

PROJECT GOALS

Evaluation Criteria and Strategies for Ford Spur Corridor Reuse

The sections below outline recommended evaluation criteria and strategies that relate to the project goals. The evaluation criteria and strategies serve different purposes, as described below.

The purpose of evaluation criteria is as follows:

- To link the project goals with future project design decisions.
- To use as a checkpoint for conceptual and preliminary designs created through the scope of the current planning process.
- To measure future designs for the Ford Spur and aid in decision making between different design alternatives.

The purpose of strategies is as follows:

- To link the project goals with future planning and design decisions.
- To provide actions and guiding principles that can be used by the City through future stages of planning and design.
- To provide the City with guidance and flexibility to further the goals of the project, understanding that there is currently uncertainty in whether transit will be co-located with trail facilities in the Ford Spur.

Connections:

Strengthen transportation and community connections along the diverse neighborhoods along the Ford Spur and extensions, such as downtown Saint Paul and the Ford Motor Co. Plant redevelopment site (“Ford Site”).

EVALUATION CRITERIA:

- Design maximizes the health benefits of the project, through design that is attractive and comfortable to users of all ages and abilities, and crossing designs that minimize conflicts and injury potential for users.
- Design maximizes opportunities for neighborhood connections, as measured by the number of trail access points along the Ford Spur.

STRATEGIES:

- Identify walk and bike connections between the east end of the Ford Spur and downtown Saint Paul that provides a similar level of comfort as future trails on the Ford Spur. If there are not existing walk and bike connections that can provide a similar level of comfort, develop and/or improve connections.
- Use Ford Spur street crossings as an opportunity to highlight and promote the Ford Spur.
- Design public art, trailheads, and other trail-supporting amenities in collaboration with neighborhood residents, to reflect neighborhood character and culture.
- Engage neighborhood, community, and business organizations in the planning and design process.
- Develop safe and convenient neighborhood connections to the Ford Spur.
- Provide wayfinding to connect Ford Spur users with nearby neighborhoods and unique destinations.
- Provide wayfinding from neighborhood destinations to the Ford Spur.
- Work with Saint Paul Public Schools to identify and design connections between nearby schools and the Ford Spur so that trails can be used for transportation to school and school-based walk and bike education and programming.
- Work with community groups to promote use of the Ford Spur. Support community-based programming and events along the Ford Spur corridor.

- To reduce conflicts and injury potential for users.
- Minimize delay at street crossings so that the Ford Spur can be efficient for people walking, bicycling, and using transit.

Complement the regional transportation system and connect to existing and future walk, bike, and transit facilities along the Ford Spur corridor.

EVALUATION CRITERIA:

- Reliable travel time for walking and bicycling, as measured by the separation of trail users walking and bicycling, minimizing/eliminating at-grade street crossings, level of stress at crossings, and anticipated delay at crossings.

- Reliable travel time for potential future transit on the Ford Spur.

STRATEGIES:

- Establish primary walk and bike routes between the Ford Spur and existing and future bike, walk, and transit routes.
- Enhance primary walk and bike connections to the Ford Spur routes to provide a similar level of comfort as Ford Spur trails.
- Provide wayfinding between the Ford Spur and existing and future walk, bike, and transit routes.

Allow future development on the Ford Site to be served with a variety of safe transportation choices.

EVALUATION CRITERIA:

- Design includes legible and convenient access to the Ford Site.

STRATEGIES:

- Incorporate a distinctive gateway treatment that highlights and attracts Ford Spur use by future Ford site residents and workers.
- Provide continuous walk, bike, and transit routes through the Ford site, to maximize connections with Ford Parkway, the Ford Bridge, and trail connections along both sides of the Mississippi River.

- Coordinate Ford Spur improvements with Ford Site development, so that the Ford Spur is open for use once the first phase of Ford Site development is complete.
- Provide wayfinding to the Ford Spur within the Ford Site.
- Provide wayfinding to the Ford Site from the Ford Spur.

Process:

Coordinate the goals and needs of related studies and stakeholders.

EVALUATION CRITERIA:

- Design is consistent with existing plans and complements future public investments along and intersecting the Ford Spur corridor.

STRATEGIES:

- Develop designs that are consistent with other existing plans that relate to the Ford Spur.
- Continue collaboration between Saint Paul Planning & Economic Development, Public Works, and Parks & Recreation; Ramsey County Regional Rail Authority; Ramsey County Public Works; Metropolitan Council, the Minnesota Department of Transportation, neighborhood groups, non-profits, and other public agency and community stakeholders.
- Seek opportunities to support construction of the Ford Spur through related plans and projects.
- Establish clear roles and next steps for agency and community partners.

Engage a broad cross-section of community members and stakeholders to build a common vision and support for the future of the Ford Spur.

EVALUATION CRITERIA:

- Community support for the design, as measured by public feedback gathered during planning and design.

STRATEGIES:

- Understand community demographics and be intentional about engaging traditionally underrepresented communities.
- Engage the diversity of residents and business owners in the planning and design process.
- Provide a variety of ways to participate in Ford Spur planning and design.
- Facilitate the development of a strong common vision that has the support of stakeholders.
- Be clear and transparent about the scope of project planning and design.
- Be considerate of the number of other related studies in the area and take care not to overwhelm community members.
- Articulate a clear role for residents and businesses to stay involved after the completion of this study and be advocates for building the project.
- Engage businesses and community organizations along the Ford Spur as potential project champions.

Demonstrate innovation in expediting the process of re-purposing the Ford Spur.

EVALUATION CRITERIA:

- Design maximizes opportunities to develop facilities in coordination with planned public and private development.
- Ability for construction to be phased in a logical and useful manner.

STRATEGIES:

- Share project benefits with elected officials to cultivate awareness and support of the project.
- Seek funding and staff resources to complete the design of the Ford Spur.
- Seek funding for construction of Ford Spur facilities.
- Develop a construction phasing plan that allows for the Ford Spur to be constructed in segments with logical end points. Construction phasing should be coordinated with other

related projects such as the Riverview Transitway and Ford Site development. The phasing plan should consider ways to attract early use and support to build momentum for future phases.

- Consider opportunities to build elements of the Ford Spur in coordination with other projects such as the Riverview Transitway, Ford Site development, and other public and private development.

Design:

Foster economic development and place-making along the Ford Spur corridor.

EVALUATION CRITERIA:

- Design includes distinctive elements with the potential to influence adjacent development investments.

STRATEGIES:

- Share the benefits of the project with existing and potential residents and businesses along the Ford Spur.
- Identify development possibilities along the Ford Spur.
- Collaborate with residents, businesses, community organizations, and others to design and construct placemaking elements along the Ford Spur such as public art, pocket parks, and unique natural features.
- Work to support economic development while maintaining housing and commercial affordability along the Ford Spur.

Develop the Ford Spur into a neighborhood asset that complements and enhances existing and future land use along the Ford Spur.

EVALUATION CRITERIA:

- Design minimizes construction impacts on existing natural and built environment.
- Design maximizes opportunities to integrate green infrastructure into the project.
- Design maximizes opportunities to create and/or connect to places for socializing and lingering: parks, gardens, plazas, public art.

STRATEGIES:

- Develop designs that allow for trails and transit to coexist in the Ford Spur.
- Identify and design for potential conflicts between proposed designs and existing infrastructure, utilities, and land uses.
- Be sensitive about Ford Spur interactions with adjacent properties.
- Plan and design with multiple active transportation uses in mind, including scooters, skateboards, mobility devices, winter uses, and people who prefer natural surface trails.
- Consider unique design features for trails and transit facilities, as well as supporting amenities.
- Maximize opportunities to develop and enhance green infrastructure so that it can be a feature and amenity in the Ford Spur.
- Facilitate connections to nature through the design of trails and supportive amenities.

Develop walking and biking trail designs that are attractive, healthy, efficient, comfortable, safe, and convenient for people of all ages and abilities.

EVALUATION CRITERIA:

- Design minimizes conflicts between people walking and bicycling as measured by presence of separation between walk and bike trails.
- Design minimizes conflicts between pedestrians, bicyclists, and transit users with vehicles as measured by design at potential stations and throughout corridor to minimize conflicts between modes.
- Design minimizes conflicts between trail users and motor vehicles, as measured by the level of stress for trail users at street crossings.
- Design meets ADA requirements and is comfortable for users with mobility limitations, as measured by compliance with ADA requirements, ease of surface rollability, legibility to people with vision impairments, and potential for seating and resting spaces along the facility.

STRATEGIES:

- Develop a distinctive, seductive design that entices people to use the Ford Spur.
- Design beyond the minimum requirements for accessibility so that the Ford Spur is comfortable and easy to use for people using mobility devices and people with vision impairments.
- Design beyond the minimum requirements for trail width and crossing design when possible so that the facility is inviting and feels safe and comfortable for users.
- Use lighting, access, and other principles of crime prevention through environmental design to cultivate personal safety, security, and comfort in the Ford Spur.
- Design intersections to provide the lowest possible level of stress for users by reducing conflicts between people walking and bicycling, transit users, transit vehicles, and motor vehicles.
- Identify and enhance connections to schools and support school use of facilities for school transportation and school-based activities.
- Identify and enhance connections to senior housing near the Ford Spur.
- Enhance public spaces near the Ford Spur to provide supportive amenities and create unique destinations along the Ford Spur.
- Provide seating on bridges and in locations with unique views.
- Develop facility and wayfinding designs that are intuitive and easy to understand by people with low English language proficiency.

Reimagine the Railway: Studying New Uses for the Ford Spur



COMMUNITY CONVERSATION #1 SUMMARY

May 23, 2017

6:30 PM – 8:00 PM

St. Paul Jewish Community Center

Meeting Purpose

The goal of the meeting was to introduce the project, share information on the background and goals, and solicit questions and input from the community on how the corridor should look, feel, and function in the future.

Meeting Summary

Mike Richardson from the City of Saint Paul introduced the project and the project's background, goals, and schedule. Following the presentation, attendees were invited to provide comments on the project boards, identify opportunities and challenges on layouts of the corridor, and provide feedback and brainstorm ideas for future uses of the corridor.

Summary of Comments Received

The top five comment topics are as follows:

1. **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/concern regarding the inclusion of public transit along the corridor.
2. **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.
3. **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.
4. **Concern about proximity of route to residential areas**, especially in considering the potential inclusion of public transit.
5. **Concern about safety of route and pedestrian/bike access to the route** from major intersections and landmarks.

Individual Comments Received

OPPORTUNITIES	CHALLENGES
<ul style="list-style-type: none">• Link to Hidden Falls	<ul style="list-style-type: none">• Lots of routes converge here. Maybe a larger transit hub? [Indicates Ford Parkway commercial area east of Mississippi River Trail]
<ul style="list-style-type: none">• Seven Spokes Bike Shop	<ul style="list-style-type: none">• Turkeys and ducks :) [Indicates Cleveland Ave]
<ul style="list-style-type: none">• Crosswalk [Two "Crosswalk" labels at approx. Cleveland and at Kenneth]	<ul style="list-style-type: none">• Safe bike/ped Xing @ Edgecombe, Davern, & W. 7th (Traffic safety concerns)
<ul style="list-style-type: none">• Several prominent transit routes converge around here. Maybe a special transit stop area? [Indicates Ford Parkway commercial area east of Mississippi River Trail]	<ul style="list-style-type: none">• Concern about condo garage impacts - Brandy Chase at Shepherd Park

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- Corridor is in a deep ravine/ditch which will provide some challenges but good lighting and access
- Get rid of neighborhood barriers
- This could be a marquee ped/bike path and St. Paul can be a world leader!
- Bike/trail would be good opportunity to link to Mississippi national Park from Ford Site
- Connect to other trails (MRB, Shepard, etc.) and downtown
- St Paul is a city of bluffs & hills. Some bike infrastructure should support beginner bikers who can't do hills
- Safe connection from Randolph to Shepard Rd
- Put opportunity & constraints maps on web site
- No connection to downtown! The end
- School Board Admin Building
- Connect DT
- If rail is co-located are we reproducing the Shepherd Rd experience where biking is not present for children along Shepherd?
- Add connections to Shepard, MRB, and Crosby, etc. Connect the network!
- Many areas might be too small for both transit and ped/bike path!!
- Crosses intersections at awkward angles
- Where do people go at the end of the trail?
- If rail is co-located are we reproducing the Shepherd Rd experience where biking is not present for children along Shepherd?
- Numerous unprotected grade crossings - dangerous! [Indicates section between Victoria Park and College Prep Elementary]

Wall Question 1: What is the most important thing to consider as we "reimagine the railway"?

- Consider connections and points where riders may want to enter & exit the trail
- Please provide connections which are protected bike lanes or separated trails (x2)
- No new roads breaking up the neighborhood as cut throughs (e.g. On to Colette)
- This needs to happen
- Taking an old, unused asset and turning it into a HUGE neighborhood plus! (rail travel & bike path)
- We should encourage new ways for people to get around their neighborhoods
- Turn bridges into destinations w/ seating & views
- It's in our yards
- Sustainable & multiuse (esp. for bike ped)
- Be a part of people's daily life - frequent users, not just a weekend activity
- No rail! Bikes, hikes, greenspace (x5)
- The full breadth of folks who will use this. Not just the most vocal.
- No motorized buses or trains in my backyard
- Fit in to the neighborhood, service with charm

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- Use the railway for a rail!
- Ford site needs more green/active space for density of population that will be there
- Make an unused asset usable and safe
- Riverview corridor (x2)
- Using the railway to connect all communities in St. Paul through transit (x2)
- It goes by my school
- Concerned about the small piece of truncated line just south of Worcester
- Multiple means of use & access would be awesome if rail would work & if not rapid bus transit!
- Make it accessible for lots of neighborhoods
- Increased connection internally & externally; reasons to ride- what destinations or population centers are linked?
- Amazing potential as a natural resource - bike, ped, natural area, stormwater management
- A well-thought-out bike way - with amenities that draw people toward the river -gives low-income residents, families, and others access to a primary feature of MSP

Wall Question 2: How could this corridor be a good neighbor?

- Accessibility, usable by all ages (x2)
- Connections to other bike paths too... MRB, Shepard, and Summit Brewery
- Health benefits of green infrastructure with a native animals and plants
- Quiet (x4) - I live on RR spur and we can hear LRT from 55&46th
- Only bikes/hike trail, no rail!!! (x6)
- No public transit!!! (x3)
- Benches for all ages
- Safe (x5)
- More public transit!!! More greenways! (x4)
- Be well kept & not interrupt nature
- Manage stormwater
- Talk about the benefits of this new infrastructure
 - more customers for existing and new businesses
 - increased movement options for people of all ages
 - increased 'developability' for Albion site, Sibley Plaza
- Welcoming signage
- Reach out to comment on FB & Next Door
- Equity of access, respectful to needs of neighbors
- Make new connections and improve what we already have
- Police accessible
- Healthy - green, clean, natural, healthy for creatures too
- Good lighting & access points
- No roads cutting neighborhood apart or to be cut throughs for Ford Development
- The people who power our local economy use these local routes every day

Wall Question 3: What words or phrases describe what you want this corridor to be?

- Reality make this happen
- Natural
- No rail!!
- Get the most out of Ford Site Development. Support density!
- Shared bike/ped transit

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- Accessible (x3)
- Safe (x4)
- Greenway (x2)
- Foot power
- Smooth
- Quiet (x2)
- Walking and biking to New Ford site
- Connect to downtown (eventually)
- Aesthetically pleasing (x2)
- Car-free!
- Visible
- Simple, safe, easy for the city to maintain (x2)
- Long-term investments in our St. Paul neighborhoods & regional network connectivity
- Neighborhood asset
- Bike/hike only!
- Smooth
- "A must see in St. Paul", charming
- Bike path w/ bike stations; clean
- Light rail
- Useful
- Connectivity, build residence by increasing transit options in region

Comments Received on Project Boards:

Ford Spur Existing Conditions Board	Remove the pedestrian bridge. You can see through rusted flooring. It's not safe. [located on "Ford Spur near Homecroft"]
	Big drainage issues! [located on "Ford Spur near Homecroft"]
	Need safe Xing at W 7th. Convince MnDOT to Road Diet W 7th (make it a turnback to Ramsey County) [located on "Ford Spur at West 7th"]
	St. Paul Public Art - Murals here Similar to Greenway in St. Louis Park Past (Beltline?). Also, Greenway murals in Seward area. [located on "Ford Spur at Homer"]
	Protect trail users in places where space is right, especially if transit is included. Bike/ped safety is important. [located on "Ford Spur over Elway"]
	Connect path to Summit Brewery/add signage (wayfinding) to connect local businesses! [located on "Ford Spur at Victoria Park"]
	Green buffered to buy goodwill from houses adjacent to spur trail; plantings, trees, etc. [located on "Ford Spur at Watson"]
Project Overview and Purpose of	Destinations: Downtown SP, Downtown MPLS, Ford Site, Regional facilities connection
	St. Paul greenway
	Easier crossing of Shepard Rd. How can we connect the Spur to other bike/ped?
	Grand Rounds Connection Where to when you hit Western?
	Bike superhighway, Greenery, Coordination with Minneapolis, Young people want transit
	Reduce crime through design

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	Great River plan! Consider this!	
	City should be discouraging driving	
	Raising awareness and connecting Sibley Manor public spaces!	
	Encourage new ways of getting to the site	
	Connection [Indicates where Ford Spur indicates Western Ave]	
	Matching connections across the tracks that don't currently exist is a barrier!	
	Maximizing/adding public open space	
	How can we connect to the views the River must offer?	
	Art & history!	
	Residential neighborhood not the best for loud trains! [someone else wrote a second comment: "Car noises are worse!"]	
Study Goals Board	Avoid cutting up neighborhood with roads onto Worcester & Colette	
	All these goals relate to trans and not include green space/bike trails/hiking/livability	
	Follow future development for all adjacent neighborhoods, more than just Ford Site!	
	Natural resources survey, Groundwater springs, Plant & animal surveys, Contamination	
	For density of Ford site need more open/active sites - so hike & bike	
	Many of the comments say there is nothing about bike & pedestrians, but I think that ignores folks who bike/walk everyday & would benefit	
	Goals don't say anything about bike or ped!!!	
	Provide connectivity to other trails	
	Enhance the adjacent/adjoining neighborhoods	
	Enhance neighborhoods - where do we need benches? Play spaces? Gathering spots?	
	Environmental green space (Currently managed as a haven for notorious weeds)	
	Pay attention to quality habitat - groundwater springs, remnant prairie vegetation, migratory bird corridor	
	Safety - tracks are currently used as a "getaway" for local crime - have path drivable by police vehicles (talk to SPPD)	
	Hiking, biking, green space only	
	Concern about if utilities (electric) buried in corridor, then adjacent homeowner requires trenched service to homes - mess + assessed?	
	Transit service for working folks	
	Native plants (prairie plants) keep in mind low maintenance, water preservation)	
	Goals should include ways to encourage all modes of transportation that are not driving	
	Develop for pollinators - bees & monarchs	
	Have a strong communications & public relations plan to promote the spur and its benefits	
	Boo! No rail next to homes [second comment made by someone else: "there is already a rail there"]	
	The area watershed district should be on the advisory board	
	Love the idea of biking and walking trails - it would allow connection to both the Bruce Vento trail and the greenway Beet trail [?]	
	S t	Speed up project!!! Timeline. I'm sick of waiting for great progress to happen!

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	<p>Longer time to comment on conceptual designs, shorter prelim period.</p>
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OPEN HOUSE #2 SUMMARY

August 29, 2017

6:00 PM – 7:30 PM

Palace Community Center

Meeting Purpose

The goal of the meeting was to provide an update about project progress, share information on the preliminary concept designs, and solicit questions and input from the community on how the corridor should look, feel, and function in the future.

Meeting Summary

Mike Richardson from the City of Saint Paul introduced the project and provided an overview of the concepts presented at the meeting. Before and after the presentation, attendees were invited to provide comments on the project boards, identify opportunities and challenges on concept layouts of the corridor, and provide feedback and brainstorm ideas for future uses of the corridor.

Comments Received on Project Boards:

	Location	Comment
Connections to Downtown St. Paul Board	Top of board (misc.)	Poor for transit. Only bike and pedestrian use. My house is between Cleveland and Return Court - 1 block and you want honest we??? No.
	Top of board (misc.)	Should mention the corridor identify through the Ford Site to bridge
	Top of board (misc.)	Connect to west side of DT
	Intersection of Sam Morgan Regional Trail and Shepherd Road	Great connection (arrow points to trail intersection)
	Sam Morgan Regional Trail	Tie into what we've got along Sam Morgan - great view!
	Sam Morgan Regional Trail and W Kellogg Blvd	Connection to the gateway trail
	S Robert St.	More supporting facilities at tend of Robert St. Nice Ride at both ends!

Comments Received on Layout Concepts:

Post-its Placed Near Ford Site	Lazy river
	Ice Skating
	Trailheads? Will people park on street and use trail?
	Bike access at curb
	Keep trees on rail ROW
	On Return Ct no transportation only bike and pedestrian

General Comments:

- Overwhelming preference for grade separation at W 7th (no interest in at-grade crossing)
- Lots of concern with transit in the neighborhood nearest the Ford Site, especially with the station proposed near Ramlow. Crime cited as the number one reason for concern
- Prefer grade separated trail crossing at West 7th (approximately 5-7 people agreed)



Open House #3 Summary

Thursday, March 1st, 2018

6:00 PM to 7:30 PM

West 7th Community Center

Meeting Purpose

Open House #3 was held from 6:00 PM to 7:30 PM on Thursday, March 1st at the West 7th Community Center. The meeting's purpose was to provide project updates, discuss design concepts, and solicit questions and input from the community on how the corridor should look, feel, and function in the future.

Meeting Summary:

39 people signed in to Open House #3. Attendees were invited to participate by writing comments on comment boards in response to prompt questions and to write their own questions as part of a Q & A session following the City's presentation. Participants could also provide input by filling out a comment sheet. 4 comment sheets were received as well as 7 completed question cards.

Comment Summary:

Most comments were concerned with trail connectivity, including connections to activity hubs, transit/vehicle routes, neighborhood centers, and other existing trail systems. These comments were generally positive towards the conversion of the Ford Spur and included interest in the connective opportunity of the proposed trail. Activity centers and trail connections mentioned include:

- Highland Area
- Crosby Lake
- Mendota
- Lilydale
- Downtown St. Paul
- Merriam sub-division
- Shepard Road MRT trail
- Snelling
- Nova School
- Mississippi Market
- Montreal Ave
- Edgumbe

Safety of bicycle and pedestrian crossings was one major concern in the comments. Specifically, West 7th Street was listed as a dangerous existing corridor and should also be considered for bike and pedestrian traffic. Recommended solutions for West 7th included increased traffic signals, signalized bike/pedestrian crossings, and the avoidance of flyover street crossings for bikes. Other streets of concern in this regard included Davern Street and Edgumbe Road.

A few additional concerns submitted in comment and question cards included funding sources and this project's coordination with other transitway-related projects in the area, specifically the Riverview Corridor. There was also a general concern about residents being heard and about the fate of the project if Canadian Pacific does not sell the Ford Spur.



Comments Received – Comment Cards

4 Comment sheets were received. Their full text is duplicated below, with no corrections to spelling or grammar.

- Comment 1
 - Are you planning a connection from Spur trail at Elway down to trail along Elway? This could be an important connection from Highland area to Crosby Lake, Sam Morgan trail + I35-E trail across the river to Mendota, Lilydale + that trail system.
 - Also new Lexington, Albion, Elway + W. 7th street alignment may give new impetus to bike/pedestrian usage here.
 - Is the CP bridge over Elway been evaluated? Is it worth buying or will it be demolished + replaced?
- Comment 2
 - The CP should be approached on Snelling both the Spur & the Merriam sub-division
 - Would provide a connection to downtown
 - Other routes are available for the Empire Builder & the Limited Freisitt traffic to traverse the city
 - Would provide other transit/bike trail opportunities
- Comment 3
 - Because Shepard Road's MRT Trail comes into downtown St. Paul at river level and is considerably less direct than the Ford Spur, the Spur provides an excellent and exciting bikeway that would connect Highland Park and downtown for bike commuters. It would have fewer steep grades and be much more connected to neighborhood housing and services – in Highland, W. 7th (Sibley Plaza), Mississippi Market, Nova School, Sholom, Summit Brewing – than Shepard/MRT. So I strongly support a bike/ped trail on this spur. The spur trail is part of the Saint Paul bikeways plan and, particularly West 7th, would provide an important, safe parallel route to a busy, high-speed street (West 7th) that is currently a death-trap for pedestrians and cyclists. The crossing of W. 7th is important. I hope city, county and state engineers will add more signalized intersections and crossing aids along the West 7th corridor. Currently, there can be over a mile between signalized crossings, making it nearly impossible for pedestrians to cross, especially at rush hour. MnDOT's own data shows that West 7th is currently one of the deadliest state roads for pedestrians and cyclists, second only to Snelling Avenue (Hwy 51). This needs to be fixed, particularly if a streetcar is being added to the street.
 - Also, some effort to connect a Ford Spur Trail to nearby community business and housing nodes should be made. For example, southeast of West 7th, the track/trail is often isolated or lacks path connections to nearby Nova School, Mississippi Market, Montreal Ave, etc.
 - Wherever possible avoid flyover street crossings. These add gradient and diminish the level of service for cyclists. Full, signalized crossings eliminate grades, are safe and have the added benefit of slowing or calming traffic on the various streets being crossed – West 7th, Davern, + Edgcombe – all of which need traffic calming. These signals can be synched with existing, nearby signals, minimizing disruption to transit.
 - I am opposed to a flyover crossing of West 7th. This is an area of 7th that needs better street level crossings + calming.
- Comment 4



- This is a great opportunity to integrate transit with bike + walking infrastructure. Especially with the Ford site development – transit will be critical to making this area a great place to live. Transit would also provide more connections to jobs for all the people living in the part of Highland Park that’s along W 7th – a part of Highland that tends to be neglected. I strongly support the transit/bike/walk path option for these reasons.

Comments Received – Input Activity

Two questions were provided for community input during the open house. The following are the responses received:

Question 1: What concerns you, or what should the city be mindful of in the next steps of the project?

- If residents need to go 5 blocks to access the trails – what kind of street amenities are provided for safety? Access in trench area to local residents is important as an equity issue and usage. If ramps are not possible in trench area – what about stairways (ex. Greenway – Bloomington)
- I would add a 2-lane road from the Ford Site to Edgumbe. It would not stop the trails, and it would help with traffic on existing streets
- Be aware of new Lexington, W 7th, Albion, and Elway Street re-alignment
- Plan for connection from spur to trail along Elway Street
- No rail to the Ford site! Many homes along the line will be negatively affected. Will the council listen to the neighborhood this time?
- That the concerns of adjacent residents continue to be ignored at the Ford Site. No clear maps or visuals are representing this area. Density levels continue to be ignored.
- That concerns of adjacent residents will be ignored as they were in the Ford Site plan.
- No transit (bus or rail) on CP
- Deeply concerned about no buffer of green space between the tracks and the existing homes at the Ford Spur. You need to protect the existing homes and neighborhoods in this area from noise, speed and traffic. Also where is the promised green space at the Ford Site?
- Would love for the spur extending south of Ford Site to extend to the river
- I’m concerned about having too many bike options. Not that I don’t want options but the river path is deteriorating. I would have another bike path next to light rail
- Please provide a landscape buffer between the trail and adjacent properties
- I think most bikers and walkers will be in the neighborhood.
- How are you tying into the Jefferson Trail?

Question 2: What excites you the most about the project moving forward? If this was in place, how would you use the Ford Spur?

- Community by bike from Cleveland to downtown
- Safe place for all ages to be active and connect to nature
- I’m so excited about this
- Biking for transportation and recreation
- This would be life changing for my kids – safe biking to their favorite places
- This would be a great amenity for our neighborhood
- I could bike to work on this path, to the JCC and many other places
- We would use this everyday
- Connections to businesses and resources, especially between Sibley Manor and United Family Medicine



- There's a bike shop by Cleveland that would benefit from this
- Connecting Ford and Victory Park for bikes and peds
- Would love to have a St Paul high line that links downtown to Fort Snelling
- This is amazing and great plan thus far! So excited!

Comments Received – Question Cards

- "Please consider the possibility of a 2 lane road from the ford site to Edgecumbe. There will be more cars, and the spur seems to be the only place where a new road is possible."
- "What type of funding do you anticipate will be used?"
- "Is this project being coordinated with the needs of the Riverview & Ford Projects? How does it fit in the schedules for these projects? Are you only considering the spur not encompassed by Riverview corridor?"
- "What are the plans for obtaining funding?"
- "Are bike + pedestrian paths going to be separated? If project is combined transit + bike/walk, does that make it less safe for bikes/pedestrians?"
- "What happens if CP doesn't sell? There are 2 tracks at Randolph Colborne – are they both CP lines? If so are both having the same outcome?"
- "Do you have a short list of 'problems' beyond acquisition of the property?"

REIMAGINE THE RAILWAY:

Studying new uses for the Ford Spur

Environmental Screening Report

October 2017

Prepared for:



Prepared by:

Kimley»Horn

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Introduction

Reimagine the Railway Study Overview

The City of Saint Paul is conducting a study to reimagine the potential use of the Ford Spur, a five-mile railway currently owned by Canadian Pacific that extends from the Ford Site to a mile southwest of downtown Saint Paul. The corridor has the potential to be remade into a vibrant transportation and recreation resource that can serve Saint Paul residents well into the future.

The study will examine opportunities to redevelop the five-mile railway corridor for trails and possible transit. Two scenarios will be evaluated in the study:

- Pedestrian and bicycle facilities only
- Pedestrian and bicycle facilities with space for co-located transit

Report Purpose

The purpose of this environmental screening report is 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 is to identify potentially significant impacts and if they can be mitigated, or if they deem a concept infeasible.

For the purposes of this report, the Ford Spur refers to the centerline of the railroad tracks themselves. The width of right-of-way varies along the Ford Spur, but it is captured in the study area for each issue area.¹ The study area used to evaluate existing conditions and potential impacts varies based on the resource evaluated and is defined for each resource in the following sections.

Environmental Screening

Land Use

Existing and Future Land Use

The Ford Spur was originally used to serve the former Ford Motor Twin Cities Assembly Plant, which closed in 2011. The spur is currently owned by Canadian Pacific Railway. The study area for existing and future land use is the area within ½ mile of the Ford Spur.

There are a variety of existing land uses within ½ mile of the Ford Spur (see Figure 1). According to the Metropolitan Council's 2010 generalized land use data (updated based on 2017 Ramsey County parcel data and Google Maps), much of the study area is zoned for single family residential with a few areas of medium- and high-density residential. The existing land use along the West 7th Street corridor, which parallels the Ford Spur, is more varied than the rest of the study area, with a mix of office, retail and other commercial, industrial, institutional, and single- and multi-family residential uses.

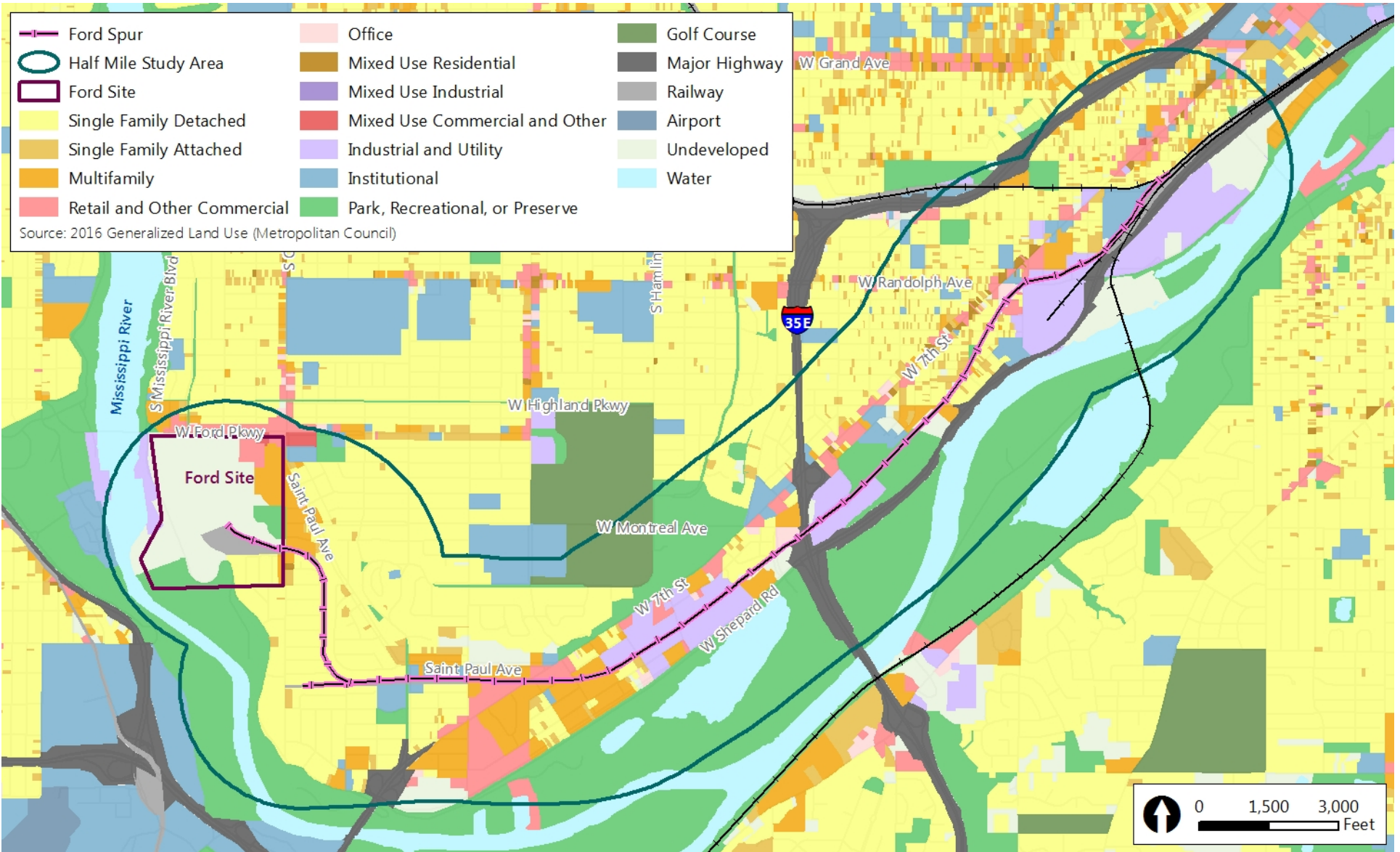
¹ According to Ramsey County parcel data dated April 2017, there are portions of the Ford Spur where the tracks are not located on railroad property or public right-of-way.



There are four distinct areas within the study area that are in industrial use, one of which is the Ford Site. Parks and open space border the Mississippi River on both sides for most of the study area.

The 2030 future land use map for the City of Saint Paul shows the intent to keep West 7th Street as primarily mixed-use with some industrial. Planned land use on the Ford Site is mixed use. Randolph Avenue is also shown as generally mixed-use and urban neighborhood that extends from West 7th Street past Snelling Avenue. The future land use in the rest of the study area is generally urban neighborhood and major parks and open space.

Figure 1: Existing Land Use



Environmental Justice Populations

Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 1994) requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and/or low-income populations. To identify such populations in the vicinity of the Reimagine the Railway project, data from the 2011-2015 American Community Survey 5-Year Estimates was analyzed for block groups within ½ mile of the corridor.

Low-Income Populations

For the purposes of this analysis, low-income persons were defined as those whose income levels are below the federal poverty threshold. To determine if a low-income population exists in a block group, the percentage of low-income individuals in the block group was compared against the percentage of individuals below the poverty threshold in the city of Saint Paul (22 percent). If the percentage of individuals below poverty level in the block group is greater than 22 percent, the block group was identified as having a high concentration of low-income persons.

Of the 34 block groups in the study area, four were found to have low-income populations that exceeded the Saint Paul average of 22 percent. An additional three block groups meet or are approaching the average (within 2 percent).

Table 1: Low-Income Populations in the Study Area

Census Tract	Block Group	Percent Low-Income Residents	Total Population
Census Tract 359	Block Group 1	20.4%	717
Census Tract 360	Block Group 1	21.9%	598
Census Tract 369	Block Group 2	24.0%	698
Census Tract 371	Block Group 5	26.1%	1,154
Census Tract 376.02	Block Group 1	39.7%	1,004
Census Tract 376.02	Block Group 2	21.0%	1,187
Census Tract 9800	Block Group 1	45.9%	366

Low-income populations in the study area are concentrated at the north end of the corridor closest to downtown Saint Paul (Census Tract 359, Block Group 1; Census Tract 360, Block Group 1; and Census Tract 369, Block Group 2) and in the middle to slightly western part of the corridor (Census Tract 376.02, Block Groups 1 and 2) (see Figure 2). The block groups closest to downtown are either approaching, equal to, or slightly above the city average of 22 percent. One of the highest concentrations of low-income persons is located in the middle of the project area, on both sides of the Ford Spur between Hamline Avenue and Snelling Avenue. In this block group (Census Tract 376.02, Block Group 1), the number of individuals living below the poverty level is 40 percent.

The remaining two low-income block groups identified (Census Tract 371, Block Group 5; and Census Tract 9800, Block Group 1) are within ½ mile of the corridor but are separated from the corridor by the Mississippi River and are not likely to be affected by this project.

Minority Populations

Minority persons were defined as those who self-identify as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, and/or Native Hawaiian/Pacific Islander. To determine if a minority population exists in a block group, the percentage of minorities in the block group was compared against the percentage of minorities in the City of Saint Paul (46 percent). If the percentage in the block group is greater than 46 percent, the block group was identified as having a high concentration of minority persons.

Of the 34 block groups in the study area, three were found to have minority populations that exceeded the Saint Paul average of 46 percent.

Table 2: Minority Populations in the Study Area

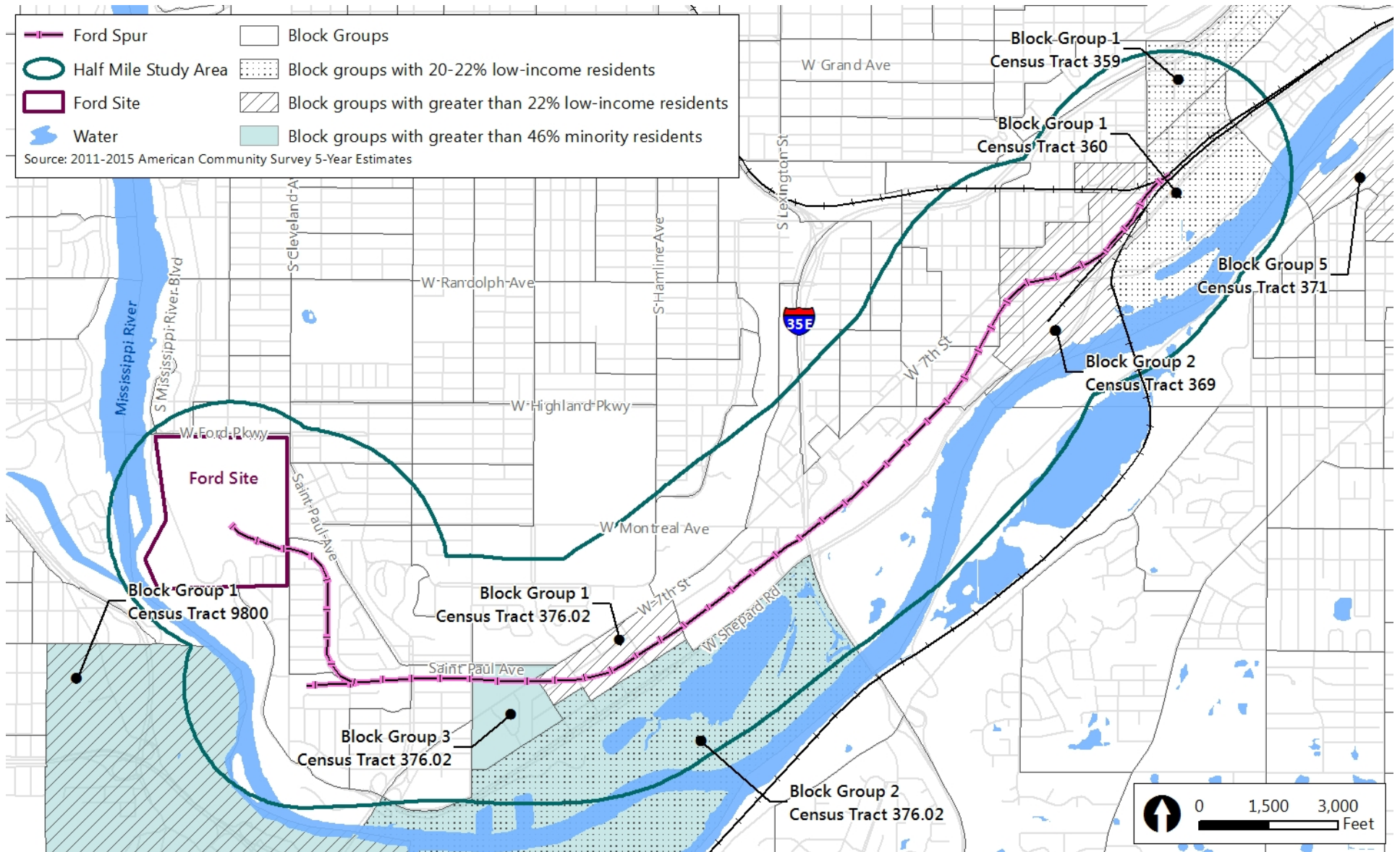
Census Tract	Block Group	Percent Minority Residents	Total Population
Census Tract 376.02	Block Group 2	55%	1,187
Census Tract 376.02	Block Group 3	91%	1,893
Census Tract 9800	Block Group 1	73%	366

Minority populations in the project area are concentrated in the middle of the corridor (Census Tract 376.02, Block Groups 2 and 3) (see Figure 2). These populations are primarily adjacent to and south of the Ford Spur, extending to the Mississippi River between Lexington Avenue and Davern Street. Block Group 3, which is located on both sides of the Ford Spur between approximately Saint Paul Avenue and Fairview Avenue, has a 91 percent minority population, which consists of 81 percent African-American residents. The 55 percent minority population in Block Group 2 includes African-American (31%), Hispanic (19%), and Asian (15%) residents. Overall, minority persons make up approximately 25 percent of the entire study area.

As previously noted, the third block group identified (Census Tract 9800, Block Group 1) is separated from the corridor by the Mississippi River and is not likely to be affected by this project.

As preliminary concepts are developed for reuse of the Ford Spur corridor, further analysis of the potential for impacts to low-income and minority populations will be needed.

Figure 2: Low-Income and Minority Populations in the Study Area





Transportation

The study area for transportation includes existing facilities within ½ mile of the Ford Spur.

Due to the proximity of the Mississippi River and character of the existing topography, the existing roadway network within the study area is curvilinear and more disconnected than in other areas of Saint Paul. The northern section of the study area has a slightly more gridded network, but the presence of the river and I-35E disrupt the grid in many places. West 7th Street and Shephard Road are arterial streets that run most of the length of the study corridor, generally parallel to the river and the Ford Spur (see Figure 3).

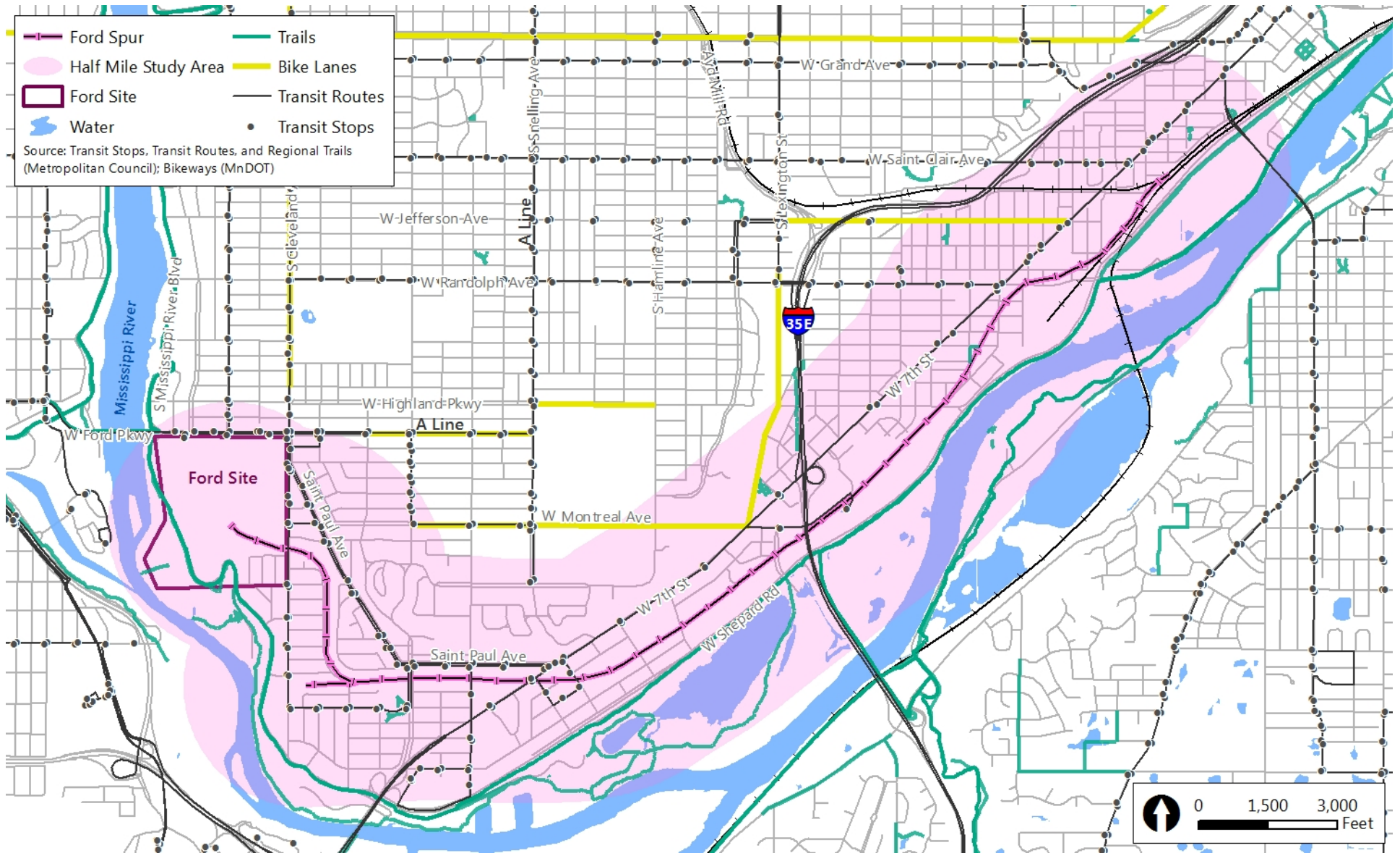
There are several existing multi-use trails within the ½-mile study area. These trails follow the river and Shephard Road for the entire length of the study area and focus on recreation and park access. There are also bike lanes on Montreal Avenue, Lexington Parkway, and Jefferson Avenue in the study area. Any new pedestrian and bicycle facilities along the Ford Spur would be focused more on transportation than recreation and would provide more connections within the community.

The existing transit routes within the ½ mile study area include Routes 23, 46, 54, 63, 65, 70, 74, 83, 84, 87, 134, 417, 436, 480, 484, and 489 and the A Line. There are 153 transit stops within ½ mile of the Ford Spur where passenger boarding and alighting occurs. The stops are mostly located along West 7th Street, Cleveland Avenue, Randolph Avenue, Saint Clair Avenue, and Saint Paul Avenue (see Figure 3).

Connections to these existing facilities should be considered when developing concepts for reuse of the Ford Spur corridor.

The Riverview Corridor Transit Study, which is being led by Ramsey County Regional Railroad Authority independent of the Reimagine the Railway Study, is currently underway. It is evaluating potential routes and modes for a transit connection between downtown Saint Paul and the Mall of America, including possible routes along West 7th Street and on the Ford Spur. West 7th also is identified in the Saint Paul Bike Plan as a future enhanced shared lane bicycle facility. If a transit route along West 7th affects this planned bicycle use, there could be more emphasis on the Ford Spur as a parallel bikeway to serve transportation needs in this area. A future environmental document for the Reimagine the Railway Study may need to take into account the results of the Riverview Corridor Transit Study.

Figure 3: Existing Transportation Network





Parks and Recreational Facilities

The study area for parks and recreational facilities is the area within ½ mile of the Ford Spur. There are 28 parks and recreational facilities within this study area (see Figure 4). These facilities include:

- Bay Triangle
- Bohland Triangle
- Cherokee Regional Park
- Crocus Hill Terrace Park
- Crosby Farm Regional Park
- Dawson Park
- Dousman Park
- Fort Snelling Park
- Harriet Island Regional Park
- Hidden Falls Park
- Highland National Golf Course
- Highland Park
- Hillcrest Rec Center
- Homecroft Park
- Howell Park
- Lilydale Regional Park
- McDonough Park
- Minnehaha Park
- North High Bridge Park
- Oakland Terrace Park
- Palace Rec Center
- Pleasant Ice Arena
- Point of View Park
- Riverside Park
- St. Clair Rec Center
- Victoria Park
- Walsh Park
- Xinia Triangle

Many of these parks and recreational facilities are located along the Mississippi River. There are also a number of smaller parks throughout the residential neighborhoods in the study area. Only two, Bay Triangle and Victoria Park, are adjacent to the Ford Spur. The Great River Road Scenic Byway is also located within the study area.

Portions of the Ford Spur are located within the Mississippi National River and Recreation Area (MNRRA) (see Figure 4). The MNRRA boundary includes 54,000 acres of river and adjoining land along a 72-mile stretch of the Mississippi River. The purpose of MNRRA is to preserve, enhance, and protect the river corridor while providing a tool for coordinated planning and management. The MNRRA Comprehensive Management Plan (CMP) provides guidance for actions within the MNRRA boundary. The State of Minnesota also designated the Mississippi River corridor as a critical area in 1976 with State Executive Order No. 79-19. The boundary of the Mississippi River Corridor Critical Area (MRCCA) is the same as the MNRRA boundary. Elements of the proposed project within this boundary would need to be reviewed for compatibility with the MNRRA CMP, State Executive Order No. 79-19, and the City of Saint Paul’s zoning provisions for River Corridor Overlay Districts.² Recreational trails and transit are generally supported by these guidelines and rules if adverse effects on the natural beauty and environment of the river are minimized. The Ford Spur is adjacent to the RC3 and RC4 River Corridor Overlay Districts, which do not include restrictions related to trails or transit. RC1 and RC2 River Corridor Overlay Districts are also located within the ½ mile study area (but are not adjacent to the Ford Spur); these overlay districts are more restrictive than the RC3 and RC4 districts but permit recreational trails. No compatibility issues with the MNRRA CMP, State Executive Order No. 79-19, or the City of Saint Paul’s zoning provisions are anticipated.

² The City of Saint Paul plans to update its overlay districts in 2018 or 2019.

Water Resources

The study area for water resources is the area within one mile of the Ford Spur. Surface waters, wetlands, and floodplains within the study area are discussed below.

Surface Waters and Wetlands

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into the Waters of the United States. Section 404 of the CWA is under the purview of the United States Army Corps of Engineers (USACE) and requires a permit to be issued by the USACE prior to the placement of any dredged or fill material into any Water of the United States, including wetlands. The Minnesota Department of Natural Resources (DNR) and the Minnesota Pollution Control Agency (MPCA) also have jurisdiction over particular water bodies, as noted below.

According to Public Waters Inventory (PWI) mapping by the DNR, there are six public water basins within the study area (Upper Lake, Crosby Lake, US Lock and Dam #1 Pool, US Lock and Dam #2 Pool, Pike Island Marsh, and Pickerel Lake) and three public watercourses (Minnesota River, Minnehaha Creek, and Mississippi River) (see Figure 5). Any activities involving work in these waters must be authorized by the DNR and reviewed by the USACE for permitting requirements. However, since these public waters are not proximate to the Ford Spur, impacts are not anticipated.

Review of National Wetland Inventory (NWI) mapping identified 190 wetlands within the study area (see Figure 5). The majority of wetlands mapped on the NWI are associated with the Mississippi River and surrounding tributaries and floodplains. Other mapped wetlands include stormwater ponds near the Ford Spur (in the northeast quadrant of Shepard Road and Randolph Avenue) and wetlands within one park property adjacent to the Ford Spur (Victoria Park).

During the next stages of design and engineering, a wetland delineation would need to be conducted to confirm wetland boundaries and minimize impacts to the extent practical. Wetland impacts must be reviewed through the appropriate permitting process (i.e., Wetland Conservation Act [MnDOT or Local Government Unit], Section 404 of the Clean Water Act [USACE], and Section 10 of the Rivers and Harbors Act [USACE]).

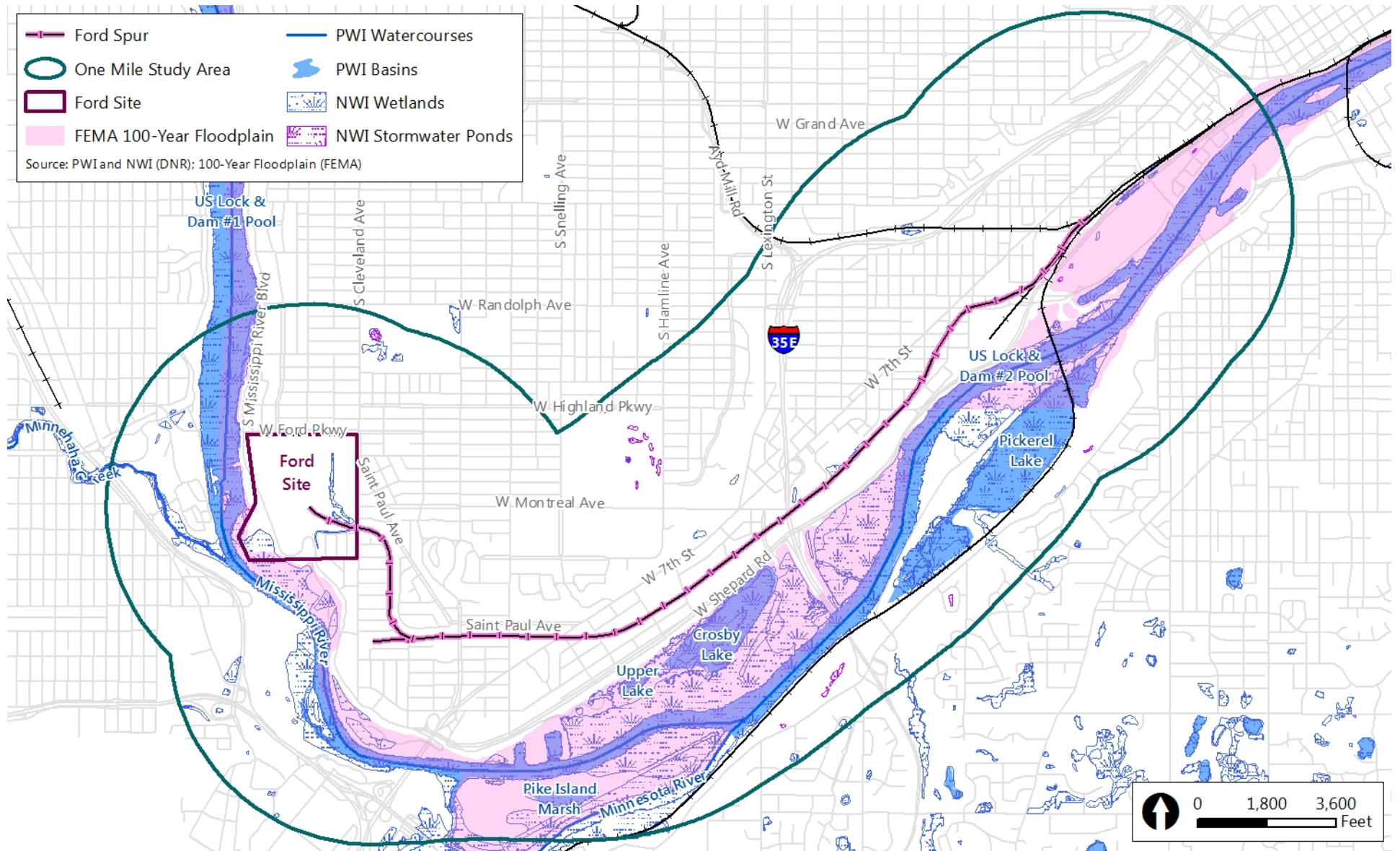
The Capitol Region Watershed District (CRWD) has jurisdiction within the study area. Coordination with the CRWD will be dependent on the action proposed.

Floodplains

The federal laws protecting floodplains include Section 404 of the CWA, Executive Order 11988, and Executive Order 13690. The Federal Emergency Management Agency (FEMA) is the federal agency responsible for mapping and managing floodplains. Flood Insurance Rate Maps (FIRM) have been developed by FEMA for most waterways via floodplain models and Flood Insurance Studies (FIS). Substantial changes to floodplain boundaries require a letter of map revision (LOMR) from FEMA. State and local floodplain protection is enforced through DNR public waters work permits, watershed district permits, or city approvals. The required permits vary depending on the feature, size of impact, location of impact, and other factors.

According to the FEMA dataset for Ramsey County, one 100-year floodplain designation exists within the study area (see Figure 5). Floodplain impacts are not anticipated at this time; however, as concepts for reuse of the Ford Spur are developed, further analysis will be needed.

Figure 5: Water Resources in the Study Area





Vegetation and Species

The study area for vegetation and species is the area within one mile of the Ford Spur. Resources within the study area are described in the following sections.

Fish

As discussed above, there are nine public water basins and watercourses located within the study area, but none that are adjacent to the Ford Spur. Any work in a public waterbody or watercourse would need to be coordinated with the DNR. Depending on the type and timing of the action, fish spawning timeframes may need to be accommodated along with best management practices to minimize impacts to the fishery, including measures to prevent the accidental introduction of invasive species.

Wildlife Resources and Habitat

In general, wildlife present within the immediate area of the railroad corridor are typical of a heavily developed urban landscape. However, the study area includes the Mississippi River and is located just to the north and east of the Minnesota Valley National Wildlife Refuge. The riverine and surrounding bluff areas provide a diverse set of habitat opportunities for both aquatic and terrestrial wildlife. Many of these species fall under federal or state jurisdiction. Further discussion on these sensitive resources is provided below.

No DNR Wildlife Management Areas were identified within the study area.

Vegetation

The area proximate to the Ford Spur includes vegetative communities commonly found in railroad right-of-way. No sensitive plant communities were identified within the study area. Any vegetation disturbed as part of the proposed project would need to be seeded and reestablished.

Federally-Listed Species

The Endangered Species Act of 1973, as amended, is a federal law that instructs all federal departments and agencies to "...conserve endangered species and threatened species and to utilize their authorities in furtherance of the purposes of this Act." This means that they must ensure "...that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat." To fulfill these obligations, they must use the best scientific and commercial data available.

Section 7 of the Endangered Species Act requires that each federal agency (or their designated representatives) must evaluate potential project-related impacts upon federally-listed species and on the habitats on which they depend. Consultation with the US Fish and Wildlife Service (USFWS) is required if any such effects may occur as a result of their actions. Consultation with the USFWS is not necessary if the proposed action will not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action will have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

According to the County Distribution of Minnesota Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list (revised in March 21, 2017) maintained by the USFWS, the counties within the study area (Hennepin and Ramsey Counties) are within the distribution range of the five species listed in Table 3.

Table 3: Federally-Listed Species in Hennepin and Ramsey Counties

Species	Status	Habitat	County
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Hibernates in caves and mines, swarming in surrounding wooded areas in autumn; roosts and forages in upland forests during spring and summer	Hennepin and Ramsey
Higgins eye pearlymussel (<i>Lampsilis higginsii</i>)	Endangered	Mississippi River	Hennepin and Ramsey
Snuffbox (<i>Epioblasma triquetra</i>)	Endangered	Mississippi River	Hennepin and Ramsey
Rusty patched bumble bee (<i>Bombus affinis</i>)	Endangered	Grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for hibernating queens to overwinter	Hennepin and Ramsey
Winged mapleleaf (<i>Quadrula fragosa</i>)	Endangered	St. Croix River	Ramsey

The project will not encroach within the Mississippi or St. Croix River; therefore, no impacts are anticipated to the Higgins eye pearlymussel, snuffbox, or winged mapleleaf. If tree removal is required, coordination with USFWS would need to occur to minimize potential impacts to the northern long-eared bat. A small portion of the study area is within a high potential zone for the rusty patched bumble bee; therefore, further coordination with USFWS will be required.

State-Listed Species

A review of the DNR’s Natural Heritage Inventory System (NHIS) database was conducted (using license agreement LA-843) for the study area. The database includes known occurrences of sensitive resources, including state-listed endangered, threatened, and special concern species. The review identified 34 species under varying levels of state protection (see Table 4).

Table 4: State-Listed Species in the Study Area

Common Name	Scientific Name	Status	Habitat
Black sandshell	<i>Ligumia recta</i>	Special concern	Medium rivers and streams, large rivers
Bell’s vireo	<i>Vireo bellii</i>	Special concern	Wet meadow/carr, upland prairie, lowland prairie
Prairie vole	<i>Microtus ochrogaster</i>	Special concern	Upland prairie, savanna
Blue sucker	<i>Cycleptus elongates</i>	Special concern	Large rivers
Louisiana waterthrush	<i>Parkesia motacilla</i>	Special concern	Mesic hardwood forest, floodplain forest, wet forest, small rivers and streams, medium rivers and streams, large rivers
Northern long-eared bat	<i>Myotis septentrionalis</i>	Special concern	Fire dependent forest, mesic hardwood forest, floodplain forest, subterranean
Mudpuppy	<i>Necturus maculosus</i>	Special concern	Large rivers, medium rivers and streams, deep water zone of lakes, littoral zone of lakes
Round pigtoe	<i>Pleurobema sintoxia</i>	Special concern	Small rivers and streams, medium rivers and streams, large rivers
Peregrine falcon	<i>Falco peregrine</i>	Special concern	Cliff



Common Name	Scientific Name	Status	Habitat
Kentucky coffee tree	<i>Gymnocladus dioica</i>	Special concern	Mesic hardwood forest
Mucket	<i>Actinonaias ligamentina</i>	Threatened	Medium rivers and streams, large rivers
Paddlefish	<i>Polyodon spathula</i>	Threatened	Large rivers
Spike	<i>Elliptio dilatata</i>	Threatened	Small rivers and streams, medium rivers and streams, large rivers, littoral zone of lakes
Pugnose shiner	<i>Notropis anogenus</i>	Threatened	Small rivers and streams, littoral zone of lakes
Butterfly	<i>Ellipsaria lineolata</i>	Threatened	Large rivers
Wartyback	<i>Quadrula nodulata</i>	Threatened	Large rivers
Monkeyface	<i>Quadrula metanevra</i>	Threatened	Medium rivers and streams, large rivers
Blanding's turtle	<i>Emydoidea blandingii</i>	Threatened	Upland prairie, lowland prairie, floodplain forest, wet forest, forested rich peatland, wet meadow/carr, marsh, small rivers and streams, medium rivers and streams, large rivers, savanna
Fawnsfoot	<i>Truncilla donaciformis</i>	Threatened	Large rivers
Elktoe	<i>Alasmidonta marginata</i>	Threatened	Small rivers and streams, medium rivers and streams, large rivers
Rock fir moss	<i>Huperzia porophila</i>	Threatened	Mesic hardwood forest, cliff, talus
Yellow sandshell	<i>Lampsilis teres</i>	Endangered	Large rivers
Rock pocketbook	<i>Arcidens confragosus</i>	Endangered	Large rivers
Purple wartyback	<i>Cyclonaias tuberculata</i>	Endangered	Medium rivers and streams, large rivers
Washboard	<i>Megalonaias nervosa</i>	Endangered	Large rivers
Plantain-leaved sedge	<i>Carex plantaginea</i>	Endangered	Mesic hardwood forest
Pallid shiner	<i>Hybopsis amnis</i>	Endangered	Medium rivers and streams, large rivers
Ebonyshell	<i>Fusconaia ebena</i>	Endangered	Large rivers
Handsome sedge	<i>Carex Formosa</i>	Endangered	Mesic hardwood forest
Sheepnose	<i>Plethobasus cyphus</i>	Endangered	Large rivers
Elephant-ear	<i>Elliptio crassidens</i>	Endangered	Large rivers
Higgins eye	<i>Lampsilis higginsii</i>	Endangered	Large rivers
Pistolgrip	<i>Tritogonia verrucosa</i>	Endangered	Large rivers
Winged mapleleaf	<i>Quadrula fragosa</i>	Endangered	Medium rivers and streams, large rivers

Of the 34 species within the study area, 24 are found in riverine habitats. The project will not encroach within the Mississippi River; therefore, no impacts are anticipated to these 24 species. Once project design commences, coordination with the DNR will be necessary for the remaining 10 species.



Minnesota County Biological Survey (MCBS) Sites of Biodiversity Significance

There are 13 sites within the study area that have been identified by the DNR as sites of biodiversity significance. In these areas, the DNR has assigned a biodiversity significance rank to each site surveyed. These ranks are used to communicate the statewide native biological diversity significance of each site and assists in guiding conservation and management.

A site's biodiversity significance rank is based on the presence of rare species populations, the size and condition of native plant communities within the site, and the landscape context of the site. The rankings are broken into four categories:

- **Outstanding** sites contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most ecologically intact or functional landscapes.
- **High** sites contain very good quality occurrences of the rarest species, high-quality examples of rare native plant communities, and/or important functional landscapes.
- **Moderate** sites contain occurrences of rare species, moderately disturbed native plant communities, and/or landscapes that have strong potential for recovery of native plant communities and characteristic ecological processes.
- **Below** sites lack occurrences of rare species and natural features or do not meet MCBS standards for outstanding, high, or moderate rank. These sites may include areas of conservation value at the local level, such as habitat for native plants and animals, corridors for animal movement, buffers surrounding higher-quality natural areas, areas with high potential for restoration of native habitat, or open space.

The 13 sites of biodiversity significance within the study area are listed in Table 5. If the project activities are contained within the existing right-of-way, impacts to these resources are expected to be negligible.

Table 5: Sites of Biodiversity Significance in the Study Area

Site Name	Ranking
Crosstown Woods	Below
Long Meadow Lake	Moderate
West Bank Mississippi River	Moderate
Saint Paul Bluffs West	Moderate
Cherokee Heights Park	Moderate
Minnehaha Park	Moderate
Saint Paul 17 Floodplain	Moderate
Saint Paul 20 Bluffs	Moderate
Saint Paul 20 Island	Moderate
Crosstown Prairie	Moderate
Crosby Lake Park NE	High
Crosby Lake Park SW	High
Pike Island	High

Regionally Significant Ecological Areas

In 2003, the DNR conducted a landscape-scale assessment of the seven-county metro area to identify ecologically significant terrestrial and wetland areas. This assessment was based on LandSat data and aerial photo interpretation of grassland. In 2008, the DNR updated the assessment using Minnesota Land Cover Classification System (MLCCS) data.

Each of the identified areas are given a ranking of 1, 2, or 3 based on their size, diversity in vegetation, and biodiversity significance. A ranking of 3 indicates a larger more diverse area, while a ranking of 1 is generally smaller in size and has less species diversity.

There are 15 Regionally Significant Ecological Areas within one mile of the project corridor. Of these 15 areas identified, six sites have a ranking of 1, six sites have a ranking of 2, and three sites have a ranking of 3.

Of the sites identified, only one is located within close proximity to the current project corridor. It is located between Montreal Way and Butternut Avenue and occurs on both sides of the railroad corridor. Although these sites themselves are not necessarily under state protection, they could contain sensitive species that are under state or federal jurisdiction. Therefore, as the project advances and the scope is defined, coordination with the DNR will be needed.

Contaminated Properties

The presence of potentially contaminated properties (defined as properties where soil and/or groundwater is impacted with pollutants, contaminants, or hazardous wastes) is a concern in the development of transportation projects because of potential liabilities associated with ownership of such properties, potential cleanup costs, and safety concerns associated with construction personnel encountering unsuspected wastes or contaminated soil or groundwater.

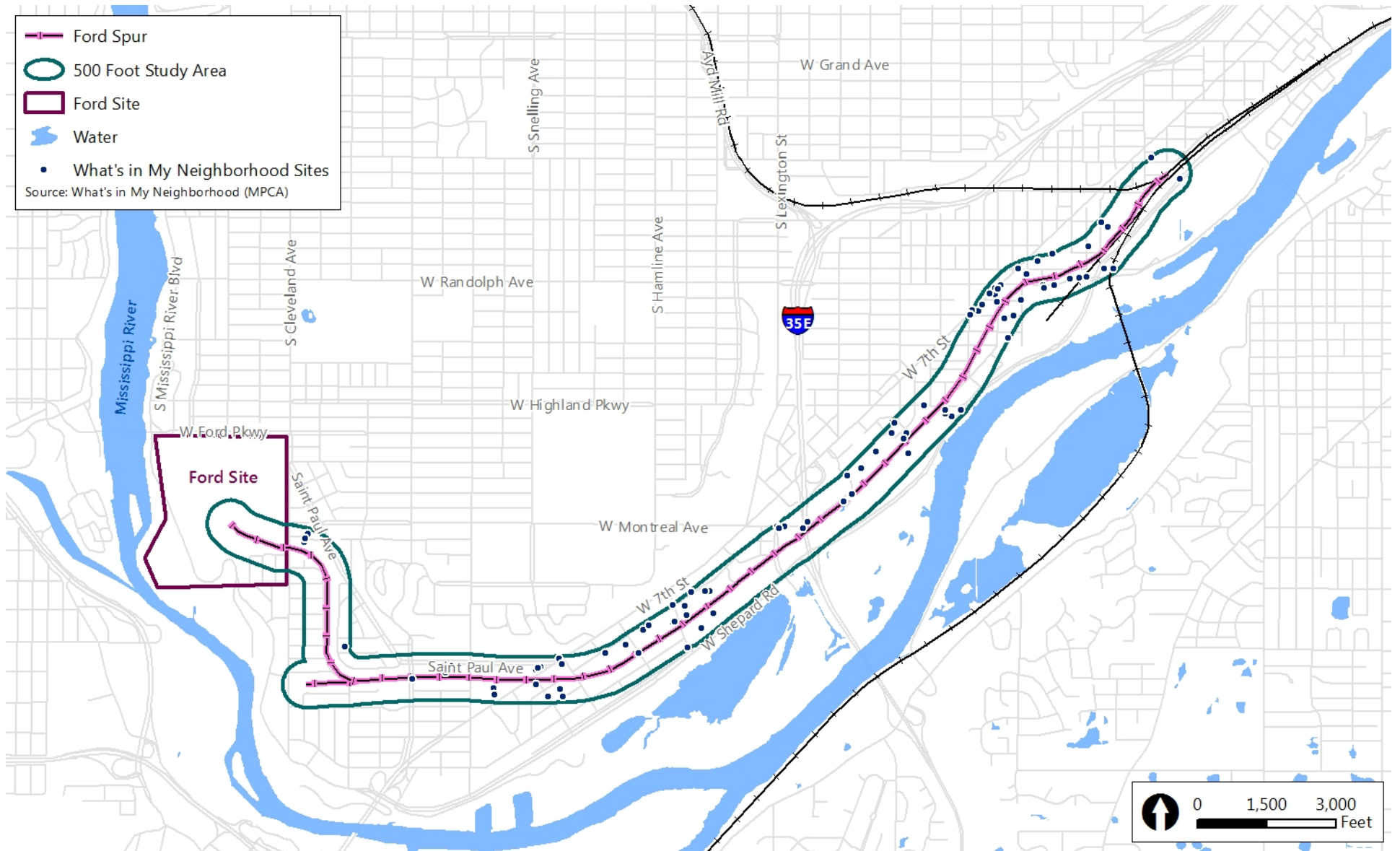
The study area for contaminated properties is the area within 500 feet of the Ford Spur. The MPCA’s What’s in My Neighborhood database was reviewed for potentially contaminated sites within the study area. This database includes records of environmental permits issued by the MPCA, registrations and notifications required by the MPCA, and investigations of potentially contaminated properties undertaken by the MPCA or its partners. A total of 108 records were identified and are dispersed throughout the study area (see Table 6 and Figure 6).

It is possible other contaminated sites are present in the study and not identified in the What’s in My Neighborhood database. Once the concepts for the reuse of the Ford Spur are defined, if the scope of proposed improvements involves acquisition of right-of-way, the agency that acquires the right-of-way will likely need to conduct a Phase I and possibly a Phase II Environmental Site Assessment (ESA) as part of a future project. It should be noted that the Ford Spur right-of-way is currently owned by Canadian Pacific Railway and would need to be acquired for future development of transportation facilities on the Ford Spur.

Table 6: What’s in My Neighborhood Sites in the Study Area

Program Name	Total Number of Sites	Number of Active Sites	Number of Inactive Sites
Hazardous Waste	35	18	17
Investigation and Cleanup	18	18	0
Multiple Programs	26	19	7
Stormwater	22	8	14
Tanks	6	2	4
Water Quality	1	0	1
TOTAL	108	65	43

Figure 6: Potentially Hazardous and Contaminated Sites



Historic Properties

To determine the presence of historic properties and archaeological resources in the project area, a request was sent to the Minnesota Historic Preservation Office (MnHPO) to conduct a database search of the Minnesota Archaeological Inventory and Historic Structures Inventory. The results provided by MnHPO included all recorded archaeological sites and historic properties within the sections in which the Ford Spur is located (i.e., Township 28N, Range 23W, Sections 11, 14, 15, 16, 17, 21, and 22), regardless of whether or not they have been evaluated for or are listed on the National Register of Historic Places (NRHP). Over 250 historic properties and eight archaeological sites were identified.

For the purposes of this report, the study area was refined to include only those parcels adjacent to the Ford Spur or adjacent to the railroad property or public right-of-way on which the spur is located. Within this study area, 10 inventoried historic properties were identified (see Figure 7). The details of these properties are provided in Table 7.

Table 7: Historic Properties in the Study Area

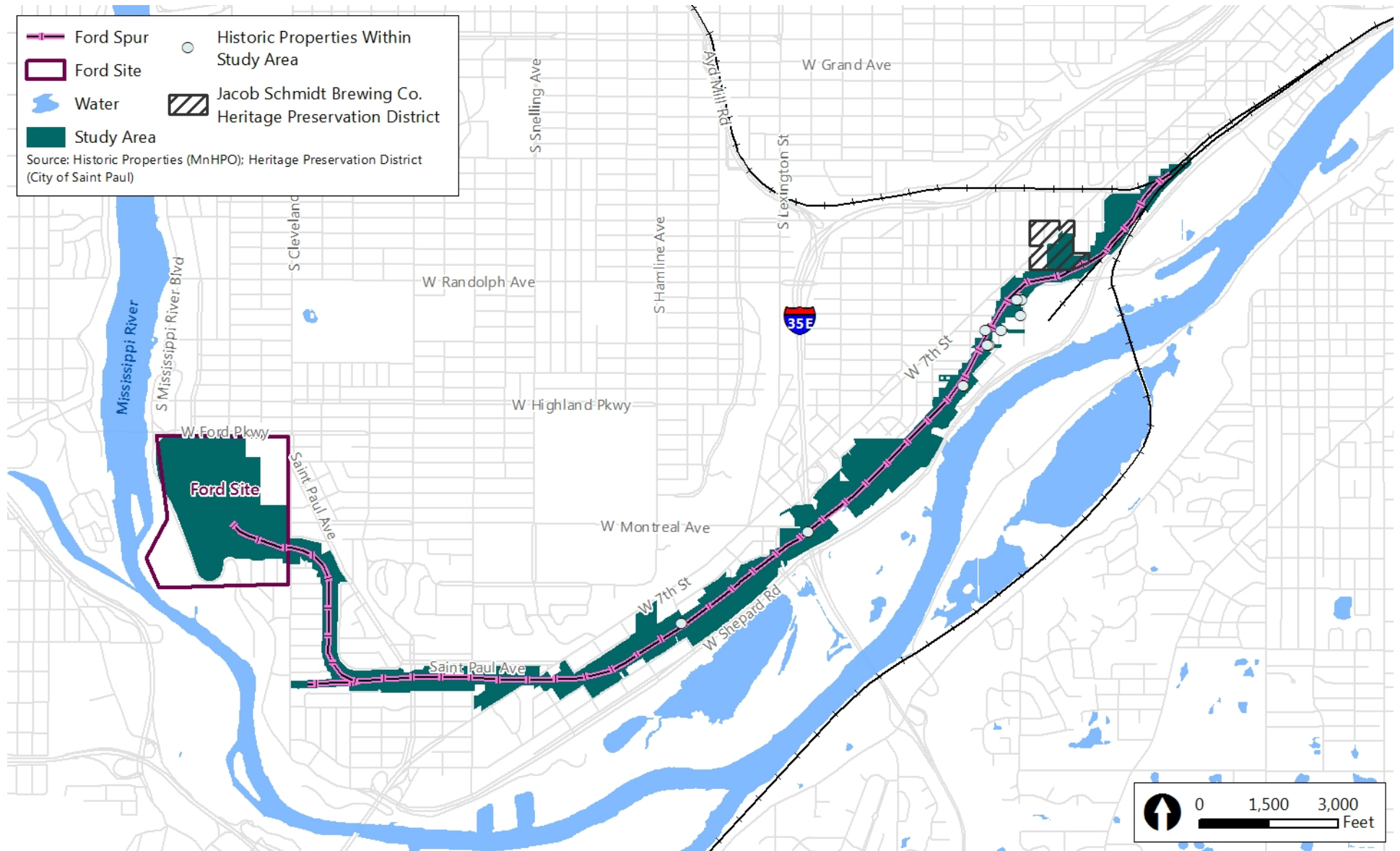
Name	Address	Listed on the NRHP	Certified Eligible for the NRHP	Certified Not Eligible for the NRHP
Omaha Iron & Brass Factory	626 Armstrong Avenue W	No	No	No
John Larson House	1184 Homer Street S	No	No	No
Residence	780 Stewart Avenue W	No	No	No
Residence	696 Tuscarora Avenue W	No	No	No
Residence	700 Tuscarora Avenue W	No	No	No
House	627 Juno Avenue W	No	No	No
House	637 Juno Avenue W	No	No	No
John Bergstrom Apt.	671-673 Watson Avenue W	No	No	No
Residence	703 Watson Avenue W	No	No	No
Bridge 9532	CP Railroad & I-35E	No	No	Yes

Of the eight archaeological sites identified in the data from MnHPO, only one is potentially located within the study area. The site is recorded within Section 17, which spans the river and is bounded by Highland Parkway on the north, Cleveland Avenue on the east, Ramlow Place/E 54th Street on the south, and 46th Avenue S on the west; however, the exact location of the site was not provided by MnHPO.

In addition to the MnHPO database search, the location of Saint Paul’s heritage preservation districts was reviewed. One heritage preservation district, Jacob Schmidt Brewing Co. Heritage Preservation District, is adjacent to the Ford Spur (see Figure 7).

As preliminary concepts are developed for reuse of the Ford Spur corridor, further analysis will be needed as part of a future project to identify if other potentially historic resources exist in the study area and determine if any historic resources would be impacted by the proposed project.

Figure 7: Historic Properties in the Study Area





Next Steps

The results of the environmental screening did not identify the potential for any impacts that could not be mitigated to less than significant levels. As concepts are developed for reuse of the Ford Spur corridor, the appropriate level of environmental documentation will be identified and further analysis will be conducted as required by the Minnesota Environmental Policy Act (MEPA) and, if federal funds are used, the National Environmental Policy Act (NEPA). 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 ESA
- 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.



Purpose

This memo serves as an addendum to the *Reimagine the Railway: Studying new uses for the Ford Spur Environmental Screening Report*, published in September 2017.

Since the Environmental Screening Report was completed, additional work has been done on design concepts for the Ford Spur. The purpose of this addendum is to identify and document any additional environmental issues or impacts that should be taken into consideration based on these concepts.

Proposed Concepts

The current study includes two sets of concepts: 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. The two sets of concepts are not being evaluated against each other. Rather, this approach acknowledges that other studies are considering the Ford Spur right of way as a potential alignment for future public transit.

In all cases, the total amount of right-of-way remains the same for trail-only or trail-with-transit options. Without transit, there is more green space and greater distance between the trail and adjacent properties/structures. With transit, there is less green space and improvements are closer to structures, while still remaining within the right-of-way.

Concepts include a separated walkway and bikeway whenever possible, with combined walkway/bikeway in areas where right-of-way is constrained. These constraints happen particularly in the concepts which also include transit, because more space is occupied by the proposed transitway. An example of this difference is demonstrated in the cross-sections below.



Location 6 - Near Watson Ave, Trail Only, looking Northeast



Additional Environmental Considerations

In the Environmental Screening Document, presence of and potential impacts to environmental or community resources were identified within one-half mile of the Ford Spur. The trail only and trail + transit concepts developed for the project remain within this half-mile buffer, and potential impacts identified in the Environmental Screening Report remain valid.

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 + 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

The results of the environmental screening did not identify the potential for any impacts that could not be mitigated to less than significant levels. This remains true for the current concepts, especially a trail-only concept. For trail + transit concepts, additional impacts such as noise and safety will require further investigation. If federal funds are used for future phases of the Ford Spur, relevant guidance under the National Environmental Policy Act (NEPA) will be applicable. 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 ESA



- 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

Reimagine the Railway: Studying New Uses for the Ford Spur

This cost estimate examines trail construction costs in the Ford Spur rail corridor for a trail-only option and constructing trail co-located with transit. This cost estimate does not include construction costs for transit facilities. This estimate is the segment of the rail corridor from Cleveland Ave to Grace St.

COST ESTIMATES

Trail-Only Construction Costs

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

Trail Construction Costs if Co-located with Transit

Area 1: Cleveland Ave to W 7th St	\$4,440,000
Area 2: W 7th St to Victoria Park	\$6,130,000 *
Area 3: Victoria Park to Randolph Ave	\$1,540,000
Area 4: Randolph Ave to Grace St (no transit in rail corridor north of Randolph Ave)	\$1,000,000 *
Project Total	\$13,110,000

W 7th St Bridge

\$8,040,000

Estimate Assumptions and Limitations**

Areas may be implemented independently.

Estimate assumes no below ground obstructions are present.

Estimate assumes no substantial barriers will impact mobilization to the site.

At-grade bikeway and walkway are assumed to be normal hot mix asphalt, 2" thick over 8" rock base.

No appreciable excavation is assumed for bikeway and walkway. Rock will build up trail above surrounding grade.

Estimate assumes dashed centerline for entire length of bikeway.

Estimate assumes 10' width of landscaping for entire length of trail, without irrigation.

Estimate assumes onsite distribution of stripped topsoil.

Right of Way acquisition costs are excluded from this cost estimate.

No site research has been performed; cost basis is purely by lane miles.

No allowance has been made for wetlands study, delineation or impact mitigation.

No allowance has been made for hazardous material assessment or mitigation.

No allowance has been made for utility work - no water, sewer, electrical, gas work included.

Estimate does not include removal of existing railroad ties and rail.

Estimate does not include removal of railroad ballast - quantity is unknown and rock may be used in trail construction.

Estimate does not include new rail or transit facilities (this includes fencing to separate transit from trail).

No allowance has been made for bridge assessment or reconstruction.

No allowance has been made for the movement of overhead utilities.

Unless noted, no allowances have been made for retaining walls or other items (see Cost Adjustment section).

No costs for operation and maintenance have been provided.

Estimate does not include wayfinding, communications, furniture, water fountains, play areas, art, shelters, etc.

Gateway treatment is provided as an allowance.

*No allowance has been made for new trestle, trestle widening, bridge widening, or bridge approach construction in phases 2 and 4 (these costs are accounted for the W 7th St Bridge)

**Additional unknown conditions may exist that are not accounted for in these assumptions. These unknowns may affect costs.

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 1: Cleveland Ave to W 7th St- Trail Only**

Current year:	2018
Segment length:	1.44 miles
Cost per mile:	\$749,929 \$/mile

2-12-2 bikeway + median + 10' walkway

Segment cost:	\$1,079,897.70
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Estimate for bridge at W 7th Crossing is included in the Bridge tab.

Itemized cost adjustments

(1) Gateway Treatment @ Ford Site	\$ 750,000
(2) Curb Extensions/RRFB/Crosswalks	\$ 200,000
LED Trail Lighting approx 100' spacing	\$ 262,310

excludes intersections

Subtotal Itemized Adjustment	\$ 1,212,310
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Construction Subtotal	\$ 2,292,208
------------------------------	---------------------

Engineering:	25% of construction subtotal	\$ 573,052.03
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Miscellaneous expenses:	2% of construction subtotal	\$ 45,844.16
	financing cost	\$ 59,597

Construction Subtotal*20%*8%+Construction Subtotal*1%

Contingency:	30% of construction subtotal	\$ 687,662.43
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Total Estimated Cost:	\$ 3,658,364
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Total Estimated Cost (Rounded nearest \$10,000):	\$ 3,660,000
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Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 1: Cleveland Ave to W 7th St- Trail co-located with Transit**

Current year:	2018
Segment length:	1.44 miles
Cost per mile:	\$749,929 /mile

Segment cost:	\$1,079,897.70
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Itemized cost adjustments

(1) Gateway Treatment @ Ford Site	\$ 750,000
(2) Curb Extensions/RRFB/Crosswalks	\$ 200,000
6' tall cast in place retaining wall	\$ 490,198
LED Trail Lighting approx 100' spacing	\$ 262,310

Itemized adjustment subtotal	\$ 1,702,508
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Construction Subtotal	\$ 2,782,406
------------------------------	---------------------

Engineering:	
25% of construction subtotal	\$ 695,601.43

Miscellaneous expenses:	
2% of construction subtotal	\$ 55,648.11
financing cost	\$ 72,343

Contingency:	
30% of construction subtotal	\$ 834,721.71

Total Estimated Cost:	\$ 4,440,720
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Total Estimated Cost (Rounded nearest \$10,000):	\$ 4,440,000
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Transit has no impact on trail width in this phase
2-12-2 bikeway + median + 10' walkway

Estimate for bridge at W 7th Crossing is included in the
Bridge tab.

approx 1322'
excludes intersections

Construction Subtotal*20%*8%+Construction Subtotal*1%

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 2: W 7th St to Victoria Park- Trail Only**

Current year:	2018
Segment length:	1.4 miles
Cost per mile:	\$749,929 \$/mile

8500' of 2-12-2 bikeway + median + 10' walkway

Segment cost: \$1,049,900.54

Itemized cost adjustments

(1) Gateway Treatment @ Victoria Park	\$ 750,000
(6) Crosswalks + Signage	\$ 120,000
(1) Curb Extensions/RRFB/Crosswalks	\$ 110,000
1,000 LF Elevated Walkway	\$ 963,072
LED Trail Lighting approx 100' spacing	\$ 268,013
6' tall cast in place retaining wall	\$ 202,828

excludes intersections
approx 547' on EB approach to Elway St bridge

Itemized adjustment subtotal \$ 2,413,912

Construction Subtotal \$ 3,463,813

Engineering: 25% of construction subtotal \$ 865,953.24

Miscellaneous expenses: 2% of construction subtotal \$ 69,276.26
financing cost \$ 90,059

Construction Subtotal*20%*8%+Construction Subtotal*1%

Contingency: 30% of construction subtotal \$ 1,039,143.88

Total Estimated Cost: \$ 5,528,245

Total Estimated Cost (Rounded nearest \$10,000): \$ 5,530,000

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 2: W 7th St to Victoria Park- Trail co-located with Transit**

Current year:	2018
Segment length:	1.4 miles
Cost per mile:	\$749,929 \$/mile

8500' of 2-10 bikeway + 6' walkway

Segment cost: \$1,049,900.54

Itemized cost adjustments

(1) Gateway Treatment @ Victoria Park	\$ 750,000
(6) Crosswalks + Signage	\$ 120,000
(1) Curb Extensions/RRFB/Crosswalks	\$ 110,000
1,000 LF Elevated Walkway	\$ 963,072
LED Trail Lighting approx 100' spacing	\$ 268,013
6' tall cast in place retaining wall	\$ 204,311
10' tall cast in place retaining wall	\$ 193,939
Guardrail	\$ 183,792
*Trestle	

excludes intersections

approx 551'

approx 312'

approx 547' on EB approach to Elway St bridge

approx 547' on EB approach to Elway St bridge cost unknw

Itemized adjustment subtotal \$ 2,793,127

Construction Subtotal \$ 3,843,027

Engineering: 25% of construction subtotal \$ 960,756.84

Miscellaneous expenses: 2% of construction subtotal \$ 76,860.55
financing cost \$ 99,919

Construction Subtotal*20%*8%+Construction Subtotal*1%

Contingency: 30% of construction subtotal \$ 1,152,908.20

Total Estimated Cost: \$ 6,133,472

Total Estimated Cost (Rounded nearest \$10,000): \$ 6,130,000 *

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

*Does not include cost for trestle

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 3: Victoria Park to Randolph Ave- Trail Only**

Current year:	2018	
Segment length:	1.09	miles
Cost per mile:	\$749,929	\$/mile
Segment cost:	\$817,422.57	
Itemized cost adjustments		
(9) Crosswalks + Signage	\$ 180,000	
(2) Curb Extensions/RRFB/Crosswalks	\$ 220,000	
LED Trail Lighting approx 100' spacing	\$ 174,874	
Itemized adjustment subtotal	\$ 574,874	
Construction Subtotal	\$ 1,392,296	
Engineering:		
25% of construction subtotal	\$ 348,074.04	
Miscellaneous expenses:		
2% of construction subtotal	\$ 27,845.92	
financing cost	\$ 36,200	
Contingency:		
30% of construction subtotal	\$ 417,688.85	
Total Estimated Cost:	\$ 2,222,105	
Total Estimated Cost (Rounded nearest \$10,000):	\$ 2,220,000	

2-12-2 bikeway + 10' walkway without transit

excludes intersections

Construction Subtotal*20%*8%+Construction Subtotal*1%

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 3: Victoria Park to Randolph Ave- Trail co-located with Transit**

Current year:	2018
Segment length:	1.09 miles
Cost per mile:	\$355,196 \$/mile

Length: .9 miles

2-10 bikeway + 6' walkway with transit

Segment cost: \$387,163.81

Itemized cost adjustments

(9) Crosswalks + Signage	\$ 180,000
(2) Curb Extensions/RRFB/Crosswalks	\$ 220,000
LED Trail Lighting approx 100' spacing	\$ 174,874

excludes intersections

Itemized adjustment subtotal \$ 574,874

Construction Subtotal \$ 962,037

Engineering: 25% of construction subtotal \$ 240,509

Miscellaneous expenses: 2% of construction subtotal \$ 19,240.75
financing cost \$ 25,013

Construction Subtotal*20%*8%+Construction Subtotal*1%

Contingency: 30% of construction subtotal \$ 288,611.22

Total Estimated Cost: \$ 1,535,412

Total Estimated Cost (Rounded nearest \$10,000): \$ 1,540,000

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
Area 4: Randolph Ave to Grace St- Trail Only**

Current year:	2018
Segment length:	0.64 miles
Cost per mile:	\$749,929 \$/mile

No transit in this segment.
2-12-2 bikeway + median + 10' walkway

Segment cost: \$479,954.53

Itemized cost adjustments

(2) Crosswalks + Signage	\$ 40,000
LED Trail Lighting approx 100' spacing	\$ 106,445

excludes intersections

Itemized adjustment subtotal \$ 146,445

Construction Subtotal \$ 626,399

Engineering: 25% of construction subtotal \$ 156,599.83

Miscellaneous expenses: 2% of construction subtotal \$ 12,527.99
financing cost \$ 16,286

Construction Subtotal*20%*8%+Construction Subtotal*1%

Contingency: 30% of construction subtotal \$ 187,919.80

Total Estimated Cost: \$ 999,733

Total Estimated Cost (Rounded nearest \$10,000): \$ 1,000,000

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

**Conceptual Cost Estimate for Construction of Ford Spur Trail
from Ford Site to Grace Street
W 7th St Bridge**

Current year:		2018	
Segment length:	1400'	0.27	miles
Cost per mile:		\$749,929	\$/mile

Segment cost: \$198,845

Itemized cost adjustments

(1) Bridge 180' x 16' bridge, 700' approaches	\$ 4,836,288
Itemized adjustment subtotal	\$ 4,836,288

Construction Subtotal \$ 5,035,133

Engineering: 25% of construction subtotal 1,258,783

Miscellaneous expenses: 2% of construction subtotal 100,703
financing cost 130,913

Contingency: 30% of construction subtotal 1,510,540

Total Estimated Cost: 8,036,072
Total Estimated Cost (Rounded nearest \$10,000): 8,040,000

Construction Subtotal*20%*8%+Construction Subtotal*1%

Prepared: 3/13/2018
By: Alta Planning + Design
Based On: Spreadsheet Provided by City of Saint Paul, MN

Unit Costs

Trail Construction Costs per Mile (Areas 1 Trail Only, 2 Trail Only, 3 Trail Only, 4)

2-12-2 bikeway + median + 10' walkway	
Strip Topsoil (2.84/SY, 22' width)(\$/LF)	\$6.94
3"/6" Asphalt+Aggregate (22' wide)(\$/LF)	\$60.72
Thermoplastic dashed centerline on bikeway only(\$/LF)	\$0.70
10' wide landscaping for entire segment (\$5/SF, 10 SF/LF=\$50/LF)(\$/LF)	\$50.00
Total Cost per LF	\$118.36
Subcontractor Cost per Mile	\$624,940.80
Add 10% for Mobilization per mile	\$62,494.08
Add 10% for GC Cost per Mile	\$749,928.96

Trail Construction Costs per Mile (Area 2-elevated trail)

16' wide elevated boardwalk + foundation @ \$800/LF	\$800.00
Total Cost per LF	\$800.00
Subcontractor Cost per mile	\$4,224,000.00
Add 10% Mobilization per mile	\$422,400.00
Add 10% for GC Cost per mile	\$5,068,800.00

Trail Construction Costs per Mile (Area 3 + narrower trail if co-located with transit)

2-10 bikeway + 6' walkway	
Strip Topsoil (2.84/SY, 18' width)(\$/LF)	\$5.68
3"/6" Asphalt+Aggregate (18' wide)(\$/LF)	\$49.68
Thermoplastic dashed centerline on bikeway only(\$/LF)	\$0.70
Total Cost per LF	\$56.06
Subcontractor Cost per Mile	\$295,996.80
Add 10% for Mobilization per mile	\$29,599.68
Add 10% for GC Cost per Mile	\$355,196.16

Intersection Treatments

Crosswalk Improvements + Signage (\$/Intersection)	\$20,000.00
RRFB Crossing (\$/Intersection)	\$50,000.00
Curb Extensions (\$/Intersection)	\$40,000.00

Guardrail Cost

Guardrail cost per LF	\$280.00
Subcontractor Cost per mile	\$1,478,400.00
Add 10% Mobilization per mile	\$147,840.00
Add 10% for GC Cost per mile	\$1,774,080.00

Retaining Wall Cost

6' tall cast in place retaining wall per LF	\$309.00	
Subcontractor cost per mile	\$1,631,520.00	
Add 10% Mobilization per mile	\$163,152.00	
Add 10% GC Cost per mile	\$1,957,824.00	

10' tall cast in place retaining wall per LF	\$518.00	
Subcontractor cost per mile	\$2,735,040.00	
Add 10% Mobilization per mile	\$273,504.00	
Add 10% GC Cost per mile	\$3,282,048.00	

Lighting Cost

LED lighting spaced every 100' (\$3000/EA, 100' spacing=\$30/LF)	\$30.00	
Subcontractor Cost per mile	\$158,400.00	
Add 10% Mobilization per mile	\$15,840.00	
Add 10% GC Cost per mile	\$190,080.00	

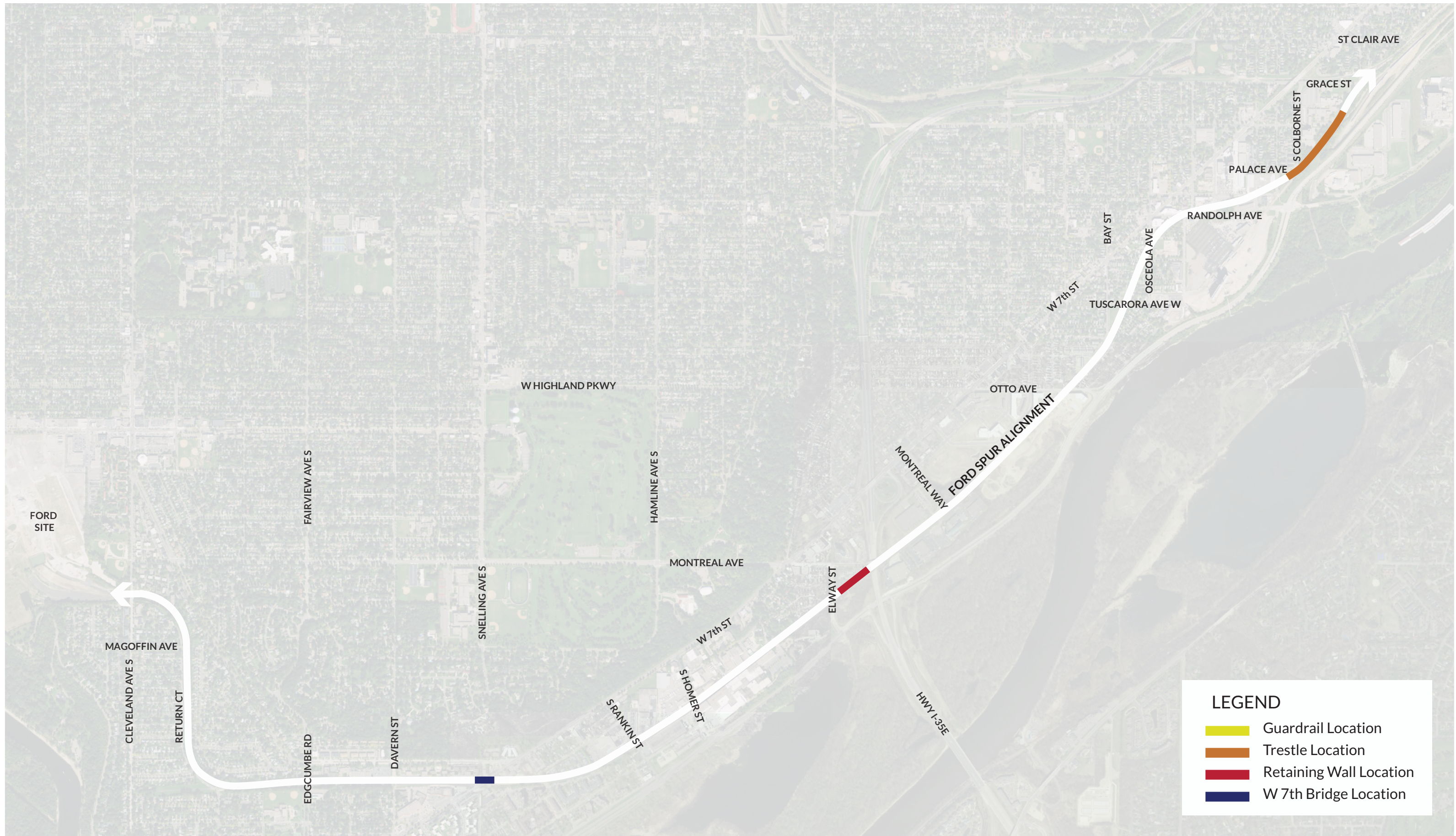
Bridge

Prefabricated 180'x16' @ \$1000/sf	\$2,880,000.00	
10' Retaining walls (350' x 2 x 2)	\$870,240.00	
Fill (35,000 cu yd @ \$8/cu yd)	\$280,000.00	
Subtotal	\$4,030,240.00	
Add 10% Mobilization per mile	\$403,024.00	
Add 10% GC Cost per mile	\$4,836,288.00	

cu yd fill: 31,111

Notes

Includes materials and labor costs



Ford Spur - Guardrail, Trestle, and Retaining Wall Locations Overview

Trail only from Ford Site to Grace St



Ford Spur Operations and Maintenance Report

April 11, 2018

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. Trail maintenance activities typically include pavement preservation and stabilization, landscape maintenance, maintenance of drainage, facility upkeep, sign replacement, mowing, snow removal and litter removal. Maintenance activities required for continuous, safe trail operations should always receive top priority. 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 the 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.

This report discusses general trail operations and maintenance activities for the Ford Spur as well as considerations for winter trail maintenance; it does not cover maintenance and operations associated with transit. The report was written and reviewed in collaboration with the City of Saint Paul Departments of Public Works and Parks and Recreation.

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.

Operations and Maintenance Activities

Surface Maintenance

Cracks, ruts, potholes, and water damage will have to be repaired periodically. To maintain a smooth trail surface, the following are recommended surface maintenance activities for an asphalt trail on the Ford Spur.

Sweeping

The trail should be swept regularly to keep the paved surface free of debris, especially broken glass and other sharp objects, sand, grit and loose gravel, leaves and stray branches. Sweeping should be scheduled based on location, for example, trail segments in wooded areas will tend to accumulate plant litter such as leaves and should be swept more frequently in order to maintain safe surface conditions. Signage can be posted at trailheads to encourage users to report areas of the trail in need of sweeping. At a minimum, there should be one annual sweep at the beginning of spring. If sand is used during the winter for snow friction, additional sweeping should be scheduled after major thaws. Roadway intersections may require more frequent sweeping.

Patching and Sealing

Periodically, potholes and root damage will need to be manually filled and patched, or cracks will need to be sealed. 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.

Resurfacing and Reconstruction

Based on observations and analysis of similar asphalt trails in Minnesota, the pavement will need to be resurfaced every 15 years. Extensive replacement and renovation is anticipated 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.

Pavement markings

Thermoplastic, epoxy, or MMA should be used for pavement markings for the longevity of these materials. Anticipated restriping of the trail would occur every five years, and after pavement resurfacing. Inlaying pavement markings reduce snowplow damage to trail striping and markings.

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 Ford Spur. These activities are described in the following sections and assigned frequencies in Table 1 below.

Table 1: Trail Maintenance Schedule

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 and 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 during spring, summer, and fall; every 5-7 years on slopes
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 immediately as needed
Lighting repair, maintenance	10-15 year relamping; 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

Drainage

To preempt drainage problems along the trail, ditches and drainage structures should be regularly cleared of debris to prevent wash-outs and maintain positive drainage flow. Regular checks for erosion along the trail should be made during the wet season, and immediately after any storm that brings flooding to the area. Providing adequate drainage on the trail will also minimize ice on the trail due to seasonal freeze/thaw cycles.

Vegetation

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 overhanging branches should be pruned to a minimum vertical clearance of 10 feet. Tree canopies may be trimmed for light fixtures or overhead utilities. 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 regular weeding by mechanical means or hand labor should be done on a regular basis. Where mechanical or hand removal of weeds is not possible, the limited application of a state-approved herbicide may be employed to limit vegetation growth.

Monthly (or as needed) mowing along both sides of the trail prevents invasion of plants into the pavement and shoulder areas. Mowing frequency is dependent on rainfall and plant growth, but generally will occur monthly during spring, summer, and fall. To prevent erosion on slopes adjacent to the trail, it is a best practice to mow slopes on a 5-7 year cycle. This periodic maintenance helps prevent slope failures by managing invasive species not conducive to slope stability and by exposing small washouts before they become problematic.

Trash Removal

Trash receptacles should be placed at primary trail access points. Staff or volunteers should empty these receptacles on a regular basis and remove litter along the trail on an as needed basis. Dumping can be controlled by designing trail access points to discourage vehicle access, regulatory signage, and enforcement of fines as much as possible. When dumping does occur, it should be removed as soon as possible in order to prevent further occurrences. Neighborhood volunteers, friends groups, alternative and community service crews may be considered in addition to maintenance staff. Signage should be posted at trailheads indicating a contact number to report illegal dumping.

Graffiti

Graffiti not only affects trail aesthetics; it can also encourage other undesired behaviors, such as littering, crime, and more graffiti. The appearance of graffiti and litter is perceived as an indicator that an area is in decline. Rapid removal of graffiti and illegally dumped materials is critical to maintaining a safe facility and conveying to the community that the trail is cared for and regularly observed. Signage should be posted at trailheads indicating a contact number to report graffiti.

Lighting

At a minimum, light fixtures should be inspected on a yearly basis for cracks, corrosion, anchoring, or other structural damage as well as adequate illumination levels. Light fixtures with LED bulbs are recommended on the Ford Spur for their energy efficiency, light production, and longevity. LED fixtures would have a regular group relamping schedule of every 10-15 years. Aside from this cyclical replacement, bulbs should be replaced as they burn out, and fixtures should be repaired or replaced as needed to maintain safety on the trail. Signage can be posted on light fixtures or at trailheads to encourage trail users to report light outages.

Signage

Signs such as informational kiosks, directional signs, or distance markers should be regularly checked for graffiti or damage, weathering or wear to the sign face or post. Damaged signs should be repaired or replaced on an as-needed basis. On an annual basis, trail signs should be evaluated for sun and water damage and replaced as needed. 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.

Bridge Structures

There are a number of bridge and trestle structures on the Ford Spur that may be modified or newly constructed. These structures should be inspected for structural integrity by a licensed engineer on a frequency established by engineering best practices.

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.

Effort should be made to maintain an ice-free trail to prevent slipping injuries. This will likely require ongoing inspection between snow events to reduce ice buildup and drifting snow is removed promptly. Salt, sand, or de-icing solution should only be used if special circumstances warrant; such as severe ice buildup, to mitigate freeze-thaw cycles on the trail surface, or for immediate safety concerns. Salt or de-icing solutions create runoff that can damage vegetation, structures, vehicles and bicycles. Sand can damage bicycle parts and should be used in limited amounts for traction concerns. Gravel application should be avoided as the smaller tire width of bicycles does not adequately grip to larger aggregate and may cause cyclists to lose control and fall.

Snow stakes may also be used along trail edges so that plows only clear the intended paved surface and the adjacent vegetation is not damaged. Note that snow removal may accelerate the need for major pavement and vegetation maintenance or reconstruction during summer months.

Snow storage should be anticipated in the design of drainage and planting areas to reduce damage, replacement, and maintenance needs.

Cost Considerations

Maintenance costs are variable across organizations and places. Many maintenance needs are unpredictable and completed “as needed.” These costs are context dependent and can include items such as storm response and trail surface rehabilitation, which are less regular. However, some activities are routine and can be regularly planned. Some of the factors that affect per mile operations and maintenance costs can include the following:

- Degree to which costs are borne by existing Parks and Recreation and Public Works budgets
- Intensity of use of the trail and associated amenities
- Degree to which volunteers contribute to minor maintenance activities
- Context such as cost of living and wages in the area
- Environmental conditions such as extreme temperatures

The operational costs in the tables below have been derived through information from St. Paul Parks and Recreation and Public Works staff, a review of trail maintenance literature including the 2005 Rails-to-Trails Conservancy *Rail-Trail Maintenance & Operation: Ensuring the Future of Your Trail-A Survey of 100 Rail-Trails*, the Hennepin County Bikeway Maintenance Study, and consideration of Ford Spur objectives. Table 2 provides estimated costs for surface maintenance activities and the recommended frequency of these activities. Table 3 provides estimated annual labor and equipment costs for routine maintenance activities. These cost estimates were provided by Saint Paul Parks and Recreation.

Table 2: Estimated Costs for Surface Maintenance

Surface Maintenance Task	Recommended Frequency	Estimated Cost/Mile	Estimated Cost for Five-Mile Ford Spur Trail
Crack Sealing	5-8 years	\$2,200-\$5,500	\$11,000-\$27,500
Fog Sealing	5-8 years	\$1,700-\$4,700	\$8,500-\$23,500
Microsurfacing	5-8 years	\$15,700-\$19,000	\$78,500-\$95,000
Resurfacing	15 years	\$53,000	\$265,000
Reconstruction	25-30 years	\$350,000-\$550,000	\$1,750,000-\$2,750,000

Table 3: Estimated Annual Costs for Routine Maintenance (Excluding Surface – See Table 2)

Routine Maintenance Task	# of Times per Season	Labor Category	Hours per Maintenance Event	Labor Cost	Equipment Type	Equipment Cost	Estimated Annual Cost Per Mile	Estimated Annual Cost for Five-Mile Ford Spur Trail
Winter Maintenance								
Plow snow (Nov - April)	18	PW3	1	\$532	Pick up W/ plow	\$113	\$645	\$3,227
Broom trail (Nov - April)	18	PW3	1.5	\$532	Tool cat	\$381	\$914	\$4,568
Sand occasionally for ice	8	PW3	1	\$237	Sand truck	\$70	\$307	\$1,533
Snow removal	3	PW3	3	\$355	Tool cat	\$127	\$482	\$2,410
		PW3	3	\$266	Dump truck	\$62	\$328	\$1,642
Litter Pick up (Oct - April)	28	PW1	0.5	\$198	Pick up truck	\$88	\$286	\$1,428
spring turf repair - seeding	1	PW3	1	\$30	Pick up truck	\$6	\$36	\$179
mowing (May - October)	18	PW3	0.5	\$266	580- d	\$362	\$628	\$3,139
					Z-turn	\$273	\$273	\$1,366
					Pick up	\$113	\$113	\$566
					Trailer	\$68	\$68	\$340
Summer maintenance								
Empty trash containers	52	PW3	0.5	\$367	Load n Pac	\$847	\$1,214	\$6,068
weed whip (May - Oct)	18	PW1	1	\$254	Utility vehicle	\$68	\$322	\$1,612
Blow off trail	18	PW1	0.25	\$63	Backpack blower	\$19	\$82	\$411
Minor tree maintenance	1	PW3	1	\$30	Pruner	\$0	\$30	\$148
Storm Damage	2	PW3	1.5	\$89	Chain saw	\$4	\$93	\$464
					Pick up truck	\$6	\$6	\$31
Litter pick up May - Oct	56	PW1	0.5	\$395	Utility vehicle	\$213	\$608	\$3,039
Empty trash containers	78	PW3	1	\$532	Load n Pack	\$2,540	\$3,073	\$15,364
Amenity upkeep/repair	4	GCL	1	\$129	Pick up truck	\$25	\$154	\$769
Total Estimated Cost				\$4,145		\$5,362	\$9,507	\$47,536