

Dodd Road Trail Feasibility Study



Prepared for:
City of Mendota Heights

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Executive Summary

The City of Mendota Heights retained Stantec Consulting Services to evaluate preliminary feasibility of an off-road trail along Dodd Road. Dodd Road runs approximately 3.8 miles north-south the entire length of the City. Approximately one mile of this corridor is served by an existing trail or by a funded trail that will be constructed in 2018. Stantec analyzed 2.8 miles of the corridor between Delaware Ave. and Marie Ave. and between Wagon Wheel Trail and Mendota Heights Road.

To identify the best location for a trail alignment, Stantec generated assumptions regarding the total surface width required for a trail facility. A trail would require a twenty foot-wide corridor adjacent to the roadway shoulder. This corridor would accommodate an eight-foot wide walking and bicycling trail, clear zones, private utilities, and drainage infrastructure for stormwater generated by both the trail and the road.

Stantec conducted a desktop assessment and field review to understand the physical conditions within the public right-of-way that would impact trail construction, and assess the availability of public right-of-way for a trail. The following principles guided our analysis of potential locations for a trail alignment along Dodd Road:

- Utilize available public right-of-way as much as possible
- Minimize relocation of utilities
- Minimize disruption to slopes and trees
- Minimize crossings; maintain a continuous trail segment along one side of Dodd Road for as long as possible

Based on this analysis, Stantec's recommended alignment for an off-road trail along Dodd Road would run on the west side of Dodd Road from Delaware Ave. to Marie Ave. Trail users would cross Dodd Road at Marie Ave. to a planned trail segment along the east side of Dodd from Marie to Maple St., connecting to an existing trail that runs from Maple St. south of Highway 110 on the east side of Dodd Road. From Highway 110 to Mendota Heights Road, Stantec recommends a trail alignment on the east side of Dodd Road.

Our preliminary cost estimate for constructing this trail in its entirety is \$3.6 million, including soft costs. This does not include right-of-way acquisition. In order to construct the trail, the City of Mendota Heights would need to acquire approximately 75,000 square feet of right-of-way from approximately 71 privately owned parcels.

The City of Mendota Heights conducted outreach meetings with community stakeholders to understand preferences regarding a trail alignment. Participants generally supported a trail along the corridor and indicated a desire for safer walking and bicycling facilities on Dodd Road.

DODD ROAD TRAIL FEASIBILITY STUDY

Stantec recommends the City pursue the following next steps in order to advance implementation of a trail in this corridor:

- Continue to discuss the proposed alignment with citizens and elected officials to generate buy-in and support for the trail concept.
- Pursue trail construction in segments. This helps spread costs out over time. Begin construction along southern trail segments where right-of-way is publicly owned. Completed segments can help build public support for the trail and for extending the alignment further north where right-of-way acquisition is required.
- Initiate individual meetings with property owners along the trail alignment to assess support for the trail project and readiness to sell property or easements for trails segments.
- Continue conversations with Xcel Energy staff and other utility companies regarding relocation needs of private utilities. Utility staff expressed appreciation for early notice of these discussions and can more easily join productive partnerships when they are included early in the process.
- Look for opportunities through the development review process to acquire trail easements as properties change ownership.
- Work with MnDOT to install crossing improvements such as medians at key locations on Dodd Road during its 2018 resurfacing project to improve safe access to the trail.
- Both segments 7A and 7B create a continuous off-road connection throughout the trail corridor. While it is likely only feasible to construct one alignment in the short term, the City should pursue both alignments in the long term to maximize the trail's connectivity with existing trail and the City's park system.

1.0 INTRODUCTION

This report documents preliminary feasibility analysis of an off-road trail along Dodd Road in the City of Mendota Heights, MN. This corridor represents a gap in the City's extensive trail network. Currently, there are no sidewalks or trails along most of Dodd Road. The road is paved with wide shoulders, which are used regularly by both cyclists and pedestrians. Enhancing bicycling and walking facilities in this corridor would greatly improve connectivity of the city-wide trail system and create a continuous north-south connection through Mendota Heights.

Improving walking and bicycling facilities along Dodd Road is consistent with local and regional plans. The City of Mendota Heights 2030 Comprehensive Plan identifies planned improvements on Dodd Road between TH110 and Marie Avenue as a priority in its Parks and Open Space Plan.¹ This trail connection will be implemented during MnDOT's 2018 resurfacing project on Dodd Road. Dakota County's Mendota-Lebanon Hills Greenway Master Plan, depicted in Figure 1, identifies portions of Dodd Road in Mendota Heights as the preferred and/or alternative alignment for a future greenway corridor that would include bicycling and walking facilities.² The Metropolitan Council's 2040 Transportation Policy Plan identifies Dodd Road as part of a Tier 1 Priority Regional Bicycle Transportation Corridor.³ The Met Council defines these as the highest priority corridors for regional transportation planning and investment, located where they can attract the most riders and most effectively enhance mode choice in favor of biking and walking.

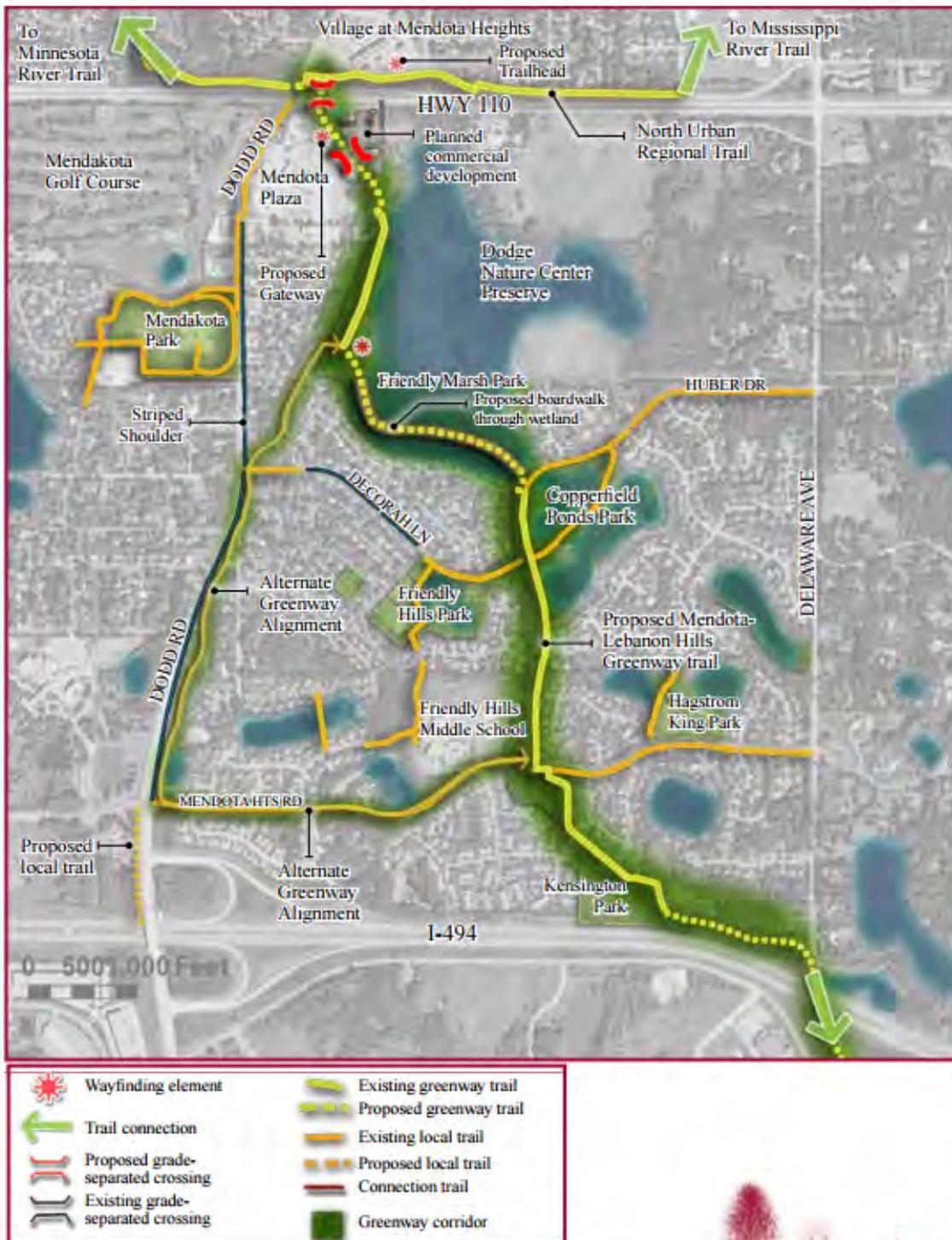
The City of Mendota Heights asked Stantec to perform a preliminary feasibility analysis of an off-road trail along Dodd Road. City of Mendota Heights staff also conducted outreach meetings with community members to gauge interest and support for a potential trail alignment, summarized in Section 6. This report documents right-of-way availability for a trail along Dodd Road; assesses major geographic features such as mature trees, wetlands, and slopes that could impact the trail's physical design and constructability; and presents a preliminary recommendation for a trail alignment along Dodd Road based on these characteristics. An estimated cost to construct this alignment is also included in this report.

This study and City-led community outreach regarding the trail alignment was funded by a grant from Dakota County as part of the Statewide Health Improvement Program.

¹ City of Mendota Heights website. Accessed 9.19.16. <http://www.mendota-heights.com/vertical/sites/%7BA0FB05B5-4CF8-4485-84AA-0C48D0BC98D7%7D/uploads/%7BC3D7F995-5084-416B-8992-95A9EDFE7BF8%7D.PDF>

² Dakota County website. Accessed 9.19.16. <https://www.co.dakota.mn.us/parks/Planning/Greenways/Documents/MendotaLebanonHillsGreenwayMasterPlan.pdf>

³ Metropolitan Council website. Accessed 9.19.16. [http://www.metrocouncil.org/Transportation/Planning-2/Key-Transportation-Planning-Documents/Transportation-Policy-Plan-\(1\)/The-Adopted-2040-TPP-\(1\)/Final-2040-Transportation-Policy-Plan/2040-TPP-Chapter-7-Bike-and-Pedestrian-Investment.aspx](http://www.metrocouncil.org/Transportation/Planning-2/Key-Transportation-Planning-Documents/Transportation-Policy-Plan-(1)/The-Adopted-2040-TPP-(1)/Final-2040-Transportation-Policy-Plan/2040-TPP-Chapter-7-Bike-and-Pedestrian-Investment.aspx)



32 Mendota-Lebanon Hills Greenway MASTER PLAN 2013



Figure 1: Mendota-Lebanon Hills Greenway Master Plan

Regional Bicycle Transportation Network Vision

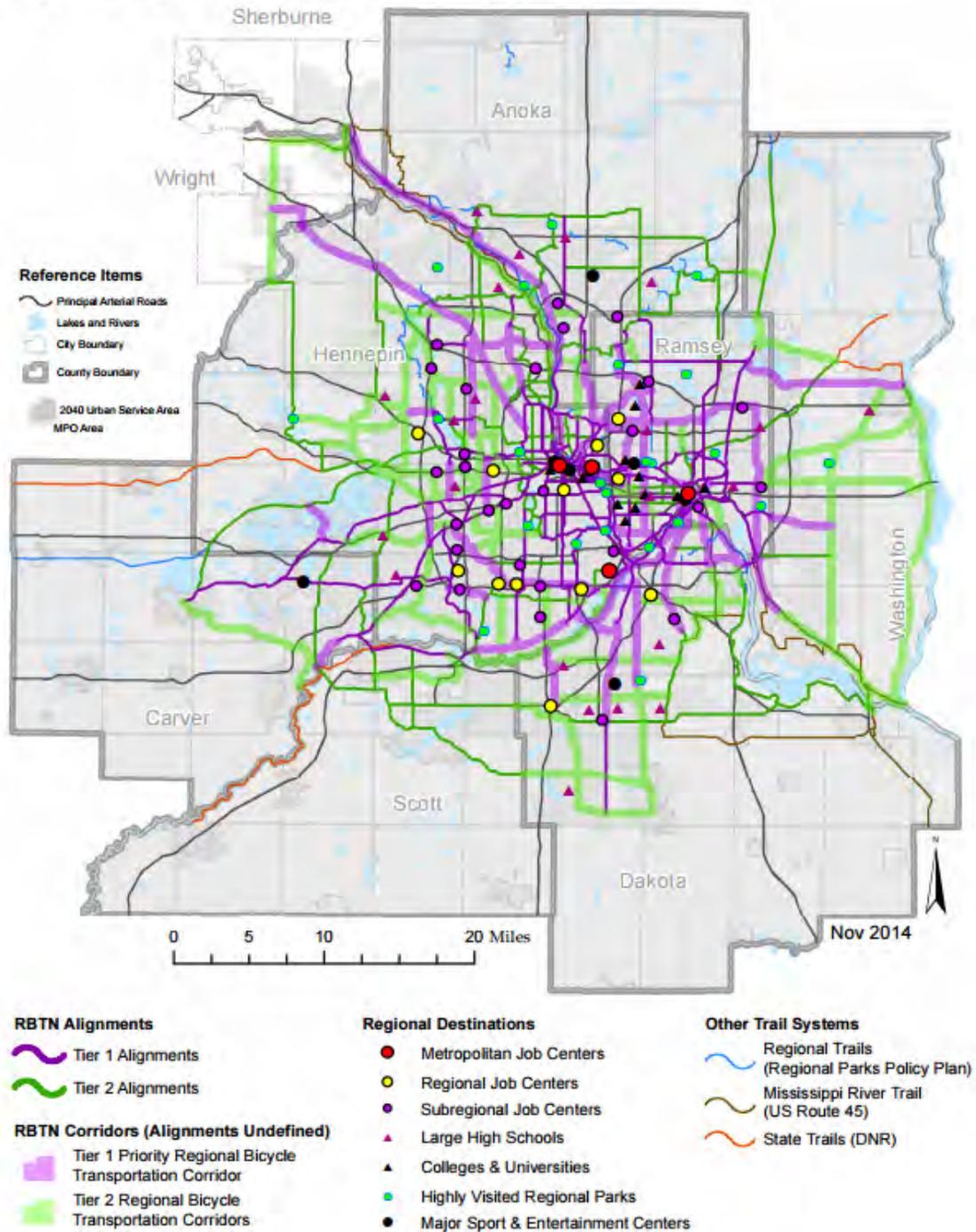


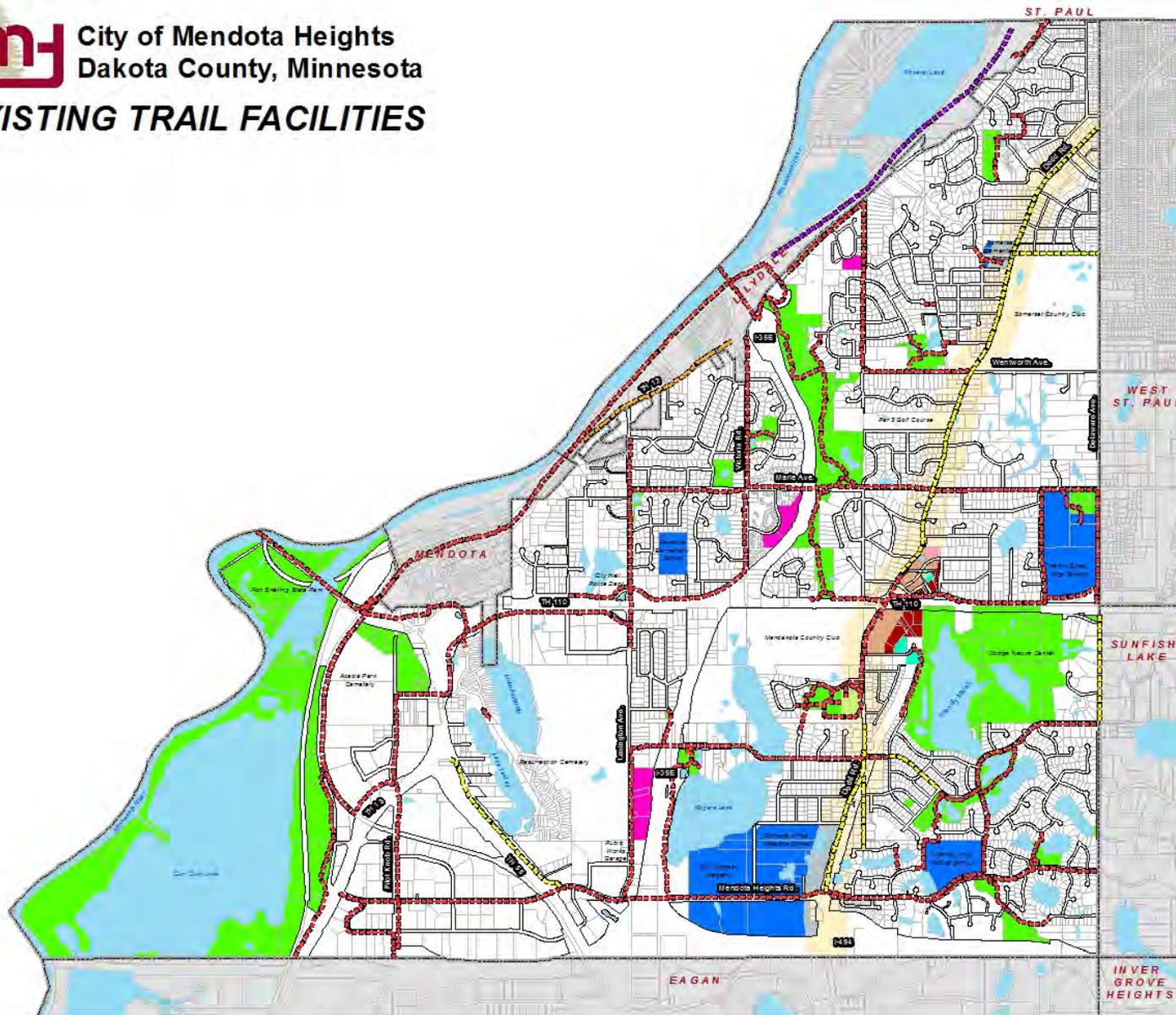
Figure 2: 2040 Transportation Policy Plan

2.0 PROJECT LOCATION

The City of Mendota Heights' existing trail system is depicted in Figure 3 on the following page. The Dodd Road corridor is highlighted in this graphic in light tan. Bicycling and pedestrian needs along the majority of Dodd Road are currently served by wide shoulders. An additional off-road trail would provide greater separation and protection from vehicular traffic.

Stantec analyzed the Dodd Road corridor between Delaware Ave. and Marie Ave., and from Wagon Wheel Trail to Mendota Heights Road. Stantec did not review Dodd Road between Marie Ave. and Wagon Wheel Trail, because this segment is served by an existing off-road trail from TH 110 to Maple Street that will be extended north to Marie Ave. during MnDOT's planned 2018 resurfacing of Dodd Road. The total corridor is approximately 3.8 miles long and runs north-south through the City. The segments included in this study are approximately 2.8 miles long.

City of Mendota Heights
Dakota County, Minnesota
EXISTING TRAIL FACILITIES



LEGEND

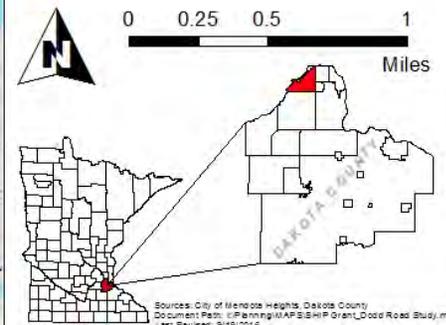
- Park/Open Space/Natural Area
- School
- High-Density Residential Use
- Senior/Assisted Living Use
- Commercial Area
- Dodd Road Corridor

Trail Facility

TYPE

- Off-street Trail
- Lilydale Off-street Trail
- On-street Trail (wide shoulders)
- Proposed Regional Trail

NOTE: Map includes data from the 2013-2017 Trail Improvement and Maintenance Plan.



Sources: City of Mendota Heights, Dakota County
 Document Path: \\Planning\GIS\B\BHP\Grant_Dodd Road Study.mxd
 Last Revised: 9/19/2014

Figure 3: Dodd Road Corridor and Existing Trail Facilities in Mendota Heights

3.0 TRAIL DESIGN STANDARDS

3.1 TRAIL ELEMENTS AND WIDTHS

To identify the best location for a trail alignment, Stantec generated assumptions regarding the total surface width required for a trail facility. The trail design standards listed below were developed based on recommendations from City staff on widths of existing City trails, the MnDOT Bikeway Design Manual, the 2012 AASHTO Guide for the Development of Bicycle Facilities, and a June 2016 conversation with Xcel Energy staff regarding standard utility sizes and right-of-way requirements.

This study uses the following assumptions regarding trail design standards:

- A multi-use trail along Dodd Road will be constructed as close to the road shoulder as possible
- The total surface width needed for a trail corridor is twenty feet. The multi-use trail corridor includes:
 - 8' bituminous surface two-way walking and bicycling trail
 - 2' clear space on either side of trail
 - 3' additional vegetative clearance between trail and roadway shoulder
 - 7' additional separation between trail and adjacent properties to accommodate drainage and utilities within public right-of-way

Figure 4 is a visual depiction of this trail design accommodating all of the elements listed above.

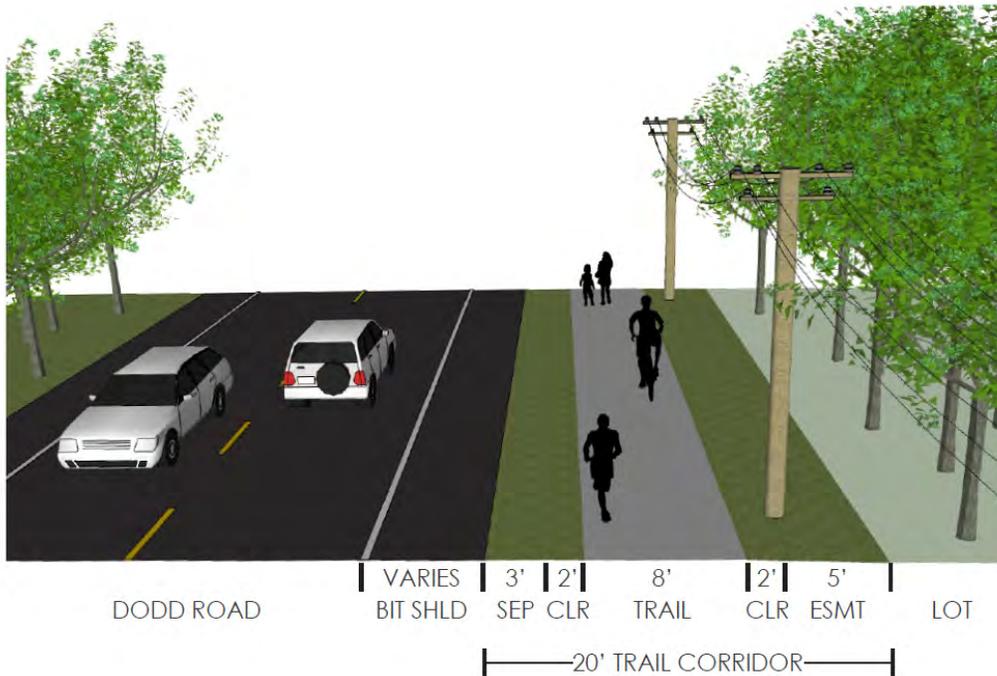


Figure 4: Assumed Widths of Right-of-Way Uses

3.2 OTHER RIGHT-OF-WAY USES

The available public right-of-way along Dodd Road (i.e. publicly-owned land that does not include the roadway surface or shoulder) currently serves two major uses: it houses private utilities (e.g. power lines, power poles, and utility boxes) and contains drainage infrastructure to carry stormwater. Construction of a trail along Dodd Road must continue to accommodate these uses within the public right-of-way.

The width of the publicly-owned right-of-way along Dodd Road varies greatly throughout the corridor. The road surface is typically 38 feet wide. In some locations, the total right-of-way is as narrow as 40 feet. At the southern end of the corridor, the right-of-way is owned by Dakota County and is as wide as 300 feet. The width of the available public right-of-way varies block by block and parcel by parcel. In some locations along the corridor, a 20 foot right-of-way width is available adjacent to the road. In other locations, between 5 feet and 20 feet of right-of-way would need to be acquired in order to accommodate a 20 foot trail corridor with drainage and utility infrastructure. Constructing as much of the trail as possible within the public right-of-way reduces the cost of acquiring land or easements from neighboring property owners for the trail. Furthermore, assembling easements from dozens of property owners fronting the corridor could take many years.

Because of the constrained width of public right-of-way, accommodating a trail within this space would require changing the location of existing public and private utility infrastructure. Although public agencies are required to provide space for private utilities in the public right-of-way, agencies have some discretion in determining where within their right-of-way these utilities are located. Stantec explored the idea of moving or burying private utilities in order to create more room within existing right-of-way for a trail. In order to understand whether private utilities along Dodd Road could be buried underground or moved (e.g. to the side of the road opposite the proposed trail alignment), Stantec and City staff had a conversation with Xcel Energy representatives on June 30, 2016. This conversation focused on general concepts of burying and relocating utilities and did not review any detailed designs or investigate specific conditions along the corridor.

3.2.1 Burying Utilities

Private utilities may be buried underground at the expense of the requesting entity. Burying power lines eliminates the need for most power poles, creating room along the ground surface for other uses such as trails. According to Xcel staff, the additional cost of burying utilities along two miles of Dodd Road could range from \$1.5 to \$2 million. Furthermore, some elements of the system such as utility boxes cannot be buried underground and would still need to be accommodated within the public right-of-way at the surface. Because of the high cost of this option, Stantec and City staff determined that it was not realistic to consider utility burial as part of this trail project and to only investigate options for trail construction that accommodate above-ground private utility infrastructure.

3.2.2 Relocating Utilities

The City of Mendota Heights could require Xcel and other utility companies to relocate power poles within the public right-of-way to create space for a trail. All utility equipment must be contained completely in the public right-of-way, including the full length of overhanging power pole arms. Any new right-of-way needed for the relocation of private utilities must be purchased by the City of Mendota Heights.

The majority of overhead power lines along Dodd Road are on the west side of the corridor, although in some segments utility lines are on the east side of the corridor as well. Xcel staff believe that poles on the west side of Dodd Road are used by Xcel; poles on the east side are used by Century Link. Both utilities could be combined on the same pole; however, this would likely require constructing taller, larger poles that may not be politically acceptable to nearby residents.

Stantec explored the idea of moving existing poles closer to the roadway to create more room for a trail along the edge of the right-of-way closest to the neighboring property line. However, MnDOT clear zone requirements do not allow poles to be moved closer to the roadway than they are today. Therefore, Stantec and City staff determined that the preliminary concept designs explored in this study should incorporate space for private utilities alongside the

proposed trail, between the trail and the adjoining property line. This configuration is depicted in Figure 4.

3.2.3 Replacing Drainage Ditches

In some segments along Dodd Road, stormwater drainage is carried by ditches. In order to repurpose right-of-way space for a trail, drainage ditches can be eliminated by adding storm sewers to transfer water in pipes. Figures 5-7 depict modifications to stormwater drainage systems along Dodd Road to ensure that drainage can still occur within the public right-of-way. These modifications are included in the cost estimates to construct a trail presented in Section 6.

TYPICAL SECTION 1 - SLOPE AWAY FROM ROAD

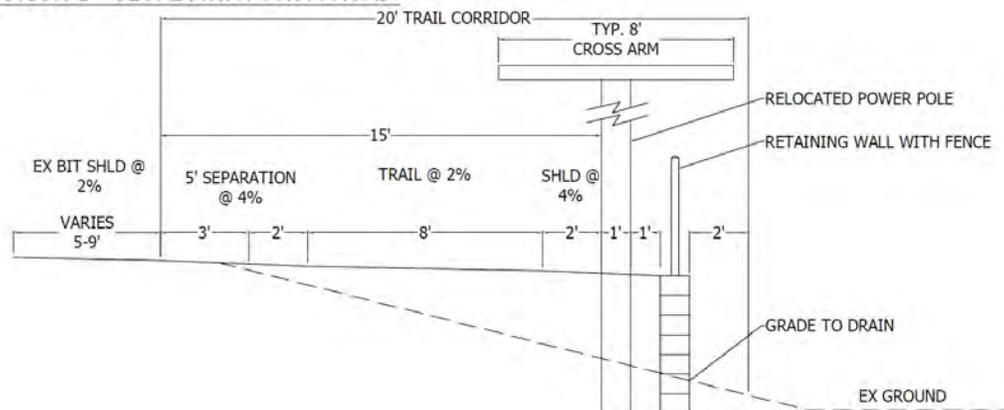


Figure 5: Surface Drainage with Retaining Wall Below

TYPICAL SECTION 2 - SLOPE TO ROAD

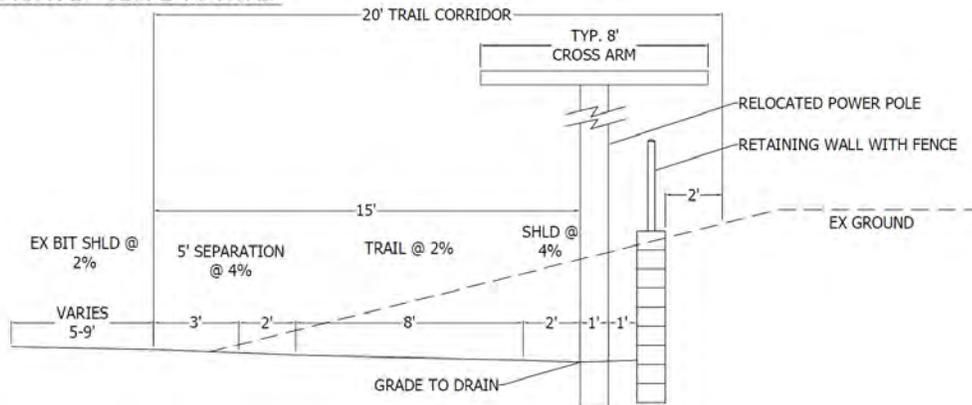


Figure 6: Surface Drainage and Ditch with Retaining Wall Above

TYPICAL SECTION 3 - DITCH

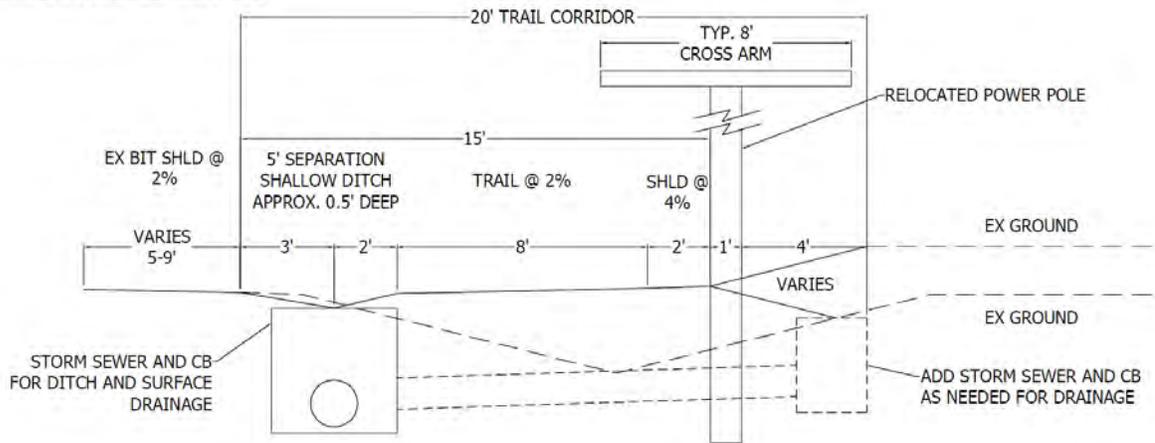


Figure 7: Drainage with Storm Sewer

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4.0 PRELIMINARY ASSESSMENT

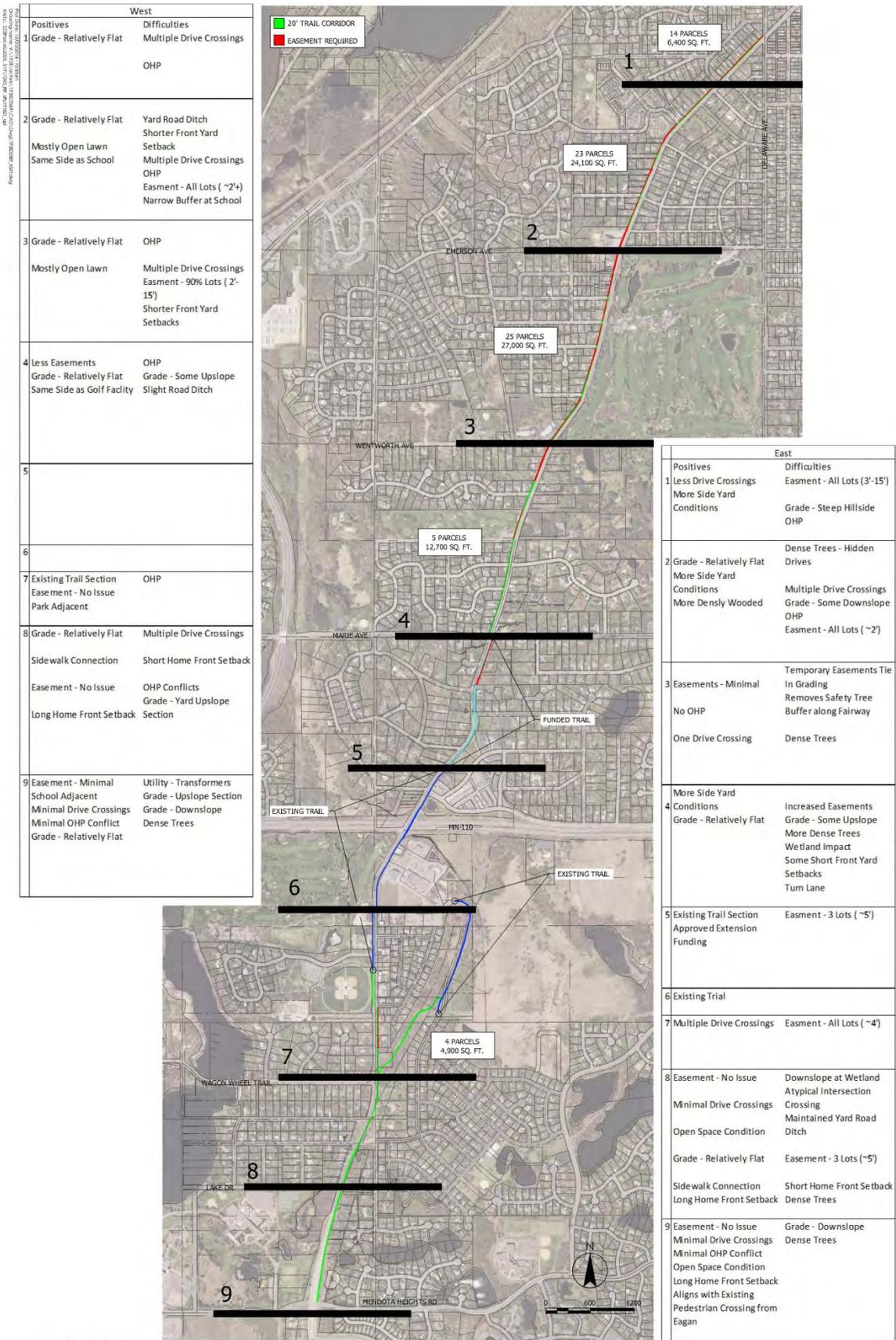
To identify a potential alignment for the trail along Dodd Road, Stantec first conducted a review of aerial photography to identify major physical barriers to trail construction along the corridor alignment. We next analyzed the width of the public right-of-way along both sides of Dodd Road to determine which side of the road (east or west) would be most feasible for a trail alignment given both physical conditions and available public right-of-way.

The following principles guided our analysis of potential locations for a trail alignment along Dodd Road:

- Utilize available public right-of-way as much as possible
- Minimize relocation of utilities
- Minimize disruption to slopes and trees
- Minimize crossings; maintain a continuous trail segment along one side of Dodd Road for as long as possible.

Stantec divided the corridor into nine segments based on different characteristics of each segment. An initial assessment of each segment is depicted in Figure 8 on the following page.

Note: Stantec did not review Segments 5 or 6. Segment 6 includes an existing trail segment along Dodd Road. This trail will be extended into Segment 5 during a 2018 resurfacing project on Dodd Road.



West	
1	Positives Grade - Relatively Flat
	Difficulties Multiple Drive Crossings OHP
2	Grade - Relatively Flat Mostly Open Lawn Same Side as School
	Yard Road Ditch Shorter Front Yard Setback Multiple Drive Crossings OHP Easment - All Lots (~2') Narrow Buffer at School
3	Grade - Relatively Flat Mostly Open Lawn
	OHP Multiple Drive Crossings Easment - 90% Lots (2'-15') Shorter Front Yard Setbacks
4	Less Easements Grade - Relatively Flat Same Side as Golf Facility
	OHP Grade - Some Upslope Slight Road Ditch
5	
6	
7	Existing Trail Section Easement - No Issue Park Adjacent
	OHP
8	Grade - Relatively Flat Sidewalk Connection Easement - No Issue Long Home Front Setback
	Multiple Drive Crossings Short Home Front Setback OHP Conflicts Grade - Yard Upslope Section
9	Easement - Minimal School Adjacent Minimal Drive Crossings Minimal OHP Conflict Grade - Relatively Flat
	Utility - Transformers Grade - Upslope Section Grade - Downslope Dense Trees

East	
1	Positives Less Drive Crossings More Side Yard Conditions
	Difficulties Easment - All Lots (3'-15') Grade - Steep Hillside OHP
2	Grade - Relatively Flat More Side Yard Conditions More Densely Wooded
	Dense Trees - Hidden Drives Multiple Drive Crossings Grade - Some Downslope OHP Easment - All Lots (~2')
3	Easements - Minimal No OHP One Drive Crossing
	Temporary Easements Tie In Grading Removes Safety Tree Buffer along Fairway Dense Trees
4	More Side Yard Conditions Grade - Relatively Flat
	Increased Easements Grade - Some Upslope More Dense Trees Wetland Impact Some Short Front Yard Setbacks Turn Lane
5	Existing Trail Section Approved Extension Funding
	Easment - 3 Lots (~5')
6	Existing Trail
7	Multiple Drive Crossings
	Easment - All Lots (~4')
8	Easement - No Issue Minimal Drive Crossings Open Space Condition
	Downslope at Wetland Atypical Intersection Crossing Maintained Yard Road Ditch
	Grade - Relatively Flat
	Easement - 3 Lots (~5')
	Sidewalk Connection Long Home Front Setback
	Short Home Front Setback Dense Trees
9	Easement - No Issue Minimal Drive Crossings Minimal OHP Conflict Open Space Condition Long Home Front Setback
	Grade - Downslope Dense Trees
	Aligns with Existing Pedestrian Crossing from Eagan

Key Map

Figure 8: Assessment of potential trail alignment

5.0 RECOMMENDED TRAIL ALIGNMENT

After completing the desktop assessment, Stantec performed a field review of Segments 1-4 and Segments 7-9 to verify actual conditions and assess potential limitations to the constructability of a trail based on the physical features present. The field review confirmed findings from the desktop assessment and informed which side of Dodd Road Stantec recommends for the trail alignment. Stantec's recommended alignment for a trail corridor is depicted in Figure 9.

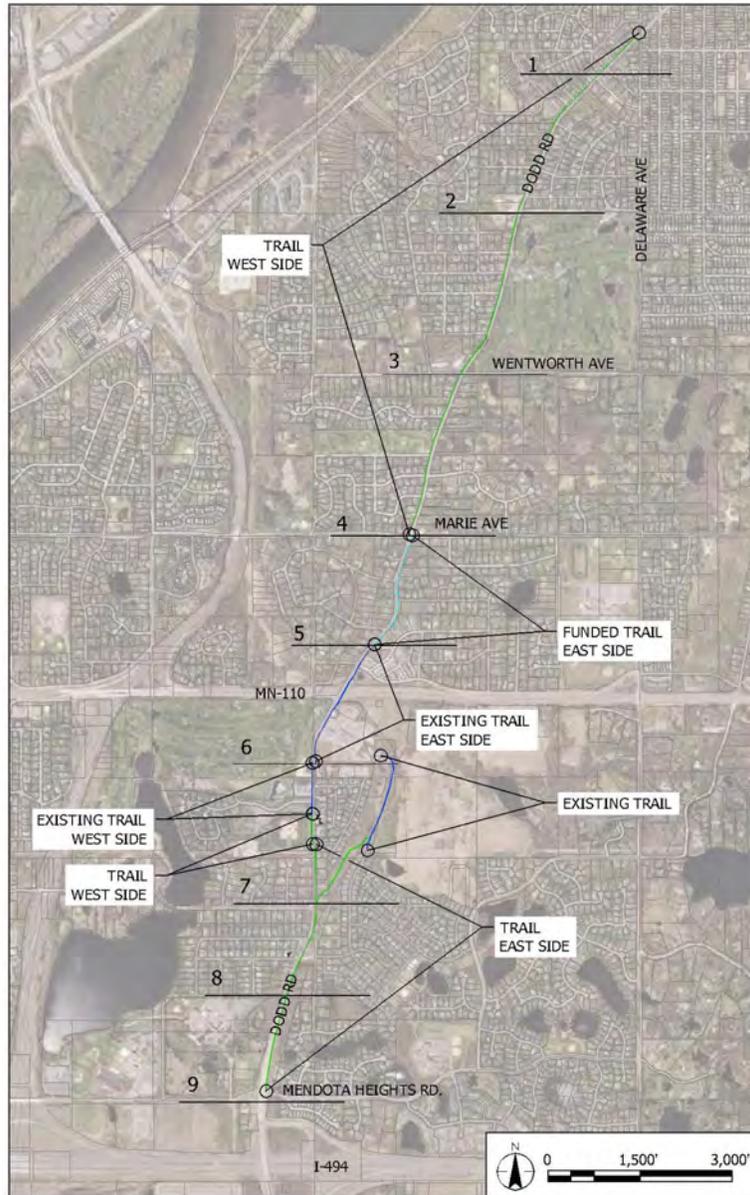


Figure 9: Recommended Trail Alignment

5.1 PHYSICAL FEATURES

The following is a summary of existing conditions within each segment along Dodd Road that would impact trail construction, and major activities that would be required to accommodate a trail within this alignment.

Segment 1 – Delaware Ave. to Chippewa Ave.

- Fill existing ditch sections and add storm sewer between road and trail
- Remove and replace existing stone retaining wall
- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 15-20 trees and shrubs

Segment 2 – Chippewa Ave. to Emerson Ave.

- Fill existing ditch sections and add storm sewer between road and trail
- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 35-40 trees and shrubs

Segment 3 – Emerson Ave. to Wentworth Ave.

- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 15-20 trees and shrubs

Segment 4 – Wentworth Ave. to Marie Ave.

- Fill existing ditch sections and add storm sewer between road and trail
- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 55-60 trees and shrubs

Segment 5 – Marie Ave. to Maple St.

- Not analyzed as part of this study. Trail extension planned as part of 2018 Dodd Road resurfacing project.

Segment 6 – Maple St. to Hwy 110

- Not analyzed as part of this study. Trail exists along east side of Dodd Road.

Segment 7A – Apache St. to Decorah Ln. (off-road on public right-of-way)

- Clear 30' wide corridor through existing woods; approximately 30 trees and brush

Segment 7B – Hokah Ave. to Decorah Ln. (along Dodd Road)

- Fill existing ditch sections and add storm sewer between road and trail
- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 15-20 trees and shrubs

Segment 8 – Decorah Ln. to Lake Dr.

- Fill existing ditch sections and add storm sewer between road and trail
- Add retaining walls to keep grading limits within the 20' trail corridor
- Clear 30-35 trees and shrubs

Segment 9 – Lake Dr. to Mendota Heights Road

- Extend grading limits in public right-of-way to 30-45' to eliminate retaining walls
- Clear 10-15 trees and brush

5.2 RIGHT-OF-WAY AVAILABILITY

As described in Section 3, a twenty-foot wide right-of-way corridor along Dodd Road is required to construct a trail. In many cases, the City of Mendota Heights would need to acquire portions of the twenty-foot right-of-way corridor from adjoining property owners, either through land purchase or easements. In some instances, easements on individual properties would be as narrow as five feet; in others, all twenty feet would need to be acquired. Table 1 summarizes the total right-of-way that would need to be acquired from private property owners to support a trail. Locations where right-of-way acquisition is required within each segment are depicted in Figures 10-16 beginning on page 17.

Table 1: Private Right-of-Way Required for Trail

	Total Right-of-way Acquisition Needed (square feet)	Number of Parcels Impacted
Segment 1	6,400	14
Segment 2	24,100	23
Segment 3	27,000	25
Segment 4	12,700	5
Segment 7B	4,900	4
Segment 5, 6, 7A, 8,9	Public right-of-way available or trail exists	
TOTAL	75,100	71

Note: Constructing either Segment 7A or Segment 7B would result in a continuous north-south trail connection along Dodd Road. Although building a trail in Segment 7B requires the acquisition of private right-of-way, this segment connects the proposed trail with existing trail west of Dodd Road and to Mendakota Park. For this reason, both alignments are included in this study.

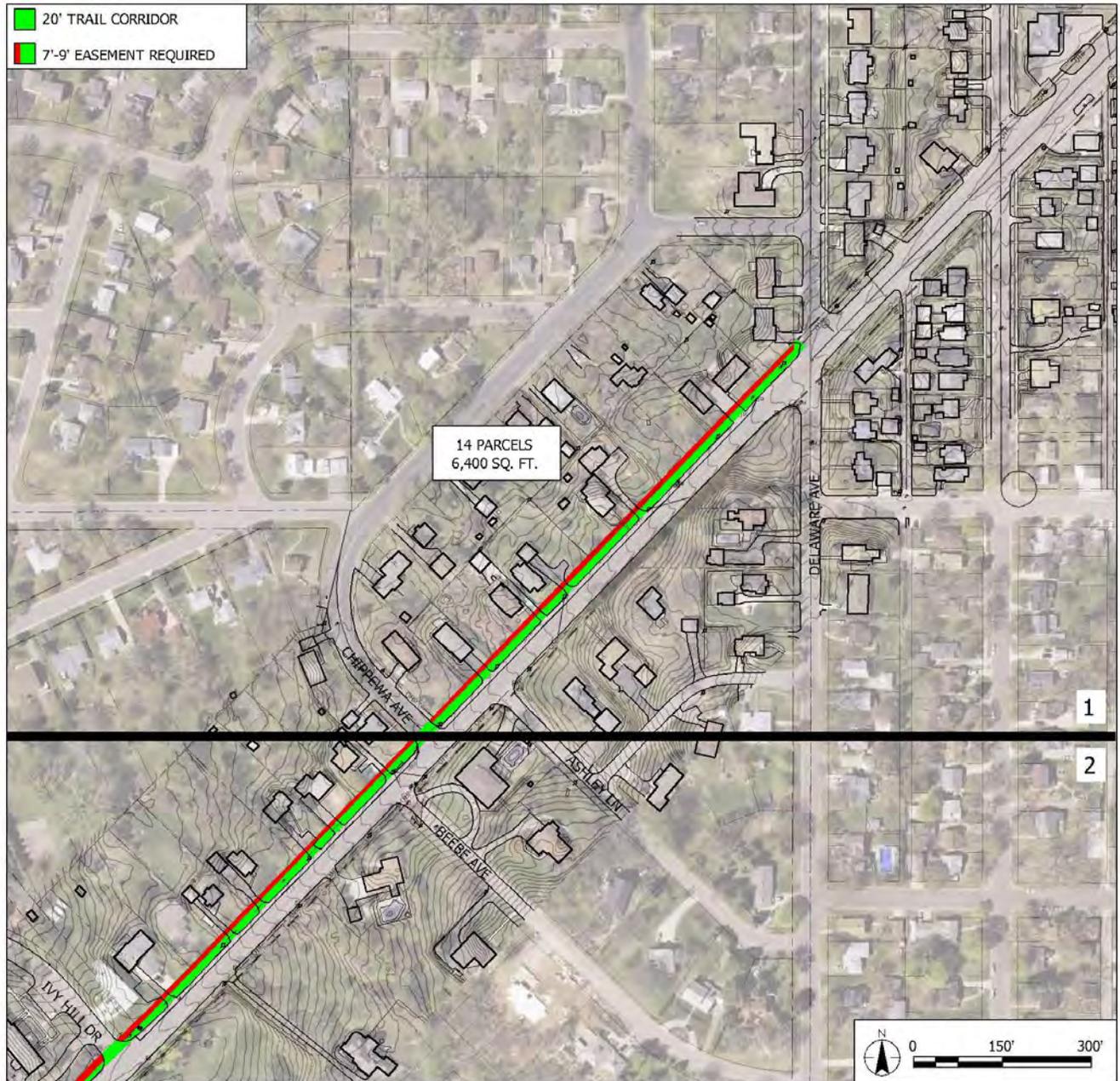


Figure 10: Right-of-Way Needed in Segment 1 (Delaware Ave. to Chippewa Ave.)

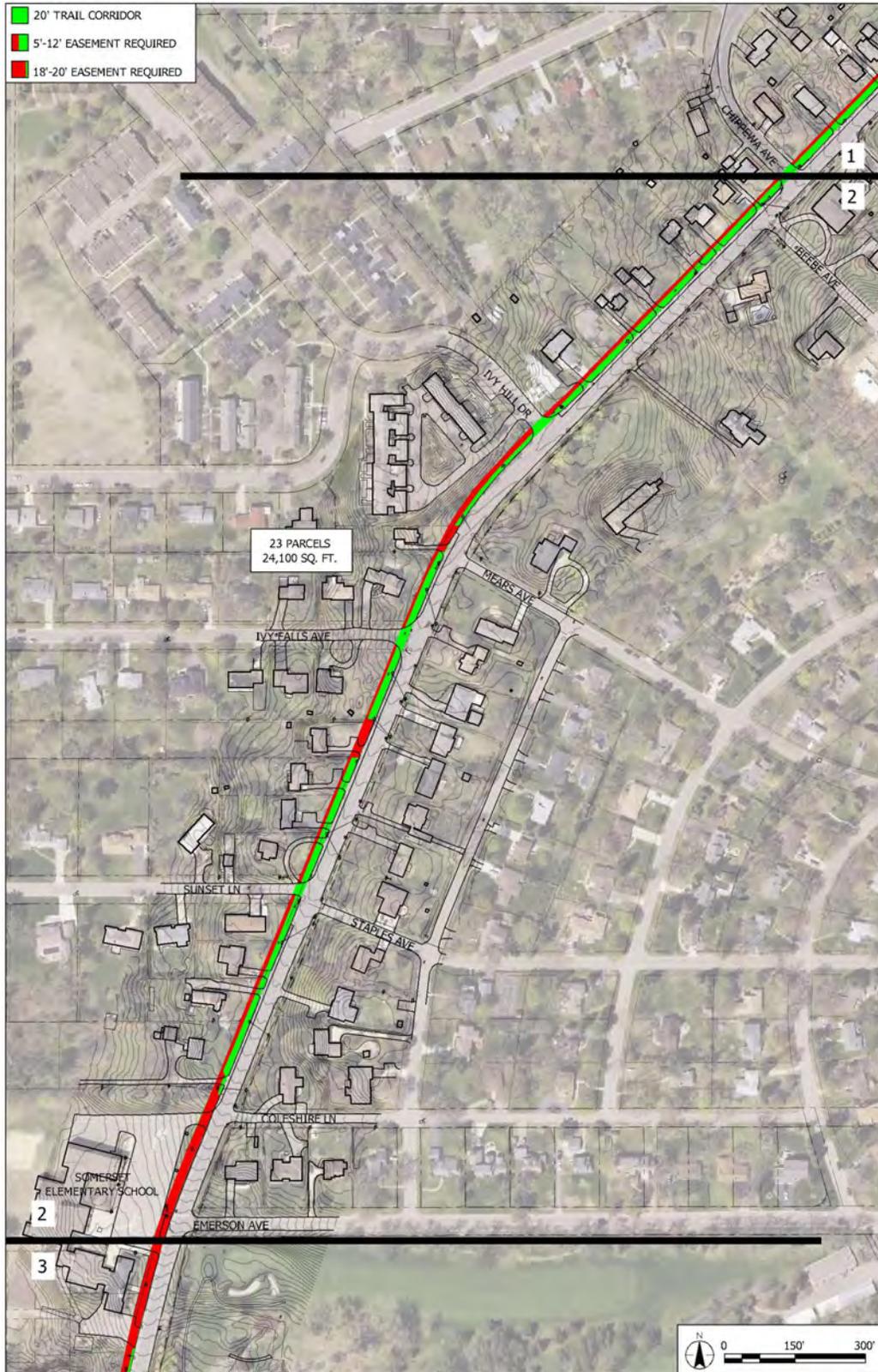


Figure 11: Right-of-Way Needed in Segment 2 (Chippewa Ave. to Emerson Ave.)

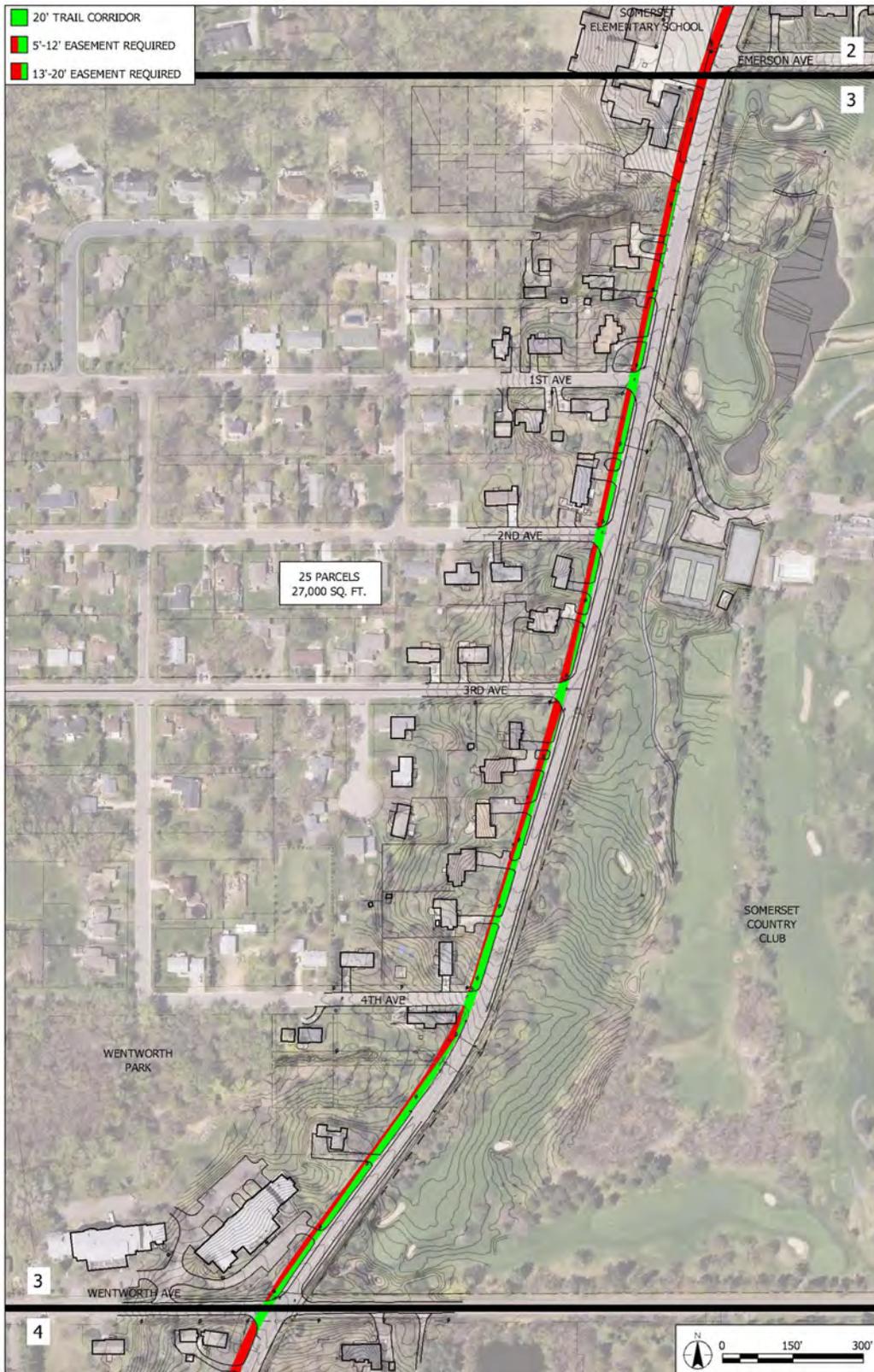


Figure 12: Right-of-Way Needed in Segment 3 (Emerson Ave. to Wentworth Ave.)



Figure 13: Right-of-Way Needed in Segment 4 (Wentworth Ave. to Marie Ave.)

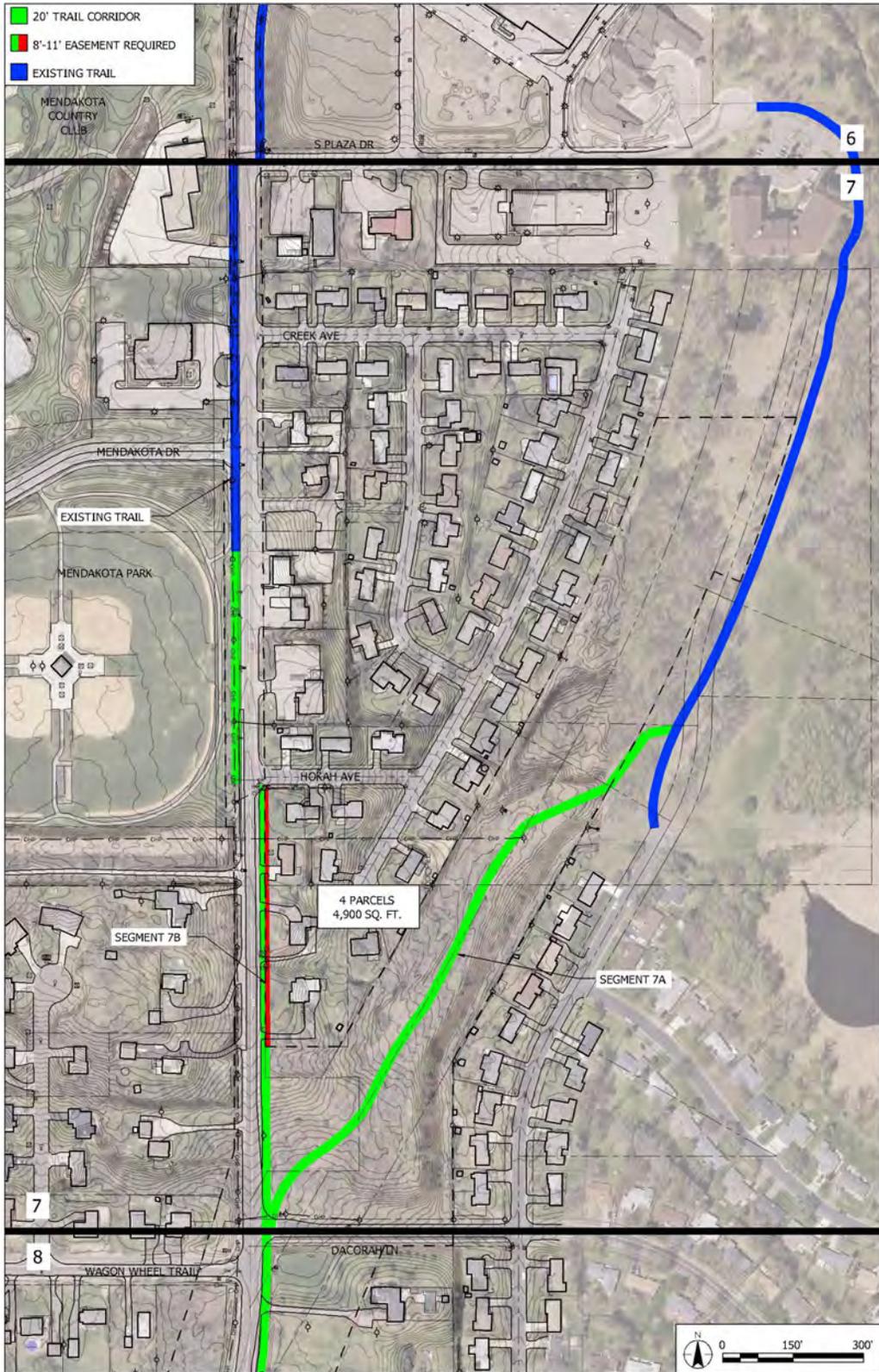


Figure 14: Trail Alignments in Segment 7 (Decorah Lane to South Plaza Drive)

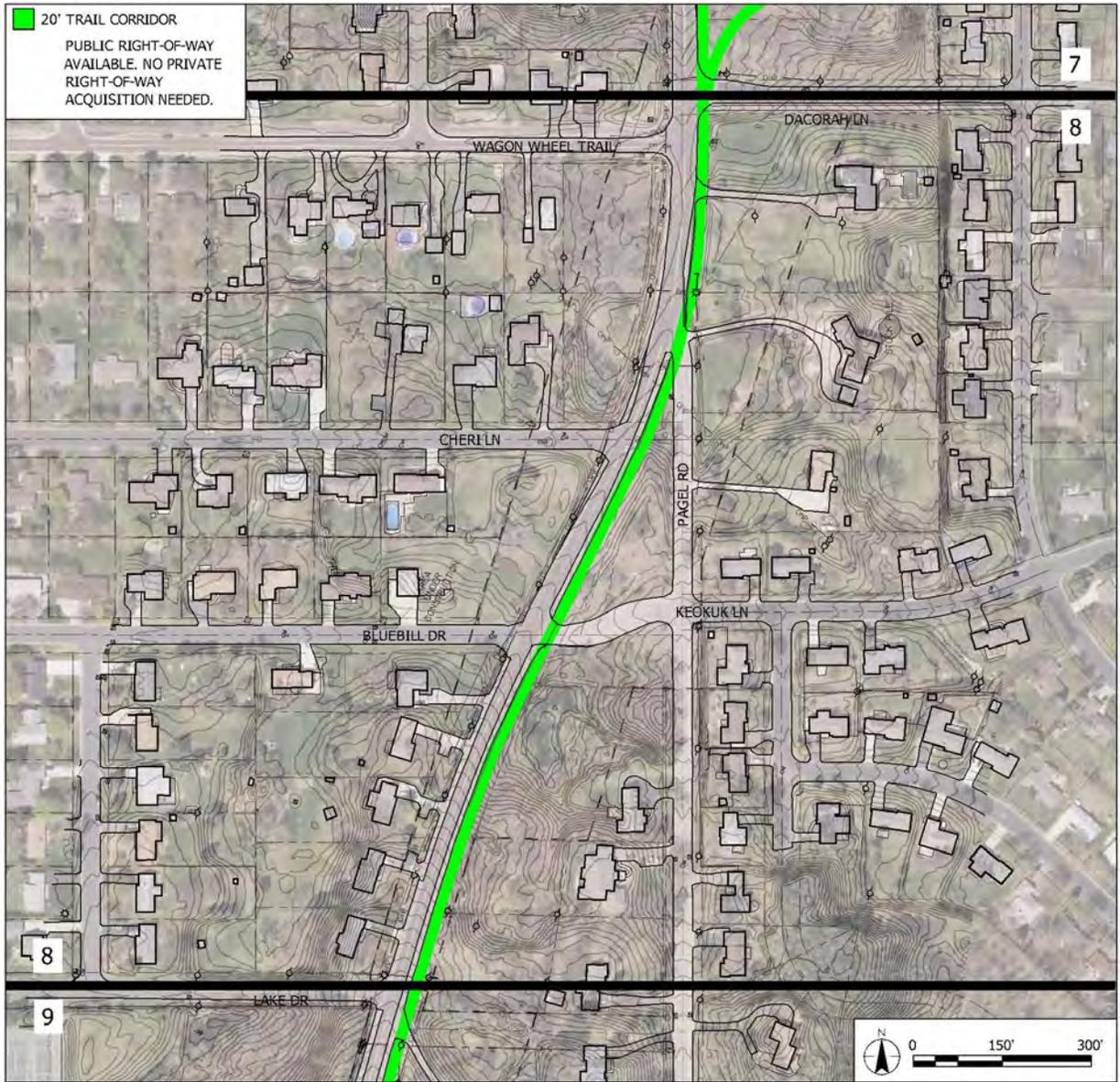


Figure 15: Trail Alignment in Segment 8 Using Public Right-of-Way
 (Decorah Lane to Lake Drive)



Figure 16: Trail Alignment in Segment 9 Using Public Right-of-Way
(Lake Drive to Mendota Heights Road)

6.0 COMMUNITY INPUT

The City of Mendota Heights shared trail design concepts at public meetings throughout the summer of 2016. While this report details technical considerations that would make a trail feasible, acquiring right-of-way from adjoining property owners is ultimately a political decision that requires strong support from the community and buy-in from both property owners and potential trail users. The following is a summary of comments and discussion at public meetings held to discuss a potential trail alignment. Appendix A includes the public participation plan for this outreach effort.

6.1 MENDOTA HEIGHTS 5K/PARKS CELEBRATION

City of Mendota Heights planning staff attended this event on June 4, 2016. Staff presented trail concepts and asked for feedback on the proposed Dodd Road alignment. Participants expressed the following desires regarding the potential trail:

- Overwhelmingly positive comments about establishing a trail along the corridor
- Safer corridor for walking and biking
- A separated trail facility is preferred over a wide shoulder
- Safer connection to Somerset Elementary School
- Pedestrian crossing improvements

6.2 PARKVIEW PLAZA AND VILLAGE COMMONS (08.25.16 AND 08.31.16)

City of Mendota Heights planning staff visited two senior housing facilities located along the Dodd Road corridor on August 25 and August 31, 2016. Staff presented trail concepts and asked for feedback on the proposed Dodd Road alignment. Participants expressed the following desires regarding the potential trail:

- Most residents would not use a trail facility on Dodd Road
- Walking/biking would not replace any vehicle trips for those that drive
- Some recreational walkers may use Dodd Road to reach other walking trails
- Pedestrian crossing at South Plaza Drive
- Connection to River to River Greenway
- Trail crossing Dodd Road at TH 110

7.0 PRELIMINARY COST ESTIMATES

Stantec prepared a preliminary cost estimate to construct each trail segment. **Costs do not include right of way acquisition or temporary construction easements.** Costs include a 20 percent construction contingency and a 25 percent engineering contingency (e.g. design, construction administration, survey, geotechnical work and legal fees for acquisitions). Detailed descriptions of the construction requirements for each segment are provided in Appendix B.

Table 2: Trail Construction Cost Estimates

Trail Segment	Length (LF)	Probable Construction Cost/LF	Probable Construction Cost
Segment 1 - Delaware Ave to Chippewa Ave	900	\$ 252.67	\$ 227,400
Segment 2 - Chippewa Ave to Emerson Ave	2600	\$ 269.02	\$ 699,450
Segment 3 - Emerson Ave to Wentworth Ave	2800	\$ 224.49	\$ 628,575
Segment 4 - Wentworth Ave to Marie Ave	2800	\$ 297.46	\$ 832,875
Segment 5 - Marie Ave to Maple St	[Trail construction planned]		
Segment 6 & 7 - Maple St to Hokah Ave	[Existing trail facilities to remain]		
Segment 7A - Apache St to Decorah Lane (Off-road through public right-of-way)	1500	\$ 117.75	\$ 176,625
Segment 7B - Hokah Ave to Decorah Lane (Along Dodd Rd)	1000	\$ 230.03	\$ 230,025
Segment 8 - Decorah Lane to Lake Dr	1650	\$ 372.41	\$ 614,475
Segment 9 - Lake Dr to Mendota Heights Rd	1600	\$ 144.14	\$ 230,625
Total Segment 1 - 9	14850		\$ 3,640,050

8.0 SUMMARY AND RECOMMENDATIONS

Public right-of-way along Dodd Road is finite and must serve multiple functions. Adding a trail entirely within the existing right-of-way is not feasible. Therefore, the City of Mendota Heights would have to acquire additional right-of-way along some portions of Dodd Road in order to construct a trail. In addition, private utilities within the right-of-way would also need to be relocated to support the trail alignment. Stantec recommends the City pursue the following next steps in order to advance implementation of a trail in this corridor:

- Continue to discuss the proposed alignment with citizens and elected officials to generate buy-in and support for the trail concept.
- Pursue trail construction in segments. This helps spread costs out over time. Begin construction along southern trail segments where right-of-way is publicly owned. Completed segments can help build public support for the trail and for extending the alignment further north where right-of-way acquisition is required.
- Initiate individual meetings with property owners along the trail alignment to assess support for the trail project and readiness to sell property or easements for trails segments.
- Continue conversations with Xcel Energy staff and other utility companies regarding relocation needs of private utilities. Utility staff expressed appreciation for early notice of these discussions and can more easily join productive partnerships when they are included early in the process.
- Look for opportunities through the development review process to acquire trail easements as properties change ownership.
- Work with MnDOT to install crossing improvements such as medians at key locations on Dodd Road during its 2018 resurfacing project to improve safe access to the trail.
- Both segments 7A and 7B create a continuous off-road connection throughout the trail corridor. While it is likely only feasible to construct one alignment in the short term, the City should pursue both alignments in the long term to maximize the trail's connectivity with existing trail and the City's park system.

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APPENDICES

**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix A Public Participation Plan
October 11, 2016

Appendix A PUBLIC PARTICIPATION PLAN



PUBLIC PARTICIPATION PLAN

Dodd Road Corridor Study

Purpose:

Dakota County's Statewide Health Improvement Program (SHIP) is funded by a grant from the Minnesota Department of Health to reduce chronic disease and improve health for all. The SHIP grant requires that the City engage target populations through community outreach as part of the proposed project. The City recognizes that public participation is an important component of the planning process. This plan is intended to outline public engagement strategies and methods to fulfil the grant award requirements.



Project Scope:

The City intends to conduct an in-depth analysis of the Dodd Road (State Trunk Highway 149) corridor in an effort to identify safe trail facility options and funding sources. Dodd Road is a key north-south transportation corridor through the community that requires a detailed analysis to identify opportunities and constraints to establishing an off-street trail facility. The study will include stakeholder engagement outreach to certain user groups that are more likely to depend on non-motorized transportation, including seniors and children.



Public Participation Methods:

In an effort to promote community engagement in the planning process and recognize the SHIP target populations, the following activities will be undertaken:

Parks and Recreation Commission

The Mendota Heights Parks and Recreation Commission will be presented project updates and will advise staff and consultants throughout the planning process. The Commission meets monthly and includes seven members and two high-school aged student representatives. All Commission meetings are posted in advance and open to the public. The meeting agendas will allow for public comment on the planning process. In addition to the regularly scheduled meetings, staff plans to host an open house prior to one of the Commission meetings.

Commission Members:

Joel Paper (Chair)
Ira Kipp
Pat Hinderscheid
Stephanie Brod Levine
David Miller
Jay Miller
Michael Toth
Claire Dunham (student)
Miles Bowen (student)

Focus Group Open Houses

Parkview Plaza and Village Commons are senior living/affordable housing facilities operated by the Dakota County Community Development Agency (CDA) and located along the Dodd Road corridor. The CDA’s Senior Housing Program is designed for adults over age 55 who meet the income eligibility requirements. The Village at Mendota Heights and Mendota Plaza are mixed-use commercial developments that serve as local and regional destinations located along the corridor. Staff plans to hold open houses at both facilities and prior to one of the Commission meetings to present the preliminary findings and get feedback from the residents.



Surveys

Staff plans to develop a short survey to be completed by students of area public/private schools and by attendees of the Parks Celebration to inform them about the planning process and get feedback regarding potential use of an off-street trail facility along the corridor.

Electronic Communications

Staff plans to utilize several electronic communication outlets to inform and engage stakeholders in the planning process. The City’s website and social media applications will be updated with current information on the planning process, including meeting agendas and materials. In addition, articles will be included in the weekly *Friday News* email and in the September edition of the *Heights Highlights* newsletter mailed to all property owners.



Public Participation Timeline:

Staff anticipates starting the project in May and finishing by the end of December 2016.

Public Participation Method	Stakeholder(s)	Tentative Timeline
Parks and Recreation Commission Meetings (6-7)	Commissioners, Residents	Monthly meetings (May – November)
Focus Group Open Houses (4)	Seniors citizens, business owners	July – November
Surveys (5)	Students, residents	September – October (schools) June 4 (Parks Celebration)
Electronic Communications	Residents, “friends/followers”	Continuous (website/social media) Weekly (<i>Friday News</i>) September (<i>Heights Highlights</i>)

**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Appendix B DETAILED COST ESTIMATES

**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 1 - Delaware Ave to Chippewa Ave						
<u>Length</u>	900	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	7200	SF
Gravel	12	LF		Gravel	10800	SF
Shouldering	2	LF		Shoulder	1800	SF
Common Ex	12	LF		Com Ex	10800	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	10800	SF
Topsoil Borrow	10	LF		Topsoil	9000	SF
Clearing	8	LF		Clearing	7200	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 7,000.00	\$ 7,000.00	
2	Traffic Control	LS	1	\$ 700.00	\$ 700.00	
3	Clearing & Grubbing	LS	1	\$ 5,000.00	\$ 5,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	60	\$ 5.00	\$ 300.00	
5	Common Excavation - Trail	CY	290	\$ 20.00	\$ 5,800.00	
6	Common Excavation - Cut Slopes	CY	230	\$ 20.00	\$ 4,600.00	
7	Subgrade Excavation	CY	120	\$ 20.00	\$ 2,400.00	
8	Common Borrow for Subgrade Ex	CY	120	\$ 15.00	\$ 1,800.00	
9	Common Borrow - Fill Slopes	CY	280	\$ 15.00	\$ 4,200.00	
10	Storm Sewer Pipe	LF	600	\$ 40.00	\$ 24,000.00	
11	Storm Sewer Structures	EA	3	\$ 3,500.00	\$ 10,500.00	
12	Retaining Wall	SF	1400	\$ 30.00	\$ 42,000.00	
13	Chain Link Fence	LF	300	\$ 20.00	\$ 6,000.00	
14	Aggregate Base	TN	460	\$ 15.00	\$ 6,900.00	
15	Aggregate Shouldering	TN	40	\$ 20.00	\$ 800.00	
16	Bituminous Pavement	TN	140	\$ 80.00	\$ 11,200.00	
17	Concrete Curb & Pedestrian Ramps	EA	3	\$ 2,000.00	\$ 6,000.00	
18	Topsoil Borrow (LV)	CY	230	\$ 30.00	\$ 6,900.00	
19	Erosion Control	LS	1	\$ 1,500.00	\$ 1,500.00	
20	Turf Establishment	SY	1000	\$ 3.00	\$ 3,000.00	
21	Signing & Striping	LS	1	\$ 1,000.00	\$ 1,000.00	
					Subtotal Construction Costs \$ 151,600.00	
					+/- 20% Construction Contingency \$ 30,320.00	
					\$ 181,920.00	
					+/- 25% Engineering, Admin, Legal, Etc \$ 45,480.00	
					Total Cost \$ 227,400.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 2 - Chippewa Ave to Emerson Ave						
Length	2600	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	20800	SF
Gravel	12	LF		Gravel	31200	SF
Shouldering	2	LF		Shoulder	5200	SF
Common Ex	12	LF		Com Ex	31200	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	31200	SF
Topsoil Borrow	10	LF		Topsoil	26000	SF
Clearing	8	LF		Clearing	20800	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 20,000.00	\$ 20,000.00	
2	Traffic Control	LS	1	\$ 2,000.00	\$ 2,000.00	
3	Clearing & Grubbing	LS	1	\$ 10,000.00	\$ 10,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	180	\$ 5.00	\$ 900.00	
5	Common Excavation - Trail	CY	830	\$ 20.00	\$ 16,600.00	
6	Common Excavation - Cut Slopes	CY	170	\$ 20.00	\$ 3,400.00	
7	Subgrade Excavation	CY	350	\$ 20.00	\$ 7,000.00	
8	Common Borrow for Subgrade Ex	CY	350	\$ 15.00	\$ 5,250.00	
9	Common Borrow - Fill Slopes	CY	3230	\$ 15.00	\$ 48,450.00	
10	Storm Sewer Pipe	LF	1600	\$ 40.00	\$ 64,000.00	
11	Storm Sewer Structures	EA	8	\$ 3,500.00	\$ 28,000.00	
12	Retaining Wall	SF	4450	\$ 30.00	\$ 133,500.00	
13	Chain Link Fence	LF	1050	\$ 20.00	\$ 21,000.00	
14	Aggregate Base	TN	1320	\$ 15.00	\$ 19,800.00	
15	Aggregate Shouldering	TN	100	\$ 20.00	\$ 2,000.00	
16	Bituminous Pavement	TN	390	\$ 80.00	\$ 31,200.00	
17	Concrete Curb & Pedestrian Ramps	EA	9	\$ 2,000.00	\$ 18,000.00	
18	Topsoil Borrow (LV)	CY	650	\$ 30.00	\$ 19,500.00	
19	Erosion Control	LS	1	\$ 4,000.00	\$ 4,000.00	
20	Turf Establishment	SY	2900	\$ 3.00	\$ 8,700.00	
21	Signing & Striping	LS	1	\$ 3,000.00	\$ 3,000.00	
				Subtotal Construction Costs	\$ 466,300.00	
				+/- 20% Construction Contingency	\$ 93,260.00	
					\$ 559,560.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 139,890.00	
				Total Cost	\$ 699,450.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 3 - Emerson Ave to Wentworth Ave						
Length	2800	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	22400	SF
Gravel	12	LF		Gravel	33600	SF
Shouldering	2	LF		Shoulder	5600	SF
Common Ex	12	LF		Com Ex	33600	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	33600	SF
Topsoil Borrow	10	LF		Topsoil	28000	SF
Clearing	8	LF		Clearing	22400	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 18,000.00	\$ 18,000.00	
2	Traffic Control	LS	1	\$ 1,800.00	\$ 1,800.00	
3	Clearing & Grubbing	LS	1	\$ 5,000.00	\$ 5,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	60	\$ 5.00	\$ 300.00	
5	Common Excavation - Trail	CY	890	\$ 20.00	\$ 17,800.00	
6	Common Excavation - Cut Slopes	CY	790	\$ 20.00	\$ 15,800.00	
7	Subgrade Excavation	CY	380	\$ 20.00	\$ 7,600.00	
8	Common Borrow for Subgrade Ex	CY	380	\$ 15.00	\$ 5,700.00	
9	Common Borrow - Fill Slopes	CY	950	\$ 15.00	\$ 14,250.00	
10	Storm Sewer Pipe	LF	200	\$ 40.00	\$ 8,000.00	
11	Storm Sewer Structures	EA	1	\$ 3,500.00	\$ 3,500.00	
12	Retaining Wall	SF	5980	\$ 30.00	\$ 179,400.00	
13	Chain Link Fence	LF	1495	\$ 20.00	\$ 29,900.00	
14	Aggregate Base	TN	1420	\$ 15.00	\$ 21,300.00	
15	Aggregate Shouldering	TN	100	\$ 20.00	\$ 2,000.00	
16	Bituminous Pavement	TN	420	\$ 80.00	\$ 33,600.00	
17	Concrete Curb & Pedestrian Ramps	EA	9	\$ 2,000.00	\$ 18,000.00	
18	Topsoil Borrow (LV)	CY	700	\$ 30.00	\$ 21,000.00	
19	Erosion Control	LS	1	\$ 3,500.00	\$ 3,500.00	
20	Turf Establishment	SY	3200	\$ 3.00	\$ 9,600.00	
21	Signing & Striping	LS	1	\$ 3,000.00	\$ 3,000.00	
				Subtotal Construction Costs	\$ 419,050.00	
				+/- 20% Construction Contingency	\$ 83,810.00	
					\$ 502,860.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 125,715.00	
				Total Cost	\$ 628,575.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 4 - Wentworth Ave to Marie Ave						
Length	2800	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	22400	SF
Gravel	12	LF		Gravel	33600	SF
Shouldering	2	LF		Shoulder	5600	SF
Common Ex	12	LF		Com Ex	33600	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	33600	SF
Topsoil Borrow	10	LF		Topsoil	28000	SF
Clearing	8	LF		Clearing	22400	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 26,000.00	\$ 26,000.00	
2	Traffic Control	LS	1	\$ 2,600.00	\$ 2,600.00	
3	Clearing & Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	120	\$ 5.00	\$ 600.00	
5	Common Excavation - Trail	CY	890	\$ 20.00	\$ 17,800.00	
6	Common Excavation - Cut Slopes	CY	800	\$ 20.00	\$ 16,000.00	
7	Subgrade Excavation	CY	380	\$ 20.00	\$ 7,600.00	
8	Common Borrow for Subgrade Ex	CY	380	\$ 15.00	\$ 5,700.00	
9	Common Borrow - Fill Slopes	CY	1380	\$ 15.00	\$ 20,700.00	
10	Storm Sewer Pipe	LF	1300	\$ 40.00	\$ 52,000.00	
11	Storm Sewer Structures	EA	7	\$ 3,500.00	\$ 24,500.00	
12	Retaining Wall	SF	7325	\$ 30.00	\$ 219,750.00	
13	Chain Link Fence	LF	1650	\$ 20.00	\$ 33,000.00	
14	Aggregate Base	TN	1420	\$ 15.00	\$ 21,300.00	
15	Aggregate Shouldering	TN	100	\$ 20.00	\$ 2,000.00	
16	Bituminous Pavement	TN	420	\$ 80.00	\$ 33,600.00	
17	Concrete Curb & Pedestrian Ramps	EA	9	\$ 2,000.00	\$ 18,000.00	
18	Topsoil Borrow (LV)	CY	700	\$ 30.00	\$ 21,000.00	
19	Erosion Control	LS	1	\$ 5,500.00	\$ 5,500.00	
20	Turf Establishment	SY	3200	\$ 3.00	\$ 9,600.00	
21	Signing & Striping	LS	1	\$ 3,000.00	\$ 3,000.00	
				Subtotal Construction Costs	\$ 555,250.00	
				+/- 20% Construction Contingency	\$ 111,050.00	
					\$ 666,300.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 166,575.00	
				Total Cost	\$ 832,875.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 7A - Apache St to Decorah Lane (Off Street through County Right of Way)						
Length	1500	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	12000	SF
Gravel	12	LF		Gravel	18000	SF
Shouldering	4	LF		Shoulder	6000	SF
Common Ex	12	LF		Com Ex	18000	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	18000	SF
Topsoil Borrow	10	LF		Topsoil	15000	SF
Clearing	30	LF		Clearing	45000	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 5,500.00	\$ 5,500.00	
2	Traffic Control	LS	1	\$ 500.00	\$ 500.00	
3	Clearing & Grubbing	LS	1	\$ 15,000.00	\$ 15,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	20	\$ 5.00	\$ 100.00	
5	Common Excavation - Trail	CY	480	\$ 20.00	\$ 9,600.00	
6	Common Excavation - Cut Slopes	CY	0	\$ 20.00	\$ -	
7	Subgrade Excavation	CY	670	\$ 20.00	\$ 13,400.00	
8	Common Borrow for Subgrade Ex	CY	670	\$ 15.00	\$ 10,050.00	
9	Common Borrow - Fill Slopes	CY	0	\$ 15.00	\$ -	
10	Storm Sewer Pipe	LF	200	\$ 40.00	\$ 8,000.00	
11	Storm Sewer Structures	EA	1	\$ 3,500.00	\$ 3,500.00	
12	Retaining Wall	SF	0	\$ 30.00	\$ -	
13	Chain Link Fence	LF	0	\$ 20.00	\$ -	
14	Aggregate Base	TN	760	\$ 15.00	\$ 11,400.00	
15	Aggregate Shouldering	TN	110	\$ 20.00	\$ 2,200.00	
16	Bituminous Pavement	TN	230	\$ 80.00	\$ 18,400.00	
17	Concrete Curb & Pedestrian Ramps	EA	1	\$ 2,000.00	\$ 2,000.00	
18	Topsoil Borrow (LV)	CY	380	\$ 30.00	\$ 11,400.00	
19	Erosion Control	LS	1	\$ 1,000.00	\$ 1,000.00	
20	Turf Establishment	SY	1700	\$ 3.00	\$ 5,100.00	
21	Signing & Striping	LS	1	\$ 600.00	\$ 600.00	
				Subtotal Construction Costs	\$ 117,750.00	
				+/- 20% Construction Contingency	\$ 23,550.00	
					\$ 141,300.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 35,325.00	
				Total Cost	\$ 176,625.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 7B - Hokah Ave to Decorah Lane (Along Dodd Rd)						
Length	1000	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	8000	SF
Gravel	12	LF		Gravel	12000	SF
Shouldering	2	LF		Shoulder	2000	SF
Common Ex	12	LF		Com Ex	12000	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	12000	SF
Topsoil Borrow	10	LF		Topsoil	10000	SF
Clearing	8	LF		Clearing	8000	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 7,000.00	\$ 7,000.00	
2	Traffic Control	LS	1	\$ 700.00	\$ 700.00	
3	Clearing & Grubbing	LS	1	\$ 5,000.00	\$ 5,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	20	\$ 5.00	\$ 100.00	
5	Common Excavation - Trail	CY	320	\$ 20.00	\$ 6,400.00	
6	Common Excavation - Cut Slopes	CY	230	\$ 20.00	\$ 4,600.00	
7	Subgrade Excavation	CY	140	\$ 20.00	\$ 2,800.00	
8	Common Borrow for Subgrade Ex	CY	140	\$ 15.00	\$ 2,100.00	
9	Common Borrow - Fill Slopes	CY	840	\$ 15.00	\$ 12,600.00	
10	Storm Sewer Pipe	LF	600	\$ 40.00	\$ 24,000.00	
11	Storm Sewer Structures	EA	3	\$ 3,500.00	\$ 10,500.00	
12	Retaining Wall	SF	1050	\$ 30.00	\$ 31,500.00	
13	Chain Link Fence	LF	300	\$ 20.00	\$ 6,000.00	
14	Aggregate Base	TN	510	\$ 15.00	\$ 7,650.00	
15	Aggregate Shouldering	TN	40	\$ 20.00	\$ 800.00	
16	Bituminous Pavement	TN	150	\$ 80.00	\$ 12,000.00	
17	Concrete Curb & Pedestrian Ramps	EA	3	\$ 2,000.00	\$ 6,000.00	
18	Topsoil Borrow (LV)	CY	250	\$ 30.00	\$ 7,500.00	
19	Erosion Control	LS	1	\$ 1,500.00	\$ 1,500.00	
20	Turf Establishment	SY	1200	\$ 3.00	\$ 3,600.00	
21	Signing & Striping	LS	1	\$ 1,000.00	\$ 1,000.00	
				Subtotal Construction Costs	\$ 153,350.00	
				+/- 20% Construction Contingency	\$ 30,670.00	
					\$ 184,020.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 46,005.00	
				Total Cost	\$ 230,025.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 8 - Decorah Lane to Lake Dr						
Length	1650	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	13200	SF
Gravel	12	LF		Gravel	19800	SF
Shouldering	2	LF		Shoulder	3300	SF
Common Ex	12	LF		Com Ex	19800	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	19800	SF
Topsoil Borrow	10	LF		Topsoil	16500	SF
Clearing	8	LF		Clearing	13200	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 19,000.00	\$ 19,000.00	
2	Traffic Control	LS	1	\$ 1,900.00	\$ 1,900.00	
3	Clearing & Grubbing	LS	1	\$ 7,500.00	\$ 7,500.00	
4	Remove Pagel Rd Intersection	SY	400	\$ 20.00	\$ 8,000.00	
5	Common Excavation - Trail	CY	530	\$ 20.00	\$ 10,600.00	
6	Common Excavation - Cut Slopes	CY	0	\$ 20.00	\$ -	
7	Subgrade Excavation	CY	220	\$ 20.00	\$ 4,400.00	
8	Common Borrow for Subgrade Ex	CY	220	\$ 15.00	\$ 3,300.00	
9	Common Borrow - Fill Slopes	CY	1740	\$ 15.00	\$ 26,100.00	
10	Storm Sewer Pipe	LF	500	\$ 40.00	\$ 20,000.00	
11	Storm Sewer Structures	EA	3	\$ 3,500.00	\$ 10,500.00	
12	Retaining Wall	SF	7025	\$ 30.00	\$ 210,750.00	
13	Chain Link Fence	LF	1250	\$ 20.00	\$ 25,000.00	
14	Aggregate Base	TN	840	\$ 15.00	\$ 12,600.00	
15	Aggregate Shouldering	TN	60	\$ 20.00	\$ 1,200.00	
16	Bituminous Pavement	TN	250	\$ 80.00	\$ 20,000.00	
17	Concrete Curb & Pedestrian Ramps	EA	3	\$ 2,000.00	\$ 6,000.00	
18	Topsoil Borrow (LV)	CY	420	\$ 30.00	\$ 12,600.00	
19	Erosion Control	LS	1	\$ 3,000.00	\$ 3,000.00	
20	Turf Establishment	SY	1900	\$ 3.00	\$ 5,700.00	
21	Signing & Striping	LS	1	\$ 1,500.00	\$ 1,500.00	
				Subtotal Construction Costs	\$ 409,650.00	
				+/- 20% Construction Contingency	\$ 81,930.00	
					\$ 491,580.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 122,895.00	
				Total Cost	\$ 614,475.00	



**DODD ROAD
TRAIL FEASIBILITY STUDY**

Appendix B Detailed Cost Estimates
October 11, 2016

Segment 9 - Lake Dr to Mendota Heights Rd						
Length	1600	LF				
<u>Width</u>				<u>Area</u>		
Bit	8	LF		Bit	12800	SF
Gravel	12	LF		Gravel	19200	SF
Shouldering	2	LF		Shoulder	3200	SF
Common Ex	12	LF		Com Ex	19200	SF
Subgrade Ex/Com Bor	12	LF		SG Ex/CB	19200	SF
Topsoil Borrow	10	LF		Topsoil	16000	SF
Clearing	8	LF		Clearing	12800	SF
<u>Thickness</u>						
Bit	2.5	IN				
Gravel	6	IN				
Shouldering	2.5	IN				
Common Ex	0.71	FT				
Subgrade Ex/Com Bor	1	FT				
Topsoil Borrow	0.5	FT				
No.	Item	Unit	Quantity	Unit Price	Total Price	
1	Mobilization	LS	1	\$ 7,500.00	\$ 7,500.00	
2	Traffic Control	LS	1	\$ 750.00	\$ 750.00	
3	Clearing & Grubbing	LS	1	\$ 5,000.00	\$ 5,000.00	
4	Remove Curb/ Bit Trail / Conc Walk	SY	40	\$ 5.00	\$ 200.00	
5	Common Excavation - Trail	CY	510	\$ 20.00	\$ 10,200.00	
6	Common Excavation - Cut Slopes	CY	790	\$ 20.00	\$ 15,800.00	
7	Subgrade Excavation	CY	220	\$ 20.00	\$ 4,400.00	
8	Common Borrow for Subgrade Ex	CY	220	\$ 15.00	\$ 3,300.00	
9	Common Borrow - Fill Slopes	CY	2530	\$ 15.00	\$ 37,950.00	
10	Storm Sewer Pipe	LF	200	\$ 40.00	\$ 8,000.00	
11	Storm Sewer Structures	EA	1	\$ 3,500.00	\$ 3,500.00	
12	Retaining Wall	SF	0	\$ 30.00	\$ -	
13	Chain Link Fence	LF	0	\$ 20.00	\$ -	
14	Aggregate Base	TN	810	\$ 15.00	\$ 12,150.00	
15	Aggregate Shouldering	TN	60	\$ 20.00	\$ 1,200.00	
16	Bituminous Pavement	TN	240	\$ 80.00	\$ 19,200.00	
17	Concrete Curb & Pedestrian Ramps	EA	2	\$ 2,000.00	\$ 4,000.00	
18	Topsoil Borrow (LV)	CY	400	\$ 30.00	\$ 12,000.00	
19	Erosion Control	LS	1	\$ 1,500.00	\$ 1,500.00	
20	Turf Establishment	SY	1800	\$ 3.00	\$ 5,400.00	
21	Signing & Striping	LS	1	\$ 1,700.00	\$ 1,700.00	
				Subtotal Construction Costs	\$ 153,750.00	
				+/- 20% Construction Contingency	\$ 30,750.00	
					\$ 184,500.00	
				+/- 25% Engineering, Admin, Legal, Etc	\$ 46,125.00	
				Total Cost	\$ 230,625.00	

