

# DAKOTA COUNTY MINNESOTA RIVER GREENWAY CULTURAL RESOURCES INTERPRETIVE PLAN

## EXECUTIVE SUMMARY

Adopted by the Dakota County Board

AUGUST 1, 2017



This project has been financed in part with funds provided by the State of Minnesota from the Arts and Cultural Heritage Fund through the Minnesota Historical Society.

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JIM ROE

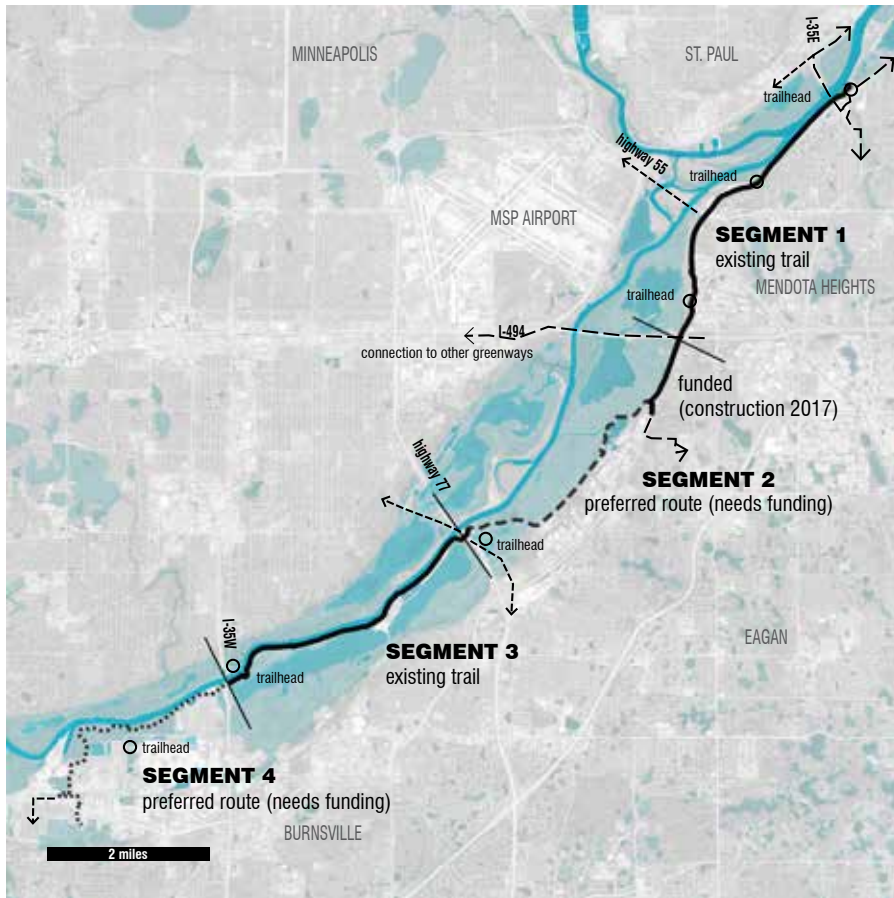
MONA SMITH

TROPOSTUDIO



# EXECUTIVE SUMMARY

## INTRODUCTION



### PROJECT PURPOSE

The purpose of this interpretive plan is to describe a compelling and comprehensive vision for engaging trail visitors in the history, nature, and culture of the Lower Minnesota River Valley. This plan describes and illustrates a connected set of experiences for the Minnesota River Greenway, a trail that connects 17 miles of parks and trails from Burnsville through Eagan, Mendota Heights, Mendota, and Lilydale before landing at St. Paul's Lilydale Regional Park. This greenway connects to the larger Minnesota Valley State Trail planned by the Minnesota Department of Natural Resources to connect St. Paul to Le Sueur, Minnesota.

The Minnesota River Greenway includes a variety of evocative settings—places for discovery, reflection, and learning—and places where trail visitors can see and feel change over time and be immersed in thriving ecosystems. And while this stretch of river has endured great changes over time, it has long been and still is Dakota homeland.

The development of this plan was guided by a set of goals that were reviewed by project advisors, stakeholders, and Dakota County staff:

- Provide a compelling vision and plan that can be implemented in sections as funding becomes available
- Generate excitement among stakeholders about the possibilities for interpreting the stories and landscapes of the river
- Draw renewed attention to the Lower Minnesota River Valley as a valuable asset in the heart of the Twin Cities
- Improve accessibility and create a greater sense of welcome for Native people who call this home
- Engage trail visitors with interactive, inclusive, and interesting interpretive installations that are relevant and memorable to diverse audiences
- Support the development of the corridor as a high-quality regional tourism destination

The project team was encouraged to look beyond traditional modes of interpretation—trail signs and linear narratives—and develop a mix of experiences that also includes

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## INTRODUCTION

more interactive, visionary concepts that open up new ways to attract future audiences to the landscapes and cultural legacy of the Lower Minnesota River Valley. A highly visitor-centered and forward-looking approach has resulted in a set of concepts that promises to engage trail visitors in the land and its stories through a range of perspectives.

Early phases of planning focused on historical research and listening sessions with Dakota people to learn more about the meaning of this place and about specific locations on and near the river. The project team was encouraged to study the natural world of the Minnesota River Valley and consider it, along with the human history, as parts of a whole.

The research phase (books, articles, photos, site analysis, and interviews) resulted in a set of themes that together provided an interpretive framework for the many stories of the Lower Minnesota River Valley. The final selection of stories was guided by the following considerations, which in turn informed the selection of interpretive locations and design strategies for each node.

- Available historical and cultural resources
- Respect for this place as Dakota homeland
- Feedback from Dakota County's Technical Advisory Group
- Opportunities for place-based storytelling
- Potential level of interest from a wide range of trail visitors
- Local, regional, and national relevance to the Minnesota River
- Stories that will work together as a set

### IMPLEMENTATION

Implementation of the Minnesota River Cultural Resources Interpretive plan will give the Minnesota River Greenway a unique identity within the Metropolitan Regional Trail system. Implementation will occur over time, as opportunities allow. It is anticipated that implementation will occur in two primary ways: 1) integration into infrastructure projects and 2) as stand-alone projects where there are opportunities for partnerships and/or grant funding.

With eight trail miles and three trailheads yet to be constructed on the Minnesota River Greenway, there will be opportunities to integrate interpretation into future infrastructure projects. Near-term opportunities include trail construction from Lone Oak Road to Cedar Ave/TH77, trailhead development at Cedar Ave/TH77, and trailhead improvements at the Big River's Regional Trail.

The vision for interpretation along the Minnesota River Greenway presented in this plan helps position projects for partnership and grant funding. The greenway travels through five municipalities, Fort Selling State Park, and The Minnesota River Valley National Wildlife Refuge. It has a history of State significance, is considered homeland by Dakota tribal people, and links to State and regional trails. These connections provide opportunities for implementation among partners where there are shared interests.

Like all greenway projects, cost share roles will be determined based on grant funding and the strengths of each agency and circumstances of each project. Examples of outside funding include:

- Clean Water & Legacy Amendment funds
- National Park Service Rivers, Trails, and Conservation Assistance Program
- Federal Land Access Program
- Minnesota Department of Natural Resources
- Minnesota Pollution Control Agency
- The Environment and Natural Resources Trust Fund
- Watershed management organizations
- Foundations and nonprofits

Once constructed, the Dakota County Parks Department will be the lead department in operations, management, and maintenance for all interpretive features. Maintenance is essential to protect public investment and provide recreation users clean, safe, and enjoyable year-round experiences. Interpretive elements are located at trailheads and along trail sections that will be maintained regularly along with general greenway upkeep.

# EXECUTIVE SUMMARY

## INTERPRETIVE THEMES

### INTERPRETIVE THEMES

An interpretive theme answers the question, “What’s this place about?” It’s also an idea that has the capacity to hold many different stories, pulling them together along a common thread.

“The Land Remembers,” a Dakota adage, serves as an overarching interpretive theme for the Minnesota River Greenway. It emerged from stories and conversations that describe a human relationship to the land that transcends time. This main theme is supported by a set of subthemes, each of which draws together a selection of related stories with the places where they happened.

### “THE LAND REMEMBERS”

*What we see, hear, and feel in the land around us opens views into the past and reveals changes over time. In Dakota tradition, the earth holds memories of what’s happened through time.*

### INTERPRETIVE SUBTHEMES

**THEME #1 DAKOTA HOMELAND** *For thousands of years, the Minnesota River Valley has been home to the Dakota. Today it’s an important spiritual center, a place of healing and homecoming.*

**THEME #2 TRAILS THROUGH TIME** *Today’s hikers and bicyclists on the Minnesota River Greenway are moving along the same route that Native peoples have walked for thousands of years.*

**THEME #3 BRIDGING AND CROSSING** *Rivers are natural boundaries, until bridged or crossed. There’s a technology story here, but also an opportunity for historical reflection about the changes that result from simply getting out over the water and across the river.*

**THEME #4 WORKING RIVER** *This waterway shaped trading and commerce for thousands of years. It moved people and resources. Today’s railroads and highways reveal a pattern of movement that still follows the river.*

**THEME #5 ECOSYSTEMS OF THE RIVER** *The back and forth tension between natural systems and human intervention is easily observed in today’s landscape. Natural changes such as floods and droughts have influenced what we see today.*

**THEME #6 GEOLOGICAL TIME** *Visible evidence of the events that shaped this valley is still visible in today’s landscape. Deep time is at the surface, within view.*


**THEME #7 COMMUNITIES PAST AND PRESENT** *Only a few traces remain from the many villages, farms, and camps that once occupied this stretch of the river. Today they’ve been replaced with wide highways, industrial parks, and suburban developments.*

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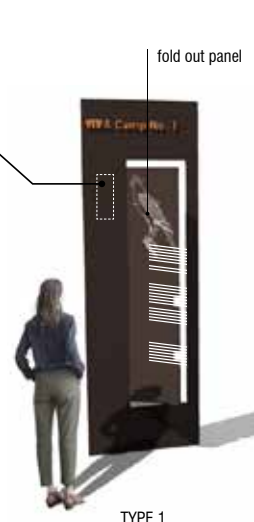
## TRAILWIDE IDENTITY ELEMENTS

### TRAILWIDE IDENTITY AND INTERPRETATION

These features combine wayfinding with specific points of engagement along the trail—reasons to stop and discover something new about the riverfront. The interpretive content focuses on trailwide stories, places, and subjects that are bigger in scope than historic sites and locations.




**LOCATION-BASED MEDIA**  
Link to trail app



fold out panel


**TYPE 1**




fold down bench

mild steel panels, deep black brown powder coat


**TYPE 2**




**E ENTRY MONUMENTS (NIC)**  
Dakota County Standard, located at trailheads only.




**D DIRECTIONAL SIGN (NIC)**  
Dakota County Standard




**S SMALL INTERPRETIVE PANELS**  
Dakota County Standard



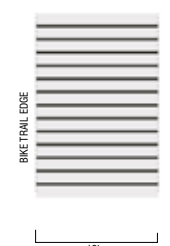
**M MILE MARKER (NIC)**  
Dakota County Standard




**DIRECTIONAL BENCH**  
These benches have high backs to help in removing distractions. They will be angled towards a specific view and will always face away from the trail.



**TIMBER BENCH // SMALL GROUP SEATING**  
These benches are made from nominal 15-inch square planed timber or reclaimed barn beams roughly 96 inches long with 2-3-inch square box-tube or strap-steel feet.

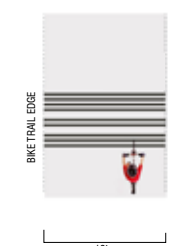


**RHYTHM BRANDING**  
Grooves in the pathway are an interactive and tactile way of marking speed, distance and providing safety alerts along the trail.



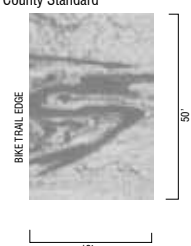
**BIKE TRAIL EDGE**

**NODE WARNING**  
Markings will be placed 100' before each node and destination.



**BIKE TRAIL EDGE**

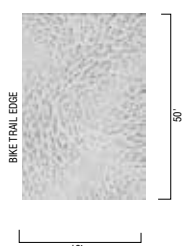
**MILE MARKER**  
Mile markings will be placed at every mile to help track distance traveled and as a wayfinding tool.



**BIKE TRAIL EDGE**

**mile marker (NIC)**  
- Dakota County Standard

**SLOW DOWN!**  
Sandblasted patterns can be used along the trail to highlight the presence of nature (water, unique plant communities, or habitat) and mark time passing.



**BIKE TRAIL EDGE**

**LOOK UP!**  
Directional sandblasted patterns can be used along the trail to notify and remind users to look up and notice their surroundings.



# EXECUTIVE SUMMARY

## DAKOTA HOMELAND INTERPRETATION

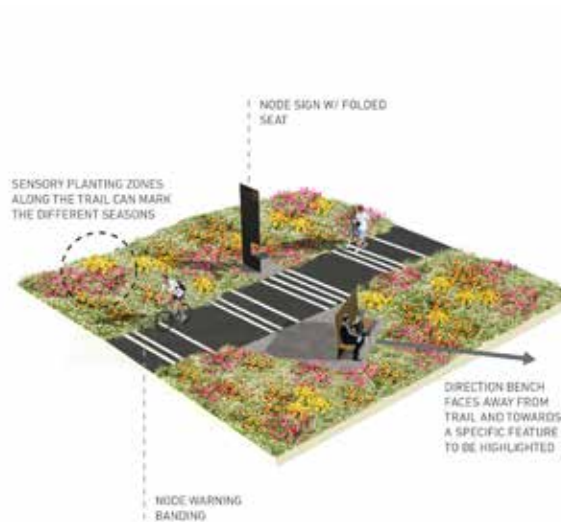
### DAKOTA HOMELAND INTERPRETATION

A series of spaces and structures will carry the Dakota Homeland theme by framing views and prompting sensory interactions with the landscape, and will be an invitation to learn from these places in ways that are inspired by Dakota traditions.

### GATHERING SPACES



Pauses along the trail



Heightened sensory experiences



Offer new perspectives

### DAKOTA WAYS OF SEEING

A family of gateways and frames reveals the landscape in specific ways to focus views. Each frame will describe a particular animal, plant, element, or viewshed important to this place as Dakota Homeland. The frames could utilize beacon technology or be tied to an app for access to audio recordings of Dakota voices telling various stories about these elements. These frames are an invitation to learn, to linger, to hear Dakota stories, and learn new ways of seeing.



# EXECUTIVE SUMMARY

## INTERPRETIVE DESIGN FRAMEWORK

### INTERPRETIVE NODES AND DESTINATIONS

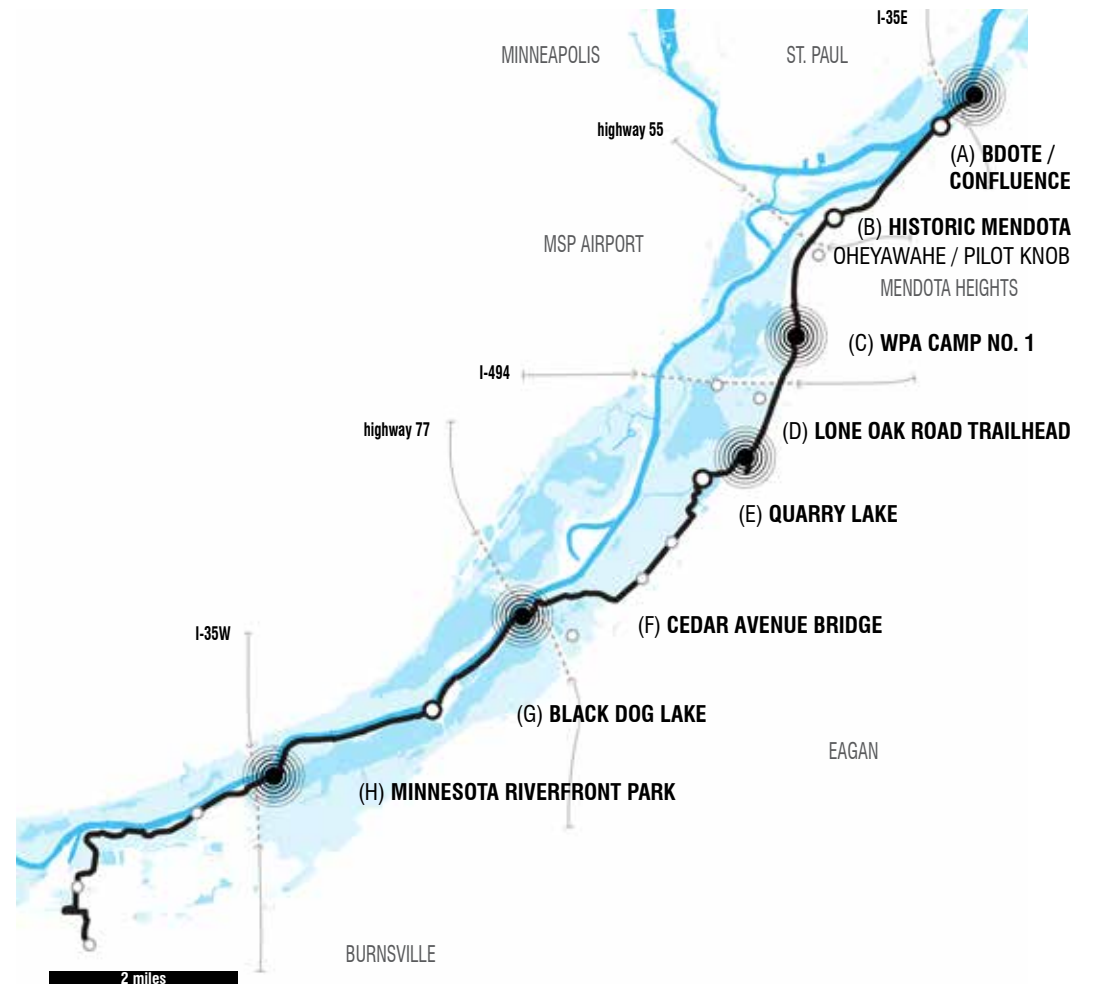
Nodes are an initiation to pull over and pause for a bit. They offer places to rest with additional design elements that help visitors line up remarkable views or locate historical traces in the land.

Destinations correlate with Greenway trailheads and incorporate vehicle and bicycle parking, restrooms, water, picnicking facilities, and connections to other trails. They are more parklike in their layout and offer a greater variety of interactive learning activities. Here, visitors might arrive in a group and stay for a few hours, have lunch, and even go fishing.

Eight interpretive sites, along with trail-wide interpretation spanning the entire Minnesota River Regional Trail's length, were identified as part of an initial phase of planning. Along with trail-user accessibility, the nodes offer substantial and engaging cultural and historical opportunities for interpreting stories and content and engaging trail users.

The sites from Lilydale to Burnsville are:

- Trail-wide / Dakota Homeland
- (A) Bdote / Confluence
- (B) Historic Mendota
- Oheyawahe / Pilot Knob
- (C) Big Rivers Trailhead / WPA Camp #1
- (D) Lone Oak Trailhead
- (E) Quarry Lake
- (F) Cedar Avenue Bridge
- (G) Black Dog Lake
- (H) Minnesota Riverfront Park



# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: BDOTE / CONFLUENCE

### INTERPRETIVE THEMES

### INTERPRETIVE STORIES

### INTERPRETIVE FEATURES

THEME #1 DAKOTA HOMELAND

**BDOTE**  
THE TREATIES OF TRAVERSE DES SIOUX AND MENDOTA

#### OVERLOOK PLATFORM

A raised platform gives trail visitors a better view of Bdote, where the waters of the Mississippi and Minnesota Rivers swirl together. The overlook is large enough to hold a gathering of 40 people and is oriented along the convergence of the two rivers. It replaces the existing overlook and fits within the trail right-of-way.

THEME #6 GEOLOGICAL TIME

**BEDROCK OF THE MINNESOTA RIVER VALLEY**

While an overlook large enough for a gathering is desired by Dakota people, the narrow site and the need for accessibility may result in a smaller overlook.

THEME #1 DAKOTA HOMELAND

**BDOTE**

#### FENCE ENHANCEMENT

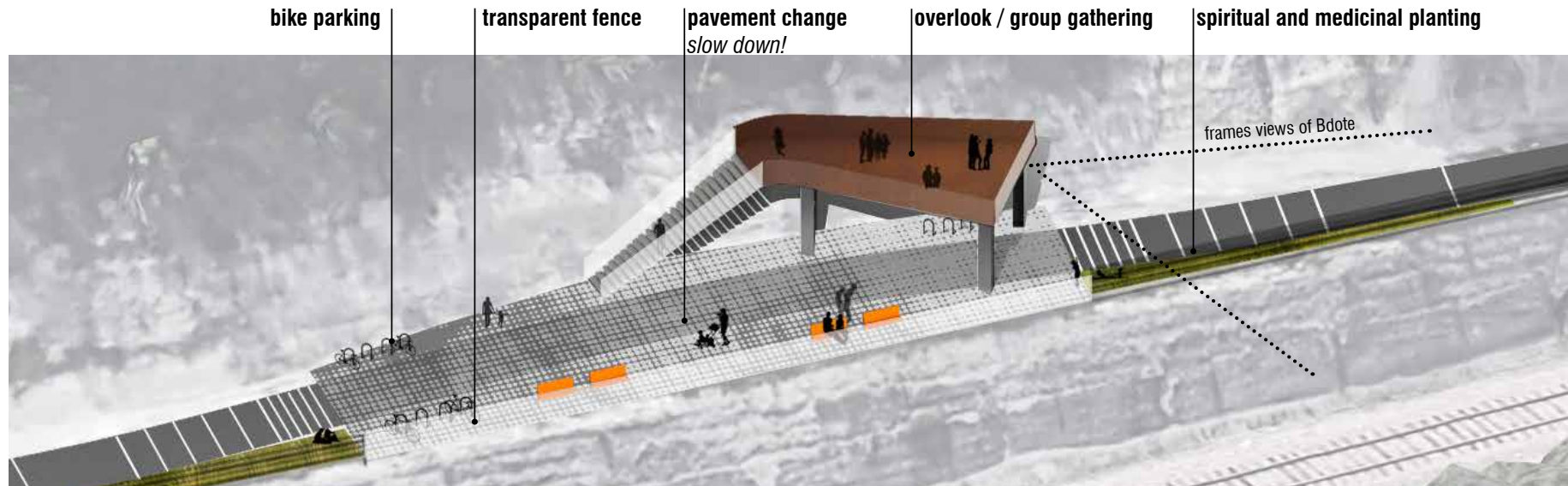
Currently, a five-foot fence protects trail visitors from a steep bluff and railroad tracks below. Replacing sections of fence with secure but transparent materials will help diminish the barrier between visitors and Bdote.

THEME #6 GEOLOGICAL TIME

**BEDROCK OF THE MINNESOTA RIVER VALLEY**

#### PAVEMENT MARKINGS

A rhythmic pattern of grooves in the trail surface—ahead of and behind the feature—will alert bikers and walkers that a feature is ahead.





# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: MENDOTA

### INTERPRETIVE THEMES

### INTERPRETIVE STORIES

### INTERPRETIVE FEATURES

**THEME #1** DAKOTA HOMELAND

**INDIAN TRADE AND MENDOTA**

**TRACE TABLE**

Layers of movement over thousands of years—foot, hoof, wheel, and track—are cast in a table of iron, highlighting different modes of travel through time.

**MENDOTA GATEWAY**

At the intersection of Highway 13 and D Street, a set of markers welcomes visitors to one of the most historic places in Minnesota.

**THEME #2** TRAILS THROUGH TIME

**MINNESOTA VALLEY TRAILS AND RAILROAD**

**RAILROAD CROSSROADS**

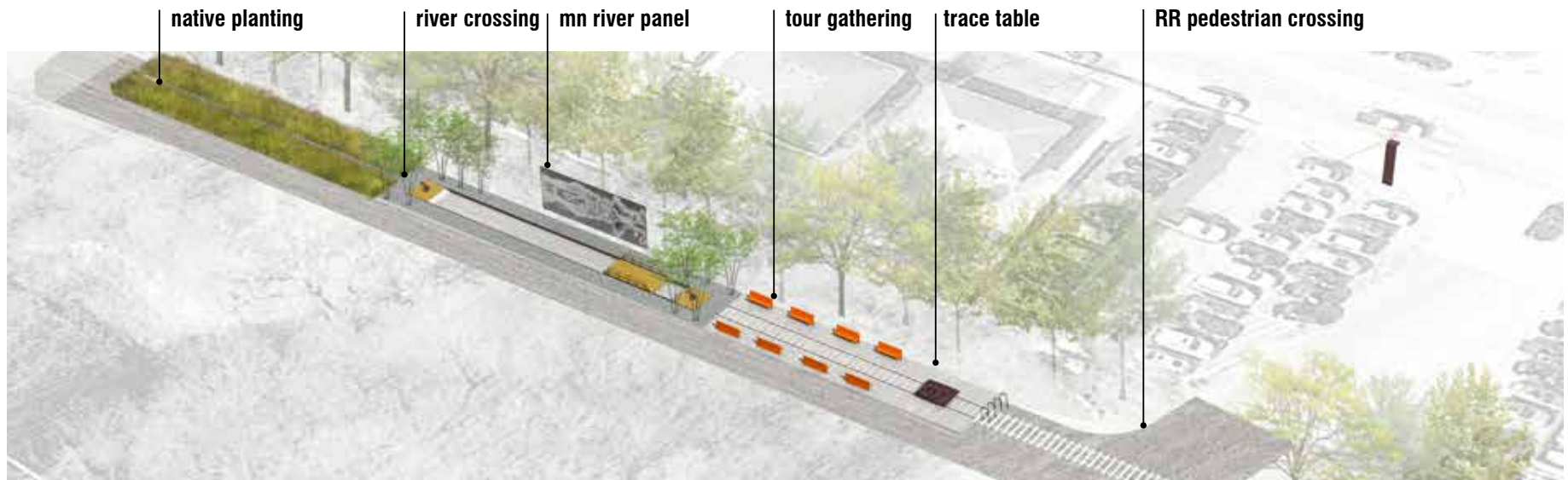
Where the Greenway trail is crossed by a road (D Street) leading to the Sibley Historic Site, traces of movement are painted on the surface, recalling Mendota's place in history as an important crossroads for travel and commerce.

**THEME #3** BRIDGING AND CROSSING

**MENDOTA FERRY**

**THE RIVER CROSSING**

This feature replicates the mechanism that moved the Mendota Ferry from shore to shore. While some visitors ride the ferry, others turn the wheel that moves the platform.



# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: WPA CAMP #1

### INTERPRETIVE THEMES

### INTERPRETIVE STORIES

### INTERPRETIVE FEATURES

**THEME #6** GEOLOGICAL TIME

**QUARRIES FILLED WITH OCEAN LIFE**

**WORKING THE QUARRY**

Large limestone blocks mark the old quarry site, providing a vivid sense of the scale of the operation. A series of walkable, staggered plateaus descends from the top of the limestone ledge, calling attention to how the stone was cut and removed.

**THEME #7** COMMUNITIES PAST AND PRESENT

**MINNESOTA AIRLINES**

**THE OVERLOOK**

In the space of the existing overlook, the informal path between the parking area and the wall will be paved, and lounge-like chairs and picnic tables will be lined up with the flight pattern of planes arriving at MSP airport.

**MENDOTA CAMP #1:  
AFRICAN AMERICANS IN THE WPA**

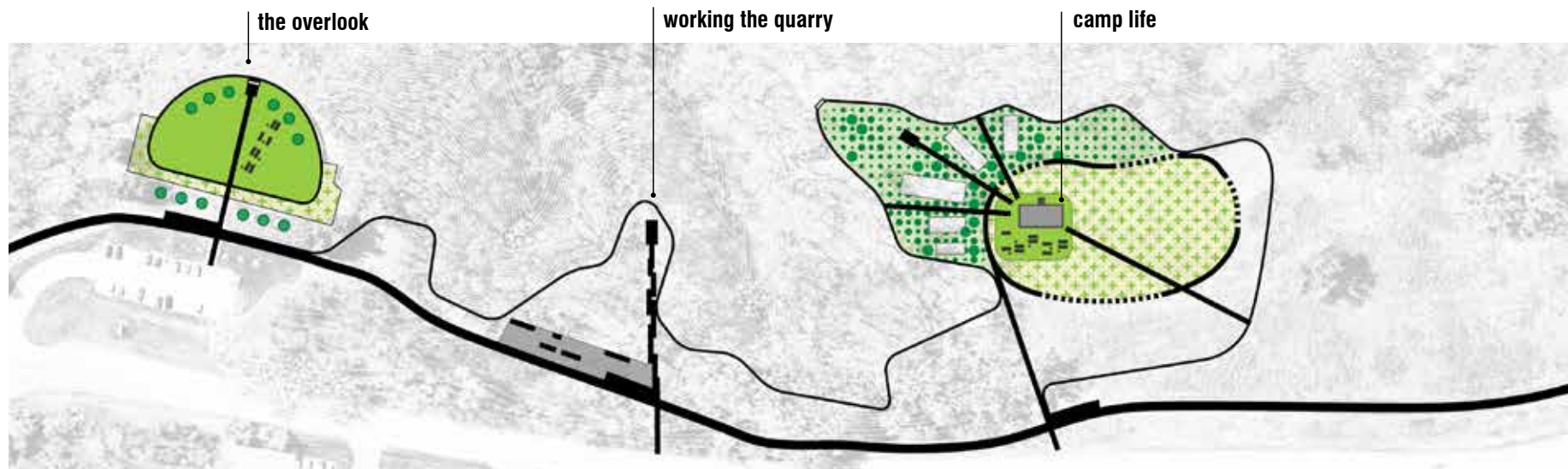
**CONNECTING PATHS**

A series of paths and platforms invite visitors to retrace the daily movements of WPA laborers who lived and worked at the same location. Location-based media will help fill in the sounds and voices of people who worked in the camp.

**MENDOTA CAMP #1:  
AFRICAN AMERICANS IN THE WPA**

**CAMP LIFE**

The layout of the once-bustling camp is outlined in walkable paths and landscape elements. The demolished camp buildings are given presence as voids in the forest.



# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: LONE OAK ROAD TRAILHEAD

### INTERPRETIVE THEMES

- THEME #2 TRAILS THROUGH TIME
- THEME #5 ECOSYSTEMS OF THE RIVER

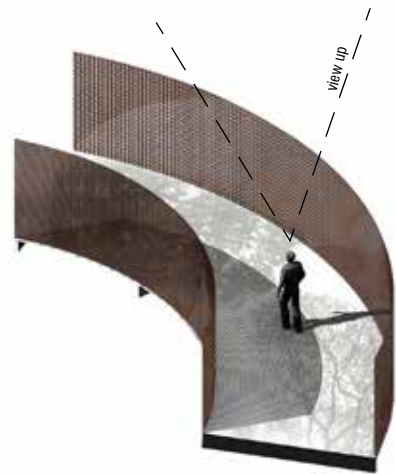
### INTERPRETIVE STORIES

- MINNESOTA VALLEY RAILROAD
- MINNESOTA RIVER WATERSHED

### INTERPRETIVE FEATURES

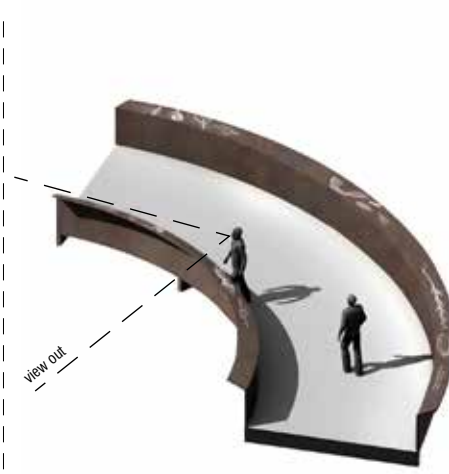
#### ECO-TRANSECT

This section of the Greenway—which has yet to be built—presents an opportunity to give trail visitors unexpected perspectives on the transition from upland forest to the wet prairies of the floodplain. The elevated trail will feature surfaces and railing systems that encourage specific experiences with the surrounding ecology.



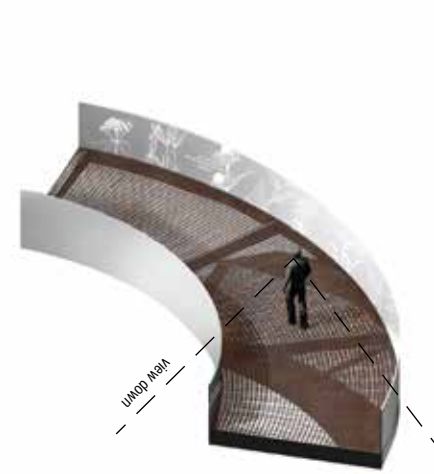
#### UPLANDS

The trail would start out at ground level; the bridge section along this part encourages you to look up at the canopy.



#### RIVER-BOTTOM FOREST

This part of the trail would be elevated and rise up into the tree canopy. The bridge section along this part encourages you to look out as the ecology changes to river-bottom forest. Interpretive graphics, highlighting ecology and habitat, can be integrated into the sides of the bridge.



#### WET PRAIRIE

This part of the trail would be elevated to cross the railroad tracks, moving out of the forests and into wet prairie. The bridge section along this segment encourages people to look down. Interpretive graphics highlighting ecology and habitat can be integrated into the sides of the bridge.





# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: QUARRY LAKE

### INTERPRETIVE THEMES

### INTERPRETIVE STORIES

### INTERPRETIVE FEATURES

**THEME #5** ECOSYSTEMS OF THE RIVER

**NICOLS AND THE SAND QUARRIES**

**CASTING SANDBOX**

A shallow box is filled with molding sand, the kind that was quarried from this very site and used in metal foundries across the country. A selection of recreated foundry molds is tethered to the box inviting visitors to press different shapes into the sand, then lift them out to reveal the objects.

**THEME #6** GEOLOGICAL TIME

**GLACIERS AND THE RIVER WARREN**

**QUARRY CROSSING**

A path across the lake draws attention to changing water levels and life in the aquatic shallows.

**VIEWING PLATFORM**

Trail visitors will hear the sounds of the fens amplified—birds, insects, rustling breezes, and even the nearby highway.



# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: CEDAR AVENUE BRIDGE TRAILHEAD

### INTERPRETIVE THEMES

### INTERPRETIVE STORIES

### INTERPRETIVE FEATURES

**THEME #3** BRIDGING AND CROSSING

**CEDAR AVENUE BRIDGES**

**SWING BRIDGE OVERLOOK AND ROTATING LENTICULARS**

The original swing bridge took six people to operate. The lenticulars rotate 180 degrees, with the help of six people, mimicking the movement of the historic bridge that swung open for barge traffic on the Minnesota. The overlook is a replica of the swing bridge structure in the historic location which allows visitors to get over the water.

**MINI SWING BRIDGES**

Long pivoting beams close to the ground can be pushed and pulled, like bridges that opened and closed across the river.

**THEME #4** WORKING RIVER

**STEAMBOAT COMMERCE**

**WATER TROUGHS**

Visitors can pump water and move sand in a meandering channel to see how rivers transport and deposit sediment. Here's where they find out about dredging the river.

**WOOD THAT FUELED THE RIVER VALLEY**

**WOODING STATIONS**

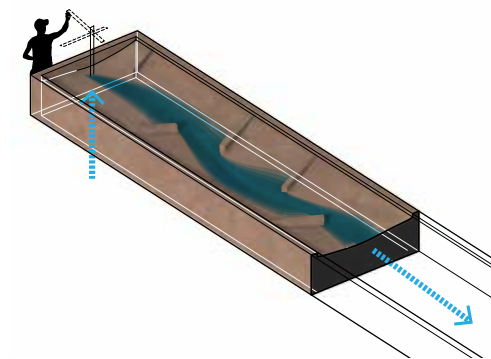
Each of the wood rounds in this play area represents an amount of wood it would take to fuel a particular operation—heat a house for a day, power a steamboat for 5 miles, or power a steam locomotive for an hour.

**THEME #5** ECOSYSTEMS OF THE RIVER

**LOST TROUT STREAMS**

**NATIVE PLANTING // STREAM RESTORATION**

This is an area once known for its trout streams, floating fens, and diverse wet prairies. Where possible, native plant and aquatic communities will be restored and interpreted.



**WATER TROUGH**

- corten steel trough; water pump; contoured; 4' wide x 40' long
- hand pump to water line installed by Dakota County as part of trailhead project.

# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: BLACK DOG LAKE

### INTERPRETIVE THEMES

**THEME #1** DAKOTA HOMELAND  
**THEME #7** COMMUNITIES PAST AND PRESENT

### INTERPRETIVE STORIES

**HOHAANSKAE: BLACK DOG VILLAGE**

### INTERPRETIVE FEATURES

#### TEACHING AREAS

Program areas provide for facilitated group activities, particularly in partnership with Native educators and students. Workshops focused on native plantings and tipi construction could be among the offerings. Temporary and mobile, this installation interprets the temporality of Black Dog Village.

**THEME #4** WORKING RIVER

**XCEL ENERGY (BLACK DOG POWER STATION)**

#### BIKE POWERED POLES

Here's where trail visitors turn their own energy into electricity. Two stationary bikes are connected to generators that power a set of LEDs. The faster visitors pedal, the more lights they power, setting up a challenge opportunity with other riders. This activity showcases the role of Xcel Energy's Black Dog Power Plant in powering the regional electrical grid.

#### XCEL ENERGY PLAZA // WEATHER SENSOR STATION

In partnership with Xcel Energy, interpretation will developed to tell the story of the plant, including its shift from coal to natural gas and its role in the founding of Burnsville. Displays will show wind speeds and real-time wind-generated power production.

**THEME #5** ECOSYSTEMS OF THE RIVER

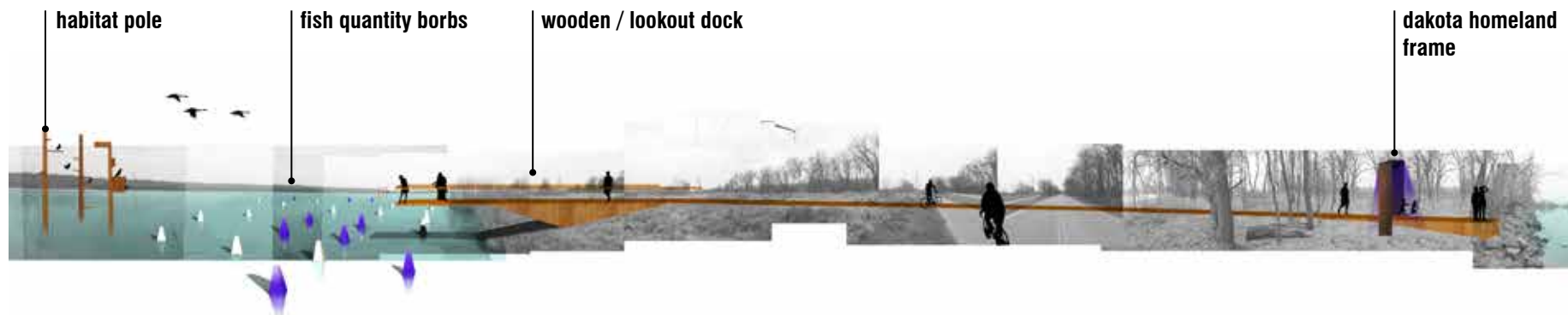
**BLACK DOG LAKE**

#### HABITAT POLES

Poles with platforms or houses will be set just off shore in Black Dog Lake, encouraging bird nesting and perching. Height, size, and type will vary to attract different species.

#### FISH QUANTITY BORBS [BUOY / ORB]

These floating fish detectors—called borbs—have integrated LED lights that illuminate when fish swim by.





# EXECUTIVE SUMMARY

## INTERPRETIVE NODES AND DESTINATIONS: MINNESOTA RIVERFRONT PARK

### INTERPRETIVE THEMES

**THEME #5** ECOSYSTEMS OF THE RIVER

### INTERPRETIVE STORIES

**RIVER FISH AND WATER QUALITY**

### INTERPRETIVE FEATURES

**BIG FISH SCULPTURES**

These playful sculptures showcase the top five fish species populating this section of the Minnesota River. They will be scaled in relation to one another and designed to encourage climbing, rocking, bouncing, and relaxing. Each one will be constructed differently to highlight particular information—such as habitat, native or invasive, and related guidelines for human consumption.

This area highlights the habitat and ecological restoration efforts by the DNR, Fish and Wildlife Service, and Xcel Energy. Interpretive signage will include information about the improved health of the River and ongoing management and restoration strategies.

#### EMERALD SHINER

- bouncy steel ribs
- most abundant fish in the Mississippi and Minnesota rivers
- bait fish

#### WHITE BASS

- steel ribs for climbing through
- glows turquoise once every 30 minutes as a reminder that one serving of white bass should be eaten only once a month
- fish consumption guidelines interpretive signage

#### GIZZARD SHAD

- rocks back and forth
- interior surface is etched with all Minnesota River fish species and habitat information

#### COMMON CARP

- wood bench integrated into steel base
- interior surface is etched with information about invasive species affecting the MN River

#### FLATHEAD CATFISH

- wood lounge integrated into steel base
- glows dark blue once every 30 minutes as a reminder that one serving of catfish greater than 30" in length should be eaten only once a month.





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