

McLeod County

# McLeod County Dakota Rail Trail Master Plan

May 17, 2016

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## Introduction

The McLeod County Dakota Rail corridor master planning process provides a vision for the Dakota Rail corridor as a multi-use trail extending approximately 18 miles from the McLeod/Carver County line into the City of Hutchinson (see Appendix B for proposed trail alignment). Combined with the 26 miles of trail already developed in Hennepin and Carver Counties, this would create a 44 mile regional trail linking McLeod County to the western suburbs of the Twin Cities. The master plan outlines the development requirements and operations costs associated with constructing and managing an 18-mile regional trail facility.



The McLeod County Regional Railroad Authority, along with Hennepin and Carver County Regional Railroad Authorities, purchased the corridor in 2001 to preserve it for future transportation operations. In 2008, Hennepin County began construction on paving the Dakota Rail Trail. The paving project was completed in 2009 and the trail opened in July of 2009. In the spring of 2010, Carver County began work paving the Dakota Rail Trail from St. Bonifacius to Mayer. This section opened in May of 2011. The final segment in Carver County from Mayer to the Carver/McLeod County line was completed in 2012.

The master planning process was initiated to identify issues and opportunities, outline improvement costs and identify public needs, and interests in the potential development of the trail in McLeod County. The Master Plan was written and facilitated by a working group made up of staff from McLeod County and the City of Hutchinson. This process includes public agency discussions, policymaker workshops, and a public open house. A public survey and public open house as part of the McLeod County Trail Plan development process were also taken into account.

### ***McLeod County***

## **Chapter 1: Boundaries**

The Dakota Rail corridor that extends from Wayzata to Hutchinson was abandoned in 2001. Throughout McLeod County, the Dakota Rail corridor typically has a 100-foot dedicated right-of-way. In certain locations the width of the corridor varies. There is an area near South Silver Lake where the right-of-way varies from 135 feet to 285 feet. (See Appendix B for proposed trail alignment). The Dakota Rail corridor is wide enough to construct a multi-use trail on the existing rail bed. Additional land acquisition is not anticipated, but any future identified amenities, parking and/or connections may require future property rights/transaction negotiations.

In Hutchinson, the Dakota Rail corridor extends for approximately 1.5 miles and ends at the Crow River near Ranch Avenue SE. In 2015, the trestle bridge over the South Fork of the Crow River was removed due to it being a severely deteriorated structure. For several years, the City of Hutchinson has been planning for an alternate alignment for the Dakota Rail Trail not utilizing the railroad trestle. (See Appendix C for proposed alignment through Hutchinson). The preliminary plan is for a trail to continue north from Ranch Avenue SE, near the 5<sup>th</sup> Avenue SE bridge, and connect into the existing City of Hutchinson trail network. Trail users could then travel to the former Great Northern Depot which serves as a trailhead and/or connect to the Luce Line State Trail. Since the land needed to complete the new trail alignment is already City of Hutchinson property, there are no anticipated land acquisition costs for connecting to the existing City of Hutchinson trail network.

## Chapter 2: Stewardship Plan

The railroad rails and ties were removed from the corridor in about 2005. In its current state, the rail bed is uneven and somewhat overgrown, with three deficient timber bridge structures. The Crow River Sno Pro's Snowmobile Club maintains the trail between Lester Prairie and Hutchinson as a State of Minnesota Grant In Aid snowmobile trail. Maintenance by the Sno Pro's includes clearing downed trees and brush removal to keep the corridor clear.

In addition, in 2014 the McLeod County Rail Authority entered into a lease agreement with the City of Lester Prairie that allowed the city to improve the trail from the McLeod/Carver County line 2.0 miles through to the west side of Lester Prairie. Completed in 2015, this improvement provided a firm class 5 surface for trail users that eliminated the previous dead end at the county line.

Existing Dakota Rail corridor lease agreements between the MnDNR and the McLeod County Regional Railroad Authority, as well as the Rail Authority and the City of Lester Prairie, will continue to be honored until such time as circumstances change.



Views of existing Dakota Rail corridor.

## Chapter 3: Demand Projections

Regional parks and trails in Minnesota are very popular. The population in McLeod County is projected to continue to grow as the metropolitan area to the east expands steadily and this will further increase the demand for regional trails. According to the Minnesota State Demographic Center, McLeod County will grow from 38,240 people in 2015 to 44,126 people in 2045. Carver County which is just to the east of Lester Prairie is projected to grow from 101,499 people in 2015 to 126,095 people in 2045.

Outdoor recreation is important to many Minnesota residents. According to a 2014 survey, 57 percent of Minnesotans indicate that outdoor recreation is “very important” to their life. Among the outdoor activities most favored by Minnesotans, trail uses are popular recreation activities. These include walking, bicycling, running or jogging, in-line skating, snowmobiling and cross-country skiing.

<b>Activity</b>	<b>Percent of Population Participating</b>
Walking/Hiking	54%
Biking	18%
Running or Jogging	15%
Snowmobiling	8%
In-line Skating	6%
Snowmobiling	8%
Cross-country Skiing	3%

*2014 Outdoor Recreation Participation Survey of Minnesotans.  
Minnesota DNR, 2016.*

Use of area trails mirror this importance. For example, a Met Council report estimated that the Dakota Rail Regional Trail saw 488,000 visits in Hennepin County in 2014. In only its second year since completion, the Carver County segment saw an estimated 113,000 visits. In addition, a 2015 trail count study conducted by the Parks & Trails Council of MN, estimated annual use of the Luce Line State Trail in Hutchinson to be approximately 156,000 visits.

## Chapter 4: Development Concept

### General Elements

McLeod County plans to assist the McLeod County Regional Rail Authority in developing its segment of the Dakota Rail corridor into the Dakota Rail Trail, a multi-use, bituminous (paved) trail that will complement the existing paved trails that are located in the area, including the Dakota Rail Trail in Carver and Hennepin Counties and the Luce Line State Trail within McLeod County. The ultimate trail will be suitable for bicycling, walking, running, in-line skating, commuting, dog walking and other typical non-motorized trail uses during the spring, summer and fall seasons. During the winter season, the trail is proposed to be open to snowmobile use, as well as cross-country skiing, snow-shoeing, and walking. In addition, the McLeod County Regional Railroad Authority and the Crow River Sno-Pros could continue the agreement that defines maintenance, usage, and insurance responsibilities for the operation of the snowmobile trail.

The proposed trail will generally utilize the existing rail bed on which the rails and ties have been removed. The trail may divert from the right-of-way center line where realignment is necessary to avoid impacts to existing topography/vegetation or where realignment may provide additional buffering to adjacent properties. The current condition of the rail bed varies from relatively flat and packed to rough, rutted, vegetated and/or strewn with ballast rock material. Weeds and grasses are growing on most of the rail bed, and the adjacent tree canopy, which was trimmed back for rail removal, is once again encroaching on the corridor.

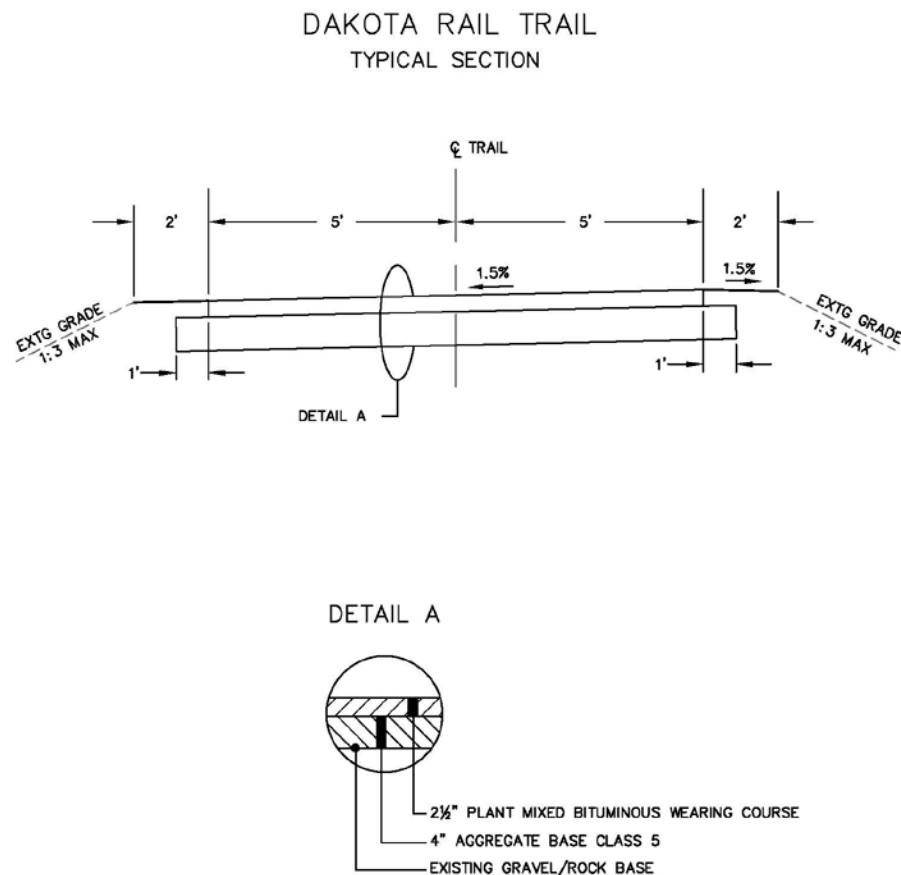


Typical ballast found on existing rail corridor.

Site preparation along the corridor will require standard construction preparation, including tree trimming, minor excavation, sub-grade preparation, vegetation control and miscellaneous removals. Minimal grading will be necessary along the existing railroad bed to accommodate the proposed typical trail section.

**Primary Trail Elements**

The proposed trail will be designed in accordance with applicable American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* and Minnesota Department of Transportation’s *Minnesota Bicycle Transportation and Planning Guidelines*. The trail’s paved surface portion will typically be ten feet wide with a two-foot shoulder and clearance zone on each side.



**Figure 2: Typical Section**  
**McLeod County**  
**Dakota Rail Trail Master Plan**



Bituminous trails are preferred by trail users because they offer a wider variety of uses including bicycling, walking, running, in-line skating and handicapped mobility, while also being compatible with winter time uses. A bituminous surface is also preferred because of its cost-effectiveness through its life-cycle in comparison to other surface treatments.

McLeod County will actively pursue funding which would address corridor improvements, preservation, safety, and usability. Realizing funding constraints and the need to first address corridor preservation, safety and usability, paving on portions of the trail may occur after or concurrent with other improvements to the corridor. Recent discussions with trail managers throughout Minnesota indicate that snowmobile use does not pose a significant impact to trail surfaces. There are 15 at-grade road crossings along the proposed trail segment from Hutchinson to the County line. In addition to safety signing, roadway crossings may have surface paint marking the trail intersection location and possibly roadway surfacing improvements. Specific crossing features and surface types will be determined at the time of project final design.

Where the trail crosses a gravel road, a paved trail crossing may be constructed with pavement extending 50 feet over the roadway from the trail centerline on both sides. This could minimize the amount of gravel deposited on the trail crossing, which can be problematic to summer time trail users. This is especially true for cyclists, in-line skaters, walkers with strollers, skateboarders, and handicapped users.

The Dakota Rail Corridor has three bridges that connect the rail bed across wetlands, creeks and rivers as it crosses McLeod County. The following bridges are located within the proposed trail corridor (in order east to west):

- Bridge over Bear Creek just west of County Road 90.
- Bridge over County Ditch 32 just west of County Road 15.
- Bridge over Otter Creek on east side of Lester Prairie.



Existing trestle on Dakota Rail corridor.

There are also three relatively large culverts the trail goes over. There is a 24 inch culvert between County Road 71 and County Road 90, a 48 inch and 24” culvert between County Road 90 and County Road 24.

Trail corridor improvements may include bridge and culvert repairs, retrofits and/or replacements at the time of construction as determined necessary. The bridge retrofits may include adding safety fencing and rub rails to the sides and timber planking or bituminous overlays on the deck surface.

### **Supporting Trail Elements**

Access, signage, vegetative screening, overlooks, and rest areas are important elements of regional trails. Their proper design, stewardship and placement add aesthetic and functional value to the trail. Signature features such as trailheads are important elements because they provide the amenities visitors need to prepare for trail use and a location for users to access the trail.

As a part of the master plan, McLeod County, the City of Lester Prairie and the City of Hutchinson should consider signature features along the trail to add to the user’s experience. Signature features may include parking, informational signage, landscape features, benches, tables, bicycle racks, restroom facilities, water

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fountains and trash receptacles. There is already a location in Hutchinson that can serve as a trailhead identified as the Depot Marketplace (Former Great Northern/Dakota Rail Train Depot). This location has a parking lot, bike rack, and restroom facilities. Lester Prairie has Central Square Park downtown.

Waste receptacles, portable bathroom facilities and other amenities could also be provided at other locations along the trail corridor. McLeod County Regional Railroad Authority will coordinate with communities and other interested parties who wish to construct trail elements in the rail corridor.

The Dakota Rail corridor passes through beautiful natural, agricultural and rural settings. The corridor has some very scenic locations with views of area wetlands, the Crow River and hardwood forests. Overlooks allow trail users to admire the views from a location other than on the trail itself. Bridges are often good locations for overlooks because they are elevated and can provide better views, but other overlook locations may be worth exploring so trail users can enjoy these unique natural features.

Proper signage along the trail is important for safety and wayfinding. Traffic control signs, such as stop signs at road crossings and street name signs at bridges and intersections may be installed on the trail. Potential informational and directional signage will be consistent with other McLeod County signage and standards.

Rail corridors are sometimes very overgrown with both beneficial and invasive vegetation because the management regime utilized by the railroads was done more for function than aesthetics. The Dakota Rail Corridor is no exception. The corridor will need to be trimmed enough to provide adequate clearance and satisfy clear zone requirements. In addition, there are locations that may require safety screening and fencing, which will be identified during the final design phase of the project. Using vegetation to screen the trail is aesthetically pleasing and very effective in providing visual protection to and from the trail. In areas that may require additional protection, other options could be considered.

### **Connections**

Developing the Dakota Regional Rail Trail in McLeod County will be an added asset for county residents. Besides enabling a variety of looping opportunities with the Luce Line State Trail, the trail would also provide beneficial connections to regional parks and trails in Carver and Hennepin Counties.

The McLeod County Trails Plans has a list of priority trail projects that relate to the Dakota Rail Trail and those are as follows:

- Silver Lake Trail (Central Luce Line/Dakota Rail Trail Loop)
- Glencoe to Dakota Rail Trail
- Winsted – Lester Prairie Trail (Eastern Luce Line/Dakota Rail Trail)
- Hutchinson to Glencoe trail

These trails would connect Dakota trail users to more McLeod County communities and their local parks, trails and points of interest.

### **Sources of Revenue and Development Costs**

Developing the trail from the Carver County line into Lester Prairie is a priority of the Parks and Trails Council of MN, local community stakeholders and has local legislative support. This makes State bonding a possibility, but bonding for trails is not awarded on a regular basis and leaves the rest of the trail to be funded.



Dakota Rail Trail corridor in Lester Prairie.

Grants, on the other hand, are funded each year and would likely be a better option, especially since the Dakota Rail Trail corridor has been designated as a regionally significant trail. This designation should make the McLeod County segment eligible for state funding through the Greater MN Legacy Grant program and the DNR's

Regional Trail Grant program. Other potential grant programs, including Federal Aid Enhancement funding are included in the McLeod County Trail Plan.

While a local match is not needed for the Legacy Grant program, projects with non-state funding receive additional consideration. In addition, local matches are often required for other grants. Possible sources of non-state funding for the Dakota could include the City of Hutchinson funded portion, City of Lester Prairie contributions for previous trail development and improvements of Central Square Park, in-kind contributions such as master plan development and engineering, and possible limited cash contributions.

The cost estimates below are broken out into four broad categories. A detailed cost estimate can be found in Appendix A of this report. It is important to note that the estimates were broken out into two parts, the Hutchinson to CSAH 1 in Lester Prairie (\$2,660,997) and the CSAH 1 Lester Prairie to the Carver County line (\$560,000).

**Estimated Trail Construction Costs**

Corridor Preparation and Mobilization	\$413,385
Drainage and Structures	\$510,880
Pavement	\$1,403,156
Restoration	\$333,576
<b>Estimated Construction Cost (Hutchinson to CSAH 1 Lester Prairie)</b>	<b>\$2,660,997</b>
<b>Estimated Construction Cost (CSAH 1 Lester Prairie to County Line)</b>	<b>\$680,000</b>
<b>*Total (2016 dollars)</b>	<b>\$3,340,997</b>

*\*Detailed cost estimate is located in Appendix*

## **Chapter 5: Issues**

Some of the conflicts and concerns that generally come up regarding trail corridors are with safety, noise, effects on property values and parking. This section will address these potential concerns and identify ways these issues can be minimized through design.

### **Safety and Security**

When a new trail is proposed, a common concern of residents adjacent to the trail is the potential effect on their safety and security, as well as the safety and security of the trail users.

Regional trails around the metropolitan area generally have not had much criminal activity. In Hennepin County, Three Rivers Park District reported an average of one incident per 31,429 visits on the heavily used (222,000 visits annually) North LRT Regional Trail, which runs from Carver Park Reserve along the south shore of Lake Minnetonka east to the City of Hopkins.

The McLeod County Sheriff's Office provides patrolling for all County parks and trails. Sheriff's Deputies and parks department employees share the responsibility for regularly patrolling parks and trails. Trail and bridge structures will allow access for emergency vehicles on and along the trail corridor.

### **Privacy**

McLeod County will work with local communities and residents to minimize the impact on adjacent residents. The design stage of the trail development will address specific situations using a variety of methods. For example, the design process may identify the need to shift a short segment of trail away from the center of the corridor when the corridor is narrow and residents live only on one side. In other cases, vegetative screening may be employed or other screening considered.

### **Property Values**

Several studies assessing the effect of trails on property values have been conducted for trails throughout the United States. The studies showed that trails have no negative impact on either the marketability of property (easier or more difficult to sell) or its value. There was a belief among some, typically between 20 and 40 percent of a study sample, that there was a positive impact on marketability and value.

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## **Parking**

McLeod County will work with the Cities of Hutchinson and Lester Prairie to identify parking locations for trail users within their communities. There is potential for parking area/trailhead in South Silver Lake. On-street parking, where permitted, will be monitored by the McLeod County Sheriff's Department and police departments within the respective municipalities.

## **Trail Surface**

Consistent with the McLeod County Trail Plan, the Master Plan recommends that the Dakota Rail Regional Trail be paved through McLeod County because a paved trail enables a greater variety of uses. In addition, the Dakota Rail Trail to the east of McLeod County is paved. Continuing that surface in McLeod County will provide a consistent 44-mile long corridor and a paved trail will encourage increased use and promote tourism. However, in the best interest of completing the trail, an aggregate surface may be considered as an interim solution if inadequate funding is available to pave the entire trail initially.

Bituminous trails, despite the higher construction cost, are typically less expensive to maintain than aggregate trails over the life span of the asphalt. The higher maintenance costs are due to the less durable surface that suffers washouts in heavy rain events, the cost of annually replacing aggregate, the labor that is needed to fix washouts and the extra cleaning that is needed when the aggregate begins to migrate away from the trail bed.

## **Snowmobiles**

While snowmobile use is not allowed on the Dakota Rail Regional Trail in Hennepin and Carver Counties, the Dakota Trail has been an important part of the McLeod County network of snowmobile trails and that will continue as the Dakota Trail is developed in the county. There are snowmobile trails in Minnesota that operate smoothly over multi-use, bituminous trails including the recently paved Luce Line State Trail in McLeod County. Maintenance, patrolling and education are key elements to making snowmobile use a success on snow-covered trails.



Figure 1 Signs indicating snowmobile traffic only are found approximately 1-mile on existing corridor and at major road crossings.

### **Equestrian Use of the Trail**

McLeod County does not recommend allowing equestrian use on the Dakota Rail Regional Trail. The demand for equestrian use does not warrant another equestrian facility in the area. The Luce Line State Trail, which runs parallel to the Dakota Rail corridor several miles north, has a treadway that is maintained for equestrian use. The former rail grade of the Dakota Rail corridor is generally not wide enough to construct a separate pathway for equestrian users.

### **Encroachments**

Except by permit or lease, encroachments within the Dakota Rail corridor are not permitted by the McLeod County Regional Rail Authority. Unauthorized encroachments are unlawful and are not allowed. Existing agreements with McLeod County Regional Rail Authority continue to be honored.



## **Chapter 6: Trail Operation and Management**

The Dakota Rail Trail will pass through both rural and agricultural landscapes as well as through the cities of Hutchinson and Lester Prairie. Much of the trail will be visible from adjacent roadways. The high visibility and expected high use of the trail may make the need for routine maintenance a priority for McLeod County.

Routine maintenance could include mowing, tree trimming, sign maintenance, debris removal on the trail surface, noxious weed management and solid waste collection. It is expected that trail maintenance will be a partnership between the McLeod County staff, local user groups/local agencies and volunteers. For example the Sno-Pros could still help with tree trimming and trail maintenance as part of the snowmobile grant in aid program. In addition, volunteers could participate by being involved in an “Adopt-A-Trail” program, trail monitor program or a Trail Friends group.

Bridge structures should be visually inspected annually in the spring and during routine maintenance operations throughout the year. McLeod County staff should minimize the amount of driving on the corridor to levels that are necessary for maintenance in an effort to reduce the amount of energy required to maintain a safe and aesthetically pleasing trail.

### **Operations Costs**

McLeod County will make use of existing personnel and equipment to maintain the Dakota Rail Trail corridor, surfacing and vegetation. McLeod County will require additional annual maintenance materials and efforts, including sign replacement, vegetation control and materials for minor bituminous repair to maintain a safe trail.

### **Sources of Revenue for Operations and Maintenance**

As suggested in the McLeod County Trails Plan, the County could establish a Trail Fund that will receive an annual allocation in the county budget and contributions from other organizations and agencies. With funds collected over time the Trail Fund could provide the local match for grants and help fund new trail development, maintenance needs and the purchase of trail amenities for the Dakota and other County trails. The Fund could also serve as a collection place for donations and funds raised through trail events.

The County may also continue to receive corridor preservation funding from McLeod County Regional Railroad Authority to preserve railroad land, repair and

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replace structures, construct drainage facilities, maintain vegetation, issue leases and permits, and address other issues as it pertains to the preservation of the former rail corridor.

## **Chapter 7: Natural Resources**

### **Existing Conditions**

The corridor is presently owned and managed by the McLeod County Regional Railroad Authority. Operations and maintenance of the former rail corridor is being managed by the Railroad Authority. In 2008, as part of the abandonment process, the Railroad Authority removed all the railroad rails and ties from the rail bed. Presently, the corridor receives minimal maintenance. The existing rail bed has a runoff rate similar to a typical pavement surface. Paving the rail bed to construct the Dakota Rail Trail should not increase the rainfall runoff volume, discharge rate, or pollutant loading to the land adjacent to the railroad right-of-way. Consequently, the project will have a negligible impact on adjacent water resources.

McLeod County will plant the soft shoulders of the trail with a mixture of deep-rooted, native grasses that can withstand mowing and heavy public use. This will enhance the infiltration of runoff from the bituminous or aggregate surface of the trail.

### **Natural Resources Management Plan**

McLeod County will be responsible for maintaining a 14-foot wide corridor, generally located on the existing rail bed within the Dakota Rail corridor. The middle ten feet of the trail corridor will ultimately consist of a paved trail. On each edge of the trail, two-foot grass shoulders will be maintained with regular mowing. Overhead vegetation within the 14-foot trail corridor will be trimmed to sufficient height to allow users, maintenance and emergency vehicles unobstructed use. In instances where vegetation overhangs from outside the trail corridor, McLeod County staff will trim the vegetation to keep it clear of the trail users. The areas outside of the 14-foot trail corridor are considered low maintenance areas. Native and non-invasive plant species are encouraged for visual screening, wildlife and shade purposes.

## **Chapter 8: Special Needs**

McLeod County provides equal access for all users to its park facilities. Park facilities are designed to meet or exceed guidelines established by the Americans with Disabilities Act.

A paved Dakota Rail Regional Trail will enable wheel chairs and other handicapped mobility device users to enjoy the trail like other trail users. The trail will be designed with gradual slopes along the trail and at entry points so that handicapped users, strollers and bicycle trailers will be able to operate on the trail effectively.

## **Chapter 9: Public Awareness**

Developing the Dakota Rail Trail in McLeod County will provide a new recreational asset that improves safety, promotes health lifestyles, enhances connectivity and provides economic development opportunities for the county and the adjacent communities. A grand opening celebration may be planned to officially open the trail to public use. The trail would be recognized as an integral component of the regional trail system and would be identified on all McLeod County Park system maps and on the County's website.

The trail would also be included in regional and local trail maps. We would also expect that local communities and chambers of commerce would include the trail in their park, trail and promotional materials.

Business, stakeholder, volunteer participation should also be encouraged. This could be done through trail monitor and Adopt-A-Trail programs and the establishment of a trail "Friends" group. The McLeod County Trail Committee will also be a valuable source public involvement.

Working with Carver and Hennepin Counties and their communities along the trail would raise regional public awareness of this valuable asset. The looping opportunities between the Luce Line State Trail and the Dakota Rail Regional Trail would be especially beneficial to the entire region.

Finally, McLeod County will work with the Greater MN Parks and Trails Commission on various research initiatives that are developed. It is also expected that periodic trail counts will be conducted by the County and/or local agencies using appropriate equipment/methods and established annual use estimate formulas.

## **Chapter 10: Appendices**

**Appendix A – Detailed Cost Estimate**

**Appendix B – Proposed Trail Alignment**

**Appendix C – Proposed Trail Alignment through  
Hutchinson**

**Appendix D – Dakota Rail Bridge Inspections**

**Appendix E – Public Comments from Open House**

DAKOTA RAIL TRAIL ESTIMATED CONSTRUCTION COSTS (5/11/16)					
LINE NO.	ITEM DESCRIPTION	UNIT	DAKOTA RAIL TRAIL		
			UNIT PRICE	EST QTY	AMOUNT
	<b>CORRIDOR PREPARATION &amp; MOBILIZATION</b>				
	MOBILIZATION	LS	\$100,000.00	1	\$100,000.00
	TREE/BRUSH CLEARING (APPROX 5.00 ACRES)	LS	\$63,000.00	1	\$63,000.00
	GRADE AND COMPACT EXISTING AGGREGATE SURFACE (BLADE OFF 1" EXISTING MATERIAL)	RDST	\$100.00	739	\$73,900.00
	COMMON BORROW (LV)	CY	\$25.00	2000	\$50,000.00
	SOIL STERILANT	SY	\$1.10	114987	\$126,485.70
	<b>SUBTOTAL</b>				<b>\$413,385.70</b>
	<b>DRAINAGE &amp; STRUCTURES</b>				
	DITCH GRADING	LF	\$8.00	13860	\$110,880.00
	CULVERT PIPE REPLACEMENT (24" RCP AVERAGE)	LF	\$50.00	1000	\$50,000.00
	BRIDGE REPLACEMENT-WEST OF CR 90 (14'x8' BOX CULVERT)	LS	\$250,000.00	1	\$250,000.00
	BRIDGE REPLACEMENT-WEST OF CSAH 15 (84" RCP)	LS	\$100,000.00	1	\$100,000.00
	<b>SUBTOTAL</b>				<b>\$510,880.00</b>
	<b>PAVEMENT</b>				
	AGGREGATE BASE CLASS 5 (CV) (P)	CY	\$30.00	10850	\$325,500.00
	TYPE SPWEA230B WEARING COURSE MIXTURE-(2½")	SY	\$12.00	82133	\$985,596.00
	6" CONCRETE WALK	SF	\$11.00	3100	\$34,100.00
	TRUNCATED DOMES	SF	\$40.00	500	\$20,000.00
	18" SOLID LINE WHITE-PAINT	LF	\$4.00	250	\$1,000.00
	4" BROKEN LINE YELLOW-PAINT	LF	\$0.50	73920	\$36,960.00
	<b>SUBTOTAL</b>				<b>\$1,403,156.00</b>
	<b>RESTORATION</b>				
	COMMON TOPSOIL BORROW (LV)	CY	\$28.00	10842	\$303,576.00
	SEEDING, HYDROSEED	ACRE	\$1,500.00	20	\$30,000.00
	<b>SUBTOTAL</b>				<b>\$333,576.00</b>
	<b>ESTIMATED CONSTRUCTION COST</b> (Hutchinson-Ranch Ave to Lester Prairie-CSAH 1) - Note A				<b>\$2,660,997.70</b>
	<b>ESTIMATED CONSTRUCTION COST</b> (Lester Prairie-CSAH 1 to Carver County Line) - Notes B, C & D				<b>\$680,000.00</b>
	<b>TOTAL ESTIMATED CONSTRUCTION COST</b>				<b>\$3,340,997.70</b>

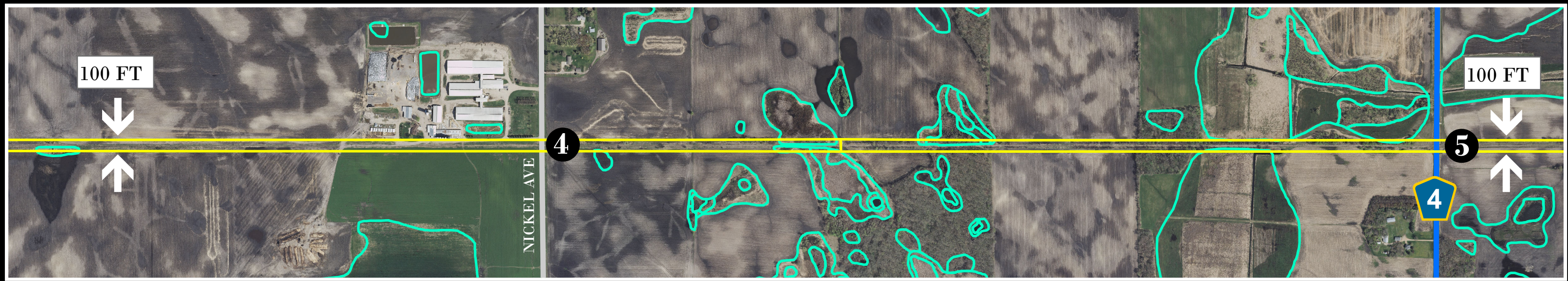
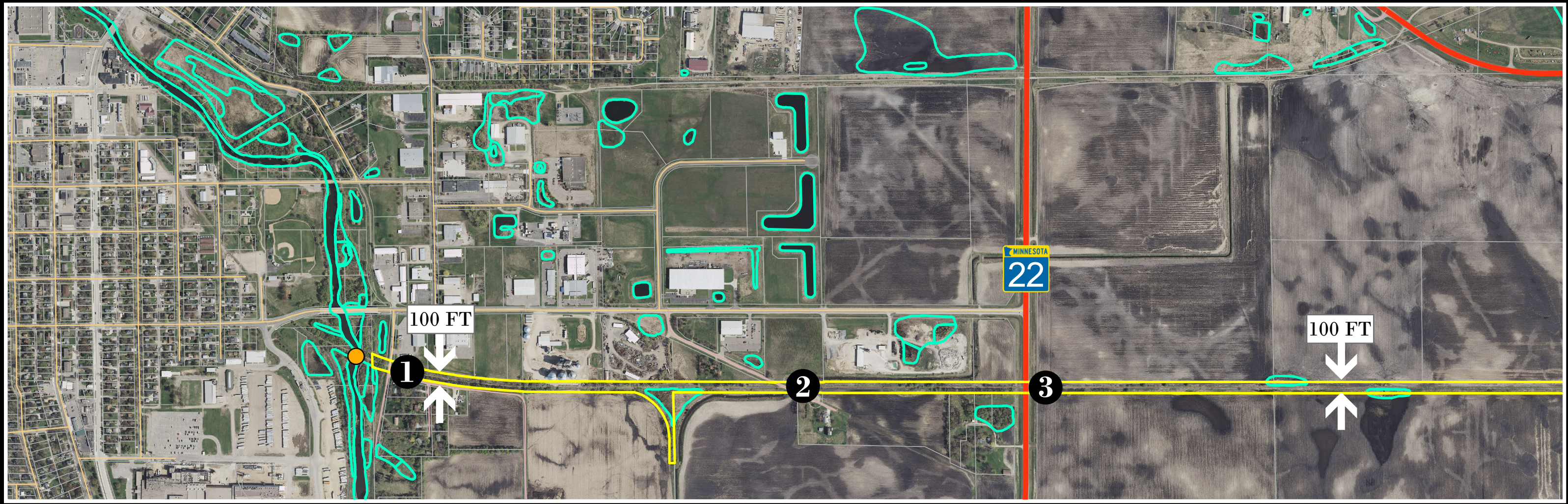
NOTES;

A) 14 MILE LENGTH USED FOR ESTIMATING PURPOSES

B) 2 MILE LENGTH USED FOR ESTIMATING PURPOSES

C) LESTER PRAIRIE SEGMENT (CSAH 1 TO CARVER COUNTY LINE) PREVIOUSLY ESTIMATED CONSTRUCTION COST OF \$680,000 (INCLUDES STRUCTURES)

D) ESTIMATED COST OF BRIDGE REPLACEMENT EAST OF CSAH 9 (10'x6' BOX CULVERT) \$150,000



# Dakota Rail Trail



Wetlands (NWI)



McLeod Regional Rail Authority Right of Way



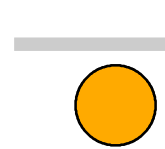
State Highway



County Paved Highway



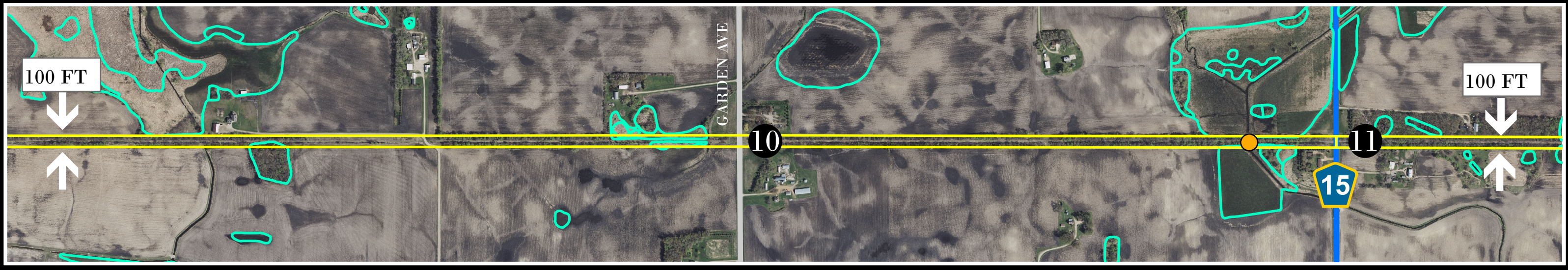
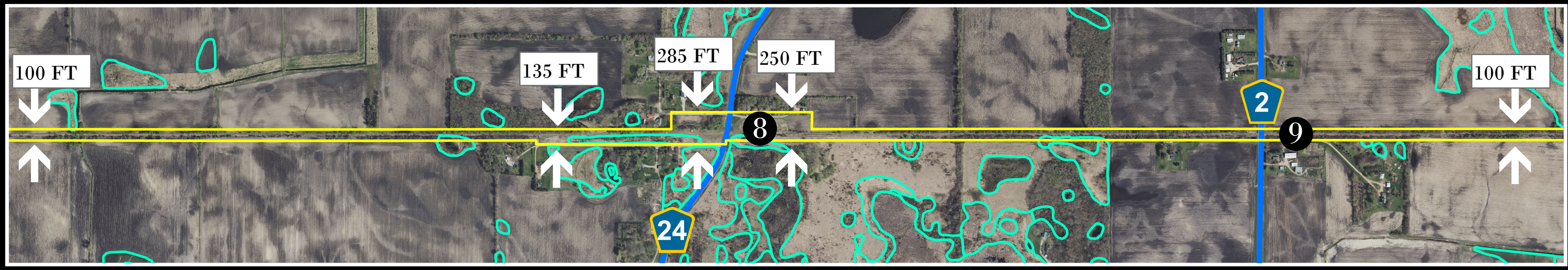
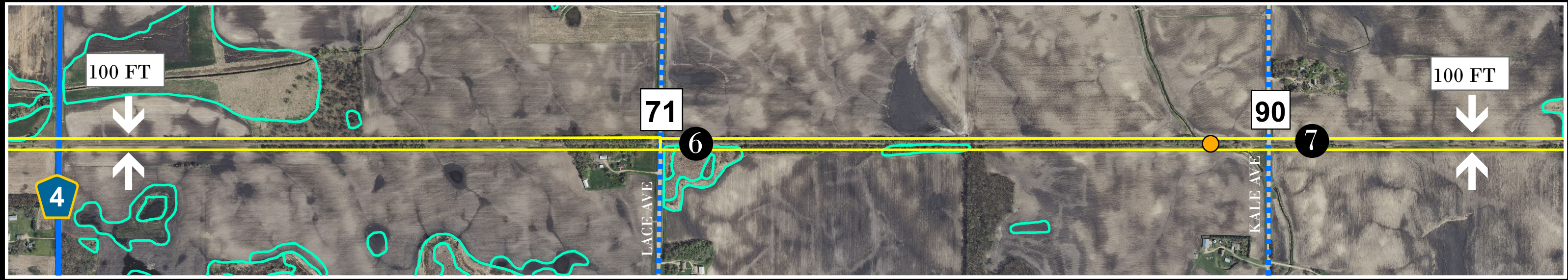
County Gravel Road



Township Road Bridge

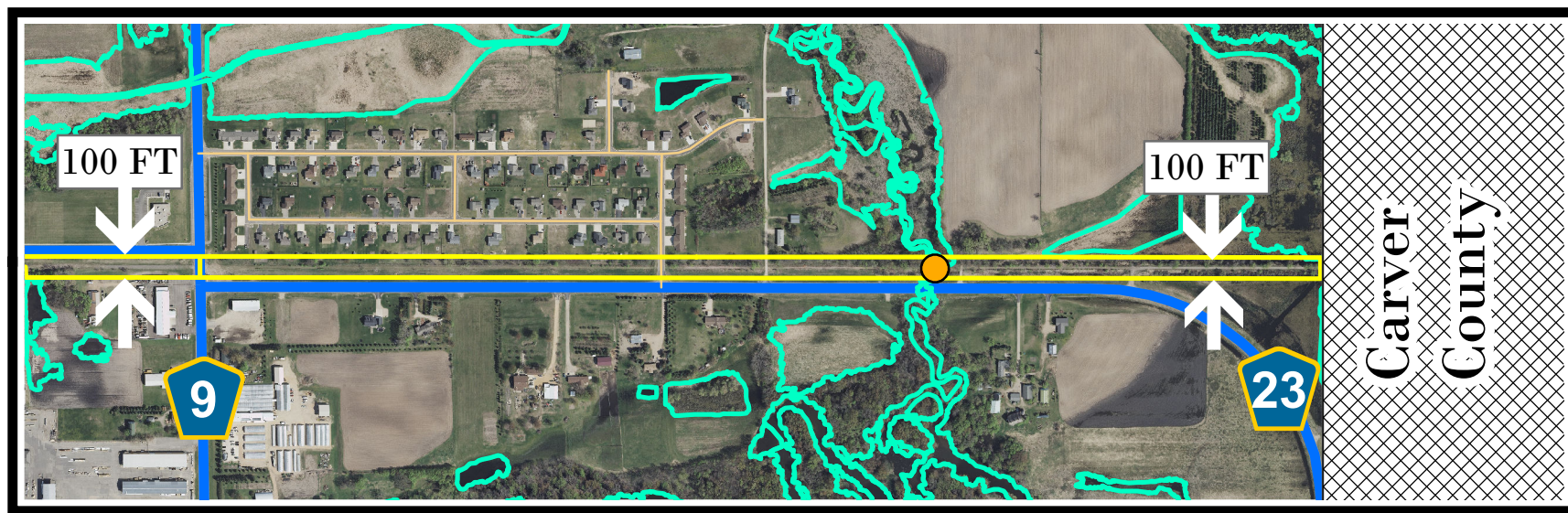
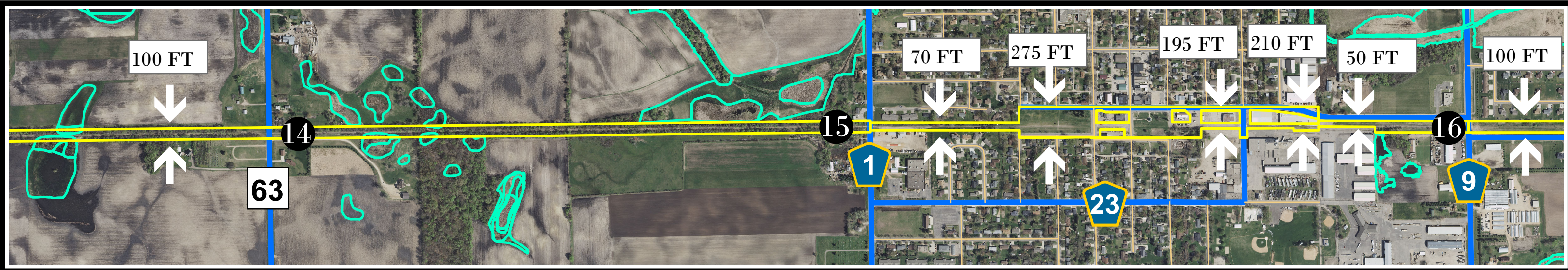






# Dakota Rail Trail

 Wetlands (NWI)	 McLeod Regional Rail Authority Right of Way	 State Highway	 County Paved Highway	 Township Road Bridge	
		 County Gravel Road			



## Dakota Rail Trail

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- Wetlands (NWI)
  - McLeod Regional Rail Authority Right of Way
  - State Highway
  - County Paved Highway
  - County Gravel Road
  - Township Road Bridge





## DAKOTA RAIL TRAIL

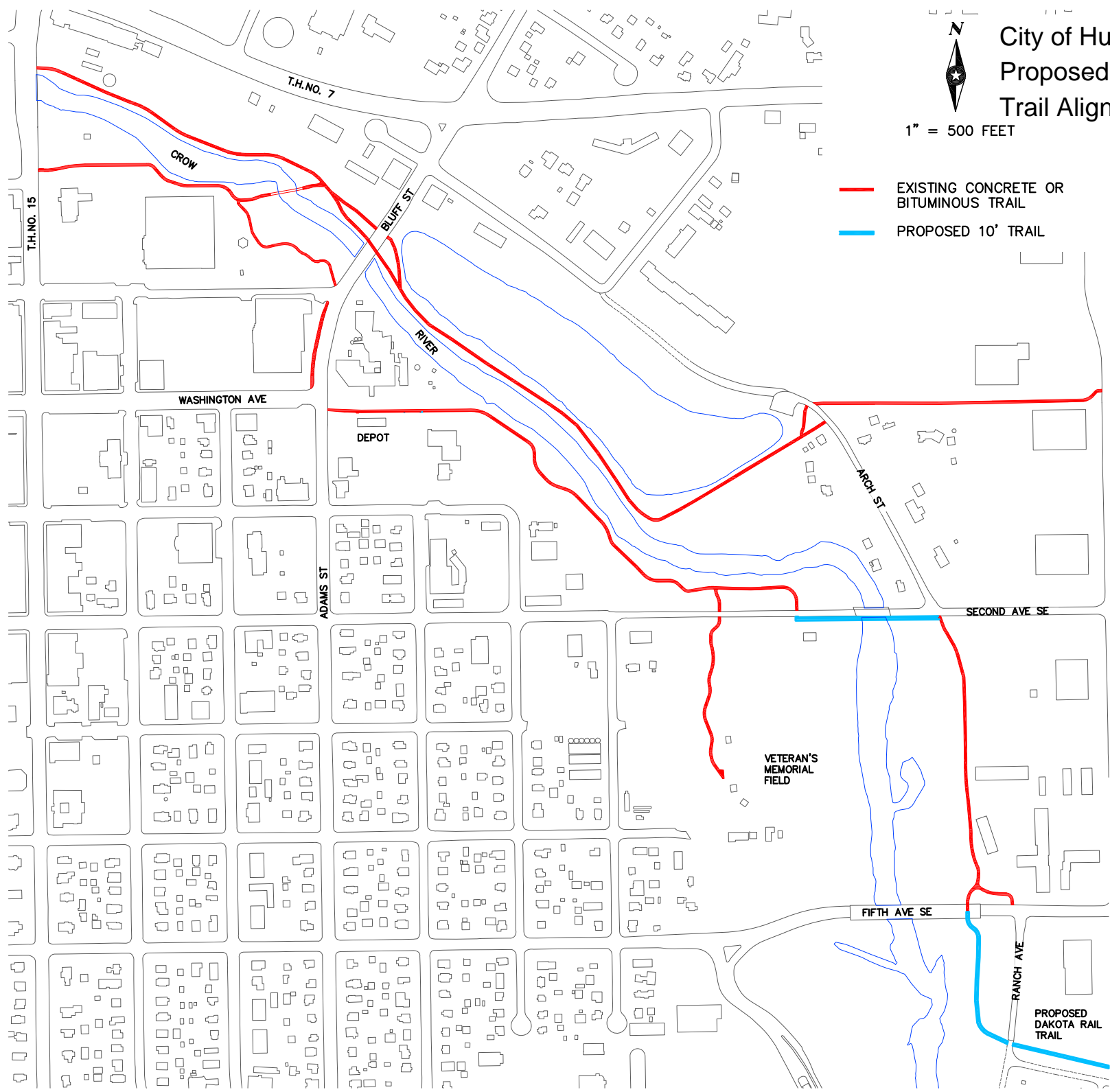
LOCATION NUMBER	LOCATION	PHOTO NUMBERS	TRAIL BED MATERIAL OBSERVATION	APPROXIMATE MATERIAL DEPTH	NOTES
1	RANCH AVENUE	1	1" MINUS GRANITE	12 INCHES	15' WIDTH TRAIL BED
2	ARCH STREET	2-3	1" MINUS	12 INCHES	2" ROCK MIXED ON TOP
3	TRUNK HIGHWAY NO. 22	4-5	1" MINUS WITH SAND	12 INCHES	2" ROCK MIXED ON TOP 12' WIDTH TRAIL BED
4	NICKEL AVENUE	6-7	1" MINUS WITH BLACK ORGANICS	12 INCHES	TRUCK ROLL TEST PERFORMED AT THIS LOCATION MATERIAL GRADATION SAMPLE
5	COUNTY ROAD NO. 4 - MAJOR AVE	8-11	1" MINUS WITH SAND	8 INCHES	2" ROCK MIXED ON TOP
6	COUNTY ROAD NO. 71 - LACE AVE	12-14	1" MINUS	8 INCHES	2" ROCK MIXED ON TOP
7	COUNTY ROAD NO. 90 - KALE AVE	15-19	1" MINUS WITH BLACK ORGANICS	6 INCHES	1" MINUS IS SPARSE THICK VEGETATION ON TRAIL BED
8	COUNTY ROAD NO. 24 - IRIS ROAD	20-22	1" MINUS	8 INCHES	2" ROCK MIXED ON TOP MIXTURE OF BLACK SANDY MATERIAL
9	COUNTY ROAD NO. 2	23-24	2"-3" ROCK	8 INCHES	MIXTURE OF 1" MINUS, BLACK SANDY MATERIAL THICK VEGETATION ON TRAIL BED
10	GARDEN AVENUE	25-26	MOSTLY ORGANIC MATERIAL		SOME 2" ROCK MIXED
11	COUNTY ROAD NO. 15 - FALCON AVE	27-29	LARGER BALLAST ROCK	4-6 INCHES	12' WIDTH TRAIL BED
12	EAGLE AVENUE	30-32	2"-3" ROCK	5 INCHES	DARK, SANDY MATERIAL MIXED 10'-12' TRAIL BED WIDTH
13	DAIRY AVENUE	33-34	2" ORGANIC MATERIAL 1½" ROCK BELOW ORGANIC MATERIAL	4 INCHES	ROCK IS SPARSE THICK VEGETATION ON TRAIL BED 10'-12' WIDTH TRAIL BED
14	COUNTY ROAD NO. 63 - CABLE AVE	35-37	3"-4" ROCK	6 INCHES	PIT RUN MATERIAL BELOW ROCK
15	COUNTY ROAD NO. 1 - BABCOCK AVE	38-40	1" MINUS	6 INCHES	2"-3" ROCK SPREAD ON TOP OF 1" MINUS 10'-12' WIDTH TRAIL BED EAST SIDE-TRAIL BLENDS INTO BUILDING SITE
16	COUNTY ROAD NO. 9	41-42	AGGREGATE BASE		



# City of Hutchinson Proposed Dakota Rail Trail Alignment.

1" = 500 FEET

-  EXISTING CONCRETE OR BITUMINOUS TRAIL
-  PROPOSED 10' TRAIL



STATE OF MINNESOTA  
**OFFICE MEMORANDUM**

Management Resources -Brainerd

**DATE:** December 23, 2015

**TO:** Kristy Rice  
Trail Development Specialist  
Parks and Trails Division

**FROM:** Paul Ouren, P.E.  
Senior Engineer

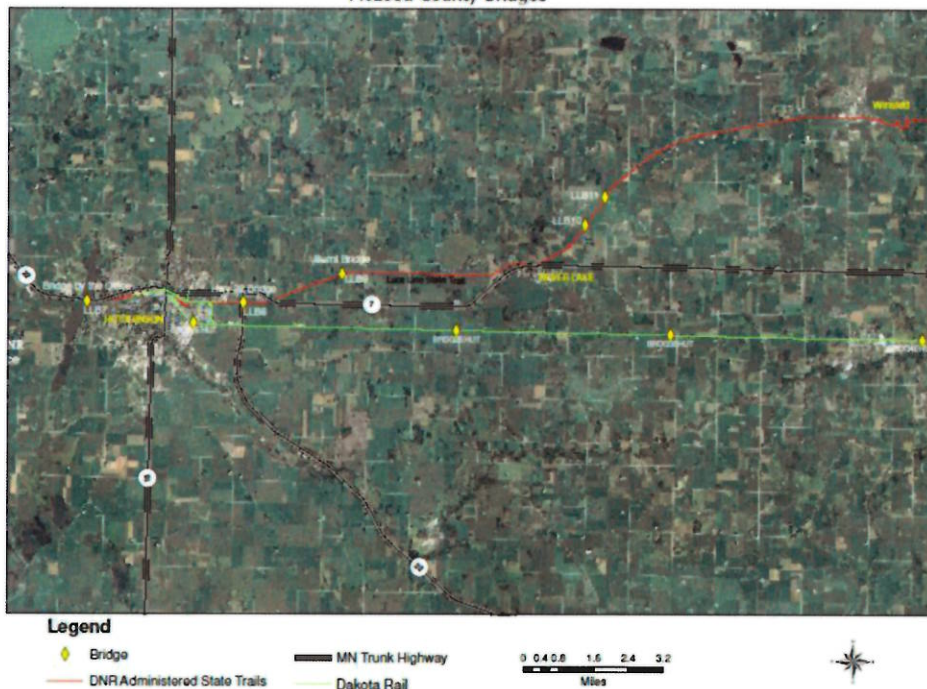
**PHONE:** 218-203-4387

**PROJECT:** Dakota Rail Bridge Inspections  
Dakota Rail Regional Trail  
McLeod County

Kristy,

To follow is a report for the bridges on the Dakota Rail Regional Trail in McLeod County that Danny Anderson and I inspected December 10, 2015.

Luce Line State Trail & Dakota Rail  
McLeod County Bridges



Bridge 1:

This bridge is located in Hutchinson. It was a timber trestle that has been removed.

Bridge 2:

This bridge is a four span timber trestle spanning Bear Creek about 2 miles west of Silver Lake. It is 57' long and 10' in width. The bridge is currently closed.



Side View

The timber deck is in poor condition with the railroad ties having moderate to severe decay.



Deck

The superstructure elements consisting of two lines of three timber stringers are in fair to good condition. Moderate decay was observed near the ends of the beams.



**Timber Stringers-Decay at the ends**

The substructure elements are in generally fair to failed condition.

- The backwall planks of the abutments are in fair to good condition with some decay starting.
- The pile caps are in fair to good condition.
- The timber piling are in poor to failed condition. Many of these piles had been repaired in the past. These repairs are now failing. Most of the piles that haven't failed are severely decayed.



**Timber Piling-failing and severely decayed**

**Recommendations:**

**Short-term recommendations include:**

1. Keep the bridge closed to all types of use.

**Long-term recommendations include:**

1. Replace the existing bridge with culverts similarly sized to those downstream. Two approximately 6'-7' diameter culverts should be considered.



**Downstream Culverts**

2. Hydraulics should be performed to adequately size these culverts.

This long term recommendation will cost less than replacing with a bridge and should have a service life of 50 years and be capable of carrying highway type loads.

**Bridge 3:**

This bridge is a five span timber trestle spanning a tributary to the South Fork Crow River about 3 miles east of Silver Lake. It is 69' long and 10' in width. The bridge is currently closed.



**Side View**



The timber deck is in poor condition with the railroad ties having moderate to severe decay.



Deck

The superstructure elements consisting of two lines of three timber stringers are in fair to good condition. There are checks and splits in the beams but no decay was observed.

The substructure elements are in good to poor condition.

- The backwall planks of the abutments are good condition.
- The pile caps are in fair condition.
- The timber piling are in good to very poor condition.
  - Bents 5 and 6 have been repaired by framing the bents out. These are in good condition.
  - Bents 3 and 4 have very poor piling. Significant decay is present predominantly near the waterline.



Bent 3 decayed piles

Recommendations:

Short-term recommendations include:

1. Keep the bridge closed to all types of use.

Long-term recommendations include:

1. Replace the existing bridge.
  - a. Hydraulics will need to be performed to adequately explore the alternatives and the pro's and con's of each alternative to aide in the decision to what type of structure would best serve this site.
2. Rehabilitate this structure using the master contract for the rehabilitation of railroad type structures to address the substructure issues. Then bid out new deck and railing.

The long term recommendations include a structure capable of carrying a minimum of a 15-ton vehicle and would provide a minimum of a 12' clear width. The service life of a new bridge should be at least 75 years. The service life of a rehabilitated structure will be about 30 years. Construction access to this site is good. It is likely that a replacement will prove to be the most cost effective option for this site.

Bridge 4:

This bridge is a three span timber trestle spanning Otter Creek and it is located on the east edge of Lester Prairie. It is 41' long and 11' in width.



Side View

The deck and railing system have been recently constructed and are in excellent condition. The railroad ties beneath are in good condition. There are several split ties, but no decay was observed.



#### **Deck and Railing**

The superstructure elements consisting of two lines of four timber stringers are in good condition.

The substructure elements are in generally good to poor condition.

- The backwall planks of the abutments are in poor condition with significant decay especially near the ends of the planks.
- The pile caps are in good condition.
- The timber piling are in good condition.



**Decayed Abutment Backwall Plank**

Recommendations:

Short-term recommendations include:

1. Install horizontal delineators.
2. Clean embankment material from bearings.

Long-term recommendations include:

1. The timber backwall planks will need to be replaced in 5-10 years.

Conclusion:

More extensive engineering and permit requirements will need to be explored to best determine what type of structure will be most appropriate for each site along with the associated costs.

Please let us know if you have any questions or require further assistance from us.

c: Kent Skaar, Parks and Trails  
Danny Anderson, Management Resources  
file

Dakota Rail Trail Master Plan Open House  
Comments – May 9<sup>th</sup> 2016

The Dakota Master Plan is well written and illustrated with good documentation and maps. This is such a key step and vital piece to developing the Dakota Trail. Lester Prairie anxious to bring the trail through town for many reasons:

- 1) Economically is a priority
- 2) The community has gotten “on board” and will support trail development in various ways
- 3) We are enthusiastic – I’m looking forward to biking to Hutchinson

**Mary Behrens – Lester Prairie**

How will crossing Hwy 22 be addressed? Have the trail meet up with existing Luce Line Bridge? Spend more money to build another bridge? The speed limit was just increased to same speed as Hwy 7 so are people going to want to cross a busy highway? Weren’t there problems with people actually utilizing Luce Line before tunnel was fixed? How is this any different?

**Unknown**

I am a huge supporter of completing the Dakota Trail to Hutchinson. We have a fantastic opportunity with the trails in our region. Trails are used more and more throughout the state; bikers, walkers, snowmobilers, etc. Having a loop makes riding safer and will draw people to our region – not just Hutchinson, but to surrounding towns as well.

**Roman Bloemke – Hutchinson**

What will happen with the old rail grade from the depot in Hutchinson (mile 0) to mile 1 of the proposal? Will the right of way be released or is the city of Hutchinson to develop this part of the trail? Would there be a dedicated crossing over the Crow River on the old trussle bridge site or will the trail be forced to share traffic on 5<sup>th</sup> Ave SE or 2<sup>nd</sup> Ave SE? Overall I view the new recreational trail in a positive light and have been looking forward to the development of the trail as it strengthens a drawl for new residents from the Twin Cities and other major metro area that are potential connecting locations for the residents of McLeod County,

**Steffen Hollar – Hutchinson**

This is well planned open house to educate the people on the benefits of Dakota Trail. The Plan for the trail is well laid out on what it takes to pave the trail.

**Dave Ashburn – Hutchinson**

Please meet with Skyview Dairy.

**Melissa, Garrett & Daryl - Hutchinson**