



# Mendota-Lebanon Hills Greenway

## MASTER PLAN

ADOPTED BY THE DAKOTA COUNTY BOARD OF COMMISSIONERS AUGUST 20, 2013





# Mendota-Lebanon Hills Greenway

MASTER PLAN



# Acknowledgements



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# Table of Contents



<b>Chapter 1: INTRODUCTION</b>	<b>1</b>
<i>Overview</i>	
<i>Planning context and master plan process</i>	
<i>Recreation needs</i>	
<b>Chapter 2: EXISTING CONDITIONS</b>	<b>11</b>
<i>Overview</i>	
<i>Existing cultural resources</i>	
<i>Existing natural resources</i>	
<b>Chapter 3: THE PLAN</b>	<b>19</b>
<i>Development plan</i>	
<i>Key initiatives</i>	
<i>Interpretive plan</i>	
<i>Stewardship plan</i>	
<b>Chapter 4: IMPLEMENTATION</b>	<b>53</b>
<b>Appendix A: Public Input &amp; Stake Holder Outreach Summary</b>	<b>69</b>
<i>Open house No. 1 summary</i>	
<i>Open house No. 2 summary</i>	
<i>Resolutions of support</i>	
<b>Appendix B: Alternatives Analysis</b>	<b>77</b>



# Figures & Tables



## FIGURES

Figure 9. Core and primary service areas	9
Figure 15. Known cultural resources	15
Figure 17. Existing natural resources (MLCCS & MCBS)	17
Figure 20. Typical trail section	20
Figure 21. Mendota-Lebanon Hills Greenway concept plan	21
Figure 25. Grade-separated crossings map	25
Figure 26. Typical at-grade, midblock road crossing with median refuge	26
Figure 27. Greenway lighting plan	27
Figure 28. Wayfinding examples	28
Figure 29. Mendota-Lebanon Hills Regional Greenway trail alignments and segments	29
Figure 31. Mendota-Lebanon Hills Greenway segment 1 concept plan	31
Figure 32. Mendota Plaza detail	32
Figure 33. Mendota Plaza conceptual section	33
Figure 34. Kensington Park conceptual section	34
Figure 35. I-494 to CSAH 26 detail	35
Figure 37. Inver Grove Heights future development detail	37
Figure 39. Mendota-Lebanon Hills Greenway segment 2 concept plan	39
Figure 40. Dodd Road section study 1 — Trails on both sides of road	40
Figure 41. Dodd Road section study 2 — Trail on one side of road	41
Figure 49. Habitat investment areas	49
Figure 55. Mendota-Lebanon Hills Greenway priority projects	55
Figure 57. Property ownership	57

## TABLES

Table 8. Population forecasts for communities adjacent the Mendota-Lebanon Hills Greenway	8
Table 22. Adjacent road, off-street trail alignment	22
Table 24. Grade-separated crossings	24
Table 48. Habitat investment strategies	48
Table 54. Mendota-Lebanon Hills Greenway priority projects	54
Table 57. Protection and stewardship partnership lands (for 30 foot wide trail corridor)	57
Table 59. Pavement management	59
Table 62. Summary of probable costs	62
Table 63. Mendota-Lebanon Hills Greenway capital development estimates	63
Table 67. Mendota-Lebanon Hills Greenway operations and maintenance cost estimates	67
Table 67a. Mendota-Lebanon Hills Greenway natural resources collaboration opportunities	67



The Village at Mendota Heights



# Introduction

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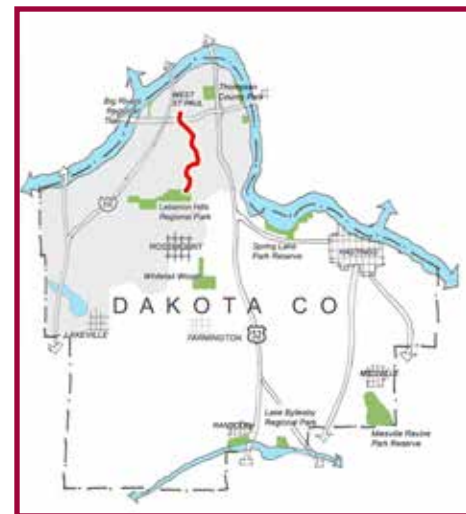


## OVERVIEW

The Mendota-Lebanon Hills Greenway travels 8.5 miles through Mendota Heights, Inver Grove Heights and Eagan. Today, the landscape is largely developed residential, commercial, office and industrial areas. There are areas, primarily in Inver Grove Heights' Northwest Area, of agricultural land that are expected to develop in the next five to 20 years. In these areas, there is opportunity to organize development patterns around the greenway's natural, cultural and recreational resources. The Mendota-Lebanon Hills Greenway will link Lebanon Hills Regional Park to the North Urban Regional Trail, which connects to the Mississippi River and downtown Saint Paul. Like all Dakota County greenways, the Mendota-Lebanon Hills Greenway is envisioned to provide multiple benefits to water quality, habitat, recreation and nonmotorized transportation.

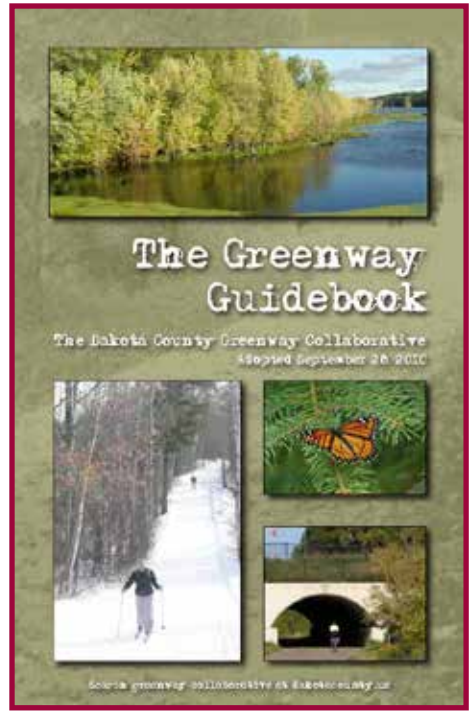
The master plan:

- ▶ Expresses an integrated vision for recreation, nonmotorized transportation, habitat and water quality.
- ▶ Determines preferred regional trail alignment and design.
- ▶ Provides strategies for interpretation, resource stewardship, development, land acquisition and operations.
- ▶ Estimates project costs.
- ▶ Satisfies requirements for Metropolitan Council regional destination trail and greenway planning.



The Mendota-Lebanon Hills Greenway is shown in red.





### *Dakota County greenway vision*

With the 2008 Park System Plan and 2010 Greenway Guidebook, Dakota County has established a progressive vision for an interconnected system of open space corridors — greenways. We need look only as far as Minneapolis’ Grand Rounds to realize the powerful legacy of community benefits that greenways can bestow.

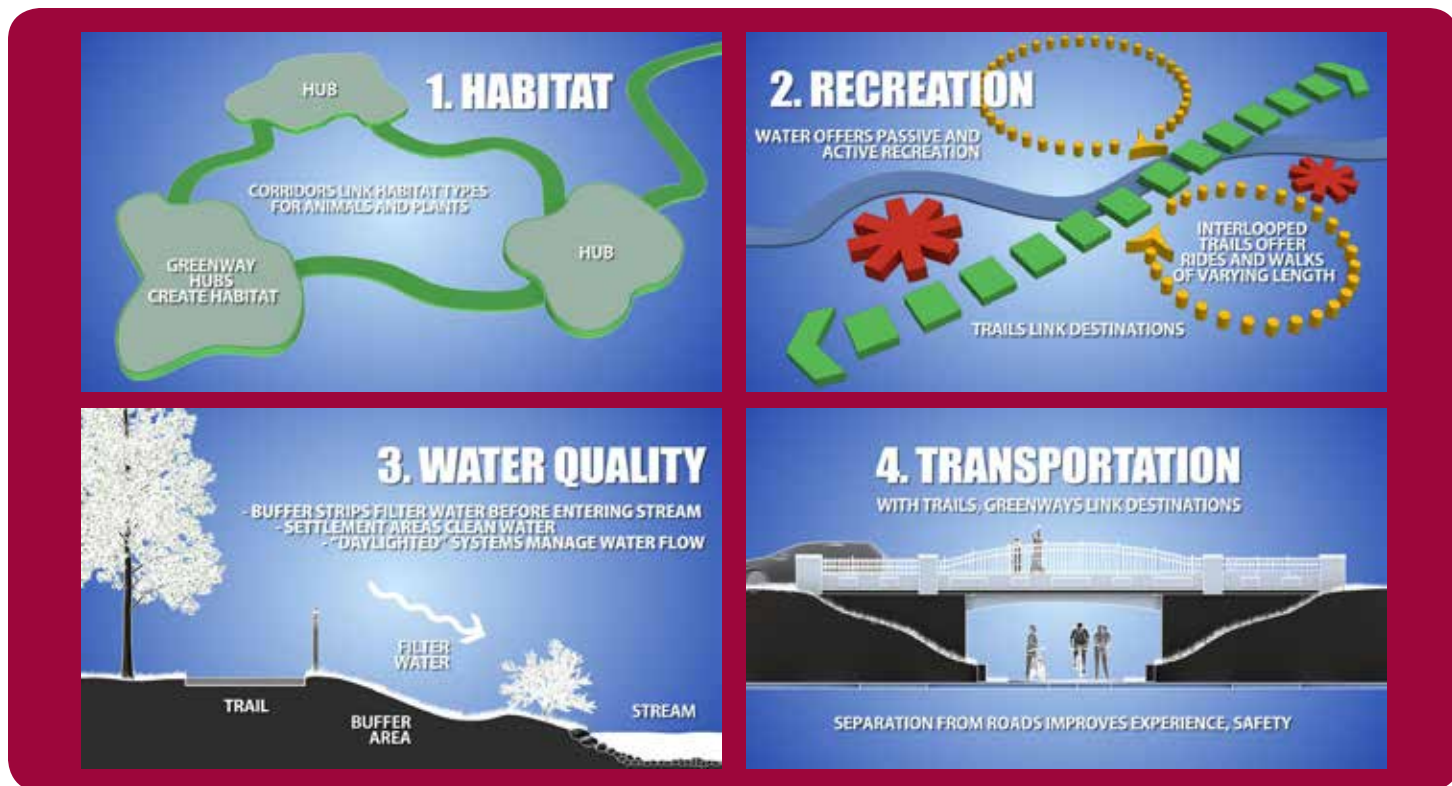
### *Dakota County Park System Plan*

The 2008 Dakota County Park System Plan established the foundation for a county wide greenway network by envisioning regional greenways that connect parks, schools, local trails and libraries through the nonrural portions of the county. Dakota County’s greenway vision suggests 200 miles of regional greenways, 2/3 of which are on land currently in public or semipublic ownership. A priority is to implement more than 50 miles of greenways by 2020.

### *Dakota County Greenway Collaborative: The Greenway Guidebook*

In 2010, Dakota County adopted the Dakota County Greenway Guidebook as a framework for greenway development. The guidebook establishes a framework for a collaborative approach to governance, stewardship, design and operation of greenways.





## PLANNING CONTEXT

The Mendota-Lebanon Hills Greenway travels through the cities of Mendota Heights, Eagan and Inver Grove Heights. Several planning efforts guide the greenway's development:

- ▶ Metropolitan Council 2030 Regional Parks Policy Plan, December 2010
- ▶ Dakota County Park System Plan, 2008
- ▶ Dakota County Greenway Guidebook, 2010
- ▶ Lebanon Hills Regional Park Master Plan, March 2001; update currently underway (2013)
- ▶ City of Inver Grove Heights 2030 Comprehensive Plan
- ▶ City of Eagan 2030 Comprehensive Plan
- ▶ City of Mendota Heights 2030 Comprehensive Plan
- ▶ Inver Grove Heights Northwest Area Collector Street Plan (October 2012)
- ▶ Future Development at Mendota Plaza
- ▶ TH 110 Grade Separated Crossing Study
- ▶ Regional Roadway System Visioning Study (August 2010)



# GREENWAY MASTER PLANNING

The yearlong planning process was a collaborative effort of multiple agencies and jurisdictions. Dakota County led the process with advice from a technical advisory group formed to guide the master plan.

## Stakeholder input

A technical advisory group met during each phase of master planning to provide guidance, provide insight into technical questions, explore options, identify partnership opportunities and discuss concurrent projects. In addition to providing specific guidance, the TAG institutionalized a collaborative planning process and established relationships across agencies with a stake in implementing the master plan. TAG meetings were held on Sept. 11, 2012, Nov. 14, 2012, Feb. 27, 2013, and April 9, 2013.

## January 2013 open house

The first open house was on Jan. 15, 2013, to gather input on the draft greenway trail alignment, interpretive themes and approaches to natural resources and water quality improvement. This open house was held jointly with the Lebanon Hills Regional Park Master Plan open house. Each project had display boards in a separate room in the Lebanon Hills Visitor Center. More than 50 people attended the joint open house. Overall, the comments were positive about the greenways, but several questions were asked about the specific alignment options. Attendees expressed interest in both on-road and off-road trails for varying reasons, including cost, maintenance, access and experience. Most attendees were Eagan residents who had received mailings notifying them of the open house, as residents within 500 feet of the greenway were notified by mail.

Specific comments included:

- ▶ Off-road paths are preferred for the higher quality experience
- ▶ Preference that money is spent on more trails rather than expensive grade-separated crossings
- ▶ Preference that trails are along roads to avoid going through private backyards
- ▶ Desire for grade-separated crossings over busy roads
- ▶ Desire for more plantings and trees along the trails
- ▶ Desire for maps along the greenway

## Stakeholder outreach

During the alignment evaluation portion of the project, individual meetings with key stakeholders were held. Meetings were held with Dodge Nature Center, the Cole Family, Thomson Reuters and Ace in the Hole. Detailed meeting summaries can be found in the appendix.

## Technical Advisory Group

A technical advisory group met regularly, including representatives from:

- ▶ City of Mendota Heights
- ▶ City of Eagan
- ▶ City of Inver Grove Heights
- ▶ Dakota County Parks Department
- ▶ Dakota County Office of Planning
- ▶ Dakota County Historical Society





## Spring 2013 open house

The second public open house was held again jointly with the Lebanon Hills Regional Park Master Plan update, on May 30, 2013, at Lebanon Hills Visitor Center. Residents within 500 feet of the greenway alignment again were notified of the open houses by mail. More than 60 residents attended the joint open house.

Input on the draft master plan was generally supportive, though several concerns were raised. Resident questions and concerns included:

- ▶ Feasibility of the boardwalk through Friendly Hills Park in Mendota Heights
- ▶ Concern about increased use and trail width as local trails become regional
- ▶ Concern about a paved connection from the Mendota Lebanon Hills greenway to the Lebanon Hills Visitor Center

## Project Web site

A project Web site at [www.hkgi.com/projects/dakota](http://www.hkgi.com/projects/dakota) was established for the North Creek and Minnesota River greenways in 2010, and was continued as a resource for the Mendota-Lebanon Hills Greenway. Materials from the open houses were posted online and an on-line questionnaire was available for those interested as a way to provide feedback.

## Public review

The public review draft master plan was posted on Dakota County's Web site and the greenway Web site from May 24 through July 24, 2013. The May open house gave the public the opportunity to talk to county staff and voice concerns. The public review draft was also available to all project stakeholders: city of Mendota Heights, city of Inver Grove Heights, city of Eagan, the Dakota County Historical Society and the Metropolitan Council. In addition, a summary presentation was prepared for technical advisory group member to present to their organizations. The Dakota County Board adopted the master plan on Aug. 27, 2013. Letters of support along with public comments can be found in Appendix A of this plan. Resolutions of support from the cities of Inver Grove Heights, Eagan and Mendota Heights also are included in Appendix A.



## RECREATION NEEDS

The Mendota-Lebanon Hills Greenway will enhance access to natural areas, trails and cultural resources. These resources are important for quality of life and accommodate the high demand recreational activities of walking, biking, jogging, inline skating, dogwalking and more. Respondents to Dakota County's 2006 park survey cited these among the top activities residents would like to see in the County's park system. Current recreation and demographic trends suggest these needs will increase well into the future.

The need for a continuous trail in the Mendota-Lebanon Hills corridor has been referenced in other planning documents. The Metropolitan Council's 2030 Parks Policy Plan references a Dakota North-South Regional Trail Search Corridor that connects the North Urban Regional Trail and Lebanon Hills Regional Park; it is called the Rich Valley Greenway Regional Trail. In Dakota County's Park System Plan, the greenway is identified as the Rich Valley Greenway Regional Trail and is listed as second level priority (out of three levels).

### Visitors

A broadly generalized profile of greenway visitors was created based on input from existing visitors to Dakota County parks and trails, from stakeholders in the master planning process and from demographics of the population within 30 miles of Dakota County (see sidebar on page 7).

The following observations can be made about potential visitors based on comparative census data from 1990, 2000 and 2010.

- ▶ The people served by Dakota County parks and trails are becoming increasingly diverse. As recreation, interpretation and education are developed, outreach should be considered.
- ▶ There are more than half a million children enrolled in schools in the area served by Dakota County parks; more than one quarter of the population is younger than 17. Schoolchildren and families are a large group of potential greenway users.
- ▶ At the 2010 U.S. Census, 10 percent of the population in Dakota County was older than 65, and this age group is projected to increase dramatically in number and proportion in the next 20 years. The influx of baby boomers into this age category will influence interpretive and education program development.
- ▶ Based on the 2011 American Community Survey, the average per capita income for the U.S. was \$26,708. The average per capita income for Dakota County was more than 23 percent higher, at \$32,935. Higher incomes have historically been associated with greater participation in recreation activities.



## Trends

Popularity of trail-based activities, active living, interest in nature, transportation and connectivity, aging actively, interest in history and culture and population growth are all current trends that indicate that interest in and visits to Dakota County greenways are likely to increase.

### Trail use

Trails are the No. 1 desired recreation facility in poll after poll. Trails can be enjoyed by people of all ages and abilities, they are inexpensive for users, and they often are close to home. The Minnesota Statewide Comprehensive Outdoor Recreation Plan notes that the interest and demand for more trails are being felt at all levels of government. According to the 2008 Metropolitan Council Regional Parks and Trails Survey, biking and walking are the most common recreation form, while running, inline skating and dogwalking also were popular.

### Active living

In 2009, 64.3 percent of adults in Dakota County were either overweight or obese. If the current trend continues, the percentage is expected to be 76 percent by 2020. Nationally, the obesity rate in children has tripled over the past 30 years. Today about 20 percent of school-age children are overweight or obese (*Source: Dakota County Public Health*).

Regular moderate physical activity can help prevent a host of disorders, including heart disease, obesity, high blood pressure, Type 2 diabetes and osteoporosis. More physical activity at a population level can reduce health care costs and other costs to society.

Walking and biking are two of the simplest and most popular ways to integrate regular physical activity into daily routines, referred to as active living. Places that have physical infrastructure such as trails and programs to promote walking and biking tend to have more physical active and healthier populations.

In 2010 members of the Greenway Collaborative identified the following groups as current visitors to Dakota County Parks:

- ▶ Wildlife/bird watchers
- ▶ School groups
- ▶ Seniors
- ▶ Nonmotorized commuters
- ▶ Hikers, walkers, runners, cyclists
- ▶ Regional users
- ▶ Anglers
- ▶ Park users (athletics and community events/activities)
- ▶ Residents
- ▶ Families
- ▶ Disabled users
- ▶ Bicycle racers
- ▶ Boaters

Stakeholders also identified groups of visitors they would like to see as greenway users in the future:

- ▶ Groups needing increased physical activity
- ▶ Corporate users
- ▶ Foragers (fruit, flowers)
- ▶ Commercial and business connections
- ▶ Art community





### Interest in nature and sustainability

Increased sensitivity to ecological issues and the benefits of healthy ecosystems has led to people seeking more natural experiences. There also is increased interest in and opportunities for environmental stewardship such as stream and riparian restoration and the removal of invasive species. People also desire educational and interpretive programs and seek a balance of environment and recreation.

### Transportation and connectivity

Health benefits, concerns about climate change and rising energy costs have increased demand for trails and bikeways as preferable transportation options. Regional trails with grade-separated crossings offer cyclists the advantages that motorists enjoy on freeways.

Connectivity to local trails is essential. The more connected the trail system, the more use it will see. Connecting trails reduce the need for vehicle parking at trailheads. In 2008, half of all regional trail users arrived by bicycle or on foot (Metropolitan Council Regional Parks and Trails Survey).

### Engaged aging

Trail users tend to be older than park users. In 2008, 54 percent of Big Rivers Regional Trail users polled were between the ages of 45 and 64. Trail use likely will remain high as the baby boom generation ages and remains physically active — or gets more physical activity with increased leisure time — by walking, hiking or biking on trails.

### Interest in history and culture

As society has become more mobile, interest in local culture and history has increased. The ability to integrate cultural, historic and environmental interpretation into the greenway will add richness to the greenway experience.

## Population

Metropolitan Council studies indicate half of regional trail users live within 3/4 mile of a trail and 75 percent of trail users live within 3 miles of the trail used. The 3/4 mile area around the trail is considered the core service area and the 3-mile area the primary service area. Communities that fall within the Mendota-Lebanon Hills Greenway’s core and primary service areas are all expected to see growth within the next 20 years, including significant growth in Inver Grove Heights and Rosemount.

Table 8. Population forecasts for communities adjacent to the Mendota-Lebanon Hills Greenway. Source: Metropolitan Council Community Profiles, <http://stats.metc.state.mn.us/profile> and the U.S. Census

MUNICIPALITY	2010	2030 FORECAST	% CHANGE
<i>Core Service Area (areas within 3/4 mile of greenway)</i>			
Mendota Heights	11,198	11,800	5%
Inver Grove Heights	33,880	47,300	40%
Eagan	64,206	71,250	11%
Sunfish Lake	521	530	2%
<b>Total Core</b>	<b>109,805</b>	<b>130,880</b>	<b>19%</b>
<i>Primary Service Area (areas within 3 miles of greenway)</i>			
Apple Valley	49,084	71,000	45%
Rosemount	21,874	42,000	92%
Mendota	210	270	29%
Lilydale	623	1,100	77%
West St. Paul	19,540	21,700	11%
Saint Paul	285,068	331,000	16%
South Saint Paul	20,160	20,700	3%
<b>Total (Core + Primary)</b>	<b>506,364</b>	<b>618,650</b>	<b>22%</b>
Dakota County	398,552	525,725	33%





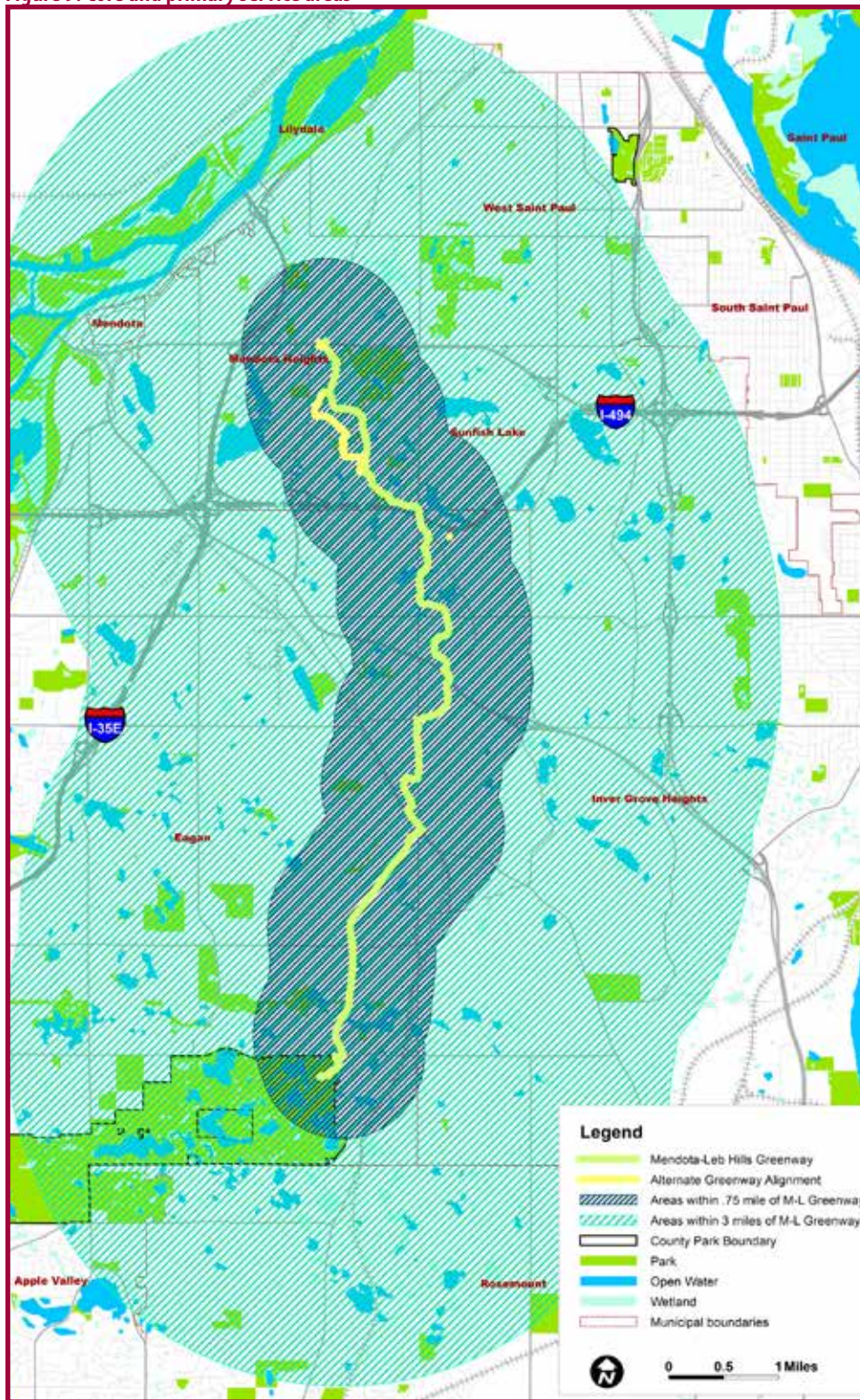
## Use forecasts

Estimates for the Mendota-Lebanon Hills Greenway usership were calculated by referencing data from the Rush Creek Regional Trail in Brooklyn Park and Maple Grove. Based on Metropolitan Council 2011 visit estimates for the Rush Creek Regional Trail (345,000 visits over 5 miles of trail) and adjusting for lower population in the cities included in the Mendota-Lebanon Hills Greenway core service area, the Mendota-Lebanon Hills Greenway, if opened today, could expect approximately 270,000 annual visits.

The 2030 population of the communities touching the greenway's 3-mile service area is expected to be 22 percent greater than in 2010. Assuming use rates are stable — a very conservative assumption — in 2030, annual visitation can be expected to be at least 329,000. The estimate does not take into account increased use based on population increases in communities outside the primary service area, current recreation trends and increased use spurred by better connectivity to other regional and local trails.

Also, with the future development of the Inver Grove Heights Northwest Area surrounding a portion of the greenway alignment, the proposed medium density residential and commercial areas could bring higher trail usage than forecast.

Figure 9. Core and primary service areas



### Use forecast methodology:

*The 5-mile Rush Creek Regional Trail had 345,000 visits in 2011 or 69,000 per mile.  
 The total population in Rush Creek's core service area is 138,674 total/ 27,734 per mile.  
 The total population in the 8.5 mile Mendota-Lebanon Service area is 109,678 total or 12,903 per mile.  
 The population per mile for the Mendota-Lebanon is 46% of the Rush Creek Population per mile (12,903/27234\*100).  
 The number per mile used for estimates is 31,740 per mile (Rush Creek's 69,000 per mile adjusted to reflect 54% lower populations in the communities immediately adjacent to the Mendota-Lebanon. Final numbers are rounded to the nearest 1,000.)*



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# Existing Conditions

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## OVERVIEW

The Mendota-Lebanon Hills Greenway travels about 8.5 miles from The Village at Mendota Heights to Lebanon Hills Regional Park through residential and commercial areas in the communities of Mendota Heights, Inver Grove Heights and Eagan. The greenway links destinations including: Lebanon Hills Regional Park, neighborhood parks in Mendota Heights and Eagan, office and retail hubs in Mendota Heights and Eagan, schools and community parks.

The greenway area contains a rich cultural history with stories of key movement corridors that have changed and maintained over time, including Dodd Road, Highway 55, the early railroad from Minneapolis to Chicago, Interstate 494 and Yankee Doodle Road. Cultural sites that can be highlighted along the greenway include residential communities, commercial hubs, the last remaining agricultural plots in northern Dakota County, large employment centers, parks and schools.

The Mendota-Lebanon Hills Greenway links two natural areas of significance: Lebanon Hills Regional Park and the Mississippi River (via the North Urban Regional Trail). Between these anchors is a mosaic of farmland, suburban development and patches of woodlands, ponds and lakes. In the future, the Northwest Area of Inver Grove Heights is expected to develop, heightening the importance of the greenway's connective infrastructure.

## Greenway character and land use

Today the surrounding landscape is mostly residential development. The land most likely will maintain the suburban character well into the future. The greenway can be broken into two segments; a brief description of each segment follows.

This chapter presents:

- ▶ Existing greenway corridor character and land use
- ▶ Relationship to the larger transportation system
- ▶ Existing cultural resources
- ▶ Existing natural resources

## Segment 1: North Urban Regional Trail / Highway 110 to Highway 55 (4 miles)

The northern terminus of the greenway is The Village at Mendota Heights and the existing North Urban Regional Trail. From there the greenway links Mendota Plaza to a wooded trail through Friendly Marsh Park and connecting to Copperfield Pond Park. The greenway then travels south through Kensington Park before crossing Interstate 494 at Delaware Avenue. Between Interstate 494 and Highway 55, the greenway weaves through Inver Grove Heights' Northwest Area near the Eagan border. South of Interstate 494, there are many patches of woods, ponds and wetlands.



The Village at Mendota Heights



Trail in Mendota Heights



Mendota Plaza



Kensington Park



## Segment 2: Highway 55 to Lebanon Hills Regional Park (4.5 miles)

From Highway 55 to Dodd Road, the greenway winds through light industrial, commercial, office development and farmland. South of Westcott Road, the greenway will follow Dodd Road, which is fronted by single family homes, connecting neighborhood parks, schools and homes in Eagan via local roads. At Cliff Road, the greenway will extend to the Lebanon Hills Regional Park Visitor Center and trailhead.



Dodd Road



Lake in Eagan

## Transportation system

The Mendota-Lebanon Hills Greenway will support nonmotorized transportation by providing a regional corridor for bicycle and pedestrian transportation. The greenway will intersect with existing local trails in Mendota Heights, Eagan and Inver Grove Heights that connect residential areas, commercial destinations, schools and employment destinations. Further linking trails will lead to St. Paul and Minneapolis.

The greenway will also facilitate connectivity to regional transit hubs and be linked to the Eagan and Blackhawk transit stations via existing trails.





# EXISTING CULTURAL RESOURCES

## Historic overview

Every place has a unique history with resources with which people have an emotional connection. Crossing the greenway corridor, there are many resources that have important cultural meaning. There are key historical corridors including an early railroad connecting Minneapolis and St. Paul with Chicago, Highway 55 that roughly parallels trails that have been used for centuries and perhaps most significant, Dodd Road. The corridor has adapted to new forms of travel through the years but the path that is seen today is roughly the same as the path that was likely travelled for centuries by Native Americans and early settlers.

Though few of these resources are considered historic by state or federal definitions, or simply have yet to be evaluated, they are an important part of the landscape to the people along the greenway corridor. There are few other cultural resources recognized by the State Historic Preservation Office within and around the Mendota-Lebanon Hills Regional Greenway. There are few known archaeological sites along the greenway likely due to few archaeological studies having been completed within and around the proposed greenway. The area's rich resources have attracted people for thousands of years: additional sites likely remain undiscovered in the corridor.

## Dodd Road

The following is excerpted from the Dakota County Historical Society's Over the Years publication on Dodd Road:

Dodd Road has a rich history as a Native American Indian and a trader's route with maps as early as 1839 showing traders' roads departing southeast from Mendota. The original road Dodd Road, built in 1853 by Captain Dodd, followed these roads.

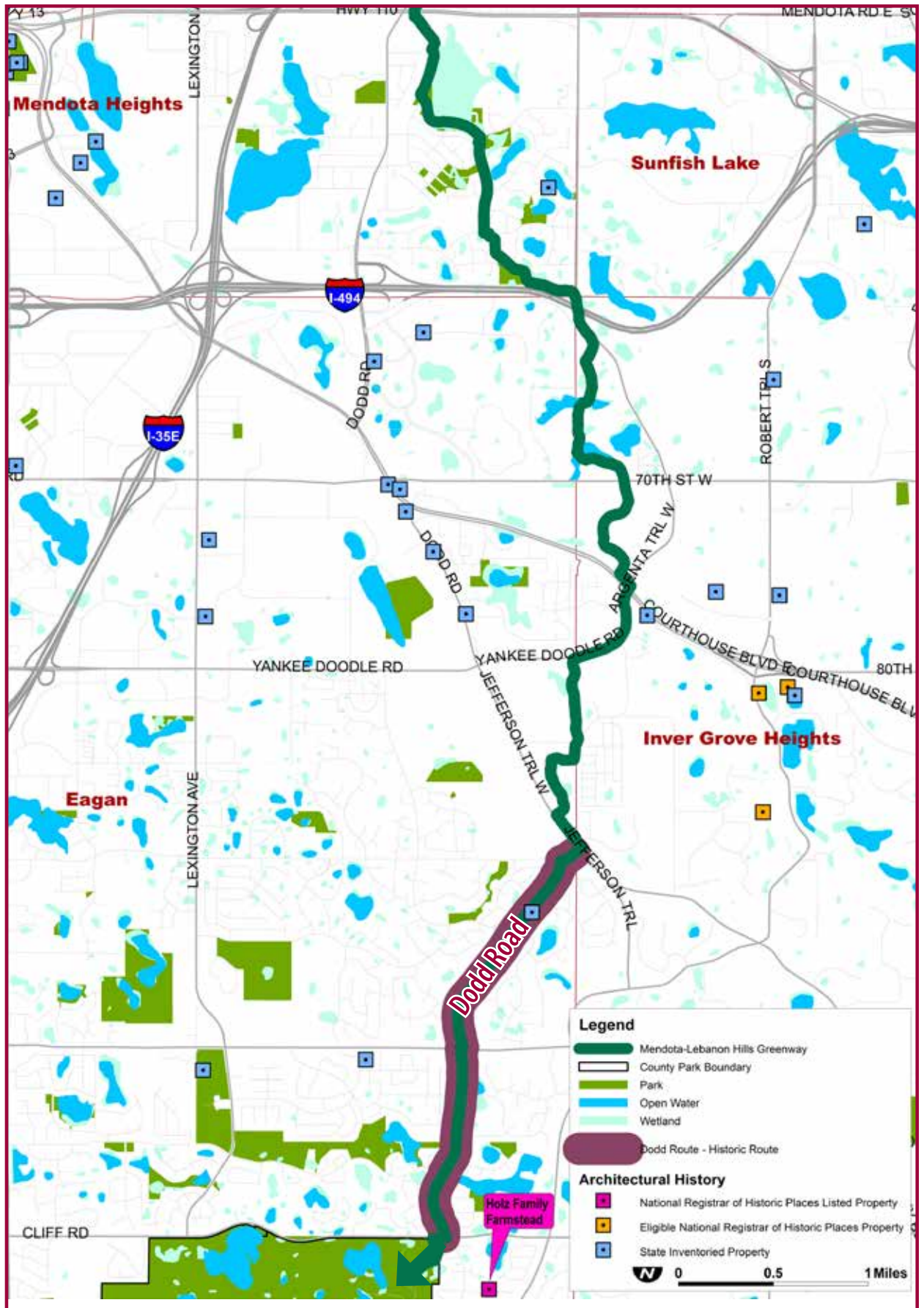
Captain Dodd was an early leader in Rock Bend, MN (later to be renamed St. Peter), who was interested in a roadway from Rock Bend to Mendota and Saint Paul. In 1850, Congress authorized five military roads in the new territory of Minnesota, including the Mendota-Wabasha Road and Mendota-Big Sioux River Road (Dodd Road would follow portions of both of these routes). Dodd was aware that the proposed Mendota-Big Sioux River Road, which could be Rock Bend's roadway to Mendota lacked financing. Therefore, in 1852 Dodd decided to build the road privately and solicited funds from Minnesota River settlers who would benefit from the route. In the summer of 1853, the road was surveyed and cleared in just 109 days. From Saint Paul, the route followed the recently surveyed Mendota-Wabasha Road to Wescott Station, on the border between Eagan and Inver Grove Heights. Dodd and his crew then traveled southwest through Lakeville, Scott County, Rice County and LeSueur County to Lake Emily, a mile from Rock Bend.

A month before Dodd reached Lake Emily the U.S. government's survey for the Mendota-Big Sioux River Road Survey commenced, starting in Sioux City, Iowa. When the survey team reached Lake Emily, they were happy to find Dodd's newly constructed road and used that route for the 70 miles to Mendota.

The Mendota Lebanon Hills Greenway follows Dodd Road from Wescott Station (where the road began) south to Lebanon Hills Regional Park. South of the park, the Rosemount Greenway continues on Dodd to downtown Rosemount. Though Dodd Road within Dakota County bears little resemblance to the historic road, in these two areas it generally follows the original route. Through interpretation, greenway visitors will be able to envision how the trail was used throughout history and understand how important this corridor was for the development of Dakota County.



Figure 15. Known cultural resources



## EXISTING NATURAL RESOURCES

The natural resources in the area surrounding the Mendota-Lebanon Hills Greenway consist of patches of woodlands and wetlands, mostly within neighborhood parks and residential areas. The greenway is anchored on the south by a large natural area: Lebanon Hills Regional Park, which contains the only area of Minnesota County Biological Survey (MCBS) ecological significance within the corridor.

## VEGETATIVE COVER: MINNESOTA LAND COVER CLASSIFICATION SYSTEM (MLCCS)

According to Minnesota Department of Natural Resources' Land Cover Classification System, a majority of land cover along the Mendota-Lebanon Hills Greenway is developed land, non-native grasses, or forest cover. Lebanon Hills Regional Park is a diverse preserve of prairie, shrubland, woodland and wetland.

## WATER RESOURCES

Water resources within the greenway corridor consist of scattered wetlands and small bodies of open water. Many of these water bodies are surrounded by forest cover or non-native grasses and some are directly adjacent to developed landscapes. Throughout the residential and commercial developments, most of these ponds and wetlands take in street and parking lot runoff that contains significant nutrients and sediment. This runoff contributes to poor water quality and diminishing wildlife habitat.

## ECOLOGICAL QUALITY

With the exception of some areas in Lebanon Hills Regional Park, a majority of the land surrounding the greenway corridor has been altered or disturbed. The highest quality natural area along the corridor is in Lebanon Hills Regional Park and is identified by the MCBS as “moderate biodiversity significance.” There are also a few small “native plant communities” within the boundary of Lebanon Hills Regional Park.

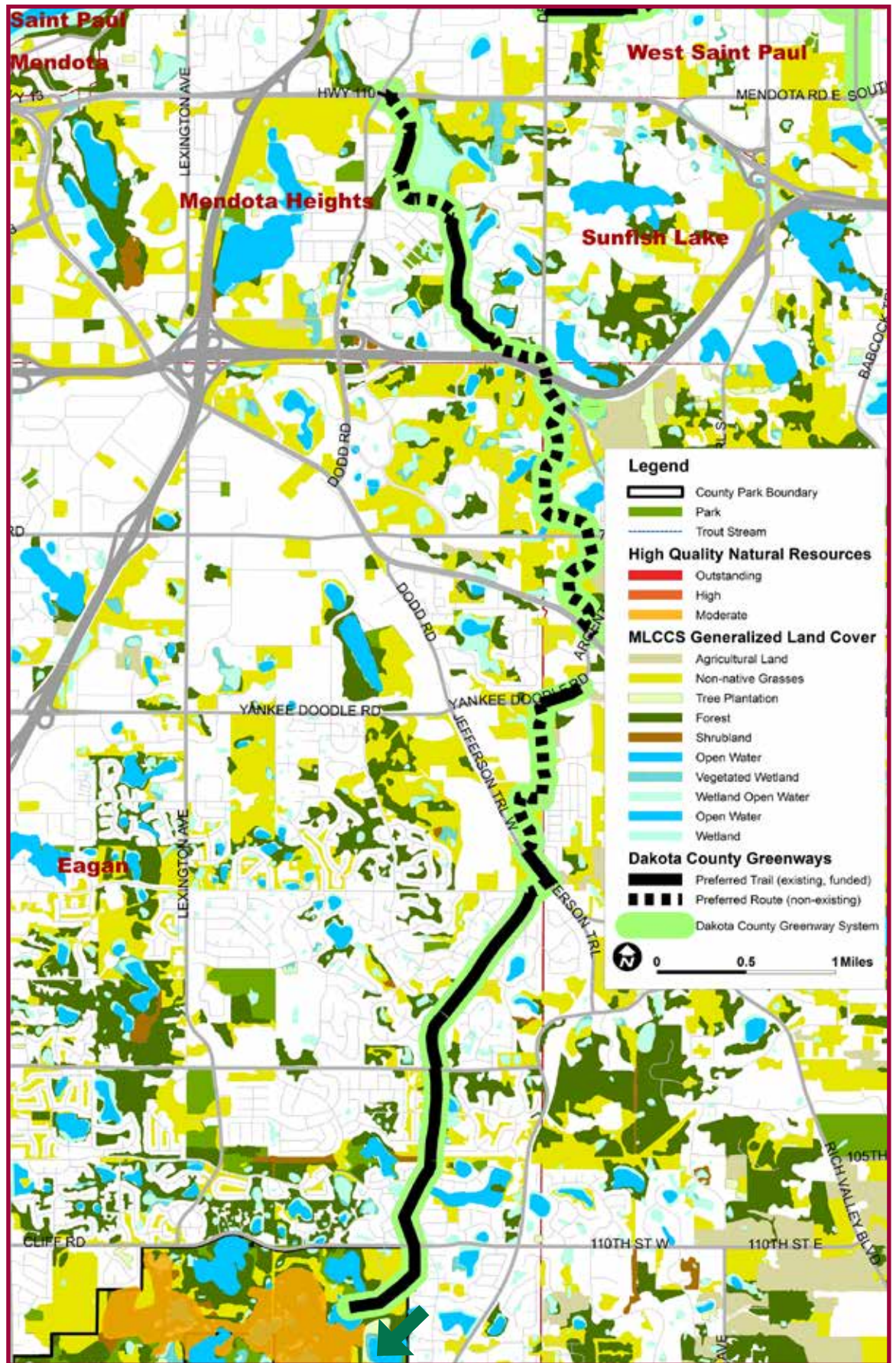
### *Ecological impacts*

A significant ecological impact to the landscape within the greenway corridor has been conversion of native forest and prairie landscapes and draining of natural wetland complexes for agricultural and urban land uses. Interruption of disturbance regimes (fire), invasive species colonization, habitat fragmentation and agricultural runoff have all contributed a landscape with low ecological quality.





Figure 17. Existing natural resources (MLCCS & MCBS)



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# The Plan



## OVERVIEW

The Mendota-Lebanon Hills Greenway, like all Dakota County greenways, will integrate recreation, transportation, water quality and habitat. This corridor is and will continue to be an urban and suburban corridor. Because of the land use context, emphasis will be on a continuous recreation and transportation functions with a natural design signature. Where opportunities allow, habitat and water quality projects will provide environmental benefits as well as enhance the greenway user's experience.

This chapter is the plan for the Mendota-Lebanon Hills Greenway — it describes what features will be included in the greenway and the projects needed to realize the greenway.

The plan chapter is presented in four sections:

- ▶ A. Development plan — Outlines the defining recreation and transportation features of the greenway.
- ▶ B. Key initiatives — Describes specific development and natural resource projects for each greenway segment.
- ▶ C. Interpretive plan — Identifies interpretive themes and subthemes for the greenway and provides a framework for cultural and environmental interpretive elements.
- ▶ D. Stewardship Plan — Addresses habitat stewardship and water resources.

## DESIGN FRAMEWORK

The Greenway Guidebook provides the framework for this master plan:

- ▶ Regional trail for recreation and transportation that follows water and natural features
- ▶ Is maintained as a year-round facility
- ▶ Provides frequent trailheads and access points
- ▶ Grade-separated crossings of major roads
- ▶ Has a consistent design with natural signature and high quality support facilities
- ▶ Has lighting for evening use in appropriate locations
- ▶ Links recreation destinations and activity centers
- ▶ Acts as a spine for loop trails
- ▶ Maximizes borrowed views
- ▶ Uses wayfinding as a systemwide unifying element
- ▶ Universally accessible
- ▶ Incorporates sustainability by using recycled materials, energy efficient lighting and enabling nonmotorized transportation



# A. Development plan

Access to recreation and nonmotorized transportation are two of the four foundational elements of Dakota County greenways. The primary recreation/transportation feature of the greenway is a continuous regional destination trail. While the greenway varies in width from 100 feet to more than 300 feet throughout the corridor, this section focuses on the design of the 30-foot trail corridor to create a safe, amenity-rich trail for year-round use.

Design consistency is critical in developing Dakota County greenways to create a high-quality, unified and legible system. The Greenway Guidebook identifies the elements that will be signatures of the greenway system, listed in the sidebar on the previous page. How the Mendota-Lebanon Hills Greenway addresses each of these topics is discussed in this chapter.

## TRAIL CORRIDOR FEATURES AND DESIGN

This section addresses design features that are signatures of Dakota County’s greenway system. Design touches many facets of the trail alignment, including: the relationship of the trail alignment to the larger greenway corridor; the ability to connect destinations; the presence and location of grade separated crossings, trailheads and support facilities; the style and location of furnishings and wayfinding; accessibility; and sustainability. Consistent, high-quality design will elevate the greenway experience above that of a utilitarian trail to a first-class regional destination.

## TRAIL CORRIDOR

The regional trail within the greenway corridor will be a continuous multipurpose bituminous trail designed in accordance with applicable American Association of State Highway Transportation Officials guidelines, Minnesota DOT bicycle design guidelines and Dakota County trail standards. The trail will be 10 to 12 feet wide with a 3-foot grass clear zone on each side. Anticipated uses include walking, jogging, inline skating and bicycling. The trail will be maintained as a dry surface for winter use and, where appropriate, lit for evening use.

Figure 20. Typical trail corridor section

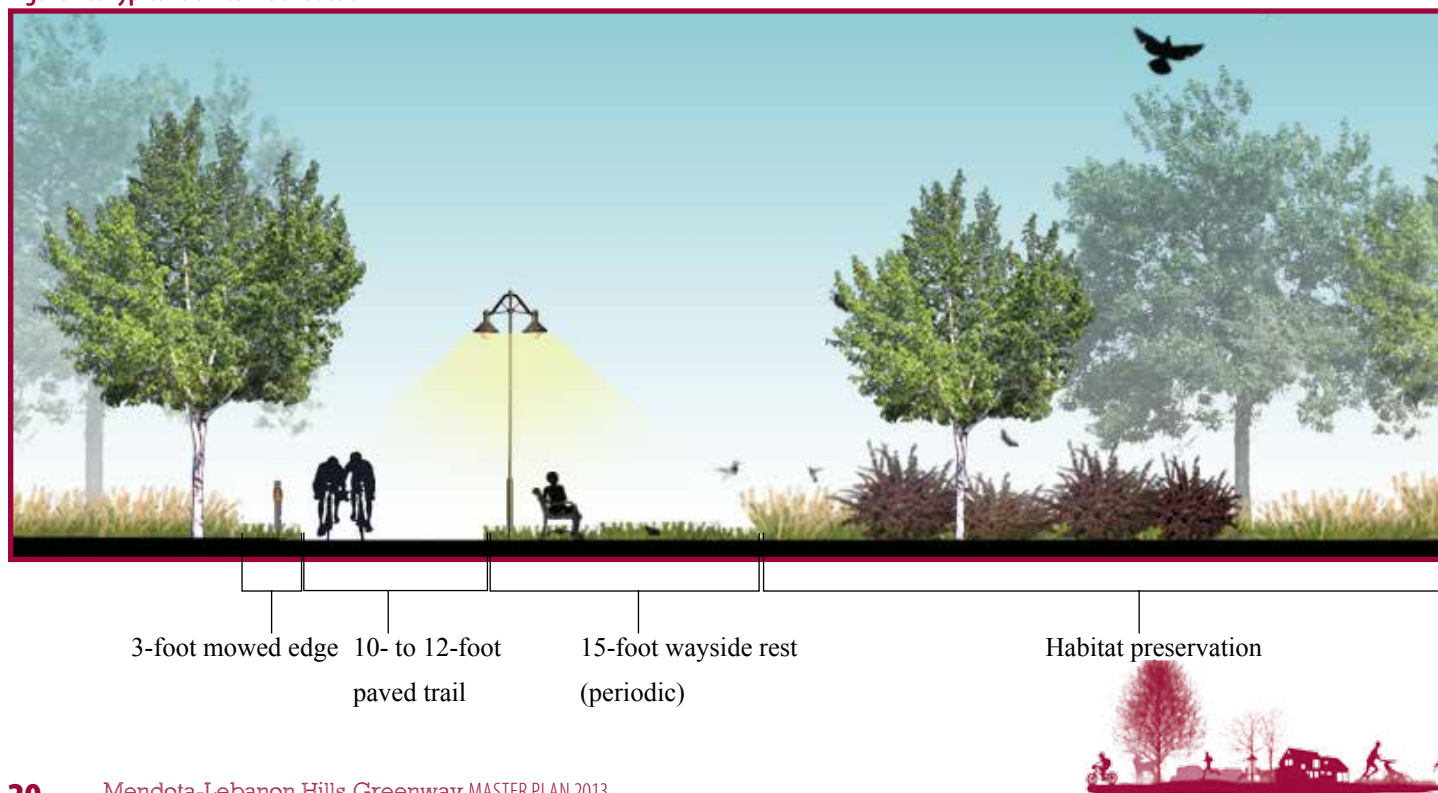
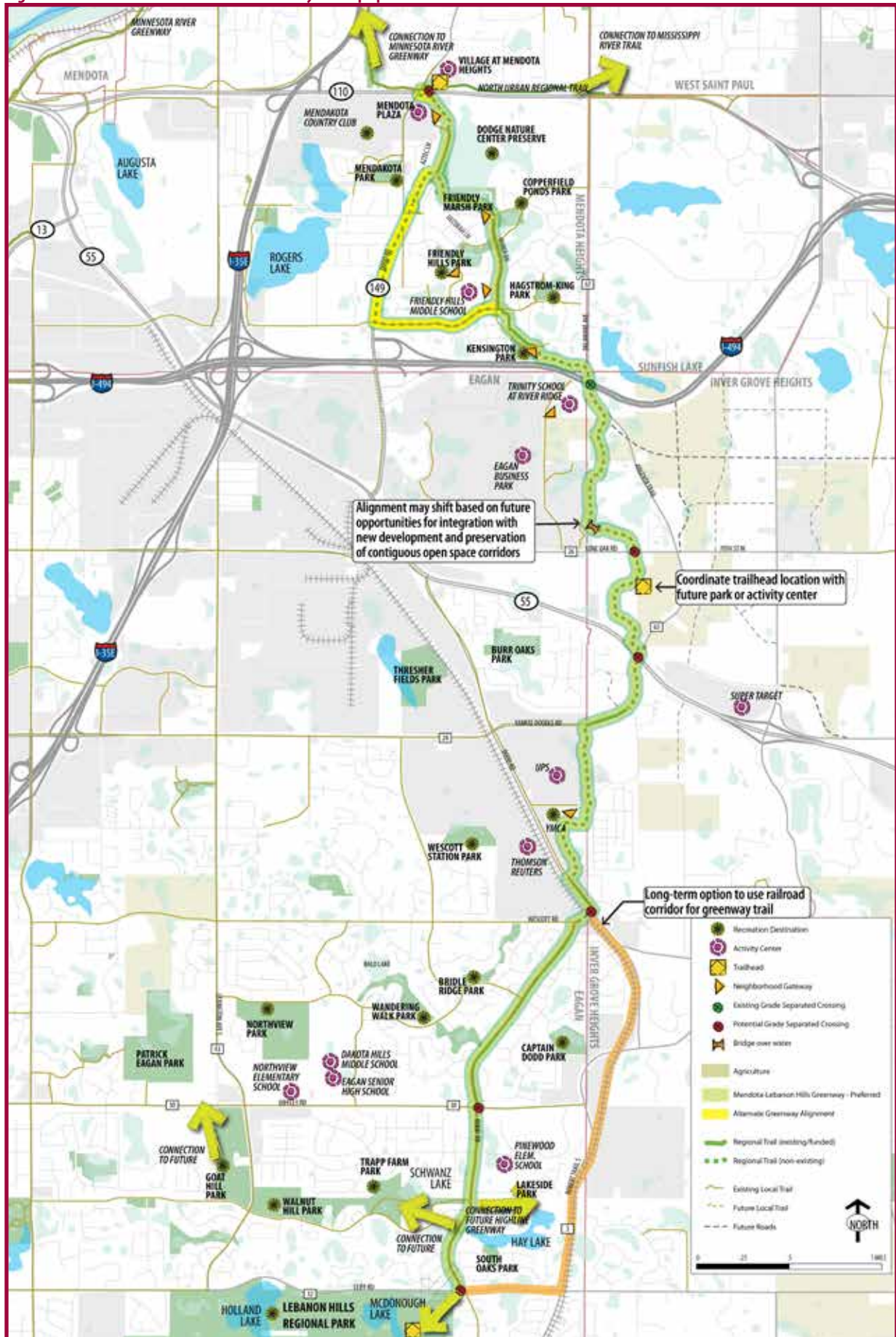


Figure 21. Mendota-Lebanon Hills Greenway concept plan





## 80/20 TRAIL ALIGNMENT

A primary goal of the greenway trail alignment is to be at least 80 percent in an off-street greenway corridor with a maximum of 20 percent of the greenway adjacent roads. Due to existing development patterns surrounding the Mendota-Lebanon Hills Greenway, the greenway alignment falls short of this goal. A substantial segment of the greenway (2.3 miles) uses Dodd Road right of way. However, the roadway segment the greenway will use is compatible with greenway goals, as it is a low traffic, two-lane street with existing trails, mature trees and a rich cultural history. Along Dodd Road as with other areas where the greenway follows roads, efforts will be made to ensure an enjoyable greenway experience through addition of landscaping, road narrowing (where feasible) to increase buffer space and slow traffic, historic interpretation and amenities.

	<i>Adjacent road</i>	<i>Off-street</i>
<i>Segment 1</i>	<i>19%</i>	<i>81%</i>
<i>Segment 2</i>	<i>80%</i>	<i>20%</i>
<i>Mendota-Lebanon Hills Greenway</i>	<b>50%</b>	<b>50%</b>

Note: All undeveloped areas are assumed to be off-road for purposes of estimating.

Table 22. Adjacent road, off-street trail alignment

## RECREATION DESTINATIONS, ACTIVITY CENTERS AND TRAIL CONNECTIONS

Inherent to greenways are the trails linking recreation destinations and activity centers, the social gathering places along the trail. Opportunities to stop along the trail to fish, observe wildlife or eat lunch are some of the features that will make the Mendota-Lebanon Hills Greenway a regional destination drawing people from a broad area. The Mendota-Lebanon Hills Greenway will be a spine for loop trails, connect to regional and local trails and roads and will itself serve as an important transportation route. Recreation destinations, activity centers and connections are shown in Figure 21.

### RECREATION DESTINATIONS



Mendota-Lebanon Hills Greenway recreation destinations include Friendly Hills Park, Copperfield Ponds Park and Lebanon Hills Regional Park.

### ACTIVITY CENTERS



Mendota-Lebanon Hills Greenway activity centers include The Village at Mendota Heights, Mendota Plaza and schools in Mendota Heights and Eagan.





## TRAILHEADS AND NEIGHBORHOOD GATEWAYS

Frequent access is a priority for the Mendota-Lebanon Hills Greenway. Two generalized types of greenway and trail access points are recommended: trailheads are intended for regional and local access; neighborhood gateways primarily are for local access at opportune locations. Typically, access points will be at recreation destinations, activity centers and trail intersections. Here trail users will find support facilities such as water and restrooms as well as greenway information.

Trailheads are the primary greenway access points and will serve people who drive, walk, bike, or take transit to the greenway. They will occur every 3 to 5 miles and share facilities such as parking and restrooms with other facilities. Neighborhood Gateways are more frequent, local access points. They will be at convenient intervals between primary trailheads (2-3 miles apart or closer at logical locations). Wherever possible, facilities are shared with other uses and ideally are located where there is a complementary recreation destination or activity center.

Trailheads will include:

- ▶ Water
- ▶ Motor vehicle parking
- ▶ Secure bicycle parking
- ▶ Picnic areas and/or facilities
- ▶ Wayfinding and traffic control
- ▶ Restrooms
- ▶ Interpretation
- ▶ Benches
- ▶ Food where opportune
- ▶ Shelter and shade
- ▶ Local and/or regional trail connections

Neighborhood gateways will include the following elements:

- ▶ Benches
- ▶ Local and/or regional trail connections
- ▶ Secure bicycle parking
- ▶ Wayfinding and traffic control
- ▶ Water
- ▶ Interpretation

Neighborhood gateways may also include as shared facilities:

- ▶ Restrooms
- ▶ Picnicking
- ▶ Food
- ▶ Motor vehicle parking

### TRAILHEADS



### NEIGHBORHOOD GATEWAYS



# ROAD AND RAILROAD CROSSINGS

Grade-separated crossings are a critical component of Dakota County’s greenway system. Grade separation promotes safety by reducing conflicts with motorized traffic and allows for more efficient and enjoyable trail experience for users of all abilities. To that end, grade-separated crossings are suggested at all major intersections, shown in Figure 25 and elaborated in Table 24.

Grade separations on the greenway system should be of the highest quality possible to ensure safety, security and to establish the greenway system as a truly special and high-quality destination.

Grade-separated crossings were evaluated at potential locations along the Mendota-Lebanon Hills Greenway. The evaluation is based on topography and utility information. For the purposes of the evaluation, it was assumed that a minimal-cost underpass would be a 10-foot by 14-foot box culvert and an overpass would consist of a pedestrian bridge with a minimum clearance of 17 feet over the roadway. The concept level cost estimates include grading, retaining walls, traffic control, turf establishment/erosion control and mobilization. Engineering, administrative costs and contingencies are included in the estimate. Overall system drainage costs are not.

**Table 24. Grade-separated crossings**

NUMBER	LOCATION	RECOMMENDATION	IMPORTANCE FOR USER SAFETY AND EXPERIENCE	COST
1	Highway 110 just east of Dodd Road <i>Notes: Coordination with landowners needed</i>	Underpass	High	\$1,672,200
2	Interstate 494 at Delaware Avenue (widen existing sidewalk and separate from travel lane)	Existing overpass	Low	\$60,000
3	Lone Oak Road/70th Street West	Underpass	High	\$590,000
4	Highway 55	To be determined in conjunction with future interchange design	Medium	To be completed with interchange construction
5	Highway 149	Underpass	High	\$820,000
6	Diffley Road	Underpass	Low	\$820,000
7	Cliff Road	Overpass (possible underpass)	High	\$ 1,040,000



# GRADE-SEPARATED CROSSINGS

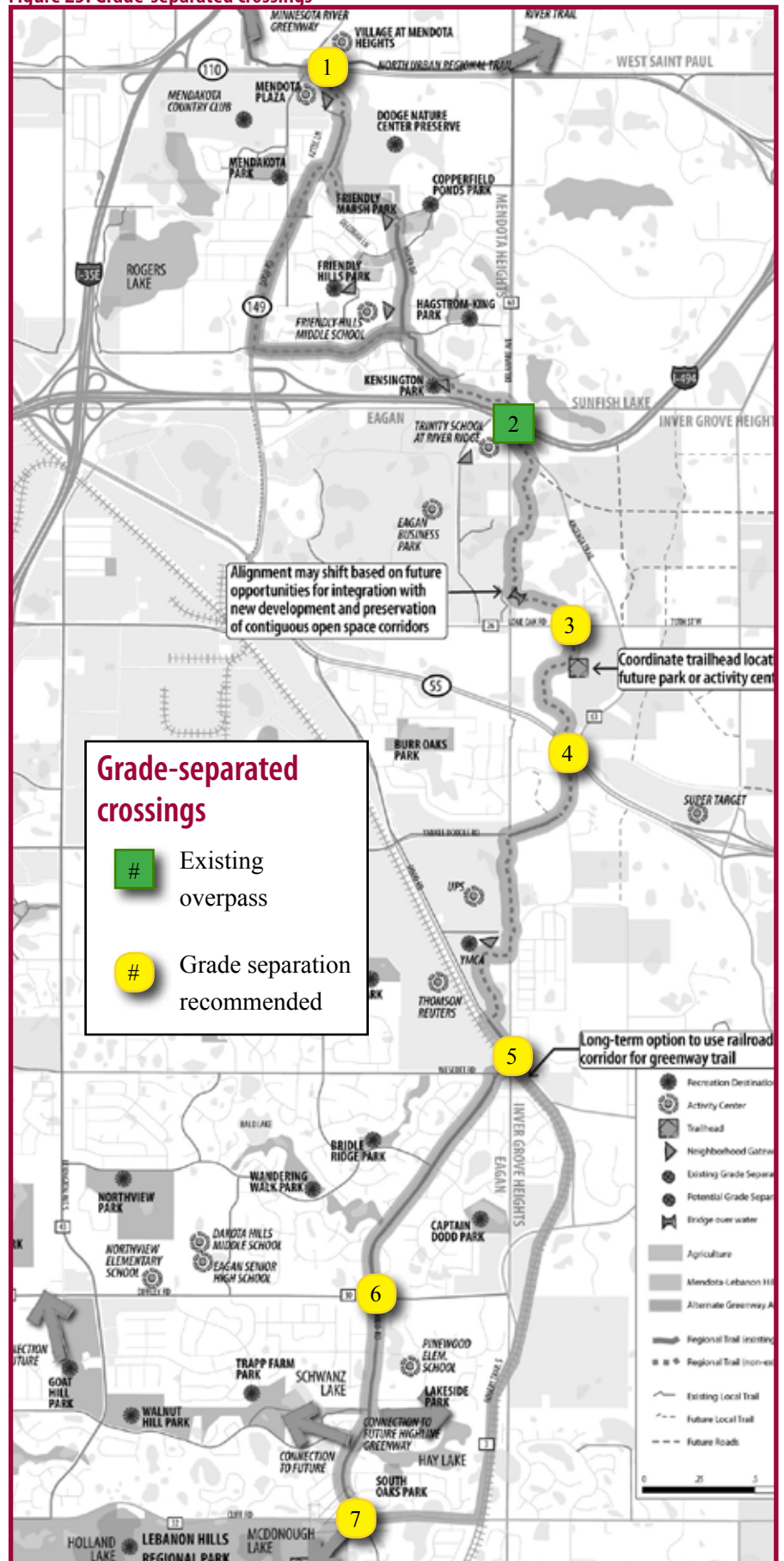
## Underpass



Source: HKGi



Figure 25. Grade-separated crossings

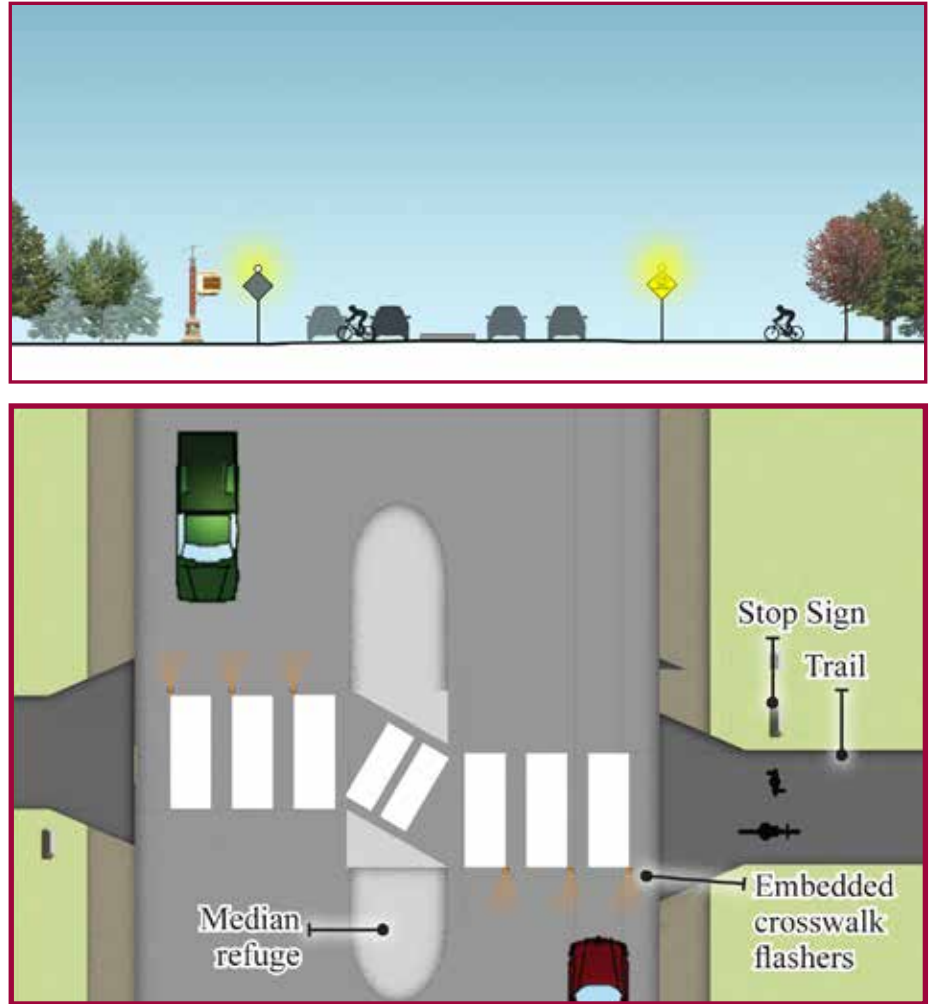




## AT-GRADE CROSSINGS

When grade-separated crossings are not possible on collector roads or higher, crossing should occur at controlled intersections with road users stopping at traffic lights or stop signs. In some instances, midblock crossings may be appropriate and should be designed with pedestrian/cyclist safety and visibility in mind, as shown in Figure 26. On lower volume local roads, crossings might not be controlled with traffic lights or stop signs. In these cases, features such as pavement marking, refuge islands and bumpouts should be applied to reduce crossing distances for trail users and increase visibility for trail users and road users.

Figure 26. Typical at-grade, midblock road crossing with median refuge



## ACCESSIBILITY

Dakota County is committed to offering universal accessibility at all trail facilities. The primary paved trail and all access points suggested in the master plan are located and planned for universal accessibility to provide all visitors with a meaningful experience.

## SUSTAINABILITY

Environmental sustainability is at the core of the greenway concept. Improving ecological function, habitat creation, wildlife movement, stormwater infiltration and carbon sequestration as well as facilitating nonmotorized recreation and transportation all are greenway objectives.

Greenways will be constructed in environmentally sustainable ways and designed to minimize impact on natural systems. Recommended strategies include:

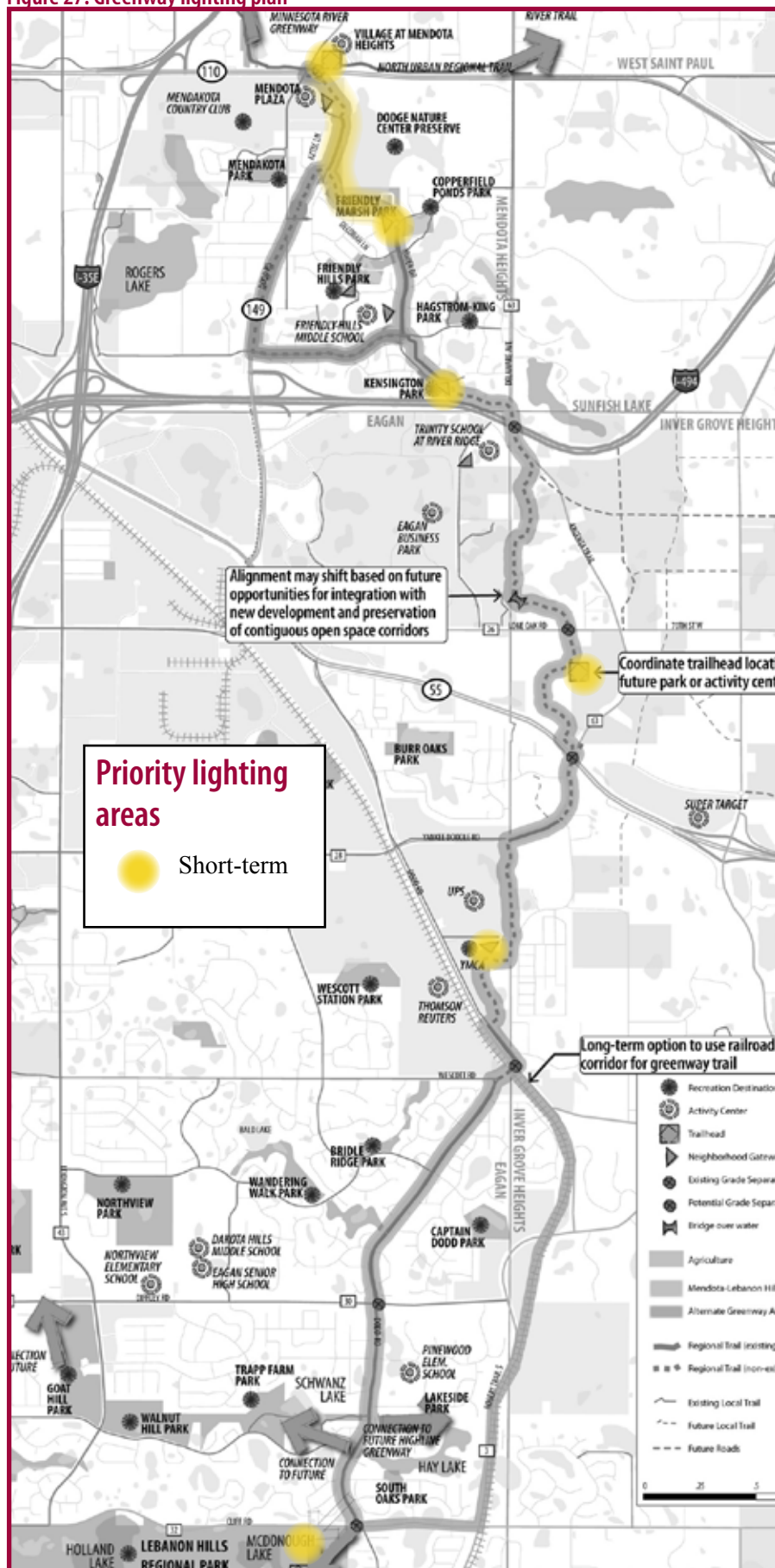
- ▶ Protecting and restoring natural systems
- ▶ Emphasizing native plant species
- ▶ Reducing maintenance costs by promoting self-sustaining wildlife and plant communities and treating stormwater on site
- ▶ Use recycled materials
- ▶ Energy-efficient lighting and use of timed lighting



# LIGHTING

Lighting is an essential component for safety and to make the greenway functional as a transportation corridor in the winter and fall months when the days are short. For safety and navigation, lighting is paramount at all greenway access points, trailheads, neighborhood gateways and trail connections. In these places, it is recommended that lighting be incorporated into initial design and construction. In areas with potential for high use because of population density, trail connections and destinations, it is recommended that continuous trail lighting be installed. Figure 27 shows priority lighting areas.

Figure 27. Greenway lighting plan



# SITE FURNISHINGS

One of the key features of the greenway system is having a consistent design signature for site furnishings. On the right are examples of site furnishings (benches, bike racks, lighting and trash receptacles) that show the desired character of facilities at trailheads, neighborhood gateways and other resting areas along the greenway.

# WAYFINDING

Wayfinding is the way people navigate from place to place. For the Dakota County greenway system a consistent wayfinding system is essential for orientation, navigation and safety. Signage should be consistent across the system and should guide greenway users to local services, cultural destinations, transportation connections, activity centers, recreation destinations, cities, neighborhoods and other landmarks.

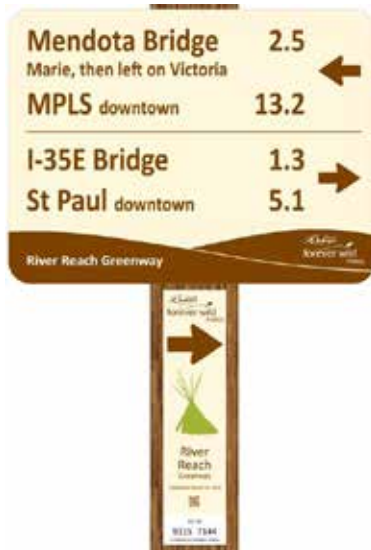
## Greenway furnishing examples



Figure 28. Wayfinding examples



Mile marker



Directional sign



Kiosk



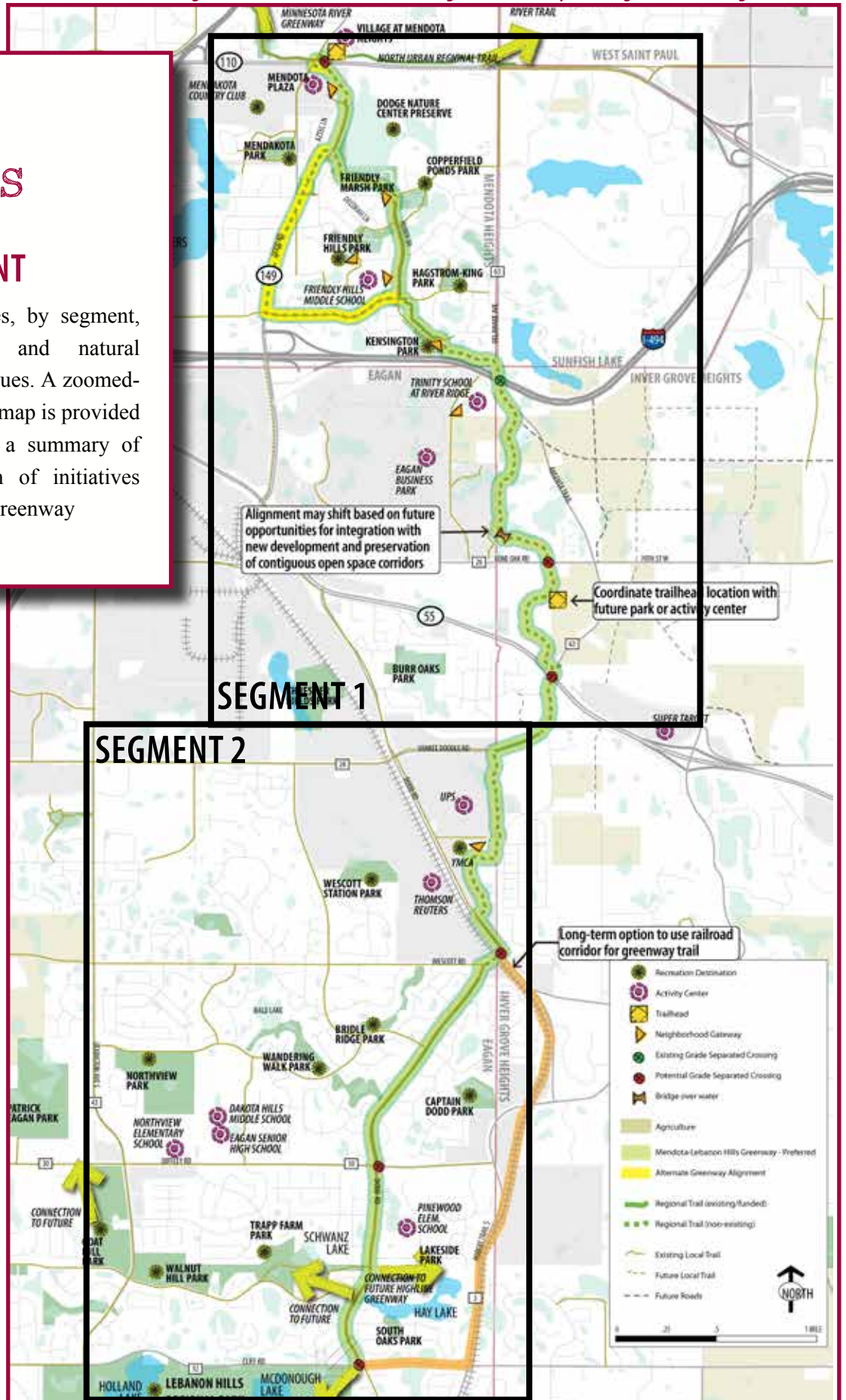


Figure 29. Mendota-Lebanon Hills Regional Greenway trail alignments and segments

# B. Key initiatives

## TRAIL ALIGNMENT

This section summarizes, by segment, specific development and natural resource projects and issues. A zoomed-in view of the greenway map is provided for each segment with a summary of features and discussion of initiatives needed to complete the greenway



SEGMENT 1

SEGMENT 2

Alignment may shift based on future opportunities for integration with new development and preservation of contiguous open space corridors

Coordinate trailhead location with future park or activity center

Long-term option to use railroad corridor for greenway trail



## Village at Mendota Heights to Highway 55

### Recreation destinations

- A Friendly Marsh Park
- B Friendly Hills Park
- C Kensington Park
- D Future parks in Inver Grove Heights Northwest Area
- E Dodge Nature Center preserve

### Activity centers

- F Village at Mendota Heights
- G Mendota Plaza
- H Friendly Hills Middle School
- I Trinity School at River Ridge
- J Eagan Business Park (via local trails)
- K Future commercial areas in Inver Grove Heights

### Trailheads

- F The Village at Mendota Heights
- D Coordinated with future park in Inver Grove Heights

### Neighborhood gateways

- G Mendota Plaza
- A Friendly Marsh Park
- B Friendly Hills Park
- H Friendly Hills Middle School
- I Trinity School at River Ridge
- C Kensington Park

### Loop and connecting trails

- L North Urban Regional Trail
- M Local trails in Mendota Heights and Inver Grove Heights

### Grade-separated crossings

- N Highway 110
- O I-494
- Q Lone Oak Road
- R Highway 55

## Segment 1: Village at Mendota Heights to Highway 55

(4 miles; 19 % on-road, 81% off-road)

The northern end of the Mendota-Lebanon Hills Greenway is Village at Mendota Heights and the North Urban Regional Trail. The greenway then travels south, through Mendota Plaza and Friendly Marsh Park, before linking Friendly Hills Middle School and Kensington Park. The greenway then crosses I-494 parallel Delaware Avenue and travels through Inver Grove Heights' Northwest Area to Highway 55.

### Trailhead — The Village at Mendota Heights

The Village at Mendota Heights is an activity center and will be a popular destination with established restaurants, retail and employment uses. It is also the intersection of the Mendota-Lebanon Greenway and the North Urban Regional Trail. Trailhead amenities such as bicycle parking, wayfinding and public drinking water will be added and opportunities to share existing parking and restroom facilities will be explored.

### Grade separated crossing at Highway 110

A grade-separated crossing is recommended between the Village at Mendota Heights and Mendota Plaza to create nonmotorized continuity between these two activity centers and for safety. In the interim, greenway users will cross at grade at the Dodd Road/Highway 110 intersection. Improvements for pedestrian and cyclist safety at the intersection are planned for summer/fall 2013.





Figure 31. Mendota-Lebanon Hills Greenway Segment 1 Concept Plan

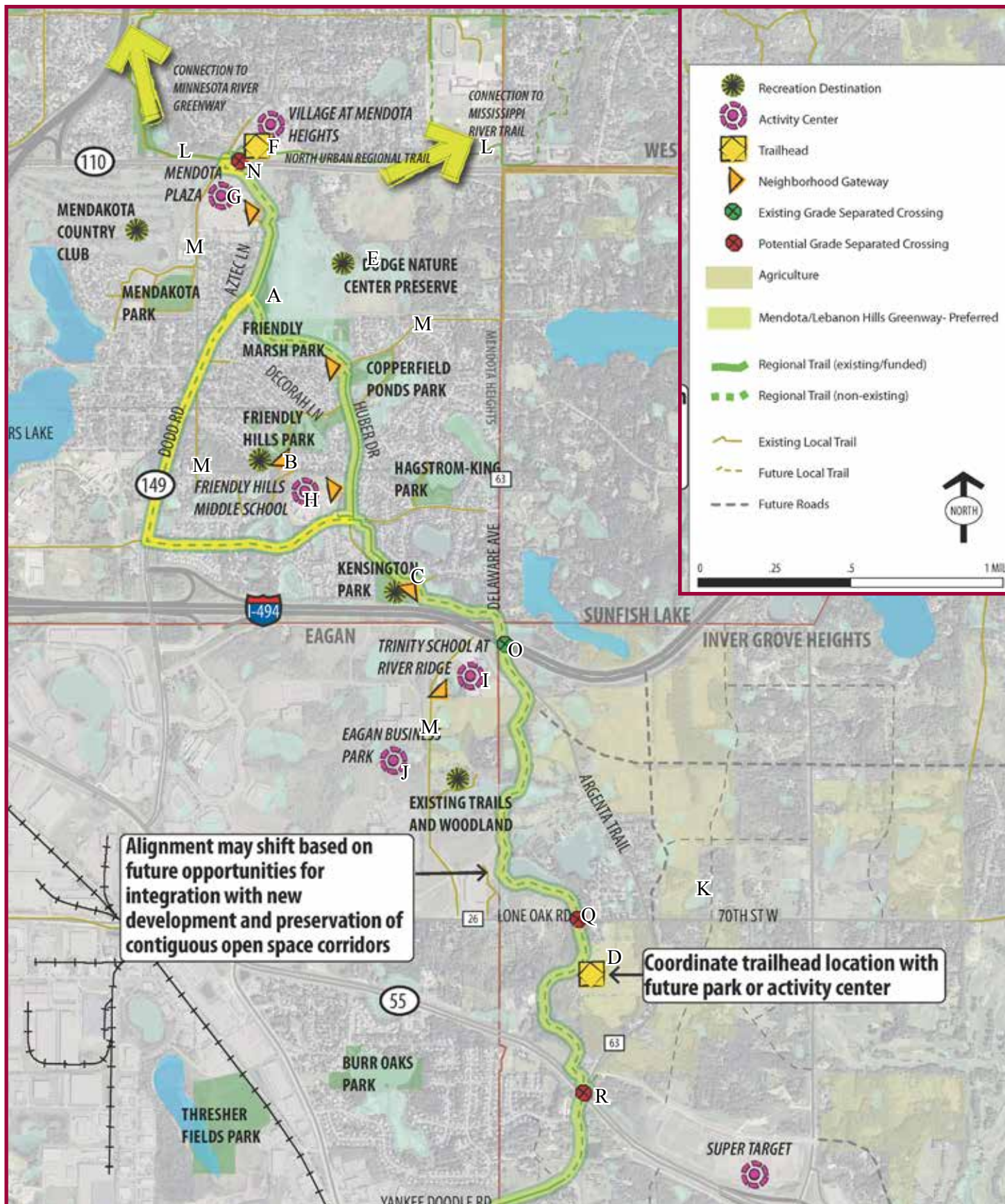
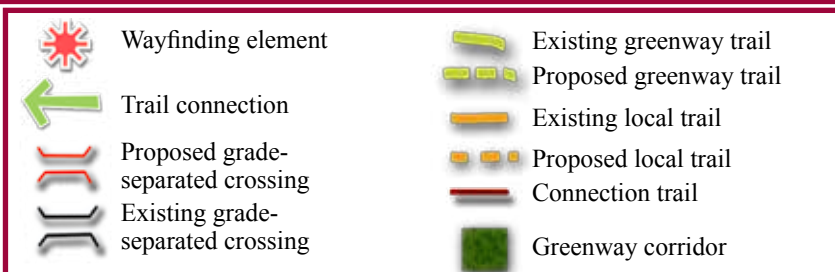
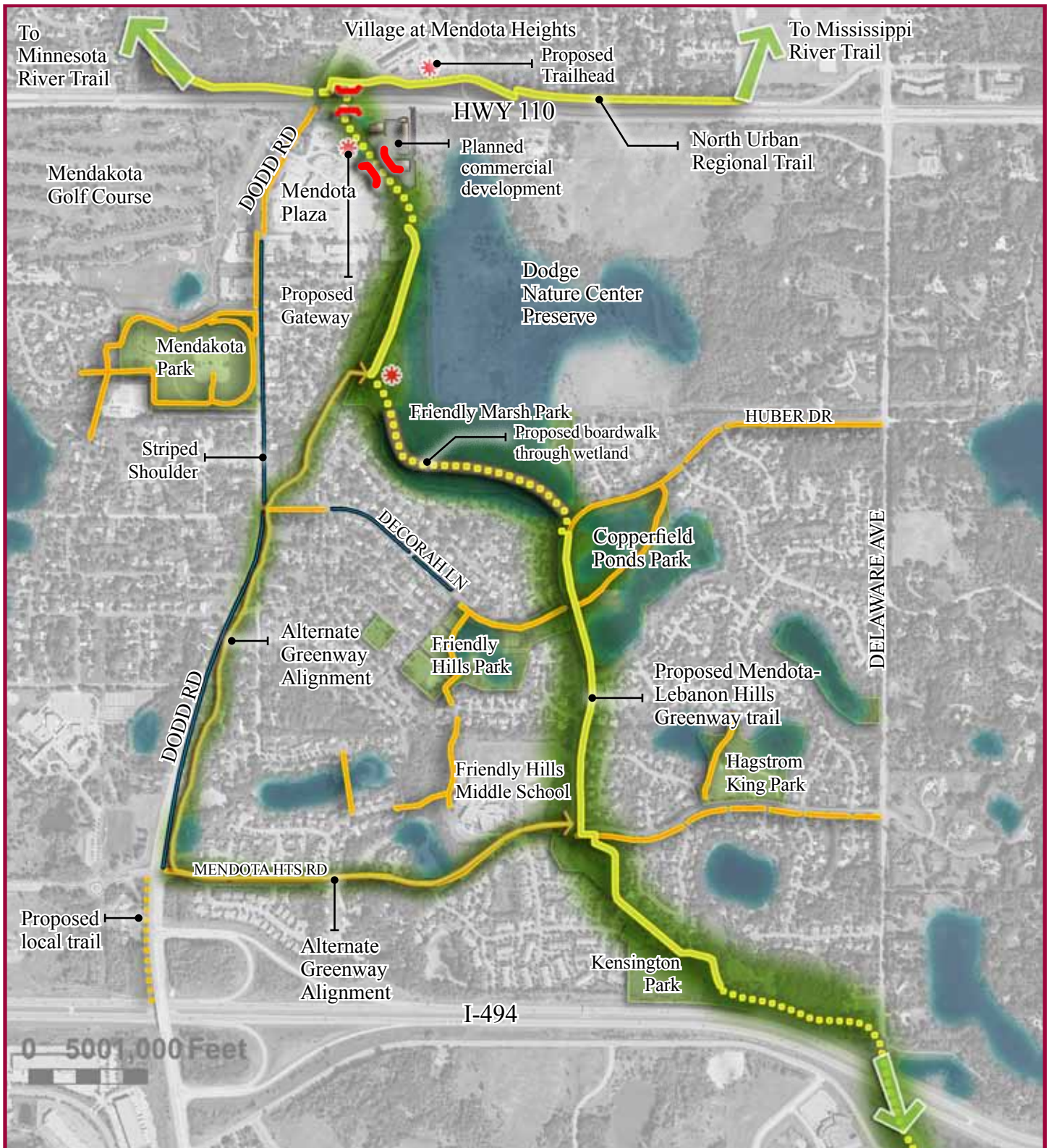




Figure 32. Mendota Plaza detail



## *Mendota Plaza*

A small drainage runs along the eastern side of Mendota Plaza. Improvements to this waterway, including vegetation restoration will create an amenity for visitors to Mendota Plaza and the greenway. A neighborhood gateway will be at Mendota Plaza.

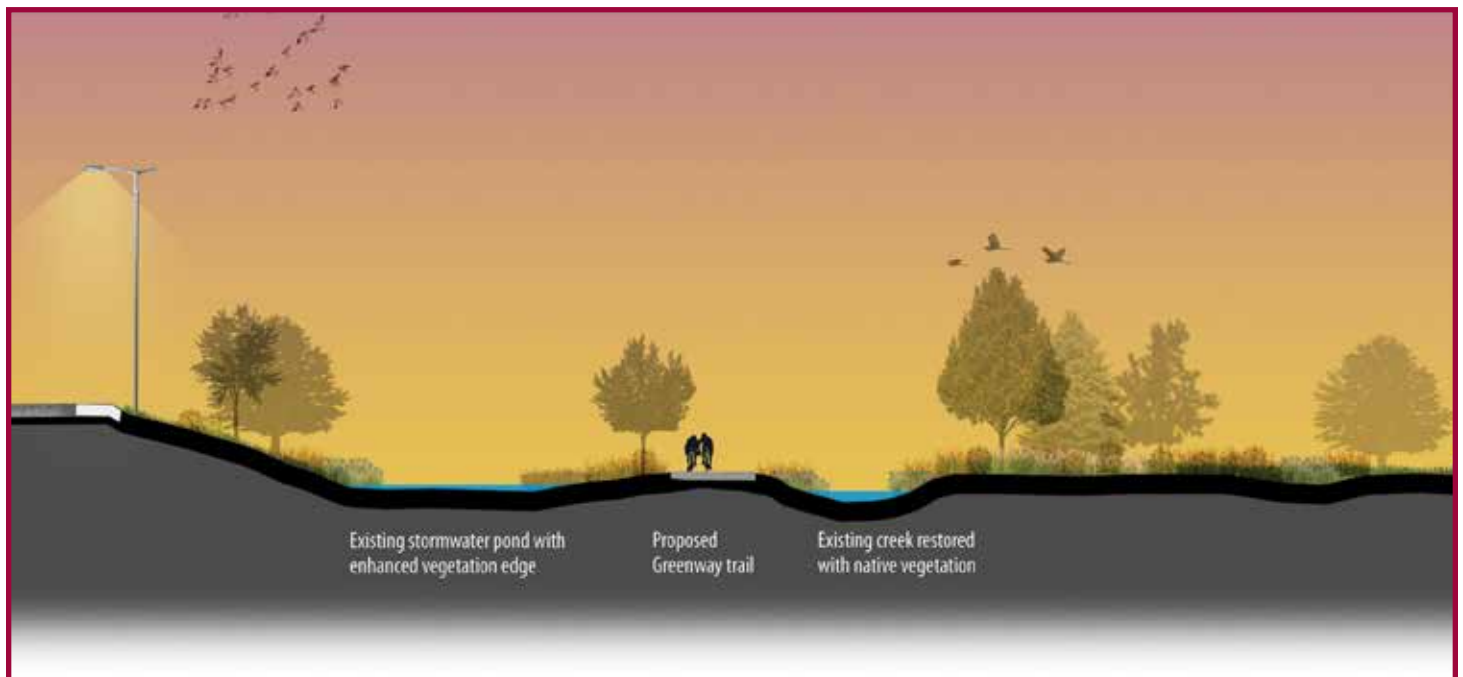
## *Mendota Plaza to Mendota Heights Road*

South of Mendota Plaza, the greenway follows an existing trail through Friendly Marsh Park. At the southern edge of this trail, two alignment options exist. The preferred alignment jogs east across the marsh in the park. This alignment allows for variety of experience and long views of the marsh to the north. A boardwalk would be needed in this area. After exiting the marsh at Huber Drive, the greenway would follow the existing trail on Huber Drive to Mendota Heights Road.

The alternate alignment is suggested if a boardwalk through Friendly Marsh Park is, upon more detailed study, unfeasible for cost or environmental reasons. The alternate travels through Dakota County Community Development Agency property south to Dodd Road. Traveling south and east, an off-street trail follows Dodd Road to Mendota Heights Road.

Prior to finalizing the alignment in this area, a detailed feasibility study will be conducted with analysis of the two or more options related to user experience, cost and environmental impacts.

**Figure 33. Mendota Plaza area conceptual section**



**Figure 34. Kensington Park Conceptual Section**



### *Kensington Park and I-494 Crossing*

The Greenway will travel south across Mendota Heights Rd. through Kensington Park. From the southeast boundary of Kensington Park the greenway will travel within the right-of way on the north side of I-494. At I-494, the greenway will cross on the existing Delaware Avenue bridge.

### *I-494 to Highway 55*

Between Interstate 494 and Highway 55, the greenway travels through the City of Inver Grove Heights' Northwest Area, an area guided for significant future growth.

Inver Grove Heights' Northwest Area zoning ordinance regulates the area's development with the purpose of allowing development consistent with the city's comprehensive plan while reducing the amount of impervious land cover to create a cost-efficient and innovative storm sewer system. To that end, zoning requirements include preservation of at least 20 percent of the net developable area as open space, much of which must be in contiguous corridors at least 100-feet wide. Uses allowed in the open space include stormwater management, active and passive recreation (including trails) and utilities.

As shown on the concept master plan, the preferred greenway alignment travels west of Argenta Trail close to the Inver Grove Heights/Eagan border. This best connects existing natural resources and employment destinations. However, land use guidance and open space requirements for future development in the Northwest Area provide a tremendous opportunity to integrate the regional greenway into future development consistent with regional greenway goals. Therefore, the actual greenway alignment may change based on opportunities to assemble a connected 100-foot to 300-foot wide corridor, separated from roads, that connects future residential areas to parks, commercial areas and employment destinations between I-494 and Highway 55.

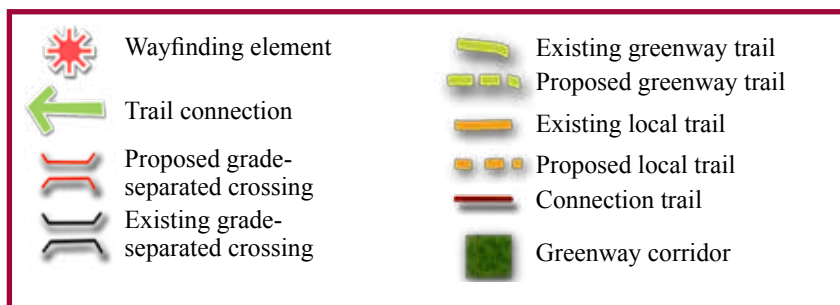
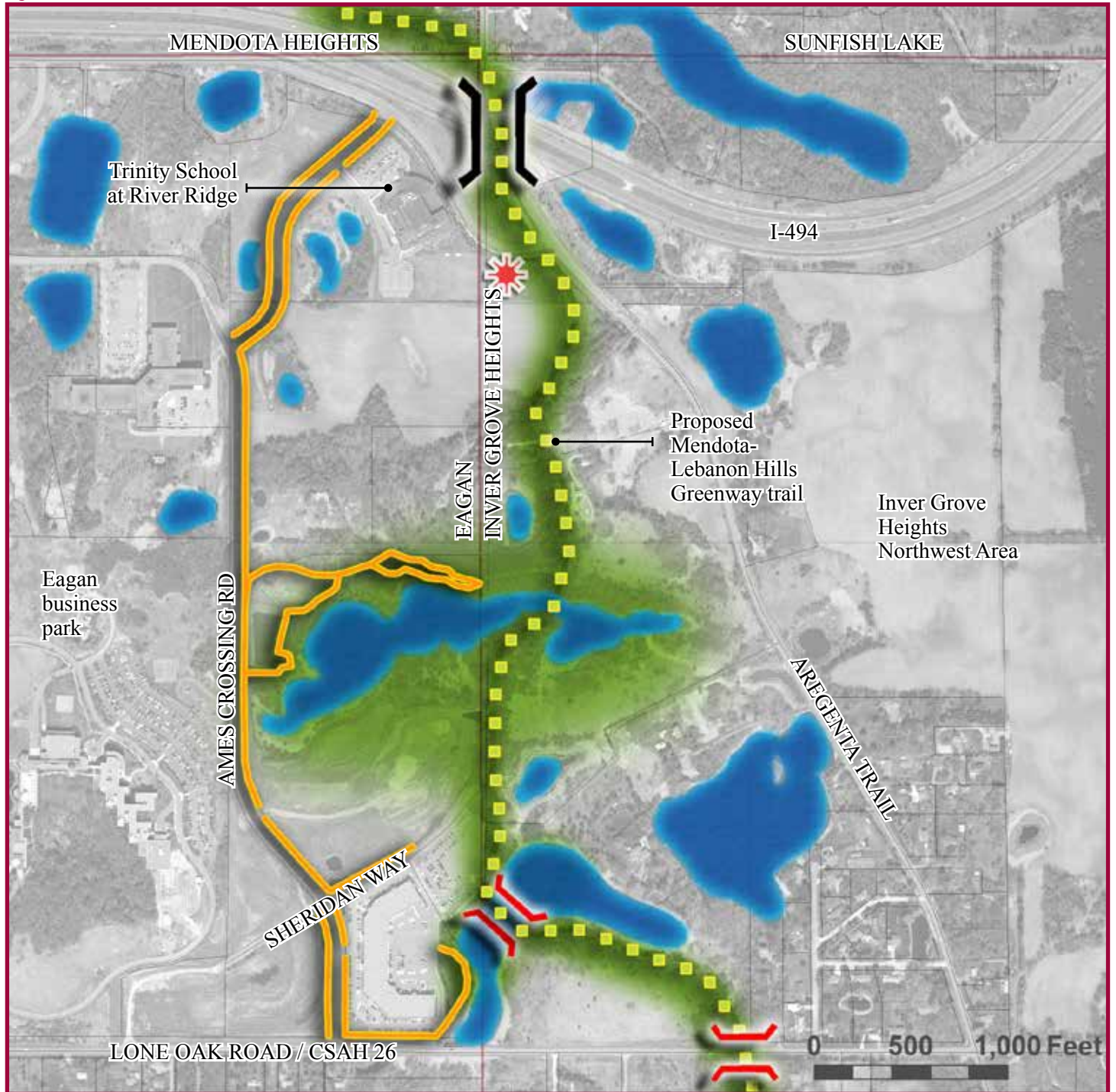
### **Northwest Area trailhead**

A full-service regional trailhead is desired in the Northwest Area, north of Highway 55. This trailhead should be planned and constructed in conjunction with future activity centers (commercial areas) or recreation destinations (parks) to allow for shared county/city facilities for parking and rest rooms.





Figure 35. I-494 to CSAH 26 detail



## Northwest Area future roads

The 2012 Northwest Area Collector Street Plan outlines the long term collector roadway system for east-west and north-south movement in the Northwest Area. In keeping with Dakota County greenway performance standards, grade-separated crossings of arterial roads or higher are a priority, and grade-separated crossings at collector roads are highly desired, particularly when underpasses can be built in a cost-efficient manner by coordinating with road construction or reconstruction projects. Priority crossings future greenway grade separated crossings are:

- ▶ I-494, at the location shown using the existing Delaware Bridge
- ▶ 70th Street (CSAH 26) to four lanes
- ▶ TH-55 in coordination with a potential new interchange at realigned Argenta Trail (CSAH 63)
- ▶ Other collector roads as needed

### *Highway 55 crossing*

A grade-separated crossing is recommended at Highway 55. It is anticipated that this will be built in conjunction with future road reconstruction or a new interchange. Until then, the greenway will utilize the existing signalized at-grade crossing at Argenta Trail.

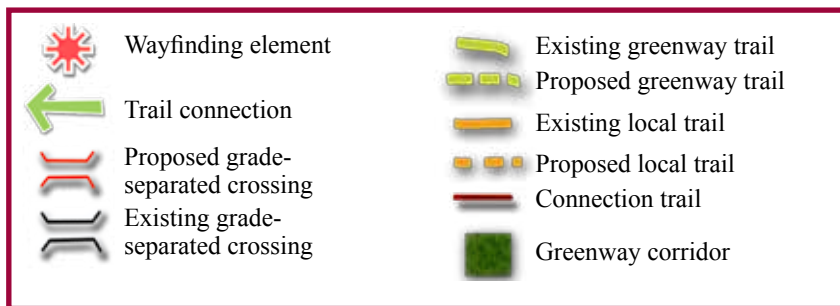
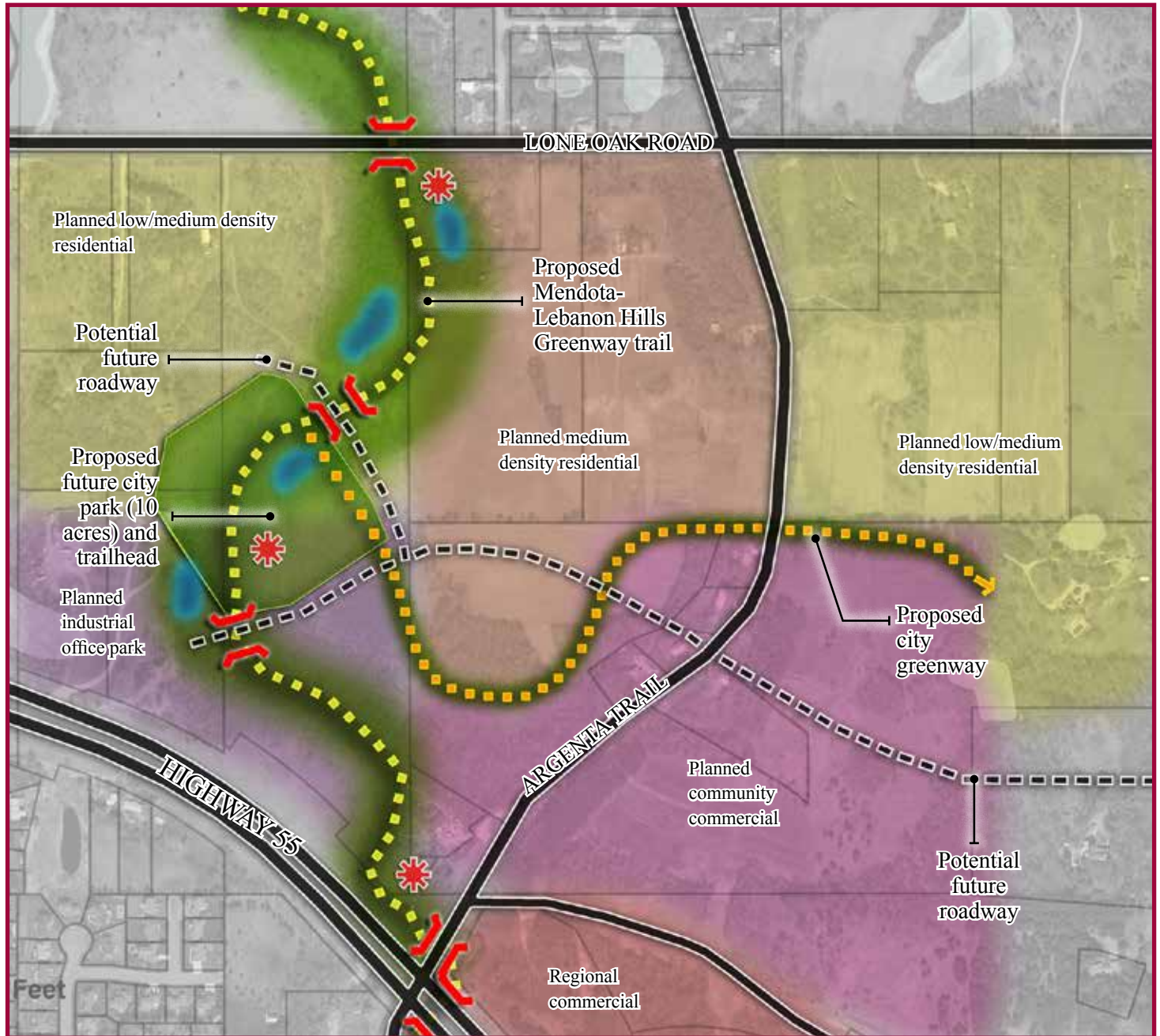
### *Natural resources and water quality initiatives*

- ▶ Stream restoration and vegetation restoration at Mendota Plaza.
- ▶ Wetland habitat improvements in Friendly Hills Marsh.
- ▶ Integrate habitat protection, restoration and innovative stormwater treatment into the greenway in Inver Grove Heights Northwest Area from I-494 to Highway 55.





Figure 37. Inver Grove Heights future development detail





## Highway 55 to Lebanon Hills Regional Park

### Recreation destinations

- A YMCA
- B Trapp Farm Park
- C Lebanon Hills Regional Park

### Activity centers

- D Employment destinations in Eagan (UPS, Thomson Reuters)
- E Pinewood Elementary School

### Trailheads

- C Lebanon Hills Regional Park

### Neighborhood gateways

- A YMCA

### Loop and connecting trails

- F Highline Trail
- G Rosemount Greenway
- H Vermillion Highlands Greenway
- I North Creek Greenway
- J Lebanon Hills Regional Park trails

### Grade-separated crossings

- K Dodd Road
- L Diffley Road
- M Cliff Road

## Segment 2: Highway 55 to Lebanon Hills Regional Park (4.5 miles; 80% on-road, 20% off-road)

South of Highway 55, the Mendota-Lebanon Hills Greenway continues through Inver Grove Heights' Northwest Area to Yankee Doodle Road, where it then travels along the Inver Grove Heights' Eagan border connecting to the YMCA and Thomson Reuters. South of Wescott Rd., the greenway follows Dodd Road south 2 miles to Lebanon Hills Regional Park and the Schulze Lake Trailhead.

### Dodd Road

The greenway will follow Dodd Road for over 2 miles to Lebanon Hills Regional Park. Though County greenway standards guide to minimize following roads, the alignment is preferred based on Dodd Road's rich cultural history, existing residential development patterns, directness between destinations and the proximity to other county greenways.

Today, a continuous trail exists on the east side of Dodd. Near term enhancements will be located in the existing right-of-way, work with the current road design and focus on the east side of Dodd Road. Long term, when Dodd Rd. is in need of reconstruction, opportunities to improve the user experience by converting Dodd Road to a parkway rich with historic interpretation will be explored.

Conceptual ideas for parkway improvements include:

- ▶ **Road narrowing** - to allow for trail on both sides of Dodd Rd., increased boulevard space and/or a planted central median
- ▶ **Additional landscaping** - trees and naturalized areas/native gardens in key locations; working with willing homeowners to expand natural plantings/natural design signature beyond the right-of-way
- ▶ **Site furnishings** - benches, lighting, wayfinding at local trail connections to nearby parks and schools
- ▶ **Development as a heritage route** - rest areas with interpretive themes and/or information (the story of Captain Dodd and other road names); art elements with historic theme; historic interpretation artistically integrated into greenway trail and furnishing (special paving or periodic pavement inlays with historic reference on or adjacent to the trail and integrated into benches, wayfinding, signage, etc.)



Figure 39. Mendota-Lebanon Hills Greenway segment 2 concept plan

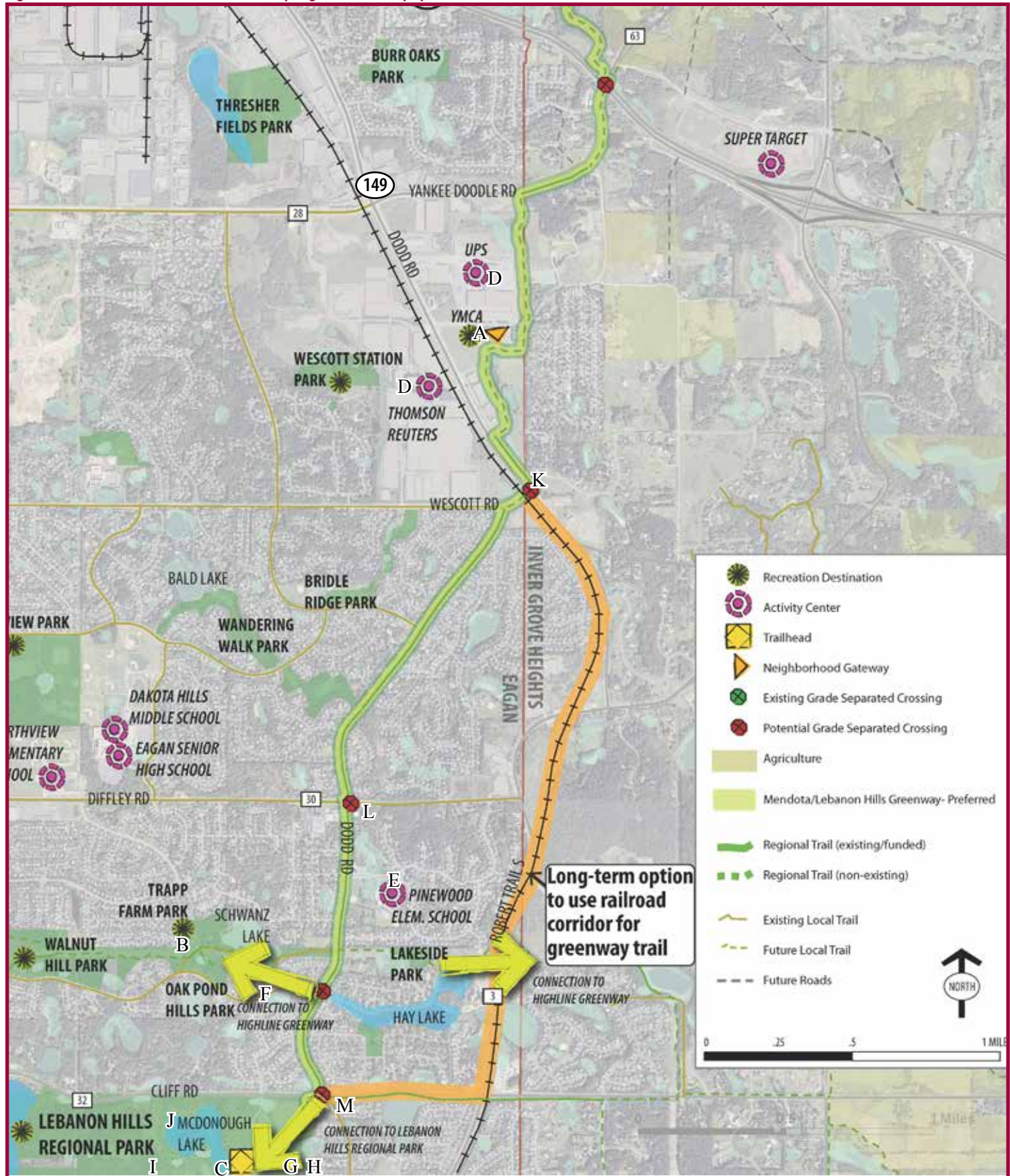
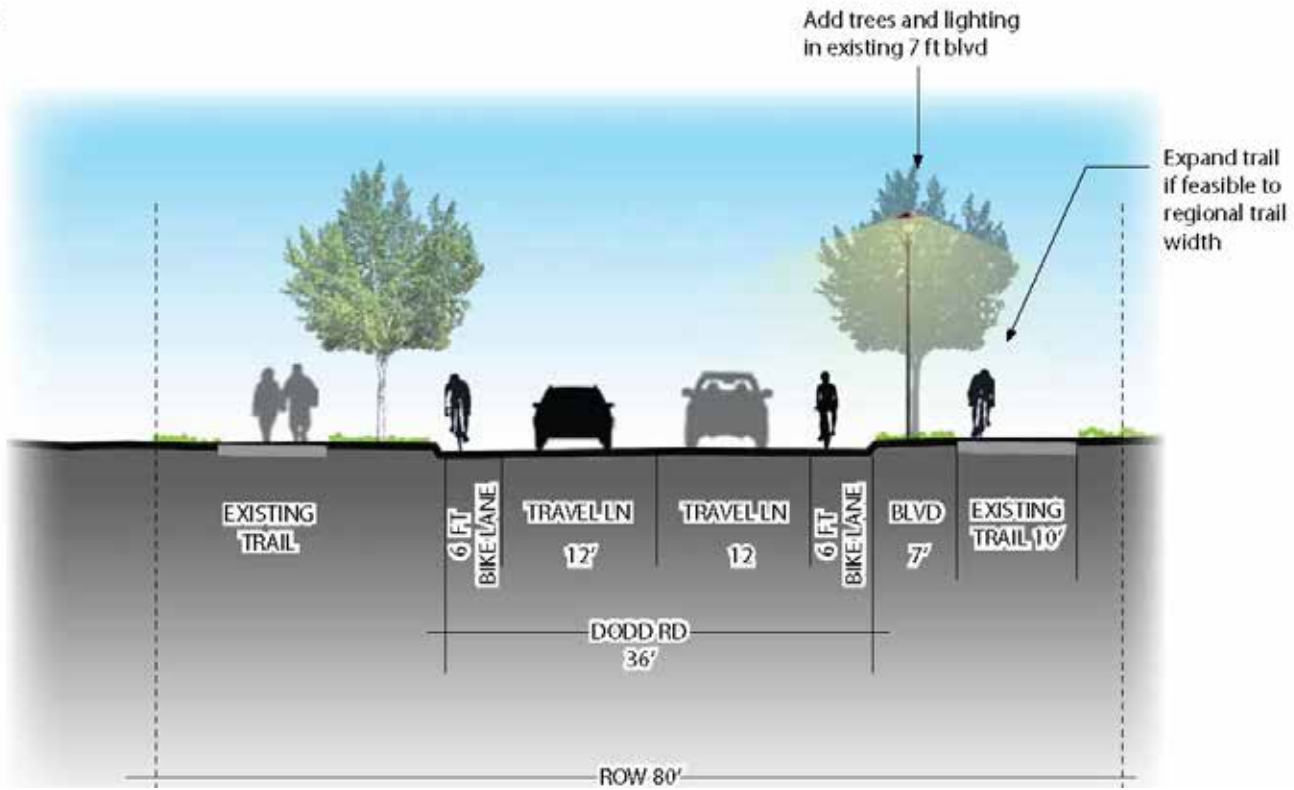
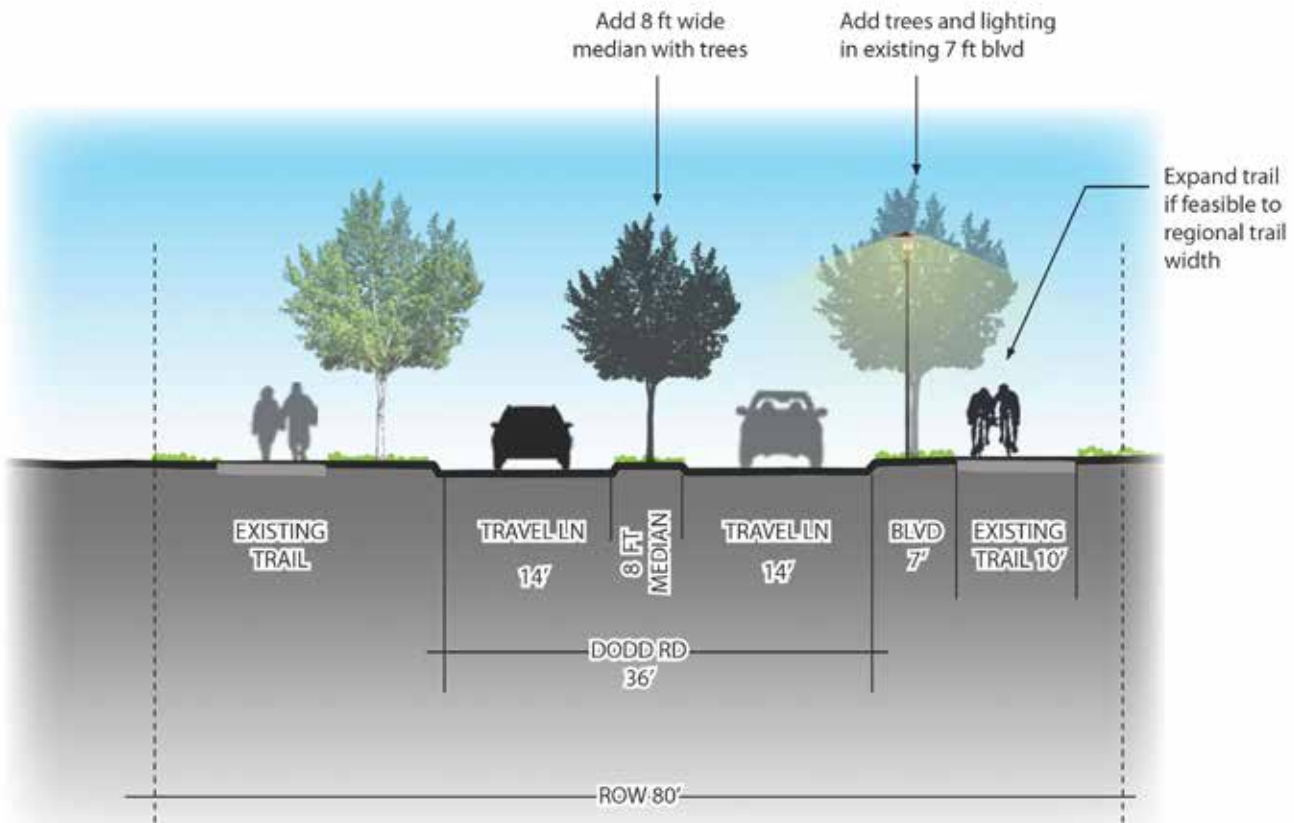




Figure 40. Dodd Road section study 1 — trails on both sides of road



Greenway enhancements to current road configuration

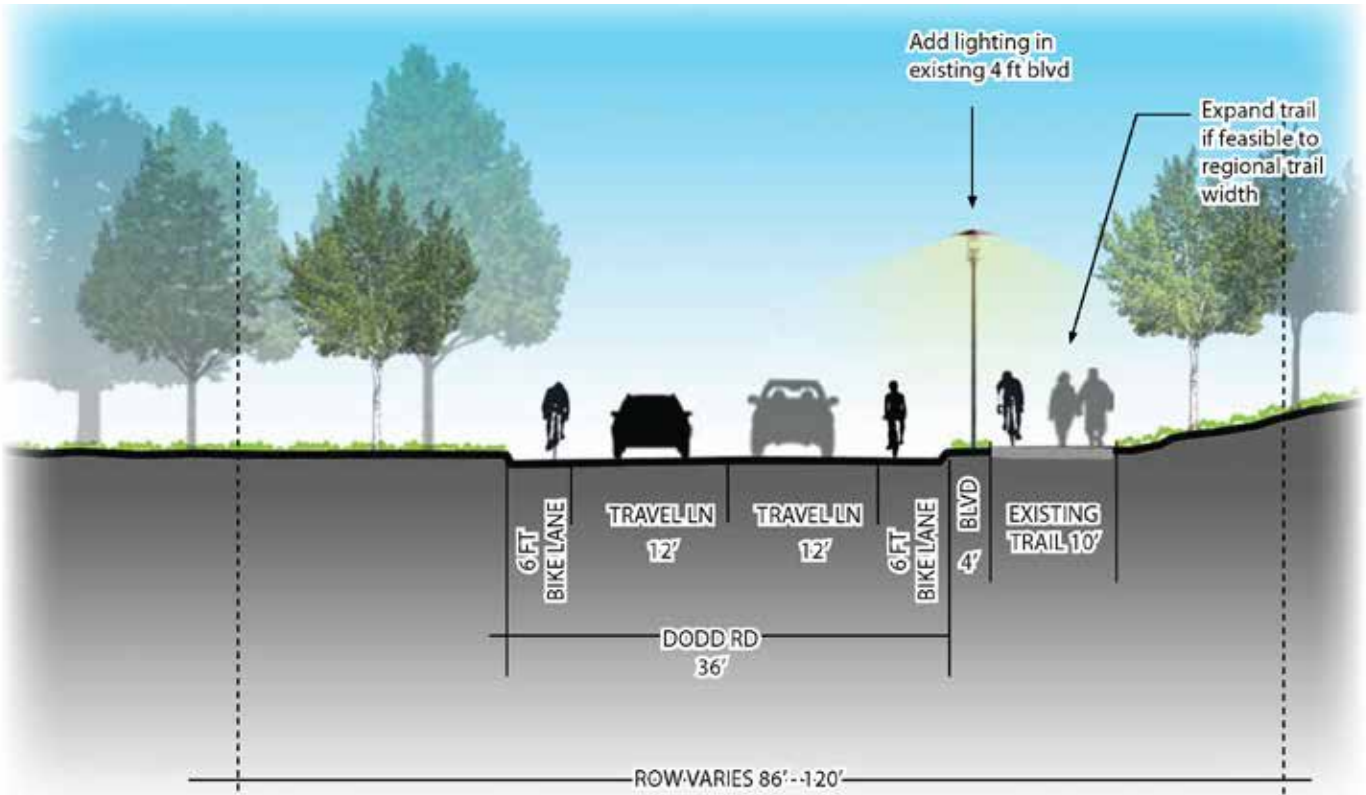


Parkway concept A

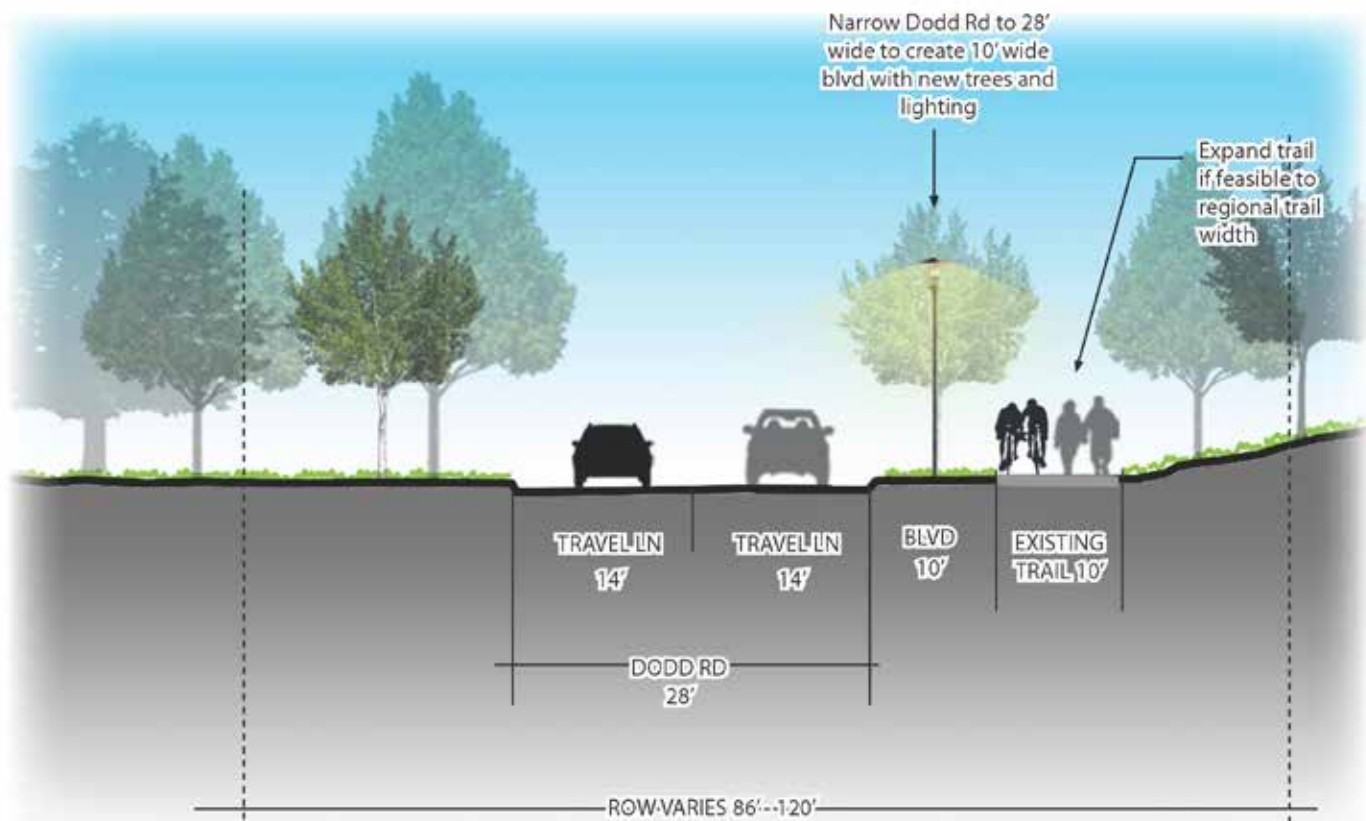




Figure 41. Dodd Road section study 2 — trail on one side of road



Greenway enhancements to road current configuration



Parkway concept B



### *Canadian Pacific Railroad option*

The Canadian Pacific Railroad corridor to the east of Dodd Road is an alternate route for the Dodd Road portion of the Mendota-Lebanon Hills Greenway and the northern segment of the Rosemount Greenway south of Lebanon Hills Regional Park. Long term, if the railroad corridor were to become available, it should be considered as a trail connection from Wescott Road to Connemara Trail (Cliff Road to Connemara Trail would be part of the Rosemount Greenway). The alignment would keep trail users in a dedicated corridor away from roads for an improved experience.

### *Cliff Road crossing*

A grade-separated crossing is particularly important at Cliff Road for user safety and to provide a gateway to Lebanon Hills Regional Park. Cliff road is a busy two-lane county highway with a center turn lane and vehicles moving at high speed, creating a significant barrier. There is a sizeable wetland at the northwest corner of the Dodd Road/Cliff Road intersection, where the crossing is desired, and an underpass may be problematic in that it may draw drainage from the wetland. The feasibility of the underpass should be further explored. An overpass may be desirable to avoid wetland impacts and provide a highly visible landmark and gateway near the Lebanon Hills Visitor Center entrance drive.

### *Lebanon Hills Regional Park*

Upon entering Lebanon Hills Regional Park, the greenway will link to the Schulze Lake Visitor Center in an alignment consistent with the Lebanon Hills Regional Park Master Plan (currently being updated, completion expected in fall 2013). The existing Schulze Lake Trailhead/Lebanon Hills Visitor Center will act as a trailhead and southern terminus of the greenway. Support facilities currently located at the Visitor Center (parking, water, rest rooms, picnicking) will be shared.

### *Natural resources and water quality initiatives*

- ▶ Integrate habitat restoration and stormwater infiltration into the greenway in Inver Grove Heights Northwest Area south of Highway 55.
- ▶ Potential for water quality improvements at the small wetland at Wescott Road/Dodd Road.
- ▶ Natural design signature and water quality improvements as opportunities allow along Dodd Road.
- ▶ Water resource and habitat management in Lebanon Hills Regional Park according to the park's master plan.



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# C. Interpretive plan

## OVERVIEW

In today's world, people's connections to culture, land, nature and community often are detached. We sometimes cannot imagine the prairie before the metropolis, the wheat before the bread, or the world before Columbus. We forget, or never learn, the stories that define the significant places in our lives. Place-based interpretation seeks to "re-story" places, or reveal the connections between social and natural systems distinctive to each site. It is an approach rooted in the belief that people seek to understand the stories of the places they visit.

Dakota County has long been committed to sharing the stories of special places that comprise the county's parks and trails. Through interpretative programs and exhibits, Dakota County strives to create awareness and appreciation of the county's history, culture and environment. As the county expands its greenway system, interpretation for each greenway is a goal for the planning and development process.

Interpretive planning designs educational experiences that support an organization's vision and mission. The planning process considers the place-specific historical, cultural and natural resources to be interpreted and the demographics and interests of the people who use the site in order to develop relevant messages and media in support of an organization's mission. In the case of Dakota County, interpretation ought to support Dakota County Park's mission: to enrich lives by providing high-quality recreation and education opportunities in harmony with natural resource preservation and stewardship.

In the context of the Dakota County greenways, it is important to note that fostering an understanding of the relationships between social and natural systems can lead to environmental stewardship. In other words, helping visitors understand the connections between history, culture and nature is at the core of fostering stewardship of these resources and awareness of the connections between people and nature.

## RESOURCES

In considering what is special and unique about the Mendota-Lebanon Hills Greenway, it is helpful to identify some of the most outstanding resources found along the greenway corridor. These resources create a unique setting, or sense of place, and are places where stories of nature, history and culture intersect in ways that are meaningful to visitors.

Historical and cultural resources include several key corridors that have been and remain important to the region including Dodd Road, Highway 55 and an early railroad that connected Minneapolis to Chicago as well as many facets of the suburban landscape. Natural resources include a number of small lakes and ponds. Some of these cultural, historical and natural resources are located on Dakota County property; however, many are located on adjacent properties. Therefore, continued partnerships with adjacent property owners will be important to developing interpretation along the greenway.

Cultural, historical and natural resources may be vulnerable and potentially compromised with increased traffic and human interaction. Resources such as un-excavated archaeological sites are culturally sensitive and susceptible to looting or vandalism if care is not taken to protect them. Therefore, interpretation of these resources should be sensitive to these potential impacts and Dakota County should work with necessary stakeholders, such as Minnesota Indian Affairs Council for burials, to determine an appropriate approach to both preservation and interpretation.



## KEY MESSAGES

While each individual greenway within Dakota County's system will have a theme that is based on the specific resources associated with the greenway corridor, it is recommended that Dakota County undertake a systemwide interpretive planning effort to identify overarching themes for the greenway system. These overarching themes would represent broader messages that span the system and weave together specific themes for each individual greenway.

In the absence of a systemwide interpretive plan, this master plan suggests one central message, or theme for the greenway corridor. Supporting subthemes are also identified in order to further develop the central theme and provide organization for interpretation.

It is recommended that the subthemes be interwoven throughout the trail to provide both a richly layered and consistent interpretive experience. If a systemwide interpretive plan is developed, the themes presented below should be revisited and revised as necessary.

## INTERPRETIVE THEME

***Cross sections:*** *The Mendota-Lebanon Hills Regional Greenway traverses landscapes that highlight our history and suburban development.*

### Subthemes:

***Crossing important corridors:*** Understanding what shaped our region.

Supporting characteristics within neighboring communities:

- ▶ Many important corridors are crossed by the greenway including Dodd Road, Highway 55, an early railroad from Minneapolis to Chicago, Interstate 494 and Yankee Doodle Road.
- ▶ The greenway provides an opportunity to talk about place names, the history of some of these key corridors, and what these corridors have meant to people.

***A Suburban Landscape:*** The Mendota-Lebanon Hills Regional Greenway is a cross-section of suburban development.

Supporting characteristics within neighboring communities:

- ▶ The greenway passes through several common features within the suburban landscape including:
  - ▶ Residential communities
  - ▶ Commercial hubs
  - ▶ Last remaining agriculture in northern Dakota County
  - ▶ Large employment centers
  - ▶ Parks
  - ▶ Schools



## *Active Living: Counting the Benefits*

- ▶ In addition to these place-based subthemes, it is recommended that interpretation in the Dakota County greenway system engages visitors to think about the active living and the benefits of greenways. Some interpretation could convey what greenways are and how they differ from standard trails. Mile-markers along the trail could also serve as interpretation by linking the distance a visitor has traveled to calories lost. Interpretation could also compare the distance traveled to energy and money saved by cycling or walking rather than driving.

## RECOMMENDATIONS

### Build relationships

Establish a community advisory group to build relationships with the agencies and organizations that own adjacent property, facilitate an inclusive interpretive planning process, engage community members knowledgeable about history and culture and ensure that interpretation along the greenway is thematically and aesthetically cohesive.

### Use interpretive media

- ▶ Interpretive media should not impinge on the natural landscape. As much as possible, Dakota County should adopt the National Park Service's Wayside Exhibit approach (<http://www.nps.gov/hfc/products/waysides/>) to interpretation along the greenways. In this approach, the focus is on experiencing the landscape first-hand; interpretation is an enhancement not the primary focus.
- ▶ Based on this approach, interpretive signs should be minimal, low profile, accessible to all and purposefully placed.
- ▶ Interpretation should be integrated into orientation signs at key locations along the greenway (such as trailheads and neighborhood gateways). This interpretation should serve to orient the greenway user thematically to the greenway and introduce the visitor to the experiences they can expect along the greenway. Interpretation at these locations could also be artfully integrated into trailhead or gateway facilities such as benches or picnic tables, pavement, fencing, or structures (e.g., rest rooms).
- ▶ Interpretive signs along the greenway should be considered a caption to distinct or important landscape features that a greenway user may not understand by looking at the feature on its own. In other words, interpretive signs should only be installed along the greenway if they explain or describe something that is visible along the greenway. These signs should have brief but engaging text. More detailed or lengthy information should be delivered through another form of media.
- ▶ Dakota County should consider developing multimedia interpretation. Audio tours provide an opportunity for unobtrusive interpretation along the greenway for interested users. Self-guided MP3 tours could be developed and made available on the Dakota County Parks website for downloading to iPods or other personal MP3 devices. Initially a greenwaywide audio tour should be developed based on the greenway theme. As staff time and resources allow, additional tours could be developed for the subthemes or for different age groups.
- ▶ Dakota County should work closely with community partners to ensure that interpretation along the greenway enhances but does not overlap interpretative experience in adjacent or collaborating public spaces.





## GREENWAY NAME

As individual Dakota County greenway corridors are master planned, more is discovered about the unique cultural, historic and natural resource attributes for each corridor, which opens new possibilities for greenway naming. Greenway names are important for creating a unique identity for individual corridors, public awareness and recognition and creating a sense of place. In the case of the Mendota-Lebanon Hills greenway, the story of the Dodd Road's historic origins as a trading route is compelling enough to warrant consideration for naming. Potential names that reference the route's historic origins are: Trader's Greenway, Dodd Road Greenway, Captain Dodd Greenway and Wescott Station Greenway. If the greenway name changes in the future, it is worth considering including the segment of the Rosemount Greenway from the Lebanon Hills Visitor Center to downtown Rosemount — which also follows Dodd Road — as part of the Mendota-Lebanon Hills Greenway.



# D. Stewardship plan

The linear nature of the greenway will require natural resource management strategies that are geographically targeted, cooperative and realistic. Restoration and protection efforts should be focused near trailheads, as these locations will provide the greatest opportunity for greenway users to see the results of stewardship and provide a high-quality user experience. Given the linear nature of the greenway, stewardship activities should be in cooperation with adjoining landowners, public and private. Cooperative stewardship activities likely will be easier with other public agencies, but this should not preclude the possibilities of stewardship work on adjoining private lands. All stewardship actions should be evaluated through the lens of sustainability — is the stewardship effort economically and ecologically sustainable over the long term.

## HABITAT INVESTMENT AREAS

Given the length of the greenway corridors, efforts to manage and restore the natural resources and native plant communities would be a daunting task — well beyond the ability of any one agency. In order to provide for a realistic and sustainable restoration and management of the resources, key habitat investment areas were identified for natural resource management. These habitat investment areas were prioritized and targeted to areas associated with high quality ecological resources and greenway use patterns. These areas are identified in Figure 49.

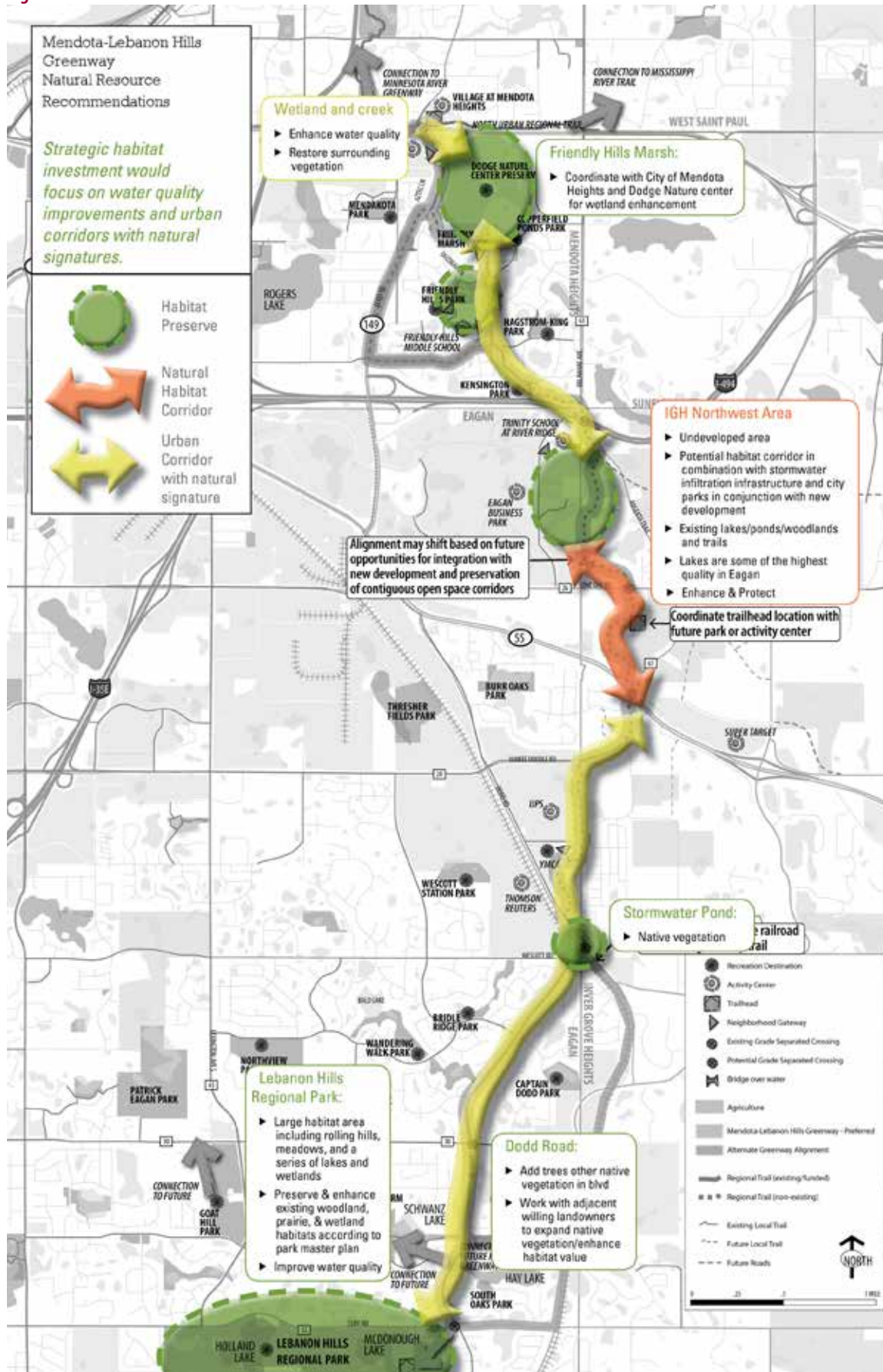
As most of the area along the Mendota-Lebanon Hills Greenway is currently developed at suburban densities, the establishment of a continuous ecologically functioning habitat corridor would be difficult. Therefore, improvements at key areas in this corridor, and capitalizing on opportunities in Inver Grove Heights’ Northwest Area to develop the land while at the same time preserving and enhancing an ecologically function will be the focus.

Table 48. Habitat investment strategies

			
HABITAT PRESERVE	HABITAT CORRIDOR	NATURAL LANDSCAPES	DESIGNED LANDSCAPES
Top priority habitat restoration/management	Second priority habitat management	Lowest landscape investment priority	High landscape investment
<ul style="list-style-type: none"> <li>◆ Adequate patch size/shape to sustain native plant community</li> <li>◆ Contains existing remnant of native plant community</li> <li>◆ Has interpretive potential</li> <li>◆ Has benign surrounding uses</li> <li>◆ Buffers or contains natural waters</li> </ul>	<ul style="list-style-type: none"> <li>◆ Provides connection between habitat preserves</li> <li>◆ Adequate width to sustain native plant ground layer</li> <li>◆ Grades allow for rainwater infiltration</li> <li>◆ Buffers natural waters</li> </ul>	<ul style="list-style-type: none"> <li>◆ Primary task is to control invasive plants</li> <li>◆ Managed as a natural, low-maintenance landscape</li> </ul>	<ul style="list-style-type: none"> <li>◆ Managed urban landscapes</li> <li>◆ Limited habitat value</li> <li>◆ Relatively small area</li> </ul>



Figure 49. Habitat Investment Areas





# STEWARDSHIP RECOMMENDATIONS

General considerations for stewardship activities within this investment hierarchy are organized around ecological quality, landscape position and future uses and are described in Table 48.

## Vegetation management

In native plant communities — prairie, woodlands and wetlands — invasive species removal, buffer protection or establishment and re-establishment of disturbance regimes will be the key activities. Oak savannas may need to be supplemented with tree plantings and all of the grassland systems will likely need supplemental seeding.

## Site-specific actions

### *Mendota Plaza:*

**Existing conditions:** Low ground surrounded by development and roads. Existing stormwater ditch likely fluctuates in storm situations. Vegetation consists of mostly invasive tall grasses and other weeds.

**Recommendations:** Burn existing vegetation. Plant native plugs along waterway. Seed remaining open space areas with aggressive cover crop and native prairie mix.

### *Friendly Marsh:*

**Existing conditions:** Trail follows turf and tree covered area along the west side of Dodge Nature Center land. South of Dodge Nature Center preserve land, marsh areas exist adjacent to residential backyards.

**Recommendations:** Reduce mowing on turf area and seed areas with woodland seeding. Assess need for stormwater management and filtration and add raingardens if feasible. In marsh area, plant areas of native wetland plugs adjacent to future boardwalk for educational purposes.

### *Inver Grove Heights' Northwest Area:*

**Existing conditions:** Predominant agricultural matrix includes future land use plans for medium density residential, office and commercial uses.

**Recommendations:** Incorporate 100- to 300-foot wide greenway corridor where possible with future development. Add water quality best management practices, including creation of wetlands, rain gardens and prairie and woodland restorations.

### *Wetland at Wescott Road and Dodd Road:*

**Existing conditions:** Existing low area is surrounded by roads. Low-quality vegetation.

**Recommendations:** Enhance area by buffering roadways with aggressive native vegetation. Manage any existing invasive species through burning. Replant or reseed with aggressive native vegetation to survive harsh surroundings.



### *Dodd Road:*

**Existing conditions:** Residential road with varying width boulevards on both sides. Existing trail follows east side of road entire length from Wescott Road to Cliff Road. Trail is on both sides of road from Diffley Road to Cliff Road. Boulevards consist mainly of turf grass.

**Recommendations:** Plant hardy, native tree species in boulevards entire length of road. Add areas of prairie plantings and raingardens where feasible.

### *Lebanon Hills Regional Park:*

**Existing conditions:** High-quality landscapes exist throughout park along with areas of buckthorn and other invasive species. Prairie restoration exists at northeast corner where greenway will enter the park. The master plan is currently being updated by Dakota County.

**Recommendations:** Follow existing and future recommendations with the Lebanon Hills Regional Park master plan.

## **SURFACE AND GROUND WATER MANAGEMENT/PROTECTION**

### *Stormwater management options at trailheads*

Trailhead parking lots typically are small; 10- to 20-stall lots within green space. This means that stormwater can be directed to drain off the paved surface onto surrounding ground, where it can infiltrate. The best place to manage stormwater (regardless of where one is within the corridor) is at the point it runs off a hard surface; i.e. near every street, driveway and parking lot.

Water is a valuable resource that should be used to water plants rather than run off into pipes to a natural water body where it causes problems. Directing surface water onto the ground rather than into a pipe aids the following important functions:

- ▶ Filter pollutants such as phosphorus, grease and oil through plants and soil that mitigate their effects
- ▶ Protect downstream water bodies by preventing the influx of large amounts of water — it is best to have water slowly reach a stream or lake underground via subsurface flow
- ▶ Protect natural water bodies by capturing pollutants at their source
- ▶ Cool surface water before reaching trout streams
- ▶ Recharge groundwater and eventually aquifers
- ▶ Water trees and other plants at the source allowing for vigorous growth and shaded parking lots



### *Opportunities for stormwater management*

Many practices are available to manage surface water at trailheads. Some make more sense than others and provide greater return on investment.

Practical surface water management practices include:

- ▶ Creating shallow depressions (raingardens) alongside parking lots and grade the parking lot to tip in that direction.
- ▶ Creating planted depressed parking lot islands to capture surface water.
- ▶ For small parking lots surrounded by greenspace, running the water onto the surrounding grass (ideally prairie).
- ▶ Around parking lots, planting trees to capture and evaporate rainwater on their leaves and create pores in the soil with their roots to allow water to soak in. Trees also shade pavement to keep it cooler in the summer.
- ▶ Planting prairie plants around parking lots — they function much like trees (minus the shading). They are especially useful on clay soils, where they drive roots deep and facilitate surface water infiltration.

### *Lake restoration considerations*

Lake and wetland restoration should be considered along the greenway. Restoration should be designed by multidisciplinary teams that include expertise in engineering, hydrology, aquatic and restoration ecology, geomorphology, soil science and policy/permitting.





# Implementation

4



## OVERVIEW

This master plan is a long-range vision for recreation, transportation, water quality and habitat improvements for the Mendota-Lebanon Hills Greenway. Accomplishing this vision depends on multiagency collaboration. Without continued coordination between the communities it is unlikely the greenway could be realized as envisioned. Working collaboratively will enable Dakota County, cities and other agencies to leverage resources to build, operate and maintain the greenway.

While the 30-foot regional trail corridor will be the jurisdictional and operational responsibility of Dakota County, the larger greenway corridor will be governed in many ways, depending on the situation. Similarly, responsibilities for land acquisition, construction, stewardship, operations and maintenance will depend on the particularities of each segment.

This chapter outlines approaches for greenway implementation, including:

- ▶ Phasing and priorities
- ▶ Land protection and stewardship
- ▶ Operations
- ▶ Funding
- ▶ Capital and operational budgets

## PHASING AND PRIORITIES

The Mendota-Lebanon Hills Greenway will be implemented in phases. Greenway segments have been prioritized into first priority projects, second priority projects and long-term projects (Table 54). It is anticipated that first priority projects will be built in advance of second priority projects, but the master plan remains flexible so that any project can be implemented as partnership or funding opportunities arise.

First priority projects are those that are needed to create a continuous, functional greenway experience. Of foremost importance is securing land or easements for the 30-foot corridor as opportunities arise. After land has been secured, building missing trail segments is the first priority. It is intended that recreation, water quality, nonmotorized transportation and natural resource elements be integrated into the greenway at the time of construction.

Second priority projects will enhance the greenway experience. These include trailhead development and enhancements to existing trails such as landscaping, habitat restoration interpretation, wayfinding, benches and trash receptacles.

Grade-separated crossings will be installed as funding, partnership, or construction opportunities arise.

In cases where gaps in the regional trail exist and alternative trail connections can be made on existing trails, interim routes will be designated until the preferred alignment can be assembled.

## LAND PROTECTION AND STEWARDSHIP

Dakota County's greenway concept incorporates recreation, transportation, ecological and water quality components in a 100- to 300-foot corridor secured through two approaches:

**Land protection** — protecting land essential to make the greenway usable. For the Mendota-Lebanon Hills Greenway, this means securing land needed for the trail corridor and trailheads.

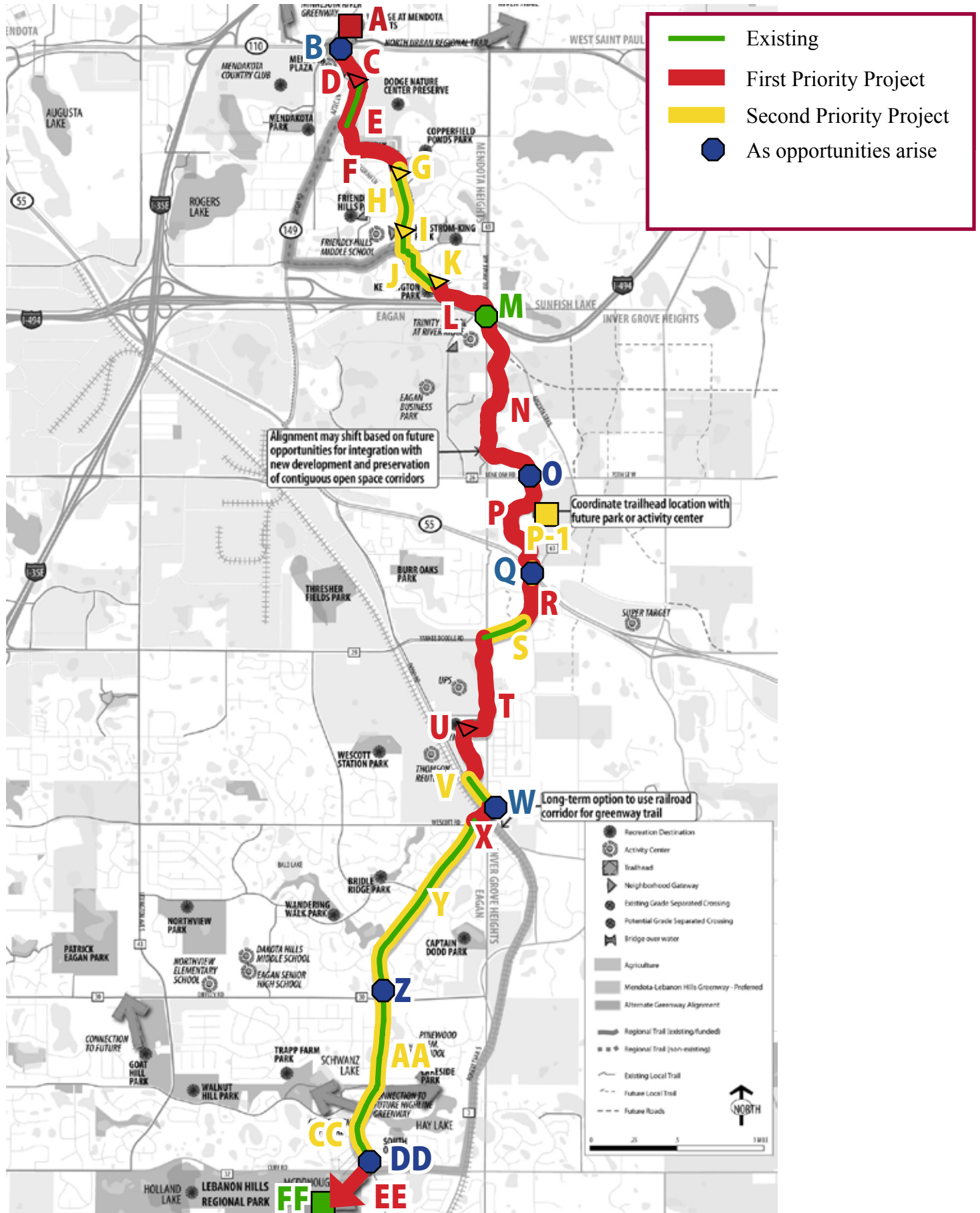
**Land stewardship** — the care of native landscapes and habitat within the greenway.

**Table 54. Mendota-Lebanon Hills Greenway priority projects**

PROJECT		PRIORITY	POTENTIAL TRIGGERS/ PARTNERS
<i>Segment 1: The Village at Mendota Heights to Highway 55</i>			
<b>A</b>	Trailhead at Village at Mendota Heights	1st	
<b>B</b>	Grade separated crossing at Highway 110	as opportunities arise	
<b>C</b>	Greenway (Highway 110 to South Plaza Drive)	1st	Development
<b>D</b>	Gateway at Mendota Plaza	1st	
<b>E</b>	Improvements (South Plaza Drive to Friendly Marsh Park)	1st	
<b>F</b>	Improvements to greenway (west side of Friendly Marsh Park to Huber Drive)	1st	Development
<b>G</b>	Gateway at Copperfield Ponds Park	2nd	
<b>H</b>	Improvements to greenway (Cheyenne Lane to Friendly Hills Middle School)	2nd	
<b>I</b>	Gateway at Friendly Hills Middle School	2nd	
<b>J</b>	Improvements to greenway (Friendly Hills Middle School to Kensington Park)	2nd	
<b>K</b>	Gateway at Kensington Park	2nd	
<b>L</b>	Greenway (Kensington Park to Interstate 494 overpass)	1st	Development
<b>M</b>	Overpass at Interstate 494	Existing	
<b>N</b>	Greenway (Interstate 494 overpass to Lone Oak Road)	1st	Development
<b>O</b>	Grade-separated crossing at Lone Oak Road	as opportunities arise	
<b>P</b>	Greenway (Lone Oak Road to Highway 55)	1st	Development
<b>P-1</b>	Trailhead in Inver Grove Heights' Northwest Area	2nd	in conjunction with future park
<b>Q</b>	Grade-separated crossing at Highway 55	as opportunities arise	in conjunction with interchange reconstruction
<i>Segment 2: Highway 55 to Lebanon Hills Regional Park</i>			
<b>R</b>	Greenway (Highway 55 to Argenta Trail)	1st	Development
<b>S</b>	Improvements (Argenta Trail along Yankee Doodle Road)	2nd	
<b>T</b>	Greenway (Yankee Doodle Road to Highway 149)	1st	Development
<b>U</b>	Gateway at Eagan YMCA	1st	
<b>V</b>	Improvements to greenway (Highway 149 to Wescott Rd)	2nd	
<b>W</b>	Grade-separated crossing at Highway 149	as opportunities arise	
<b>X</b>	Greenway (Highway 149 to Dodd Road)	1st	Development
<b>Y</b>	Improvements to greenway (Wescott Road to Diffley Road)	2nd	
<b>Z</b>	Grade-separated crossing at Diffley Road	as opportunities arise	
<b>AA</b>	Improvements (Diffley Road to Wilderness Run Road)	2nd	
<b>BB</b>	NOT USED		
<b>CC</b>	Improvements (Wilderness Run Road to Cliff Road)	2nd	
<b>DD</b>	Grade-separated crossing at Cliff Road	as opportunities arise	
<b>EE</b>	Greenway (Cliff Road to Lebanon Hills Regional Park Trailhead)	1st	to be addressed in Lebanon Hills Regional Park Master Plan
<b>FF</b>	Trailhead at Lebanon Hills Regional Park	Existing	



Figure 55. Mendota-Lebanon Hills Greenway Priority Projects





## Land protection

It is essential that Dakota County secure land for the minimum 30-foot trail alignment and trailheads. Segments of the Mendota-Lebanon Hills Greenway corridor where protection is needed are shown in Figure 57. Three categories of land are shown: land owned by Dakota County, land owned by other public entities and privately held land. For land owned by other public agencies, Dakota County will need to permanently protect the trail corridor and trailheads for regional trail use with easements or joint powers agreements. For land that is privately owned, the county will need to acquire the trail corridor for public use. Table 57 summarizes the approximate number of acres of land needed for protection. Land protection strategies include: park dedication, direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale, life estate and negotiations with cities and developers.

## Land stewardship

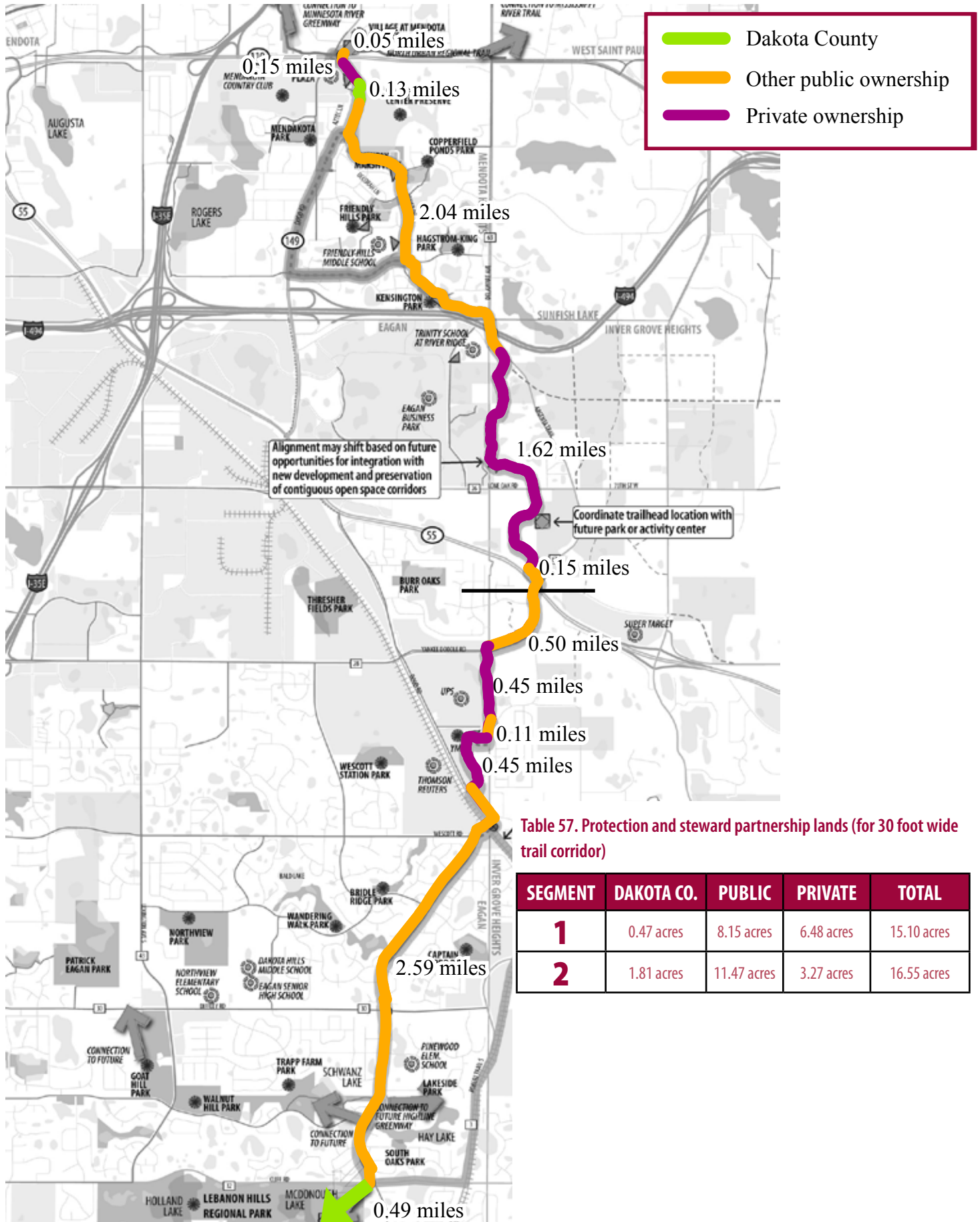
The natural resource objective for the greenway system is to maintain or create a healthy context within which nature can thrive. The first stewardship priority is restoring continuous habitat within the greenway corridors. The second is habitat restoration and protection of the most sensitive lands, including uplands that link greenways to the broader landscapes. Generally, Dakota County will not be the lead agency in stewardship activities outside the 30-foot trail corridor and trailheads, but will work as a partner with local jurisdictions, agencies and private landowners and provide funding and expertise.

# MANAGEMENT AND OPERATIONS

Like other aspects of the greenway, management and operations will be a collaboration between the county, cities and other partners. Responsibilities will vary by greenway segment. While this master plan defines general responsibilities for each greenway segment, formal joint powers agreements between Dakota County and collaborating agencies will be needed to outline specific agency responsibilities. These agreements will outline who has control of the trail right of way as well as who will operate and maintain the trail and how they will do it.



Figure 57. Property ownership



## Management

The Dakota County Parks Department will be the lead agency for coordinating greenway and management operations. The Dakota County Board of Commissioners establishes policies and goals for the park system and through an annual budget provides capital and operating funds for the department. The Planning Commission, appointed by the Board of Commissioners, advises the county on park and trail issues.

## General operations

Dakota County Parks Department will be responsible for the operation of the 30-foot regional trail corridor. Where there are opportunities for operational partnerships, Dakota County will enter a joint powers agreement with partner agencies. The Parks Department employs a staff of permanent employees and seasonal employees adequate to maintain the system. Volunteers assist with outdoor education programs, patrol, park clean-ups and special events. Contractual agreements also are in place with outside agencies for some maintenance and natural resource work. Dakota County recognizes that as facilities expand, it will need to increase staffing. Based on operations and maintenance staffing for current Dakota County regional trails, it is anticipated that when the regional trail within the Mendota-Lebanon Hills Greenway is complete, an additional 0.5 full time employee park keeper (1,000 hours of labor) and 0.5 seasonal FTE (1,000 hours of labor) will be needed.

## Operating hours

Where the regional greenway is in city parks, hours will be open according to jurisdictional ordinance or policy. The greenway outside city parks will be open 24 hours for transportation purposes.

## Maintenance

Maintenance of facilities and lands is essential to protect public investment, enhance natural resource quality and achieve the county's goals of providing recreational users clean, safe, enjoyable year-round experiences. The Dakota County Parks Department has a clearly defined maintenance program and reporting hierarchy led by the manager of park development and maintenance, who reports to the parks director.

Regular maintenance activities for the greenway will include:

- ▶ Sign maintenance
- ▶ Trash collection
- ▶ Sweeping and blowing
- ▶ Trail repair
- ▶ Bridge repair
- ▶ Trailhead facility repair and maintenance
- ▶ Mowing
- ▶ Tree trimming
- ▶ Winter trail clearing





## Pavement Management

Pavement deteriorates as it ages. Regular pavement maintenance can prolong the life-span of the greenway trail in a cost-effective manner. See Table 59 for an outline of recommended activities.

## Ordinances

Public use and enjoyment of the county park system is regulated by Ordinance 107, Park Ordinance, which was last revised June 3, 1997. The ordinance incorporates pertinent Minnesota statutes and addresses the following issues:

- ▶ Regulation of public use
- ▶ Regulation of general conduct
- ▶ Regulations pertaining to general parkland operation
- ▶ Protection of property, structures and natural resources
- ▶ Regulation of recreational activity
- ▶ Regulation of motorized vehicles, traffic and parking

**Table 59. Pavement Management Activities**

YEAR	MAINTENANCE ACTIVITY
0	Original construction of the paved trail
3	Seal coating
7	Routine maintenance – crack filling, minor patching, minor curb repairs
11	Routine maintenance – crack filling, minor patching, minor curb repairs
13	Seal coating
18	Routine maintenance – crack filling, minor patching, minor curb repairs
21	Routine maintenance – crack filling, minor patching, minor curb repairs
25	Mill and overlay

## Enforcement and security

Visitors are informed of park and trail rules and regulations through strategically located kiosks and signs that address specific information about hours, trails, permitted and prohibited activities, fees and directions. Dakota County Parks, Lakes and Trails officers will patrol the park in motor vehicles, on bicycles and on foot. Officers will also educate visitors and enforce ordinances. Local law enforcement and public safety agencies will be responsible for emergency and criminal complaints within the greenway.

## Public awareness

Dakota County’s Parks Department will continue working with Dakota County’s Communications Department to promote awareness and use of the county’s parks and greenway system. Many tools are available to promote awareness of Dakota County parks and greenways including, but not limited to, websites, direct mail, press releases, brochures, on-site promotion, monument signage along roads, wayfinding within greenways and parks and paid advertising. Dakota County also collaborates with cities, businesses, the regional park system and others to promote its facilities, programs and services and educate the public about its resources.

## Conflicts

The surrounding land uses and the greenway are generally compatible and no conflicts outside of norm affect the viability of master plan recommendations. Minor conflicts will occasionally arise from private encroachment or neighboring residents’ sensitivity to greenway, recreation or maintenance uses. Dakota County will work with individual landowners to resolve these issues case by case.



## Public services

No significant new public services will be needed to accommodate the greenway. Proposed trailheads and neighborhood gateways are served by the existing road network. If utilities are not accessible at gateways and trailheads, options such as solar powered lighting, self-composting toilets or wells will be considered. Surface water will be treated on site. Accommodations for later installation of continuous trail lighting will be considered at initial trail construction.

## FUNDING

Funding for initial capital cost and ongoing operations and maintenance costs is essential for a successful greenway. Funding will be a collaboration among the county, cities and other agencies, with an emphasis on seeking outside funding. Cost-share roles will be determined by the strengths of each agency and circumstances of each project. In-kind contributions of land, easement, design, engineering, construction and maintenance and operations are encouraged and will be outlined in joint powers agreements among agencies.

It is anticipated that most future capital projects will be well positioned to secure regional, state and federal funds for recreation, transportation, water and habitat and that these sources will account for a majority of capital construction costs. In many cases, but not all, Dakota County, as the regional agency, will be in the best position to pursue outside funding. Examples of outside funding sources include:

- ▶ Federal transportation grants (MAP 21 / TAP)
- ▶ Metropolitan Council
- ▶ National Park Service Rivers, Trails and Conservation Assistance Program
- ▶ Minnesota Department of Transportation
- ▶ Minnesota Department of Natural Resources
- ▶ Minnesota Pollution Control Agency
- ▶ The Environment and Natural Resources Trust Fund
- ▶ Clean Water, Land and Legacy Amendment funds
- ▶ Watershed management organizations
- ▶ Foundations and nonprofits
- ▶ Statewide Health Improvement Program

Funding for operating and maintaining the 30-foot regional trail easement and trailheads primarily will be Dakota County's responsibility. Annual operating costs are funded through the county's general fund and from regional park allocations from the Metropolitan Council. In situations where there are efficiencies in local jurisdictions performing maintenance and operations, Dakota County will enter a joint powers agreement outlining responsibilities and cost sharing.



## CAPITAL AND OPERATIONAL BUDGETS

Estimated costs in 2013 dollars for land protection, development costs and annual operations and maintenance are included in Tables 62 and 63.

Land protection costs are included by segment in Tables 62 and 63. Because land protection strategies might include direct purchase with resale of land not required for the trail, permanent easements, land donation, bargain sale, life estate and negotiations with cities and developers, is very difficult to accurately project total acquisition costs. Estimated costs assume land protection of a 30-foot trail corridor on land that is currently privately owned with an average cost of \$90 per lineal foot.

Tables 62 and 63 includes budgets for capital investments, the priority of the investment and possible project partners. The table identifies the full anticipated construction costs of the plan elements. It is not anticipated that Dakota County will be responsible for the full cost of improvements outlined; funding will be a collaboration between the County and partner agencies. Habitat restoration within the greenway corridor is also included in these tables under the item landscaping/habitat management. It is assumed that along with greenway construction an average of 200 trees and 12.5 acres of prairie will be needed per mile along with basic water management. Natural Resource project opportunities beyond the greenway corridor that the County may choose to partner with other public or private entities are identified in Table 67a. Most capital projects also will be well positioned to secure regional, state and federal funds for recreation, transportation, water and habitat.

While the table identifies priorities for capital projects, development will occur as funding becomes available and at the discretion of the Dakota County Board of Commissioners.

Table 67 identifies annual maintenance and operations costs for the 30-foot trail corridor including gateways, trailheads and grade separated crossings for each greenway segment. It includes yearly amortization of costs for major capital maintenance or full facility replacement approximately every 25 years the 30-foot trail corridor and trailheads and every 50 years for grade-separated crossings. The estimates reflect a higher level of maintenance and expanded maintenance than is required today. Maintenance responsibilities will include landscaping, habitat management, sign replacement, winter plowing and other activities.

Table 67a identifies natural resource project opportunities beyond the greenway corridor. Dakota County supports the restoration of habitat adjacent to the greenway and may choose to collaborate with individual landowners and other public agencies where it is to the mutual benefit of both agencies and as funding for restoration and ongoing habitat management allows.





Table 62. Summary of probable costs

ITEM DESCRIPTION	FIRST PRIORITY	SECOND PRIORITY	GRADE-SEPARATED CROSSINGS	TOTAL	PERCENT TOTAL
<b>SEGMENT 1: Mendota Village to TH 55</b>					
Land Protection	\$846,000	\$0	\$0	\$846,000	11.06%
Greenway Development	\$1,909,700	\$25,500	\$0	\$1,935,200	25.30%
Landscaping/Habitat Management	\$162,000	\$42,500	\$0	\$204,500	2.67%
Grade Separated Crossings			\$1,849,844	\$1,849,844	24.19%
Trailheads and Gateways	\$535,000	\$605,000	\$0	\$1,140,000	14.90%
Contingency (10%)	\$345,270	\$67,300	\$184,984	\$597,554	7.81%
<b>Segment 1 Subtotal</b>	<b>\$3,797,970</b>	<b>\$740,300</b>	<b>\$2,034,828</b>	<b>\$6,573,098</b>	<b>85.94%</b>
Anticipated Engineering Fees (18%)	\$621,486	\$121,140	\$332,972	\$1,075,598	14.06%
<b>Segment 1 Total</b>	<b>\$4,419,456</b>	<b>\$861,440</b>	<b>\$2,367,800</b>	<b>\$7,648,696</b>	<b>100.00%</b>
<b>SEGMENT 2: TH 55 to Lebanon Hills Regional Park at Cliff Rd &amp; Dodd Rd</b>					
Land Protection	\$513,000	\$0	\$0	\$513,000	10.10%
Greenway Development	\$503,100	\$72,600	\$0	\$575,700	11.33%
Landscaping/Habitat Management	\$98,500	\$121,000	\$0	\$219,500	4.32%
Grade Separated Crossings			\$2,625,000	\$2,625,000	51.68%
Trailheads and Gateways	\$35,000	\$0	\$0	\$35,000	0.69%
Contingency (10%)	\$114,960	\$19,360	\$262,500	\$396,820	7.81%
<b>Segment 2 Subtotal</b>	<b>\$1,264,560</b>	<b>\$212,960</b>	<b>\$2,887,500</b>	<b>\$4,365,020</b>	<b>85.94%</b>
Anticipated Engineering Fees (18%)	\$206,928	\$34,848	\$472,500	\$714,276	14.06%
<b>Segment 2 Total</b>	<b>\$1,471,488</b>	<b>\$247,808</b>	<b>\$3,360,000</b>	<b>\$5,079,296</b>	<b>100.00%</b>
<b>GREENWAY TOTAL</b>	<b>\$5,890,944</b>	<b>\$1,109,248</b>	<b>\$5,727,800</b>	<b>\$12,727,992</b>	



**Table 63. Mendota-Lebanon Hills Greenway capital development estimates**

ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL		GRADE SEPARATED CROSSINGS	NOTES
					1ST PRIORITY	2ND PRIORITY		
<b>SEGMENT 1: Mendota Village to TH 55</b>								
<b>A</b>	<b>Trailhead at Village at Mendota Heights</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light	Lump Sum			\$	500,000		
	Design & Engineering at 18%				\$	90,000		
	Contingency at 10%				\$	50,000		
	<b>A Subtotal</b>				<b>\$</b>	<b>640,000</b>		
<b>B</b>	<b>Grade separated crossing at TH 110</b>							
	Grade separated crossing	Lump sum					\$	1,306,406
	Design & Engineering at 18%						\$	235,153
	Contingency at 10%						\$	130,641
	<b>B Subtotal</b>						<b>\$</b>	<b>1,672,200</b>
<b>C</b>	<b>Greenway (TH 110 to S Plaza Dr)</b>							
	NEW TRAIL	1,200	Ln Ft	\$ 60	\$	72,000		
	Signage / Wayfinding	1,200	Ln Ft	\$ 2	\$	2,400		
	Landscaping / Habitat Management	1,200	Ln Ft	\$ 10	\$	12,000		
	Site Furnishings	1,200		\$ 4	\$	4,800		
	Land Protection	800	Ln Ft	\$ 90	\$	72,000		
	Design & Engineering at 18%				\$	29,376		
	Contingency at 10%				\$	16,320		
	<b>C Subtotal</b>				<b>\$</b>	<b>208,896</b>		
<b>D</b>	<b>Gateway at Mendota Plaza</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light	Lump Sum			\$	35,000		
	Design & Engineering at 18%				\$	6,300		
	Contingency at 10%				\$	3,500		
	<b>D Subtotal</b>				<b>\$</b>	<b>44,800</b>		
<b>E</b>	<b>Greenway Enhancement (S Plaza Dr to Friendly Marsh Park)</b>							
	Signage / Wayfinding	1,350	Ln Ft	\$ 2	\$	2,700		
	Landscaping / Habitat Management	1,350	Ln Ft	\$ 10	\$	13,500		
	Site Furnishings	1,350		\$ 4	\$	5,400		
	Design & Engineering at 18%				\$	3,888		
	Contingency at 10%				\$	2,160		
	<b>E Subtotal</b>				<b>\$</b>	<b>27,648</b>		
<b>F</b>	<b>Improvements to greenway (West side of Friendly Marsh Park to Huber Dr)</b>							
	NEW TRAIL	550	Ln Ft	\$ 60	\$	33,000		
	Boardwalk	1,900	Ln Ft	\$ 500	\$	950,000		
	Signage / Wayfinding	2,450	Ln Ft	\$ 2	\$	4,900		
	Landscaping / Habitat Management	2,450	Ln Ft	\$ 10	\$	24,500		
	Site Furnishings	2,450		\$ 4	\$	9,800		
	Design & Engineering at 18%				\$	183,996		
	Contingency at 10%				\$	102,220		
	<b>F Subtotal</b>				<b>\$</b>	<b>1,308,416</b>		
<b>G</b>	<b>Gateway at Copperfield Ponds Park</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light	Lump Sum				\$	35,000	
	Design & Engineering at 18%					\$	6,300	
	Contingency at 10%					\$	3,500	
	<b>G Subtotal</b>					<b>\$</b>	<b>44,800</b>	
<b>H</b>	<b>Greenway Enhancement (Cheyenne Ln to Friendly Hills M.S./Mendota Hts Rd)</b>							
	Signage / Wayfinding	2,500	Ln Ft	\$ 2	\$	5,000		
	Landscaping / Habitat Management	2,500	Ln Ft	\$ 10	\$	25,000		
	Site Furnishings	2,500		\$ 4	\$	10,000		
	Design & Engineering at 18%				\$	7,200		
	Contingency at 10%				\$	4,000		
	<b>H Subtotal</b>					<b>\$</b>	<b>51,200</b>	
<b>I</b>	<b>Gateway at Friendly Hills M.S.</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light	Lump Sum				\$	35,000	
	Design & Engineering at 18%					\$	6,300	
	Contingency at 10%					\$	3,500	
	<b>I Subtotal</b>					<b>\$</b>	<b>44,800</b>	



ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL			NOTES
					1ST PRIORITY	2ND PRIORITY	GRADE SEPARATED CROSSINGS	
<b>J</b>	<b>Greenway Enhancement (Friendly Hills M.S. to Kensington Park)</b>							
	Signage / Wayfinding	1,750	Ln Ft	\$ 2		\$ 3,500		
	Landscaping / Habitat Management	1,750	Ln Ft	\$ 10		\$ 17,500		
	Site Furnishings	1,750		\$ 4		\$ 7,000		
	Design & Engineering at 18%					\$ 5,040		
	Contingency at 10%					\$ 2,800		
	<b>J Subtotal</b>					<b>\$ 35,840</b>		
<b>K</b>	<b>Gateway at Kensington Park</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light		Lump Sum			\$ 35,000		
	Design & Engineering at 18%					\$ 6,300		
	Contingency at 10%					\$ 3,500		
	<b>K Subtotal</b>					<b>\$ 44,800</b>		
<b>L</b>	<b>Greenway (Kensington Park to Interstate 494 overpass)</b>							
	NEW TRAIL	2,000	Ln Ft	\$ 60	\$ 120,000			
	Signage / Wayfinding	2,000	Ln Ft	\$ 2	\$ 4,000			
	Landscaping / Habitat Management	2,000	Ln Ft	\$ 10	\$ 20,000			
	Site Furnishings	2,000		\$ 4	\$ 8,000			
	Design & Engineering at 18%				\$ 27,360			
	Contingency at 10%				\$ 15,200			
	<b>L Subtotal</b>				<b>\$ 194,560</b>			
<b>M</b>	<b>Overpass at Interstate 494</b>							
	Grade separated crossing (Sidewalk, curb, and J-Barrier)	550	Ln Ft	\$ 150		\$ 82,500		Existing Bridge and Trail
	Design & Engineering at 18%					\$ 14,850		
	Contingency at 10%					\$ 8,250		
	<b>M Subtotal</b>					<b>\$ 105,600</b>		
<b>N</b>	<b>Greenway (Interstate 494 overpass to Lone Oak Road)</b>							
	NEW TRAIL	5,100	Ln Ft	\$ 60	\$ 306,000			
	Signage / Wayfinding	5,550	Ln Ft	\$ 2	\$ 11,100			
	Landscaping / Habitat Management	5,550	Ln Ft	\$ 10	\$ 55,500			
	Site Furnishings	5,550		\$ 4	\$ 22,200			
	Land Protection	5,350	Ln Ft	\$ 90	\$ 481,500			
	Boardwalk	450	Ln Ft	\$ 250	\$ 112,500			
	Design & Engineering at 18%				\$ 177,984			
	Contingency at 10%				\$ 98,880			
	<b>N Subtotal</b>				<b>\$ 1,265,664</b>			
<b>O</b>	<b>Grade separated crossing at Lone Oak Road</b>							
	Grade separated crossing		Lump sum			\$ 460,938		
	Design & Engineering at 18%					\$ 82,969		
	Contingency at 10%					\$ 46,094		
	<b>O Subtotal</b>					<b>\$ 590,000</b>		
<b>P</b>	<b>Greenway (Lone Oak Rd to TH 55)</b>							
	NEW TRAIL	3,650	Ln Ft	\$ 60	\$ 219,000			
	Signage / Wayfinding	3,650	Ln Ft	\$ 2	\$ 7,300			
	Landscaping / Habitat Management	3,650	Ln Ft	\$ 10	\$ 36,500			
	Site Furnishings	3,650		\$ 4	\$ 14,600			
	Land Protection	3,250	Ln Ft	\$ 90	\$ 292,500			
	Design & Engineering at 18%				\$ 102,582			
	Contingency at 10%				\$ 56,990			
	<b>P Subtotal</b>				<b>\$ 729,472</b>			
<b>P-1</b>	<b>Trailhead - Inver Grove Heights NW Area</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light		Lump Sum			\$ 500,000		
	Design & Engineering at 18%					\$ 90,000		
	Contingency at 10%					\$ 50,000		
	<b>A Subtotal</b>					<b>\$ 640,000</b>		
<b>Q</b>	<b>Grade separated crossing at TH 55</b>							
	Grade separated crossing		Lump sum			\$ -		Constructed as part of new planned interchange
	Design & Engineering at 18%					\$ -		
	Contingency at 10%					\$ -		
	<b>Q Subtotal</b>					<b>\$ -</b>		
	First Priority Subtotal				\$ 4,419,456			
	Second Priority Subtotal					\$ 861,440		
	Grade Separated Crossings Subtotal					\$ 2,367,800		
	<b>Segment 1 Subtotal</b>				<b>\$</b>	<b>7,648,696</b>		





ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL			NOTES
					1ST PRIORITY	2ND PRIORITY	GRADE SEPARATED CROSSINGS	
<b>SEGMENT 2: TH 55 to Lebanon Hills Regional Park at Cliff Rd &amp; Dodd Rd</b>								
<b>R</b>	<b>Greenway (TH 55 to Argenta Trail)</b>							
	NEW TRAIL	1,400	Ln Ft	\$ 60	\$ 84,000			
	Signage / Wayfinding	1,400	Ln Ft	\$ 2	\$ 2,800			
	Landscaping / Habitat Management	1,400	Ln Ft	\$ 10	\$ 14,000			
	Site Furnishings	1,400		\$ 4	\$ 5,600			
	Land Protection	500	Ln Ft	\$ 90	\$ 45,000			
	Design & Engineering at 18%				\$ 27,252			
	Contingency at 10%				\$ 15,140			
	<b>R Subtotal</b>				<b>\$ 193,792</b>			
<b>S</b>	<b>Greenway Enhancement (Argenta Trail along Yankee Doodle Rd)</b>							
	Signage / Wayfinding	1,350	Ln Ft	\$ 2		\$ 2,700		
	Landscaping / Habitat Management	1,350	Ln Ft	\$ 10		\$ 13,500		
	Site Furnishings	1,350		\$ 4		\$ 5,400		
	Land Protection	500	Ln Ft	\$ 90	\$ 45,000			
	Design & Engineering at 18%				\$ 8,100	\$ 3,888		
	Contingency at 10%				\$ 4,500	\$ 2,160		
	<b>S Subtotal</b>				<b>\$ 57,600</b>	<b>\$ 27,648</b>		
<b>T</b>	<b>Greenway (Yankee Doodle Rd to TH 149)</b>							
	NEW TRAIL	5,300	Ln Ft	\$ 60	\$ 318,000			
	Signage / Wayfinding	5,300	Ln Ft	\$ 2	\$ 10,600			
	Landscaping / Habitat Management	5,300	Ln Ft	\$ 10	\$ 53,000			
	Site Furnishings	5,300		\$ 4	\$ 21,200			
	Land Protection	4,700	Ln Ft	\$ 90	\$ 423,000			
	Design & Engineering at 18%				\$ 148,644			
	Contingency at 10%				\$ 82,580			
	<b>T Subtotal</b>				<b>\$ 1,057,024</b>			
<b>U</b>	<b>Gateway at Eagan YMCA</b>							
	Assumes 2 benches, 1 bikerack, 1 trailhead/gateway sign with interpretation, 2 waste receptacles, 1 water fountain and 1 pedestrian light		Lump Sum		\$ 35,000			
	Design & Engineering at 18%				\$ 6,300			
	Contingency at 10%				\$ 3,500			
	<b>U Subtotal</b>				<b>\$ 44,800</b>			
<b>V</b>	<b>Greenway Enhancement (Along TH 149)</b>							
	Signage / Wayfinding	1,100	Ln Ft	\$ 2		\$ 2,200		
	Landscaping / Habitat Management	1,100	Ln Ft	\$ 10		\$ 11,000		
	Site Furnishings	1,100		\$ 4		\$ 4,400		
	Design & Engineering at 18%					\$ 3,168		
	Contingency at 10%					\$ 1,760		
	<b>V Subtotal</b>					<b>\$ 22,528</b>		
<b>W</b>	<b>Grade separated crossing at TH 149</b>							
	Grade separated crossing		Lump sum			\$ 640,625		
	Design & Engineering at 18%					\$ 115,313		
	Contingency at 10%					\$ 64,063		
	<b>W Subtotal</b>					<b>\$ 820,000</b>		
<b>X</b>	<b>Greenway (TH 149 to Dodd Rd)</b>							
	NEW TRAIL	500	Ln Ft	\$ 60	\$ 30,000			
	Signage / Wayfinding	500	Ln Ft	\$ 2	\$ 1,000			
	Landscaping / Habitat Management	500	Ln Ft	\$ 10	\$ 5,000			
	Site Furnishings	500		\$ 4	\$ 2,000			
	Design & Engineering at 18%				\$ 6,840			
	Contingency at 10%				\$ 3,800			
	<b>X Subtotal</b>				<b>\$ 48,640</b>			
<b>Y</b>	<b>Greenway Enhancement (Wescott Rd to Diffley Rd)</b>							
	Signage / Wayfinding	6,200	Ln Ft	\$ 2		\$ 12,400		
	Landscaping / Habitat Management	6,200	Ln Ft	\$ 10		\$ 62,000		
	Site Furnishings	6,200		\$ 4		\$ 24,800		
	Design & Engineering at 18%					\$ 17,856		
	Contingency at 10%					\$ 9,920		
	<b>Y Subtotal</b>					<b>\$ 126,976</b>		



ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL		GRADE SEPARATED CROSSINGS	NOTES
					1ST PRIORITY	2ND PRIORITY		
<b>Z</b>	<b>Grade separated crossing at Diffley Rd</b>							
	Grade separated crossing		Lump sum				\$ 640,625	
	Design & Engineering at 18%						\$ 115,313	
	Contingency at 10%						\$ 64,063	
	<b>Z Subtotal</b>						<b>\$ 820,000</b>	
<b>AA</b>	<b>Greenway Enhancement (Diffley Rd to Wilderness Run Rd)</b>							
	Signage / Wayfinding	3,450	Ln Ft	\$ 2		\$ 6,900		
	Landscaping / Habitat Management	3,450	Ln Ft	\$ 10		\$ 34,500		
	Site Furnishings	3,450		\$ 4		\$ 13,800		
	Design & Engineering at 18%					\$ 9,936		
	Contingency at 10%					\$ 5,520		
	<b>AA Subtotal</b>					<b>\$ 70,656</b>		
<b>BB</b>	<b>Grade separated crossing at Wilderness Run Rd</b>							
	Grade separated crossing		Lump sum				\$ 531,250	
	Design & Engineering at 18%						\$ 95,625	
	Contingency at 10%						\$ 53,125	
	<b>BB Subtotal</b>						<b>\$ 680,000</b>	
<b>CC</b>	<b>Not Used</b>							
<b>DD</b>	<b>Grade separated crossing at Cliff Rd</b>							
	Grade separated crossing		Lump sum				\$ 812,500	
	Design & Engineering at 18%						\$ 146,250	
	Contingency at 10%						\$ 81,250	
	<b>DD Subtotal</b>						<b>\$ 1,040,000</b>	
<b>EE</b>	<b>Greenway (Cliff Rd to Lebanon Hills Regional Park Trailhead)</b>							
	NEW TRAIL	200	Ln Ft	\$ 60	\$ 12,000			
	Signage / Wayfinding	2,650	Ln Ft	\$ 2	\$ 5,300			
	Landscaping / Habitat Management	2,650	Ln Ft	\$ 10	\$ 26,500			
	Site Furnishings	2,650		\$ 4	\$ 10,600			
	Design & Engineering at 18%				\$ 9,792.0			
	Contingency at 10%				\$ 5,440.00			
	<b>EE Subtotal</b>				<b>\$ 69,632</b>			
<b>FF</b>	<b>Trailhead at Lebanon Hills Regional Park</b>							
	Assumes benches, bike rack, 25-stall parking, picnic tables, picnic shelter and restrooms, signage, waste receptacles, water fountain and landscaping		Lump Sum				\$ -	Existing
	<b>FF Subtotal</b>						<b>\$ -</b>	
	<b>First Priority Subtotal</b>				\$ 1,471,488			
	<b>Second Priority Subtotal</b>					\$ 247,808		
	<b>Grade Separated Crossings Subtotal</b>					\$ 3,360,000		
	<b>Segment 2 Subtotal</b>					<b>\$ 5,079,296</b>		
	<b>First Priority Subtotal</b>				\$ 5,890,944			
	<b>Second Priority Subtotal</b>					\$ 1,109,248		
	<b>Grade Separated Crossing Subtotal</b>					\$ 5,727,800		
	<b>Mendota-Lebanon Hills Greenway Total</b>					<b>\$ 12,727,992</b>		



Table 67. Mendota-Lebanon Hills Greenway operations and maintenance cost estimates

ITEM	DESCRIPTION	QTY	UNIT	Annual Operations and Maintenance		Annual Cost for Capital Maintenance/Facility Replacement <small>replacement every 25 years for trail and trailheads, every 50 years for grade separated crossings</small>		TOTAL
				UNIT COST	SUBTOTAL	UNIT COST	SUBTOTAL	
<b>SEGMENT 1: Mendota Village to TH 55</b>								
	Trailhead at Village at Mendota Heights	1.00	LS	\$ 15,000	\$ 15,000	\$ 20,000	\$ 20,000	\$ 35,000
	Trail Corridor and Gateways	4.15	Miles	\$ 7,500	\$ 31,125	\$ 15,000	\$ 62,250	\$ 93,375
	Trailhead - Inver Grove Heights NW Area	1.00	LS	\$ 15,000	\$ 15,000	\$ 20,000	\$ 20,000	\$ 35,000
	Grade Separated Crossings - Underpass	4.00	EA	\$ 3,000	\$ 12,000	\$ 10,000	\$ 40,000	\$ 52,000
	<b>1 Subtotal</b>				<b>\$ 58,125</b>		<b>\$ 122,250</b>	<b>\$ 180,375</b>
<b>SEGMENT 2: TH 55 to Lebanon Hills Regional Park at Cliff Rd &amp; Dodd Rd</b>								
	Trail Corridor and Gateways	4.10	Miles	\$ 7,500	\$ 30,750	\$ 15,000	\$ 61,500	\$ 92,250
	Grade Separated Crossings - Underpass	3.00	EA	\$ 3,000	\$ 9,000	\$ 5,000	\$ 15,000	\$ 24,000
	Trailhead at Lebanon Hills Regional Park (Included in Regional Park O&M budget)	1.00	LS	\$ -	\$ -	\$ -	\$ -	\$ -
	<b>2 Subtotal</b>				<b>\$ 39,750</b>		<b>\$ 76,500</b>	<b>\$ 92,250</b>
	<b>GREENWAY TOTAL</b>				<b>\$ 97,875</b>		<b>\$ 198,750</b>	<b>\$ 272,625</b>

Table 67 a. Mendota-Lebanon Hills Greenway natural resources collaborative project opportunities

ITEM	DESCRIPTION	PARTNER OPPORTUNITIES
<b>SEGMENT 1: Village at Mendota Heights to Hwy 55</b>		
<b>Mendota Plaza</b>		
	Burn existing vegetation, vegetate with native prairie/stream edge plants	City of Mendota Heights, Dakota County Soil and Water Conservation District
	Restore prairie and stream edge plants	
<b>Friendly Marsh</b>		
	Reduce mowed areas by adding prairie / savanna restoration areas	City of Mendota Heights, Dakota County Soil and Water Conservation District
	Rain Gardens	
	Marsh / wetland restoration	
<b>IGH Northwest Area</b>		
	Incorporate 100-300 feet wide greenway corridor into development	City of Inver Grove Heights, Developer
	Rain Gardens where feasible	
	<b>Subtotal</b>	
<b>SEGMENT 2: Hwy 55 to Lebanon Hills Regional Park</b>		
<b>Wetland at Wescott Road/Dodd Road</b>		
	Buffer roadways with aggressive native vegetation	City of Eagan, Dakota County Soil and Water Conservation District
	Revegetate wetland with native species	
<b>Dodd Road</b>		
	Plant hardy, native tree species in boulevards on both sides of road (assumes one tree every 20 feet over 11,600 feet of roadway)	City of Eagan, Dakota County Soil and Water Conservation District
<b>Lebanon Hills Regional Park</b>		
	Follow existing and future recommendations in the Lebanon Hills Regional	





**MENDOTA-LEBANON HILLS**

**GREENWAY MASTER PLAN**

**2013**



# Appendix A



## PUBLIC AND STAKEHOLDER OUTREACH SUMMARY

Public and stakeholder input was gathered in December 2012 and January 2013 during the alternative exploration phase of the project and again in the Spring of 2013 to get feedback on the draft plan. Input involved: presentations to commissions and city councils in each community the greenway travels through, community open houses and individual meetings with key stakeholders. A summary of public comments and stakeholder meetings follows.

### Open house No. 1

Public input was gathered at two open houses were held for the Mendota Lebanon Hills Greenway. The first was at Lebanon Hills Visitor Center (held jointly with the Lebanon Hills Regional Park Master Plan open house), on January 15, 2013. Dakota County staff notified all landowners within 500 feet of the greenway by mail with a brochure outlining the project and an invitation to the open houses.

More than 50 people attended the open house, including property owners, interested residents and public officials. Most attendees had received mailings notifying them of the open house. Many property owners came with questions and concerns, but overall there was support for the greenways. In addition to the open house, the plans, along with the ability to comment online, were posted on the project Web site in mid-January.

Overall, the comments were positive about the greenways, but several questions were asked about the specific alignment options. Attendees expressed interest in both on-road and off-road trails for varying reasons, including cost, maintenance, access and experience.

## Comments

### Transportation related comments:

- ▶ I would prefer off-road paths...experience is so much nicer. ...I would prefer that money not be prioritized to bridges or tunnels. The money would be better spent on more trail mileage.
- ▶ I love the idea of the Lebanon Hills connector trail...watch out for crossing Wescott Road – busy!
- ▶ I would rather you pick a different trail alternative to the proposed Oak Pond Hills Park trail...against my property line and ruin any privacy I have...
- ▶ You stated that the goal is to have 80% off road trails, but it is less costly to have the trails adjacent to roads when it comes to construction and maintenance. ...it is more accessible and less obtrusive to neighborhoods. I don't want to hike or ride my bike through the backyards of homes.
- ▶ Love to see grade separated crossings, esp. at 149 and Dodd.
- ▶ We live adjacent to Wandering Walk Park...the proposed loop from Bridle Ridge Park to Wescott and then from Wescott north through West Pub. Is not our favorite alignment...the trail already exists along Elrene. It seems like an extra expense to go through backyards, around wetlands and along a large parking lot.
- ▶ We very much like the idea of incorporating additional natural plantings within the existing right of way/easement. Native trees and rain gardens are of interest. The Dodd Road corridor is rich with history and provides important natural habitat for the migration of several species of birds and mammals within the Eagan Core Greenway[Dodd Road Resident]
- ▶ Concerned about the alignment between the Eagan High School and Bridal Ridge Park by Bald Lake
- ▶ Current/Past issues with teenagers from Eagan High School — primarily area is attractive nuisance for drug use
- ▶ City evaluated trail 4 or 5 years ago to provide access to Bald Lake — deemed too difficult and costly would have required significant tree removal
- ▶ City/School expressed that the trail (in 2008 project) would not be regularly patrolled by either Eagan Police or School Police.

### Greenway facility comments:

- ▶ Maps are a must for the greenway signage.
- ▶ You always do a great job selecting furnishings.

## Mendota-Lebanon Hills Greenway -Stakeholder Outreach

### ▶ Dodge Nature Center- 12-14-12

*Jason Sanders, Executive Director*

*Bill Owens, Board Member*

- » A 10' paved trail is not compatible with the Dodge Nature Center mission and is not interested in a trail through the property south of Highway 110. The Nature Center would like to continue to be informed and participate in meetings regarding the Mendota –Lebanon Hills Greenway and could be open to partnership opportunities in the future.



► **The Cole Family – 1-10-13**

*Bill and John Cole, Landowners*

- » Generally positive about the idea of a greenway and protecting natural resources on their land, comfortable with showing an alignment through their property in the master plan
- » Interested in continuing to talk to the County about opportunities when the land is developed or potentially before the land is developed
- » They do not intend to do anything while their parents are still living on the property.

► **Thomson Reuters – phone conversation**

*Jon Durand, Director, Facility Operations Real Estate and Workplace Solutions*

- » Concerned about / not supportive of the alignment going through their main property west of Dodd Road for security reasons. The option shown going through the triangle of land east of Dodd Road would likely be OK.

► **Ace in the Hole – phone conversation 1-11-13**

*Todd Foster, landowner*

- » Supportive of the greenway concept
- » The greenway should utilize the utility corridor and be part of park dedication and other open space requirements
- » The potential grade separated crossings shown on future roads east of Argenta Trail are not warranted from a traffic count perspective. The cost/benefit is not there
- » The greenway width in this area should be on the minimum size (100') in the area between Highway 55/ I-494, due to the densities planned for the area. If there are opportunities for a wider corridor with infiltration/ponding areas, park dedication etc, that is fine.
- » From a scenic/wildlife perspective, the western alignment being shown by Highway 55/I-494 is better (in Eagan)
- » Between Yankee Doodle Road and Westcott Road there is an potentially opportunity through the Carriage Hills neighborhood that should be investigated

## Public review draft — review process

The Draft Mendota–Lebanon Hills Greenway Master Plan was released for public review on May 21, 2013.

Public outreach was conducted from May 21 to July 24. The draft master plan, along with an executive summary and summary presentation, was available for review and comment on the project Web site; two public open houses were held; presentations were made to the cities of Eagan, Inver Grove Heights and Mendota Heights.

## Open house No. 2

- An open house was held May 30, 2013, at Lebanon Hills Visitor Center. Residents within 500 feet of the greenway alignment were notified of the open houses by mail.





## Comments

- ▶ We'd like to see the boardwalk run further from the houses in Friendly Hills Marsh for privacy and security reasons. We are very interested in a Friendly Hills Marsh restoration as part of this project.
- ▶ I am very supportive of the development of bike trails and would like to see these corridors fast-tracked ahead of any potential development. A time frame of 20 years is simply too long. I also think there should be bike trails in Lebanon Hills and that greenways should connect through the park.
- ▶ It would be great to feel more connected to our south suburban neighbors through trails like these. We like the proposed plans and would surely use them. Connecting Dakota County residents to the river and other trails would be money well spent.
- ▶ I grew up in Apple Valley, my mom remains here as do other close family members. I live in Chisago City and use the park regularly. The greenways are important and needed. I don't see that they need to be all the same, I think it would be more interesting and visually diverse to vary the design and planting, including width. Most importantly I am very concerned about paving through Lebanon, and though that is not supposed to be a part of this meeting, it should be as it is part of the greenway and how the greenway connects to it is highly pertinent. This park is unique and a gem and it needs to be kept this way, not made to match other parks. A paved path through the park will destroy the character of the park. It should remain the regional unpaved natural park. The cost of construction and maintenance are a huge concern as well. Greenways can go around the park. I am a cyclist as well, but bicycling does not need to occur in all places. The greenways are an excellent addition (and very significant) to bicycling in the area. Lebanon [Hills Regional Park] does not need to be a part of this. I am concerned that this process is quiet far along, to the point of marking trails when it should still be an open discussion.
- ▶ Look forward to this trail. Recreation is important as well as transportation and this accomplishes both.

## Outreach to local jurisdictions

The draft master plan was also presented at city council and commission meetings for each community in the corridor to solicit additional input, resolve issues of concern and ultimately obtain resolutions of support. The following meetings were held.

- ▶ Mendota Heights
  - » July 16 — City Council work session
  - » August — City Council (planned)
- ▶ Inver Grove Heights
  - » July 10 — Park and Recreation Advisory Committee
  - » August 5 — City Council work session and Meeting
- ▶ Eagan
  - » July 15 — Parks Advisory Commission
  - » July 16 — City Council (resolution of support adopted)



## Public review draft — input summary and draft master plan changes

Input on the draft master plan was generally supportive, though several concerns were raised. The following is a summary of concerns raised during the public review period and master plan document changes that address those concerns.

### *Mendota Heights*

- ▶ Boardwalk through Friendly Hills Marsh:
  - » Concern about the feasibility and cost
  - » Concern that the boardwalk is too close to adjacent homes
- ▶ Interest in Friendly Hills Marsh restoration
  - » Concern over about the existing 8-foot trail on Huber Drive being widened to 10 feet and increased use with additional connectivity and regional designation

Plan changes based on input:

- ▶ The master plan text discusses the need for a future feasibility study for a boardwalk through Friendly Hills Marsh. If a boardwalk is determined unfeasible, the greenway will use an alternate alignment
- ▶ An alternate alignment has been identified on plan maps and in the text. The alternate alignment will avoid Huber Drive and Friendly Hills Marsh. From Friendly Hills Marsh the greenway will travel on Dakota County CDA property and within the Dodd Road right of way to Mendota Heights Road. At Mendota Heights Road the greenway jogs east to connect with the preferred alignment south of the Huber Drive intersection.

### *Inver Grove Heights*

- ▶ Coordinate greenway and county road projects in Northwest Area of Inver Grove Heights.
- ▶ Keep greenway to the west of CSAH 63 (Argenta Trail) to minimize conflict with future development.

### *Eagan*

- ▶ Concern about a paved connection from the Mendota-Lebanon Hills greenway to the Lebanon Hills Visitor Center

No master plan changes — the greenway in Lebanon Hills Regional Park will be addressed in the park's master plan.



# LETTERS OF SUPPORT

City of Eagan

Dakota County, Minnesota

Resolution # 13-55

## A resolution supporting the Mendota-Lebanon Hills Regional Greenway

**WHEREAS**, the City of Eagan has been working with Dakota County on the development of a master plan for a regional greenway project that would bring new recreational and open space opportunities to the City of Eagan; and

**WHEREAS**, the unique approach to trail design outlined in the master plan integrates functional use, scenic value, historic and environmental interpretation, water quality improvements, and ecological restoration; and

**WHEREAS**, the proposed greenway is an identified unit of the Metropolitan Regional Park System Plan and will establish a link between the North Urban Regional Trail and Lebanon Hills Regional Park through the communities of Mendota Heights, Inver Grove Heights, and Eagan; and

**WHEREAS**, the master plan was developed in accordance with the 2030 Regional Parks Policy Plan; and

**WHEREAS**, the alignment identified in the master plan was developed in accordance with City of Eagan's 2030 Comprehensive Plan; and

**WHEREAS**, the detail design and maintenance of specific public right-of-way crossings will be reviewed for consistency with established transportation and maintenance policies; and

**WHEREAS**, the development and operation of the regional greenway will be a cooperative effort between Dakota County and the communities through which it extends; and

**NOW, THEREFORE, BE IT RESOLVED**, the City of Eagan adopts a resolution supporting Dakota County's Plans for the Mendota-Lebanon Hills Regional Greenway.

**ADOPTED** this 16<sup>th</sup> day of July, 2013

By:



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Mayor

By:



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Deputy City Clerk



**CITY OF MENDOTA HEIGHTS  
DAKOTA COUNTY, MINNESOTA**

**RESOLUTION 2013-56**

**RESOLUTION SUPPORTING THE  
MENDOTA-LEBANON HILLS REGIONAL GREENWAY**

**WHEREAS**, the City of Mendota Heights, along with other area municipalities, has been working with Dakota County on the development of a master plan for a regional greenway project that would bring new recreational and open space opportunities to the City of Mendota Heights; and

**WHEREAS**, the unique approach to trail design outlined in the master plan integrates functional use, scenic value, historic and environmental interpretation, water quality improvements, and ecological restoration; and

**WHEREAS**, the proposed greenway is an identified unit of the Metropolitan Regional Park System Plan and will establish a link between the North Urban Regional Trail and the Lebanon Hills Regional Park through the communities of Mendota Heights, Eagan and Inver Grove Heights; and

**WHEREAS**, the master plan was developed in accordance with the 2030 Regional Parks Policy Plan; and

**WHEREAS**, the City of Mendota Heights desires to preserve and protect open spaces within the City to include wetland habitat areas; and

**WHEREAS**, the City of Mendota Heights values the public input process particularly when it comes to new development and construction; and

**WHEREAS**, the detail design and maintenance of specific public right-of-way crossings will be reviewed for consistency with established transportation and maintenance policies; and

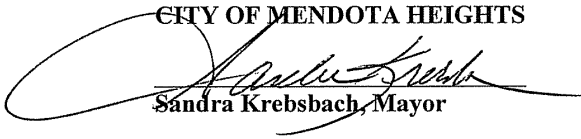
**WHEREAS**, the development and operation of the regional greenway will be a cooperative effort between Dakota County and the communities through which it extends.

**NOW THEREFORE, BE IT RESOLVED**, that the City Council of the City of Mendota Heights hereby supports the alternative alignment as proposed in the Dakota County's master plan for the Mendota-Lebanon Hills Regional Greenway, and does not in any way support the route that goes through Friendly Marsh Park, as shown on the attached Figure 31 of the Mendota-Lebanon Hills Greenway Segment 1 Concept Plan.


**BE IT FURTHER RESOLVED** that the City Council of the City of Mendota Heights acknowledges a feasibility study will be completed on the Regional Greenway alignment alternatives within the City to analyze physical, economic, transportation, and environmental issues associated with the respective alternatives.

Adopted by the Mendota Heights City Council this 6<sup>th</sup> day of August, 2013.

**CITY COUNCIL  
CITY OF MENDOTA HEIGHTS**

  
**Sandra Krebsbach, Mayor**

**ATTEST**

  
**Lorri Smith, City Clerk**





**CITY OF INVER GROVE HEIGHTS  
DAKOTA COUNTY, MINNESOTA**

**RESOLUTION NO. \_\_\_\_\_**

**RESOLUTION SUPPORTING THE  
MENDOTA-LEBANON HILLS REGIONAL GREENWAY**

**WHEREAS**, the City of Inver Grove Heights has been working with Dakota County on the development of a master plan for a regional greenway project that would bring new recreational and open space opportunities to the City; and

**WHEREAS**, the unique approach to trail design outlined in the master plan integrates functional use, scenic value, historic and environmental interpretation, water quality improvements, and ecological restoration; and

**WHEREAS**, the City's preferred alignment is depicted in the attached diagram dated August 2013 and is located west of the existing Argenta Trail ; and

**WHEREAS**, the proposed greenway is an identified unit of the Metropolitan Regional Park System Plan and will establish a link between the North Urban Regional Trail and Lebanon Hills Regional Park through the communities of Mendota Heights, Inver Grove Heights, and Eagan; and

**WHEREAS**, the master plan was developed in accordance with the 2030 Regional Parks Policy Plan; and

**WHEREAS**, the alignment identified in the master plan was developed in accordance with the City of Inver Grove Heights 2030 Comprehensive Plan; and

**WHEREAS**, the development and operation of the regional greenway will be a cooperative effort between Dakota County and the communities through which it extends;

**NOW, THEREFORE, BE IT RESOLVED** the City of Inver Grove Heights adopts a resolution supporting Dakota County's Plan for the Mendota-Lebanon Hills Regional Greenway.

Adopted by the City Council of Inver Grove Heights this 12th day of August 2013.

\_\_\_\_\_  
George Tourville, Mayor

ATTEST:

\_\_\_\_\_  
Melissa Rheaume, Deputy City Clerk



# Appendix B



## ALTERNATIVES ANALYSIS

Multiple alignment alternatives were evaluated for the Mendota-Lebanon Hills Regional Greenway. Alternatives were evaluated against nine criteria based on greenway performance goals outlined in the 2010 Dakota County Greenway Guidebook and on feasibility. The evaluation was presented to the technical advisory group and discussed, which resulted in elimination of some alternatives and suggestion of other alignments for consideration. These new alignments were evaluated and discussed with the TAG to determine the final alignments presented in the plan. This appendix contains the options evaluated during the planning process.



**To:** Technical Advisory Group  
**From:** HKGi  
**Subject:** Mendota to Lebanon Hills Regional Greenway  
 Draft Alternatives Analysis  
**Date:** November 12, 2012

There are several alternative alignment possibilities for the Mendota to Lebanon Hills Regional Greenway. Each major alternative has been evaluated against 9 criteria based on greenway performance goals outlined in the 2010 Dakota County Greenway Guidebook and feasibility.

The Criteria are:

1. Follows natural resources and is away from roads
2. Opportunities for natural resource corridors, habitat and water quality enhancements
3. Access
4. User experience
5. Grade separated crossings
6. Distance between destinations
7. Current ownership
8. Timing and availability of lands
9. Natural resource constraints

Below is a summary of preliminary recommendations. Recommendations will be refined throughout the planning process based on TAG input, analysis of grade separated crossings (in process), meetings with key land owners and public input. Attached is a map depicting the alternatives discussed and a detailed table comparing each criteria.

**Alternatives 1-A and 1-B (see attached map)**

**Preliminary Recommendation:** *Alternative 1-B - based on user experience, away from roads, and connectivity to natural resources.*

**Alternatives 2-A and 2-B (see attached map)**

**Both alternatives have merits.** *2-A has a better existing network of natural resources and a more varied landscape, 2-B has potential to frame future development and link residents to destinations. Both travel through areas where a non-motorized transportation corridor is needed. The two options together form a desirable trail loop.*

**Alternatives 3-A and 3-B (see attached map)**

**Preliminary Recommendation:** *Alternative 3-A, via 3-A3 is the preferred alternative based on proximity to Thomson Reuters, parks, natural resource signature, and user experience. Input from Thomson Reuters is important for identifying preferred alignment.*

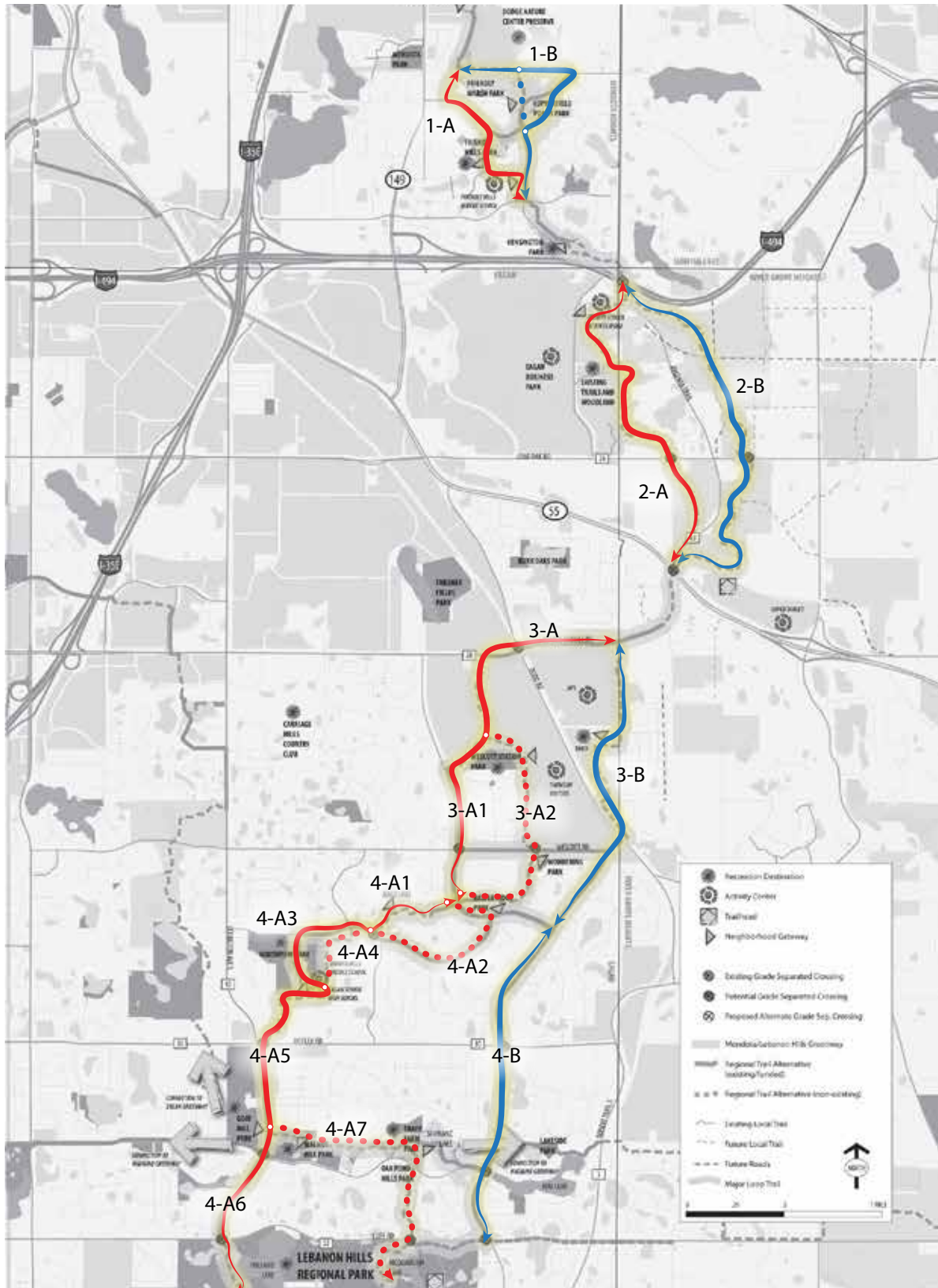
**Alternatives 4-A and 4-B (see attached map)**

**Alternative 4-A:** *Based on percentage away from roads, more varied user experience, connectivity to destinations. Preferred alternative is via 4A-1 (natural resources and experience), 4-A3 or 4A4 pending input from the school, and 4-A6 for directness*

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# Mendota/Lebanon Hills Greenway Alignment Alternatives Draft 11/12/12





**Mendota / Lebanon Hills Greenway – Alternative 1 Comparison**

*Preliminary Draft for TAG discussion 11.1.12*

		<b>Criteria</b>	<b>Alternative 1-A</b>	<b>Alternative 1-B</b>
<b>Greenway Performance Criteria</b>		Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Less Desirable <ul style="list-style-type: none"> <li>Apache Street south to Mendota Heights Road- 50% away from roads</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>Apache Street to Mendota Heights Road - 49%-60% away from roads</li> </ul>
		Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Less Desirable <ul style="list-style-type: none"> <li>Limited opportunities</li> <li>Urban greenway with a natural signature</li> </ul> May be opportunities for water quality & habitat improvements in Friendly Hills Park (13.8 acres)	Best Alternative <ul style="list-style-type: none"> <li>Opportunities for wider greenway corridor using 'borrowed views' – 300'+ through Dodge Nature Lands</li> </ul>
		Access <i>local trail connections, recreation destinations, activity centers</i>	Less Desirable Links 3 destinations <ul style="list-style-type: none"> <li>Friendly Marsh Park – <i>Recreation Destination</i></li> <li>Friendly Hills Park – <i>Recreation Destination</i></li> <li>Friendly Hills Middle School – <i>Activity Center</i></li> <li></li> </ul>	Best Alternative Links 4 destinations <ul style="list-style-type: none"> <li>Friendly Marsh Park – <i>Recreation Destination</i></li> <li>Friendly Hills Middle School – <i>Activity Center</i></li> <li>Friendly Marsh Park – <i>Recreation Destination</i></li> <li>Dodge Nature Center Lands –</li> <li>Copperfield Ponds Park – <i>Neighborhood Gateway</i></li> <li>Huber Drive &amp; Mendota Heights Road – <i>Access Point</i></li> </ul>
		User experience <i>setting, views, interpretive opportunities</i>	Less Desirable <ul style="list-style-type: none"> <li>Greenway would be along residential road with little natural setting or views.</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>Natural features along this alignment are more variable and unique</li> </ul>
		Grade Separated Crossings	Alternatives Similar <ul style="list-style-type: none"> <li>none</li> </ul>	Alternatives Similar <ul style="list-style-type: none"> <li>none</li> </ul>
<b>Feasibility</b>		Distance between destinations	Best Alternative <ul style="list-style-type: none"> <li>Most direct alignment option, 1.05 Miles</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Alignment between 1 - 1.35 Miles</li> </ul>
		Current Ownership	Alternatives Similar <ul style="list-style-type: none"> <li>100% public ownership, new trail would need to be built within the 60' right of way in front of residential homes for two blocks. Limited opportunities for space for natural plantings/design signature</li> </ul>	Alternatives Similar <ul style="list-style-type: none"> <li>100% public ownership</li> </ul>
		Timing and Availability of lands		Dependent on willing landowners (Dodge Nature Center/City easement )
		Natural resource constraints (e.g. slopes, wet soils)	Best Alternative <ul style="list-style-type: none"> <li>None known</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Crosses Large Wetland complex in Dodge Nature Center Lands (approximately length 1000')</li> <li>Need for boardwalk or wetland mitigation would increase costs</li> </ul>
<b>Preliminary Recommendation</b>				
Alternative 1-B - based on user experience, away from roads, and connectivity to natural resources. Pending landowner discussions.				



**Mendota / Lebanon Hills Greenway – Alternative 2 Comparison**

*Preliminary Draft for TAG discussion 11.12.12*

	<b>Criteria</b>	<b>Alternative 2-A</b>	<b>Alternative 2-B</b>
<b>Greenway Performance Criteria</b>	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Similar Conditions <ul style="list-style-type: none"> <li>91% away from roads</li> <li>Runs through a greater variety of natural features</li> </ul>	Similar Conditions <ul style="list-style-type: none"> <li>100% away for roads</li> </ul>
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Considerations <ul style="list-style-type: none"> <li>Alignment passes almost entirely through a mosaic of wetlands, grasslands, and woodlands.</li> <li>Opportunities for wider greenway corridor (approximate size 100'-200')</li> </ul>	Considerations <ul style="list-style-type: none"> <li>Opportunities to combine with other green infrastructure (new parks, stormwater management/infiltration, open space) for a wider corridor in places (100'-200') along with future development</li> <li></li> </ul>
	Access <i>local trail connections, recreation destinations, activity centers</i>	Considerations <ul style="list-style-type: none"> <li>Links 2 destinations</li> <li>Trinity School at River Ridge School – <i>Activity Center</i></li> <li>Eagan Business Park – <i>Activity Center</i></li> </ul>	Considerations <ul style="list-style-type: none"> <li>Links 1 destination</li> <li>Super Target – <i>Activity Center</i></li> <li>Opportunities to link park, residential, commercial, and employment uses with future development</li> </ul>
	User experience <i>setting, views, interpretive opportunities</i>	Considerations <ul style="list-style-type: none"> <li>Alignment offers a better user experience with greater variation in landscape, biome types, and greater exposure to areas of open water.</li> <li>Offers a good view of Downtown Minneapolis / St Paul south of 70<sup>th</sup> Street West</li> <li>Will serve more people in the future as land in this area becomes more developed</li> </ul>	Considerations <ul style="list-style-type: none"> <li>Future opportunities for a high quality user experience and a 100'-300' corridor in conjunction with other green infrastructure components such as parks, open space, and stormwater infiltration integrated into new development development.</li> </ul>
<b>Feasibility</b>	Grade Separated Crossings	Similar Conditions <ul style="list-style-type: none"> <li>3 road</li> </ul>	Similar Conditions <ul style="list-style-type: none"> <li>3 road</li> </ul>
	Distance between destinations	Similar Conditions <ul style="list-style-type: none"> <li>Alignment is most direct, 2.08 miles</li> </ul>	Similar Conditions <ul style="list-style-type: none"> <li>Alignment is slightly less direct, 2.37 miles</li> </ul>
	Current Ownership	<ul style="list-style-type: none"> <li>10% public ownership</li> <li>90% private (7 landholders).</li> </ul>	<ul style="list-style-type: none"> <li>15% public ownership</li> <li>85% private (7 landholders).</li> </ul>
	Timing and Availability of lands	Dependent on willing landowners / future land development	Timing based on future land development
	Natural resource constraints (e.g. slopes, wet soils)	Less Desirable <ul style="list-style-type: none"> <li>Crosses two small wetlands (approximately lengths of 200' and 50')</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>None known</li> </ul>
<b>Preliminary Recommendation</b>			
<p><i>Both alternatives have merits. 2-A has a better existing network of natural resources and a more varied landscape, 2-B has potential to frame future development and link residents to destinations. Both travel through areas where a non-motorized transportation corridor is needed. The two options together form an excellent trail loop.</i></p>			



**Mendota / Lebanon Hills Greenway – Alternative 3 Comparison**

*Preliminary Draft for TAG discussion 11.12.12*

Criteria		Alternative 3-A	Alternative 3-B
<b>Greenway Performance Criteria</b>	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Best Alternative <ul style="list-style-type: none"> <li>Yankee Doodle Road to Bridle Ridge Park – 33-72% away from roads</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>South from Yankee Doodle Road to Coventry Parkway - 43% away from roads (0.9 total on road)</li> </ul>
		3A1 - 33% away from roads, (1.4 miles on road)	3A2 – 72% away from roads (0.7 total on road)
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Best Alternative <ul style="list-style-type: none"> <li>Opportunities extend along the length of this alignment option with the greenway running through wetlands, woodlands, and grassland areas. Option 3-A2 is almost entirely through natural resources</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Potential along the backside of the UPS and commercial operations in the northern half of the segment as it passes through a large and nearly contiguous block of grasslands and open space.</li> <li>The alignment south of Highway 149 is urban and has no natural resource value.</li> </ul>
	Access <i>local trail connections, recreation destinations, activity centers</i>	Best Alternative Links between 3-4 destinations <ul style="list-style-type: none"> <li>Thomson Reuters – <i>Activity Center</i></li> <li>Wescott Station Park – <i>Recreation Destination</i></li> <li>Bridal Ridge Park – <i>Recreation Destination</i></li> <li>Wondering Park – <i>Recreation Destination (3-A2 only)</i></li> </ul>	Less Desirable Links 2 destinations <ul style="list-style-type: none"> <li>UPS – <i>Activity Center</i></li> <li>YMCA – <i>Recreation Destination</i></li> </ul>
	User experience <i>setting, views, interpretive opportunities</i>	Best Alternative <ul style="list-style-type: none"> <li>Alignment travels through a mix of urban areas, open space grasslands, wetlands, and woodland areas and connects to views of rolling landscapes and open water.</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>This alignment option is bracketed on at least one side by urban land uses through a majority of its length.</li> </ul>
<b>Feasibility</b>	Grade Separated Crossings	Less Desirable <ul style="list-style-type: none"> <li>2 road crossings</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>None</li> </ul>
	Distance between destinations	Less Desirable <ul style="list-style-type: none"> <li>Alignment options are between 2.10 – 2.70 miles</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>Most direct alignment option, 1.81 miles</li> </ul>
		3A1 – 2.1 miles total (1.4 miles has built trail)	3A2 – 2.7 miles total (.07 miles has built trail)
	Current Ownership	Best Alternative <ul style="list-style-type: none"> <li>54-67% public ownership</li> <li>33-46% private (2 landholders)</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>40% public ownership</li> <li>60% private (9 landholders).</li> </ul>
	Timing and Availability of lands	Dependent on willing landowners	Dependent on willing landowners
Natural resource constraints (e.g. slopes, wet soils)	Best Alternative <ul style="list-style-type: none"> <li>None known</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Alignment passes runs along a steep and narrow corridor of land on the backside of the UPS facility.</li> <li>Alignment passes along some small wetlands</li> </ul>	
<b>Preliminary Recommendation</b>			
Alternative 3-A, via 3-A3 is the preferred alternative based on proximity to employment center, parks, natural resource signature, and user experience. Pending public input and landowner outreach			



**Mendota / Lebanon Hills Greenway – Alternative 4 Comparison**

*Preliminary Draft for TAG discussion 11.12.12*

Criteria		Alternative 4-A	Alternative 4-B
Greenway Performance Criteria	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Best Alternative <ul style="list-style-type: none"> <li>Alignment between 38.8-78.6% away from roads</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>0% away from roads</li> </ul>
		4-A1 – 100% away from road	4-A2 – 0% away from road
		4-A3 – 50% away from road	4-A4 – 0% away from road
		4-A6 – 25% away from road (all in Lebanon Hills Park)	4-A7 – 95% away from road
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Best Alternative <ul style="list-style-type: none"> <li>Alignment passes through a mix of urban areas, woodlands, grasslands, parks, wetlands and open space areas creating opportunities along the route for natural setting/signature and water quality enhancements</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>None known</li> </ul>
		4-A1 – Best: majority of the alignment travels through a mix of woodland, grassland, and wetland areas.	4-A2 – None
	4-A3 – Limited, alignment runs through community park.	4-A4 – None	
	4-A6 – None	4-A7 – Best: a majority of the alignment travels through a mix of woodland, grassland, and wetland areas.	
Access <i>local trail connections, recreation destinations, activity centers</i>	Best Alternative Links 6-10 destinations <ul style="list-style-type: none"> <li>Eagan Senior High School – <i>Activity Center</i></li> <li>Dakota Hills Middle School – <i>Activity Center</i></li> <li>Lebanon Hills Regional Park – <i>Recreation Destination</i></li> <li>Northview Park – <i>Recreation Destination</i></li> <li>Goat Hill Park – <i>Recreation Destination</i></li> <li>Walnut Hill Park – <i>Recreation Destination</i></li> <li>Trapp Farm Park – <i>Recreation Destination (4A-7 only)</i></li> <li>Oak Pond Hills Park – <i>Recreation Destination (4A-7 only)</i></li> <li>Schwanz Lake Park – <i>Recreation Destination (4A-7 only)</i></li> <li>Bald Lake – <i>Recreation Destination (4A-1 only)</i></li> </ul>	Less Desirable Links 2 destinations <ul style="list-style-type: none"> <li>Pinewood Elementary School– <i>Activity Center</i></li> <li>Lebanon Hills Regional Park – <i>Recreation Destination</i></li> </ul>	
User experience <i>setting, views, interpretive opportunities</i>	Best Alternative <ul style="list-style-type: none"> <li>Alignment runs through urban areas, wetlands, parks, woodlands, and open space areas, providing access to a more diverse mix of landscape types than the other alignment option</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Limited opportunities, entire length of alignment follows Dodd Road, a collector road.</li> </ul>	
	4-A1 – Very high: crosses several biomes, significant topography change, lake views	4-A2 – Low: along road	
	4-A3 – Medium-high: a large majority of the alignment runs along or through park or open space	4-A4: Medium-high: a large majority of the alignment runs along or through park or open space	
	4-A6 – Low: along Lexington Ave.	4-A7: High: much of the alignment runs through open space and habitat areas, and along wetlands and woodlands	





Criteria		Alternative 4-A	Alternative 4-B					
Feasibility	Grade Separated Crossings	Alternatives Comparable <ul style="list-style-type: none"> <li>• 3-4</li> </ul>	Alternatives Comparable <ul style="list-style-type: none"> <li>• 3</li> </ul>					
	Distance between destinations	Less Desirable <ul style="list-style-type: none"> <li>• Alignment length varies from 3.15 – 4.47miles – Visitor Center</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>• Alignment is 1.74 miles</li> </ul>					
	Current Ownership	Best Alternative <ul style="list-style-type: none"> <li>• 98% Public</li> <li>• 2% (1 landholder)</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• 90% public ownership</li> <li>• 10% private (2 landholders).</li> </ul>					
	Timing and Availability of lands		Trail already in place					
	Natural resource constraints (e.g. slopes, wet soils) <ul style="list-style-type: none"> <li>•</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• 4-A1 and 4-A2 have significant grade changes and wetlands that would increase costs</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">4-A1 – significant grade changes and wetland areas exist along this alignment</td> <td style="width: 50%;">4-A2 – none known</td> </tr> <tr> <td>4-A3 – none known</td> <td>4-A4 – none known</td> </tr> <tr> <td>4-A6 – none known</td> <td>4-A7 – limited, two small segments run along/near wetland (600' &amp; 300' lengths)</td> </tr> </table>	4-A1 – significant grade changes and wetland areas exist along this alignment	4-A2 – none known	4-A3 – none known	4-A4 – none known	4-A6 – none known	4-A7 – limited, two small segments run along/near wetland (600' & 300' lengths)
4-A1 – significant grade changes and wetland areas exist along this alignment	4-A2 – none known							
4-A3 – none known	4-A4 – none known							
4-A6 – none known	4-A7 – limited, two small segments run along/near wetland (600' & 300' lengths)							
<b>Preliminary Recommendation</b>								
<p><i>Alternative 4-A: Based on percentage away from roads, more varied user experience, connectivity to destinations. Preferred alternative is via 4A-1 (natural resources and experience), 4-A3 / 4A4 pending input from the school, and 4-A6 for directness Lebanon Hills Regional Park. 4-A7 is also preferred as a regional connection as part of the Highline Greenway and makes recreational trail loop with potential future trails in Lebanon Hills Regional Park. Existing trail on Dodd Road will remain an important trail connection.</i></p>								





**To:** Mendota - Lebanon Hills Regional Greenway TAG  
**From:** HKGi  
**Subject:** Draft Preferred Alignments: Summary  
**Date:** February 22, 2013

There are several alternative alignment possibilities for the Mendota to Lebanon Hills Regional Greenway. Each major alternative has been evaluated against 9 criteria based on greenway performance goals outlined in the 2010 Dakota County Greenway Guidebook and feasibility.

The Criteria are:

1. Follows natural resources and is away from roads
2. Opportunities for natural resource corridors, habitat and water quality enhancements
3. Access
4. User experience
5. Grade separated crossings
6. Distance between destinations
7. Current ownership
8. Timing and availability of lands
9. Natural resource constraints

Below is a summary of draft recommendations, to be discussed at the upcoming TAG meeting. Recommendations will be refined based on TAG input. Attached is a map depicting the alternatives discussed and a detailed table comparing each criteria.

#### **Area 1 (see attached map)**

The preferred alignment is the best option from the perspective of the user experience. It is the most direct option, allows users to travel on a boardwalk through Friendly Marsh Park with long views to Dodge Nature Center Land to the north and makes connections to recreation destinations and activity areas either directly or via local, existing trails.

#### ***Advantages:***

- *Travels through natural area (Friendly Marsh Park)*
- *Most direct option*
- *Avoids Decorah Lane section which may need to be on road due to limited ROW, potential resident opposition, and safety concerns (driveways)*

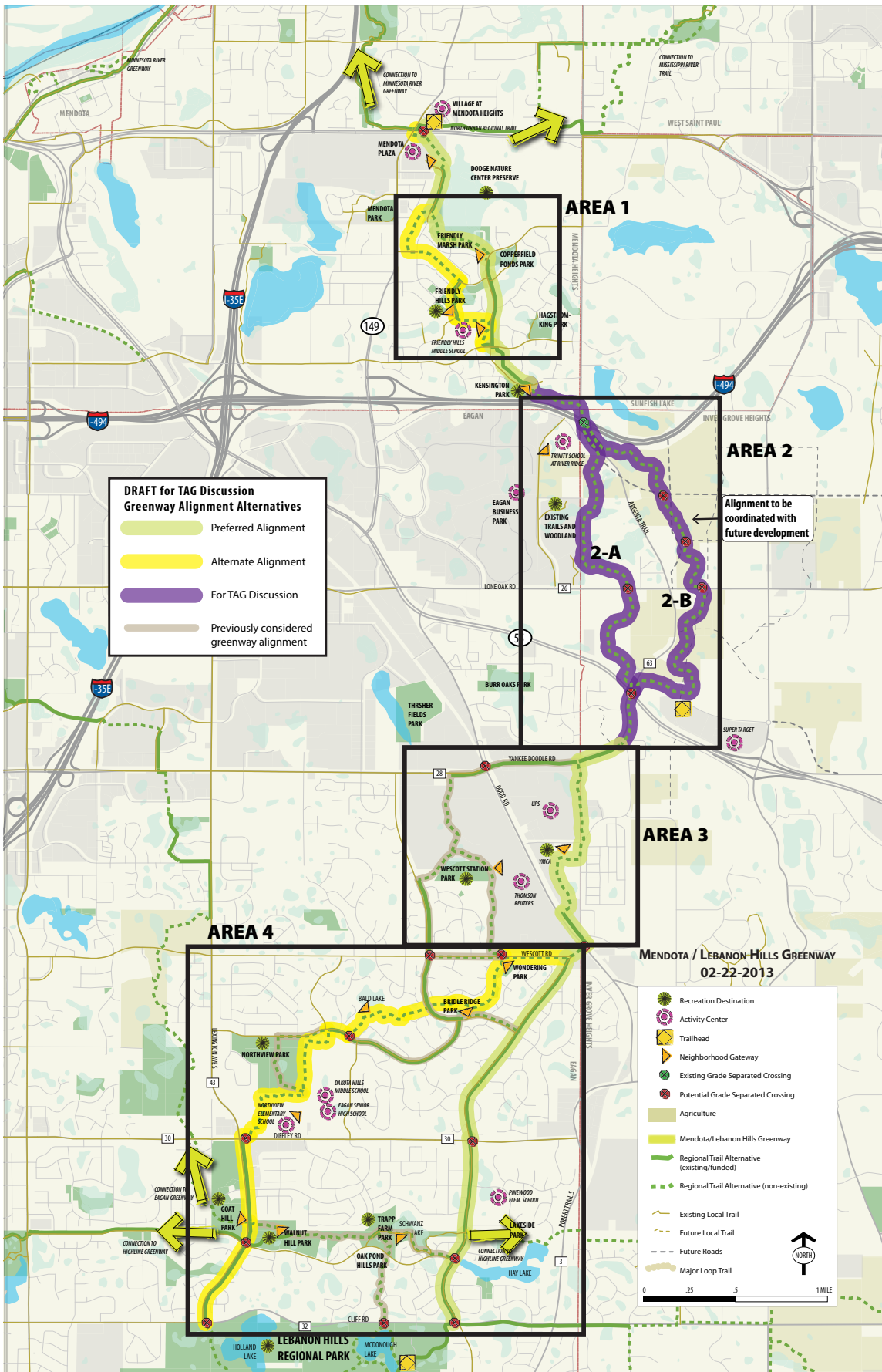
#### ***Disadvantages:***

- *Need to build approx. 1,000' feet of boardwalk will increase costs*
- *Less direct link to Friendly Hills Middle School*

#### **Area 2 (see attached map)**

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**Mendota / Lebanon Hills Greenway – Area 1 Comparison**  
 Revised 02.20.13

	Criteria	Preferred	Alternate
Greenway Performance Criteria	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Comparable <ul style="list-style-type: none"> <li>Apache Street to Mendota Heights Road - 50% away from roads (.48 on road)</li> </ul>	Comparable <ul style="list-style-type: none"> <li>Apache Street south to Mendota Heights Road- 72% away from roads (.34 miles on road)</li> </ul>
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Best Alternative <ul style="list-style-type: none"> <li>Opportunities for wider greenway corridor using 'borrowed views' – 300'+</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Limited opportunities</li> <li>Urban greenway with a natural signature</li> </ul> May be opportunities for water quality & habitat improvements in Friendly Hills Park (13.8 acres)
	Access <i>local trail connections, recreation destinations, activity centers</i>	Comparable Links 3 destinations <ul style="list-style-type: none"> <li>Friendly Marsh Park – <i>Recreation Destination</i></li> <li>Dodge Nature Center Land</li> <li>Copperfield Ponds Park – <i>Recreation Destination</i></li> </ul>	Comparable Links 3 destinations <ul style="list-style-type: none"> <li>Friendly Marsh Park – <i>Recreation Destination</i></li> <li>Friendly Hills Park – <i>Recreation Destination</i></li> <li>Friendly Hills Middle School – <i>Activity Center</i></li> </ul>
	User experience <i>setting, views, interpretive opportunities</i>	Best Alternative <ul style="list-style-type: none"> <li>Natural features along this alignment are more variable and unique</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Greenway would be along residential road for a portion, may need to be on-road</li> </ul>
	Grade Separated Crossings	Comparable <ul style="list-style-type: none"> <li>none</li> </ul>	Comparable <ul style="list-style-type: none"> <li>none</li> </ul>
Feasibility	Distance between destinations	Best Alternative <ul style="list-style-type: none"> <li>Most direct alignment option, .96 Miles</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>1.22 miles</li> </ul>
	Current Ownership	Best Alternative <ul style="list-style-type: none"> <li>100% public ownership – City of Mendota Heights</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>100% public ownership, new trail would need to be built within the 60' right of way in front of residential homes for two blocks. Limited opportunities for space for natural plantings/design signature</li> </ul>
	Timing and Availability of lands	Comparable	Comparable
	Natural resource constraints (e.g. slopes, wet soils)	Less Desirable <ul style="list-style-type: none"> <li>Crosses Large Wetland complex in Friendly Hills Park (approximately length 1000')</li> <li>Need for boardwalk or wetland mitigation would increase costs</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>None known</li> </ul>
<b>Preferred Alignment Summary</b>			
<p><i>Advantages:</i></p> <ul style="list-style-type: none"> <li>Better user experience</li> <li>Travels through natural area (Friendly Marsh Park)</li> <li>Most direct option</li> <li>Avoids Decorah Lane section which may need to be on road due to limited ROW, potential resident opposition, and safety concerns (driveways)</li> </ul> <p><i>Disadvantages:</i></p> <ul style="list-style-type: none"> <li>Need to build approx. 1,000' feet of boardwalk will increase costs</li> </ul> <p>Less direct link to Friendly Hills Middle School</p>			





**Mendota / Lebanon Hills Greenway – Area 2 Comparison** **Revised 02.20.13**

Criteria	Alternative 2-A	Alternative 2-B	
Greenway Performance Criteria	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Comparable <ul style="list-style-type: none"> <li>91% away from roads</li> <li>Travels through a greater variety of natural features</li> </ul>	Comparable <ul style="list-style-type: none"> <li>Opportunity to be 100% away for roads</li> </ul>
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Considerations <ul style="list-style-type: none"> <li>Alignment passes almost entirely through a mosaic of wetlands, grasslands, and woodlands.</li> <li>Opportunities for wider greenway corridor (approximate size 100'-200')</li> </ul>	Considerations <ul style="list-style-type: none"> <li>Opportunities to combine with other green infrastructure (new parks, stormwater management/infiltration, open space) for a wider corridor in places (100'-200') along with future development/future parks and open space</li> </ul>
	Access <i>local trail connections, recreation destinations, activity centers</i>	Considerations <ul style="list-style-type: none"> <li>Links 2 destinations</li> <li>Trinity School at River Ridge School – <i>Activity Center</i></li> <li>Eagan Business Park – <i>Activity Center</i></li> </ul>	Considerations <ul style="list-style-type: none"> <li>Links 1 destination</li> <li>Super Target – <i>Activity Center</i></li> <li>Opportunities to link park, residential, commercial, and employment uses with future development</li> </ul>
	User experience <i>setting, views, interpretive opportunities</i>	Considerations <ul style="list-style-type: none"> <li>Alignment offers a better user experience with greater variation in landscape, biome types, and greater exposure to areas of open water.</li> <li>Offers a good view of Downtown Minneapolis./ St Paul south of 70<sup>th</sup> Street West</li> </ul>	Considerations <ul style="list-style-type: none"> <li>Future opportunities for a high quality user experience and a 100'-300' corridor in conjunction with other green infrastructure components such as parks, open space, and stormwater infiltration integrated into new development.</li> <li>Dependent on the ability to work with developers and landowners to keep the alignment off road, in an independent corridor</li> </ul>
	Grade Separated Crossings	Similar Conditions <ul style="list-style-type: none"> <li>3 roads</li> </ul>	Similar Conditions <ul style="list-style-type: none"> <li>3 roads</li> <li>Opportunities for grade separated crossings at local roads to be built along with new road construction.</li> </ul>
Feasibility	Distance between destinations	Comparable <ul style="list-style-type: none"> <li>Alignment is most direct, 2.08 miles</li> </ul>	Comparable <ul style="list-style-type: none"> <li>Alignment is slightly less direct, 2.37 miles, though this alignment is conceptual and dependent on future development patterns</li> </ul>
	Current Ownership	Comparable <ul style="list-style-type: none"> <li>10% public ownership</li> <li>90% private (7 landholders).</li> </ul>	Comparable <ul style="list-style-type: none"> <li>15% public ownership</li> <li>85% private (7 landholders).</li> </ul>
	Timing and Availability of lands	Most dependent on ability to work with landowners	Timing based on future land development, most dependent on ability to work with future developers
	Natural resource constraints (e.g. slopes, wet soils)	Less Desirable <ul style="list-style-type: none"> <li>Crosses two small wetlands (approximately lengths of 200' and 50')</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>None known, rolling landscape</li> </ul>
<b>Preliminary Recommendation</b>			
<p><i>Both alternatives have merits. 2-A has a better existing network of natural resources and a more varied landscape, 2-B has potential to frame future development and link residents to destinations. Both travel through areas where a non- motorized transportation corridor is needed. The two options together form a desirable trail loop. Recommendation that one be the Regional Greenway and the other incorporated into City plans as a local greenway.</i></p>			



**Mendota / Lebanon Hills Greenway – Area 3 Comparison** **Revised 02.20.13**

	Criteria	Preferred	Other Alignments Considered
<b>Greenway Performance Criteria</b>	Follows natural resources and is away from roads <i>Goal: away from roads 80% of the time</i>	Best Alternative <ul style="list-style-type: none"> <li>South from Yankee Doodle Road to Wescott Road Parkway - 80% away from roads (0.2 total on road)</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Yankee Doodle Road to Wescott Road – 45%-74% away from roads (0.7 miles – 1.0 total mile on road)</li> </ul>
	Opportunities for wildlife/natural resources habitat and corridors & water quality enhancement	Less Desirable <ul style="list-style-type: none"> <li>Potential along the backside of the UPS and commercial operations in the northern half of the segment as it passes through a large and nearly contiguous block of grasslands and open space.</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>Opportunities extend along the length of this alignment option with the greenway running through wetlands, woodlands, and grassland areas.</li> </ul>
	Access <i>local trail connections, recreation destinations, activity centers</i>	Comparable Links 2 destinations <ul style="list-style-type: none"> <li>UPS – Activity Center</li> <li>YMCA – Recreation Destination</li> </ul>	Comparable Links between 2 destinations <ul style="list-style-type: none"> <li>Thomson Reuters – <i>Activity Center</i></li> <li>Wescott Station Park – <i>Recreation Destination</i></li> </ul>
	User experience <i>setting, views, interpretive opportunities</i>	Less Desirable <ul style="list-style-type: none"> <li>This alignment option is bracketed on at least one side by urban land uses through a majority of its length.</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>Alignment travels through a mix of urban areas, open space grasslands, wetlands, and woodland areas and connects to views of rolling landscapes and open water.</li> </ul>
<b>Feasibility</b>	Grade Separated Crossings	Best Alternative <ul style="list-style-type: none"> <li>None</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>2 road crossings</li> </ul>
	Distance between destinations	Best Alternative <ul style="list-style-type: none"> <li>Most direct alignment option, 1.4 miles</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Alignment options are approx. 2.0 miles</li> </ul>
	Current Ownership	Best Alternative <ul style="list-style-type: none"> <li>20% public ownership</li> <li>80% private (5-8 landholders).</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>0-45% public ownership</li> <li>100-55% private (2 landholders) Thomson Reuters has concerns.</li> </ul>
	Timing and Availability of lands	Best Alternative <ul style="list-style-type: none"> <li>Dependent on willing landowners</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>Thomson Reuters has security concerns regarding this alignment</li> </ul>
	Natural resource constraints (e.g. slopes, wet soils)	Less Desirable <ul style="list-style-type: none"> <li>Alignment passes runs along a steep and narrow corridor of land on the backside of the UPS facility.</li> <li>Alignment passes along some small wetlands</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>None known</li> </ul>
<b>Preferred Alignment Summary</b>			
	<b>Advantages:</b> <ul style="list-style-type: none"> <li>Most direct</li> <li>Avoids Thomson Reuters (they have security concerns about regional greenway on their land)</li> <li>Makes new connection to the YMCA</li> <li>Is away from roads more of the time (assuming Thomson Reuters alignment is not possible)</li> </ul>		



Criteria		Preferred	Other Alternatives Considered
Feasibility	Grade Separated Crossings	Best Alternative <ul style="list-style-type: none"> <li>• None</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• 2 road crossings</li> </ul>
	Distance between destinations	Best Alternative <ul style="list-style-type: none"> <li>• Most direct alignment option, 1.4 miles</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• Alignment options are approx. 2.0 miles</li> </ul>
	Current Ownership	Best Alternative <ul style="list-style-type: none"> <li>• 20% public ownership</li> <li>• 80% private (5-8 landholders).</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• 0-45% public ownership</li> <li>• 100-55% private (2 landholders) Thomson Reuters has concerns.</li> </ul>
	Timing and Availability of lands	Best Alternative <ul style="list-style-type: none"> <li>• Dependent on willing landowners</li> </ul>	Less Desirable <ul style="list-style-type: none"> <li>• Thomson Reuters has security concerns regarding this alignment</li> </ul>
	Natural resource constraints (e.g. slopes, wet soils)	Less Desirable <ul style="list-style-type: none"> <li>• Alignment passes runs along a steep and narrow corridor of land on the backside of the UPS facility.</li> <li>• Alignment passes along some small wetlands</li> </ul>	Best Alternative <ul style="list-style-type: none"> <li>• None known</li> </ul>
<b>Preferred Alignment Summary</b>			
<p><i>Advantages:</i></p> <ul style="list-style-type: none"> <li>• <i>Most direct</i></li> <li>• <i>Avoids Thomson Reuters (they have security concerns about regional greenway on their land)</i></li> <li>• <i>Makes new connection to the YMCA</i></li> <li>• <i>Is away from roads more of the time (assuming Thomson Reuters alignment is not possible)</i></li> </ul>			
Access <i>local trail connections, recreation destinations, activity centers</i>	Less Desirable Links 2 destinations <ul style="list-style-type: none"> <li>• Pinewood Elementary School– Activity Center</li> <li>• Lebanon Hills Regional Park – Recreation Destination</li> <li>• Existing local trails provide strong links to other destinations in the area</li> </ul>	Best Alternative Links 9 destinations <ul style="list-style-type: none"> <li>• Wondering Park – <i>Recreation Destination</i></li> <li>• Bridal Ridge Park – <i>Recreation Destination</i></li> <li>• Bald Lake – <i>Recreation Destination</i></li> <li>• Eagan Senior High School – <i>Activity Center</i></li> <li>• Dakota Hills Middle School – <i>Activity Center</i></li> <li>• Lebanon Hills Regional Park – <i>Recreation Destination</i></li> <li>• Northview Park – <i>Recreation Destination</i></li> <li>• Goat Hill Park – <i>Recreation Destination</i></li> <li>• Walnut Hill Park – <i>Recreation Destination</i></li> </ul>	
User experience <i>setting, views, interpretive opportunities</i>	Comparable <ul style="list-style-type: none"> <li>• Most direct and likely easier terrain</li> <li>• Strong opportunity for cultural interpretation on the history of Dodd Road</li> </ul>	Comparable <ul style="list-style-type: none"> <li>• Alignment is least direct (1.5 miles longer than the preferred and would likely have some sections that are very steep</li> <li>• Alignment runs through urban areas, wetlands, parks, woodlands, and open space areas, providing access to a more diverse mix of landscape types than the other alignment option</li> </ul>	
<b>Criteria</b>	<b>Preferred</b>	<b>Alternate</b>	
Grade Separated Crossings	Comparable <ul style="list-style-type: none"> <li>• 3</li> </ul>	Comparable <ul style="list-style-type: none"> <li>• 3-4</li> </ul>	



<b>Feasibility</b>	Distance between destinations	<b>Best Alternative</b> <ul style="list-style-type: none"> <li>• 2.8 miles</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>• 3.8 miles</li> </ul>
	Current Ownership	<b>Best Alternative</b> <ul style="list-style-type: none"> <li>• 100% public ownership</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>• 98% Public</li> <li>• 2% (1 landholder)</li> </ul>
	Timing and Availability of lands	<b>Best Alternative</b> <ul style="list-style-type: none"> <li>• Trail already in place</li> </ul>	<b>Less Desirable</b> Need to travel behind/between homes may result in resident opposition
	Natural resource constraints (e.g. slopes, wet soils)	<b>Best Alternative</b> <ul style="list-style-type: none"> <li>• None known</li> </ul>	<b>Less Desirable</b> <ul style="list-style-type: none"> <li>• Significant grade changes and wetlands that would increase cost &amp; likely have environmental impact</li> </ul>
<b>Summary</b>			
<p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>• <i>Most direct option</i></li> <li>• <i>High feasibility, trail is already in place</i></li> <li>• <i>Avoids Bald Lake &amp; Wandering Park Areas – while it is possible to put a trail through this these, it would be disruptive to existing natural resources (possibly more disruptive than there are advantages for enhancements)</i></li> <li>• <i>Is over 1 mile from planned greenway in Eagan, other alternatives are less direct and come within ¼ mile of this planned greenway.</i></li> <li>• <i>Though Dodd Blvd. does not connect as many destinations, local trails exist</i></li> <li>• <i>½ mile section between Diffley Road and Cliff Road is a better experience than alternative (Dodd Blvd./vs Lexington Ave) due to narrower road, less traffic, residential character</i></li> <li>• <i>Opportunity for cultural resource interpretation - Dodd Blvd.</i></li> </ul> <p><b>Disadvantages:</b></p> <ul style="list-style-type: none"> <li>• <i>On-road experience</i></li> <li>• <i>Limited opportunities for natural resource signature</i></li> <li>• <i>Less direct links to schools</i></li> </ul>			





**MENDOTA-LEBANON HILLS**

**GREENWAY MASTER PLAN**

**2013**

