

DECEMBER 2018

Connecting People to the Mississippi River

*A Study to Identify New Opportunities to Connect
People to the Mississippi River When Using the
Mississippi River Regional Trail (MRRT)*

Dakota
COUNTY

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MRRT along the levee in South St Paul

Image Credit: metrobiketrails.weebly.com

SECTION 1

Introduction

Introduction

The national Mississippi River Regional Trail (MRRT) follows the country's iconic river along its 3,000-mile course from Lake Itasca to the Gulf of Mexico. Twenty-seven miles of this trail travels through Dakota County from the northern edge of South St. Paul through Inver Grove Heights, Rosemount, Nininger to downtown Hastings. In Dakota County, trail use has steadily increased as trail sections are completed, with 207,700 estimated visits in 2017 (up from 27,000 visits in 2011). In 2019 construction will begin on the connection from Kaposia Landing to the City of St. Paul, and the last remaining 2 mile segment in Dakota County, Rosemount East, is currently in design.

Created over the last 20 years, this corridor connects cities, riverfront parks, and natural areas. While portions of the trail provide a quality experience and remarkable views, such as the sections in South St. Paul and Spring Lake Park Reserve, there are significant stretches that are disconnected from the river and have little to no identification as one of Dakota County's premier regional greenway trails. Given the anticipated completion as early as 2021, there is a need to improve the trail experience so that the MRRT lives up to its national, state, and regional significance.

Study Purpose

The purpose of this project is: to identify ways to increase access to the Mississippi River Regional Trail; to improve visibility and access to the Mississippi River; and to improve quality of the trail experience. This study synthesizes existing plans and identifies new ideas to better connect people to the Mississippi River when using MRRT. This study is focused on four areas for improvement:

1. Physical access to the MRRT and the Mississippi River
2. River views
3. Recreation opportunities (places to picnic, walk, hold events, enjoy nature)
4. Trail design signature including interpretation, branding, wayfinding, river cues, plantings, support facilities (benches, restrooms, water, waste receptacles)

Study Process

The study began was conducted in 2018 and was organized into four phases: 1) project organization, 2) existing conditions analysis, 3) identification of opportunities, and 4) prioritization and implementation strategy.

Introduction

This document presents inventory, analysis, and opportunities to improve the MRRT experience along the open sections of MRRT. The Rosemount East and West sections have not been included. Section 3 - Implementation addresses phasing, presents estimated costs, and funding sources.



MRRT in Downtown Hastings

Image Credit: caferacer42



SECTION 2

MRRT Existing Conditions, Analysis, and Opportunities

Evaluation Framework

Existing conditions along the Mississippi River Regional Trail's (MRRT) 27 miles vary based on land use context, existing vegetation, flood control structures, year constructed, and physical relationship to the Mississippi River.

Evaluation of the MRRT began with development of a trail typology to organize the different type of views, trail access, river access, recreation, and trail signature needed along the MRRT to achieve the overall project goals.

Next, instances of river views, MRRT access, Mississippi River access, recreation, and elements that contribute to the overall trail signature were identified and mapped. These include existing conditions as well as ideas that have already been proposed in adopted plans. These are depicted on the map *MRRT-At-A Glance: Existing and Proposed* on page 12.

The 2010 Dakota County Greenway Guidebook established design performance goals for Greenways. In the guidebook, goals related to views, natural design signature, road crossings, trailheads, habitat/landscaping, interpretation, and wayfinding, amenities are outlined.

Specific goals outlined in the guidebook are as follows:

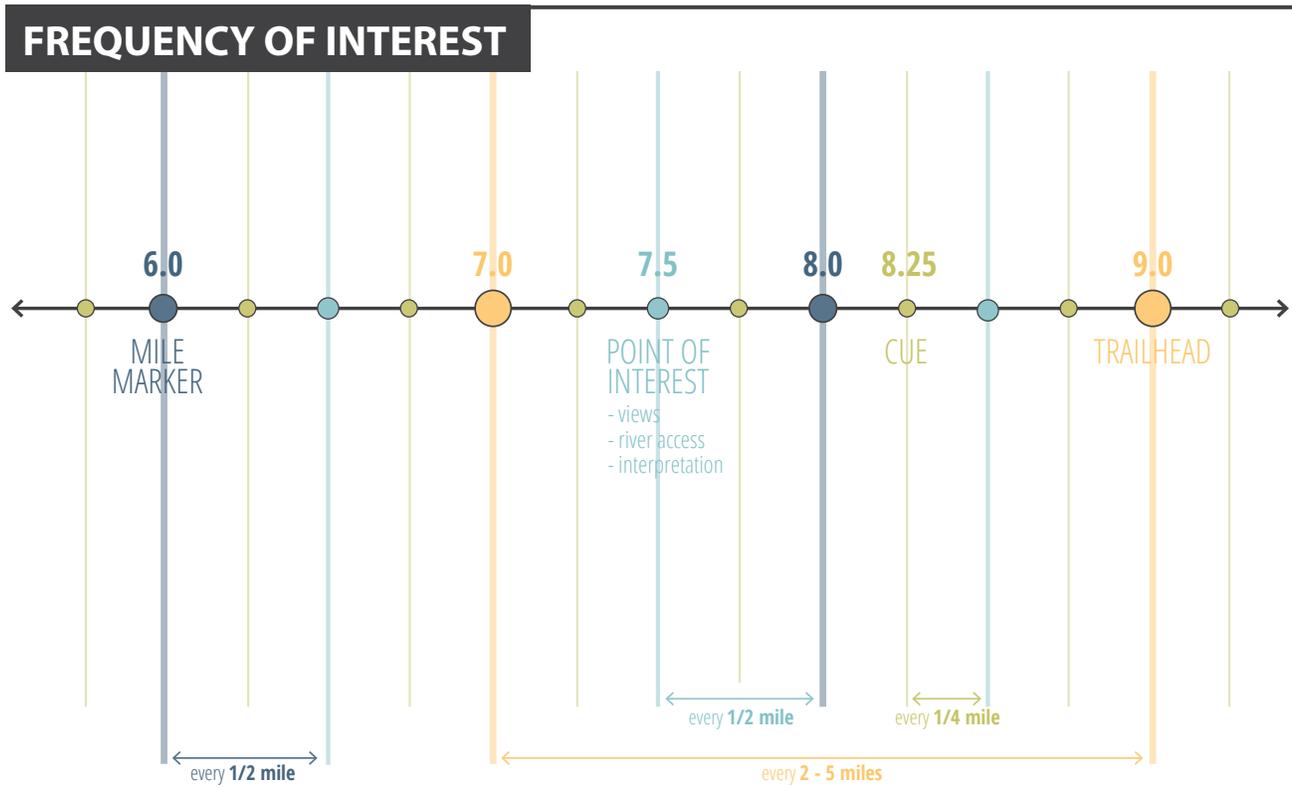
- Trailhead - Every 2 – 5 miles
- Kiosk - At trailheads and greenway intersections
- Mile Marker - Every 1/2 mile

Performance goals for views, habitat restoration, interpretation, way finding, amenities (benches, picnic tables, shade) are less specific in the Greenway Guidebook and are recommended based on land use context, where needed, or where opportunities allow.

For this MRRT study, the goal of providing a point of interest such as a trailhead, recreation destination, view with a bench and shade, river access, or interpretation every half mile (10 minute walk) and a MRRT cue every quarter mile (5 minute walk) along the MRRT was established. MRRT cues are elements that contribute to trail signature, or brand, and include wayfinding signage, mile markers, pavement markings, interpretation, that would occur between points of interest. See page 10 for examples of river cues.

Distance and frequency between existing and proposed points of interest along the MRRT was assessed to identify priority areas where new MRRT access, river views, recreation, and enhanced trail signature are needed. Three areas of focus were identified: Gun Club Corridor; Concord Boulevard, and Lock Boulevard. The priority areas are identified on the map, *MRRT At-A-Glance: Priority Areas* on page 13.

Evaluation Framework



The goal of providing a point of interest such as a trailhead, recreation destination, view with a bench and shade, river access, or interpretation every half mile (10 minute walk) and a MRRT cue every quarter mile (5 minute walk) along the MRRT was established.

The map, *MRRT-At-A-Glance Preliminary Opportunities* on page 14, provides an overview of initial ideas for improving the overall MRRT experience. These are followed by more detailed maps and listings of existing conditions, improvements already proposed in adopted plans, upcoming projects, and initial ideas for improvements organized by trail section. Work presented is based on site visits, review of existing adopted plans, and meetings with South St. Paul, Inver Grove Heights, and Hastings staff.

Trail Typology

A trail typology was developed to organize the different types of views, access, recreation and trail signature needed along the MRRT to achieve the overall project goals. Project goals are: increasing access to the MRRT; increasing access from the MRRT to the Mississippi River; increasing views of the river; providing recreation opportunities; and enhancing the trail design signature.

TRAIL ACCESS



TRAILHEAD



NEIGHBORHOOD
GATEWAY



CROSSING
IMPROVEMENT

RIVER ACCESS



BOAT LAUNCH



RIVER GET DOWN

VIEWS



LONG VIEW



ADJACENT VIEW



TOWER



OVERLOOK

Trail Typology

RECREATION



ACTIVITY CENTER



PICNIC/REST



CAMPING



RENTAL

TRAIL SIGNATURE



INTERACTIVE
INTERPRETATION



RIVER CUE



WAYFINDING



VEGETATION

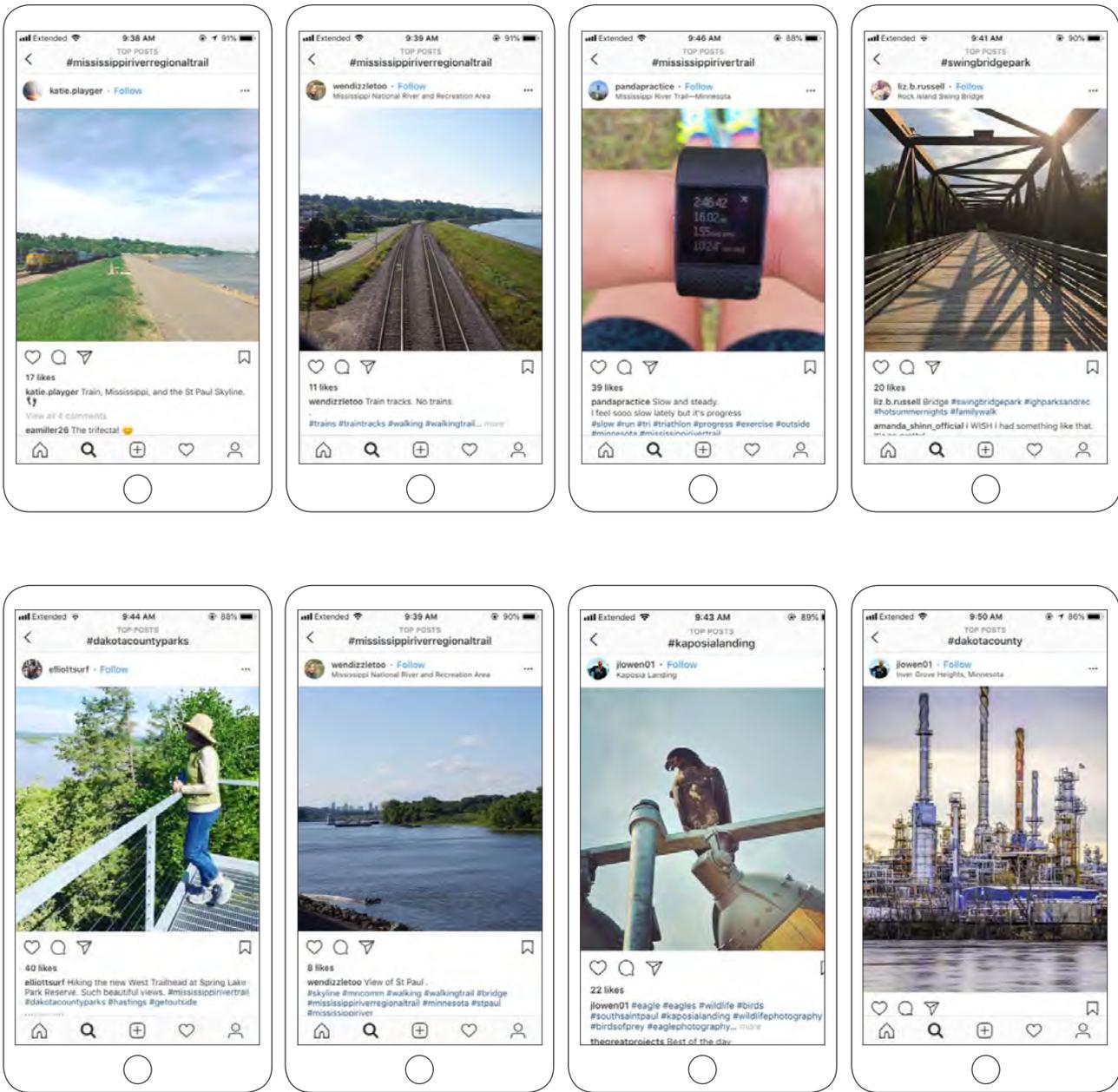
MRRT River Cue Precedents

MRRT river cues are elements that contribute to trail signature, or brand, and include wayfinding signage, mile markers, pavement markings, and interpretation. These would occur between points of interest. These elements are intended to remind the trail user that they are near the Mississippi River in locations where the river is not visible from the MRRT.



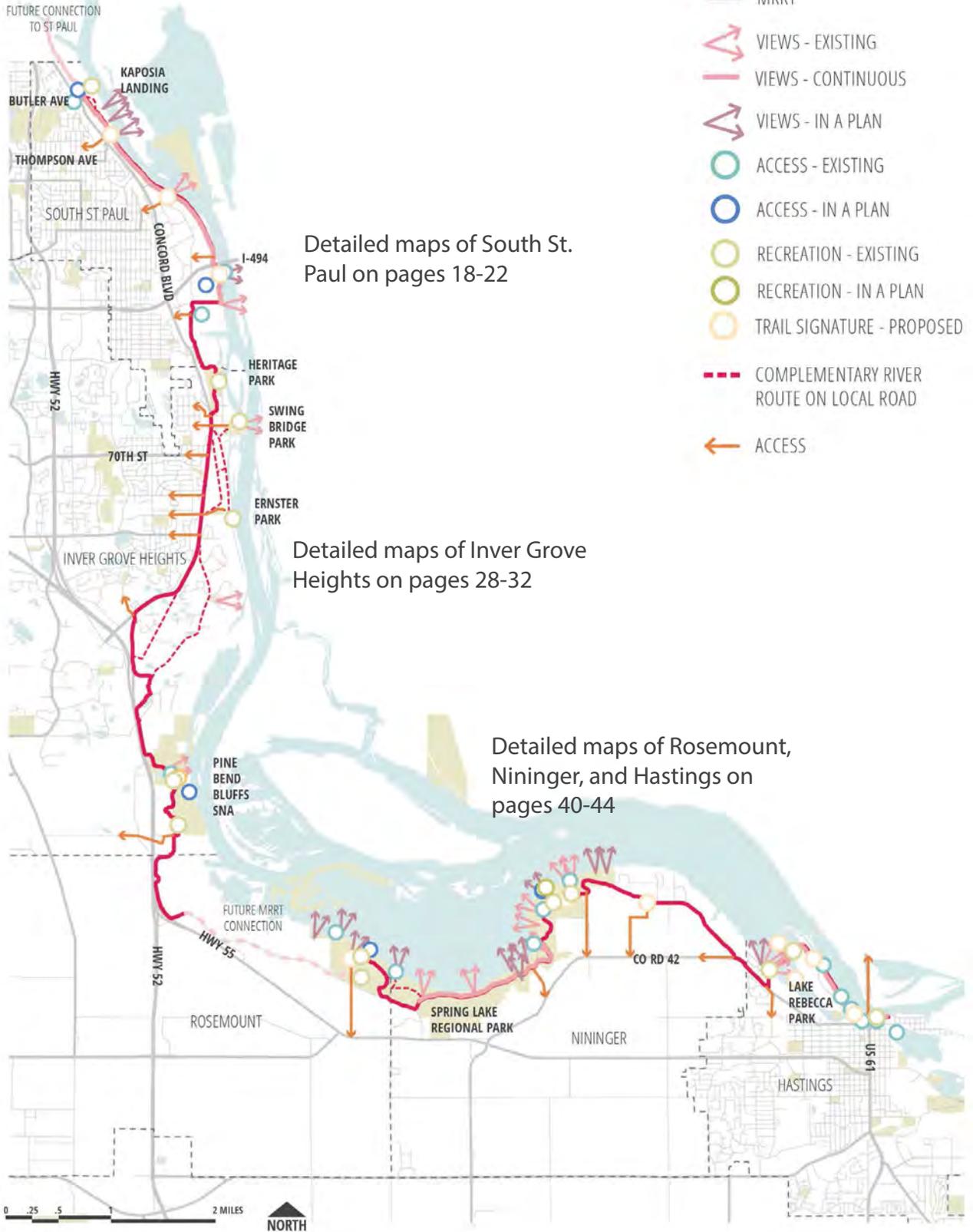
Social Media

A review of what MRRT users are posting on social media was conducted to better understand what existing trail users are drawn to and inform recommendations for improvements. Interestingly, people seem to be drawn to the natural and industrial character of the river.



MRRT At-A-Glance

EXISTING & PROPOSED*



MRRT At-A-Glance

PRIORITY AREAS



MRRT At-A-Glance

FUTURE OPPORTUNITIES



Existing Conditions, Analysis, and Preliminary Opportunities by Section

Existing conditions and trail analyses, and identification of preliminary opportunities were conducted through a series of site visits, project team meetings, review of existing plans, and individual interviews with city staff.



A sunrise ride on the MRRT near Kaposia Landing

Image Credit: caferacer42

South St. Paul

EXISTING CONDITIONS & ANALYSIS

Note: In the lists that follow, + indicates a positive attribute, and - indicates a need

Physical Access

- + Existing trailheads at Kaposia Landing and Wakota Boat Launch
- + Intersection with River to River Greenway
- Infrequent MRRT access from local streets
- Bryant Avenue bridge lacks separated ped-bike trail
- Neighborhood access identification needed at Hardman Ave S./ Richmond St. SE and Hardman Ave S/ Malden St
- Frequent informal opportunities to get down to the Mississippi River but no formal access

River Views

- + Consistent river views
- + Existing river overlook south of the Danner property
- + Opportunity for overlook bench at the swing bridge at the north end of Kaposia Landing
- Locations where vegetation management between the levee and the river could open more filtered views
- MRRT trail in Kaposia Landing is not close to the river, though a there is a riverside paved park trail

Recreation

- + Kaposia Landing provides a location for events, active, and passive recreation
- + Shore fishing is popular, there is opportunity to create formal fishing locations
- South St. Paul's Packer Preserve south of Danner property does not have formal access or trails, though people do walk there
- Kaposia Landing lacks a non-motorized boat launch

Trail Signature

- + Benches and interpretation at regular intervals along the trail
- Lack of shade along levee portions of the trail
- Areas where native plantings could be restored

Adopted Plans

- **Kaposia Landing Master Plan**, *South St. Paul*, 2014
- **Mississippi River Experience + Design Plan**, *Dakota County*, 2014
Interpretive nodes identified at south end of Kaposia Landing and Stockyards

South St. Paul

EXISTING CONDITIONS & ANALYSIS

Current and Upcoming Projects

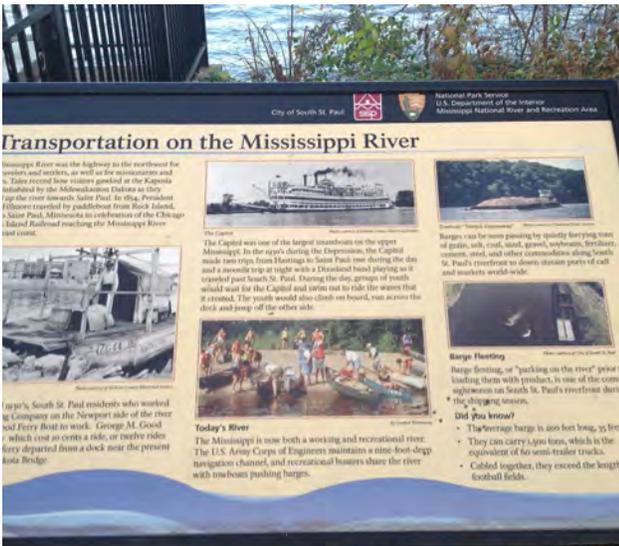
- **MRRT Connection to St. Paul, Dakota County;** 2018 design, 2019-2020 construction
- **Kaposia Landing Phase 2, South St. Paul;** playground, internal trails, lighting, parking; 2019
- **Stockyards Interpretive Node, Dakota County;** 2018 design
- **Wakota Trailhead and Overlook, South St. Paul;** 2018-2019 design



Kaposia Landing



Wacota boat launch



Interpretive signs in South St. Paul



Existing overlook south of the Danner Property

South St. Paul

VIEWS



South St. Paul

ACCESS



- MRRT
- FUTURE OPPORTUNITY
- IN A PLAN
- EXISTING
- BOAT LAUNCH
- NEIGHBORHOOD GATEWAY
- CROSSING/LOCAL ACCESS IMPROVEMENT
- TRAILHEAD
- RIVER GET DOWN
- ← ACCESS
- COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD

OPPORTUNITIES

- A1**
Install access to river & non motorized boat launch
- A2**
Create pedestrian and bike connection on Bryant Ave bridge
- A3**
Add MRRT monument sign on Kaposia Landing at Bryant Ave
- A4**
Create 'river get down' near Grand Ave access
- A5**
Add neighborhood gateway at Grand Ave
- A6**
Create river accesses for fishing at Wildflower Levee Park
- A7**
Create neighborhood gateway at Hardman Ave and Richmond St SE
- A8**
Improved local ped bike access on Richmond St SE
- A9**
Trailhead wayfinding signs on major roads

South St. Paul

RECREATION



- MRRT
- FUTURE OPPORTUNITY
- IN A PLAN
- EXISTING
- 🏠 ACTIVITY CENTER
- 🍽️ PICNIC / REST
- 🏕️ CAMPING
- 🚣 RENTAL

- - - COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD

OPPORTUNITIES

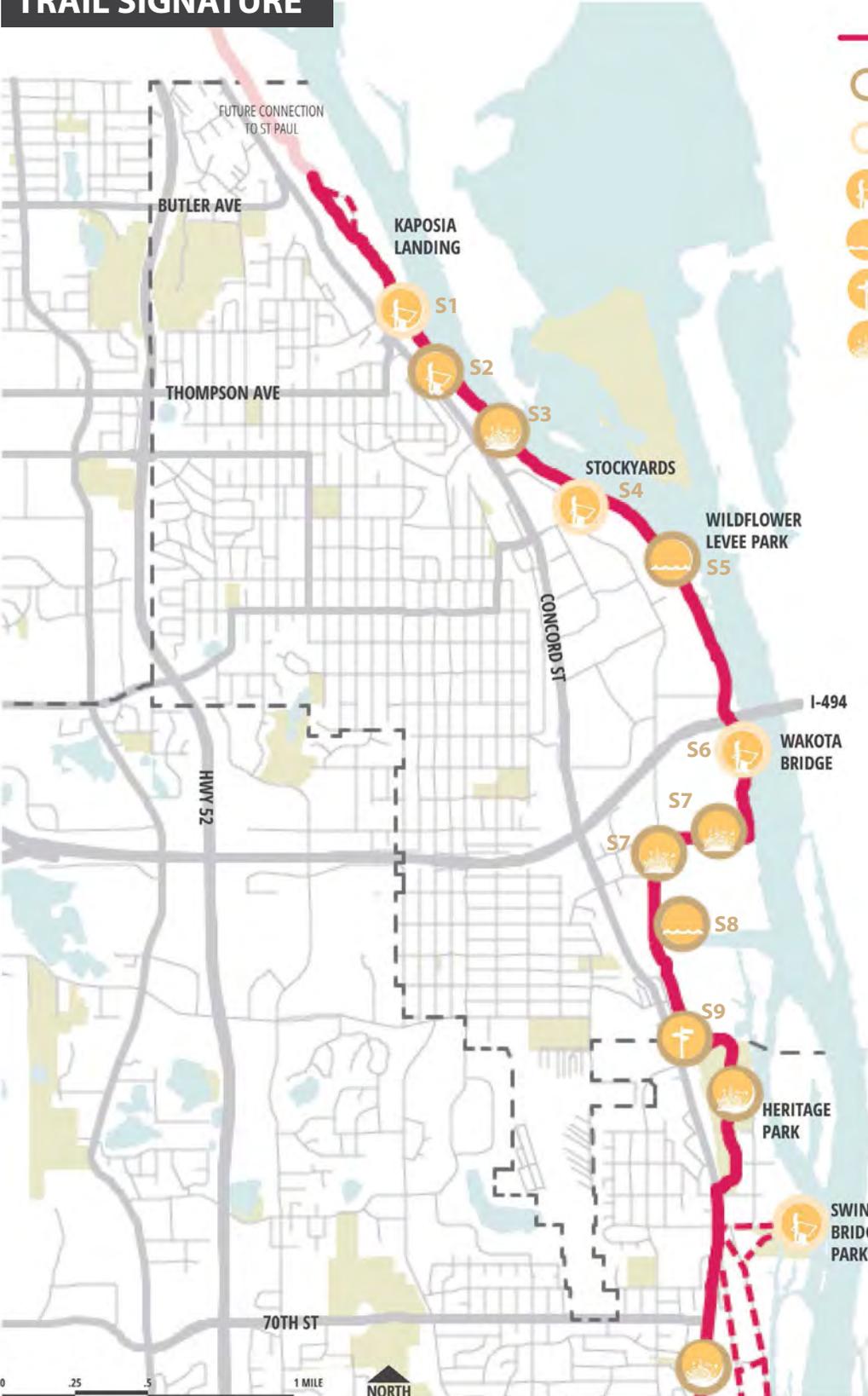
- R1**
Support South St. Paul in development of Kaposia Landing
- R2**
Create canoe/kayak launch within Kaposia Landing as part of paddle share
- R3**
Create formal rest stop at Wildflower Levee Park
- R4**
Work with South St. Paul to improve Wakota Trailhead
- R5**
Add natural surface walking trails in Packer Preserve & manage floodplain forest

Corridor

Explore opportunities for and encourage bike share

South St. Paul

TRAIL SIGNATURE



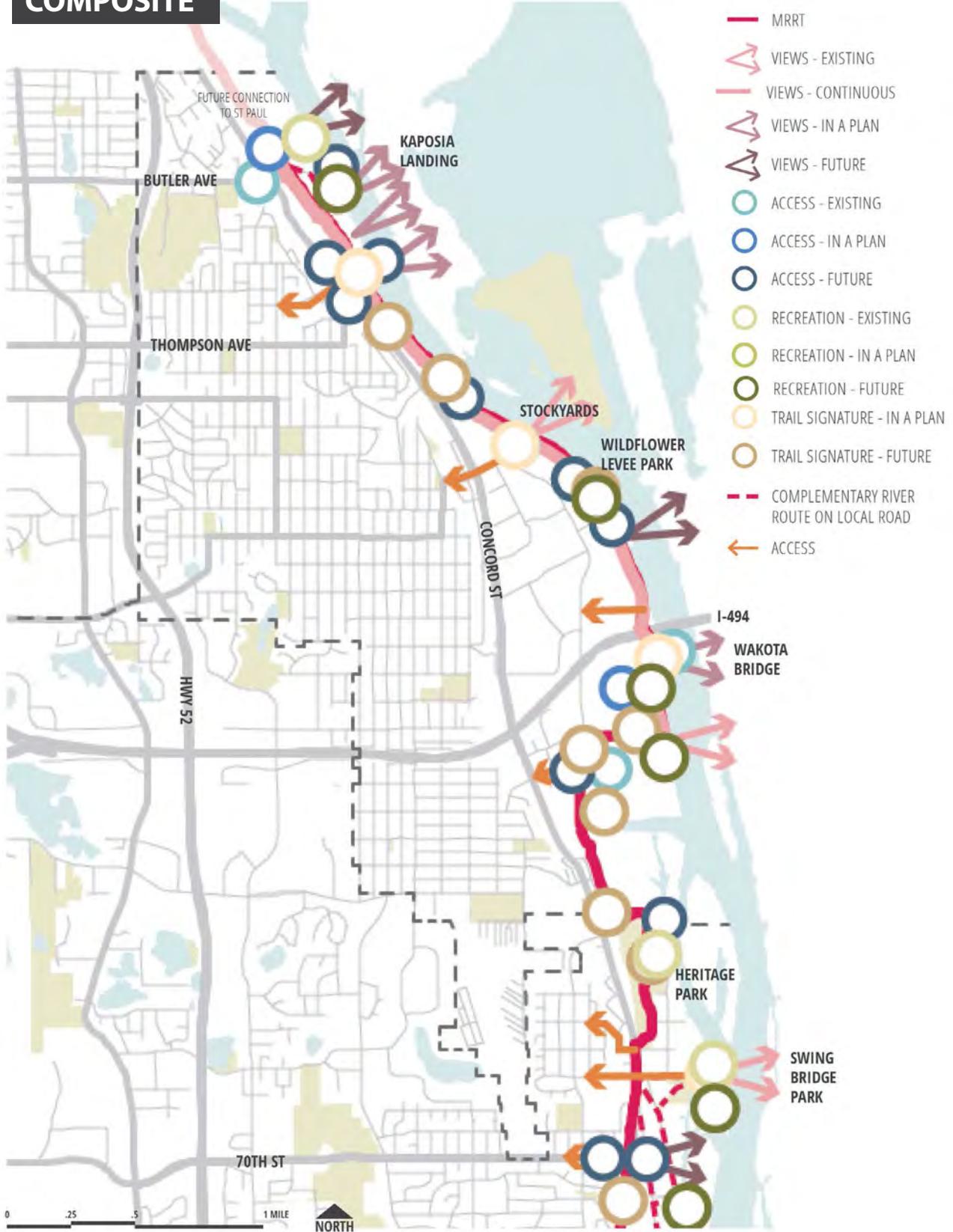
- MRRT
- FUTURE OPPORTUNITY
- IN A PLAN
- INTERPRETATION
- RIVER CUE
- WAYFINDING
- VEGETATION

OPPORTUNITIES

- S1**
Implement Kaposia Landing Monorail interpretive node
 - S2**
Interpretation opportunity at former farm location
 - S3**
Plant prairie above floodwall
 - S4**
Implement Stockyards interpretive node design
 - S5**
Add river cues to floodwall
 - S6**
Implement Wakota Bridge interpretive node
 - S7**
Plant native species and improve wetland vegetation
 - S8**
Add river cues - Richmond Ave to Heritage Park
 - S9**
Add South St. Paul / Inver Grove Heights boundary monument
- Corridor**
Add shade at existing bench locations, mile marker signs, and update existing kiosks

South St. Paul

COMPOSITE



South St. Paul

OPPORTUNITIES

River Views

- V1. Add a bench, shade, and interpretive overlooking the existing swing bridge on the north end of Kaposia Landing
- V2. Designate the riverside trail in Kaposia Landing the MRRT and improve to regional trail standards. Current MRRT alignment would become an internal park trail
- V3. Manage vegetation between the levee and river south of Bryant Avenue to provide filtered views of the river
- V4. Improve existing overlook south of Danner property, consider creating a platform over the river

Physical Access

- A1. Install stairs and ADA access to the river at the inlet south of the Kaposia Landing ball fields and identify location for non-motorized boat launch
- A2. Create ped-bike connection on or next to Bryant Ave bridge
- A3. Add MRRT monument sign on Kaposia Landing at Bryant Ave
- A4. Create river get down near Grand Ave access
- A5. Create neighborhood gateway at Grand Ave access
- A6. Create river access and shore fishing opportunities on the north and south ends of Wildflower Levee Park
- A7. Create neighborhood gateways with MRRT kiosk, bench, trash receptacle, and plantings at Hardman Ave S/ Richmond St SE
- A8. Improve ped bike connection on Richmond St SE for local access
- A9. Work with appropriate jurisdictions to place MRRT trailhead wayfinding signs on major roads

Recreation

- R1. Support South St. Paul in development of Kaposia Landing
- R2. Create a canoe/kayak launch within Kaposia Landing, as part of paddle share
- R3. Create formal rest area at Wildflower Levee Park
- R4. Support City of South St. Paul in implementing Wakota Trailhead design, when complete (design anticipated 2019)
- R5. Create natural surface trail network and manage floodplain forest in Packer Preserve Corridor - Explore opportunities for and encourage bike share

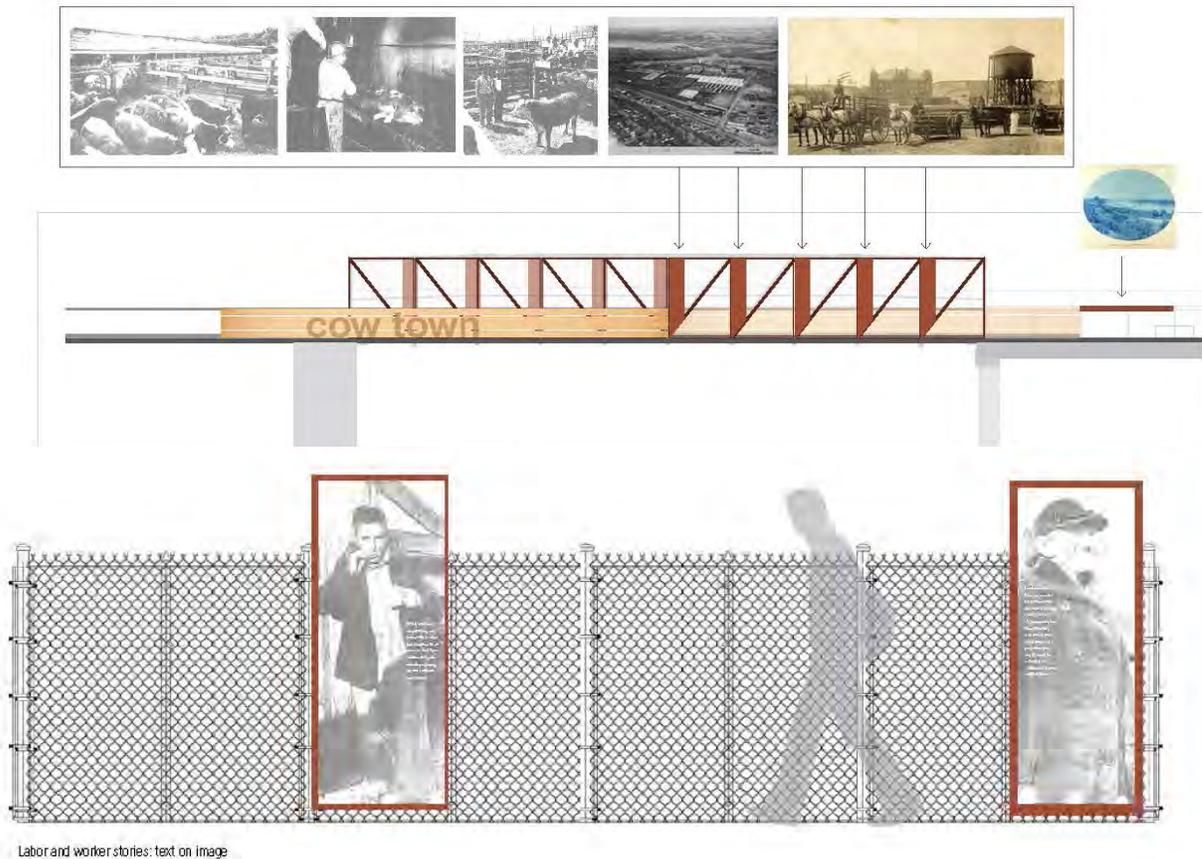
South St. Paul

OPPORTUNITIES

Trail Signature

- S1. Implement Kaposia Landing monorail interpretive node (*MRRT Experience + Design Plan*)
 - S2. Interpretive opportunity at former farm home location
 - S3. Plant prairie above the floodwall, Kaposia Landing to Wildflower Levee Park
 - S4. Implement design for Stockyards interpretive node (*MRRT Experience + Design Plan*)
 - S5. Place river cues on the floodwall
 - S6. Implement Wakota Bridge interpretive node (*MRRT Experience + Design Plan*)
 - S7. Plant native species and improve wetland vegetation, overlook to Heritage Village Park
 - S8. Add river cues, Richmond St to Heritage Village Park
 - S9. Add monument marker at South St. Paul/Inver Grove Heights boundary
- Corridor: Install shade at bench locations – shade structure or trees depending on levee condition; add mile markers at 1/2 mile intervals; add river cues, update existing kiosks

STOCKYARDS INTERPRETIVE NODE DESIGN



The Stockyards Interpretive Node Concept from 2014 Mississippi River Design + Experience Plan, is currently in the design phase.

South St. Paul

OPPORTUNITIES

EXISTING LEVEL



PROPOSED RIVER GET DOWN ON LEVEL



Inver Grove Heights

EXISTING CONDITIONS & ANALYSIS

Note: In the lists that follow, + indicates a positive attribute, and - indicates a need

River Views

- + Wonderful views at Swing Bridge Park
- + Pine Bend Bluffs SNA has great river views that could be enhanced with vegetation management and signage to make MRRT users aware of view locations
- This 8 mile section of trail lacks views of the river or river valley, with the exception of Pine Bend Bluffs and Swing Bridge Park
- Potential opportunities for river valley views near 70th Street/CR 26, River Heights Park, Ernster Park (off the MRRT). Would require vegetation management and overlook structures
- Potential connection to and views from the Katharine Ordway Natural History Study Area

Physical Access

- + Trailhead at Swing Bridge Park
- + Trailhead at Pine Bend Bluffs SNA
- Access from residential areas on the Concord Blvd. section of MRRT is frequent, but crossing Concord Blvd is a barrier
- Four miles along Concord Blvd lacks connectivity to the river
- South of Pine Bend Elementary School, access to the MRRT is limited
- Safe neighborhood crossings of Concord St needed at 70th St, 73rd St, 75th St, and 80th St
- 70th St/CR 26 lacks a trail on the south side and 80th St E /CR 28 lacks a trail on the north side of the street
- No existing locations to get down to the river though Swing Bridge Park and Heritage Village Park though both offer opportunities to create formalized access
- Pine Bend Bluffs SNA does not provide physical access to river and lacks MRRT signage from 111th St E
- River Heights Marina offers river access, though not visible from the MRRT

Recreation

- + Heritage Village Park currently offers passive recreation, Master Plan calls for a playground, interpretation, picnic shelter, and a small performance area
- + Swing Bridge Park offers picnicking
- + Pine Bend Bluffs SNA offers picnicking and hiking
- + Ernster Park, Riverfront Park and River Heights Park are approx. ½ mile from the MRRT offer passive recreation

Inver Grove Heights

EXISTING CONDITIONS & ANALYSIS

Trail Signature

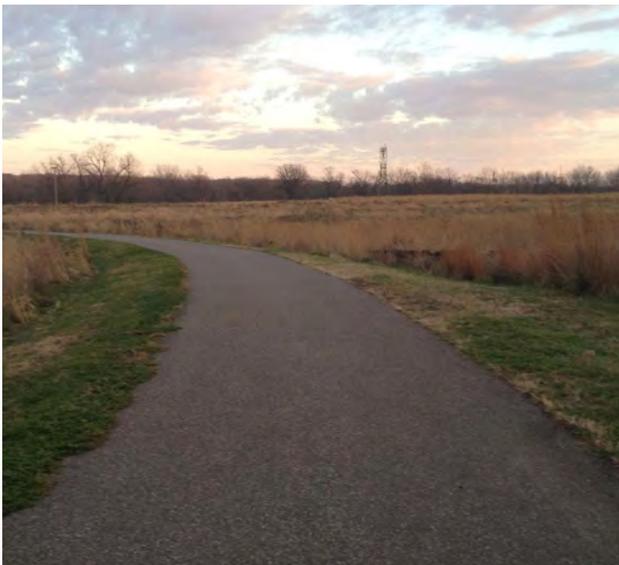
- The Concord Blvd/Cahill Ave, Inver Grove Trail sections of the MRRT lack design signature beyond wayfinding signs. Because these areas have no visual or physical access to the river, improving the design signature with benches, signage and improved crossings at intersecting streets, interpretation, pavement wayfinding, shade trees and natural plantings would greatly improve the MRRT experience.

Adopted Plans

- **Heritage Village Park Master Plan**, *Inver Grove Heights*
- **Mississippi River Experience + Design Plan**, *Dakota County*, 2014
Interpretive node identified at Pine Bend Bluffs

Current and Upcoming Projects

- **Heritage Village Park Improvements**, *Inver Grove Heights*; 2019 construction
Off-leash dog area, parking, shelter, trail to Swing Bridge Park
- **Swing Bridge Park Interpretation**, *Dakota County*; 2019 installation
- **Pine Bend Bluffs Interpretation**, *Dakota County*; 2019 installation
- **Vegetation management and signage at River Heights Park**, *Inver Grove Heights*; 2018
- **Chief Medicine Bottle Monument Reconstruction**, *Dakota County*; 2019
- **Repave Cahill Ave section of MRRT**, *Dakota County*; 2019

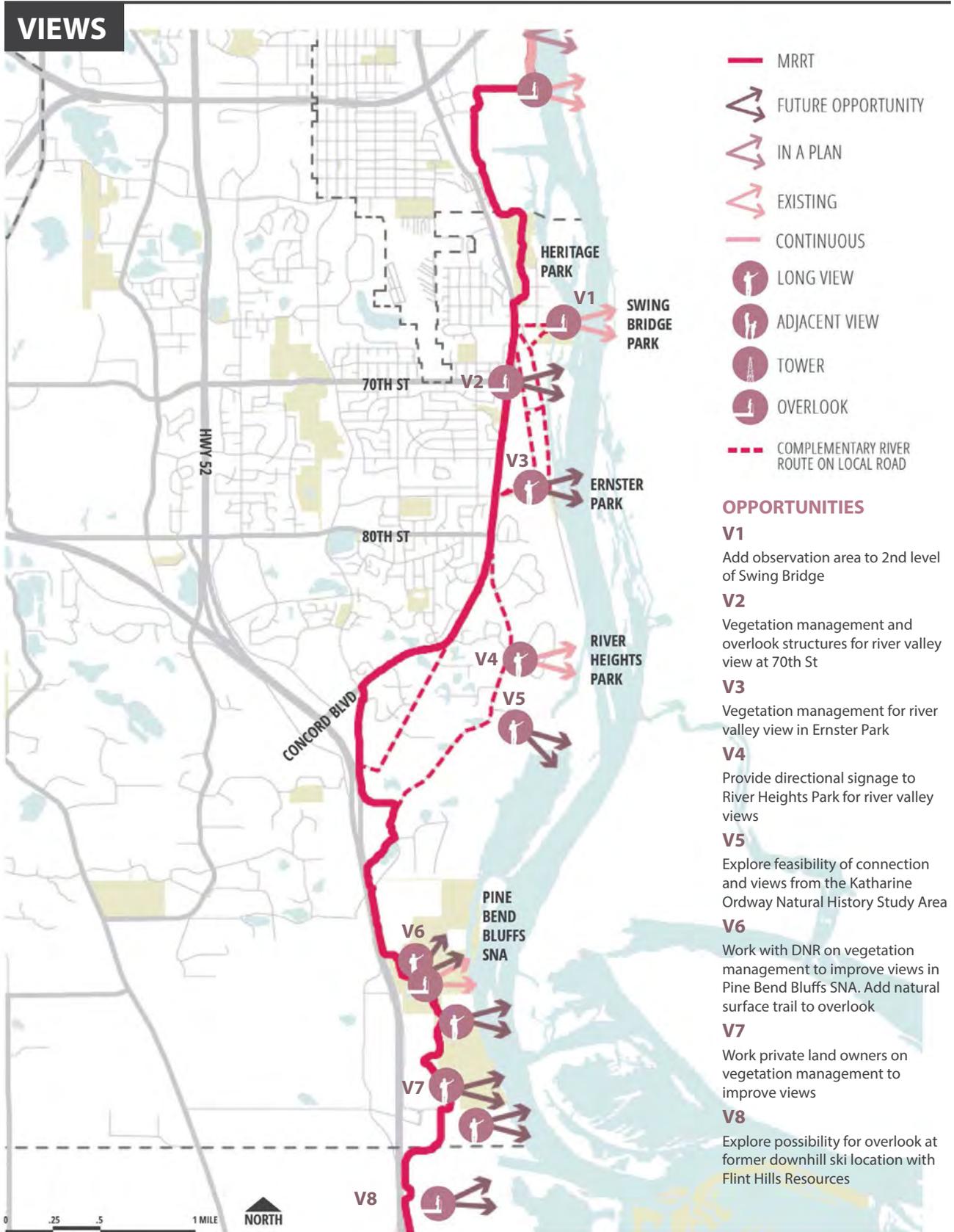


MRRT in Heritage Park

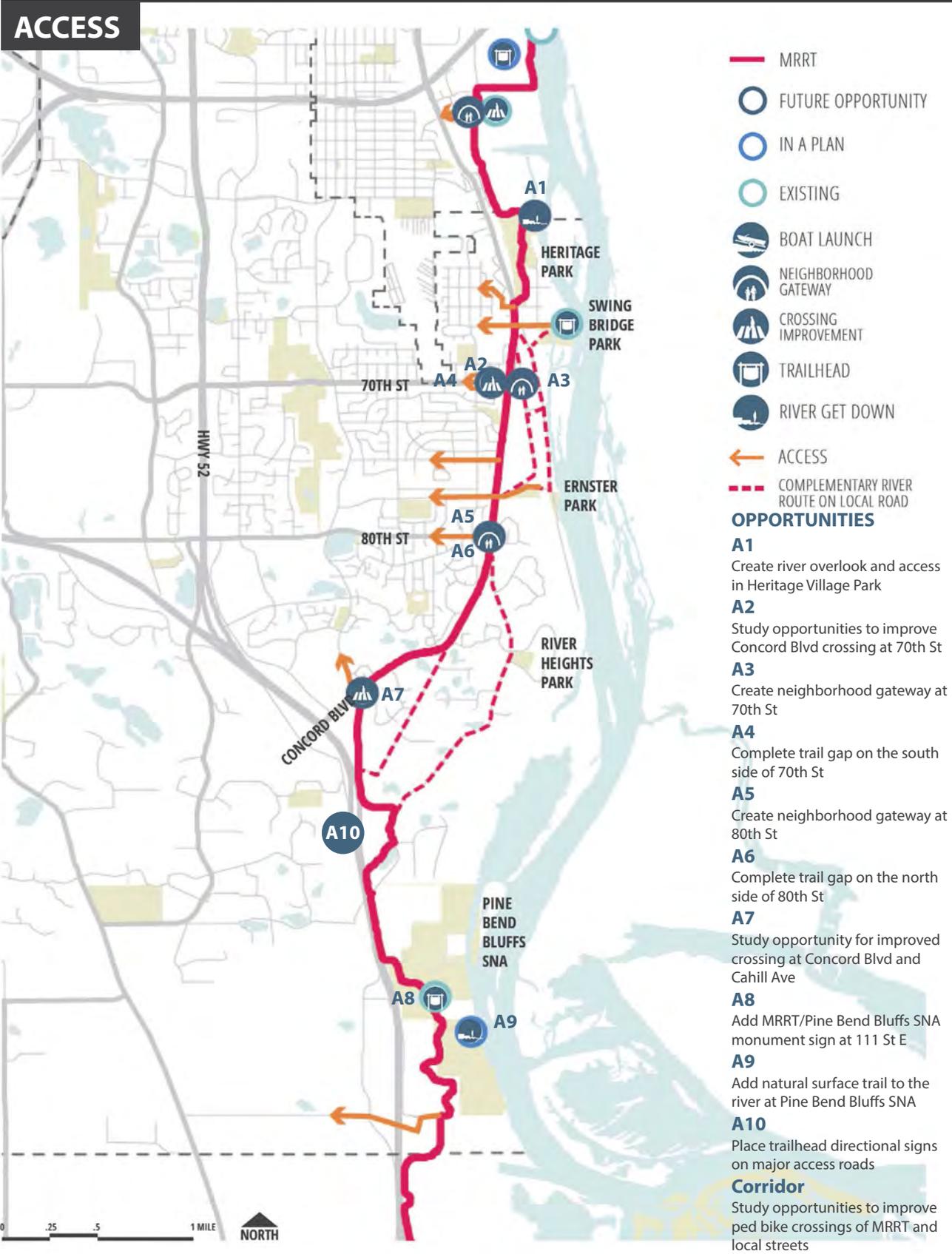


Along Concord Blvd the MRRT lacks shade, places to rest, and regional trail identity

Inver Grove Heights



Inver Grove Heights

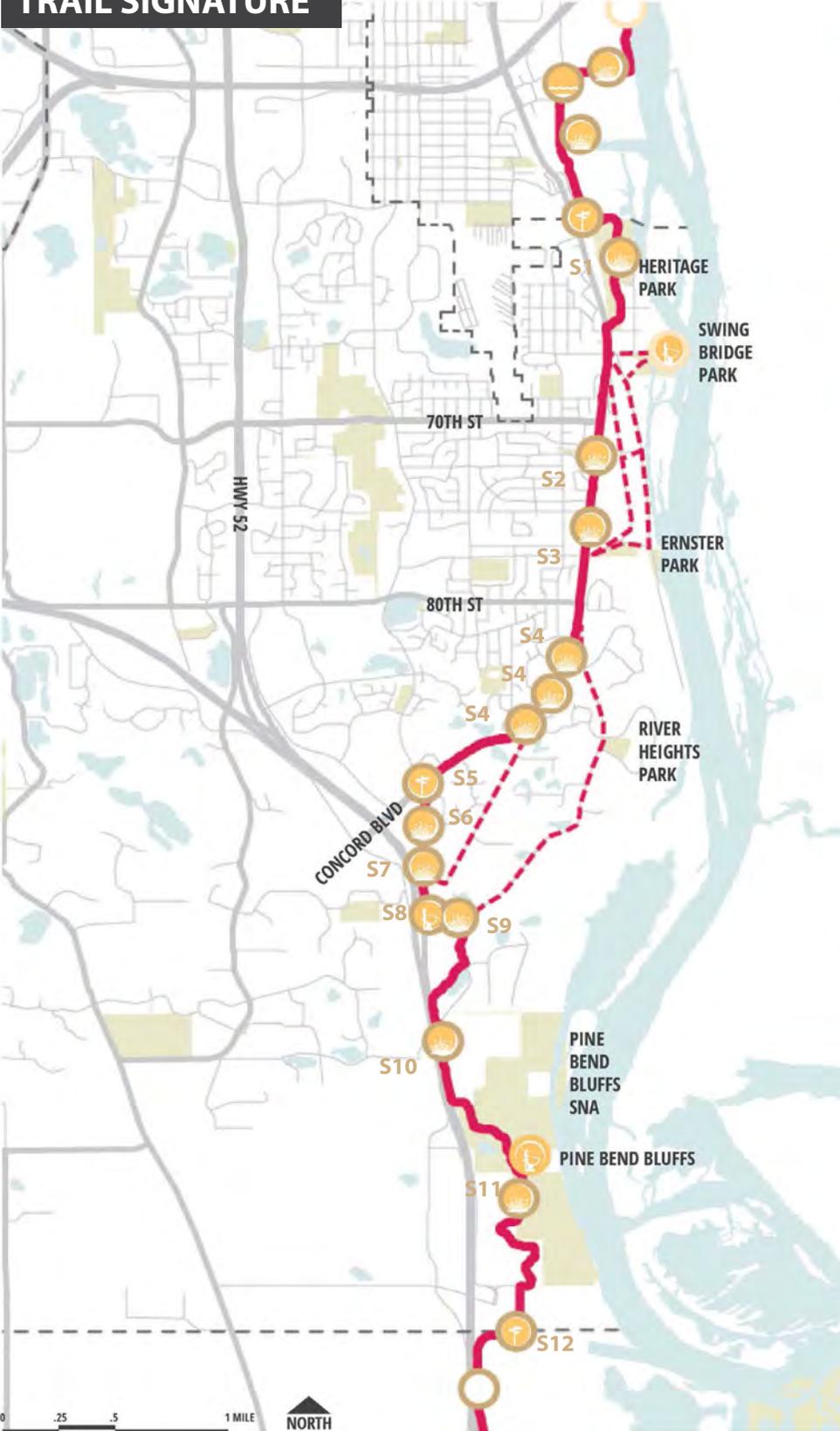


Inver Grove Heights



Inver Grove Heights

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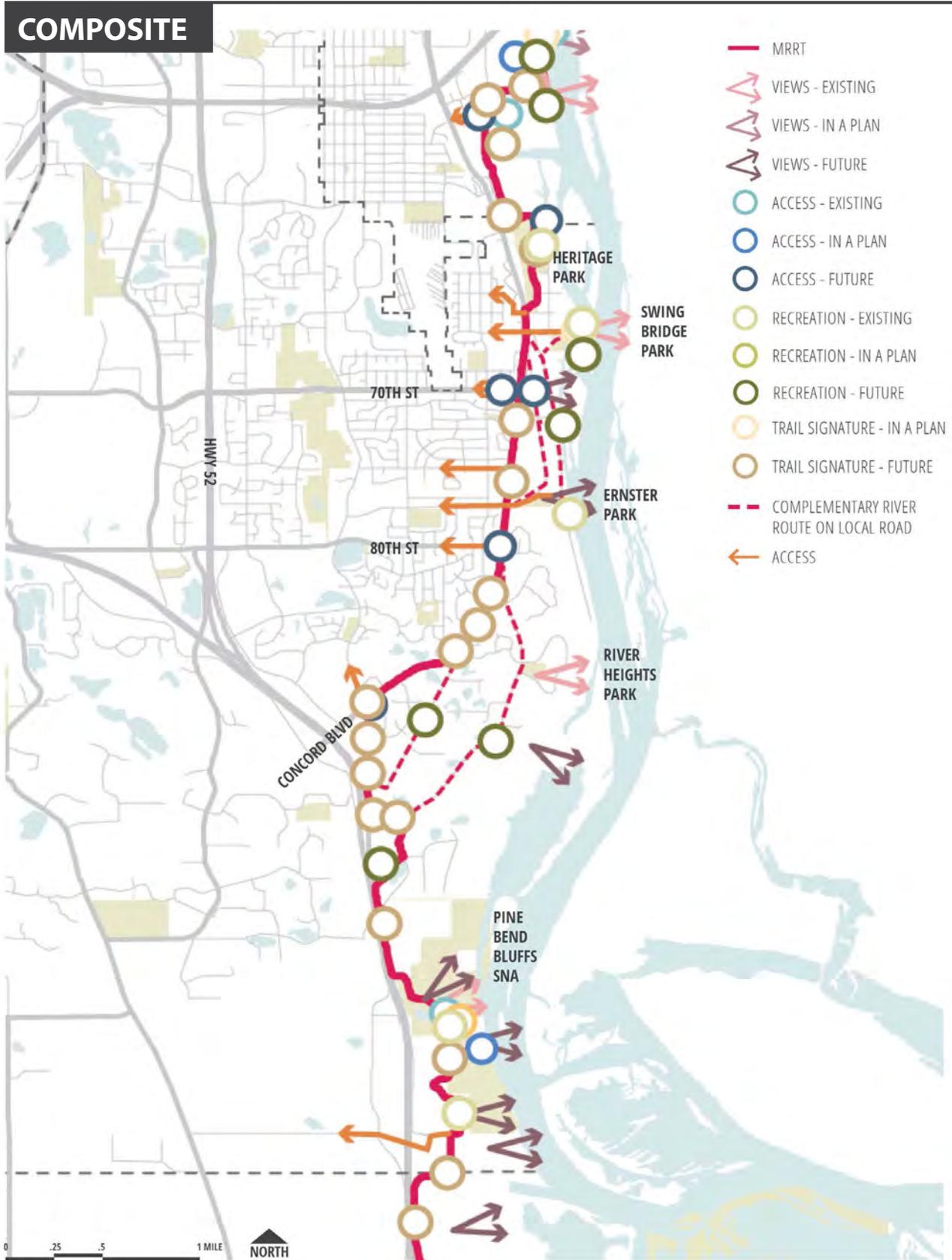


- MRRT
- FUTURE OPPORTUNITY
- IN A PLAN
- i INTERPRETATION
- r RIVER CUE
- T WAYFINDING
- v VEGETATION
- COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD

OPPORTUNITIES

- S1** Plant shade trees in Heritage Village Park
 - S2** Conduct feasibility study for parkway style design on Concord Blvd from 66th St to Cahill Ave
 - S3** Add natural signature plantings on Concord Blvd
 - S4** Add benches and shade trees at top of Concord Blvd hill and two wetlands between Corcoran Path and Coffman Path
 - S5** Improve wayfinding at Concord Blvd and Cahill Ave (stencil)
 - S6** Add shade trees natural signature plantings on Cahill Ave section
 - S7** Add prairie, shrubs, shade trees near trail at MnDOT right of way
 - S8** Interpretation opportunity for B-52 crash
 - S9** Work with Pine Bend Elementary on natural signature plantings
 - S10** Improve design signatures with pavement markings, river cues, and rest area on Courthouse Blvd section
 - S11** Improve design signature with natural signature plantings and wayfinding from Pine Bend Bluffs SNA Trailhead to Pine Bend Trail
 - S12** Add Inver Grove Heights/Rosemount boundary monument
- Corridor**
Add mile markers, river cues, pavement stencil, and update existing kiosks

Inver Grove Heights



Inver Grove Heights

OPPORTUNITIES

River Views

- V1. Add observation area to second level of Swing Bridge to create a unique elevated river-view
- V2. Create river valley overlook structure and manage vegetation at 70th St/CR 26
- V3. Manage vegetation to create river views from Ernster Park
- V4. Provide directional signage to River Heights Park for river valley views
- V5. Explore feasibility of connection and views from the Katharine Ordway Natural History Study Area
- V6. Work with the DNR on vegetation management to improve views from the MRRT in Pine Bend Bluffs SNA. Add signage/maps to trailhead kiosk with directions to the existing bluff views. Add natural surface trail to overlook per 2004 agreement with MnDNR
- V7. Work with private landowners to improve views from the MRRT
- V8. Work with Flint Hills Resources to explore feasibility of overlook at former downhill ski hill location

Physical Access

- A1. Create river overlook and access at north end of Heritage Village Park, work with City of Inver Grove Heights to ensure compatibility with Heritage Village Park Master Plan
- A2. Study pedestrian bike improvements for crossing at 70th St and Concord Blvd.
- A3. Create neighborhood gateway with MRRT sign, bench, bike rack, and interpretation at 70th St
- A4. Complete trail connecting MRRT to neighborhoods on the south side of 70th St /CR 26
- A5. Create neighborhood gateway with MRRT sign, bench, bike rack, and interpretation at 80th St
- A6. Complete trail connecting MRRT to neighborhoods on the north side of 80th St
- A7. Study opportunities to improve the pedestrian crossing at Concord Blvd and Cahill Ave
- A8. Add monument sign at 111th St. E for Pine Bend Bluffs Trailhead
- A9. Add natural surface trail to river in Pine Bend Bluffs SNA per 2004 agreement with MnDNR
- A10. Add trailhead wayfinding signs on major access roads leading to Rock Island Swing Bridge Corridor - Study pedestrian and bicycle street crossing improvements of MRRT and local streets

Inver Grove Heights

OPPORTUNITIES

Recreation

- R1. Support City of Inver Grove Heights in the development of Heritage Village Park
- R2. On City property south of Swing Bridge Park, add non-motorized boat launch, paddle share location, natural surface trail loop, and floodplain forest management
- R3. Sign and map routes on local streets as alternatives to the Concord Blvd MRRT section
- R4. Add benches and picnic tables by lake between Inver Grove Trail and Railroad Corridor - explore opportunities for and encourage bike share

Trail Signature

- S1. Plant shade trees in Heritage Village Park
 - S2. Conduct a study to determine feasibility of a parkway style design including median on Concord Blvd from 66th St to Cahill Rd where the MRRT is adjacent Concord Blvd
 - S3. Plant natural signature plantings (prairie and shrub groupings in the boulevard, shade trees in select locations on east side of trail) on Concord Blvd 66th St to Cahill Ave
 - S4. Add benches and shade trees at top of Concord Blvd hill and each of two wetlands between Corcoran Path and Coffman Path
 - S5. Improve wayfinding at Concord Blvd and Cahill Ave by adding pavement stencils
 - S6. Plant natural signature plantings (prairie and shade trees) - Cahill Ave section
 - S7. Plant natural signature plantings (prairie and buffer)- MN DOT r.o.w. to Pine Bend Elementary School
 - S8. Add a rest area and interpretive sign at B-52 crash location
 - S9. Work with Pine Bend Elementary school to add natural signature plantings near the MRRT
 - S10. Plant natural signature plantings and bench- Courthouse Blvd section
 - S11. Plant natural signature plantings and wayfinding - Pine Bend Bluffs SNA to Pine Bend Trail
 - S12. Add monument marker at Inver Grove Heights/South St. Paul boundary
- Corridor: Add mile markers at 1/2 mile intervals, add river cues, pavement stencil and update existing kiosks

Inver Grove Heights

OPPORTUNITIES



Concord Blvd crossing improvements can enhance local trail access to the MRRT



Vegetation obscures river valley views in this section of trail



Though the Mississippi River is not visible from most of the MRRT in Inver Grove Heights, wetlands provide natural interest



Opportunity for Mississippi River backwater access at the north end of Heritage Park



There is the opportunity to investigate and encourage opportunities for paddle share and bike share



Inver Grove Heights

OPPORTUNITIES

EXISTING CONCORD BOULEVARD



PARKWAY CONCEPT CONCORD BOULEVARD



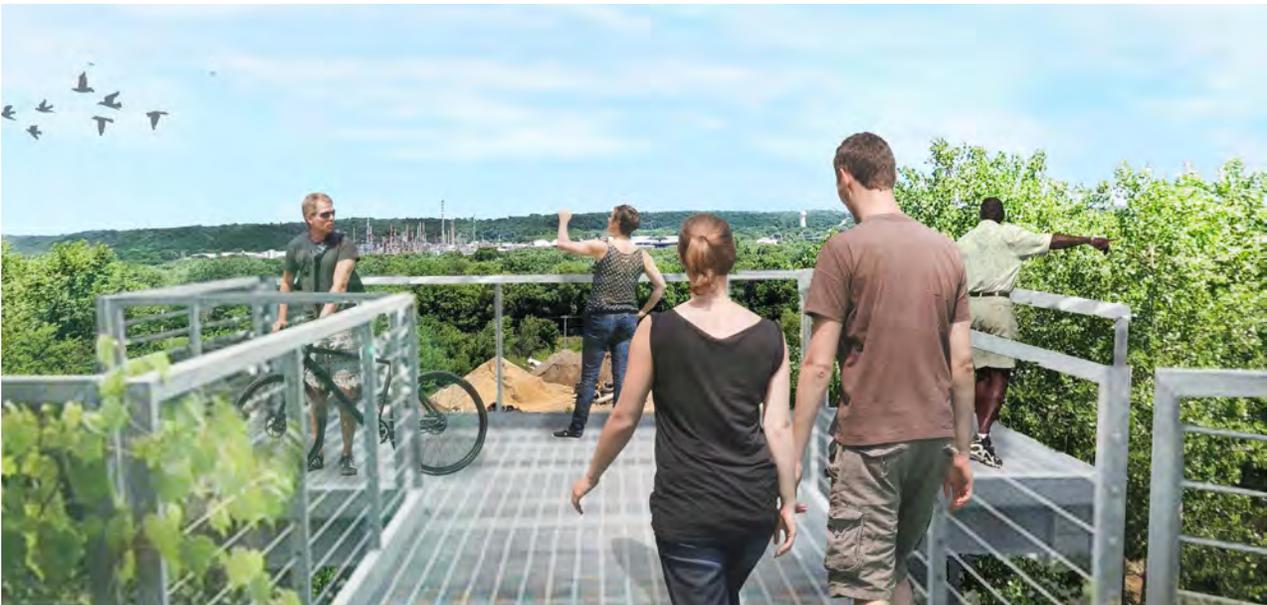
Inver Grove Heights

OPPORTUNITIES

EXISTING VIEW AT 70TH ST



OVERLOOK CONCEPT RIVER VALLEY VIEW AT 70TH ST



Rosemount, Nininger, Hastings

EXISTING CONDITIONS & ANALYSIS

Note: In the lists that follow, + indicates a positive attribute, and - indicates a need

River Views

- + River views at Hastings Riverfront Park and Lock and Dam Road
- + River Views in Spring Lake Park; could be enhanced with vegetation management
- Two and half mile Lock Blvd section lacks Mississippi River views
- View at existing levee overlook could be enhanced with vegetation management

Physical Access

- + Existing trailheads at Spring Lake Park, Schaars Bluff, Lock and Dam No. 2 and Hastings Riverfront Park
- + MRRT access and Mississippi River access at Hastings riverfront /Lock and Dam Road
- Existing trailheads lack MRRT identity and monument signs do not list MRRT
- Spring Lake Park lacks easy opportunities to get to the river from the MRRT
- Two and half mile Lock Blvd section is disconnected from the Mississippi River

Recreation

- + Existing places for picnicking, gathering, and events in Spring Lake Park and Hastings Riverfront Park
- Opportunities to enhance these use areas with benches, additional picnicking, and fishing opportunities

Trail Signature

- + Spring Lake Park and Hastings Riverfront offer strong design signature with benches, interpretation, and wayfinding signage, and natural plantings
- Section along Lock Blvd/Nininger Rd lacks river connection, would benefit from additional benches, signage, interpretation, shade, natural plantings

Adopted Plans

- **Spring Lake Park Reserve Master Plan**, *Dakota County*, 2003
- **Mississippi River Experience + Design Plan**, *Dakota County*, 2014
Interpretive nodes at Spring Lake Park Reserve Archery Trailhead, Schaar's Bluff, Town Of Nininger Lock and Dam No. 2, and Downtown Hastings

Current and Upcoming Projects

- **MRRT Rosemount West**, *Dakota County*; 2018 construction/opening

Rosemount, Nininger, Hastings

EXISTING CONDITIONS & ANALYSIS

- **MRRT Rosemount East, *Dakota County*; design 2018**
- **Forest/Wildlife Habitat enhancement southeast of Hasting Levee, *Army Corps of Engineers*; 2018**
- **Potential creation of islands northeast of Hastings Levee, *Army Corps of Engineers***
- **Spring Lake Park Master Plan update, *Dakota County*; 2019-2020**
- **Spring Lake Regional Park Reserve Natural Resources Management Plan; 2019-2020**



River overlook in Spring Lake Park



MRRT between Spring Lake Park and Hastings lacks river connections



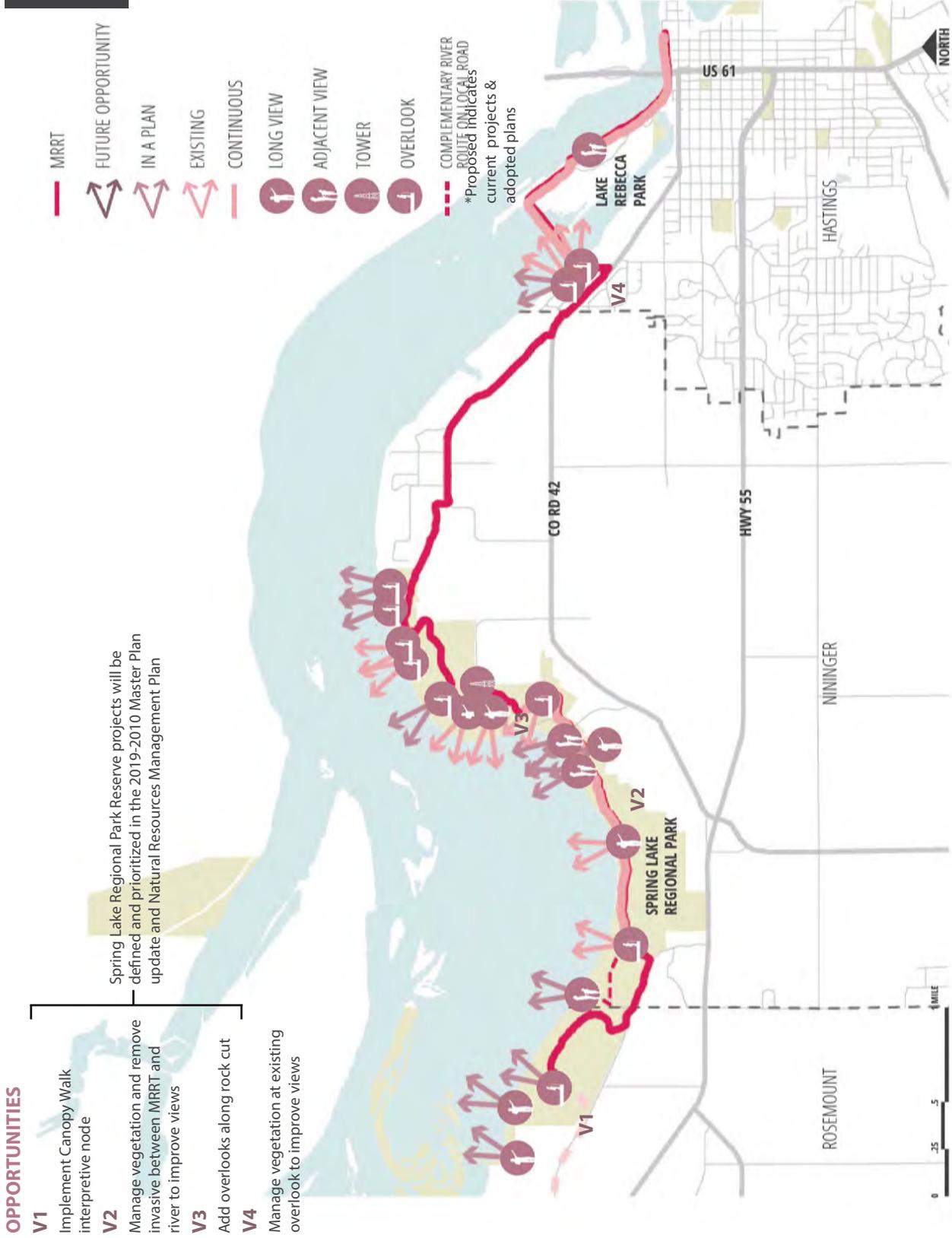
MRRT along Lock and Dam Road in Hastings offers continuous river views



Hastings Riverfront Park

Rosemount, Nininger, Hastings

VIEWS



Rosemount, Nininger, Hastings

ACCESS



OPPORTUNITIES

- A1** Add MRRT to existing Spring Lake Park monument signs
 - A2** Create boat launch at Bud's Landing
 - A3** Create river access and day use boat dock
 - A4** Pave and improve visibility of MRRT crossing at Isadore Ave/125th
 - A5** Add neighborhood gateway at intersection of Lock Blvd/Nininger Rd
 - A6** Study options for MRRT crossing improvements at CR 42/Nininger Rd at Madison St and Riverdale Dr
 - A7** Neighborhood gateway where trail leaves CR 42/Nininger Rd
 - A8** Neighborhood gateway at Lake Rebecca Park
 - A9** Place trailhead directional signs on major access roads
- Spring Lake Regional Park Reserve projects will be defined and prioritized in the 2019-2010 Master Plan update and Natural Resources Management Plan

Rosemount, Nininger, Hastings

RECREATION

OPPORTUNITIES

- R1** Implement the Village year-round camping experience
- R2** Opportunity for paddle share and picnic area at Bud's landing
- R3** Create complimentary riverside trail
- R4** Create riverside picnic area and day use boat dock and paddle share near Schaar's Bluff
- R5** Work with City of Hastings to improve Lake Rebecca Park with picnic pavilion, information about recreation opportunities, and additional fishing locations
- R6** Opportunity for paddle share at Lake Rebecca Park

CORRIDOR

- Explore opportunity for and encourage bike share

Spring Lake Regional Park Reserve projects will be defined and prioritized in the 2019-2010 Master Plan update and Natural Resources Management Plan



Rosemount, Nininger, Hastings

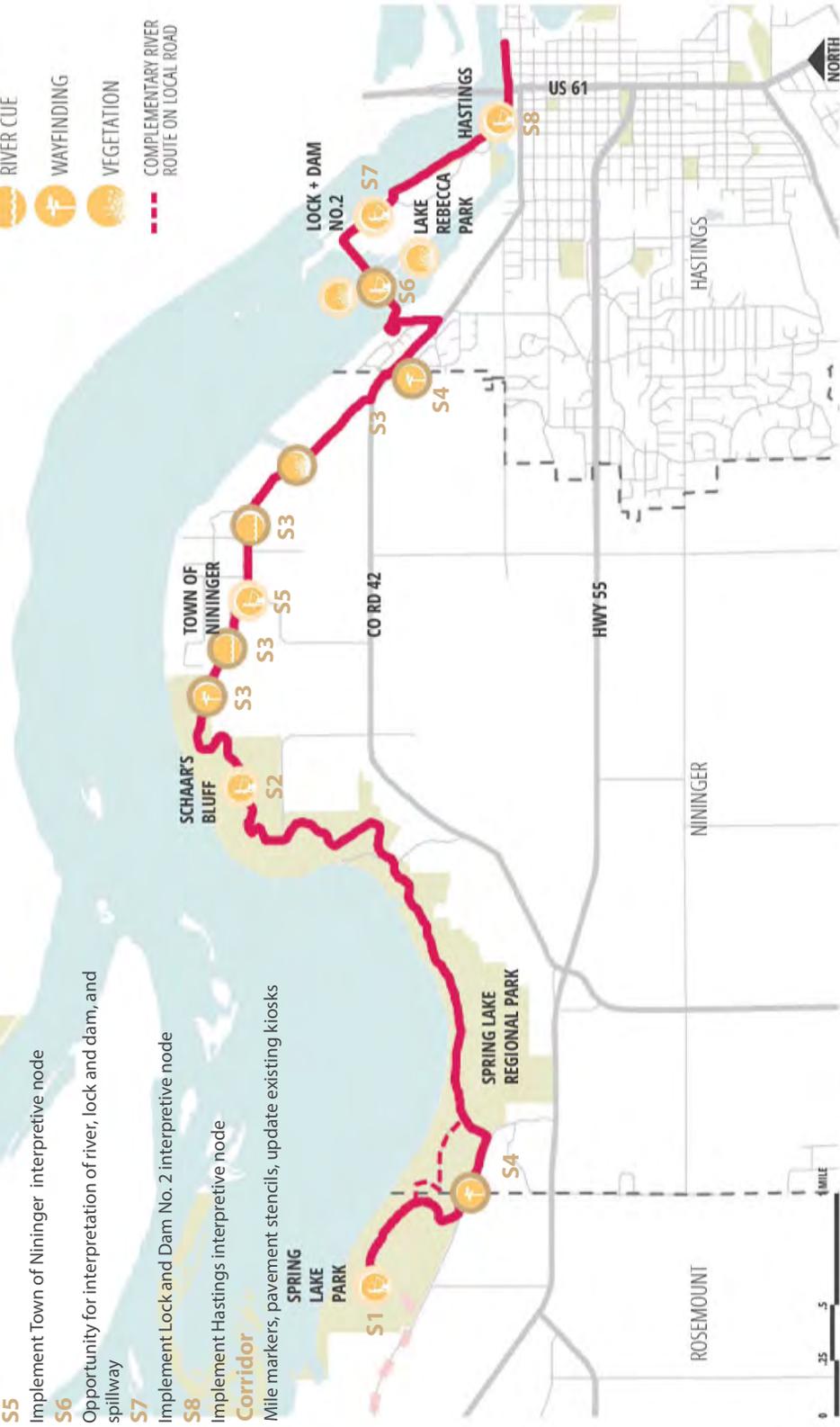
TRAIL SIGNATURE

OPPORTUNITIES

- S1** Implement Spring Lake Park Canopy Walk interpretive node
- S2** Implement Spring Lake Park Schaar's Bluff interpretive node
- S3** Improve design signature with pavement markings, river cues, and plantings on 2 mile Lock Blvd/Nininger Rd section
- S4** Add boundary monument at city/township boundaries
- S5** Implement Town of Nininger interpretive node
- S6** Opportunity for interpretation of river, lock and dam, and spillway
- S7** Implement Lock and Dam No. 2 interpretive node
- S8** Implement Hastings interpretive node

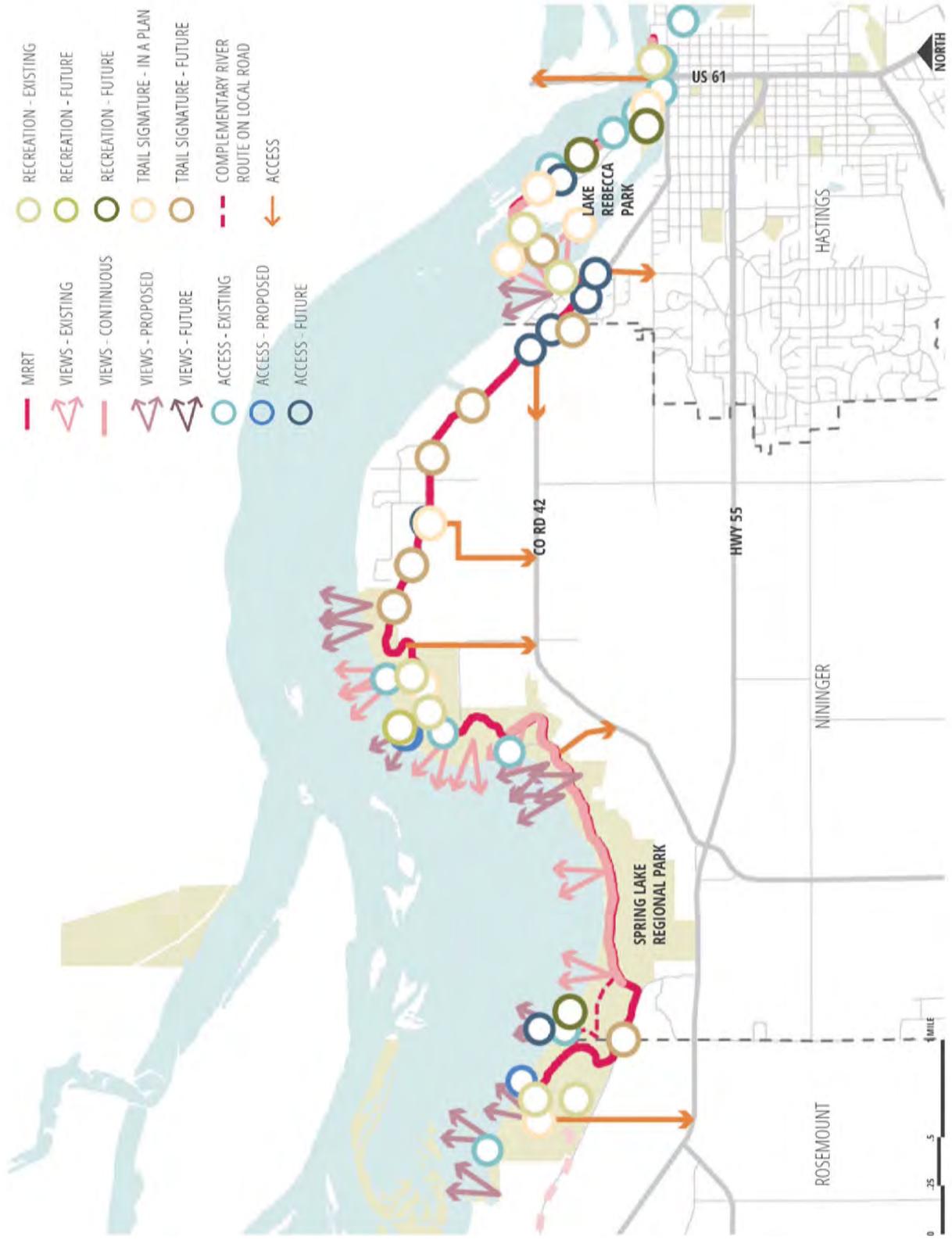
Spring Lake Regional Park Reserve projects will be defined and prioritized in the 2019-2010 Master Plan update and Natural Resources Management Plan

- MRRT
- FUTURE OPPORTUNITY
- IN A PLAN
- INTERPRETATION
- RIVER CUE
- WAYFINDING
- VEGETATION
- COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD



Rosemount, Nininger, Hastings

COMPOSITE



Rosemount, Nininger, Hastings

PRELIMINARY OPPORTUNITIES

River Views

- V1. Implement Canopy Walk Interpretive Node at Archery Trailhead in Spring Lake Park Reserve (SLPR)(*MRRT Experience + Design Plan*)
- V2. Manage vegetation/remove invasive species between the MRRT and the Mississippi River in Spring Lake Park Reserve to maximize views (*to be defined in 2019-2020 SLPR Natural Resources Management Plan*)
- V3. Add additional overlooks along the rock cut in Spring Lake Park Reserve (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- V4. Manage vegetation and improve Hastings levee overlook. Add interpretive signs, a picnic table, and bike rack

Physical Access

- A1. Add MRRT to existing monument signs at Spring Lake Park Reserve trailheads
- A2. Create boat launch at Bud's Landing in Spring Lake Park Reserve (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- A3. Create day use boat dock near Schaar's Bluff (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- A4. Pave and improve visibility of crossing and MRRT at Isadore Ave/125th St E
- A5. Add neighborhood Gateway at intersection of Lock Blvd and Nininger Rd
- A6. Study options to improve MRRT crossing of Nininger Rd/CR 42 at Madison St and Riverdale Rd
- A7. Build neighborhood gateway where trail leaves CR 42/Nininger Rd
- A8. Create neighborhood gateway at Lake Rebecca Park (MRRT kiosk and signage, water)
- A9. Place trailhead directional signs on major access roads

Recreation

- R1. Implement the village year-round camping experience in near Spring Lake Park Reserve Archery Trailhead (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- R2. Opportunity for paddle share at Bud's Landing in Spring Lake Park Reserve (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- R3. Create complimentary riverside trail in Spring Lake Park Reserve (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- R4. Create riverside picnic area near Schaar's Bluff with paddle share (*to be defined in 2019-2020 SLPR Natural Resources master plan update*)
- R5. Work with City of Hastings to improve Lake Rebecca Park section of the MRRT with picnic pavilion, information about recreation opportunities , and additional fishing locations
- R6. Opportunity for paddle share at Lake Rebecca
Corridor: explore options for and encourage bike share

Rosemount, Nininger, Hastings

PRELIMINARY OPPORTUNITIES

Trail Signature

- S1. Implement Canopy Walk interpretive node (*MRRT Experience + Design Plan*)
 - S2. Implement Schaar's Bluff interpretive node (*MRRT Experience + Design Plan*)
 - S3. Improve design signature on 2 mile Lock Blvd/Nininger Rd section
 - S4. Add boundary monument at city/township boundaries
 - S5. Implement Town of Nininger interpretive node (*MRRT Experience + Design Plan*)
 - S6. Opportunity for interpretation of river, lock and dam, and spillway
 - S7. Implement Lock and Dam No. 2 interpretive node (*MRRT Experience + Design Plan*)
 - S8. Implement Hastings interpretive node (*MRRT Experience + Design Plan*)
- Corridor: mile markers, pavement stencil, and update existing kiosks

SPRING LAKE PARK TREE CANOPY WALK STRUCTURE

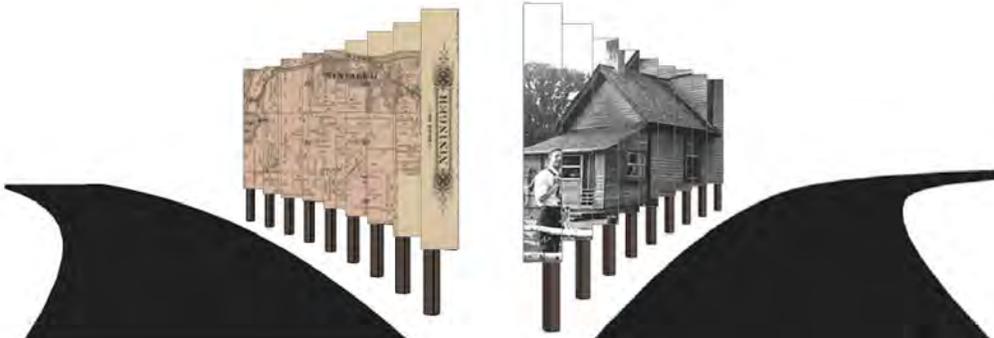


TREE CANOPY WALK ENTRY FRAMES

The canopy walk, recommended in the 2014 Mississippi River Design + Experience Plan, would create Mississippi River views near the Archery Trailhead in Spring Lake Park



LENTICULARS



Lenticulars, recommended in the 2014 Mississippi River Design + Experience Plan, could help enhance MRRT signature and connection to the river on the Lock Blvd section in Nininger Township

Rosemount, Nininger, Hastings

PRELIMINARY OPPORTUNITIES

EXISTING MRRT ON LOCK BOULEVARD



PROPOSED MRRT ON LOCK BOULEVARD





The MURR along the levee in South St Paul

Image Credit: caferacer42

SECTION 3

Implementation

Implementation

This section of the Study recommends phasing priorities, funding sources, and costs for capital projects outlined in Section 2. Projects are intended to improve the overall user experience so that the MRRT lives up to its national, state, and regional significance.

Phasing

Phasing for projects is prioritized into three timeframes:

1. 2019 - projects that can be initiated in 2019
2. Near Term - projects recommended for initiation before or shortly after Dakota County's portion of the MRRT is complete (as early as 2021)
3. Long Term – large scale or multi step projects

Projects prioritized in the 2019 and Near Term phases would bring trail to current Dakota County Greenway standards as well as improve access to the MRRT and the Mississippi River. 2019 and Near Term projects include basic amenities such as signage, places to rest, shade, and greenway design signature. They also include improvements such as river get downs, canoe/kayak boat launches, and overlooks that increase opportunities to view or access the Mississippi River.

Projects prioritized in the Long Term category require additional study, partnership, and more significant funding. Projects in this category may be undertaken in the Near Term, if funding and partnership opportunities arise. Examples of these projects are: interpretive nodes identified the 2014 Mississippi River Design + Experience Plan; partnerships with cities on Mississippi riverfront parks; and improved river access in Spring Lake Regional Park. Projects in this category would continue to elevate the trail experience to that of national and state significance.

2019 Priorities Summary

- 7 new bench locations, including shade, bike racks, and interpretive signs
- 4 new neighborhood access points
- 20 acres natural resource restoration/management
- Natural signature plantings along in South St. Paul - Gun Club Corridor and Inver Grove Heights - 1/2 mile on Cahill Blvd.
- Update/add monument signs at all existing trailheads
- Wayfinding: signage, updates to existing kiosks, mile markers, and pavement stencils

Implementation

Near Term Priorities Summary

- 3 new overlooks
- 2 existing overlook improvements
- 6 locations for river access
- 8 new bench locations, including shade, bike racks, and interpretive signs
- 2 new neighborhood access points
- 2 new local trail connections to the MRRT
- Vehicle wayfinding to trailheads from major roads
- 4 non-motorized boat launches and paddle share (Kaposia Landing, Swing Bridge Park, Spring Lake Park Reserve, Lake Rebecca Park)
- 3 riverside natural surface trail loops
- 3 rest areas with picnic tables
- Explore opportunities for and encourage bike share
- 60 acres vegetation management/natural resource restoration
- Work with landowners for additional opportunities for natural resource management/restoration in Spring Lake Park Reserve, Pine Bend Bluffs SNA, Flint Hills Resources, and other locations
- Conduct feasibility study for parkway style design of Concord Blvd from 66th St to Cahill Ave, where the MRRT is adjacent to the road
- 7 miles natural signature plantings along trail (Concord Blvd, Courthouse Blvd, Lock Blvd)
- Stockyards interpretive node
- 4 boundary monuments at city and township boundaries
- MRRT river cues trail-wide
- Study opportunities for street crossing improvements corridor-wide
- Implementation of priority projects in Spring Lake Park Reserve based on the 2019-2020 natural resources management plan and master plan update
- Design development for interpretive nodes

Long Term Priorities Summary

- Second level viewing deck to Swing Bridge
- 7 interpretive nodes
- 1 new neighborhood access
- 2 local trail connections improvements
- Support cities in development of Kaposia Landing, Heritage Village Park, and Lake Rebecca Park

Implementation

Funding

Like all Dakota County greenway projects, funding will be a collaboration among the County, cities, and other agencies. Cost-share roles will be determined on a project basis and determined by the strengths of each agency and circumstances of each project. Projects prioritized for 2019 initiation are primarily located on County owned land or within right-of-way, and require minimal agency coordination. Funding for these projects is available in the 2019-2023 Parks Capital Improvement Program under Greenway Enhancements category.

The Dakota County County Board will determine implementation priorities and funding levels for projects in the Near Term and Long Term phases during the annual Parks Capital Improvement Program budget process. Many of these projects require additional study or may evolve based on upcoming planning initiatives. For example, improvements in Spring Lake Regional Park Reserve will be guided by the Spring Lake Park Reserve Master Plan update and Natural Resources Management Plan, programed for 2019-2020. Other projects require the establishment of greenway collaborations, for example, providing non-motorized boat launches and paddle share at Kaposia Landing, Rock Island Swing Bridge, and Lake Rebecca Park. It is expected that the County will pursue cost-share with project partners and grant funding sources. Potential funding sources include:

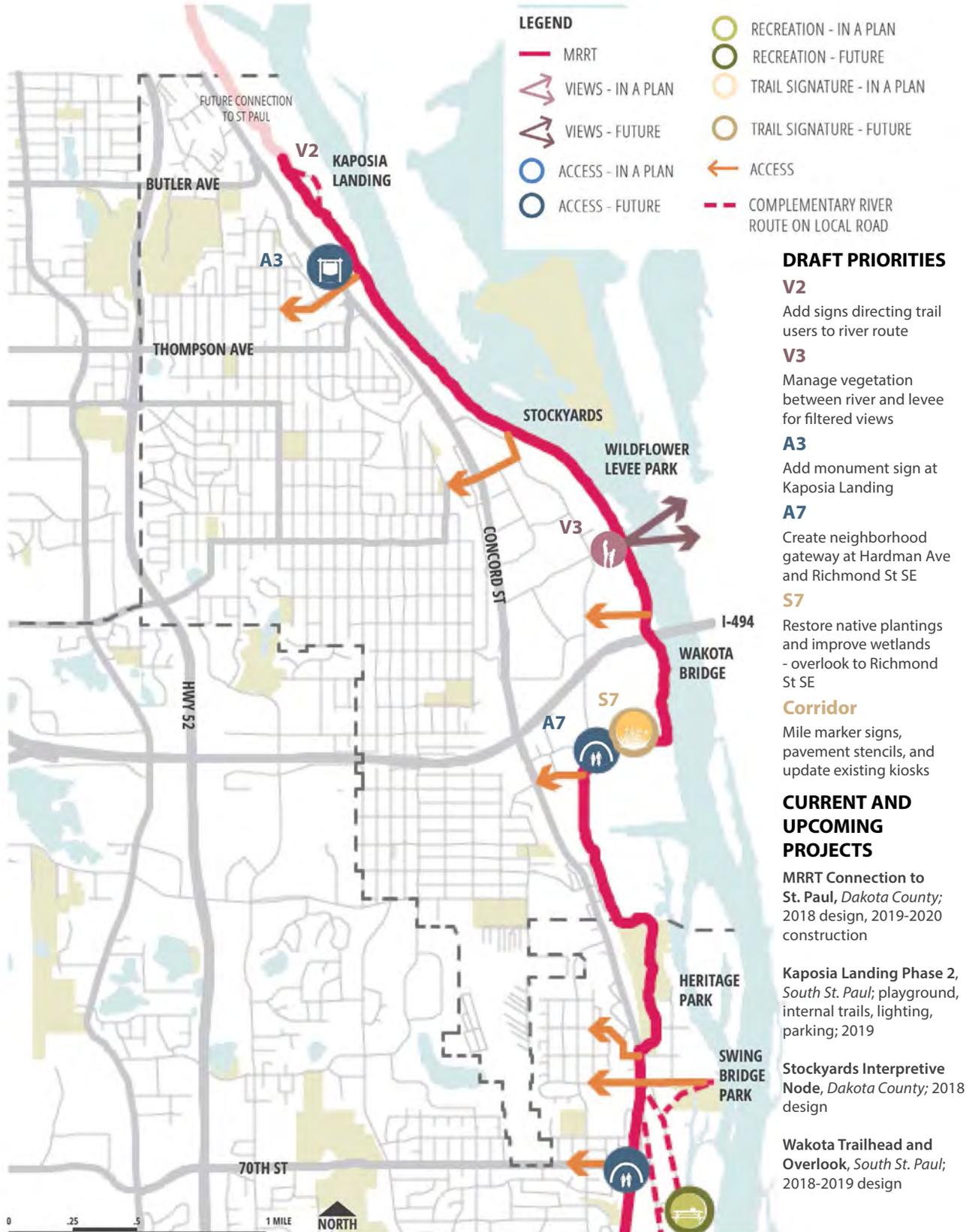
- Federal Transportation Grants
- Metropolitan Council
- National Parks Services Rivers, Trails, and Conservation Assistance Program
- Minnesota Department of Transportation
- Minnesota Department of Natural Resources
- Minnesota Pollution Control Agency
- The Environmental and Natural Resources Trust Fund
- Clean Water, Land and Legacy Amendment Funds
- Mississippi River Watershed Management Organization
- Foundations and nonprofits
- Statewide Health Improvement Partnership
- Minnesota Cultural Heritage Legacy Grants

Capital Development Cost Estimate

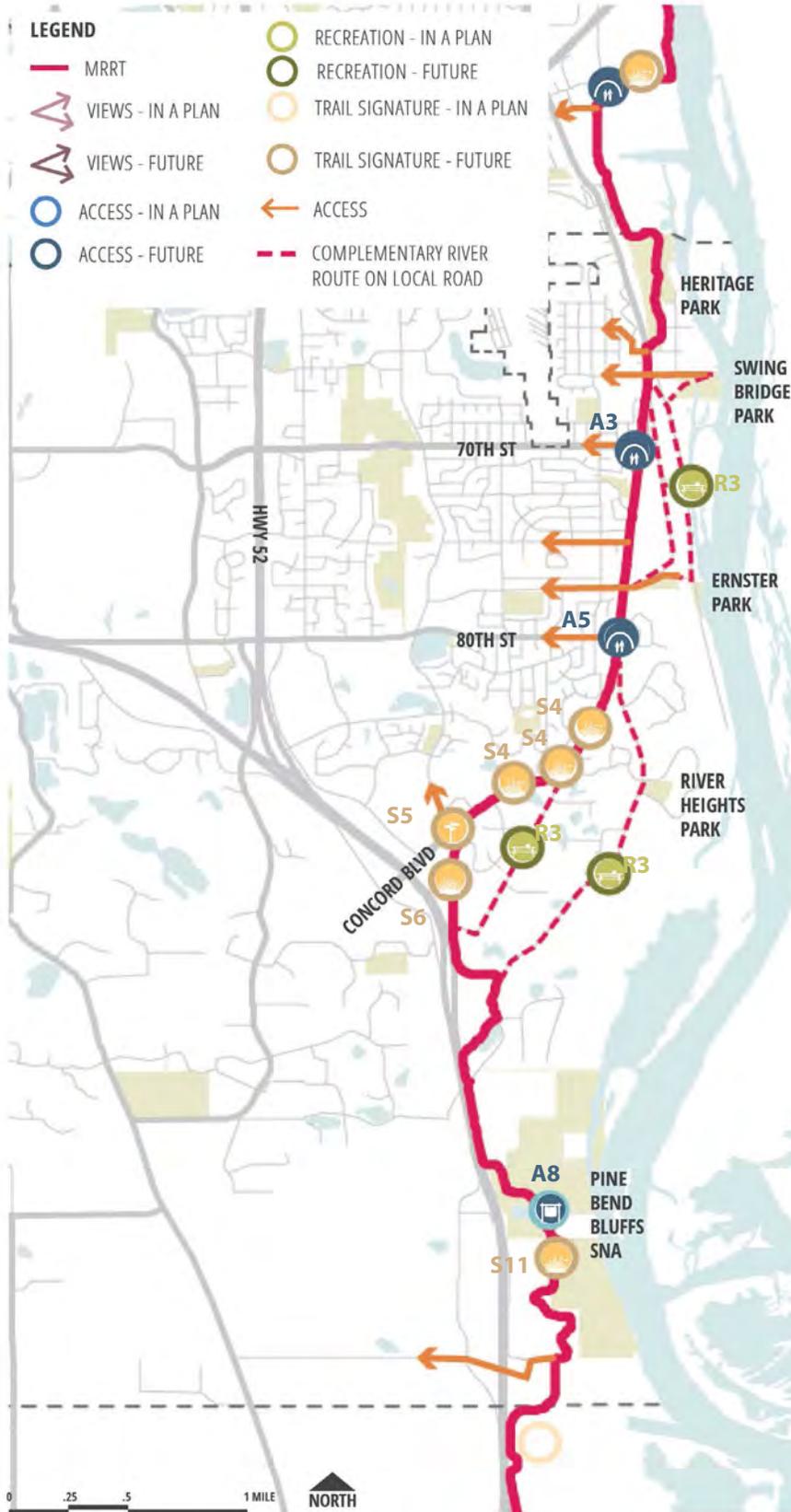
The table that follows is a summary of estimated costs by project type and phase. Costs are reflective of the level of detail in this study, rounded to the nearest \$10,000. Costs for improvements to Spring Lake Park Reserve will be determined through the 2019-2020 Master Plan update and Natural Resources Management Plan process and are not included below. Maps of project phasing, organized by phase, area, and project type can be found on the pages that follow.

Project Type	Cost Summary		
	2019	Near Term	Long Term
Views <ul style="list-style-type: none"> New overlooks (3) Improvements to existing overlooks (2) Vegetation management to improve views (20 ac) Work with partners on additional vegetation management and overlook locations 	\$50,000	\$400,000	\$1,240,000
Access <ul style="list-style-type: none"> Places to get down to the river (6) Neighborhood gateways for local access (7) Wayfinding and signage for trail access Local trail access & street crossing improvements 	\$140,000	\$630,000	\$90,000
Recreation <ul style="list-style-type: none"> Non-motorized boat launch/canoe kayak share (4) Riverside natural surface trail loops (3) Floodplain forest management (40 acres) Rest areas with picnic tables (3) 	-	\$1,110,000	Support cities in development of riverfront parks
Design Signature <ul style="list-style-type: none"> Interpretive nodes (7) Rest areas with bench, shade, interpretation (15) Natural signature plantings adjacent to trail (7 miles) Natural resource restoration/management (20 acres) Wayfinding, signage and MRRT river cues 	\$100,000	\$1,100,000	\$1,330,000
<i>Subtotal</i>	<i>\$290,000</i>	<i>\$3,250,000</i>	<i>\$2,660,000</i>
<i>Design and Engineering (20%)</i>	<i>\$60,000</i>	<i>\$650,000</i>	<i>\$530,000</i>
TOTAL	\$350,000	\$3,900,000	\$3,190,000

2019 Phasing South St. Paul



2019 Phasing Inver Grove Heights



DRAFT PRIORITIES

- A3**
Add neighborhood gateway at 70th St
- A5**
Add neighborhood gateway at 80th St
- A8**
Add MRRT/Pine Bend Bluffs Trailhead monument sign at 111 St E
- R3**
Sign and map local streets as alternatives to Concord Blvd MRRT section
- S4**
Add benches and shade trees at top of Concord Blvd hill and at two wetlands between Corcoran Path and Coffman Path
- S5**
Improve wayfinding at Concord Blvd and Cahill Ave (stencil)
- S6**
Add natural signature plantings on Cahill Ave section
- S11**
Improve design signature with pavement markings and native plantings, Pine Bend Bluffs SNA to Pine Bend Trail
- Corridor**
Mile markers, pavement stencil, update existing kiosks

CURRENT AND UPCOMING PROJECTS

- Heritage Village Park Improvements, Inver Grove Heights;** 2019 construction, off-leash dog area, parking, shelter, trail to Swing Bridge Park
- Swing Bridge Park Interpretation, Dakota County;** 2019 installation
- Pine Bend Bluffs Interpretation, Dakota County;** 2019 installation
- Vegetation management and signage at River Heights Park, Inver Grove Heights;** 2018
- Chief Medicine Bottle Monument Reconstruction, Dakota County;** 2019
- Repave Cahill Ave section of MRRT, Dakota County;** 2019

2019 Phasing Rosemount, Nininger, Hastings

DRAFT PRIORITIES

A1

Add MRRT to existing Spring Lake Park monument signs

A7

Create neighborhood gateway where MRRT leaves CR42/Nininger Rd

Corridor

Mile markers, pavement stencil, update existing kiosks

CURRENT AND UPCOMING PROJECTS

MRRT Rosemount West, *Dakota County*, 2018 construction/opening

MRRT Rosemount East, *Dakota County*; design 2018

Forest/Wildlife Habitat enhancement southeast of Hasting Levee, *Army Corps of Engineers*; 2018

Potential creation of islands northeast of Hastings Levee, *Army Corps of Engineers*

Spring Lake Park Master Plan update, *Dakota County*; 2019-2020

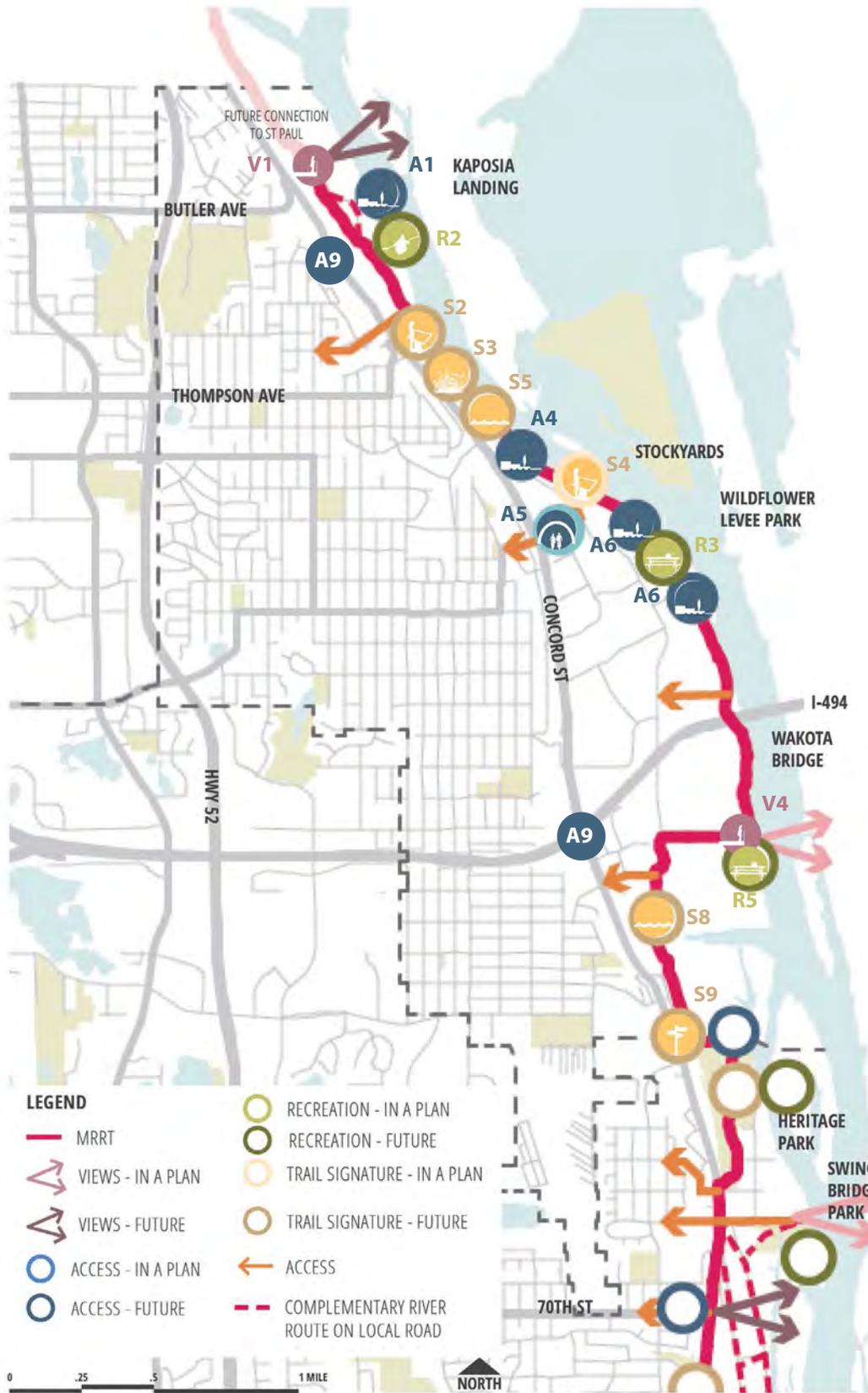
Spring Lake Regional Park Reserve Natural Resources Management Plan; 2019-2020

LEGEND

	MRRT		RECREATION - IN A PLAN
	VIEWS - IN A PLAN		RECREATION - FUTURE
	VIEWS - FUTURE		TRAIL SIGNATURE - IN A PLAN
	ACCESS - IN A PLAN		TRAIL SIGNATURE - FUTURE
	ACCESS - FUTURE		ACCESS
	COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD		



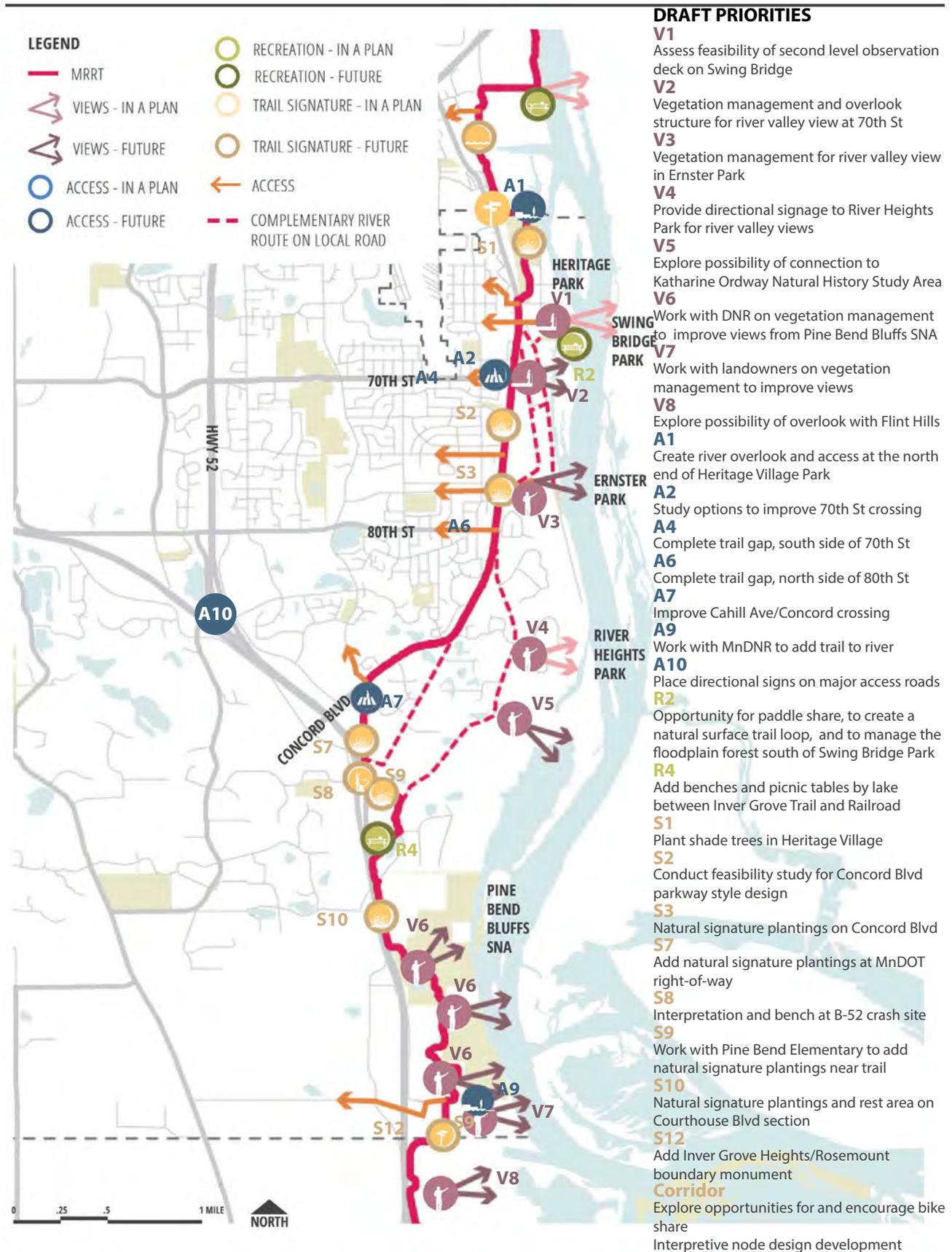
Near Term Phasing South St. Paul



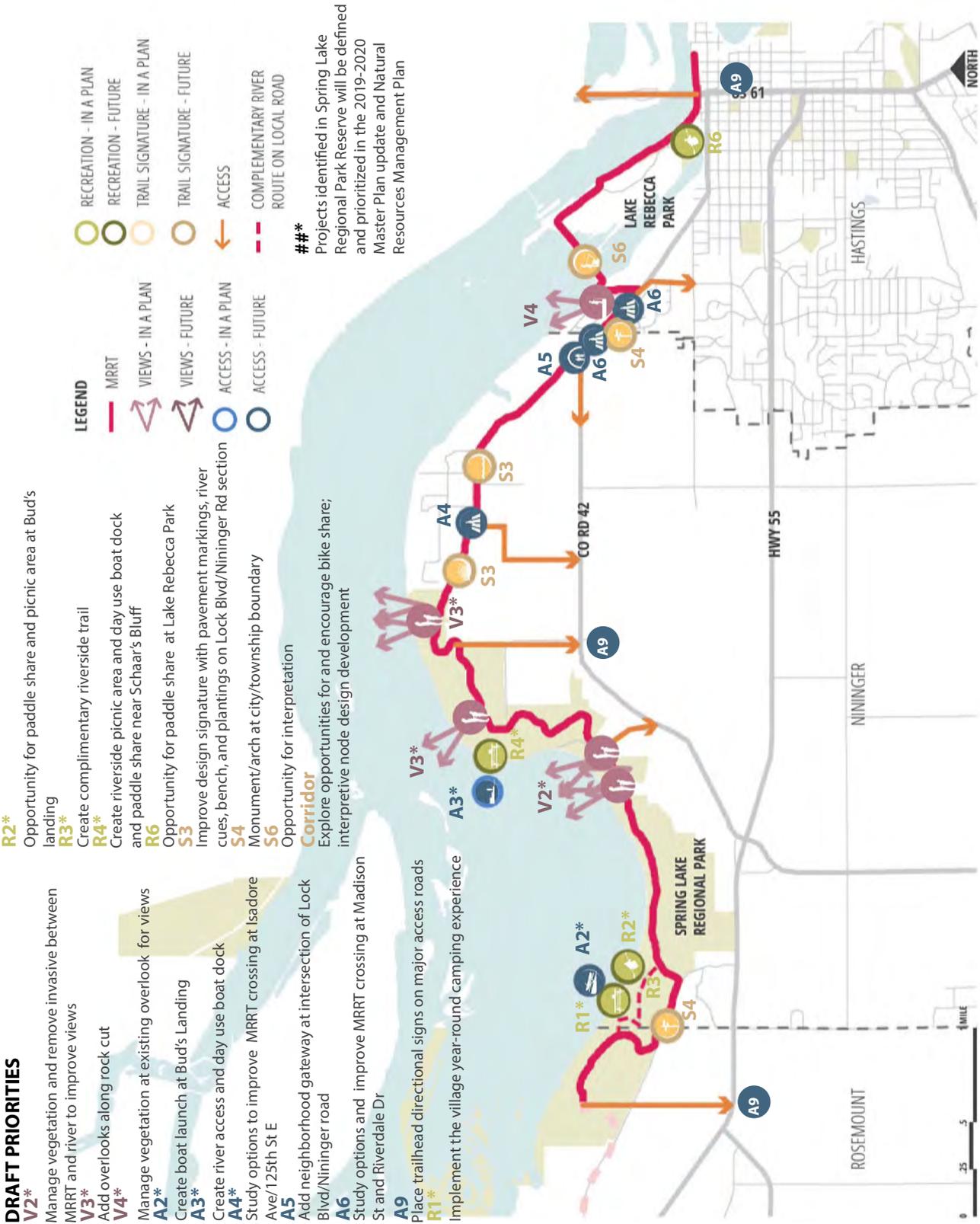
DRAFT PRIORITIES

- V1** Add bench and shade at existing swing bridge view
- V4** Improve existing overlook, consider extending the overlook platform out over the river
- A1** Create river access
- A4** Create river access
- A5** Build neighborhood gateway at Grand Ave
- A6** Create river accesses at Wildflower Levee Park
- A9** Trailhead wayfinding signs on major roads
- R2** Create canoe/kayak launch within Kaposia Landing as part of paddle share
- R3** Create rest stop at Wildflower Levee Park
- R5** Add natural surface walking trails in Packer Preserve & manage floodplain forest
- S2** Add bench and interpretive sign at former farmhouse location
- S3** Prairie plantings above floodwall
- S4** Implement Stockyards interpretive node design
- S5** River cues on floodwall
- S8** River cues from Richmond St to Heritage park
- S9** Boundary monument at Inver Grove Heights/Rosemount border
- Corridor** Add shade at existing bench locations
Investigate and encourage bike share
Interpretive node design development

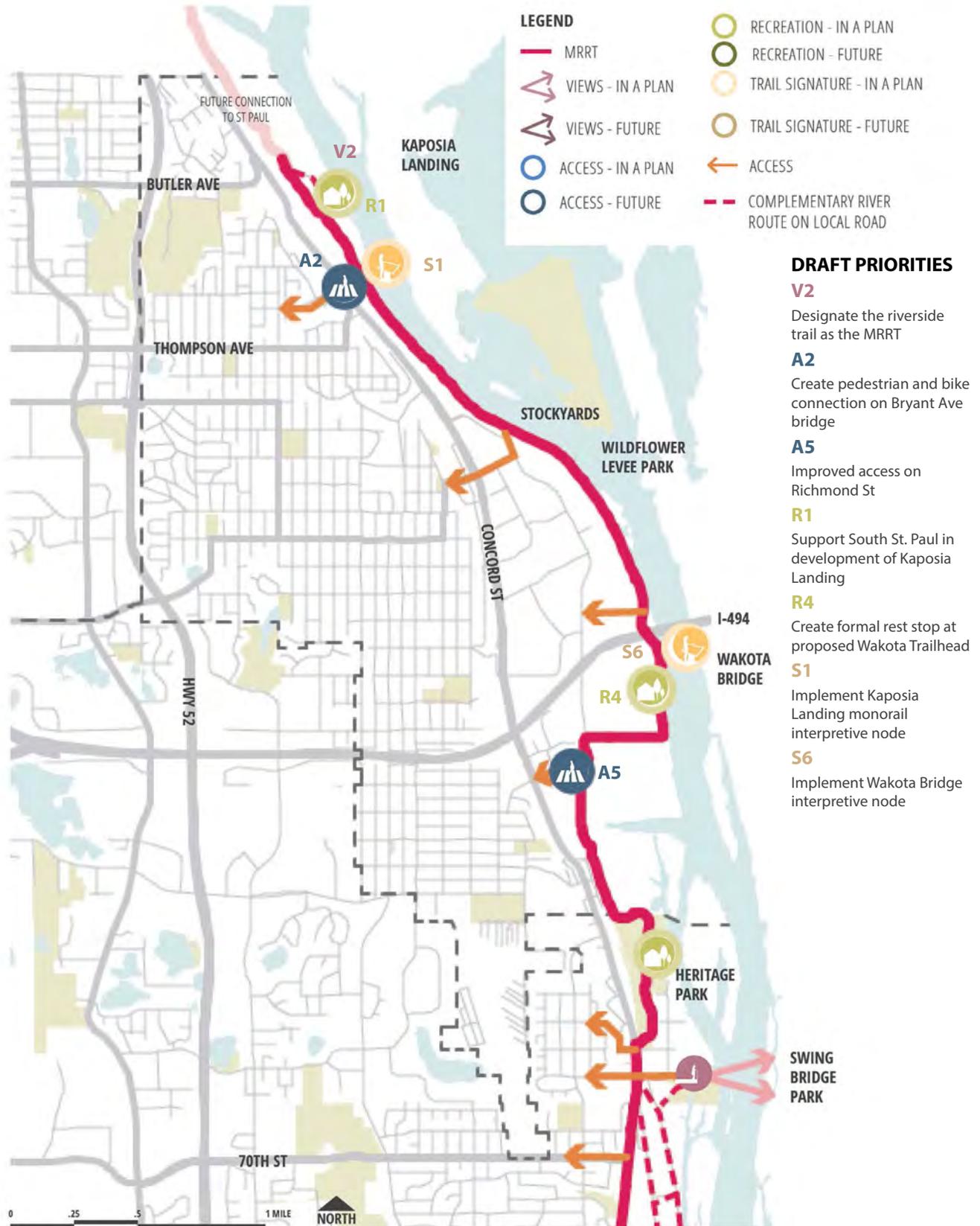
Near Term Phasing Inver Grove Heights



Near Term Phasing Rosemount, Nininger, Hastings



Draft Long Term Phasing South St. Paul



Draft Long Term Phasing Inver Grove Heights



Draft Long Term Phasing Rosemount, Nininger,

DRAFT PRIORITIES

V1/S1

Implement Canopy Walk interpretive node

A8

Future neighborhood gateway at Lake Rebecca Park

R5

Work with City of Hastings to improve Lake Rebecca Park with picnic pavilion, information about recreation opportunities, and additional fishing locations

S2

Implement Spring Lake Park Schaar's Bluff interpretive node

S5

Implement Town of Nininger interpretive node

S7

Implement Lock and Dam No. 2 interpretive node

S8

Implement Hastings interpretive node

LEGEND

- MRRT
- VIEWS - IN A PLAN
- VIEWS - FUTURE
- ACCESS - IN A PLAN
- ACCESS - FUTURE
- RECREATION - IN A PLAN
- RECREATION - FUTURE
- TRAIL SIGNATURE - IN A PLAN
- TRAIL SIGNATURE - FUTURE
- ACCESS
- COMPLEMENTARY RIVER ROUTE ON LOCAL ROAD



Dakota
COUNTY