Motor Company Fund, and East Metro Strong. The City selected a consultant team to complete the study. Alta Planning + Design was the lead consultant, in partnership with Kimley-Horn & Associates and Sambatek.

The project was guided by two groups, a Technical Advisory Group and a Project Advisory Group. Both groups met five times throughout the study to provide direction and feedback to the project team. Representatives from the following organizations were included. Organizations listed in **bold** were included in both the Technical and Project Advisory Groups.

- **Ramsey County Regional Rail Authority**
- **Ramsey County Public Works**
- **Metro Transit**
- **Metropolitan Council**
- **Minnesota Department of Transportation**
- **East Metro Strong**
- Saint Paul City Council
- Ramsey County Board of Commissioners
- Saint Paul Public Schools
- Highland Business Association
- West 7th Business Association
- Saint Paul Smart Trips – Transit for Livable Communities
- Neighborhood House
- Fort Road Federation
- Highland District Council

Structure of the Report

This report summarizes the work completed as part of the study and includes the following sections. Additional details are available in the appendices.

- Community Engagement
- Design Concepts
- Operations & Maintenance
- Next Steps and Implementation Strategies

Study Goals

The goals of the study were established with input from the Project Advisory Group, residents, and businesses. The study goals fall into three categories: Connections, Process, and Design.

CONNECTIONS:

- Strengthen transportation and community connections between the diverse neighborhoods along the Ford Spur and extensions, such as downtown Saint Paul and the Ford Site.
- Complement the regional transportation system and connect to existing and future walk, bike, and transit facilities along the Ford Spur corridor.
- Allow future development on the Ford Site to be served with a variety of safe transportation choices.

PROCESS:

- Coordinate the goals and needs of related studies and stakeholders.
- Engage a broad cross-section of community members and stakeholders to build a common vision and support for the future of the Ford Spur.
- Demonstrate innovation in expediting the process of re-purposing the Ford Spur.

DESIGN:

- Foster economic development and placemaking along the Ford Spur corridor.
- Develop the Ford Spur into a neighborhood asset that complements and enhances existing and future land use along the Ford Spur.
- Develop walking and biking trail designs that are attractive, healthy, efficient, comfortable, safe, and convenient for people of all ages and abilities.

Appendix A includes recommended evaluation criteria and strategies that relate to the study goals.

This page intentionally left blank

COMMUNITY ENGAGEMENT

COMMUNITY ENGAGEMENT

Community engagement for the project was guided by the following goals and objectives:

Inform and educate the public about the project

- Inform and educate the public, stakeholders, and advisory groups of the goals and objectives of the project.
- Build trust between stakeholders and the project team.
- Identify and engage stakeholders in meaningful ways, including underrepresented populations that are traditionally not involved in transportation decision-making.
- Engage stakeholders throughout the entire process by offering multiple options/methods for public input and engage stakeholders through the entire process.

Provide ways to enable input in the process to help define project outcomes

- Acquire an understanding from the stakeholders of what is important and address their concerns.
- Collaborate with the design team to integrate outreach information.
- Engage stakeholders early and often in the process to build momentum for future project work.

Community Engagement Activities

The City of Saint Paul held three public open houses during this study:

Date	Location	Purpose	Approx. # of attendees
5/23/2017	Jewish Community Center, 1375 St. Paul Avenue	Introduce the project. Understand community ideas, concerns, and vision.	75
8/29/2017	Palace Community Center, 781 Palace Avenue	Share and collect input on preliminary design concepts.	45
3/1/2018	West 7th Community Center, 265 Oneida Street	Share refined design concepts and project next steps, build excitement.	50

The project team also held additional outreach at community and school events, in an effort to reach additional residents and reach traditionally underrepresented populations. The purpose of this outreach was to build awareness about the project, gather information about concerns and desires, and hear ideas about possible design concepts. The project team gathered input at the following events:

- July 2017: Highland Fest
- August 2, 2017: Movies in the Park Event at Homecroft Recreation Center
- August 17, 2017: Keystone Farmer’s Market Event at W. 7th Community Center
- August 18, 2017: Sibley Manor Pop-Up Meeting
- September 10, 2017: Saint Paul Classic Bike Tour, Flyer Distribution
- Back to School Open Houses:
 - » August 31, 2017: Adams Spanish Immersion School
 - » August 31, 2017: Focus Beyond School
 - » August 31, 2017: Highland Middle School
 - » August 31, 2017: Creative Arts School
 - » September 7, 2017: Highland High School



Preliminary designs were shared and discussed during the second open house at Palace Community Center.

What We Heard

Comments from the public followed several main themes. Full summaries of each open house are available in Appendix B.

- Support for the conversion of an unused corridor into a public amenity. There was a high level of support for the inclusion of a pedestrian/bike path, but there was split support and concern regarding the inclusion of public transit along the corridor. People generally supported the design concepts.
- Interest in connecting key locations at beginning and end of trail and along route, including downtown Minneapolis, downtown St. Paul, Shepherd Road, and Mississippi National Park.
- Focus on the corridor as a neighborhood asset for potential benefits such as creating sustainable green space, adding public recreation areas, and increasing access to neighborhoods along the corridor.
- Concern about proximity of route to residential areas, especially in considering the potential inclusion of public transit.
- Concern about safety of route and pedestrian/bike access to the route from major intersections and landmarks. People generally supported a grade-separated crossing of West 7th Street.



Presentation during the second open house.

In Their Own Words:

We asked open house attendees. “What words or phrases describe what you want this corridor to be?” Some of the most common responses included:

- Accessible
- Safe
- Greenway
- Quiet
- Aesthetically pleasing
- Simple, safe, easy for the city to maintain
- Neighborhood asset
- A must-see in St. Paul

“We should encourage new ways for people to get around their neighborhoods”

“This would be life changing for my kids – safe biking to their favorite places”

This page intentionally left blank

DESIGN CONCEPTS

DESIGN TYPOLOGIES

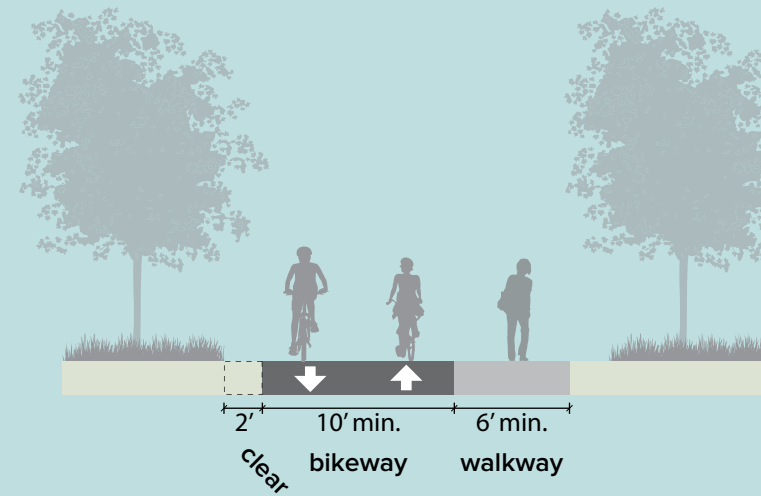
The project team established design typologies as a guide for the design of trail and transit facilities in the Ford Spur. These typologies meet state and federal minimum design standards. In all but the most constrained scenarios, the design typologies exceed minimum standards for trail design. The trail design typologies were developed to follow best practices in trail design, as well as reflect staff and community preference for modal separation.

Modal separation means that people walking and people bicycling have separate trails or separate lanes. Given the differential speed between people walking and bicycling, modal separation can improve safety, comfort and overall experience for all users. Separate trails will be more attractive to trail users and create a more comfortable experience for people who may walk at slower speeds, such as families, older adults and people with mobility and/or vision impairments.

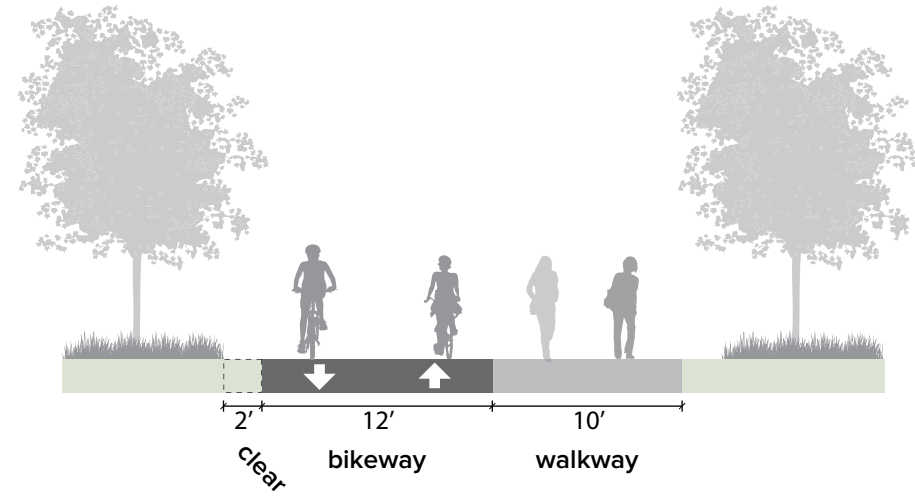
Consistency in design is important for the safety of trail users and will communicate clearly where trail users are supposed to be and increase predictability of trail user behavior. It is important to provide a consistent design for trail users, whether they are in a wide or narrow section of the Ford Spur. With this in mind, it is recommended that modal separation be maintained along the entire length of the trail. This will reduce conflicts and confusion as trail users transition between wide and narrow segments of the Ford Spur.

The following design typologies illustrate recommended trail and transit facility widths and separation, based on constrained, narrow, and wide right of way scenarios. The constrained graphic represents the recommended minimum widths for the walkway and bikeway. The recommended maximum trail widths are shown in the wide design typology. A recommended typical section is also included to show recommended dimensions for trail and transit facilities at a transit station. Designs show a fence between trail and transit facilities, to meet transit design standards and promote safety for all users.

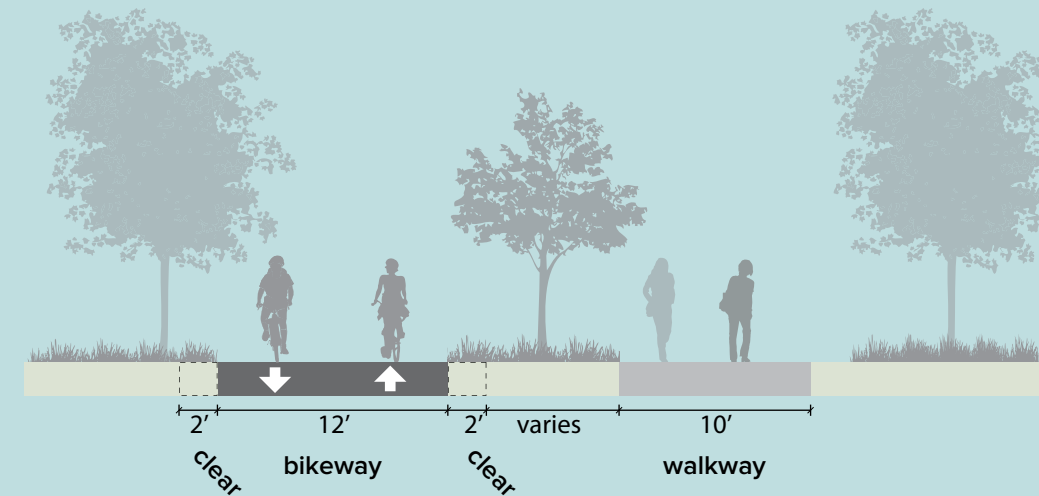
CONSTRAINED ROW: 50 FT WIDE OR LESS



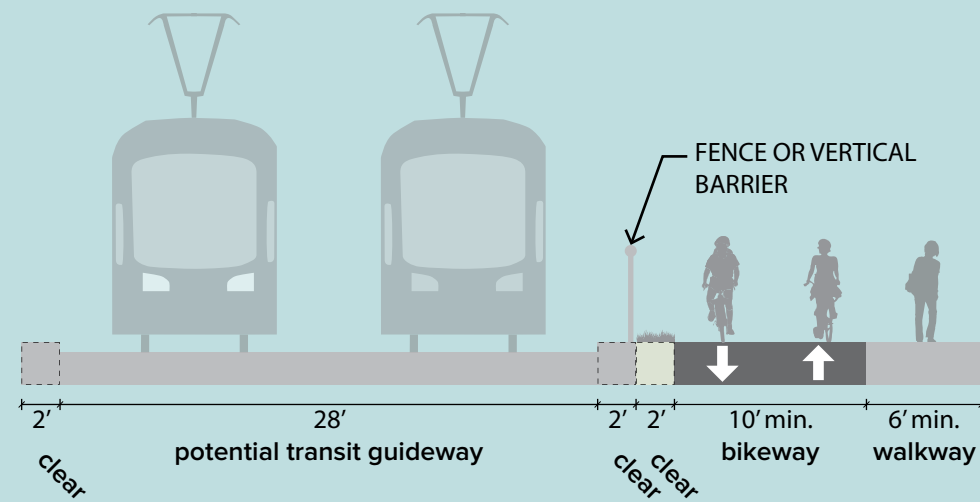
NARROW ROW: 50-70 FT WIDE



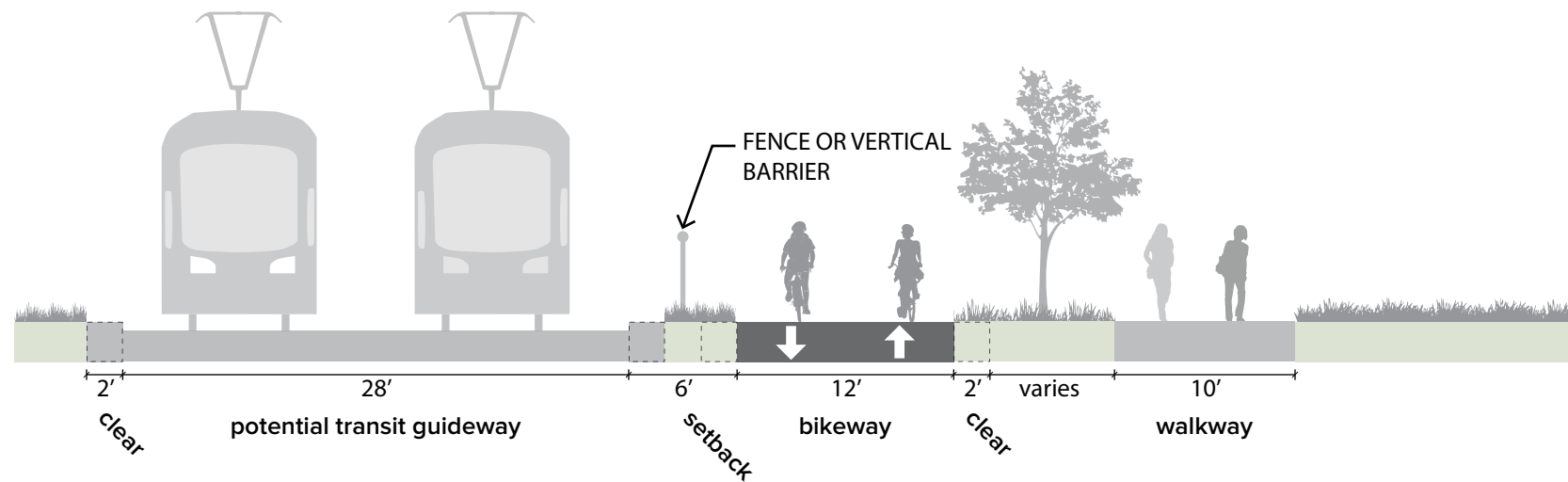
WIDE ROW: 70 FT OR WIDER



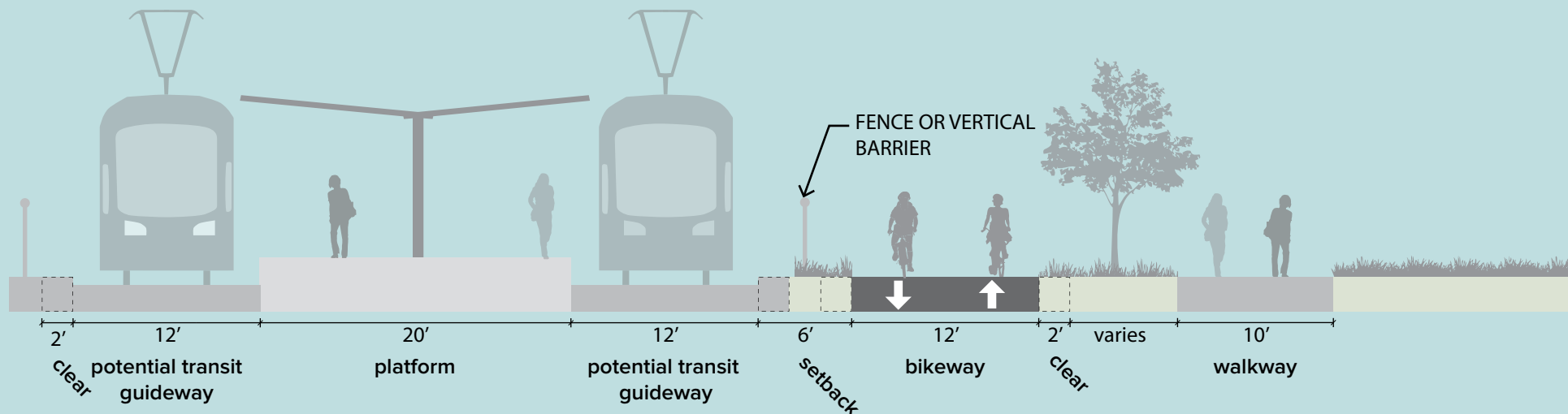
CONSTRAINED ROW: 50 FT WIDE



WIDE ROW: 70 FT OR WIDER



POTENTIAL STATION DESIGN



If transit facilities are constructed in the Ford Spur, the preliminary design concepts show the trail on the north and east side of the right of way. A trail on the north side of the Ford Spur would provide a more unique trail user experience at Victoria Park, where the trail users could view the wetlands and pond in the park. This would also preserve existing access at Return Court and Worcester Avenue.

Accessibility and ADA Compliance

The current design is not advanced enough to determine specific ADA compliance. However, a number of features are intended to improve access and comfort for people with mobility and vision impairments. The design includes separate bike and walk trails to reduce conflicts between people bicycling and people with mobility and vision impairments. Separated trails will also improve the level of comfort for people with mobility and vision impairments. While Saint Paul has hills and bluffs that can create accessibility challenges, this corridor has the advantage of being a flat railroad grade.

Throughout most of the Ford Spur, there is adequate space for a planted buffer between the walk and bike trails. This improves legibility and safety for people with vision impairments because the buffer can be detected with a cane so that people walking are able to stay on the walking trail. In locations where the bike and walk trails are adjacent, textured pavement can be used to distinguish between the walk and bike trails.

Ford Spur Right of Way and Constraints

As design concepts were developed, the design typologies were applied to specific locations. Ford Spur right of way was a primary consideration for determining how to apply the design typologies to specific locations. In many locations, Ford Spur right of way is wider than 70 feet and can fit trail and transit facilities at desired dimensions. The right of way is widest between the Ford Site and W 7th Street. In this location, concept designs for trail-only concepts show trail facilities on one half of the right of way, with the idea that right of way could be preserved for future uses such as park, green space, transportation, or other uses.

The following figure shows right of way pinch points, defined as locations with right of way narrower than 70 feet. At pinch points, the right of way is adequate for desired trail widths; however, there will be constraints if trail and transit are co-located in these areas.



The widest ROW segment of the spur is between the Ford Site and W 7th Street.



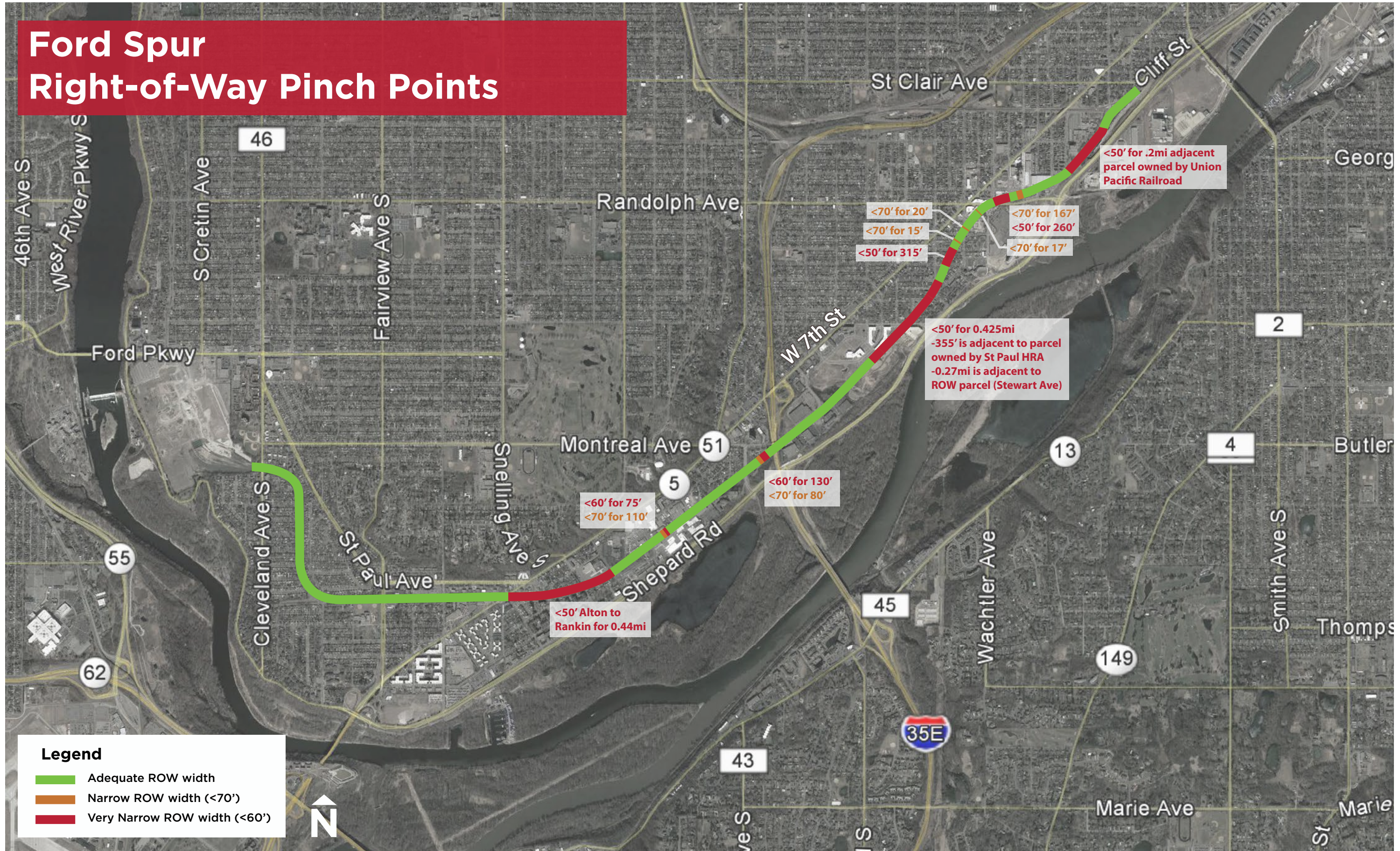
There are several ROW pinch points along the spur, including this segment with less than 50' of ROW, from Alton to Rankin Street.

PRELIMINARY DESIGN CONCEPTS

The scope of this study included preliminary design concepts for several locations along the five-mile length of the Ford Spur. The preliminary design concepts include plan-view concepts for five approximately half-mile segments of the Ford Spur, and a set of 10 section graphics illustrating locations along the Ford Spur. Two sets of concepts have been prepared: one set that shows the development of pedestrian and bicycle trails in the Ford Spur, and another set that shows how trails and transit could fit into the Ford Spur right of way to acknowledge that other studies are considering the spur for public transit. The segments were chosen to be representative of varied conditions throughout the corridor.

The following pages display the preliminary design concepts along with key design considerations for each segment.

Ford Spur Right-of-Way Pinch Points



Segment 1: Ford Site to Prior Avenue

Right of way in this segment of the Ford Spur is wide, varying between 100 and 140 feet wide. The wide right of way presents opportunities for enhancements to the trail, such as green infrastructure, natural surface trails, community gardens, or other public space. Adjacent land uses are primarily single-family residential.

TOPOGRAPHY

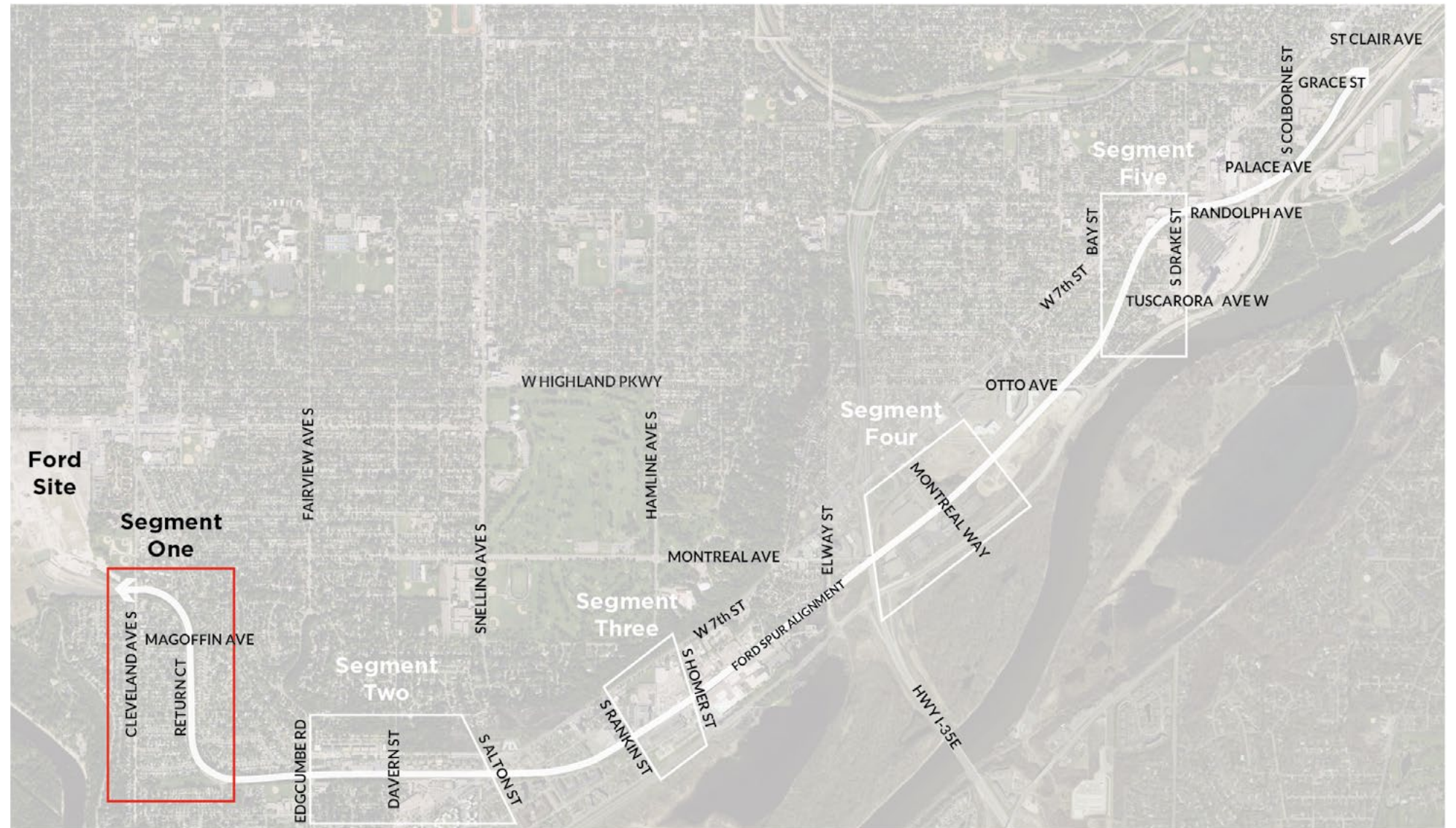
The Ford Spur is in a trench as it passes underneath Cleveland Avenue. The Ford Spur transitions out of the trench and is at-grade by the time it reaches Ramlow Place. The existing trench is a design constraint if a trail and transit are co-located in the Ford Spur. Based on existing topography, retaining walls would likely need to be constructed between Cleveland and Magoffin Avenue.

CLEVELAND AVENUE BRIDGE

There is 60 feet between abutments of the existing Cleveland Avenue bridge. This width is adequate to fit co-located trail and transit facilities. However, if a transit station is constructed at or near the Cleveland Avenue bridge, the existing bridge abutments could be a constraint. This constraint could be addressed by siting a station west of the Cleveland Avenue bridge. Side platforms could allow the station to be sited close to the Cleveland Avenue bridge, so that a transit guideway could be as narrow as possible as it passes under the bridge.

ACCESS TO THE FORD SPUR

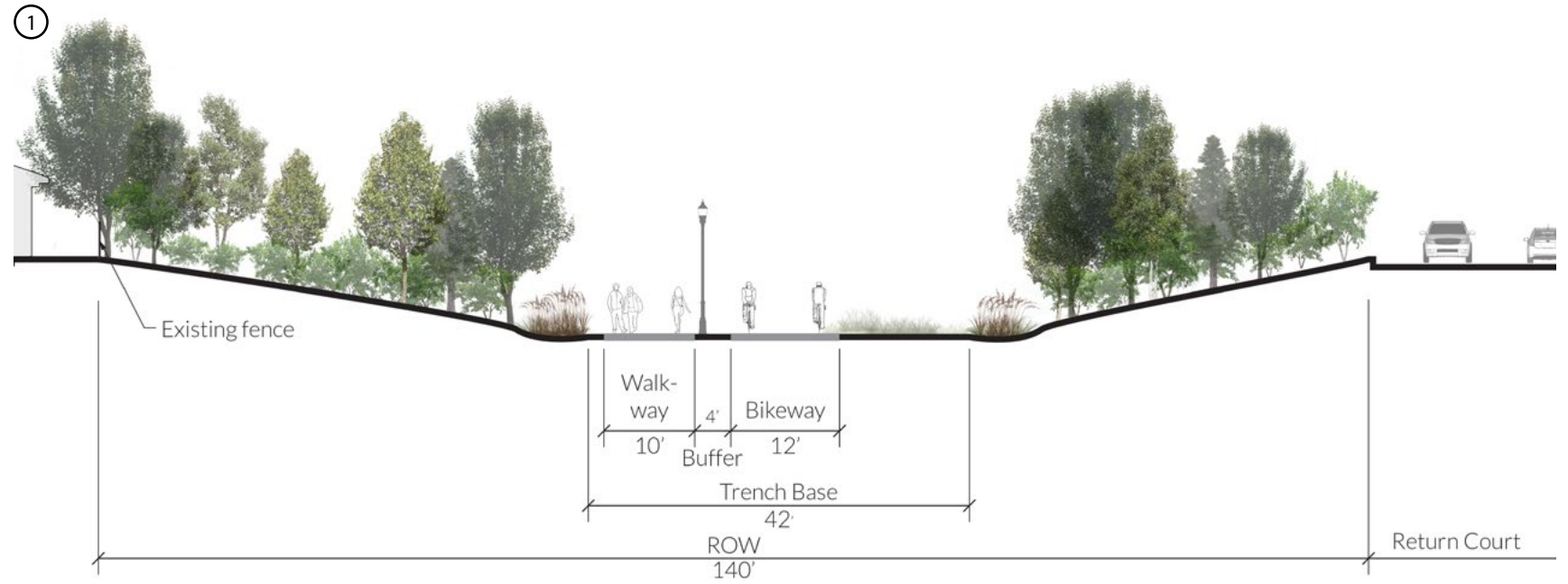
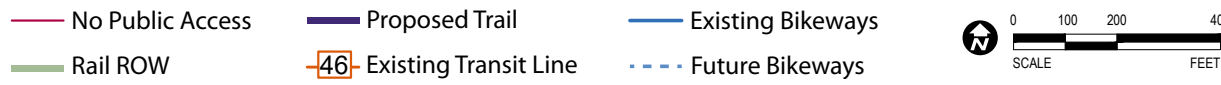
Access points are limited in this segment. There are two existing access points to the Ford Spur, at Ramlow Place and Worcester Avenue. These connections should be maintained, even if transit is developed in the Ford Spur. These connections are important for providing residents with access to future trails in the Ford Spur, as well as promoting a sense of safety for trail users. Additional access points could be considered at Cleveland Avenue and from Return Court at Magoffin Avenue.



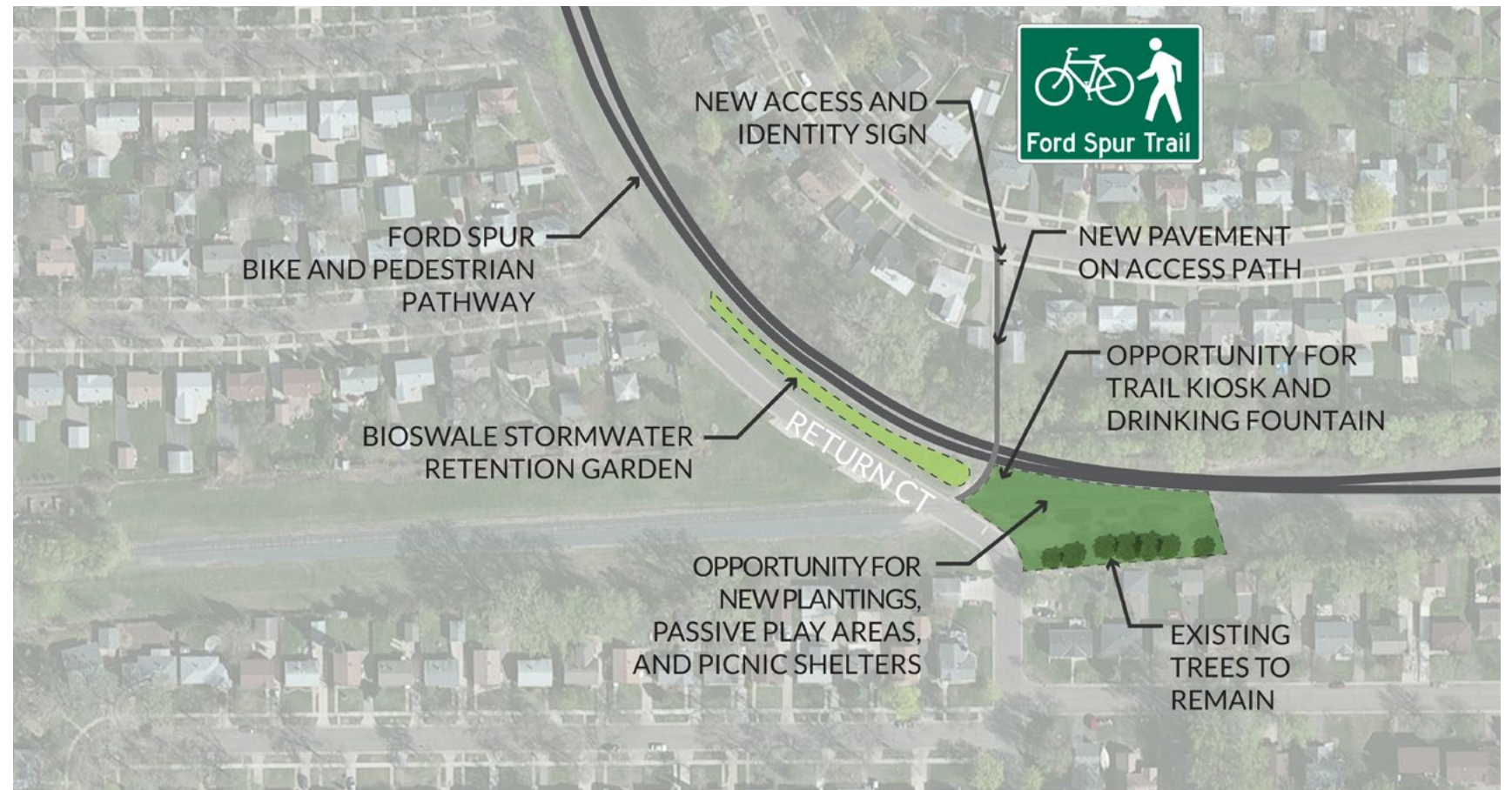
Ford Spur - Preliminary Design Segment Locations



SEGMENT 1: TRAIL ONLY

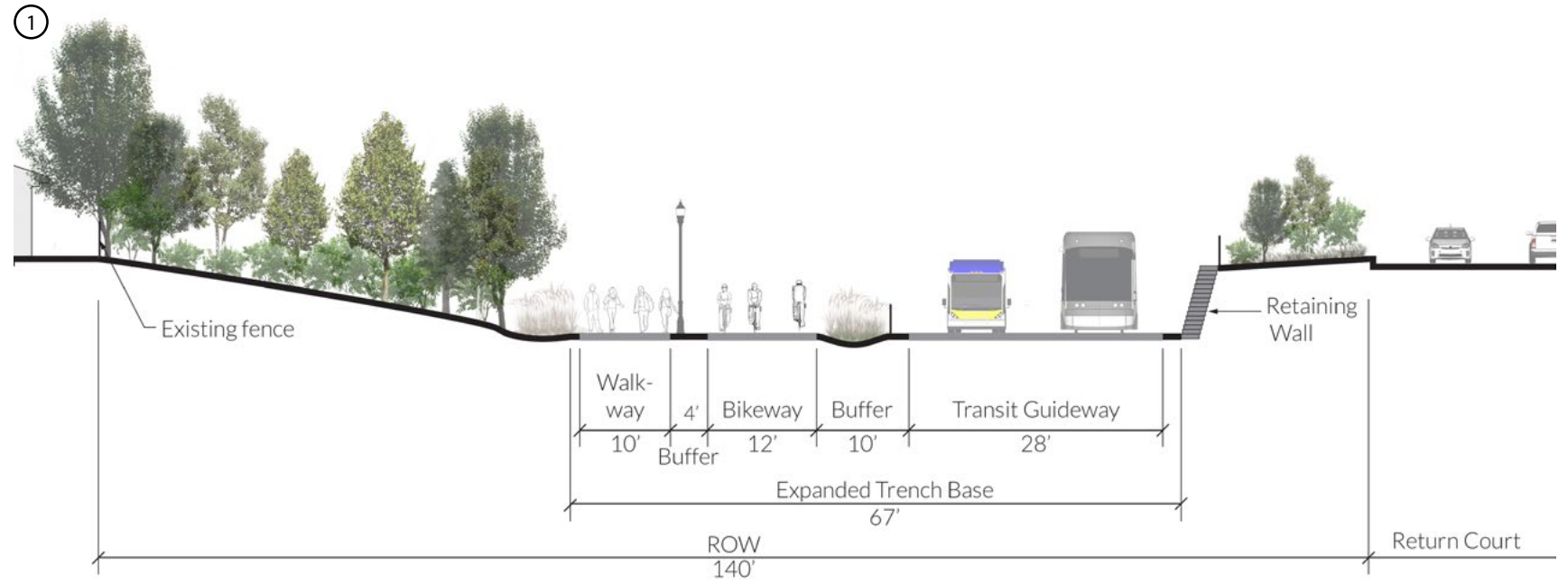
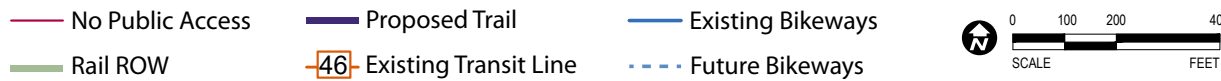
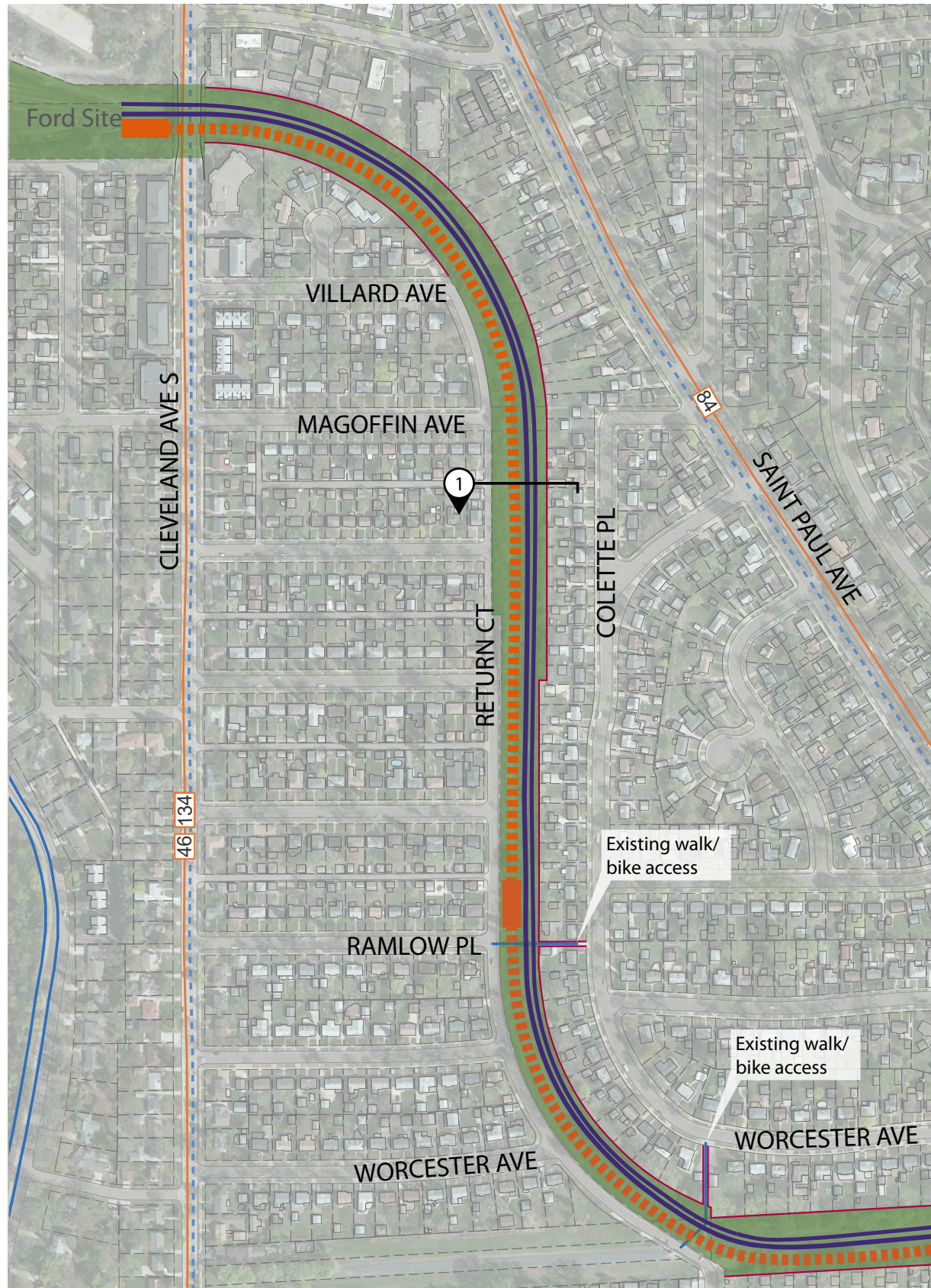


Segment 1 trail only section looking south.



Segment 1 trail only enlargement of a potential park space at Return Court near existing walk/bike access at Worcester Ave.

SEGMENT 1: TRAIL WITH TRANSIT



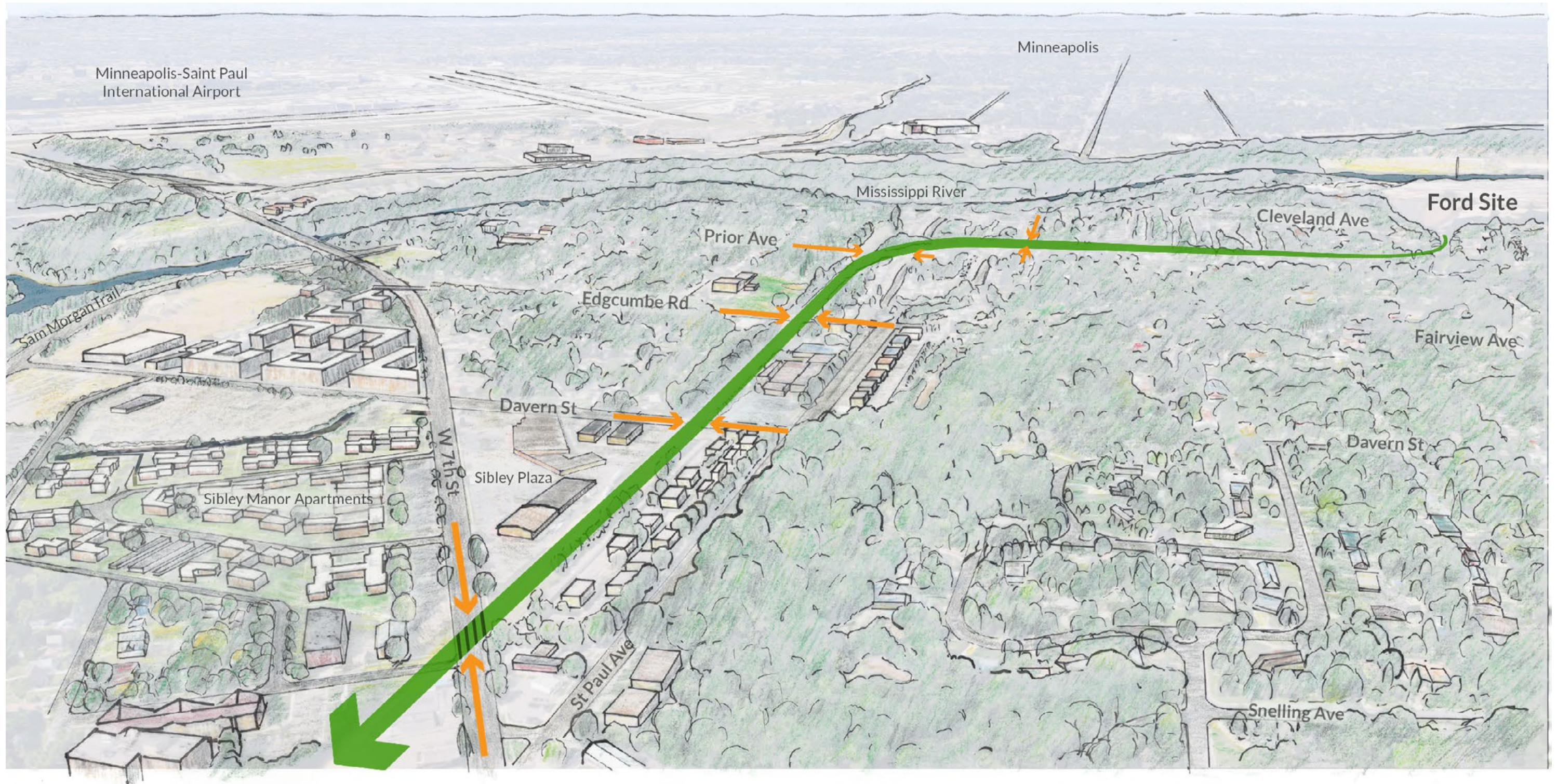
Segment 1 trail with transit section looking south.




Existing walk/bike access at Ramlow Place



Existing conditions at Cleveland Avenue, looking east



Ford Spur Neighborhood Context: Western Connections

-  Ford Spur
-  Public ROW Connections
-  Crossing to be Determined



Segment 2: Edgumbe Road to Alton Street

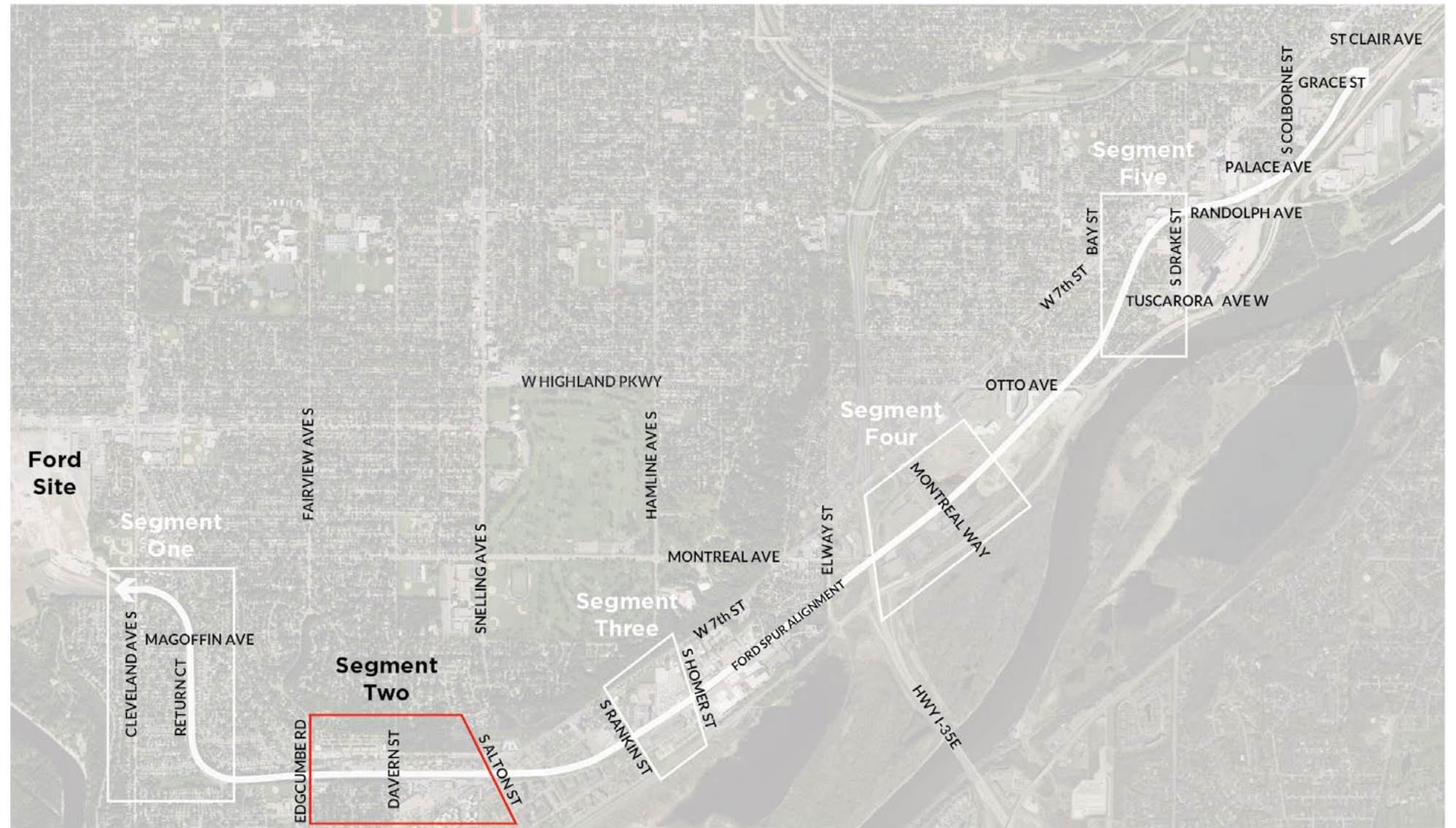
Similar to Segment 1, right of way is wide between Edgumbe Road and West 7th Street (98-150 feet). Right of way becomes constrained east of West 7th Street, with approximately 50-foot-wide right of way. Adjacent land uses vary between single and multi-family residential, institutional, and commercial.

CROSSINGS

This segment of the Ford Spur crosses roadways with the highest traffic volumes in the study area. Crossing treatments will be important to promote safety and reduce conflicts between trail users and people driving across the Ford Spur. At Edgumbe Road and Davern Street, curb extensions, refuge medians, high-visibility crosswalk markings, and pedestrian- and bicycle-activated traffic signals are recommended. These same treatments could be used at W 7th Street, along with a re-alignment of the crossing so that the trail crossing is perpendicular to the street. A bridge over W 7th and Alton Streets could be considered to further improve safety and comfort for trail users.

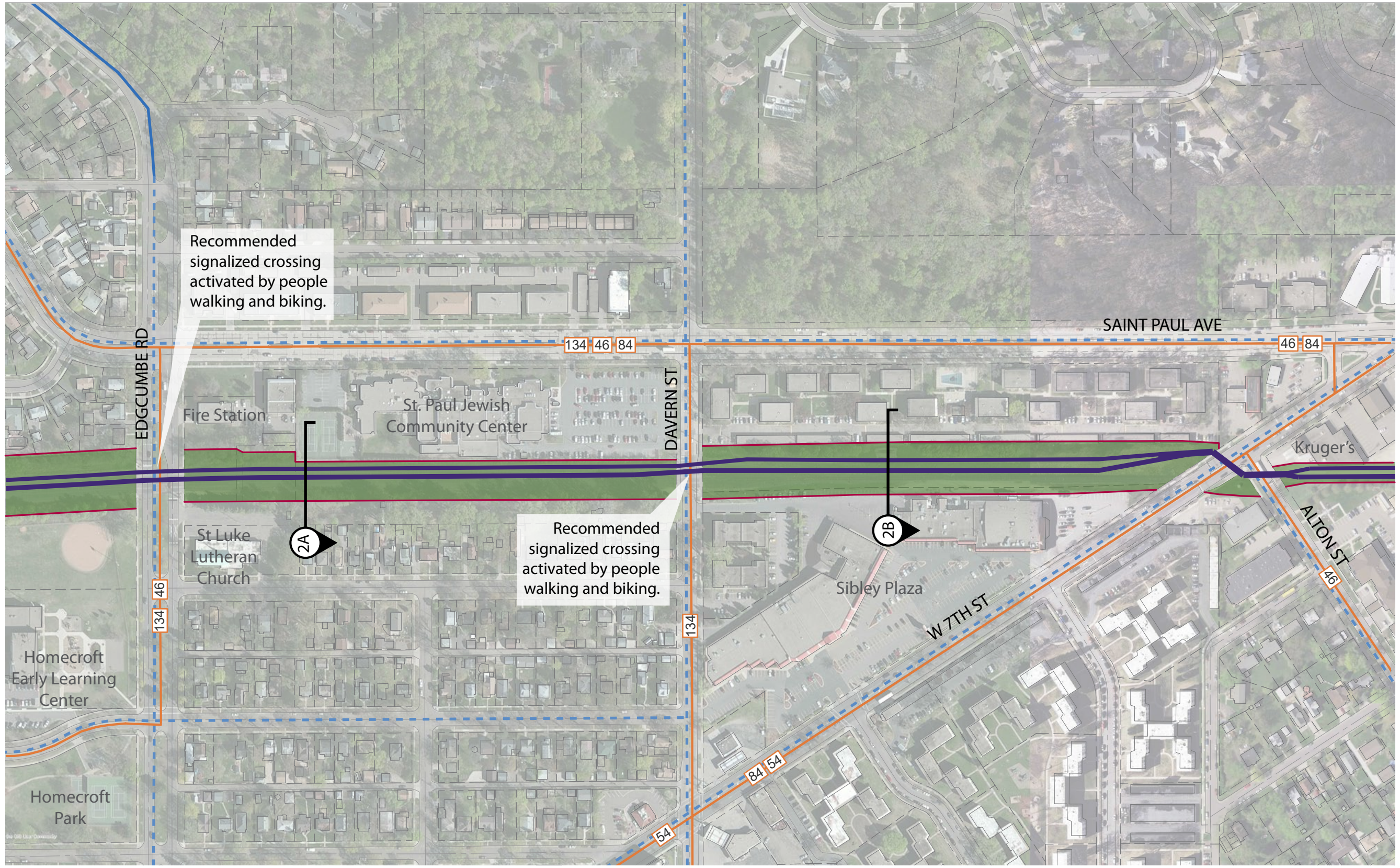
INTERACTION WITH ADJACENT PROPERTY AT ALTON STREET

There is a pinch point created by current uses of the property at the southeast corner of West 7th and Alton Streets. Loading docks are located so that trucks need to cross the Ford Spur right of way for access. The City should take advantage of any opportunity to work with the property owner to clarify uses of the Ford Spur and resolve conflicts prior to project implementation.



Ford Spur - Preliminary Design Segment Locations

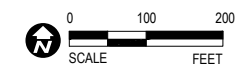
SEGMENT 2: TRAIL ONLY



Recommended signaled crossing activated by people walking and biking.

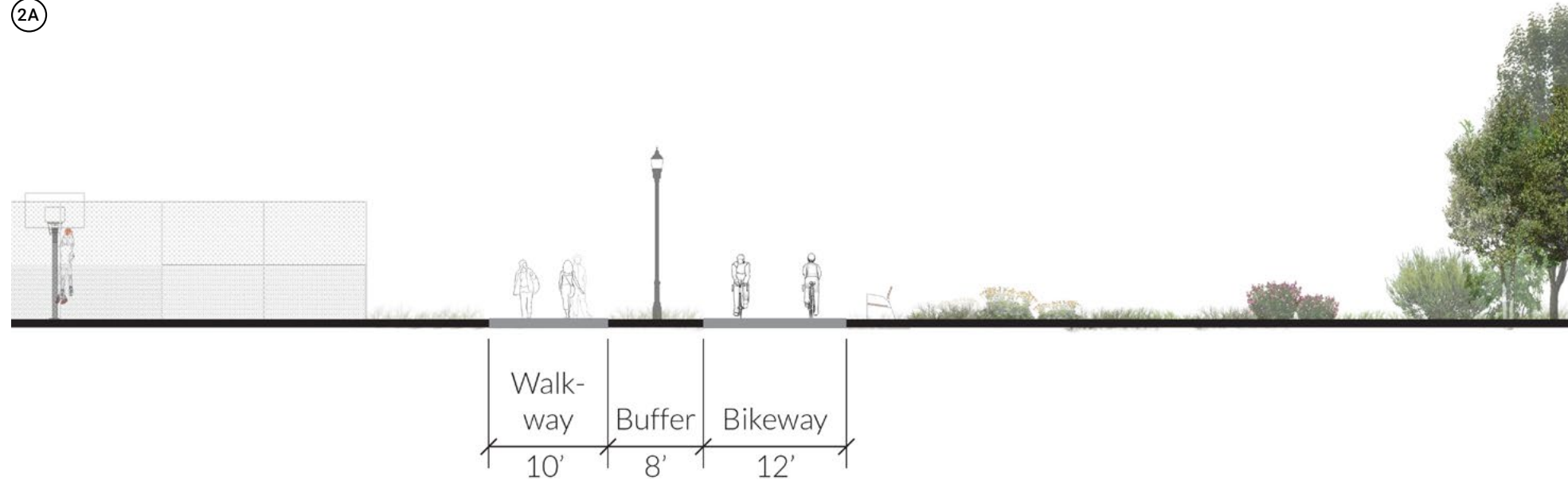
Recommended signaled crossing activated by people walking and biking.

- No Public Access
- Rail ROW
- Proposed Trail
- 46 Existing transit line
- Existing bikeways
- - - Future bikeways



SEGMENT 2: TRAIL ONLY

2A

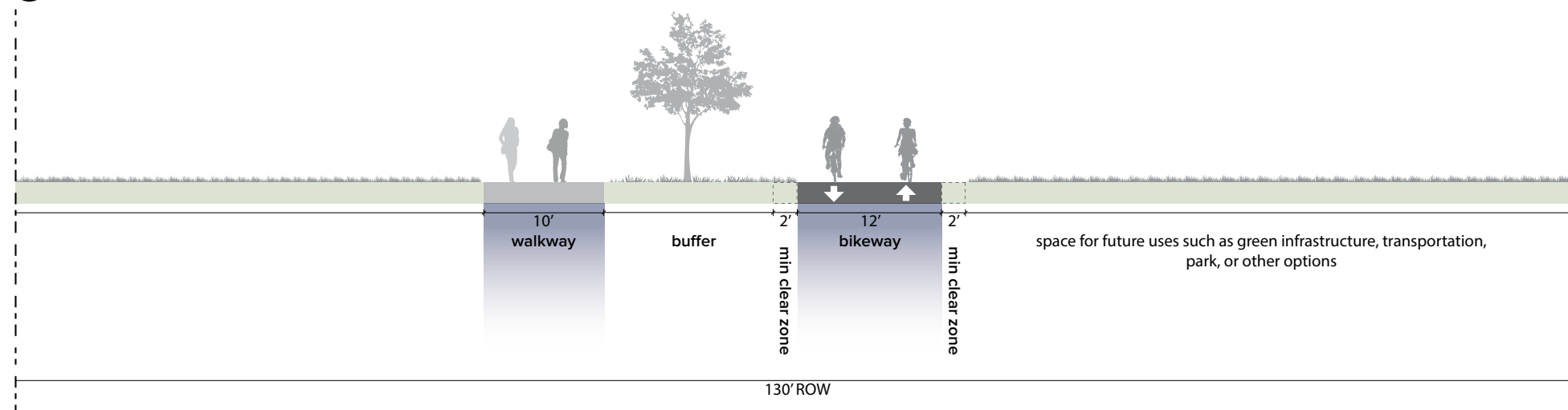


Segment 2 trail only section near Edgcumbe Rd looking east.



Existing conditions at W 7th Street

2B

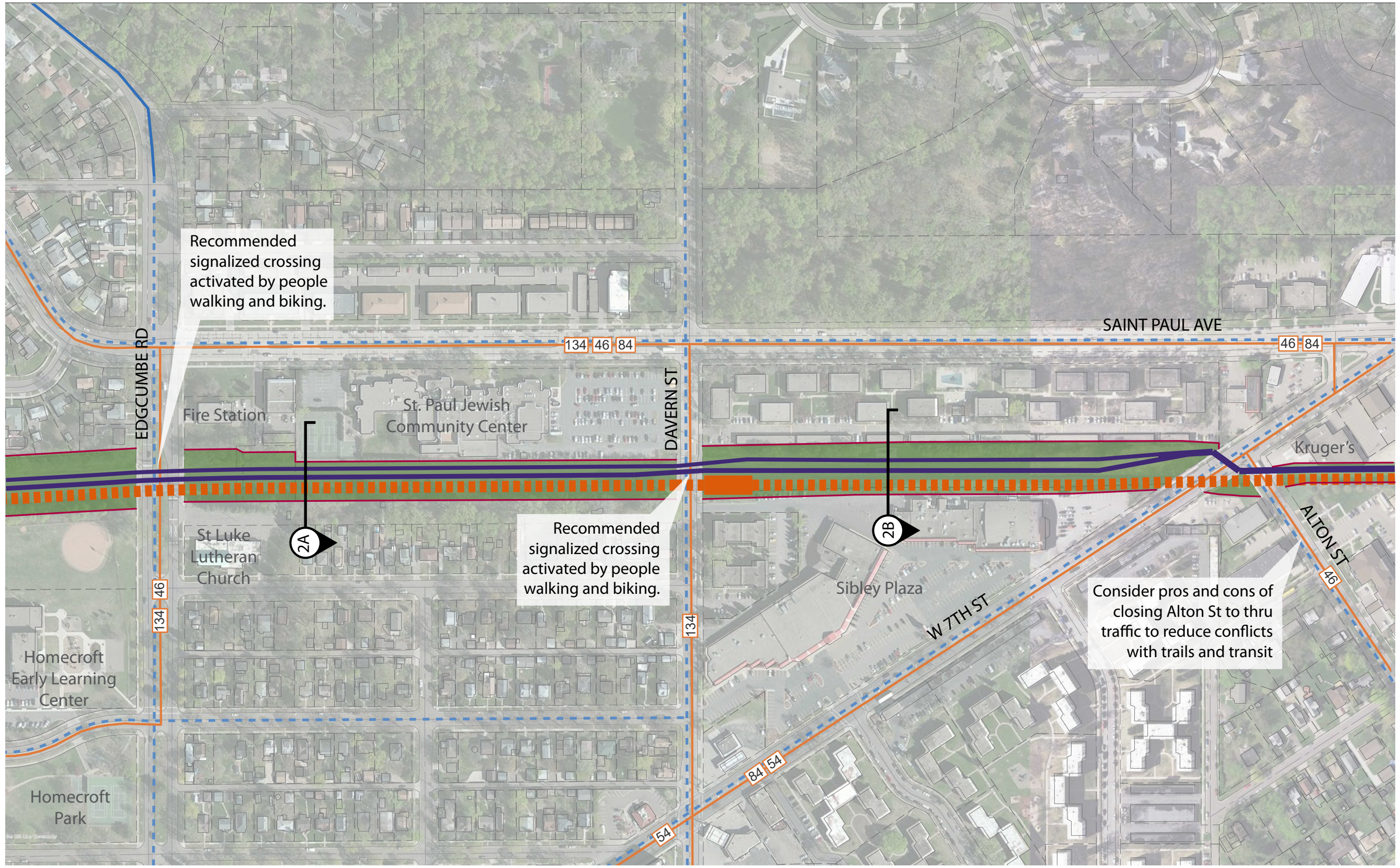


Section 2 trail only section near Davern St looking east.

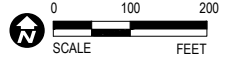


Existing conditions at Edgcumbe Road

SEGMENT 2: TRAIL WITH TRANSIT

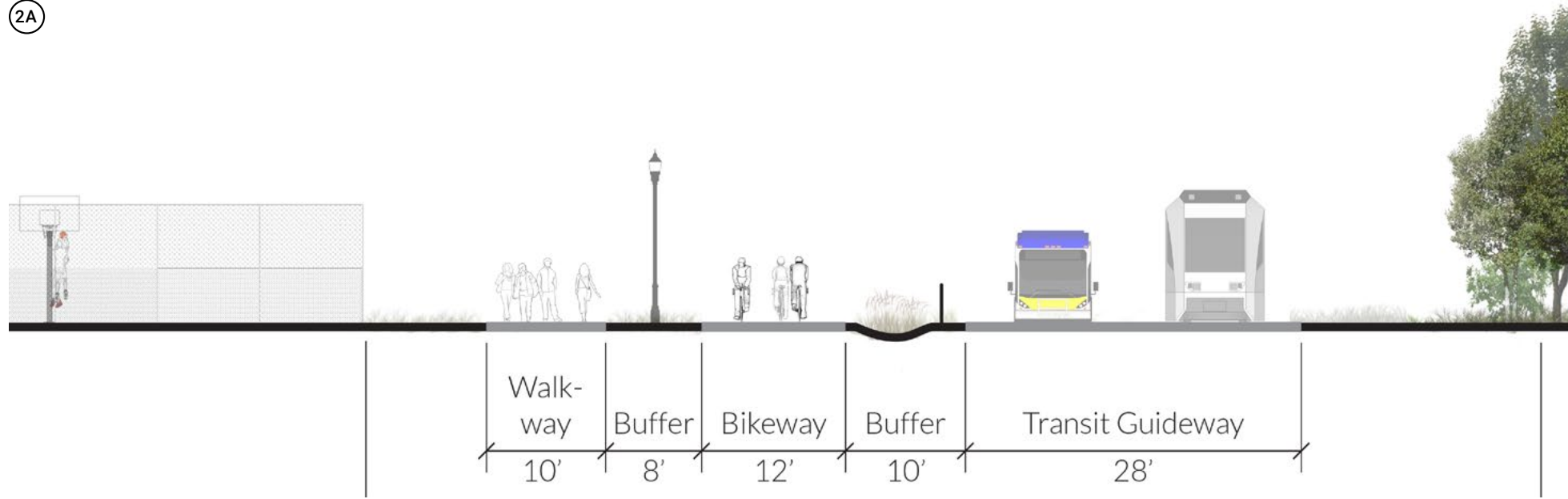


- No Public Access
- Proposed Trail
- Existing bikeways
- Potential Transit
- Rail ROW
- Existing transit line
- Future bikeways



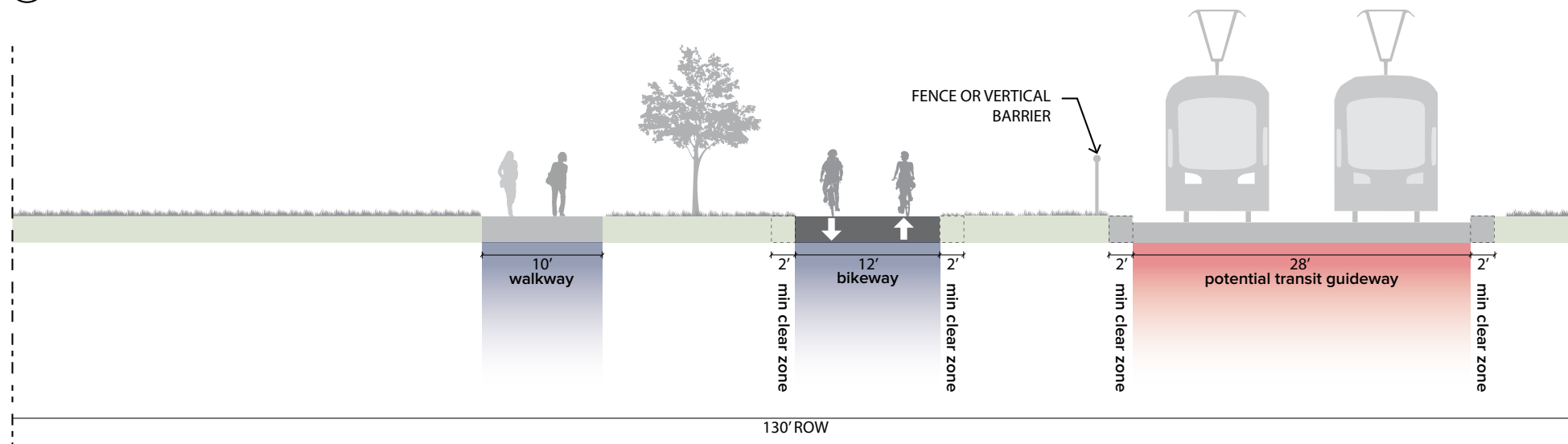
SEGMENT 2: TRAIL WITH TRANSIT

2A



Segment 2 trail with transit section near Edgcombe Rd looking east.

2B



Segment 2 trail with transit section near Davern St looking east.



Example of grade-separated crossing



Example of signalized crossing

Segment 3: Rankin Street to Homer Street

The existing right of way in this segment varies between 53-100 feet. This segment is adjacent to industrial land uses. Despite the width of the right of way in this location, there are power transmission towers that create a constrained right of way. If transit and trails are developed in this segment of the Ford Spur, the pedestrian and bicycle trails would need to be combined to one 14-foot wide trail.



Ford Spur - Preliminary Design Segment Locations



SEGMENT 3: TRAIL ONLY



- No Public Access
- Proposed Trail
- Existing bikeways
- Rail ROW
- Existing transit line
- Future bikeways



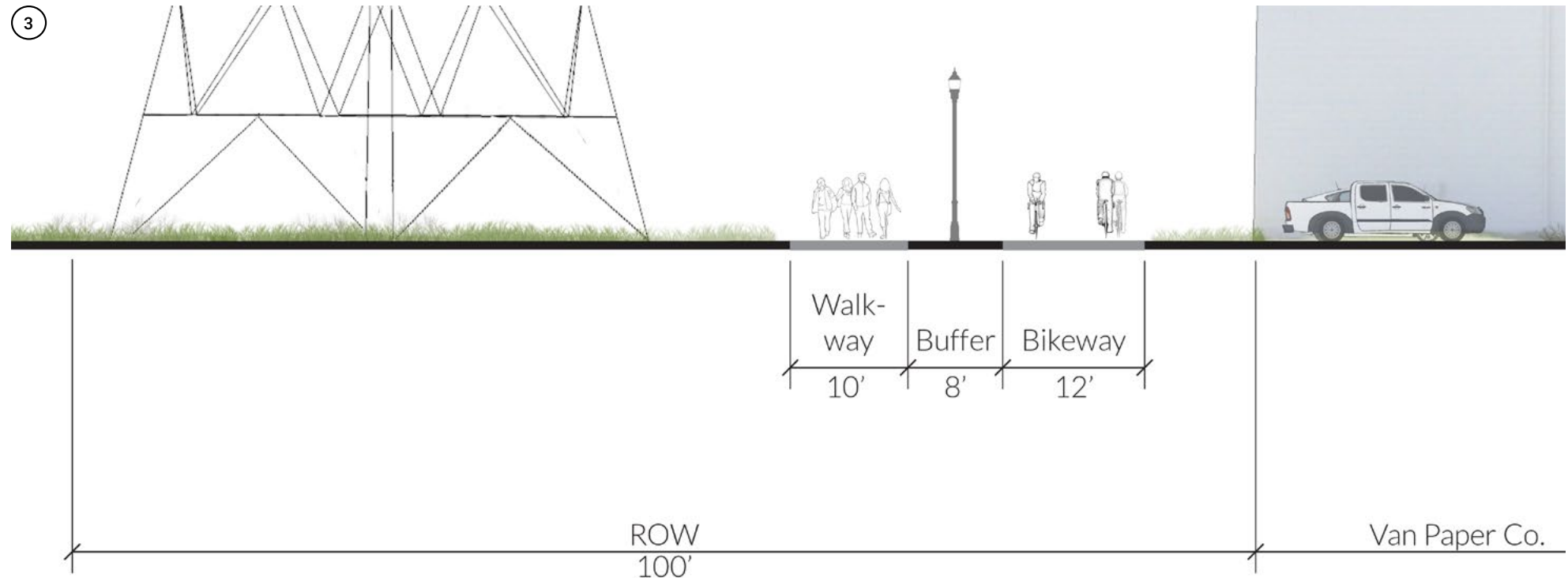
SEGMENT 3: TRAIL WITH TRANSIT



- No Public Access
- Proposed Trail
- Existing bikeways
- Potential Transit
- Rail ROW
- Existing transit line
- Future bikeways

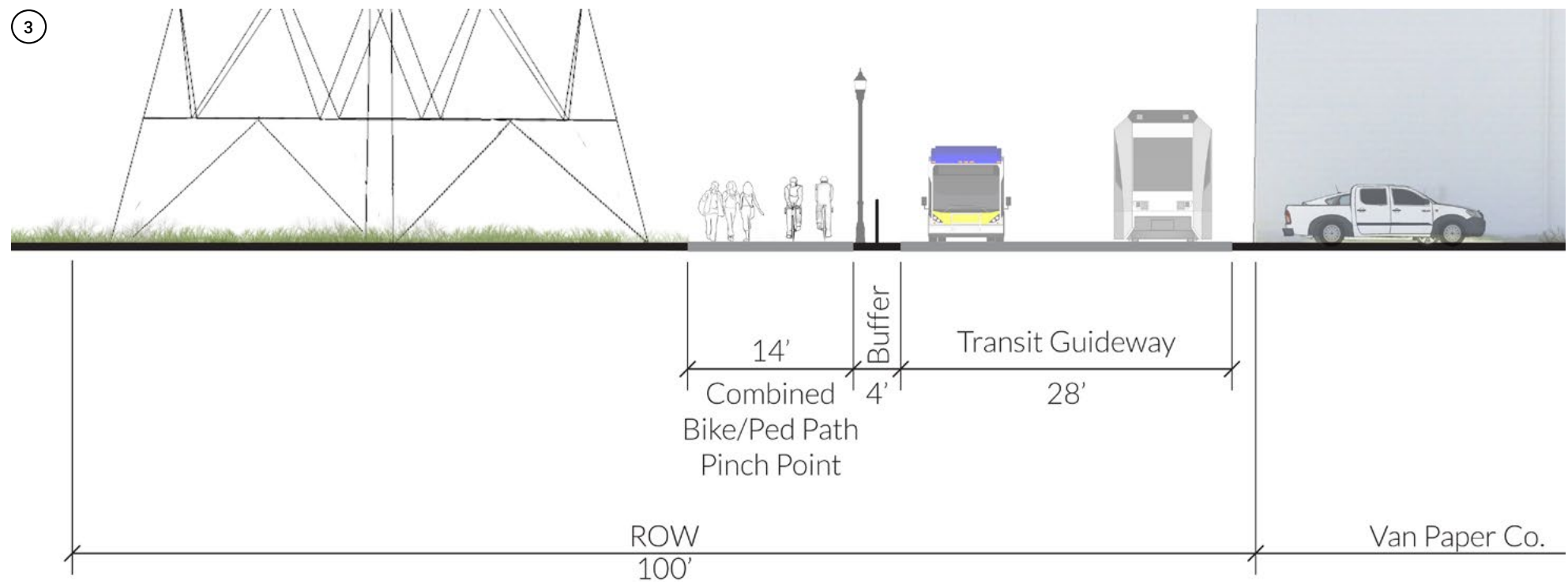


SEGMENT 3: TRAIL ONLY



Segment 3 trail only section between Rankin St and Homer St looking east

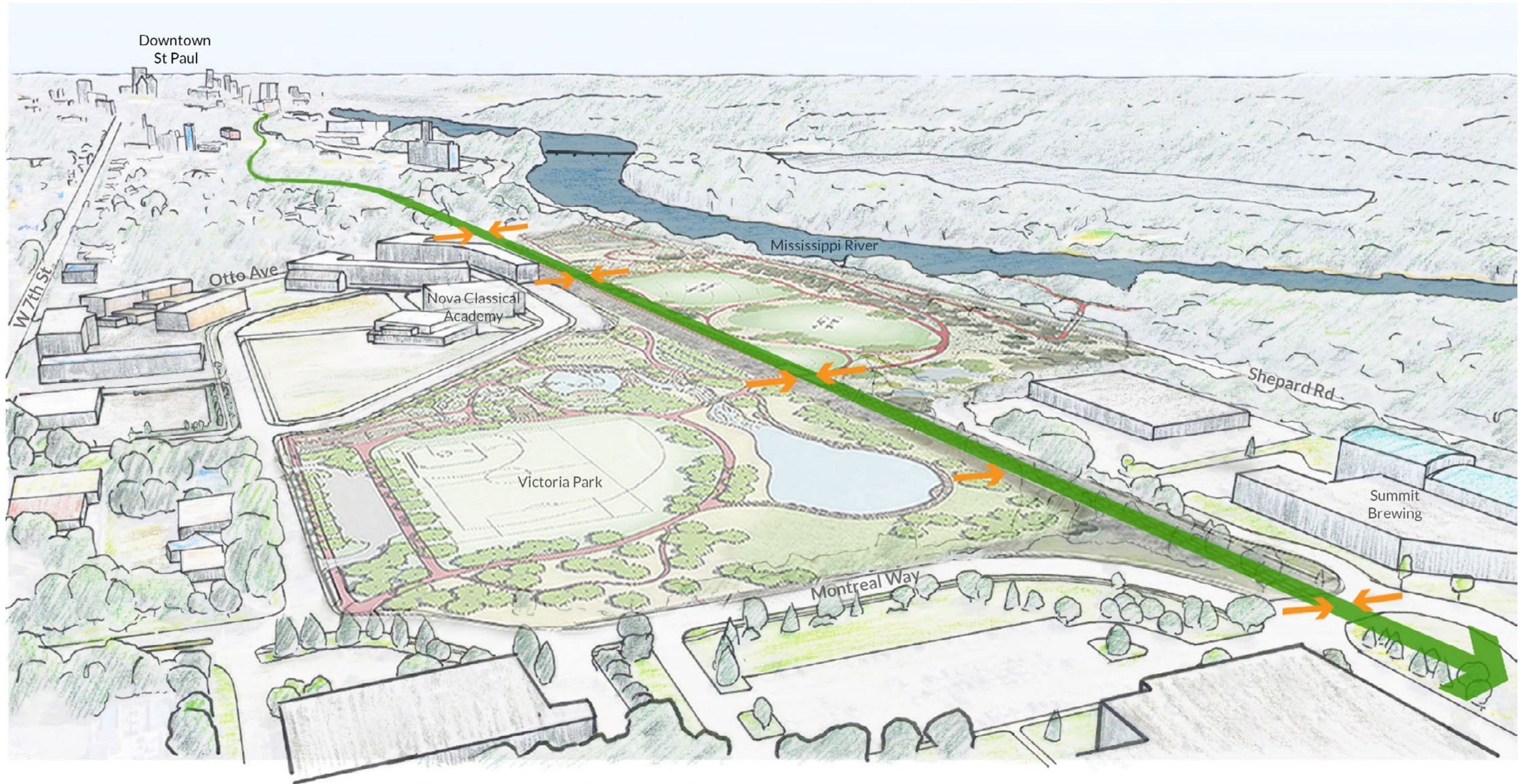
SEGMENT 3: TRAIL WITH TRANSIT



Segment 3 section between Rankin St and Homer St including transit, looking east



Existing conditions between Rankin and Homer Streets



Ford Spur Neighborhood Context: Victoria Park

 Ford Spur
 Public ROW Connections



Segment 4: I-35E to Victoria Park

The existing right of way in this segment varies between 90-100 feet. This segment is adjacent to industrial land uses. The Ford Spur also passes through Victoria Park in this section.

I-35W CROSSING

The existing rail bridge over I-35W is wide enough to be adapted for trail use. However, the structural condition of this bridge was not evaluated through this study. Further investigation is needed to determine the feasibility of converting this bridge to trail use. If transit and trails are co-located in the Ford Spur, the Riverview Corridor includes a conceptual transit station as a cap over I-35W.

OPPORTUNITY FOR TRAILHEAD FACILITIES

The width of the Ford Spur provides an opportunity to construct trailhead facilities at Montreal Way. These facilities could include seating, informational kiosks, and bike racks.

VICTORIA PARK CONNECTIONS

Preliminary designs show an approximately 1,000-foot-long elevated trail over wetlands on the west end of Victoria Park. This design would minimize environmental impacts to wetlands while creating a unique experience for trail users. The elevated trail could be widened in areas to provide viewing platforms. The elevated trail would be shared between people bicycling and walking, and should be constructed in a way that the surface is smooth and non-slip.

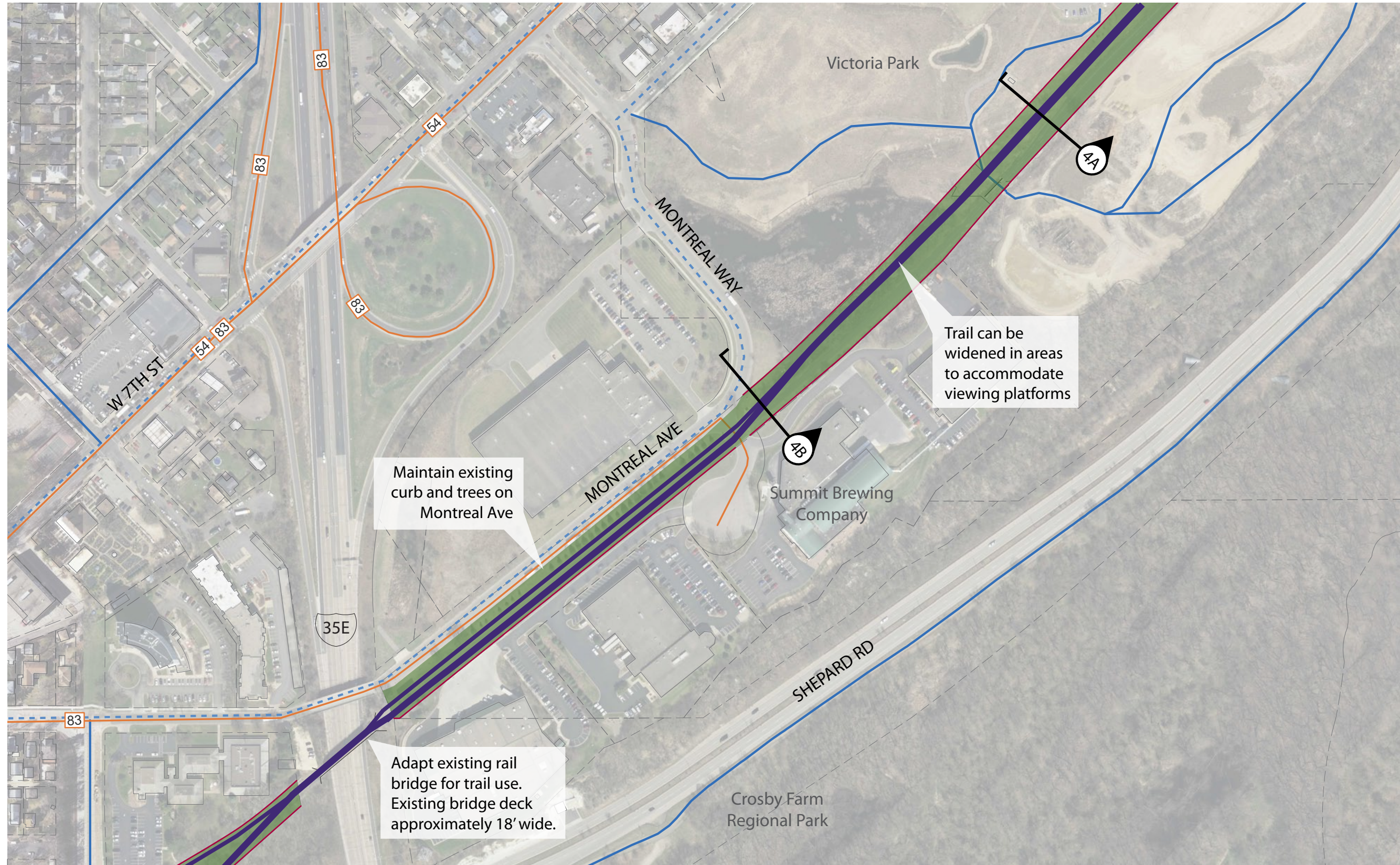
There are currently no connections to the Ford Spur in Victoria Park. Concept designs recommend tying the Ford Spur into existing trails in Victoria Park, as well as future trails that are included in the Victoria Park Master Plan.



Ford Spur - Preliminary Design Segment Locations



SEGMENT 4: TRAIL ONLY

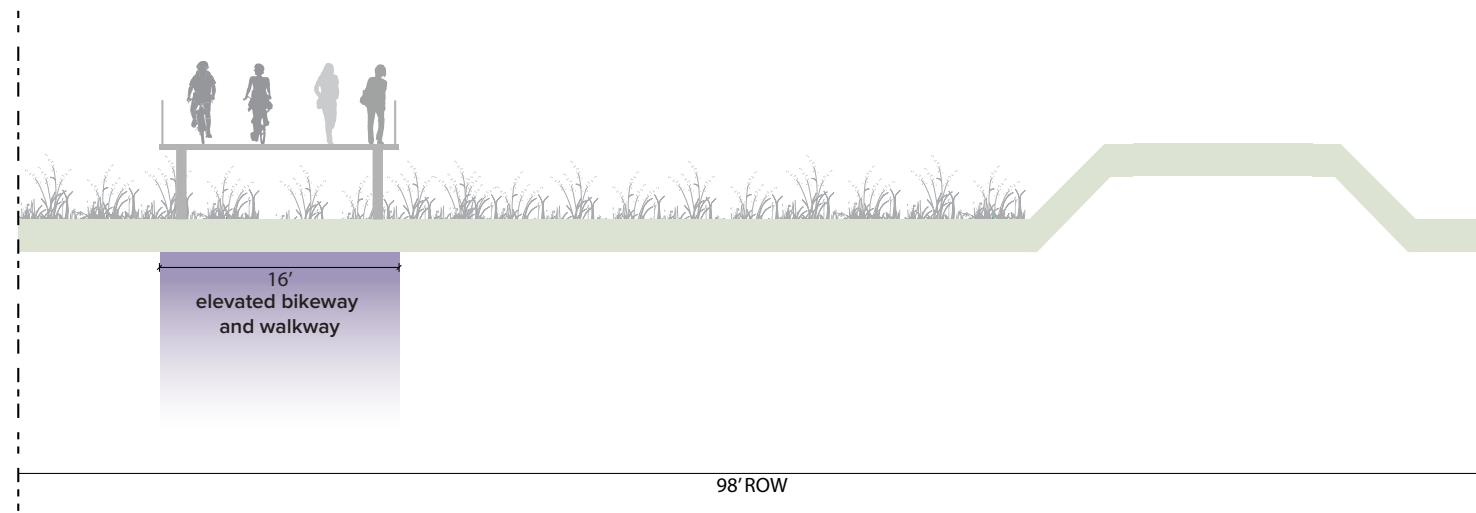


- No Public Access
- Rail ROW
- Proposed Trail
- 46 Existing transit line
- Existing bikeways
- - - Future bikeways



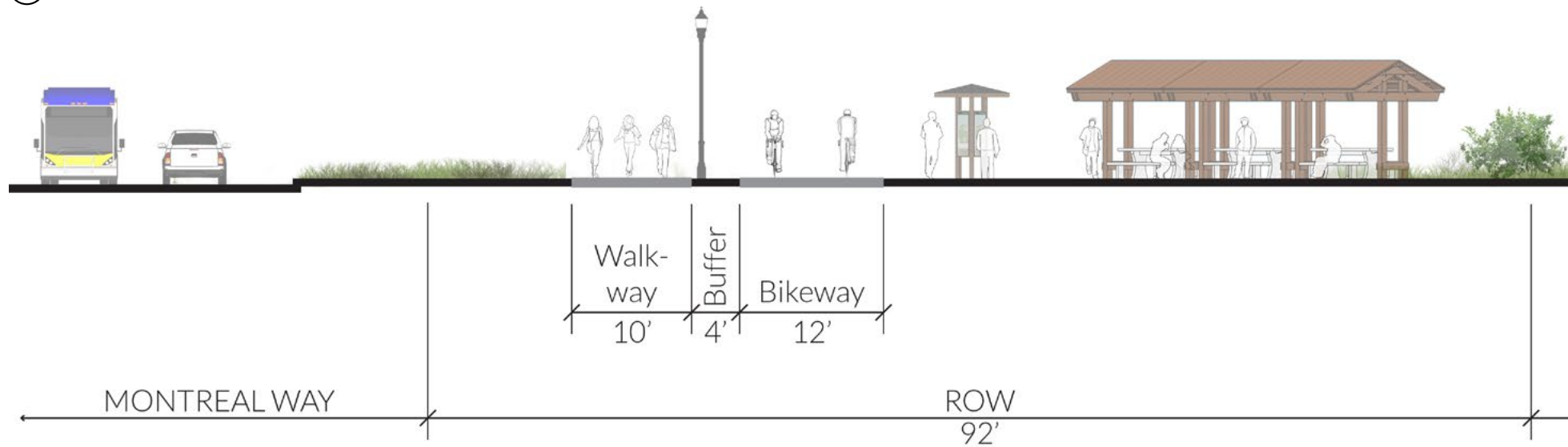
SEGMENT 4: TRAIL ONLY

4A



Segment 4 elevated trail boardwalk at Victoria Park, looking northeast

4B



Segment 4 trail only section near Montreal Way. Looking northeast.

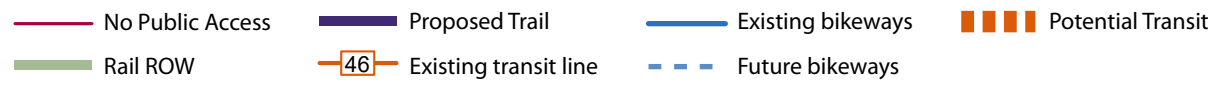
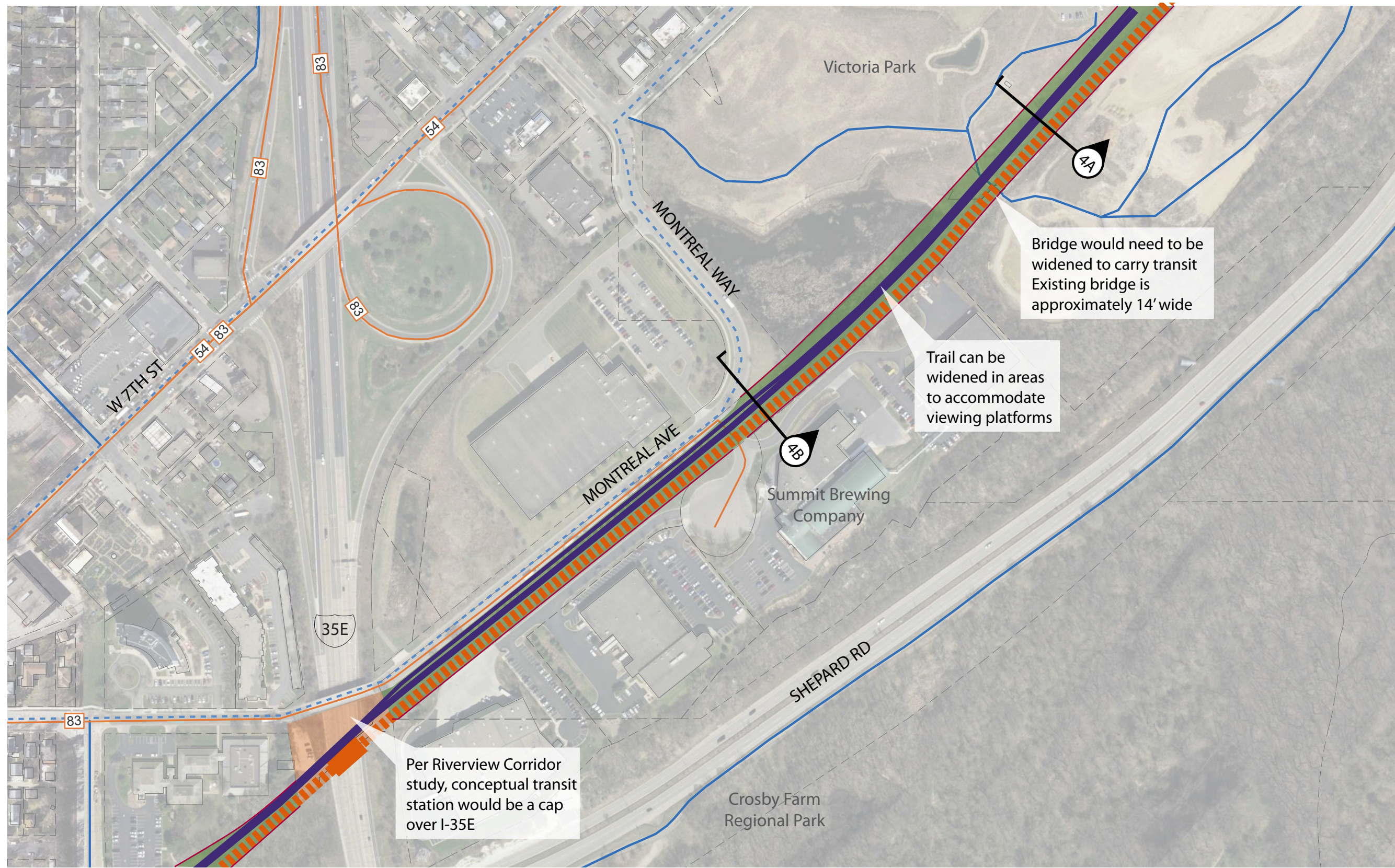


Existing conditions looking northeast towards Victoria Park.



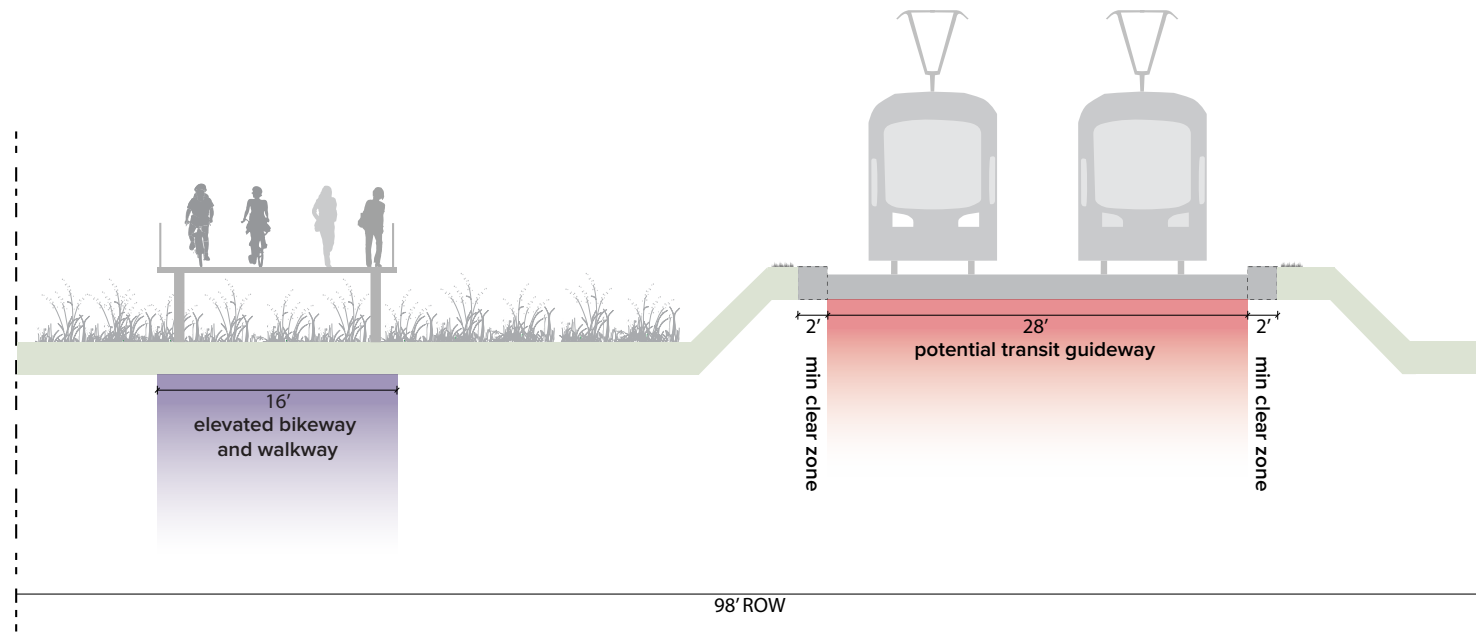
Existing conditions looking northeast at Montreal Way.

SEGMENT 4: TRAIL WITH TRANSIT



SEGMENT 4: TRAIL WITH TRANSIT

4A

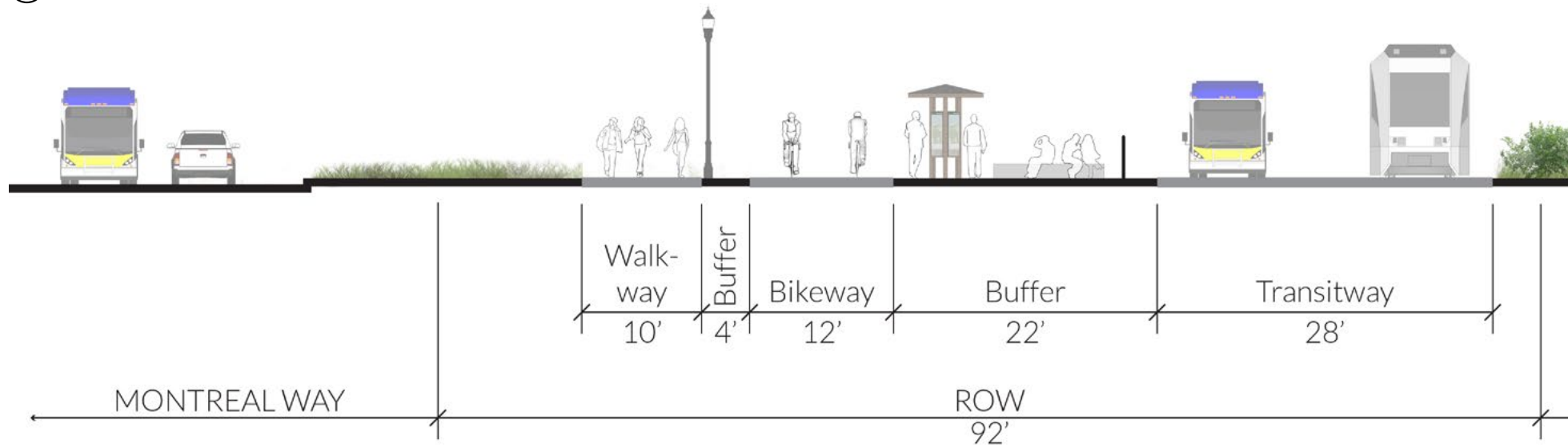


Segment 4 section at Victoria Park. Multiuse trail on elevated boardwalk, transit on widened rail bed. Looking northeast.



Existing rail bridge over I-35E looking northeast.

4B



Segment 4 trail with transit section near Montreal Way. Looking northeast.

Segment 5: Bay Street to Toronto Street

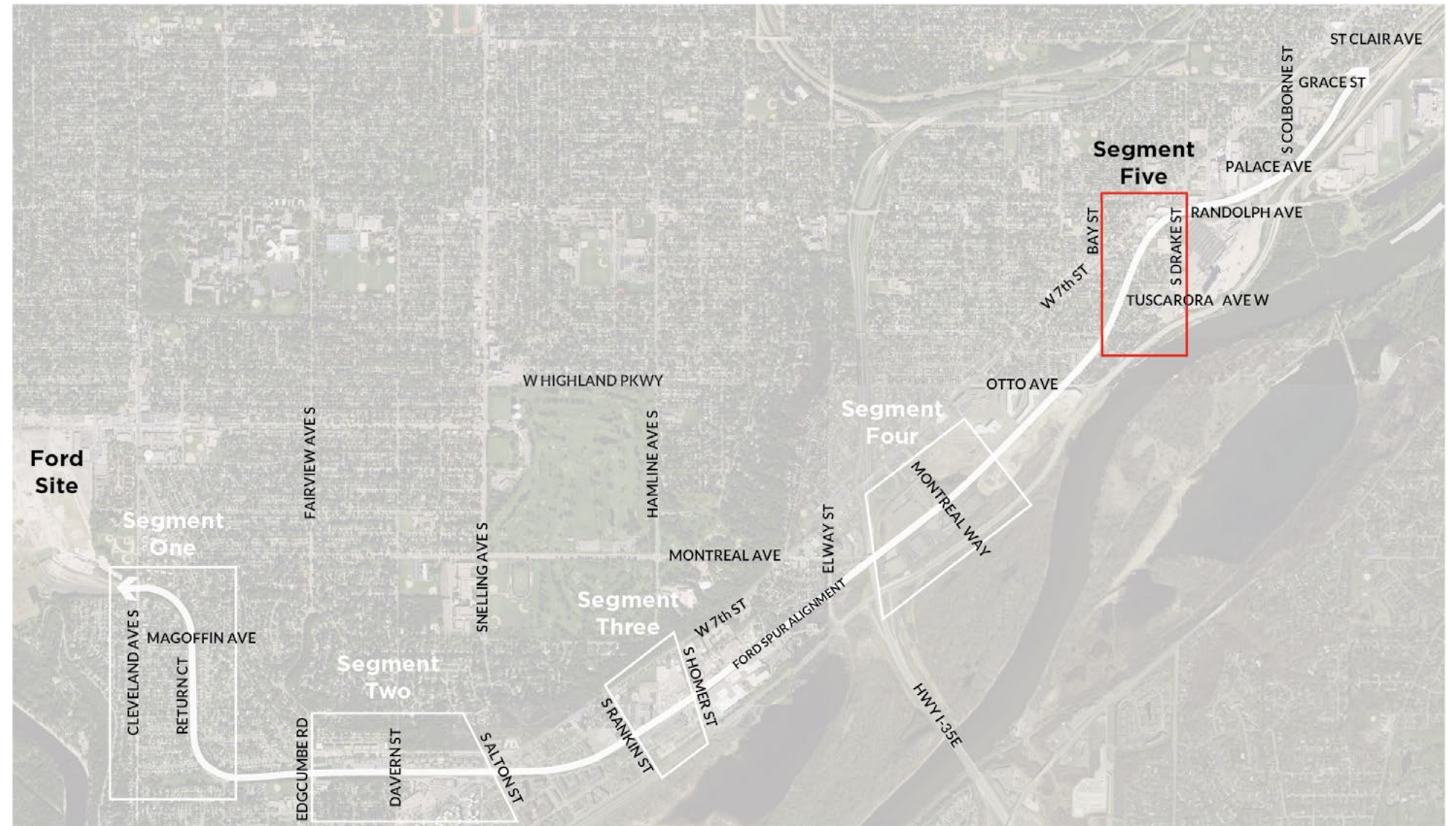
This segment of the Ford Spur has constrained right of way, varying between 50-54 feet wide. Adjacent land uses are primarily single-family residential, park, and industrial. The Ford Spur crosses many low-traffic residential streets and passes through this area at an angle, creating many small triangular parcels adjacent to the Ford Spur.

STREET CROSSINGS

There are many street crossings in this segment. Most of these crossings carry low volumes of vehicle traffic and are currently at a skewed angle. To promote safety and visibility of crossings, it is recommended that trail crossings include high-visibility crosswalk markings and curb extensions. When possible, trail crossings should be aligned so trail users cross local streets at a perpendicular angle.

OPPORTUNITIES FOR GREEN SPACE

In this segment, CP owns many triangular parcels adjacent to the Ford Spur. When the Ford Spur right of way is acquired by a public entity, these parcels could be acquired to provide additional public and green space in this neighborhood.



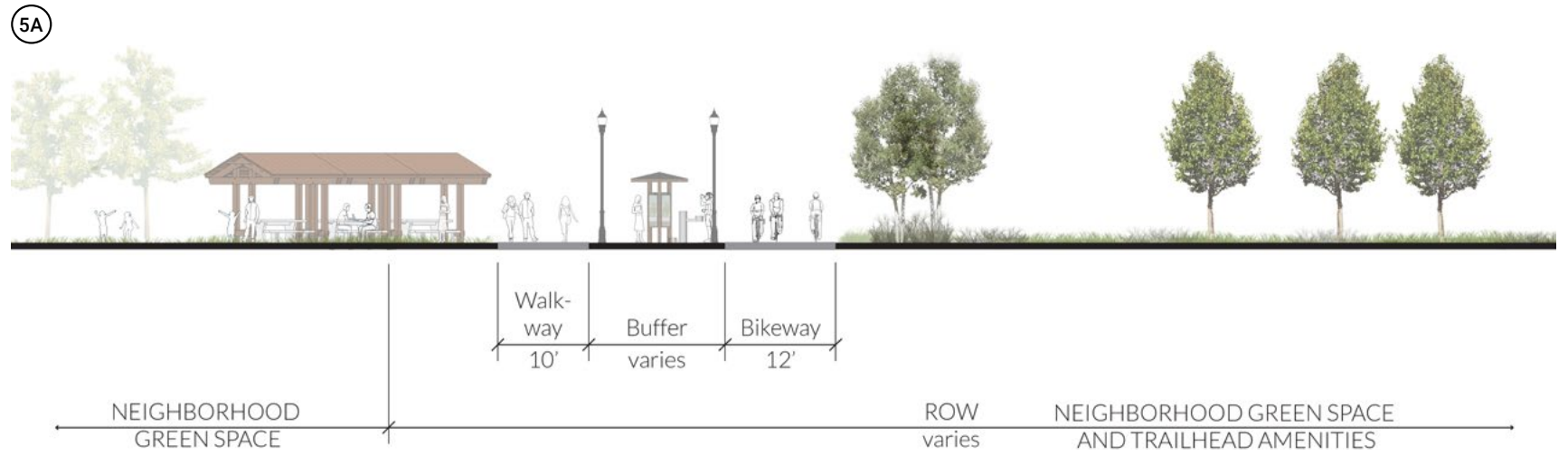
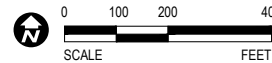
Ford Spur - Preliminary Design Segment Locations



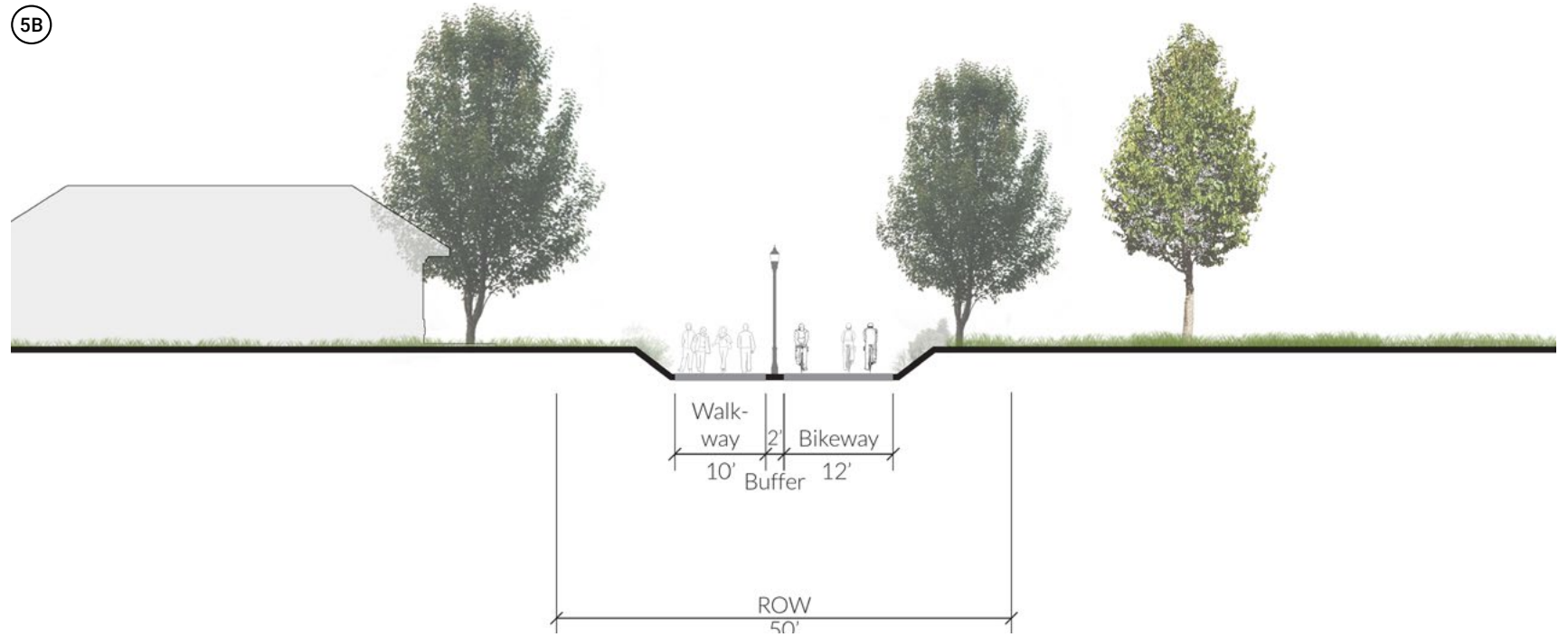
SEGMENT 5: TRAIL ONLY



- No Public Access
- Rail ROW
- Proposed Trail
- 46 Existing Transit Line
- Existing Bikeways
- Future Bikeways



Segment 5 trail only section near Juno Ave looking northeast.



Segment 5 trail only section near Watson Ave looking northeast.



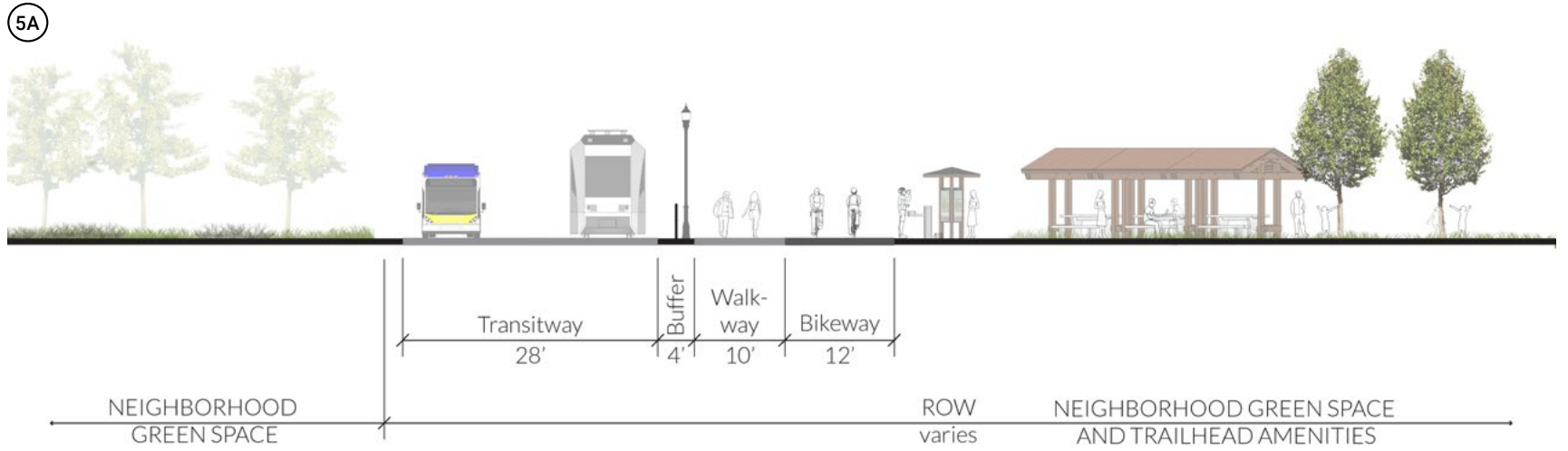
The Ford Spur travels adjacent to existing open space at Bay Triangle, view from Tuscarora Ave.



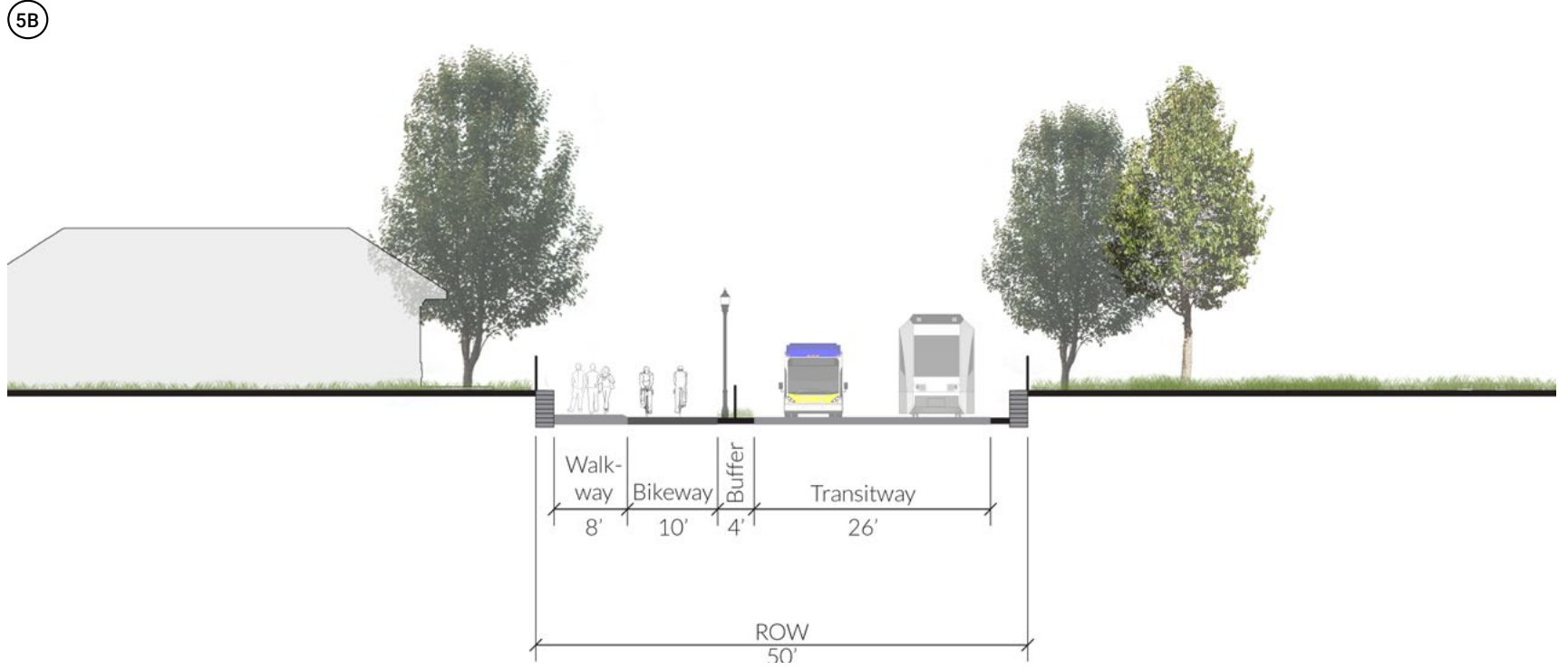
There is a residential character through this segment of the Ford Spur. Triangle shaped parcels adjacent to the trail ROW are opportunities for green space or placemaking.

SEGMENT 5: TRAIL WITH TRANSIT

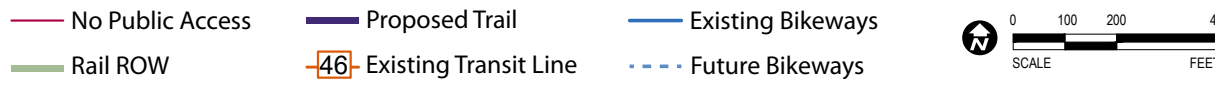
The Riverview Corridor Study includes a conceptual station at the SW corner of Randolph and Drake. The existing ROW is not wide enough for a station and trail in this location. Additional discussion is needed for this pinch point.



Segment 5 section with transit. Near Juno Ave looking northeast.



Segment 5 section with transit near Watson Ave looking northeast



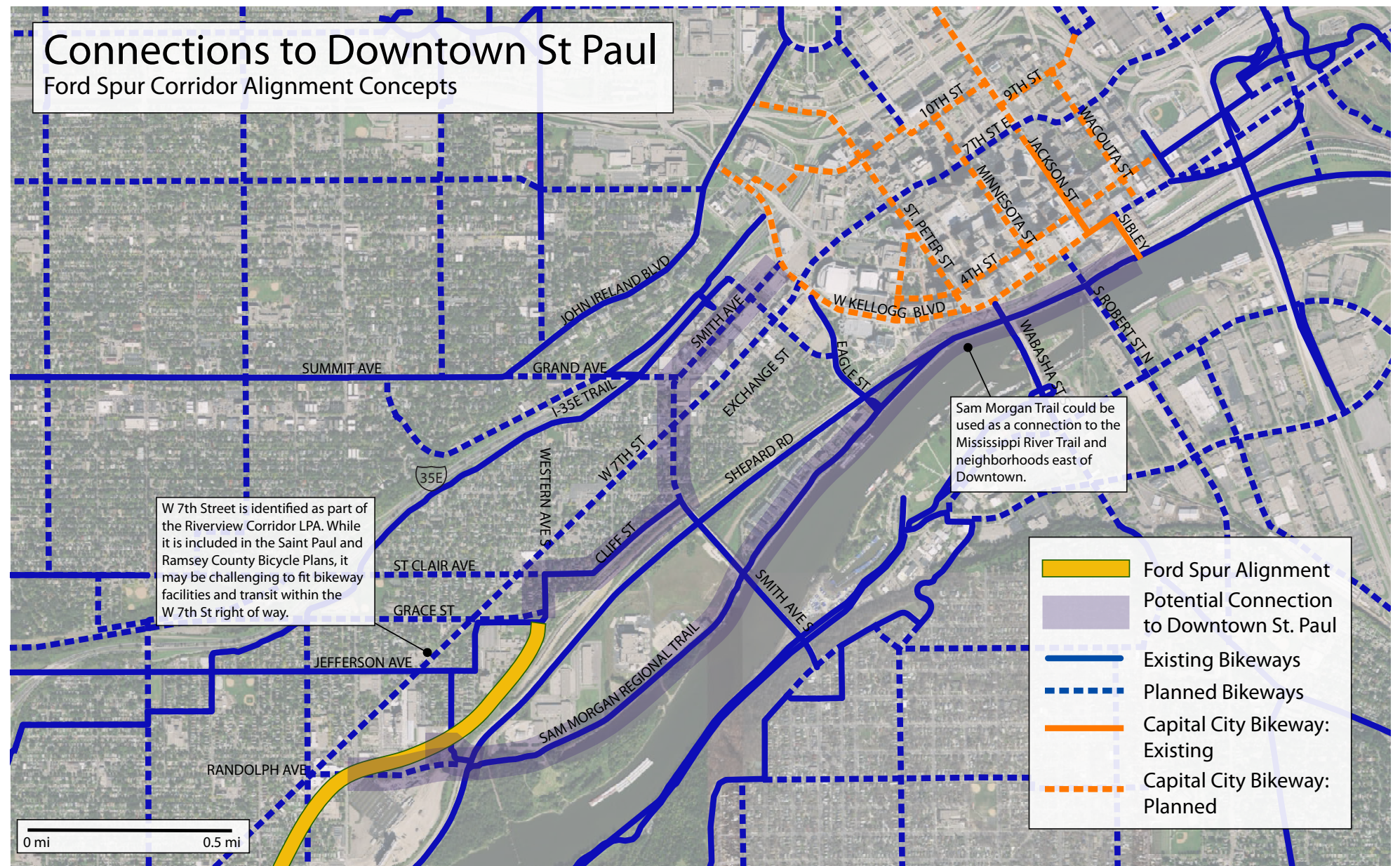
Connections to Downtown

The Ford Spur right of way ends approximately one mile from Downtown Saint Paul. It will be important to establish bicycle connections to Downtown to further enhance the transportation purpose of the Ford Spur. Two potential connections are recognized as part of this study. These connections both require some improvements to be usable for bicyclists of varying ages and abilities. Improvements could be coordinated with Ford Spur construction to provide a continuous connection to Downtown Saint Paul.

One connection follows the existing Sam Morgan Regional Trail. This connection would require a short trail segment to be constructed along Randolph Avenue. Improvements to shorten the crossing of Shepard Road would make this connection more comfortable for people of all ages and abilities. The trail along Shepard Road could be used as an alternate connection to Downtown.

Another connection follows existing and planned bikeways following the street network. This connection would follow the existing bikeway on Western Avenue and Cliff Street, to connect with planned bikeways on Smith Avenue and Kellogg Boulevard (part of the Capital City Bikeway). The quality of crossing treatments and bikeway facilities will determine whether this connection is comfortable for a wide range of trail users.

W 7th Street is identified as part of the Riverview Corridor Locally Preferred Alternative. While W 7th Street is included in the Saint Paul and Ramsey County Bicycle Plans, this study focuses on alternate routes due to the challenge of fitting bikeways and transit within the right of way.



Trail Crossing Recommendations

The following maps show recommended treatments for trail crossings along the Ford Spur. The current study proposes crossing treatments to improve safety and clarity for trail users and people driving. At a minimum, the study recommends that all trail crossings include high-visibility crosswalk markings, signage, and curb extensions or refuge medians to shorten crossing distance. At higher-traffic intersections along the Ford Spur, beacons or signals are recommended to improve safety and help trail users cross busy streets. Crossings at both Edgcumbe Road and Randolph Avenue will need to be designed to address existing speed and visibility issues on these roadways. One grade-separated crossing is recommended at W 7th Street. W 7th Street carries the highest traffic volumes of any street along the Ford Spur. A bridge would improve the safety and comfort of trail users.

EXISTING CROSSINGS



At grade crossing at Edgcumbe may need more formalized infrastructure such as a flashing beacon or pedestrian activated signal.



The spur crosses a complex intersection at W 7th and Alton St which will require a grade separated crossing for trail users.

POTENTIAL CROSSING TREATMENTS



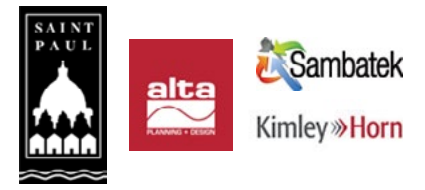
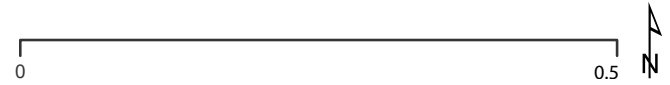
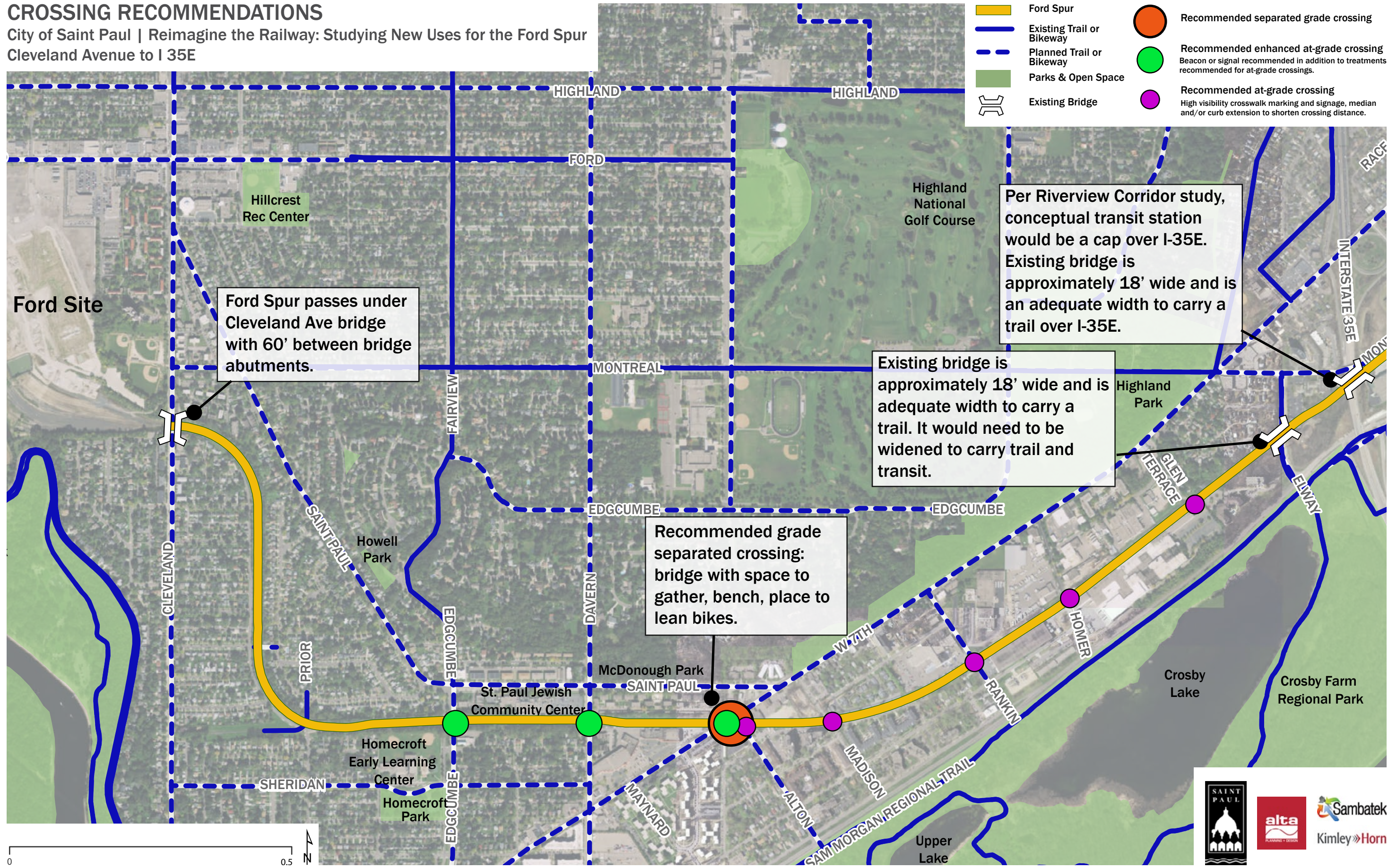
The Springwater Corridor in Portland, Oregon includes high visibility crosswalk markings, pedestrian warning signs, and pedestrian activated signals at crossings.



The Sabo Bridge in Minneapolis is an example of a grade separated multi-use trail crossing over an interstate and railroad.

CROSSING RECOMMENDATIONS

City of Saint Paul | Reimagine the Railway: Studying New Uses for the Ford Spur
Cleveland Avenue to I 35E



Bicycle and Transit Connections

The maps in the following pages identify existing and planned bikeways and transit routes near the Ford Spur. Stakeholders have emphasized the importance of connecting the Ford Spur to adjacent neighborhoods, bikeways, trails, and transit stops. These maps identify primary connections to existing and planned bikeways and transit, and potential improvements to enhance these connections.

The City could consider improving these connections in coordination with Ford Spur construction so that the Ford Spur is well-connected to nearby transportation, recreation, and destinations.



Existing walking and bicycling connection to the Ford Spur at Ramlow Pl.



Existing walking and bicycling connection to the Ford Spur at Worcester Ave also provides a through connection to Return Ct.



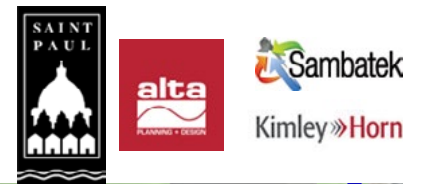
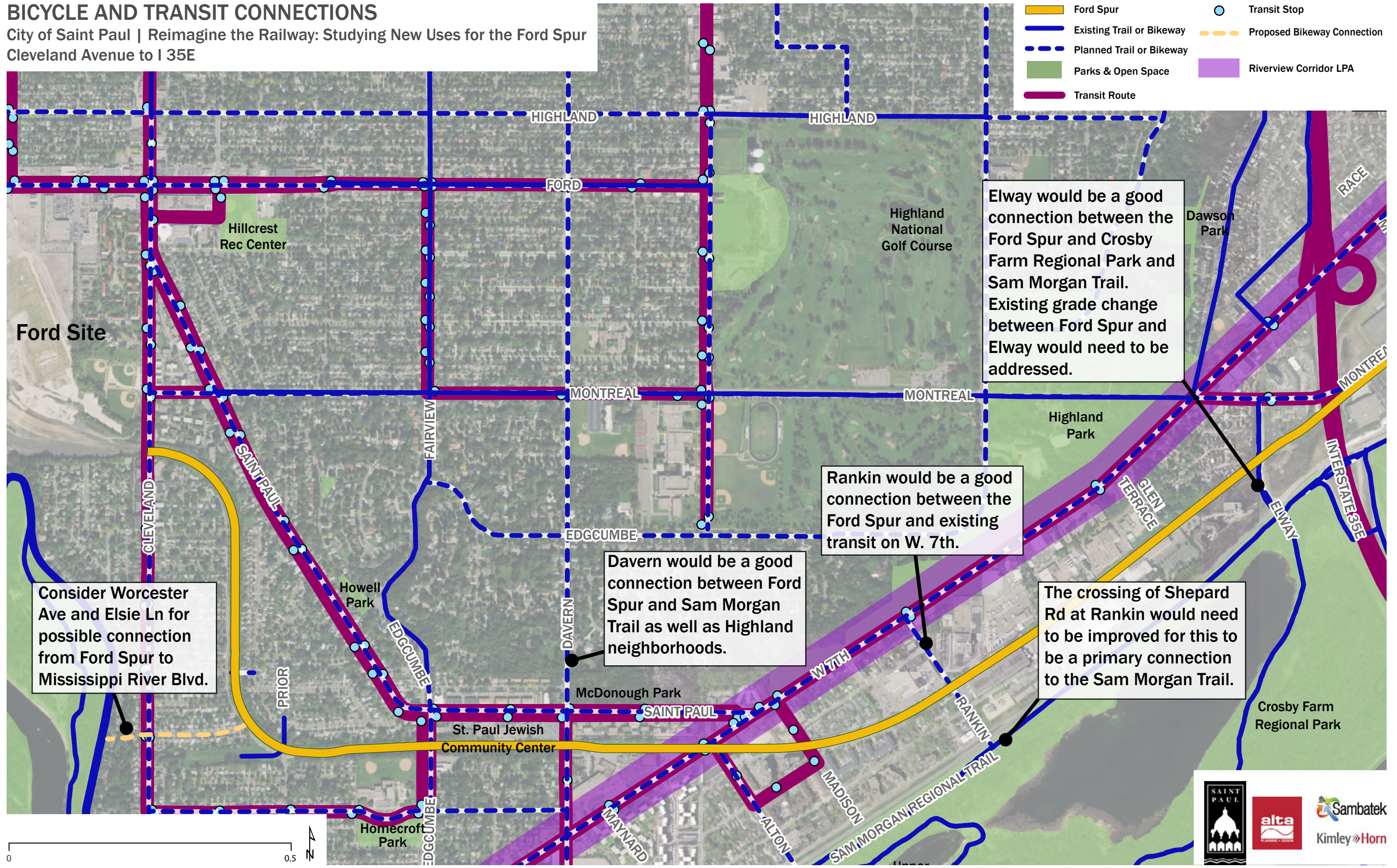
Consistent and predictable wayfinding is key to link trails to nearby destinations, such as this example in Saint Paul.



The Hiawatha trail in Minneapolis nicely integrates with light rail stations with distinct trail-lightrail crossing locations, bike racks, lighting, and signage.

BICYCLE AND TRANSIT CONNECTIONS

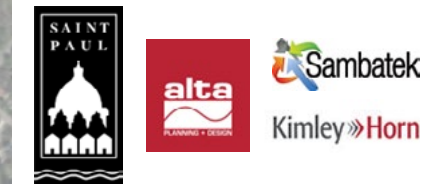
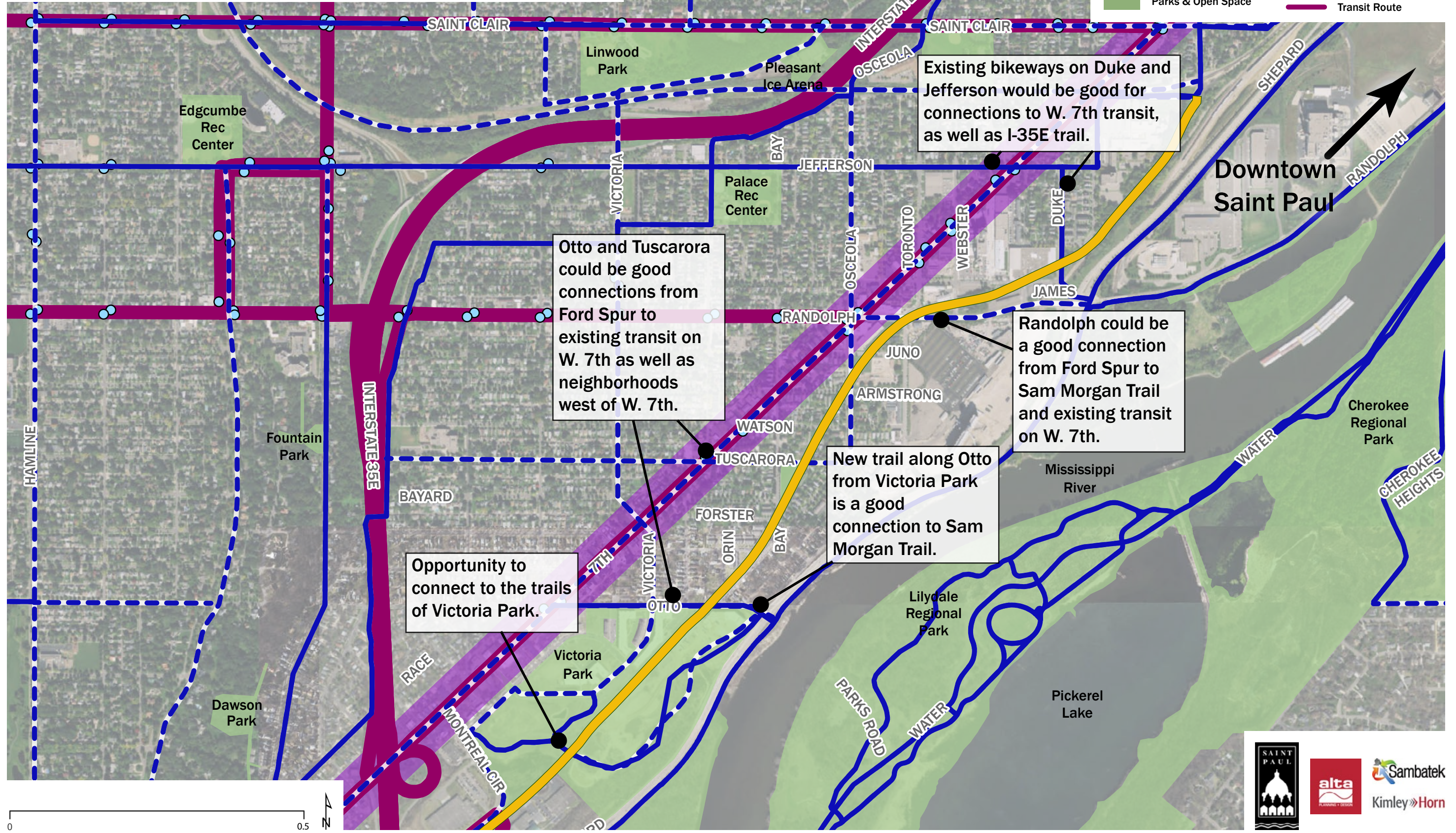
City of Saint Paul | Reimagine the Railway: Studying New Uses for the Ford Spur
Cleveland Avenue to I 35E



BICYCLE AND TRANSIT CONNECTIONS

City of Saint Paul | Reimagine the Railway: Studying New Uses for the Ford Spur
I 35E to Grace Street

- █ Ford Spur
- █ Existing Trail or Bikeway
- - - Planned Trail or Bikeway
- █ Parks & Open Space
- Transit Stop
- █ Riverview Corridor LPA
- █ Transit Route



Trail-Supportive Facilities

The maps on the following pages illustrate recommendations for trail-supportive facilities along the Ford Spur, such as overlooks, public art, green space, and trailheads. There are many options for public art, plantings and amenities such as benches that will support trail use and beautify the Ford Spur. The Ford Spur right of way is generally wide enough to include additional amenities along the future trail. This will support increased use of the trail by developing an attractive corridor, and by providing seating that supports use of the trail by older adults and families who may need resting places. An emergency call box is recommended in the segment of the spur between Cleveland Avenue and Edgumbe Road because there are fewer access points in this area.



The Victoria Park development will presents an opportunity to integrate trail connections, overlooks, and places to rest while walking or bicycling on the Ford Spur trail.



The entry to the Ford site at the Cleveland Ave bridge presents as gateway opportunity to the Ford Spur trail. Image looking down from bridge.



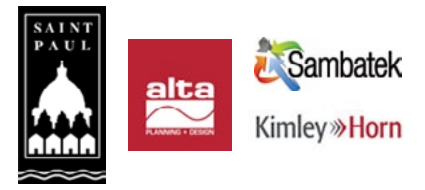
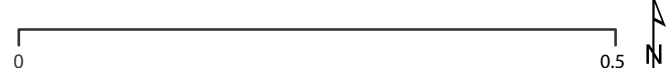
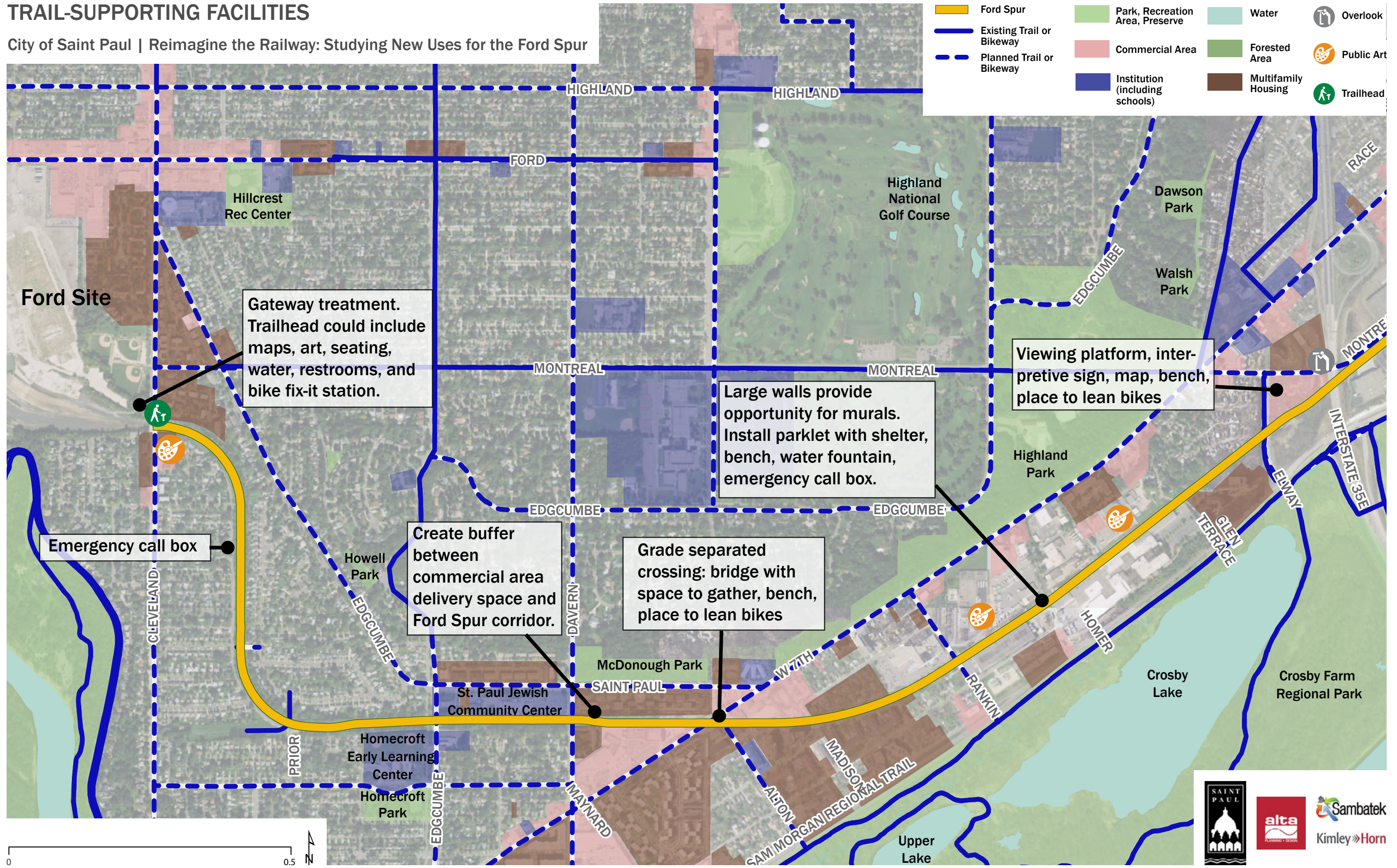
Overlooks can be combined with interpretive information and public art, such as this example in Columbus, GA.



Smaller trailheads can provide supporting amenities such as a bicycle repair station, bicycle racks, and a water fountain, such as this example in Vancouver, BC.

TRAIL-SUPPORTING FACILITIES

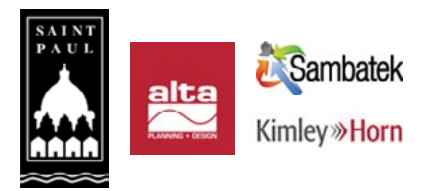
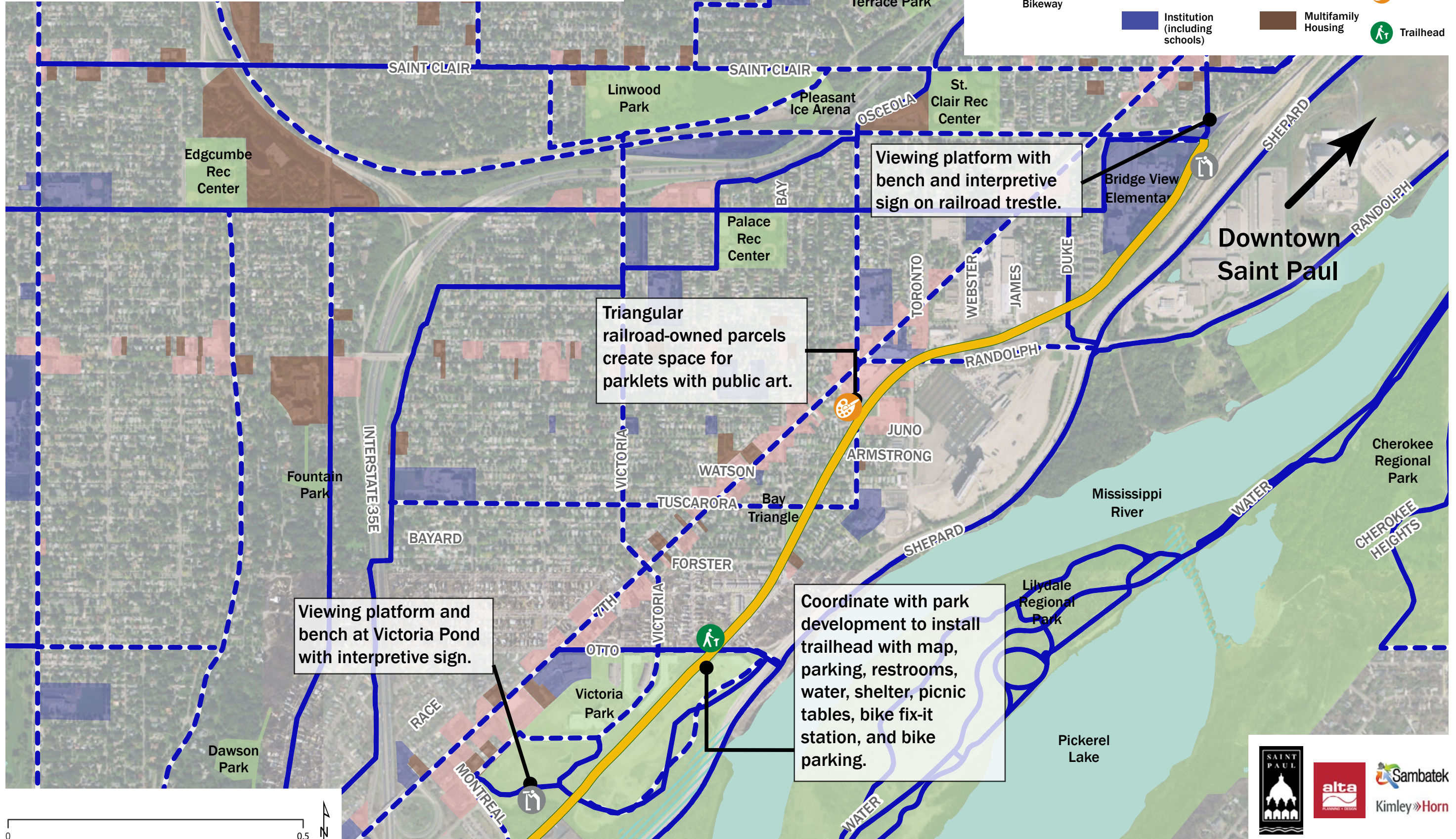
City of Saint Paul | Reimagine the Railway: Studying New Uses for the Ford Spur



TRAIL-SUPPORTING FACILITIES

City of Saint Paul | Reimagine the Railway: Studying New Uses for the Ford Spur

- Ford Spur
- Existing Trail or Bikeway
- Planned Trail or Bikeway
- Park, Recreation Area, Preserve
- Commercial Area
- Institution (including schools)
- Water
- Forested Area
- Multifamily Housing
- 👁 Overlook
- 🎨 Public Art
- 🚶 Trailhead



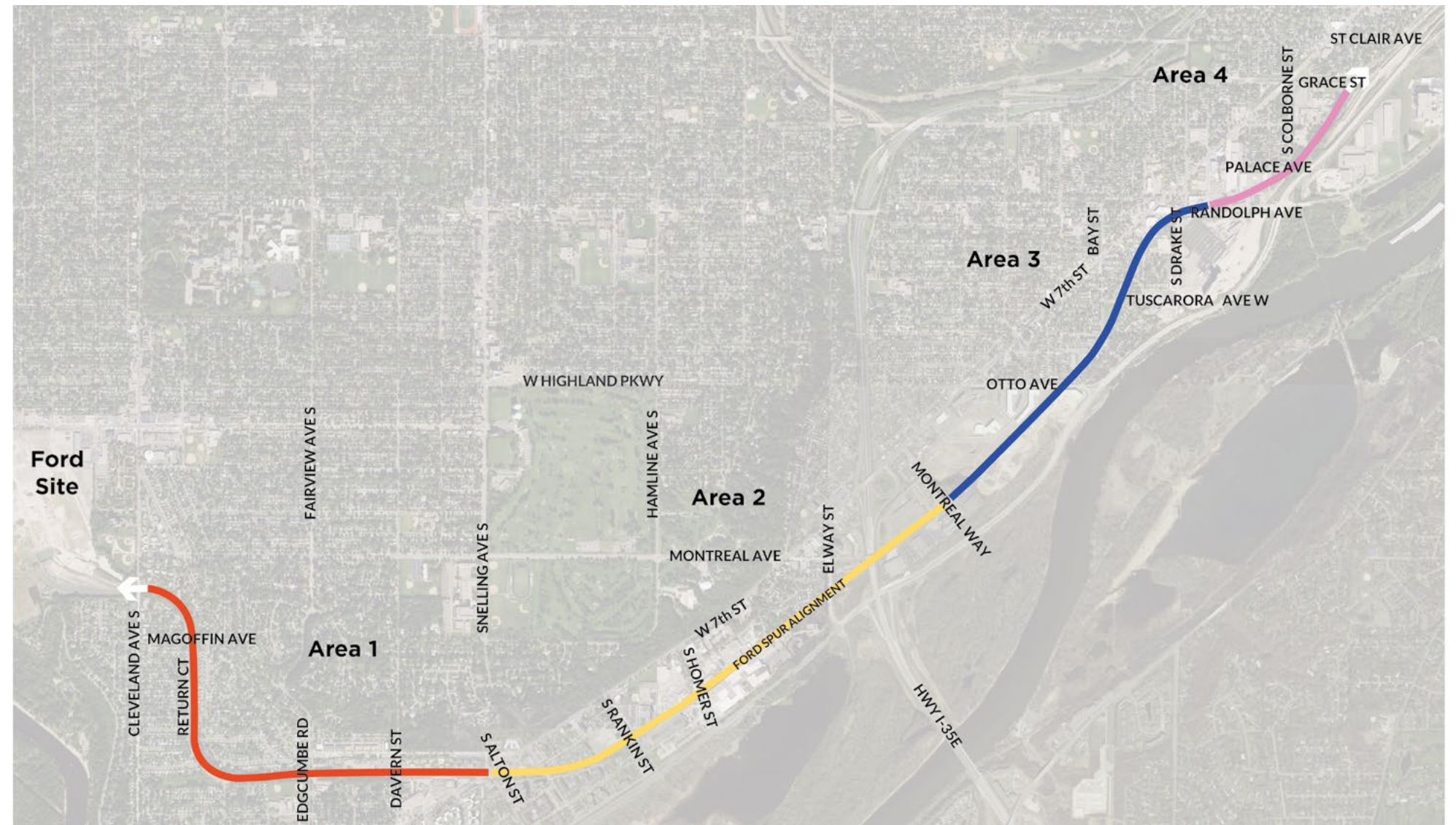
CONSTRUCTION PHASING

The current study recommends that trails in the Ford Spur be built in up to four construction phases. The exact order of construction is yet to be determined, and therefore the study defines four areas that could be constructed separately, using a phased approach. These areas are distinct from the five half-mile segments addressed in the design concepts. The list below and the map adjacent recommend four areas that could be constructed independently. Each area could function on its own as further phases of construction are complete. Construction phasing will largely depend on the progress of other related projects and studies, including Ford Site development, transit studies, and construction in Victoria Park. Further considerations on phasing are listed in the Next Steps section.

- Area 1 - Cleveland Avenue to West 7th Street: This would serve connections between West 7th Street and future development on the Ford Site.
- Area 2 - West 7th Street to Victoria Park: This would serve connections between neighborhoods west of I-35E and Victoria Park.
- Area 3 - Victoria Park to Randolph Avenue: This would serve connections between Victoria Park and could connect to Downtown via Randolph Avenue and the Sam Morgan Regional Trail.
- Area 4 - Randolph Avenue to Grace Street: This study has not included a review of the structural integrity of the existing trestle, which will impact the opportunity to develop a trail in this segment of the Ford Spur. Other phases of the project could be completed before this phase, and a connection to Downtown could be facilitated via the Sam Morgan Regional Trail.

Additionally, a bridge over West 7th Street could be constructed along with Area 1, Area 2, or at a later date.

The current design of bicycle and pedestrian trails could be implemented in coordination with transit facilities, should the Ford Spur be selected as the preferred alternative for future transit service. Facilities at the west end of the Ford Spur could be implemented in conjunction with development of the Ford Site.



Ford Spur - Areas for Construction Phasing



COST ESTIMATES

The cost estimates shown provide an estimate of trail construction and design costs based on current designs and current understanding of site conditions. A more detailed cost estimate is in Appendix D. The cost estimates shown are split into four areas, as outlined in the construction phasing section prior. These segments could be constructed independently of each other and function as individual trails until all four segments are completed. A bridge over W 7th Street could also be constructed independently.

Two sets of cost estimates are provided. The first set shows estimated costs to construct trail facilities without other transportation facilities in the Ford Spur. The second shows estimated costs to construct trail facilities if transit and trail facilities are co-located. The two cost estimates vary because if transit and trails are co-located, trail widths would be narrower in some locations and retaining walls would be required in additional locations. This estimate does not include the cost of constructing transit facilities.

These cost estimates are conceptual and do not include the following costs:

- Land acquisition
- Environmental mitigation
- Cost of constructing transit
- Cost of removing rail infrastructure

Cost Estimates

TRAIL ONLY CONSTRUCTION COSTS

Area 1: Cleveland Avenue to W 7th Street	\$3,660,000
Area 2: W 7th Street to Victoria Park	\$5,530,000
Area 3: Victoria Park to Randolph Avenue	\$2,220,000
Area 4: Randolph Avenue to Grace Street	\$1,000,000
Project Total	\$12,410,000

TRAIL CONSTRUCTION COSTS IF CO-LOCATED WITH TRANSIT

Area 1: Cleveland Avenue to W 7th Street	\$4,440,000
Area 2: W 7th Street to Victoria Park	\$6,130,000
Area 3: Victoria Park to Randolph Avenue	\$1,540,000
Area 4: Randolph Avenue to Grace Street	\$1,000,000
Project Total	\$13,110,000

W 7th Street Bridge

\$8,040,000

ENVIRONMENTAL SCREENING

ENVIRONMENTAL SCREENING

An environmental screening report was developed as part of the current study. The purpose of this environmental screening report was to provide a basis for selection of recommended concept(s) to be carried forward for further evaluation through the National Environmental Policy Act (NEPA) and Minnesota Environmental Policy Act (MEPA) processes. The focus of this analysis was to identify potentially significant impacts and if they can be mitigated, or if they deem a concept infeasible. The following topics were reviewed:

- Existing and future land use
- Environmental Justice populations (low-income and minority populations)
- Transportation
- Parks and recreational facilities
- Surface waters and wetlands
- Floodplains
- Vegetation and biodiversity
- Federally- and State-Listed threatened and endangered species
- Contaminated properties
- Historic properties

The full environmental screening report is available in Appendix C. The results of the environmental screening did not identify the potential for any impacts that could not be mitigated to less than significant levels. If federal funds are used for future phases of the Ford Spur, relevant guidance under the National Environmental Policy Act (NEPA) will be applicable.

In general, trail-only concepts will result in fewer impacts because the physical footprint of any infrastructure improvements is narrower. Specifically, there would be less impact on vegetation, wildlife, wetlands, and stormwater; because there will be more vegetation and less impervious

surface than there would be under a trail + transit alternative.

A trail co-located with transit alternative also introduces the potential for additional direct and secondary impacts to surrounding property owners. Depending on the mode chosen (bus, rail, or other) and the placement of stations, there could be additional noise impacts as well as concerns about safety of pedestrians and bicyclists crossing tracks or riding/walking alongside tracks or an otherwise dedicated transit facility.

Next Steps for Environmental Analysis

Additional analysis and or coordination as part of a future design phase would likely include:

- Environmental justice: review potential for impacts to low-income and minority populations.
- Parks and recreational facilities: review potential Section 4(f) and Section 6(f) impacts, if federal funds are used.
- Water resources: conduct wetland delineation during the next stages of design and engineering.
- Vegetation and species; coordinate with USFWS and DNR regarding potential impacts to threatened and endangered species.
- Contaminated properties; conduct a Phase I Environmental Site Assessment (ESA) to further investigate contamination risks.
- Historic properties: conduct a historic/architectural and archaeological survey, if federal funds are used. Section 4(f) may also apply to any impacted historic properties.
- Noise analysis; especially impacts to adjacent properties.
- Evaluation of safety considerations for the interface of pedestrians, bicyclists, and transit users.

OPERATIONS & MAINTENANCE

OPERATIONS & MAINTENANCE

Introduction

Effective, continuous maintenance is critical to the overall success and safety of any trail. Maintenance of the Ford Spur will be particularly important as it connects many neighborhoods and destinations for people walking and bicycling in St Paul. Regular, routine maintenance on a year-round basis will not only improve the trail's appearance and user safety but will also prolong the physical life of the trail. The benefits of a good maintenance program are far-reaching and may include:

- A high standard of maintenance is an effective advertisement to promote the trail as a local and regional transportation and recreation resource.
- Seasonal maintenance activities can help extend season of active commuting and recreation for many users.
- A maintenance program can maximize the useful life of a trail.
- Good maintenance can be an effective deterrent to vandalism, litter and property encroachments.
- A regular maintenance routine is necessary to preserve positive public relations between the adjacent land owners and the managing agency.
- Good maintenance can make enforcement of regulations on the trail more effective. Local clubs, neighborhood organizations, and interest groups will take pride in their trail and will be more apt to assist in protection of the trail.
- A proactive maintenance policy will help improve safety and maintain positive user experience on the trail.

The full operations and maintenance report is included in Appendix E. The operations and maintenance report outlines considerations and recommendations related to the following topics:

- Trail surface maintenance
 - » Sweeping
 - » Patching and sealing
 - » Resurfacing and reconstruction
 - » Trail pavement markings
- Routine trail maintenance
 - » Drainage
 - » Vegetation maintenance
 - » Trash removal
 - » Graffiti
 - » Lighting
 - » Signage
 - » Bridge structure inspections
- Trail winter maintenance
- Cost considerations

Ownership and Maintenance Responsibility

The Ford Spur is currently owned by Canadian Pacific (CP) Railway. Although CP has expressed a willingness to sell, timing and a final decision to do so are uncertain. Also, it is not clear what agency would acquire the right of way, though all parcels would likely be sold in one transaction. The scope of the current study did not identify a trail owner or identify responsible parties for maintenance.

There are many options for defining ownership and operations and maintenance responsibilities among agencies and departments. For example, one agency could own the land, another could own the trail, and varying agencies or departments could be responsible for different aspects of operations and maintenance (trash removal vs. snow removal, for instance). There could also be cost-sharing agreements to cover operations and maintenance costs. As development of the Ford Spur moves forward, it will be important to clarify operations and maintenance responsibility as trail ownership decisions are made.

Trail maintenance responsibilities in St. Paul are currently the responsibility of St. Paul Parks Department. There is currently a difference in the level of maintenance received by various trails including winter maintenance. St. Paul Public Works does not maintain trails.

Summary of Operations and Maintenance Recommendations

TRAIL SURFACE MAINTENANCE

To maintain a smooth trail surface, cracks, ruts, potholes, and water damage will have to be repaired periodically. The trail surface should be swept regularly to keep them free of debris, especially broken glass and other sharp objects, loose gravel, leaves and stray branches. As an asphalt surface deteriorates, fog seal, seal coating, slurry seal or micro surfacing can be applied to extend the life of pavement approximately 5 to 10 years. These preventative measures are much more cost effective than complete trail resurfacing or reconstruction.

Based on observations and analysis of similar asphalt trails in Minnesota, the pavement will need to be reconstructed every 25 to 30 years. However, this extensive replacement could be reduced with preventative maintenance measures such as slurry sealing every five to eight years to prevent surface raveling.

ROUTINE MAINTENANCE

In addition to maintaining a clear, usable trail surface, there are a number of routine maintenance activities that are key to the success and safety of the trail. The table on the following page summarizes these activities and frequencies.

VEGETATION MAINTENANCE

In general, plantings alongside a trail should allow trail users clear views of their surroundings to avoid personal security issues. Understory vegetation along trail corridors should not be allowed to grow higher than three feet, and any overhanging branches over the trail should be pruned to a minimum vertical clearance of 10 feet. Tree canopies may be trimmed for light fixtures or overhead utilities. Thus vegetation management will require a regular schedule of mowing, pruning, trimming, plant replacement, and tree removal.

Tree and plant species along a trail should be selected to minimize vegetative litter and prevent root uplifting of the trail pavement. Moreover, it is prudent to select native plants that

can tolerate dry spells in the summer to reduce the frequency of plant replacements. To maintain ideal plant selections and prevent invasion of unwanted plants, brush should be removed during plant installation, and weeding should be done on a regular basis.

AMENITY MAINTENANCE

Trailhead amenities and trail signs will require regular maintenance and visual inspections. Facilities including parking lots, picnic tables, trash receptacles, and comfort stations will need scheduled cleanings. Signs such as informational kiosks, directional signs, or distance markers should be periodically checked for graffiti or damage to the sign face or post.

It is estimated that signs would have a practical lifespan of 15 years. To maintain useful wayfinding information, any changes to the walking and bicycling trail networks connecting to the Ford Spur should also prompt an update to trail maps on informational kiosks and an evaluation for the need for additional directional signage or distance markers.

TRAIL WINTER MAINTENANCE

Paved multi-use trails require significant public investment and should be used to their fullest potential year-round. In fact, if federal funds are used to construct the Ford Spur trail, it must be open and accessible year-round. As the Ford Spur will be a key walking and bicycling connection to destinations in St Paul, snow should be removed from the trail within 24 hours of a snow event during the winter season to help improve winter pedestrian and bicycle safety. The most effective and available piece of equipment would be a pickup truck with a plow attachment. The trail and its access points should be designed to allow clear maintenance vehicle access without utilities, signal pole, or light pole location interference. Note that curb ramps and roadway crossings will likely need additional manual clearing of snow. Snow storage should be anticipated in the design of drainage and planting areas to reduce damage, replacement, and maintenance needs.

MAINTENANCE TASK	SUGGESTED FREQUENCY
Major damage response (fallen trees, washouts, flooding)	Immediately
Inspections	Daily routine visual inspections; seasonal detailed inspections (quarterly); immediately after wind storms or flood events
Pavement sweeping/blowing	As needed; at a minimum each spring
Pavement patching; sealing	5-10 years; as needed
Pavement resurfacing	15 years
Trail reconstruction	25-30 years
Pavement marking replacement	5 years
Culvert/drainage maintenance	Inspect spring, fall and after major storms; clear as needed
Shrub/tree irrigation for new planting areas	Weekly during summer months until plants are established
Tree trimming	1-3 years; as needed
Shoulder plant trimming (weeds, branches)	Monthly during spring, summer, and fall
Shoulder mowing	Monthly in spring, summer, and fall; slopes every 5-7 years
Trash disposal	Weekly during high use; twice monthly during low use
Litter pick-up	Weekly during high use; twice monthly during low use
Graffiti removal	Weekly; immediately as needed
Fencing repair	Inspect monthly for holes and damage, repair as needed
Lighting repair, maintenance	10-15 year re-lamping; as needed
Lighting fixture replacement	As needed
Sign repair/ information updates	As needed
Sign replacement	15 years; as needed
Comfort station maintenance	Daily
Site furnishings; replace damaged components	As needed
Snow removal	Within 24 hours of a snow event during the winter season

NEXT STEPS & IMPLEMENTATION STRATEGIES

NEXT STEPS

The focus of this study was to explore the feasibility of reusing the Ford Spur as a vibrant multimodal trail. This study established the direction and key design considerations for reuse of the Ford Spur. Significant work remains before new Ford Spur facilities are open for public use. Key next steps and implementation strategies are summarized in the following sections.

Plan Approval and Keeping Momentum

Trail facilities along the Ford Spur are already included in two adopted plans: the Saint Paul Bicycle Plan and the Ford Site Master Plan.

There will be a delay in the project development process as transit studies progress and land acquisition is negotiated. There are several steps the City can take to keep momentum during this time:

CATALYZE A COALITION OF FORD SPUR PROJECT CHAMPIONS

Reuse of the Ford Spur will take many years of effort and will require support from a broad coalition of project champions. City staff can begin to catalyze this coalition by reaching out and articulating the vision and benefits of the project. A coalition could include elected officials, neighborhood organizations, non-profit organizations, residents, businesses, and many more. City staff could facilitate an ongoing coalition to meet on a bi-annual basis to strategize ways to move the project forward.

KEEP THE FORD SPUR AT THE FOREFRONT AS WORK PROGRESSES ON RELATED PROJECTS

Ford Site development: As the sale of the Ford Site moves forward, the City will need to consider what happens to the Ford Spur trail if CP does not sell its land on the Ford Site. It is assumed that a trail would follow existing CP land to connect into Ford Site development. City staff should consider the quality, safety, and convenience of trail connections to and through the Ford Site as development progresses.



Next steps in the project process.

Riverview and Ford Corridor Studies: As City staff participate in related transit studies, staff can work to advance the concept designs developed for the Ford Spur, particularly if transit is sited in the spur. The trail designs developed for this project go beyond minimum dimensions, and the designs reflect community desires as well as best practices. City staff can work with partner agencies and community members to keep concept designs in mind as transit studies move forward.

Victoria Park: As the Victoria Park Master Plan is implemented, staff can seek ways to plan and construct connections between park trails and future Ford Spur trails.

COORDINATE WITH SITE PLAN REVIEW AND LAND USE DECISIONS ALONG THE FORD SPUR

Project staff can coordinate with staff responsible for site plan review and land use decisions to build awareness of the vision for Reuse of the Ford Spur. Site planning and land use decisions have the potential to preserve opportunities for trail development and access.

Acquisition of the Ford Spur

The Ford Spur right of way is still owned by Canadian Pacific Railway (CP). While CP may be willing to see the spur, they have not yet made a decision and it has not been determined which agency would own and/or operate the spur.

Determine Whether Transit Will Operate in the Ford Spur

Two studies beginning in 2018 will determine if for the Ford Spur will be used for transit in the future.

The Riverview Corridor Draft Environmental Impact Statement (DEIS) will begin in 2018 and will be completed two or three years later. While the Locally Preferred Alternative has been established along W 7th Street, a segment between W 7th Street and Randolph Avenue will also be advanced as an alternative in the environmental analysis.

The Ford Corridor Transit Study will begin in late 2018 and will consider future transit connections between the Ford Site, the Blue Line, and the Riverview Corridor. Transit along the Ford Spur will be considered as one of many options for providing transit service to the Ford Site. The study should be complete in the same time frame as the Riverview Corridor DEIS.

As it is determined whether transit will be sited on certain segments the Ford Spur, it may allow the City to proceed with Ford Spur design in those areas.

Determine Phasing of Construction

This study recommends four potential segments of the Ford Spur where trail facilities could be constructed as logical phases. These segments could function as independent trail segments; however, trail facilities will be the most useful if they are constructed adjacent to each other.

As other related projects advance in Saint Paul, the City will be able to better determine phasing of construction. For example, if transit will be constructed in one segment of the Ford Spur but not in others, segments without transit could be advanced first. If it is decided that transit will be constructed on W 7th Street, it could be valuable to construct the trail segment between W 7th Street and Randolph Avenue prior to transit construction. This would allow the Ford Spur trail to serve as a pedestrian and bicycle detour route during construction on W

7th Street. As improvements are constructed at Victoria Park, it could make sense to construct the segment adjacent to the park. Additionally, it could be valuable to have Ford Spur trails in place for the opening of new development on the Ford Site, and phasing decisions could be tied to redevelopment timelines at the Ford Site.

Secure Funding for Construction

Land ownership and transit siting will need to be determined prior to securing funding for construction of transportation facilities in the Ford Spur. If transit is sited in a segment of the Ford Spur, the City should work with RCRRA to include trail construction costs as part of the transit project.

For construction of trail-only facilities in the Ford Spur, federal funding is assumed to be the most likely funding source. Additional funding sources are outlined in the table below. There is currently a \$5.5 million maximum funding award for multiuse trails, based on the proposed 2018 Regional Solicitation for federal transportation funding. A 20 percent match is required from local agencies. Based on the current maximum funding award, Ford Spur trail facilities would likely need to be constructed in three to four phases. It would likely take about four years from funding award to construction.

Detailed Design and Environmental Review

Detailed design and environmental review will begin after funding is awarded. For trail facilities, detailed design and environmental review would take approximately one to two years. With the understanding that trail facilities will likely be constructed in phases, the design and environmental review would be staggered by phase. Additional community engagement will be important to incorporate into the design process.

Construction

Construction of trail facilities in the Ford Spur would likely take one year per phase. If Ford Spur trail construction is tied to transit construction (either within the Ford Spur right of way or on parallel streets), construction timelines could be extended.

POTENTIAL FUNDING SOURCES FOR FORD SPUR IMPLEMENTATION

Funding type	Level of government	Funding Source	Eligible Uses	Minimum and maximum funding awards	Local match requirements	Possible application for the Ford Spur	Website
Land acquisition, planning, and construction	City and County	City and County Capital Improvement Budgets	Land acquisition, planning, and construction	Varies	Varies	City and County Capital Improvement Budgets could fund local matches for land acquisition, planning, and construction. Local funds could also be considered for a larger share of project costs.	
Land acquisition, planning, and construction	State	State Bonding	Land acquisition, planning, and construction	Varies	Varies	The City and County could consider working with the State Legislature for state bonding funds to for land acquisition, planning, and construction	
Planning	State	MN Department of Health Statewide Health Improvement Program	Minnesota Statewide Health Improvement Program (SHIP) awards funding to Community Health Boards (CHBs) for coordinating and implementing evidence-based strategies targeted at reducing the percentage of Minnesotans who are obese or overweight and reducing the use of and exposure to tobacco.	Planning grants and implementation grants up to \$100,000 per year for five years	None	Programs and planning to support the Ford Spur, including community engagement.	health.state.mn.us/divs/oshii/ship/facts.html
Construction	State	State Funds for Safe Routes to School (SRTS)	The MnDOT SRTS program provides funding and resources to community and school groups to support students walking and biking to school.	Varies	Varies	Connections between the Ford Spur and nearby schools. Due to the proximity of the Ford Spur to several schools, it is possible that SRTS funding could be used to construct portions of the Ford Spur.	dot.state.mn.us/saferoutes/grants.html
Construction	State	DNR Local Trail Connections Program	Grants to local units of government to promote relatively short trail connections between where people live and public resources (e.g. historical areas, open space, parks and/or other trails).	\$5,000 to \$150,000	25% cash match reimbursement grant	Construction of trail connections to the Ford Spur.	files.dnr.state.mn.us/assistance/grants/recreation/local_trails_connection/ltc_manual.pdf
Construction	Federal	Bicycle and Pedestrian Facilities: Federal Transportation Funding allocated through the Regional Solicitation process	Multiuse trails and bicycle facilities	Proposed funding range for 2018 Regional solicitation: Multiuse trails and bicycle facilities: \$250,000-\$5,500,000	20% local match, minimum	Design, environmental, and construction costs for construction of Ford Spur trail facilities. The project would need to be broken into 3-4 phases to maximize grant funding opportunities.	metro council.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation.aspx
Planning	Federal	National Park Service: Rivers, Trails and Conservation Assistance Program (RTCA)	Technical assistance via direct NPS staff involvement to establish and restore greenways, rivers, trails, watersheds and open space	n/a	n/a	Planning for connections between the Ford Spur and the Mississippi River.	metro council.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation.aspx
Construction	Federal	National Park Service: Federal Lands Access	The FLAP was established to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. This program supplements state and local resources for public streets, transit systems and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. Funds are intended for capital improvements, enhancements, surface preservation, transit, planning, safety, and research.	Approximately \$2.4 million total available for all projects in MN for FY 2017-2020.	20% of total estimated project costs.	Construction of connections between the Ford Spur and the Mississippi River	metro council.org/Transportation/Planning-2/Transportation-Funding/Regional-Solicitation.aspx
Construction	Federal	U.S. Department of Transportation: TIGER Discretionary Grants	TIGER grants fund capital investments in surface transportation infrastructure and are awarded on a competitive basis.	\$5 million to \$25 million in urban areas	Urban: 20%	Large, multimodal projects that have the potential to result in large impacts to safety, transportation access, and economic benefits. Note: the current study was funded through a TIGER grant.	nps.gov/orgs/rtca/index.htm
Construction	Federal	The Conservation Fund	The Conservation Fund provides loans for land acquisition to support the creation of bicycle and pedestrian facilities that also support environmental conservation. Their loan program offers flexible financing and sustained and expert technical assistance to organizations aiming to protect key properties in their communities.	Varies		Loans to acquire land for the Ford Spur.	flh.fhwa.dot.gov/programs/flap/mn/
Programs	Private	Blue Cross Blue Shield Center for Prevention	Programming that focuses on health equity, active living, tobacco, and healthy eating.	Varies		Funding could be used for community engagement and further planning for the Ford Spur trails and trail supporting facilities such as community gardens. BCBS is undergoing a strategic planning process; new funding opportunities likely announced Summer 2018.	transportation.gov/tiger
Construction and Planning	Private	People for Bikes Community Grants	Paths, rail trails, mountain bike trails, bike parks, advocacy	Varies	Varies	Planning and advocacy for the Ford Spur, construction of the Ford Spur and supporting facilities in the Ford Spur ROW, such as natural surface trails and bike parks.	conservationfund.org/our-work/urban-conservation
Land acquisition, planning, and construction	Private	Community Fundraising: donations from individuals, foundations, and corporations	Varies based on funder requirements, especially if there are limitations set upon contributions from corporations or foundations.	Varies	None	Donations large and small could be used to support many aspects of the Ford Spur, including planning and design, land acquisition, construction of the trail, and construction of supporting facilities. A lead agency would have to manage the fundraising process.	centerforpreventionmn.com/our-approach/how-we-work/funding-initiatives/available-funding
Land acquisition, planning, and construction	Private	Trust for Public Land	Technical assistance and fundraising support for land acquisition and trail construction.	Varies	Unknown	Technical assistance and fundraising support to further land acquisition and construction of the Ford Spur.	https://www.tpl.org/how-we-work
Land acquisition, planning, and construction	Private	Rails-to-Trails Conservancy	Land acquisition, planning, and construction of rails-to-trails projects. Technical assistance for land acquisition may also be available.	\$50,000	Varies	Land acquisition, planning, and trail construction. The Rails-to-Trails Conservancy may also be able to provide technical assistance for land acquisition.	https://www.railstotrails.org/our-work/

RE-IMAGINE THE RAILWAY: STUDYING NEW USES FOR THE FORD SPUR

APPENDICES