Application

19842 - 2024 Multiuse Trails and Bicycle Facilities
20479 - County Road D Multiuse Trail
Regional Solicitation - Bicycle and Pedestrian Facilities

Status: Submitted
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Primary Contact

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What Grant Programs are you most interested in? Regional Solicitation - Roadways Including Multimodal Elements

Organization Information

Name: RAMSEY COUNTY
Jurisdictional Agency (if different):
Organization Type: County Government
Organization Website:
Address: DEPT OF PUBLIC WORKS
1425 PAUL KIRKWOOD DR

* ARDEN HILLS (City) Minnesota (State/Province) 55112 (Postal Code/Zip)

County: Ramsey
Phone:* 651-266-7100 (Ext.)

Fax:
PeopleSoft Vendor Number 0000023983A30

Project Information

Project Name County Road D Multiuse Trail
Primary County where the Project is Located Ramsey
Cities or Townships where the Project is Located: Vadnais Heights, Little Canada, Maplewood
Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

County Road D is a minor arterial road located in Ramsey County that over time has deteriorated in quality. With its reconstruction, Ramsey County has an opportunity to provide multimodal connections to areas of high need and further complete the region's Regional Bicycle Network with a new trail along a Tier 1 RBTN Alignment. The proposed project will include the addition of an off-street, multi-use path on a minor arterial road, along an approximately one-mile segment from Greenbrier Street to County Road D Circle. The new multi-use trail will align with Ramsey County's Active Living Plan and construct a trail along a Tier 1 RBTN Alignment.

The project is essential for providing safe transportation options for residents of Vadnais Heights, Little Canada, and Maplewood, all of which are along this corridor. The proposed trail's proximity to a large concentration of affordable housing will result in direct benefits for high-need residents. Over 300 units of affordable housing are located north of County Road D. Currently, residents of these units are forced to use the shoulder of the road to walk, as evidenced by paths worn into the grass. With a high quality, off-street multiuse path, conflicts with motor vehicles will be eliminated, resulting in a comfortable and safe area for all skill levels and reducing the risk of vehicle/pedestrian crashes.

The trail will connect to the greater network of bike trails in Ramsey County and the region, including access to the nearby Maplewood Mall area. In addition to being a major employment area, this site is a future station for the METRO Purple Line, a high-frequency transitway that will connect residents to employment opportunities in downtown St. Paul. The trail would also connect residents with the Regional Bicycle Trail Network and to a major east/west trail directly south of County Road D. The proposed trail will allow all residents, including those without a vehicle, to access job opportunities, parks, and other spaces to recreate.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.

CONSTRUCT 6000 FEET OF MULTIUSE TRAIL ALONG COUNTY ROAD D IN RAMSEY COUNTY BETWEEN GREENBRIER STREET AND COUNTY ROAD D CIRCLE

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles)

1.1

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?

No

If yes, please identify the source(s)

Federal Amount

$3,005,348.56

Match Amount

$751,337.14

Minimum of 20% of project total

Project Total

$3,756,685.70

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage

20.0%

Minimum of 20%
Compute the match percentage by dividing the match amount by the project total

Source of Match Funds

State Aid Funds

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one:

2028

Select 2026 or 2027 for TDM and Unique projects only. For all other applications, select 2028 or 2029.

Additional Program Years:

2025, 2026, 2027

Select all years that are feasible if funding in an earlier year becomes available.

Project Information

If your project has already been assigned a State Aid Project # (SAP or SP)

Please indicate here SAP/SP#.	062-619-039
Location	
County, City, or Lead Agency	Ramsey County
Name of Trail/Ped Facility:	County Road D Multiuse Trail
(example; CEDAR LAKE TRAIL)	
IF TRAIL/PED FACILITY IS ADJACENT TO ROADWAY:	
Road System	CSAH
(TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)	
Road/Route No.	19
(Example: 53 for CSAH 53)	
Name of Road	County Road D
(Example: 1st ST., Main Ave.)	
TERMINI: Termini listed must be within 0.3 miles of any work	
From: **Road System**	City Street
(TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)	
Road/Route No.	
(Example: 53 for CSAH 53)	
Name of Road	Greenbrier Street
(Example: 1st ST., Main Ave.)	
To: **Road System**	City Street
DO NOT INCLUDE LEGAL DESCRIPTION; INCLUDE NAME OF ROADWAY IF MAJORITY OF FACILITY RUNS ADJACENT TO A SINGLE CORRIDOR	
Road/Route No.	
(Example: 53 for CSAH 53)	
Name of Road	County Road D Circle
(Example: 1st ST., Main Ave.)	
In the City/Cities of:	Vadnais Heights, Little Canada, Maplewood
(List all cities within project limits)	
IF TRAIL/PED FACILITY IS NOT ADJACENT TO ROADWAY: **Termini: Termini listed must be within 0.3 miles of any work**	
From:	
To:	
Or	
At:	
In the City/Cities of:	
(List all cities within project limits)	
Primary Types of Work (Check all that apply)	
Multi-Use Trail	Yes
Reconstruct Trail	
Resurface Trail	
Bituminous Pavement	Yes
Concrete Walk	
Pedestrian Bridge	
Signal Revision	
Landscaping	Yes
Other (do not include incidental items)	
BRIDGE/CULVERT PROJECTS (IF APPLICABLE)	
Old Bridge/Culvert No.:	
New Bridge/Culvert No.:	
Structure is Over/Under (Bridge or culvert name):	
Zip Code where Majority of Work is Being Performed	55109
Approximate Begin Construction Date (MO/YR)	03/01/2025
Approximate End Construction Date (MO/YR)	11/30/2025
Miles of Pedestrian Facility/Trail (nearest 0.1 miles):	1.1
Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles):	1.1
Is this a new trail?	Yes

Requirements - All Projects

All Projects

1. The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2. The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

The overall goal of this project is to provide residents and visitors access to and through the area via non-motorized transportation, including biking and walking, with the creation of a new multi-use trail along County Road D. In this sense, this project can relate to most major goals and objectives described in the 2040 Transportation Policy Plan. However, this project will specifically contribute to the following goals:

- GOAL: SAFETY AND SECURITY (p. 58-59): This project will provide safe and comfortable facilities for pedestrians and bicycles which currently do not exist along this corridor. This project also addresses the need for a safe crossing across County Road D.

- GOAL: ACCESS TO DESTINATIONS (p. 62-63): This project will greatly improve the availability and quality of multimodal travel options by providing a pedestrian/bicycle corridor for residents along this road and connecting east to the Maplewood Mall. It will also play a role in further connecting to the greater regional bicycle trail as a Tier 1 RBTN Corridor.

- GOAL: HEALTHY ENVIRONMENT (p.66-69): This project engages the goal to promote the health of communities by lowering the human impact on the environment through transportation choices while providing walker and riders of all skill levels a safe, comfortable area to travel.

(Limit 2,800 characters; approximately 400 words)

3. The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.

Vadnais Heights 2040 Comprehensive Plan, Pg 58 (Parks and Trails): This project is referenced in the Vadnais Heights 2040 Comprehensive Plan, which guides for a multi-use trail along this corridor, eventually connecting to the Maplewood Mall area.

Regional Bike Trail Network: This area has been identified as a Tier 1 Corridor for the Regional Bike and Trail Network as an East/West connection. Completion of this project would fill a gap in the regional bicycle network.

(Limit 2,800 characters; approximately 400 words)

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement. Yes

5. Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6. Applicants must not submit an application for the same project in more than one funding sub-category.

Check the box to indicate that the project meets this requirement. Yes

7. The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is $500,000 and the maximum award is the total amount available each funding cycle (approximately $4,000,000 for the 2024 funding cycle).

Multiuse Trails and Bicycle Facilities: *$250,000 to $5,500,000*
Pedestrian Facilities (Sidewalks, Streetscaping, and ADA): *$250,000 to $2,000,000*
Safe Routes to School: *$250,000 to $1,000,000*

Check the box to indicate that the project meets this requirement. Yes

8. The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9. In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For future Regional Solicitation funding cycles, this requirement may include that the plan has undergone a recent update, e.g., within five years prior to application.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

Date plan completed: 12/31/1997

Link to plan:

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

10. The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11. The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement. This includes assurance of year-round use of bicycle, pedestrian, and transit facilities, per FHWA direction established 8/27/2008 and updated 4/15/2019. Unique projects are exempt from this qualifying requirement.

Check the box to indicate that the project meets this requirement. Yes

12. The project must represent a permanent improvement with independent utility. The term ?independent utility? means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match.

Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13. The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14. The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Requirements - Bicycle and Pedestrian Facilities Projects

1. All projects must relate to surface transportation. As an example, for multiuse trail and bicycle facilities, surface transportation is defined as primarily serving a commuting purpose and/or that connect two destination points. A facility may serve both a transportation purpose and a recreational purpose; a facility that connects people to recreational destinations may be considered to have a transportation purpose.

Check the box to indicate that the project meets this requirement. Yes

Multiuse Trails on Active Railroad Right-of-Way:

2. All multiuse trail projects that are located within right-of-way occupied by an active railroad must attach an agreement with the railroad that this right-of-way will be used for trail purposes.

Check the box to indicate that the project meets this requirement.

Upload Agreement PDF

Check the box to indicate that the project is not in active railroad right-of-way. Yes

Multiuse Trails and Bicycle Facilities projects only:

3. All applications must include a letter from the operator of the facility confirming that they will remove snow and ice for year-round bicycle and pedestrian use. The Minnesota Pollution Control Agency has a resource for best practices when using salt. Upload PDF of Agreement in Other Attachments.

Check the box to indicate that the project meets this requirement. Yes

Upload PDF of Agreement in Other Attachments.

Safe Routes to School projects only:

4. All projects must be located within a two-mile radius of the associated primary, middle, or high school site.

Check the box to indicate that the project meets this requirement.

5. All schools benefitting from the SRTS program must conduct after-implementation surveys. These include the student travel tally form and the parent survey available on the National Center for SRTS website. The school(s) must submit the after-evaluation data to the National Center for SRTS within a year of the project completion date. Additional guidance regarding evaluation can be found at the MnDOT SRTS website.

Check the box to indicate that the applicant understands this requirement and will submit data to the National Center for SRTS within one year of project completion.

Requirements - Bicycle and Pedestrian Facilities Projects

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES **Cost**

Mobilization (approx. 5% of total cost)	$200,000.00
Removals (approx. 5% of total cost)	$127,533.75
Roadway (grading, borrow, etc.)	$530,619.00
Roadway (aggregates and paving)	$0.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$1,006,375.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$0.00
Traffic Control	$96,050.00
Striping	$32,011.45
Signing	$0.00
Lighting	$0.00
Turf - Erosion & Landscaping	$385,200.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$0.00
Other Roadway Elements	$19,500.00
Totals	**$2,397,289.20**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$1,175,026.50
Sidewalk Construction	$149,860.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$15,060.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$0.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$19,450.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$1,359,396.50**

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	$0.00
Stations, Stops, and Terminals	$0.00
Support Facilities	$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	$0.00
Vehicles	$0.00
Contingencies	$0.00
Right-of-Way	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

PROTECT Funds Eligibility

One of the new federal funding sources is Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT). Please describe which specific elements of your project and associated costs out of the Total TAB-Eligible Costs are eligible to receive PROTECT funds. Examples of potential eligible items may include: storm sewer, ponding, erosion control/landscaping, retaining walls, new bridges over floodplains, and road realignments out of floodplains.

INFORMATION: Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program Implementation Guidance (dot.gov).

Response:

The County Road D Multiuse Trail Project will include storm sewer and erosion control/landscaping. The total associated cost for these elements is $1,391,575.

Totals

Total Cost	$3,756,685.70
Construction Cost Total	$3,756,685.70
Transit Operating Cost Total	$0.00

Measure A: Project Location Relative to the RBTN

Select one:

Tier 1, Priority RBTN Corridor	Yes
Tier 1, RBTN Alignment	
Tier 2, RBTN Corridor	
Tier 2, RBTN Alignment	
Direct connection to an RBTN Tier 1 corridor or alignment	
Direct connection to an RBTN Tier 2 corridor or alignment	
OR	
Project is not located on or directly connected to the RBTN but is part of a local system and identified within an adopted county, city or regional parks implementing agency plan.	
Upload Map	1702594704680_107_RBTN Orientation Map.pdf

Please upload attachment in PDF form

Measure A: Population Summary

Existing Population Within One Mile (Integer Only)	16788
Existing Employment Within One Mile (Integer Only)	14467
Upload the "Population Summary" map	1702594743682_105_Population Employment Summary Map.pdf

Please upload attachment in PDF form

Measure A: Engagement

i. Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.

ii. Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.

iii. Describe the progression of engagement activities in this project. A full response should answer these questions:

1. *What engagement methods and tools were used?*
2. *How did you engage specific communities and populations likely to be directly impacted by the project?*
3. *What techniques did you use to reach populations traditionally not involved in community engagement related to transportation projects?*
4. *How were the project?s purpose and need identified?*
5. *How was the community engaged as the project was developed and designed?*
6. *How did you provide multiple opportunities for of Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development?*
7. *How did engagement influence the project plans or recommendations? How did you share back findings with community and re-engage to assess responsiveness of these changes?*
8. *If applicable, how will NEPA or Title VI regulations will guide engagement activities?*

Response:

In the past decade, the project area has seen rapid population growth, more than doubling the number of residents in the area from 2010 to 2020. Of this population, more than one-third of residents are people of color. Asian or Pacific Islander makes up the largest group, followed by African American/Black residents and Hispanic or Latino. 13% of residents within a half mile of the project area are 65 years or older, while 23% are under the age of 18. 12% of the population lives with a disability. The project area contains a high number of low-income households, with 25% of households making less than $35,000 a year--approximately 30% AMI. 301 units of affordable housing are along County Road D and would have direct access to a new multi-use trail, expanding their mobility and increasing their choices for transportation.

An open house on the project was held on February 28, 2023 to solicit feedback and identify concerns within the project area. Area residents were notified by mailer for the in-person session and additional opportunities to provide feedback online or over the phone. The attendants voiced positive feedback on the new proposed crosswalk and the improved safety for students waiting for the school bus. Online comments demonstrated overwhelming support for the proposed path and noted that residents are often seen walking in the grass or along the side of the roadway in the project area. This is most often seen near Highcrest Apartments and Shadowlawn Estates, two affordable housing developments in the project area.

The Ramsey County Pedestrian and Bicycle Plan identified gaps and areas of high stress in the County's bicycle and pedestrian network. The plan identified County Road D as a high-stress roadway and a corridor with high potential usage. This 2015 report involved a combination of geospatial data analysis and community engagement and conversations. Efforts included in-person engagement, open houses, public surveys, and listening sessions, and populations that have been historically under-represented in the planning process were specifically solicited. This was achieved by working closely with organizations working with specific populations or communities, holding meetings in places people were already congregating, and creating jargon-free user-friendly materials.

Feedback from Ramsey County's public engagement efforts influenced the design of this project. The residents' desire for safe, off-street trails guided the project to a multiuse trail separated from motor vehicle traffic. Respondents' desire to have a cohesive, connected network helped prioritize this project, which would be an important piece connecting the Regional Bicycle Trail Network (RBTN) as a Tier 1 corridor.

(Limit 2,800 characters; approximately 400 words):

Measure B: Disadvantaged Communities Benefits and Impacts

Describe the project?s benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:

? pedestrian and bicycle safety improvements;
? public health benefits;
? direct access improvements for residents or improved access to destinations such as jobs, school, health care, or other;
? travel time improvements;
? gap closures;
? new transportation services or modal options;
? leveraging of other beneficial projects and investments;
? and/or community connection and cohesion improvements.

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Disadvantaged communities residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Disadvantaged communities specifically identified through engagement, and substantiate benefits with data.

Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.

Below is a list of potential negative impacts. This is not an exhaustive list.

? Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
? Increased speed and/or ?cut-through? traffic.
? Removed or diminished safe bicycle access.
? Inclusion of some other barrier to access to jobs and other destinations.

Response:

The proposed trail's proximity to a large concentration of affordable housing will result in direct benefits for high-need residents. Over 300 units of affordable housing are located north of County Road D. Currently, residents of these units are forced to use the shoulder of the road to walk, as evidenced by paths worn into the grass. With a high quality, off-street multiuse path, conflicts with motor vehicles will be eliminated, resulting in a comfortable and safe area for all skill levels and reducing the risk of vehicle/pedestrian crashes. This will allow all residents, including those without a vehicle, to access job opportunities, parks, and other spaces to recreate.

Public engagement and outreach have revealed concern from residents about the safety of children waiting for the school bus along County Road D. Without a safe place to wait, students are not able to comfortably wait for the bus to pick them up. With designated space for pedestrians along this roadway, students can more easily and safely ride the bus to school. This provides an environmentally friendly way for students to travel to school and benefits families with limited access to personal vehicles.

This project will increase residents' access to employment centers, both in the immediate area and by connection to the regional transit system. Notably, the project will connect to the future METRO Purple Line, providing high frequency, all-day, bidirectional transit to and from downtown St. Paul, giving residents access to tens of thousands of jobs in the urban core. The proposed trail will provide vital first- and last-mile connections for users of the current transit system and future Purple Line.

The benefits of increased mobility via walking, biking, and transit not only give residents alternatives to traveling by car, but also provide economic opportunity and health benefits. Reduced vehicular traffic results in cleaner air and an increased quality of life for residents compared to those near heavily trafficked roads. Residents are also increasingly able to access jobs and daily needs without a car, allowing for people who cannot or chose not to own a vehicle to not need to sacrifice mobility. In addition to employment access, residents will be connected to the regional bicycle network and have access to local and regional parks. The ability to use greenspace for exercise and to enjoy nature would have a notable effect on residents' health and well-being.

The proposed project will not result in any permanent negative impacts on area residents, including disadvantaged residents. The project team will work with the community throughout construction to limit construction impacts for nearby business owners and those living in the adjacent affordable housing.

(Limit 2,800 characters; approximately 400 words):

Measure C: Affordable Housing Access

Describe any affordable housing developments?existing, under construction, or planned?within ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the project?s benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

- *? specific direct access improvements for residents*
- *? improved access to destinations such as jobs, school, health care or other;*
- *? new transportation services or modal options;*
- *? and/or community connection and cohesion improvements.*

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

Response:

The proposed project's proximity to a large concentration of affordable housing will directly increase access for currently under-served residents of affordable housing. 301 units of affordable housing are located on County Road D within the project area. These buildings make up the entirety of affordable housing in Vadnais Heights, and the completion of this project would allow these residents to access the greater network of bicycle and pedestrian facilities, increasing access to employment, retail, and parks and recreation without the need for a motor vehicle. Currently, County Road D does not have a sidewalk or trail, forcing residents to walk or bike directly on the roadway, co-mingling with motor vehicles and resulting in unsafe conditions. A new multiuse trail in this area would provide them with safe, comfortable methods of traveling by foot or on wheels. This includes destinations such as the Maplewood Mall area, a large concentration of jobs, retail, and food.

Not only does this give residents more options when deciding how to travel, but single-car or no-car households will have a marked improvement in their quality of travel. Public engagement has identified concerns from residents with unsafe and uncomfortable waiting conditions for students riding the school bus in the morning. A new multiuse path would give these children a safe place to wait without the need for conflict with motor vehicles during the morning rush hour.

The trail will connect to the greater network of bike trails in Ramsey County and the region, including access to the nearby Maplewood Mall area. In addition to being a major employment area, this site is a future station for the METRO Purple Line, a high-frequency transitway that will connect residents to employment opportunities in downtown St. Paul. The trail would also connect residents with the Regional Bicycle Trail Network and to a major east/west trail directly south of County Road D. This trail would not only expand the area accessible by residents, but also give access to outdoor areas for residents to enjoy and recreate in.

With the increased access afforded by the multiuse trail and the connections to the greater regional bicycle network to the east and west, residents of these units will have increased mobility options for choosing walking, biking, and transit for their daily needs. This area is designated as a Tier 1 bicycle route in the Regional Bicycle Trail Network, meaning bikers utilize this area, despite no designated facilities. More complete bike infrastructure is likely to further increase usage. A mid-street crossing will also be added, giving pedestrians and cyclists a marked, highly visible trail crossing across County Road D without the need to travel to an intersection.

(Limit 2,800 characters; approximately 400 words):

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:	
Project?s census tracts are above the regional average for population in poverty or population of color (Regional Environmental Justice Area):	Yes
Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):	
Upload the ?Socio-Economic Conditions? map used for this measure.	1702595124990_106_Socio Economic Conditions Map.pdf

Measure A: Bikeway Network Gaps, Physical Barriers, and Continuity of Bicycle Facilities

PART 1: Qualitative assessment of project narrative discussing how the project will close a bicycle network gap, create a new or improved physical bike barrier crossing, and/or improve continuity and connections between jurisdictions.

Specifically, describe how the project would accomplish the following: Close a transportation network gap, provide a facility that crosses or circumvents a physical barrier, and/or improve continuity or connections between jurisdictions.

Bike system gap improvements include the following:

- *Providing a missing link between existing or improved segments of a local transportation network or regional bicycle facility (i.e., regional trail or RBTN alignment);*
- *Improving bikeability to better serve all ability and experience levels by:*
  - *Providing a safer, more protected on-street facility or off-road trail;*
  - *Improving safety of bicycle crossings at busy intersections (e.g., through signal operations, revised signage, pavement markings, etc.); OR*
  - *Providing a trail adjacent or parallel to a highway or arterial roadway or improving a bike route along a nearby and parallel lower-volume neighborhood collector or local street.*

Physical bicycle barrier crossing improvements include grade-separated crossings (over or under) of rivers and streams, railroad corridors, freeways and expressways, and multi-lane arterials, or enhanced routes to circumvent the barrier by channeling bicyclists to existing safe crossings or grade separations. Surface crossing improvements (at-grade) of major highway and rail barriers that upgrade the bicycle facility treatment or replace an existing facility at the end of its useful life may also be considered as bicycle barrier improvements. (For new barrier crossing projects, distances to the nearest parallel crossing must be included in the application to be considered for the full allotment of points under Part 1).

Examples of continuity/connectivity improvements may include constructing a bikeway across jurisdictional lines where none exists or upgrading an existing bicycle facility treatment so that it connects to and is consistent with an adjacent jurisdiction?s bicycle facility.

Response:

This trail has been identified as a high-priority project and selected by the county in part because of the pedestrian and cycling barriers that exist today. Without proper pedestrian facilities, residents and visitors to the area have been forced to walk in the ditch or on the roadway itself, creating the potential for dangerous conflict with vehicles. In the past five years, there have been four vehicle crashes in the project area and one bicycle crash. The bicycle crash occurred when a vehicle pulled out too far into the intersection while yielding to a crossing bike and resulted in a possible injury. The corridor has an injury critical index of 1.42, indicating that there is an above-expected amount of injury crashes.

A high visibility, mid-street crossing will also be added as a result of this project, creating a designated, marked area for pedestrians and bicycles to cross the road. Currently, pedestrians are forced to cross the road at uncontrolled crossings or when there is a break in traffic, risking a collision with a motor vehicle. The crossing will give the pedestrian the right-of-way and indicate where the driver should yield.

The curve of the roadway poses further risk of collision with pedestrians and bicyclists, as poor vehicle sight lines limit the amount of time a vehicle has to see a user in the roadway. Separating motorized traffic from non-motorized users at this curve will circumvent this barrier and increase safety for all.

The corridor has been identified in the Regional Bicycle Trail Network (RBTN) as a Tier 1 corridor. This designation signifies that despite obstacles to safe and comfortable cycling, bicyclists are currently utilizing this corridor for travel. Adding bicycle facilities along this road would connect to the network and close a key gap. Additionally, the additional crossings created through this project would allow for safe and defined north/south crossings, opening up access to a network of trails and parks south of the corridor.

The multi-use trail will be built to the standards outlined in Ramsey County's ADA Transition Plan and will fulfill all ADA Accessibility Requirements. Currently, this section of County Road D does not meet ADA requirements, as there are no safe or accessible areas for residents or visitors to travel by foot, bicycle, or wheelchair. This new trail will be built to ADA standards, including the designated mid-street crossing, and will allow people of all ability levels to travel along the corridor.

(Limit 2,800 characters; approximately 400 words)

PART 2: Regional Bicycle Barrier Crossing Improvements and Major River Bicycle Barrier Crossings

DEFINITIONS:

Regional Bicycle Barrier Crossing Improvements include crossings of barrier segments within the ?Regional Bicycle Barrier Crossing Improvement Areas? as updated in the 2019 Technical Addendum to the Regional Bicycle Barriers Study and shown in the RBBS online map (insert link to forthcoming RBBS Online Map). Projects must create a new regional barrier crossing, replace an existing regional barrier crossing at the end of its useful life, or upgrade an existing barrier crossing to a higher level of bike facility treatment, to receive points for Part 2.

Major River Bicycle Barrier Crossings include all existing and planned highway and bicycle/pedestrian bridge crossings of the Mississippi, Minnesota and St. Croix Rivers as identified in the 2018 update of the 2040 Transportation Policy Plan. Projects must create a new major river bicycle barrier crossing, replace an existing major river crossing at the end of its useful life, or upgrade the crossing to a higher level of bike facility treatment, to receive points for Part 2.

Projects that construct new or improve existing Regional Bicycle Barrier Crossings or Major River Bicycle Barrier Crossings will be assigned points as follows: (select one)

Tier 1

Tier 1 Regional Bicycle Barrier Crossing Improvement Area segments & any Major River Bicycle Barrier Crossings

Tier 2

Tier 2 Regional Bicycle Barrier Crossing Improvement Area segments

Tier 3

Tier 3 Regional Bicycle Barrier Crossing Improvement Area segments

Non-tiered

Crossings of non-tiered Regional Bicycle Barrier segments

No improvements Yes

No Improvements to barrier crossings

If the project improves multiple regional bicycle barriers, check box.

Multiple

Projects that improve crossing of multiple regional bicycle barriers receive bonus points (except Tier 1 & MRBBCs)

Measure B: Deficiencies corrected or safety problems addressed

Response:

In the roadway's current state, non-motorized users are forced to walk along or in the roadway, as the area lacks any pedestrian facilities. This results in dangerous scenarios with increased chances for pedestrians to be struck by vehicles. County Road D contains angled intersections and sharp curves, decreasing sightlines and reducing the amount of time a driver has to react to pedestrians. Cyclists with lower levels of comfort are forced to bike on the road and may decide against riding a bike at all. Creating a multiuse trail along this road will provide a safer route for users currently walking and biking and allow new users to safely and comfortably choose those modes as well.

The most recent pedestrian/bicycle crash at this intersection occurred in 2019, at the intersection of County Road D and Labore Rd. A motor vehicle failed to come to a complete stop at the intersection and struck a bicyclist who was riding in the roadway. The corridor has an injury critical index of 1.42, indicating that there is an above-expected amount of injury crashes. Adding a multi-use trail would not only separate motor vehicles from bicycles and pedestrians but also create physical infrastructure on the ground that makes drivers aware of other users of the road.

The roadway and surrounding areas currently are unlit at night. Without lighting, it is difficult for vehicles to see pedestrians and cyclists traveling along the road and may fail to yield in time if the users are crossing the road. Traveling on foot at night without lighting can make residents feel unsafe, as it is difficult in low light to see others. This project includes adding lighting elements along the multi-use trail, which will benefit safety along the roadway by increasing visibility of and for users.

The proposed multi-use trail will contain several safety features to allow higher visibility for people walking or biking along County Road D while increasing comfort for users. Pedestrian lighting is to be added along the entire trail along this section, allowing drivers at night to see pedestrians well before they enter the roadway or intersection. This has the added benefit of increased safety for residents in the area, as lighting helps pedestrians feel more comfortable in an area at night.

The high visibility crossing will provide a safe crossing in the middle of the roadway. This will allow trail users to cross without the need to go to the intersection and reduces the need for crossing at unmarked areas. The lighting and signage will alert drivers of the crossing and the biker or pedestrian's right-of-way and indicate where the driver should stop.

(Limit 2,800 characters; approximately 400 words)

Measure A: Multimodal Elements

Response:

The project includes a multiuse path for bicycles and pedestrians, with high visibility crossings across County Road D. Currently, the roadway does not have any facilities for pedestrians, and users are forced to walk in the roadway or in the grass ditch adjacent to the road. With the completion of this project, users will have a comfortable, safe path to walk and bike. The crossing is located at the midpoint between intersections, which allows users to cross the roadway safely without the need to travel out of their way to an intersection. With high visibility signage and a marked crossing, cars will understand the need to yield to pedestrians and cyclists attempting to cross.

The trail closes an important gap in the RBTN and completes a piece of a Tier 1 corridor, connecting residents and visitors to the greater bicycle trail network. Tier 1 signifies that users are currently traveling along the corridor, despite the lack of high-quality bicycle facilities. The completion of this trail will not only give existing users a safer place to travel, but the increased comfort from off-street trails will also attract new riders.

Nearby transit includes Route 270, approximately one-half mile from the project. The proposed trail will improve access to the future METRO Purple Line, a planned high-frequency transitway that will provide all-day bi-directional service to/from downtown St. Paul. This new line will connect with existing and future light rail and bus rapid transit service, including the METRO Green Line, Gold Line, B Line, G Line, and H Line. Extensive public engagement has occurred surrounding the METRO Purple Line, including station area planning, routing and alignment, and scheduling. The completion date is still to be determined, but the project has already cleared environmental reviews by the Federal Transit Administration and has been given federal approval.

By providing dedicated, non-motorized facilities that connect to the regional transit system, this project will connect nearby residents to major employment centers in Maplewood and downtown Saint Paul. The Regional Bicycle and Trail Network Study identifies a major employment center at the Maplewood Mall. The proposed trail will provide residents from the 301 nearby affordable housing units with direct, non-motorized access to this employment center.

The project will also address resident concerns about unsafe and uncomfortable waiting conditions for students riding the school bus in the morning. A new multi-use path will give students a safe place to wait without the need for conflict with motor vehicles during the morning rush hour.

(Limit 2,800 characters; approximately 400 words)

Upload Transit map

1702595376424_108_Transit Connections Map.pdf

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) specific to this project with the general public and partner agencies have been used to help identify the project need. Yes

100%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least online/mail outreach effort specific to this project with the general public has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

25%

No outreach has led to the selection of this project.

0%

Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

Response:

An open house for the proposed project was held on February 28, 2023 to share project information and solicit feedback from nearby community members. Residents in the area were notified by mail of the in-person session and opportunities to provide feedback online or over the phone. The in-person meeting included 20 attendees, many of whom voiced positive feedback on the new proposed crosswalks. Residents were concerned about school bus access during construction and noted that many children in the project area relied on buses to travel to school. Resident input also noted the need for a sufficient number of crossings throughout Couty Road D, especially as two school districts bus students along this segment. This feedback led to the addition of several crosswalks throughout the project area. For online users, a comment map allowed users to provide input and engage in two-way dialogues on issues. Link: https://www.ramseycounty.us/residents/roads-transportation/future-road-projects/future-road-construction-projects/county-road-d-reconstruction

Ramsey County had previously identified gaps and areas of high-stress facilities in the bicycle and pedestrian network through the Ramsey County Pedestrian and Bicycle Plan. This 2015 report involved a combination of geospatial data analysis and community engagement and conversations. Efforts included in-person engagement, open houses, public surveys, and listening sessions with populations historically underrepresented in the planning process. This was achieved by working closely with organizations working with specific populations or communities, holding meetings in places people were already congregating, and creating jargon-free, user-friendly materials. In this plan, County Road D was identified as a high-stress roadway with engagement participants expressing a desire for a connected network of walking and biking separated from motor vehicle traffic in the project area.

Ramsey County has the support of all adjacent cities for the completion of this project. Vadnais Heights, Maplewood, and Little Canada all specifically reference the need for multimodal options and connections in the project area in their 2040 comprehensive plans. Particularly, the Parks and Trails section in the comprehensive plan for Vadnais Heights designates this stretch of roadway as a "Planned Sidewalk/Off-Road Path." This plan was approved in 2019 after two years of planning and community engagement efforts by city staff.

(Limit 2,800 characters; approximately 400 words)

2. Layout (25 Percent of Points)

Layout includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow, scale; legend; city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project?s termini does not suffice and will be awarded zero points. *If applicable*

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points. *100%*	
A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid ? colleen.brown@state.mn.us. *100%*	
For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points. *75%*	
Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points. *50%*	Yes
Layout has been started but is not complete. A PDF of the layout must be attached to receive points. *25%*	
Layout has not been started *0%*	
Attach Layout *Please upload attachment in PDF form*	1705104178038_20479 2023-11-30_CRD95Plan pages 1-15.pdf
Additional Attachments	

Please upload attachment in PDF form

3. Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge — Yes

100%

There are historical/archeological properties present but determination of ?no historic properties affected? is anticipated.

100%

Historic/archeological property impacted; determination of ?no adverse effect? anticipated

80%

Historic/archeological property impacted; determination of ?adverse effect? anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

4. Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels identified — Yes

25%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels not all identified

0%

5. Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable) — Yes

100%

Signature Page

Please upload attachment in PDF form

Railroad Right-of-Way Agreement required; negotiations have begun

50%

Railroad Right-of-Way Agreement required; negotiations have not begun.

0%

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$3,756,685.70
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$3,756,685.70
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
101_One Page Project Description.pdf	One Page Project Summary	388 KB
102_Existing Conditions Photos.pdf	Existing Conditions Photos	1.9 MB
103_Project Layout and Construction Plans.pdf	Project Layout	2.4 MB
104_Cost Estimate.pdf	Cost Estimate	30 KB
110_Open House Summary.pdf	Open House Summary	242 KB
111_Ramsey County Pedestrian and Bicycle Plan.pdf	Ramsey County Pedestrian and Bicycle Plan	12.7 MB
112_Ramsey County Economic Competitiveness and Inclusion Plan.pdf	Ramsey County Economic Competitiveness and Inclusion Plan	1.0 MB
113_Ramsey County Transportation Improvement Plan.pdf	Ramsey County Transportation Improvement Plan	1005 KB
114_Vadnais Heights 2040 Comprehensive Plan Trails Map.pdf	Vadnais Heights 2040 Comprehensive Plan Trails Map	1.5 MB

Project to RBTN Orientation

Multiuse Trails and Bicycle Facilities Project: County Road D Multiuse Trail | Map ID: 1701357845372

Project
RBTN Corridor Centerlines
RBTN Tier 1 Alignment
Principal Arterials
Minor Arterials
Railroads
RBTN Tier 1
RBTN Tier 2

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 11/30/2023
LandscapeRSA6

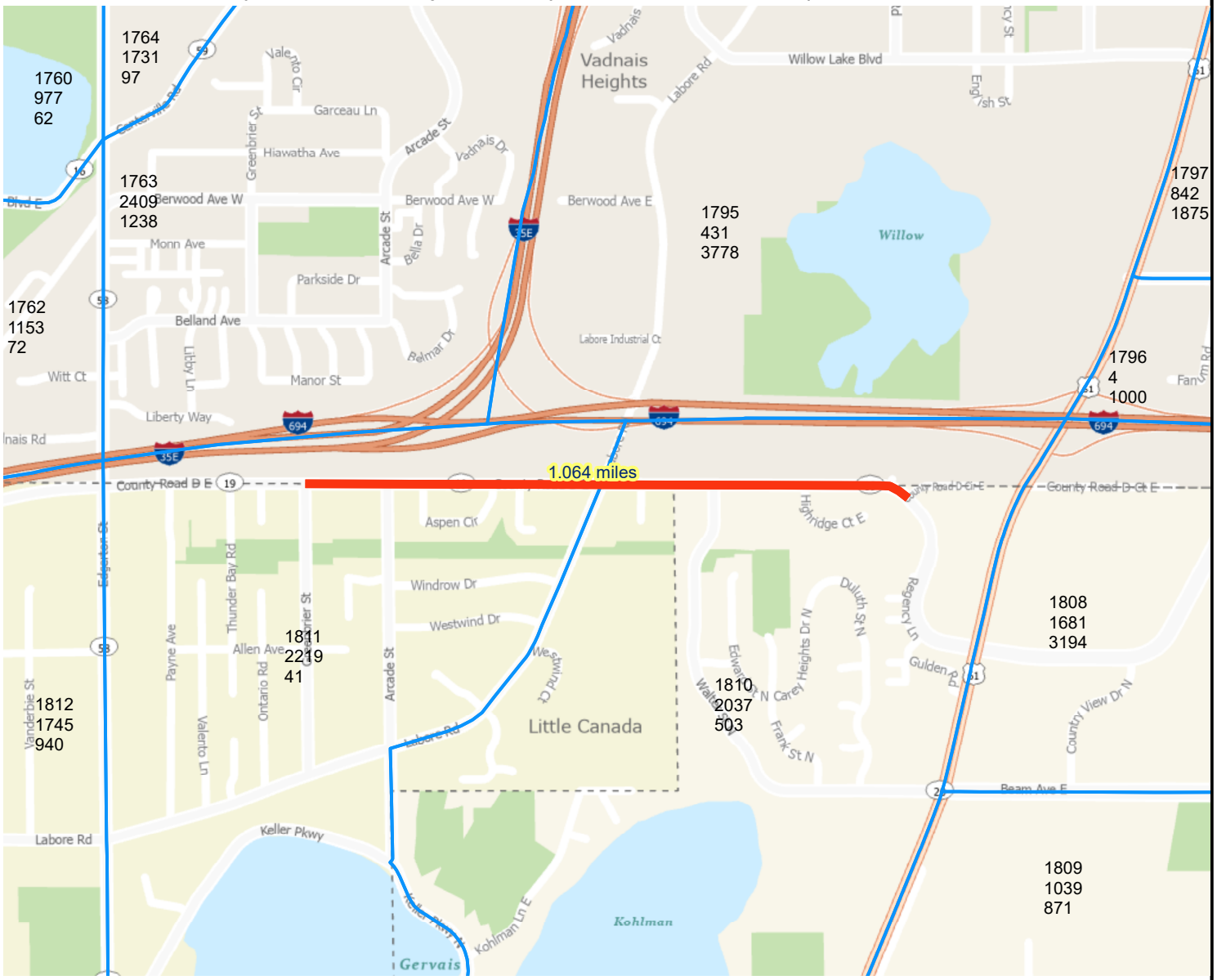
METROPOLITAN COUNCIL

Population/Employment Summary

Results

Within ONE Mile of project:
Total Population: 16788
Total Employment: 14467

Multiuse Trails and Bicycle Facilities Project: County Road D Multiuse Trail | Map ID: 1701357845372



Project Points
Project
Project Area
2016 TAZ

0 0.175 0.35 0.7 1.05 1.4 Miles

Created: 11/30/2023
LandscapeRSA4

For complete disclaimer of accuracy, please visit
https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

Socio-Economic Conditions

Multiuse Trails and Bicycle Facilities Project: County Road D Multiuse Trail | Map ID: 1701357845372

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 286

Project located in census tract(s) that are ABOVE the regional average for population in poverty or population of color.

Lines

Regional Environmental Justice Area

Area of Concentrated Poverty

0 1 2 4 6 8 Miles

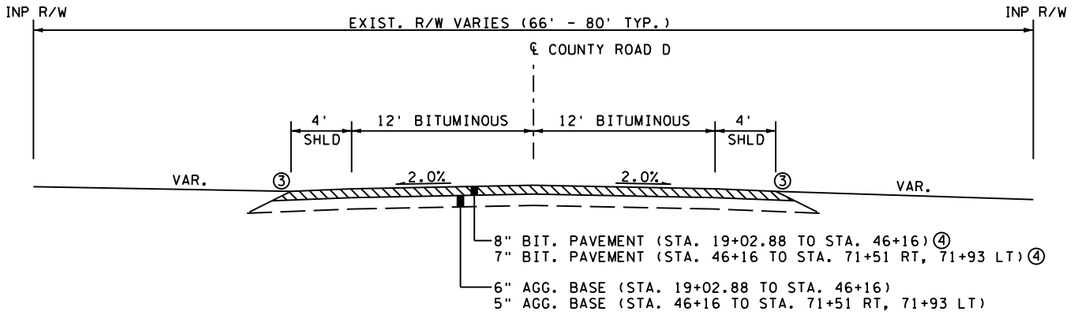
Created: 11/30/2023

LandscapeRSA2

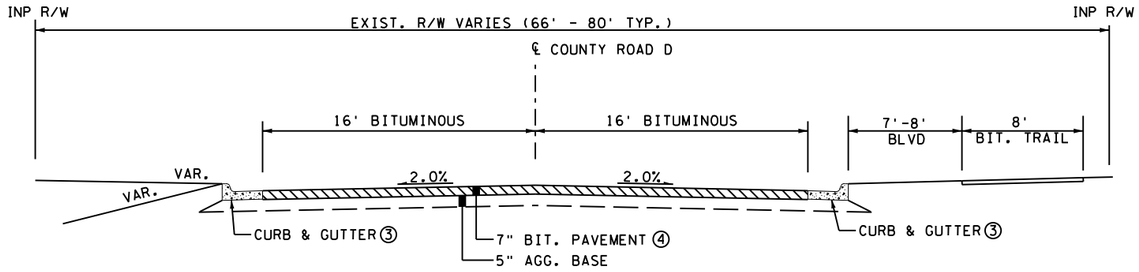
STORM SEWER TABULATION

FROM STRUCTURE	TO STRUCTURE	PIPE DIA. (IN)	PIPE MATERIAL	PIPE LENGTH (FEET)	STRUCTURE NO.	STRUTURE DIA. (FEET)	STRUCTURE BUILD (FEET)	STRUCTURE SUMP (FEET)	CASTING	DETAIL LC
CBMH-13B	MH-13	15	RCP	22.92	CB-13C	2X3	4		R-3067-V	STO-5
CB-13A	MH-13	15	RCP	12.67	CB-14A	2X3	4		R-3067-V	STO-5
CBMH-21	MH-21A	15	RCP	28	CB-14B	2X3	4		R-3067-V	STO-5
CB-14A	MH-14	15	RCP	13	CB-16A	2X3	13		R-3067-V	STO-5
CB-5B	MH-5	15	RCP	45	CB-16B	2X3	23		R-3067-V	STO-5
MH-12	MH-11	15	RCP	49	CB-17A	2X3	4		R-3067-V	STO-5
MH-17	MH-16	15	RCP	110.98	CB-17B	2X3	4		R-3067-V	STO-5
MH-7	MH-6	18	RCP	257	CB-18A	2X3	4		R-3067-V	STO-5
MH-11	MH-11A	18	RCP	53	CB-18B	2X3	4		R-3067-V	STO-5
MH-15	MH-14	18	RCP	166	CB-19A	2X3	4		R-3067-V	STO-5
MH-14	MH-13	18	RCP	175	CB-1A	2X3	4		R-3067-V	STO-5
MH-16	MH-15	18	RCP	305	CB-1B	2X3	4		R-3067-V	STO-5
MH-11A	MH-10	21	RCP	222	CB-2A	2X3	4		R-3067-V	STO-5
MH-6	MH-5	21	RCP	215	CB-2B	2X3	5.65		R-3067-V	STO-5
MH-10	MH-9	21	RCP	279	CB-3A	2X3	4		R-3067-V	STO-5
MH-1	EX SS-5	21	RCP	95	CB-3B	2X3	4		R-3067-V	STO-5
MH-2	MH-1	21	RCP	297	CB-4A	2X3	4		R-3067-V	STO-5
MH-3	MH-2	21	RCP	282	CB-5A	2X3	4		R-3067-V	STO-5
MH-4	MH-3	21	RCP	395	CB-5B	2X3	4		R-3067-V	STO-5
MH-5	MH-4	21	RCP	42	CB-7B	2X3	4		R-3067-V	STO-5
MH-9	MH-8	21	RCP	215	CB-9A	2X3	4		R-3067-V	STO-5
MH-13	MH-8	21	RCP	327.92	CB-9B	2X3	4		R-3067-V	STO-5
MH-21A	EX FES-4	24	RCP	8	CB-7A	2X3	4		R-3067-V	STO-5
MH-8	EX 5551	36	RCP	50.3	CB-17C	4	4.67		R-4342-W	STO-1
	-11	12	RCP	8	CBMH-21	4	6.95		R-3067-V	STO-3
CB-12A	MH-12	12	RCP	13	MH-1	4	12.61		R-1642-B	STO-1
CB-12B	MH-12	12	RCP	23	MH-10	4	8.09		R-1642-B	STO-1
CB-16A	MH-16	12	RCP	59	MH-11	4	4.81		R-1642-B	STO-1
CB-16B	MH-16	12	RCP	22.67	MH-11A	4	5.19	4	R-1642-B	STO-2
MH-18	MH-17	12	RCP	305	MH-12	4	4.54		R-1642-B	STO-1
CB-17A	MH-17	12	RCP	12.67	MH-13	4	9.14		R-1642-B	STO-1
CB-17B	MH-17	12	RCP	22.67	MH-14	4	4.18		R-1642-B	STO-1
CB-18A	MH-18	12	RCP	12.64	MH-15	4	6.71		R-1642-B	STO-1
CB-18B	MH-18	12	RCP	22.7	MH-16	4	4.97	4	R-1642-B	STO-2
CB-2A	MH-2	12	RCP	13	MH-17	4	4.55		R-1642-B	STO-1
CB-2B	MH-2	12	RCP	23	MH-18	4	4.54		R-1642-B	STO-1
CB-3A	MH-3	12	RCP	13	MH-2	4	5.28		R-1642-B	STO-1
CB-3B	MH-3	12	RCP	23	MH-3	4	7.8		R-1642-B	STO-1
CB-4A	MH-4	12	RCP	23	MH-4	4	7.58		R-1642-B	STO-1
CB-5A	MH-5	12	RCP	13	MH-5	4	7.36		R-1642-B	STO-1
CB-7A	MH-7	12	RCP	13	MH-6	4	6.58		R-1642-B	STO-1
CB-7B	MH-7	12	RCP	23	MH-7	4	4.54		R-1642-B	STO-1
CB-9A	MH-9	12	RCP	13	MH-9	4	16.24		R-1642-B	STO-1
CB-9B	MH-9	12	RCP	23	MH-21A	4	11.67	4	R-1642-B	STO-2
CB-19A	CBMH-19	12	RCP	8	MH-8	5	17.83		R-1642-B	STO-1
CBMH-19	MH-19B	12	RCP	15	CB-19B	4	4.42		R-4342-W	STO-1
CB-2C	CB-2B	12	RCP	14	CB-10A	2X3	4		R-3067-V	STO-5
CB-11B	MH-11A	12	RCP	23	CB-10B	2X3	4		R-3067-V	STO-5
CBMH-13B	CB-13C	12	RCP	81	CB-11B	2X3	4		R-3067-V	STO-5
CB-14B	CB-14A	12	RCP	8	CB-12A	2X3	4		R-3067-V	STO-5
CBMH-19	CBMH-20	12	RCP	20	CB-12B	2X3	4		R-3067-V	STO-5
CB-17B	CB-17C	12	RCP	12	CB-13A	2X3	4		R-3067-V	STO-5

EXISTING COUNTY ROAD D TYPICAL SECTION
STA. 19+02.88 TO STA. 71+51 RT, 71+93 LT



EXISTING COUNTY ROAD D TYPICAL SECTION
STA. 71+51 RT, STA. 71+93 LT TO STA. 75+61.12



GENERAL NOTES:

- ALL CROSS SLOPES ARE IN FEET PER FOOT.
- MAXIMUM ROLLOVER 0.07 FEET PER FOOT.
- SEE CROSS SECTIONS FOR SLOPE VARIATIONS, DITCH DETAILS AND ELEVATIONS.

NOTES:

① STA. 62+50 TO STA. 64+60.39
REVERSE CROSS SLOPE TO DRAIN AT 1.5% AWAY FROM CURB.

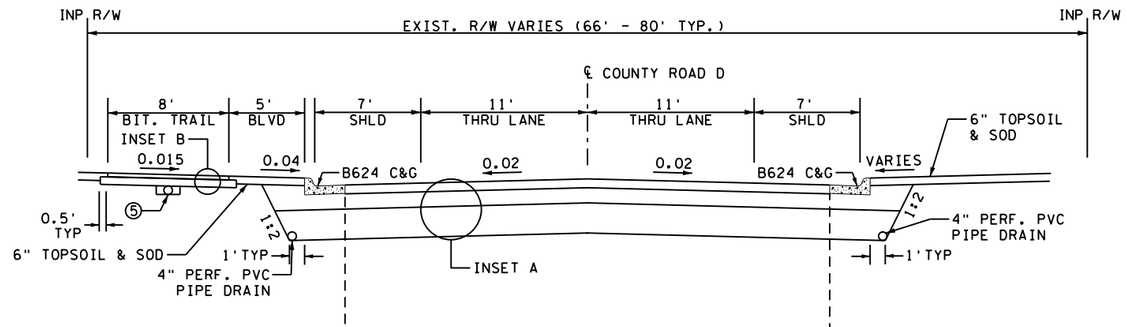
② STA. 62+00 TO STA. 64+75
PLACE 48" HIGH PROTECTIVE FENCE (WIRE FENCE DESIGN SPECIAL VINYL COATED)

③ EXISTING BITUMINOUS CURB:
STA. 62+30 TO STA. 71+51 RT
STA. 68+93 TO STA. 71+93 LT
(REMOVAL OF BITUMINOUS CURB IS INCLUDED WITH PAVEMENT REMOVAL)

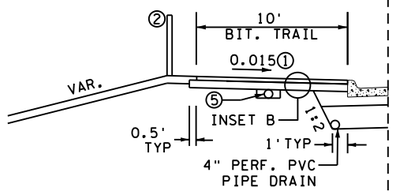
④ EXISTING PAVEMENT SECTION THICKNESS IS BASED ON SOIL BORINGS. NO COMPENSATION ADJUSTMENTS WILL BE MADE FOR VARIANCE IN EXISTING PAVEMENT THICKNESS.

⑤ TRAIL UNDER DRAIN AT LOCATIONS SPECIFIED IN DRAINAGE PLANS. 4" PERF. PVC PIPE DRAIN WITH MIN. 12" OPEN GRADED AGGREGATE BASE BEDDING MATERIAL.

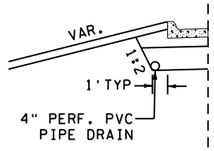
PROPOSED COUNTY ROAD D TYPICAL SECTION
STA. 19+02.88 TO STA. 75+61.12



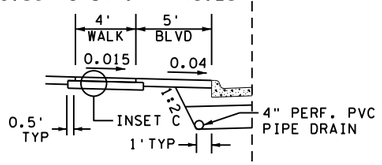
STA. 61+37 TO STA. 64+60.39



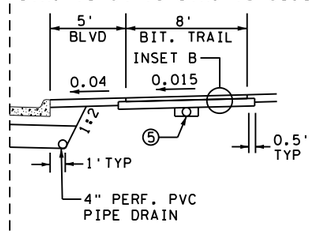
STA. 64+60.39 TO STA. 72+58.56



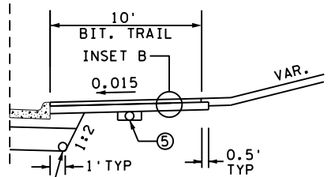
STA. 72+58.56 TO STA. 74+49.25



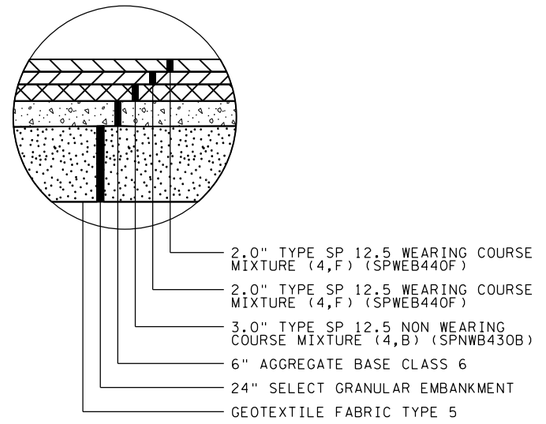
STA. 64+60.39 TO STA. 65+77
STA. 71+64 TO STA. 75+61.12



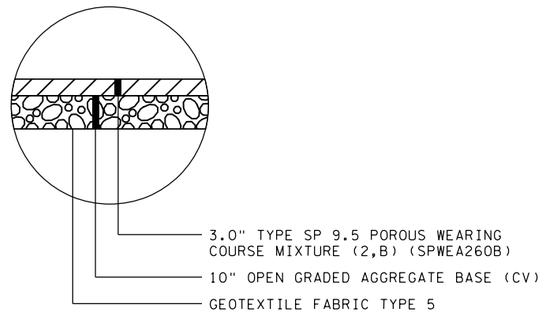
STA. 65+77 TO STA. 71+64



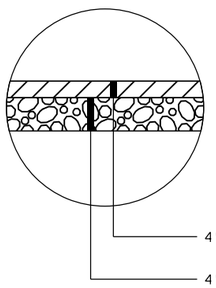
INSET A



INSET B
PED/BIKE TRAIL



INSET C
CONCRETE WALK



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S.A.P. 200-020-014
S.A.P. 209-020-014
S.A.P. 138-020-048

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

REV.	BY	DATE

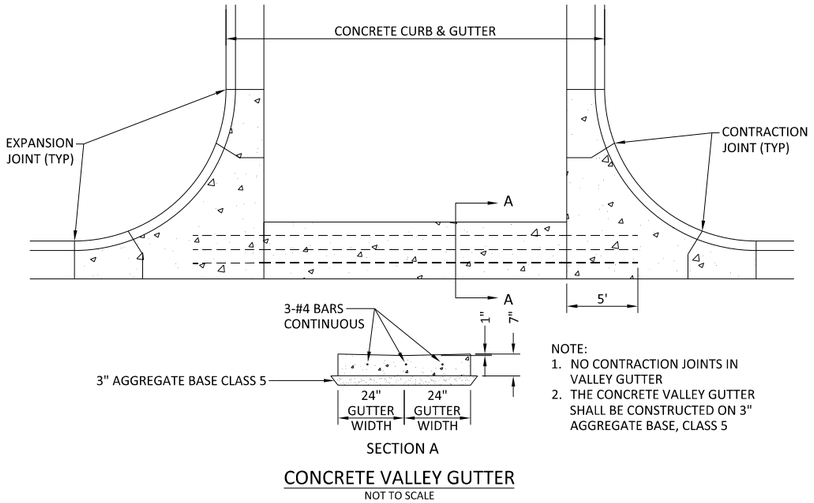
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1
JASON SCHMIDT
LIC. NO. 42788 DATE 11-30-2023

DESIGNED	DRAWN	CHECKED
JPS	DET	JPS

S.A.P. 062-619-039, RAMSEY COUNTY
COUNTY ROAD D IMPROVEMENTS
TYPICAL SECTIONS

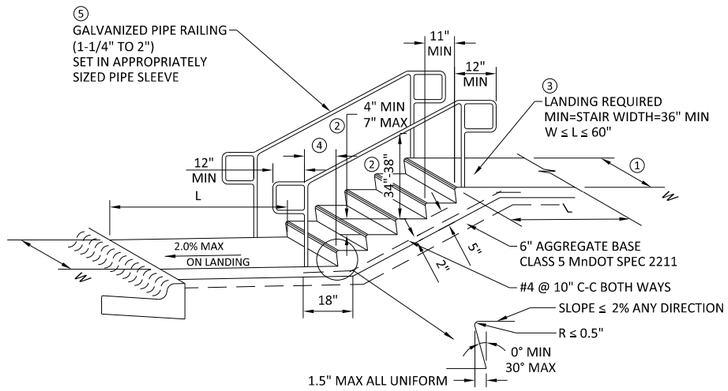
SHEET 8 OF 86



SECTION A

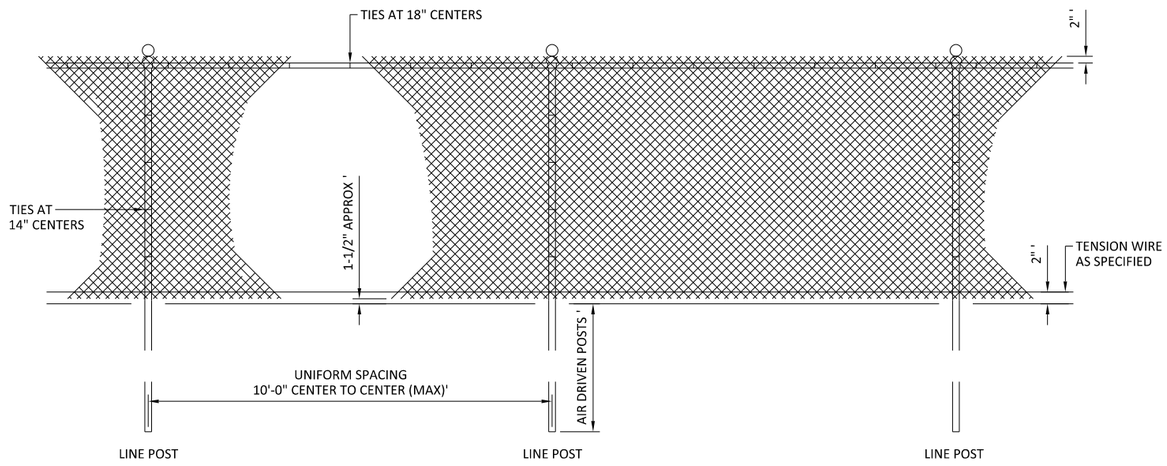
NOTE:
1. NO CONTRACTION JOINTS IN VALLEY GUTTER
2. THE CONCRETE VALLEY GUTTER SHALL BE CONSTRUCTED ON 3" AGGREGATE BASE, CLASS 5

CONCRETE VALLEY GUTTER
NOT TO SCALE

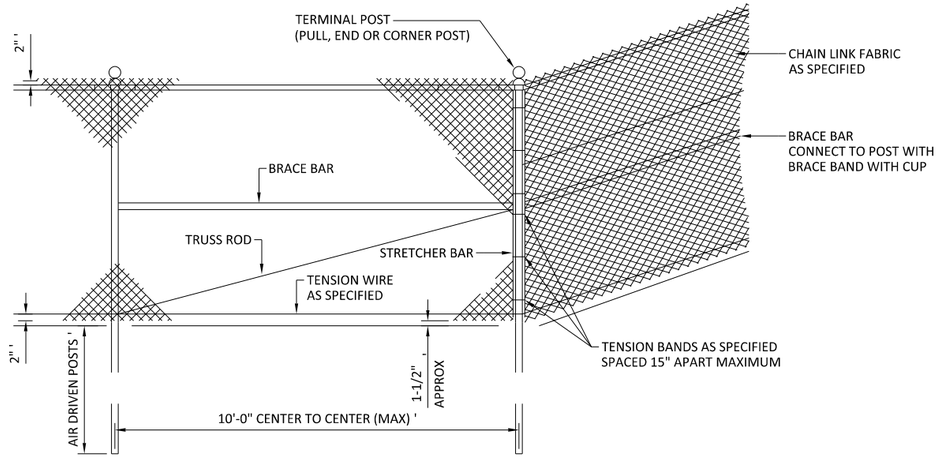


NOTES:
1. MIN WIDTH IS CLEAR BETWEEN HANDRAILS; CHECK WITH CITY BUILDING OFFICIAL FOR OCCUPANT LOADS ≥ 50 PERSONS
2. TREADS AND RISERS MUST BE UNIFORM WITH NO MORE THAN 3/8" DIFFERENCE FROM SMALLEST TO LARGEST TREAD OR RISER
3. SEE BUILDING CODE IF DOORS OPEN ON TO STAIR LANDING
4. MINIMUM ONE STAIR TREAD WIDTH
5. RAILINGS SHALL CONFORM TO AMERICANS WITH DISABILITIES ACT

CONCRETE STAIRWAY
NOT TO SCALE



LINE SECTION



PULL, END OR CORNER POST

WIRE FENCE DESIGN SPECIAL
NOT TO SCALE

FENCE FRAMEWORK SPECIFICATIONS					
			POST DEPTH BELOW GRADE (IN)	CONCRETE FOOTING	
FRAMING MEMBERS	TYPE 1 (SCHED 40) ROUND PIPE			DIA (IN)	DEPTH (IN)
TERMINAL POSTS (END, CORNER AND PULL POSTS)	OUTSIDE DIAMETER (IN)	2.375	36	10	42
	WALL THICKNESS (IN)	0.154			
	WEIGHT (LB/FT)	3.650			
LINE POSTS	OUTSIDE DIAMETER (IN)	1.900	48	NO CONCRETE FOUNDATION - AIR DRIVE	
	WALL THICKNESS (IN)	0.145			
	WEIGHT (LB/FT)	2.720			

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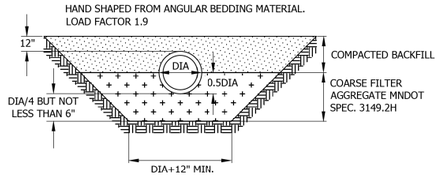
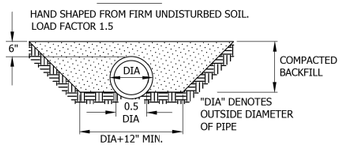
S.A.P. 062-619-039, RAMSEY COUNTY
COUNTY ROAD D IMPROVEMENTS
MISCELLANEOUS DETAILS

SHEET 9 OF 86

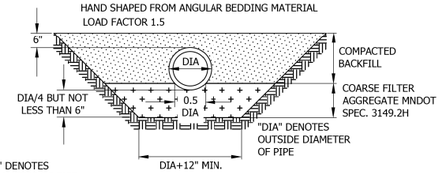
CLASS B



CLASS C-1



CLASS C-2



NOTE: "DIA" DENOTES OUTSIDE DIAMETER OF PIPE

City of Little Canada

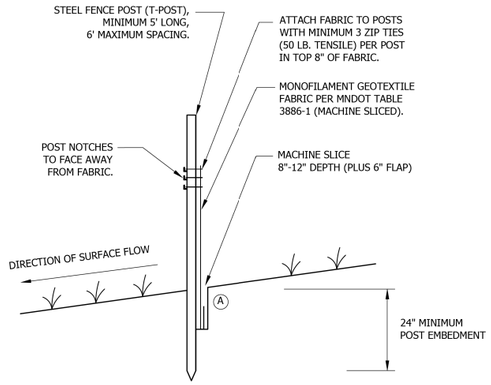
STANDARD DETAILS

BEDDING METHODS FOR REINFORCED CONCRETE OR DUCTILE IRON PIPE

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. BED-2



NOTE:
THE MACHINE SLICED METHOD (THIS DETAIL) IS THE STANDARD SILT FENCE INSTALLATION METHOD. HEAVY-DUTY (ERO-1B) OR STANDARD (ERO-1C) SILT FENCE INSTALLATION METHODS SHOULD ONLY BE USED WHEN APPROVED OR DIRECTED BY THE CITY.

(A) COMPACTION:
AFTER "SLICING" IN THE FABRIC AND *BEFORE* INSTALLATION OF STEEL POSTS, DRIVE INSTALLATION EQUIPMENT OVER THE "SLICE" WHILE FABRIC IS LAYING ON THE GROUND. *THEN* INSTALL STEEL POSTS AND PULL UP FABRIC TO ATTACH AT A UNIFORM HEIGHT.

City of Little Canada

STANDARD DETAILS

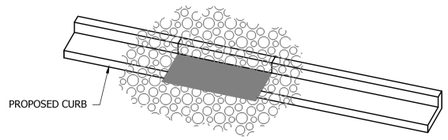
SILT FENCE
MACHINE SLICED

LITTLE CANADA, MINNESOTA

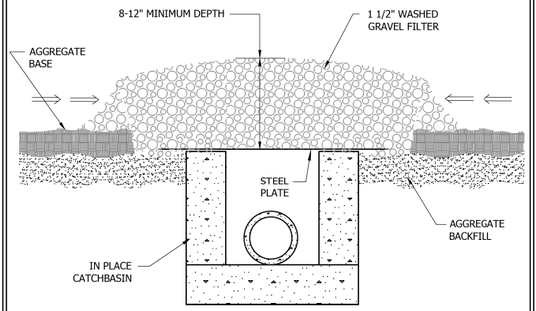
LAST REVISION: DEC 2020

CITY PLATE NO. ERO-1A

PLAN



⟸ = DIRECTION OF SURFACE FLOW



City of Little Canada

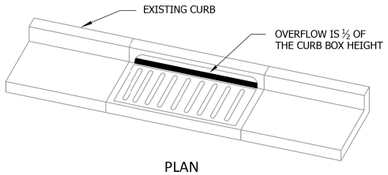
STANDARD DETAILS

INLET PROTECTION ROCK FILTER FOR CATCH BASIN DURING ROAD CONSTRUCTION

LITTLE CANADA, MINNESOTA

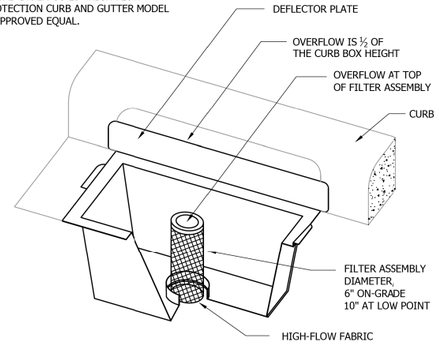
LAST REVISION: DEC 2020

CITY PLATE NO. ERO-4A



PLAN

WIMCO ROAD DRAIN CG-23* HIGH FLOW INLET PROTECTION CURB AND GUTTER MODEL OR CITY APPROVED EQUAL.



* FOR THE NEW R-3067-VB STANDARD CASTING, INSTALL WIMCO ROAD DRAIN CG-3290 OR CITY APPROVED EQUAL.

City of Little Canada

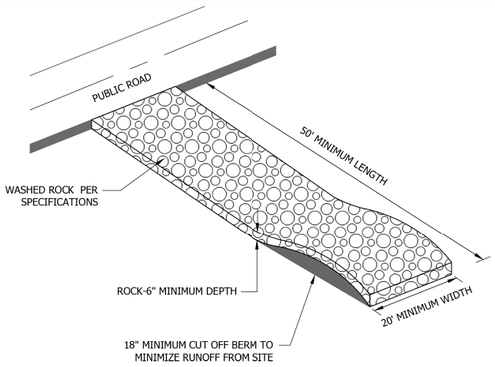
STANDARD DETAILS

INLET PROTECTION CATCH BASIN INSERT AFTER PAVING

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. ERO-4B



NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK TO STOP MUD MIGRATION THROUGH ROCK.
2. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.

City of Little Canada

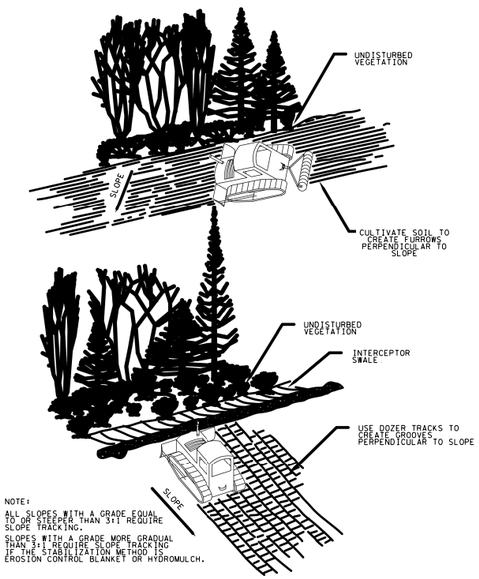
STANDARD DETAILS

ROCK CONSTRUCTION ENTRANCE

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. ERO-7



NOTE:
ALL SLOPES WITH A GRADE EQUAL TO OR STEEPER THAN 3:1 REQUIRE SLOPE TRACKING.
SLOPES WITH A GRADE MORE GRADUAL THAN 3:1 REQUIRE SLOPE TRACKING IF THE STABILIZATION METHOD IS EROSION CONTROL BLANKET OR HYDROMULCH.

City of Little Canada

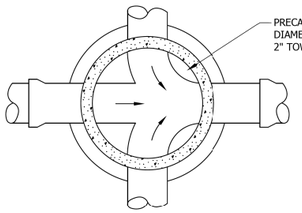
STANDARD DETAILS

SLOPE TRACKING

LITTLE CANADA, MINNESOTA

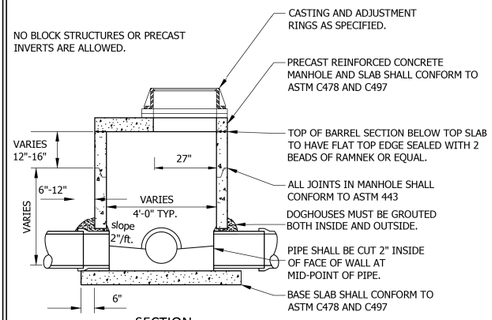
LAST REVISION: DEC 2020

CITY PLATE NO. ERO-10



PLAN

NO BLOCK STRUCTURES OR PRECAST INVERTS ARE ALLOWED.



SECTION

City of Little Canada

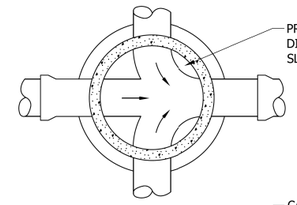
STANDARD DETAILS

STORM SEWER JUNCTION MANHOLE WITH REINFORCED TOP SLAB

LITTLE CANADA, MINNESOTA

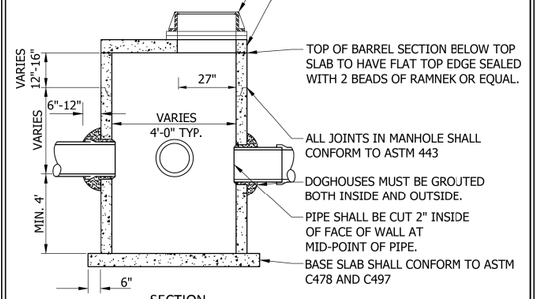
LAST REVISION: DEC 2020

CITY PLATE NO. STO-1



PLAN

NO BLOCK STRUCTURES OR PRECAST INVERTS ARE ALLOWED.



SECTION

City of Little Canada

STANDARD DETAILS

STORM SEWER JUNCTION MANHOLE WITH REINFORCED TOP SLAB & SUMP

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. STO-2

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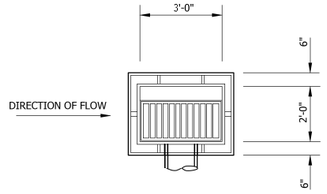
ENGINEER SIGNATURE 1

JASON SCHMIDT
LIC. NO. 42788 DATE 11-30-2023

DESIGNED MJ
DRAWN DET
CHECKED JPS

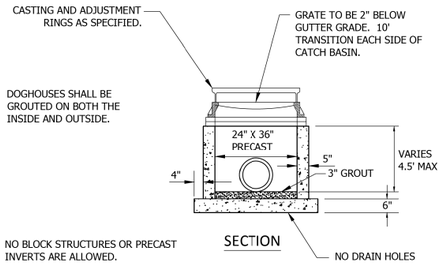
S.A.P. 062-619-039, RAMSEY COUNTY
COUNTY ROAD D IMPORVEMENTS
MISCELLANEOUS DETAILS

SHEET 10 OF 86



PLAN

PRECAST REINFORCED CONCRETE CATCH BASIN AND SLAB SHALL CONFORM TO ASTM C478 AND C497



SECTION

STANDARD DETAILS

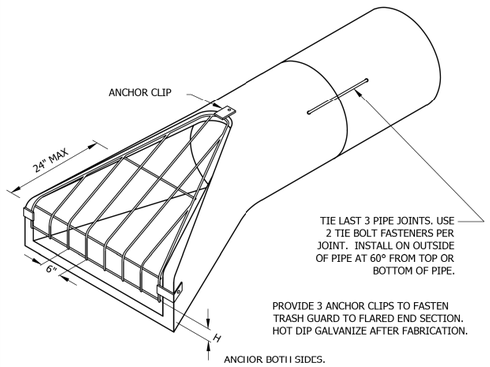
2' X 3' CATCH BASIN

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. STO-5

SEE CITY PLATE NO. STO-13 FOR RIPRAP PLACEMENT.



ISOMETRIC

TRASH GUARD SIZING			
PIPE SIZE	BARS	`H'	BOLTS
24"- 42"	1"ø	6"	3/4"
48"-72"	1 1/4"ø	12"	1"

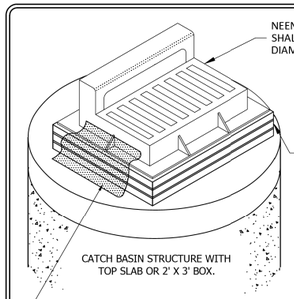
STANDARD DETAILS

FLARED END SECTION AND TRASH GUARD

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. STO-6



MANHOLE LID DETAIL

NEENAH R-1733 MANHOLE FRAME AND COVER SHALL BE FURNISHED WITH 2 LIFT HANDLES AND STAMPED "SANITARY SEWER" OR "STORM SEWER".

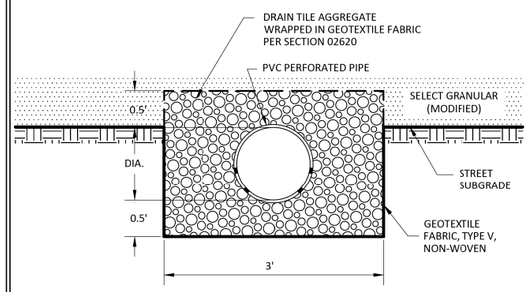
STANDARD DETAILS

CATCH BASIN AND MANHOLE ADJUSTMENT

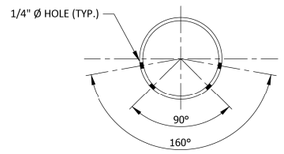
LITTLE CANADA, MINNESOTA

LAST REVISION: JAN 2022

CITY PLATE NO. STO-8



TRENCH DETAIL



PIPE DETAIL

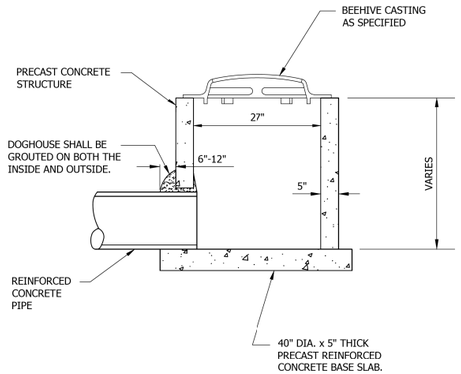
STANDARD DETAILS

PVC PERFORATED DRAIN TILE PIPE

LITTLE CANADA, MINNESOTA

LAST REVISION: JAN 2022

CITY PLATE NO. STO-9



NO BLOCK STRUCTURES OR PRECAST INVERTS ARE ALLOWED.

PRECAST REINFORCED CONCRETE CATCH BASIN AND SLAB SHALL CONFORM TO ASTM C478 AND C497

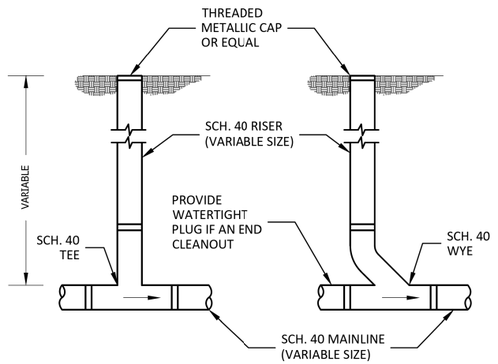
STANDARD DETAILS

PRECAST 27" SHALLOW DEPTH BEHIVE

LITTLE CANADA, MINNESOTA

LAST REVISION: DEC 2020

CITY PLATE NO. STO-10



INSPECTION TEE CLEANOUT

NOTE:

1. PVC PIPES AND FITTINGS SHALL BE SCHEDULE 40 WITH SOLVENT CEMENTED JOINTS.
2. FOR INSPECTION TEES OR CLEANOUTS TAKING SURFACE DRAINAGE, GRATE SHALL BE MNDOT STANDARD PLATE 4150C OR APPROVED EQUAL.
3. ADJUST RISER TO 1/4" TO 3/8" BELOW FINISHED GRADE FOR IMPERVIOUS SURFACES, 1" BELOW FINISHED GRADE FOR BOULEVARD

STANDARD DETAILS

PVC STORM SEWER CLEANOUTS

LITTLE CANADA, MINNESOTA

LAST REVISION: JAN 2022

CITY PLATE NO. STO-15

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S.A.P. 200-020-014
S.A.P. 209-020-014
S.A.P. 138-020-048

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
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REV.	BY	DATE

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ENGINEER SIGNATURE 1

JASON SCHMIDT

LIC. NO. 42788 DATE 11-30-2023

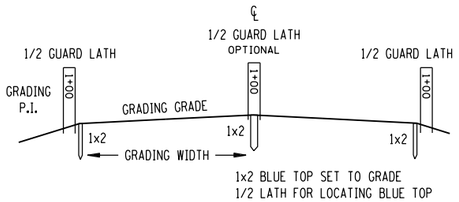
DESIGNED MJ
DRAWN DET
CHECKED JPS

S.A.P. 062-619-039, RAMSEY COUNTY
COUNTY ROAD D IMPROVEMENTS
MISCELLANEOUS DETAILS

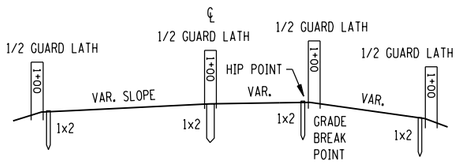
SHEET 11 OF 86

BLUE TOPS

NORMAL SECTION

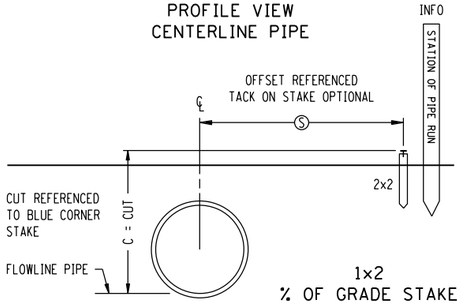


TRANSITION SECTION

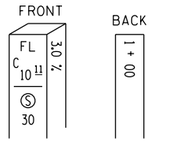


PIPE STAKING

PROFILE VIEW CENTERLINE PIPE

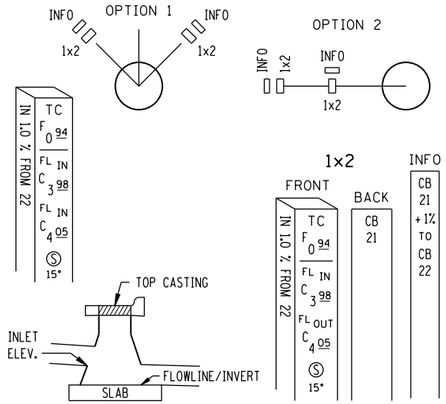


1x2 % OF GRADE STAKE



CATCH BASIN OR MANHOLE (CB/MH)

TOP VIEWS

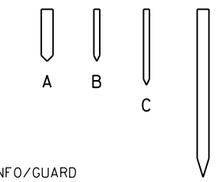


FLOWLINE/INVERT + 0.7'

STANDARD STAKES

TYPES:

REFERENCE (REF)
INFORMATIONAL (INFO)
VISIBILITY (VIS)
GUARD (GUARD)



SIZES:

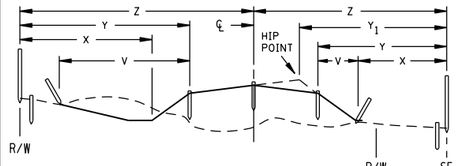
A = 2" X 2" X VAR. REF/INFO/GUARD
B = 1" X 2" X VAR. REF/INFO/GUARD
C = 1" X 2" X VAR. REF
D = LATH INFO/VIS/GUARD
1x2 OR LATH = INFO STAKES

ABBREVIATIONS

BBL = BARREL (PIPE)
B.C. = BACK CURB
C & G = CURB & GUTTER
C = CUT
CAP = CORR. ALUM. PIPE
CB = CATCH BASIN
℄ = CENTERLINE
CL & GR = CLEAR & GRUB
CMP = CORR. METAL PIPE
COR = CORNER
CR = CROWN
CSP = CORR. STEEL PIPE
℄ = DITCH CUT
D.E. = DRAINAGE EASEMENT
DI = DROP INLET
EB = EASTBOUND
E.M. = EDGE BITUMINOUS MAT
E.S. = EDGE CONCRETE SLAB
F = FILL
FF = FRONT FACE
FL = FLOW LINE
FL IN = FLOWLINE INLET
FL OUT = FLOWLINE OUTLET
GR = GRADE
GW = GRADING WIDTH
HH = HANDHOLE
HP = HIP POINT
LT = LEFT
MH = MANHOLE
NB = NORTHBOUND
Ⓢ = OFFSET
PAR = PARCEL
% = PERCENT GRADE
P.E. = PERM. EASEMENT
RAD = RADIUS POINT
RCP = REINF. CONC. PIPE
RP = REFERENCE POINT
RSC = REINF. SECT. CONC.
RT = RIGHT
R/W = RIGHT OF WAY
SB = SOUTHBOUND
SCP = SECT. CONC. PIPE
SH = SHOULDER
TC = TOP CASTING OR TOP CURB
T.E. = TEMP. EASEMENT
3 :1 = SLOPE (EXAMPLE)
WB = WESTBOUND
WP = WORKING POINTS

SLOPE STAKES

SINGLE ROADWAY - EXAMPLE 'A'



STAKE 'A'

FULL LATH AND HUB-STATION
DIST. TO ℄ WITH CUT/FILL TO ℄ (Z)
DIST. TO SHLD. WITH CUT/FILL TO SHLD. (Y) (Y1)
DIST. TO TOE OF SLOPE, CUT/FILL FROM HUB (X)
OFFSET TO SAFTY SLOPE
OFFSET TO HIP POINT

STAKE 'B'

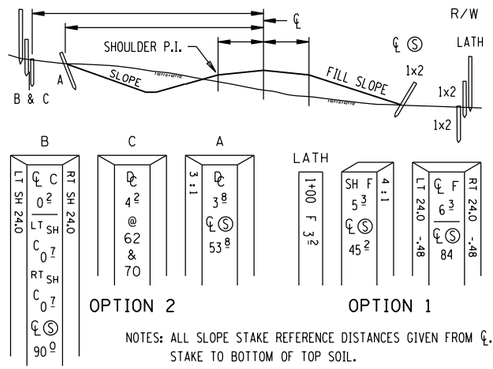
FULL LATH
DITCH CUT/SHLD. FILL
SLOPE RATED
DISTANCE TO INSLOPE TOE (V1) OR SHOULDER (AS APPLIES) (V)

NOTE:

BLUE TOPS REQUIRED ON ℄ AND BOTH SHOULDERS AT MINIMUM
ALL CULVERTS TO BE STAKED
MINIMUM DATA TO BE PROVIDED
STAKE TO BOTTOM OF TOPSOIL

SLOPE STAKES

SINGLE ROADWAY - EXAMPLE 'B'

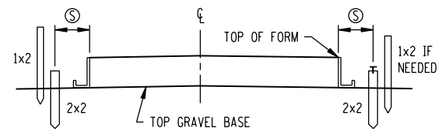


OPTION 2 OPTION 1

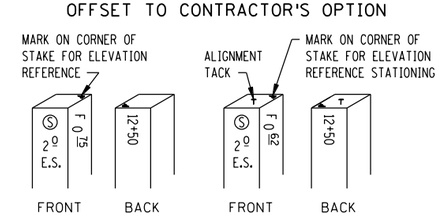
NOTES: ALL SLOPE STAKE REFERENCE DISTANCES GIVEN FROM ℄. STAKE TO BOTTOM OF TOP SOIL.

KEY STAKES: BLUE TOP SET AT R/W BOUNDARY LT. & RT. MAY BE EXCEPTIONS TO SETTING STAKE ON R/W.

CONCRETE PAVING STATIONARY FORM



OFFSET TO CONTRACTOR'S OPTION



NOTE INFORMATION ON STAKE IF NECESSARY

RECOMMENDED STAKING INTERVALS

FIGURE A

	SLOPE STAKES	SUB GRADE B.T.	CLASS MATERIAL B.T.	CONC PAVT	C & G	CL & GR LIMITS	MUCK EXC.	R/W	TEMP. EASE.
TANGENT	100	100	100	50	50	ALL CORNERS	100	ALL CORNERS	ALL CORNERS
HORIZ. CURVE									
0 - 3°	100	100	100	50	50	ALL CORNERS	100	ALL CORNERS	ALL CORNERS
OVER 3° -	100	50	50	25	25	ALL CORNERS	100	ALL CORNERS	ALL CORNERS
VERT. CURVE									
'M' 100' CHORD 0 - .25	100	100	100	50	50				
'M' OVER .25	100	50	50	25	25				
TRAN.		50	50						

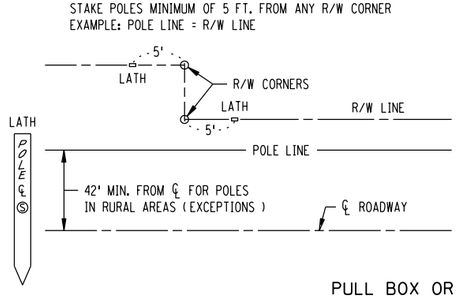
STAKING TOLERANCES (FEET)

	HORIZONTAL	VERTICAL
CONSTRUCTION LIMITS	± 1.5	
CLEARING & GRUBBING	2.0	
SLOPES STAKES	2.0	± 0.2
KEY STAKES	0.2	0.03
DRAINAGE STAKES	0.05	0.05
CURB & GUTTER	0.07	0.03
PAVING	0.05	0.03
ALIGNMENT	0.07	
UTILITY	0.10	0.05
STRUCTURAL	0.02	0.02
GUARD RAIL	0.5	
BUILDINGS	0.04	
O.H. SIGNS	0.05	0.05
MUCK EXCAVATION LIMITS	2.0	
R/W B-POINTS	0.10	
NOISE WALLS	1.0	0.5

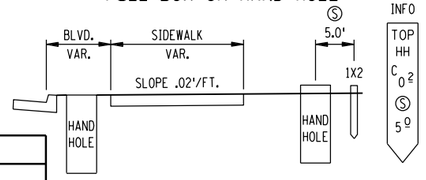
THE TOLERANCES ARE RELATIVE TO PROJECT DATUM

UTILITY (UTIL)

STAKE POLES MINIMUM OF 5 FT. FROM ANY R/W CORNER
EXAMPLE: POLE LINE = R/W LINE



PULL BOX OR HAND HOLE

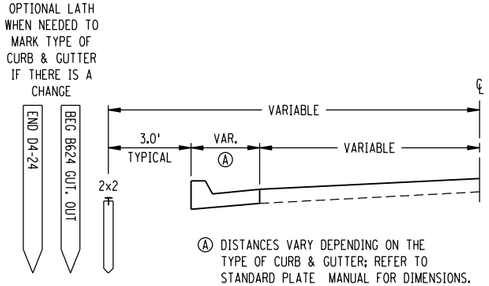


REVISION:

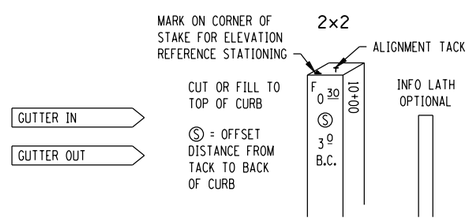
APPROVED: 8-6-2014
DIRECTOR, OFFICE OF LAND MANAGEMENT

CURB & GUTTER (CURB)

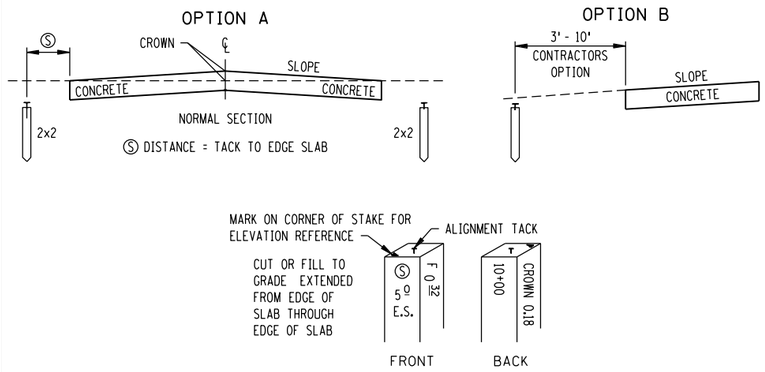
OPTIONAL LATH WHEN NEEDED TO MARK TYPE OF CURB & GUTTER IF THERE IS A CHANGE



Ⓐ DISTANCES VARY DEPENDING ON THE TYPE OF CURB & GUTTER; REFER TO STANDARD PLATE MANUAL FOR DIMENSIONS.



CONCRETE PAVING - SLIP FORM



DISCLAIMER

THESE STAKING INFORMATION SHEETS ARE FOR INFORMATION PURPOSES ONLY. STAKING PROCEDURES VARY AND MAY BE SUBJECT TO CHANGE DURING CONSTRUCTION BY CIRCUMSTANCES AND/OR AGREEMENTS BETWEEN SURVEY CREW AND CONTRACTOR.

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.115 | **1 OF 2**

APPROVED: 8-6-2014
REVISED:

STATE DESIGN ENGINEER

S.A.P. 062-619-039, RAMSEY COUNTY,
S.A.P. 200-020-014, 209-020-014, 138-020-048

STAKING INFORMATION SHEET

SHEET NO. 12 OF 86 SHEETS

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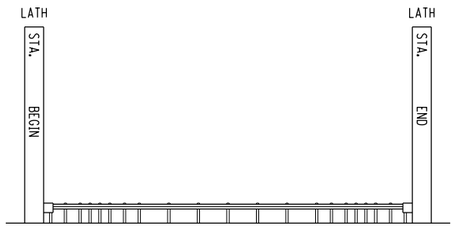
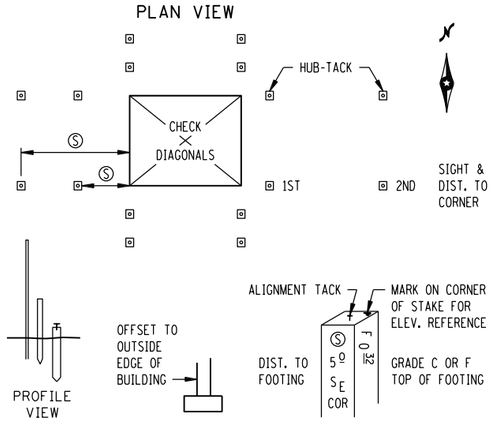
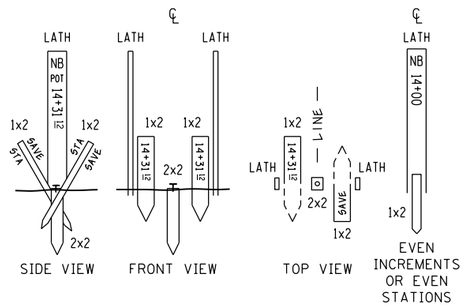
GUARDRAIL (GUARD)



BUILDING (BUILD) FOUNDATION / FOOTING



ALIGNMENT POINTS (ALIGN)



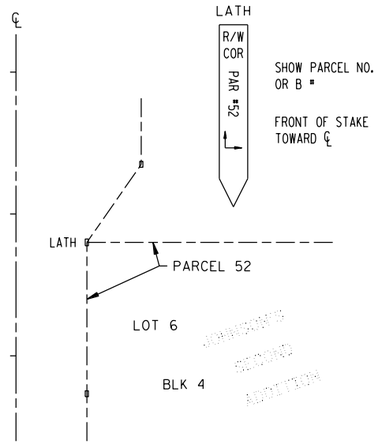
STAKE C = 2" X 2" HUB (LENGTH MAY VARY) SET AS TEMPORARY STAKE. MAY BE REPLACED BY MnDOT MARKER AFTER CONSTRUCTION IS COMPLETED.

SET AT GROUND LEVEL (TEMPORARY CONSTRUCTION STAKE).

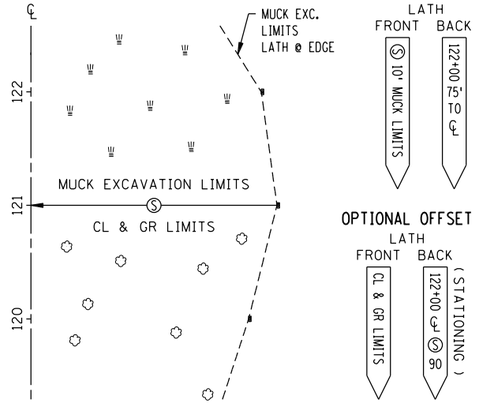
TACK SET AT ALIGNMENT POINTS.

STAKE A = GUARD STAKES SET AT ANGLE IN GROUND 6" EACH SIDE OF STAKE D, WITH STATIONING READ WHEN LOOKING UP STATION.

R/W & TEMP. EASEMENT (R/W)



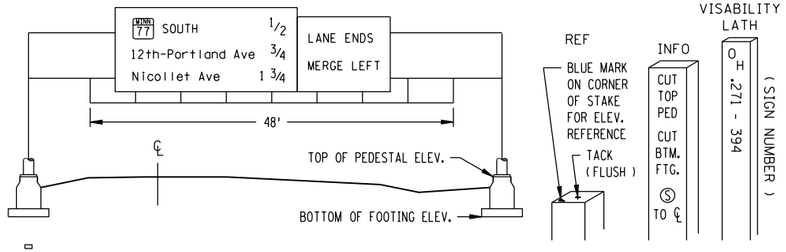
CLEAR & GRUBBING LIMITS (CLEAR) OR MUCK EXCAVATION LIMITS (MUCK)

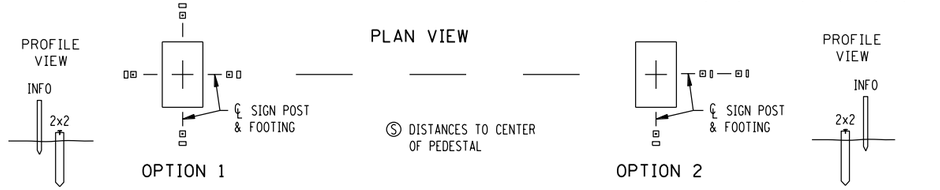


NOTE: FRONT OF LATH GOES TOWARD ℄

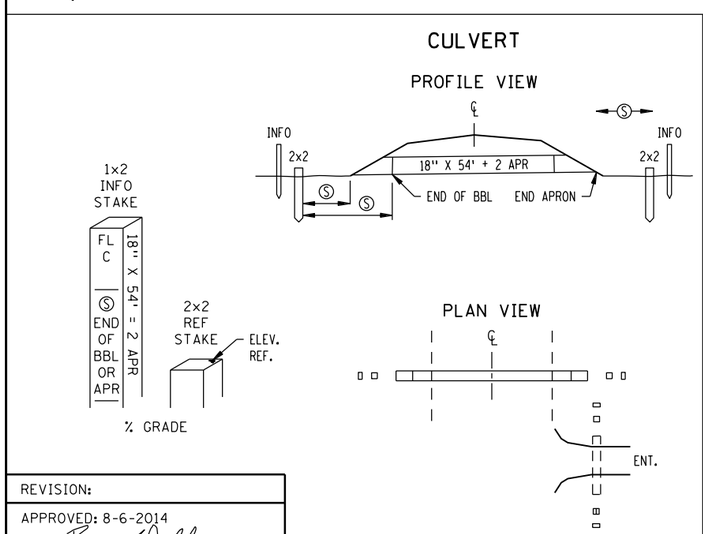
OVERHEAD SIGNS (SIGN)

PROFILE VIEW

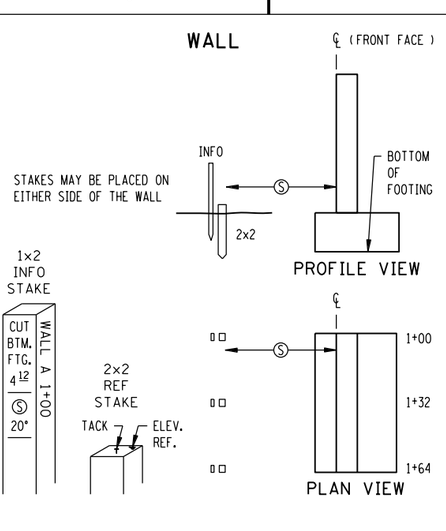




CULVERT

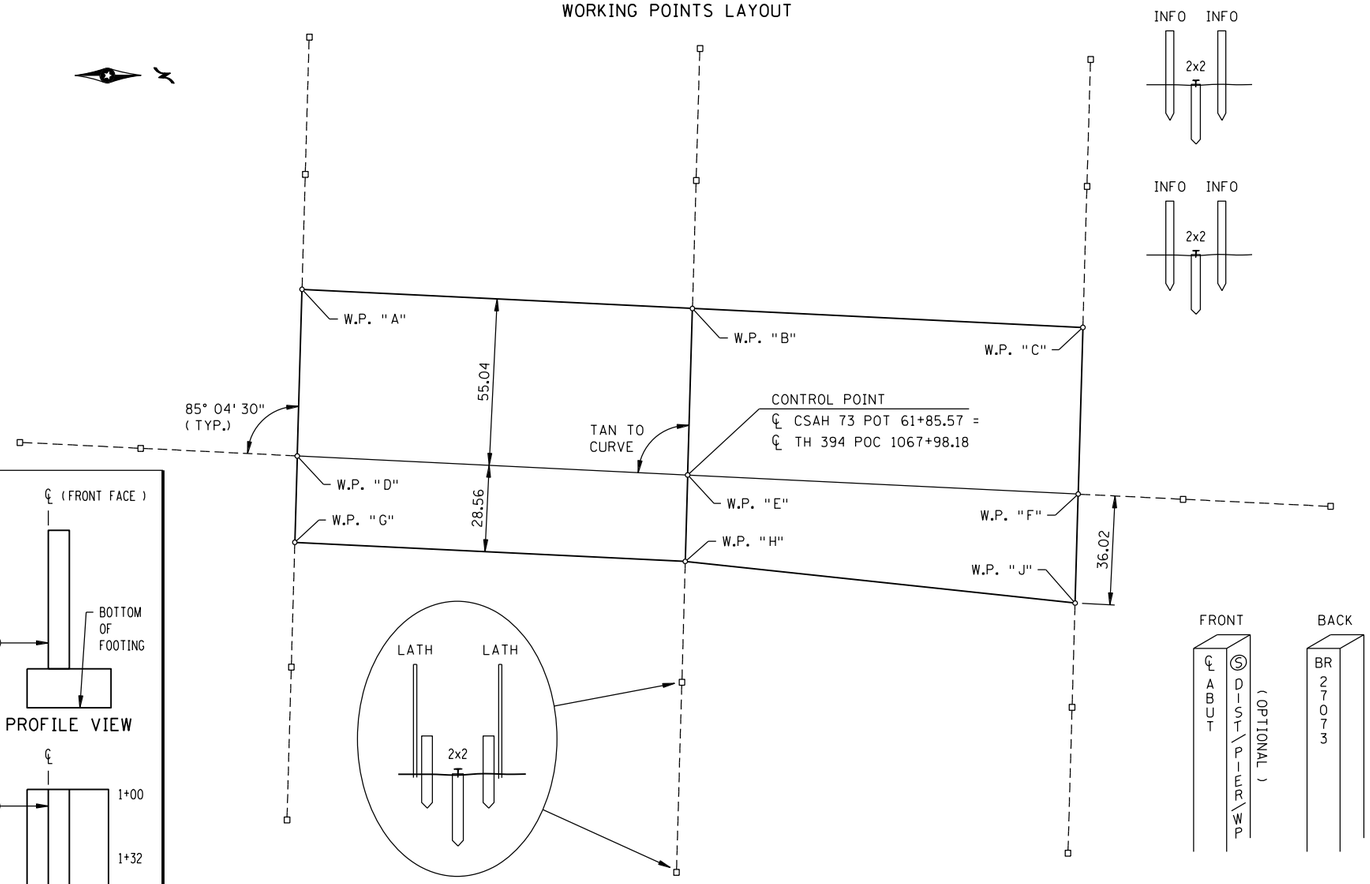


WALL



BRIDGESTAKING (BRIDGE)

WORKING POINTS LAYOUT



REVISION:

APPROVED: 8-6-2014

DIRECTOR, OFFICE OF LAND MANAGEMENT

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.115 | 2 OF 2

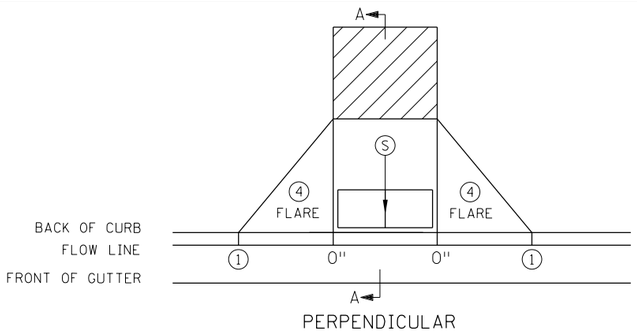
APPROVED: 8-6-2014

REVISED:

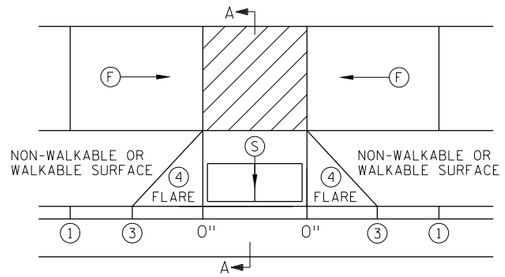
STATE DESIGN ENGINEER

STAKING INFORMATION SHEET

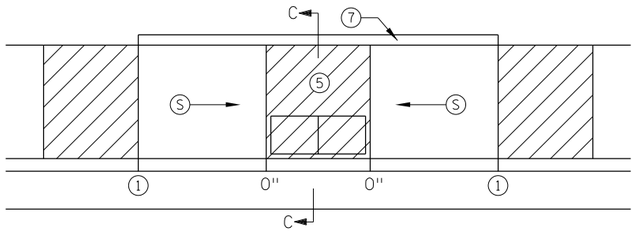
S.A.P. 062-619-039, RAMSEY COUNTY,
S.A.P. 200-020-014, 209-020-014, 138-020-048



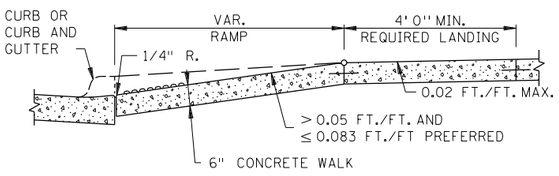
PERPENDICULAR



TIERED PERPENDICULAR

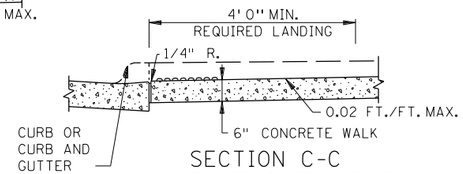


PARALLEL



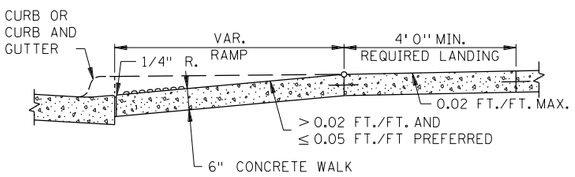
SECTION A-A

PERPENDICULAR/TIERED/DIAGONAL



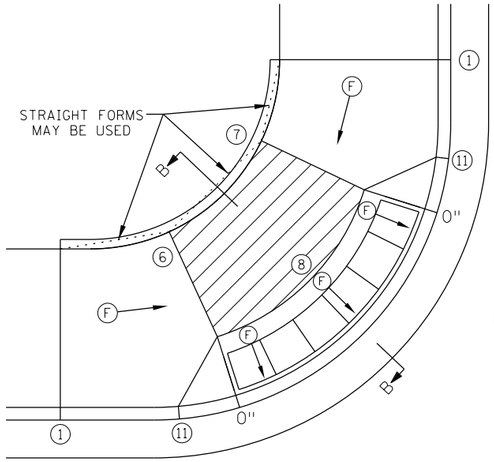
SECTION C-C

PARALLEL/DEPRESSED CORNER

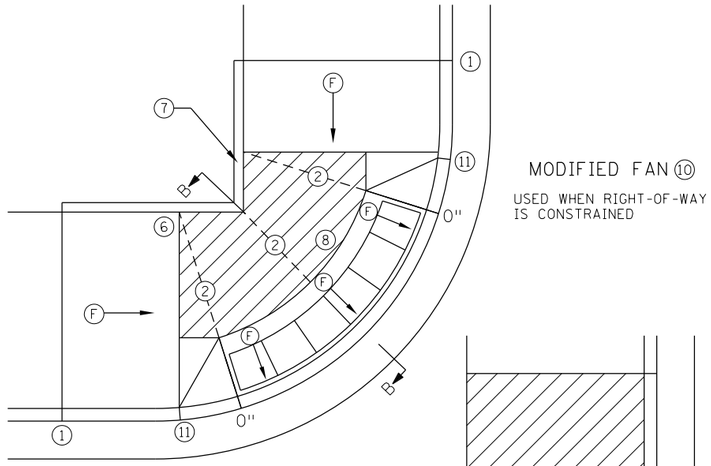


SECTION B-B

FAN

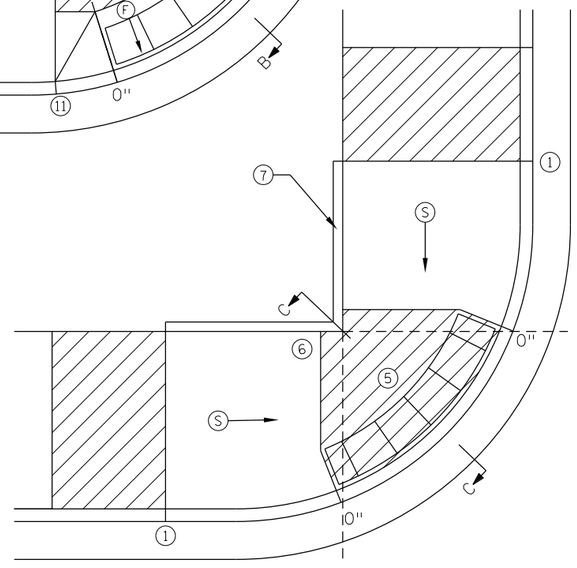


FAN (10)

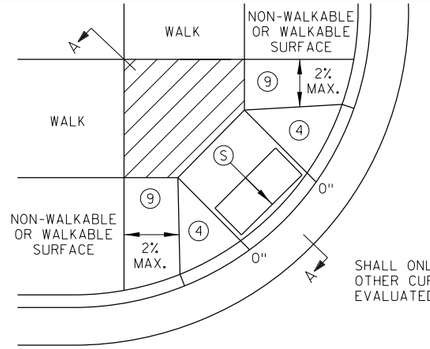


MODIFIED FAN (10)

USED WHEN RIGHT-OF-WAY IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL

SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN (6) BELOW.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.

WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

(1) MATCH FULL HEIGHT CURB.

(2) 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.

(3) 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.

(4) SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.

(5) DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.

(6) THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)

(7) WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

(8) A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.

(9) PAVE FULL WALK WIDTH.

(10) "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

(11) INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN 5-297.250 | **1 OF 6**

APPROVED: 11-04-2021
REVISED:

PEDESTRIAN CURB RAMP DETAILS

S.A.P. 062-619-039, RAMSEY COUNTY,
S.A.P. 200-020-014, 209-020-014, 138-020-048

SHEET NO. 14 OF 86 SHEETS

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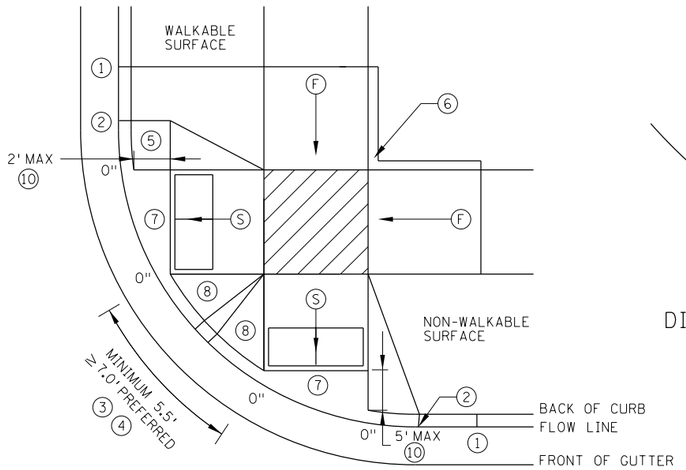
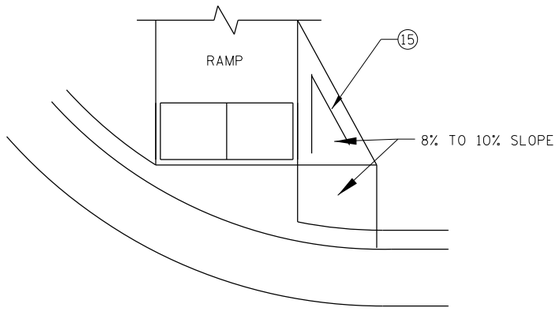
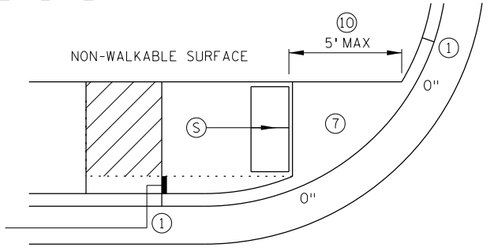


COMBINED DIRECTIONAL

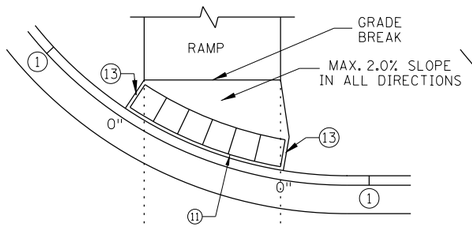


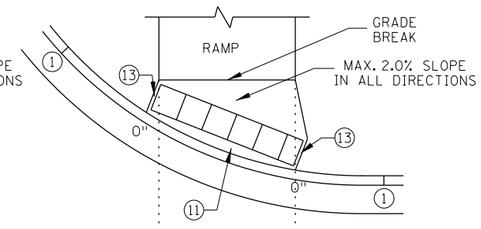
DIRECTIONAL RAMP WALKABLE FLARE

IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.



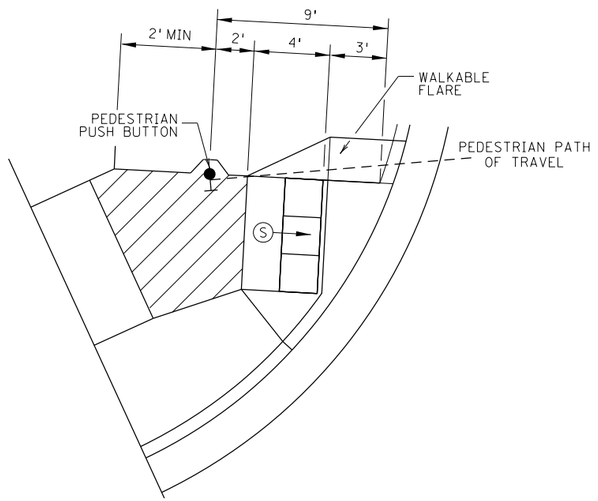
STANDARD ONE-WAY DIRECTIONAL ⑨





DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

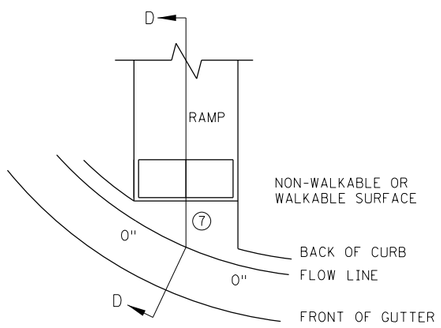
ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB

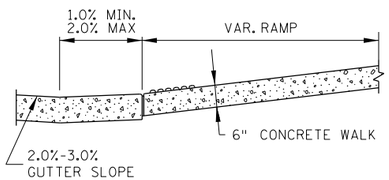


SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB

PRIMARILY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)





SECTION D-D

CURB FOR DIRECTIONAL RAMPS ⑭

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

① MATCH FULL CURB HEIGHT.

② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.

③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).

④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

⑧ 8% TO 10% WALKABLE FLARE.

⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.

⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.

⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.

⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021
JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 | 2 OF 6

APPROVED: 11-04-2021
REVISED:

THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

S.A.P. 062-619-039, RAMSEY COUNTY,
S.A.P. 200-020-014, 209-020-014, 138-020-048

SHEET NO. 15 OF 86 SHEETS

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RAMSEY COUNTY
Public Works

County Road D Multiuse Trail

Applicant: Ramsey County

Route: County Road D

Location: Vadnais Heights, Maplewood, Little Canada

Application Category: Multi Use Trails and Bicycle Facilities

Regional Solicitation Request: $3,005,348.56

Local Match: $751,337.14

Total: $3,756,685.70

Primary Contact:
Alan Maxwell, Engineer III
651-266-7157
Alan.Maxwell@ramseycounty.us

Project Benefits:

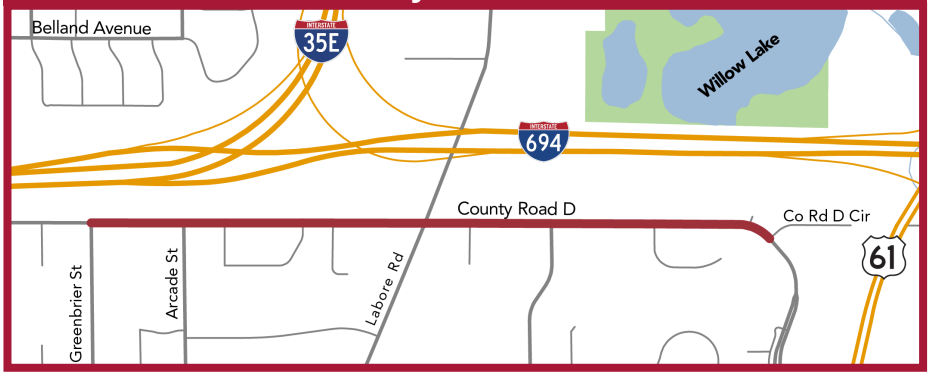
- Decrease chance of pedestrian and bicycle crashes
- Construct a trail along a Tier 1 RBTN Alignment
- Upgrade facilities to meet ADA requirements
- Connect to over 300 units of affordable housing
- Provide non-motorized access to jobs in the Maplewood Mall area
- Connect to the future METRO Purple line and greater transit network

Want more information?
RamseyCounty.us/CountyRoadD

Project Description

County Road D is a minor arterial road located in Ramsey County that over time has deteriorated in quality. With its reconstruction, Ramsey County has an opportunity to provide multimodal connections to areas of high need and further complete the region's Regional Bicycle Network with a new trail along a Tier 1 RBTN Alignment. The proposed project will include the addition of an off-street, multi-use path on a minor arterial road, along an approximately one-mile segment from Greenbrier Street to County Road D Circle.

Project Area

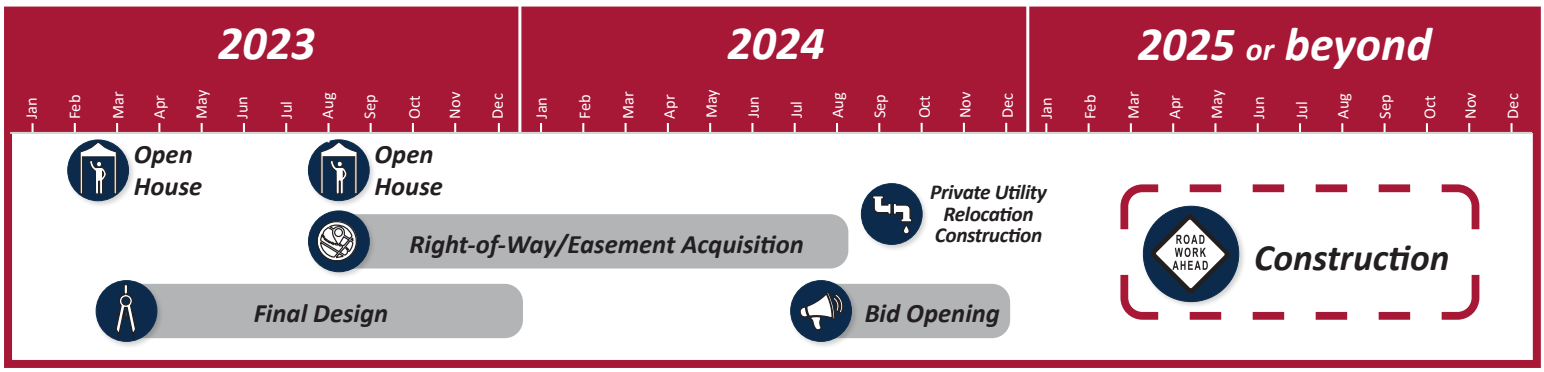


Regional Significance

The corridor has been identified in the Regional Bicycle Trail Network (RBTN) as a Tier 1 corridor. The trail will connect to the greater network of bike trails in Ramsey County and the region, including access to the nearby Maplewood Mall area. In addition to being a major employment area, this site is a future station for the METRO Purple Line, a high-frequency transitway that will connect residents to employment opportunities in downtown St. Paul. Adding bicycle facilities along this road would connect to the network and close a key gap.

The project is essential for providing safe transportation options for residents of Vadnais Heights, Little Canada, and Maplewood. The proposed trail's proximity to a large concentration of affordable housing will result in direct benefits for high-need residents. Roadway users who use non-motorized modes of transportation have worn a makeshift path in the greenspace near the County Road D because walking and biking does not feel safe. A multiuse trail on this roadway will improve safety and comfortability for corridor travelers and connect residents to nearby employment and retail opportunities and outdoor recreation areas.

Project Timeline



Attachment 2

Existing Conditions in the Project Area

Figure 1 – Evidence of roadway condition

Figure 2 –Affordable housing building with pedestrian connections terminating at roadway

Figure 3 – Pedestrian forced to walk on the shoulder of County Road D near the intersection of County Road D and Labore Rd

Figure 4 – Evidence of high pedestrian activity along County Road D with dirt path worn into roadside

Figure 5 – Metro Transit bus stop in front of affordable housing building

Figure 6 – Evidence of driveway condition

Figure 7 – Additional evidence of roadway condition

RAMSEY COUNTY DEPARTMENT OF PUBLIC WORKS
CITIES OF LITTLE CANADA, MAPLEWOOD, & VADNAIS HEIGHTS

RAMSEY COUNTY

Maplewood

COUNTY PROJECT NO. P-3436

CONSTRUCTION PLAN FOR GRADING, BITUMINOUS SURFACING, UTILITY IMPROVEMENTS, AND ADA IMPROVEMENTS

LOCATED ON COUNTY ROAD D (CSAH 19) FROM GREENBRIER STREET TO COUNTY ROAD D CIRCLE

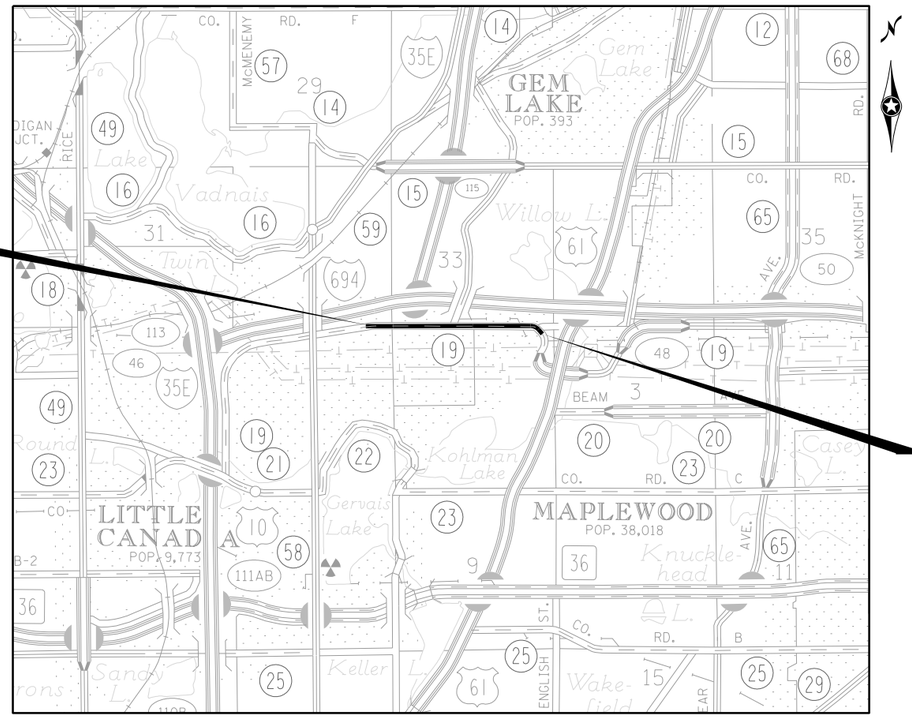
95%

11-30-2023

STATE AID PROJ. NO. 062-619-039 (COUNTY ROAD D)

GROSS LENGTH	5,714.99	FEET	1.082 MILES
BRIDGES-LENGTH		FEET	MILES
EXCEPTIONS-LENGTH		FEET	MILES
NET LENGTH	5,714.99	FEET	1.082 MILES

BEGIN S.A.P. 062-619-039
S.A.P. 200-020-014
S.A.P. 209-020-014
S.A.P. 138-020-048
COUNTY ROAD D STA. 18+46.13



END S.A.P. 062-619-039
S.A.P. 200-020-014
S.A.P. 209-020-014
S.A.P. 138-020-048
COUNTY ROAD D STA. 75+61.12

INDEX MAP	0' 2500'
GENERAL LAYOUT	0' 200'
PLAN	0' 25'
PROFILE	0' HORIZ. 25' / 0' VERT. 5'
CROSS-SECTION	0' HORIZ. 5' / 0' VERT. 5'

THE EXACT LOCATION OF UNDERGROUND UTILITIES SHOWN IN THIS PLAN SET ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL PRIOR TO STARTING ANY EXCAVATION.

GOPHER STATE ONE CALL SYSTEM:
1-800-252-1166

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES."

DESIGN DESIGNATION
S.A.P. 062-619-039 (CSAH 19)

PRESENT ADT (2026)	4,208
PROJECTED ADT (2046)	4,629
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR/MINOR ARTERIAL
NO. & WIDTH OF TRAFFIC LANES	2 – 11 FT
NO. & WIDTH OF PARKING LANES	0
SHOULDER WIDTH	7 FT
STRUCTURAL DESIGN STRENGTH	10 TON
R VALUE	10
ESALS	514,000
DESIGN SPEED	40 MPH

DESIGN SPEED BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE = 3.5 FT, HEIGHT OF OBJECT = 2.0 FT

DESIGN DESIGNATION TRAIL

DESIGN SPEED 20 MPH

BASED ON STOPPING SIGHT DISTANCE
HEIGHT OF EYE = 4.5 FT,
HEIGHT OF OBJECT = 0.0 FT

PROJECT LOCATION

CITY: LITTLE CANADA, VADNAIS HEIGHTS, MAPLEWOOD
COUNTY: RAMSEY COUNTY
DISTRICT: METRO

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

SHEET NO. INDEX

THIS PLAN CONTAINS 101 SHEETS

BOLTON & MENK
1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: XXXX LICENSE # XXXX

DATE: XX-XX-XXXX SIGNATURE:

..... 20 .....
APPROVED: RAMSEY COUNTY ENGINEER

..... 20 .....
APPROVED: CITY OF LITTLE CANADA

..... 20 .....
APPROVED: CITY OF MAPLEWOOD

..... 20 .....
APPROVED: CITY OF VADNAIS HEIGHTS

..... 20 .....
DISTRICT STATE AID ENGINEER:
REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

..... 20 .....
STATE AID ENGINEER:
APPROVED FOR STATE AID FUNDING

5-Year Transportation Improvement Program Funding Summary

Roadway Construction Improvements											
Road Name	Road No.	Termini	Lead Agency	City	Work Proposed	2023	2024	2025	2026	2027	Total
County Road B	25	Snelling Ave.to Lexington Ave.	RC	RV	Construction		$4,800				$4,800
County Road C	23	Lexington Ave. to Little Canada Road	RC	LC/RV	Construction	$200	$300	$1,000	$6,600		$8,100
County Road D	19	Greenbrier St. to CR D Cir.	RC	LC/VH/MW	Construction	$560	$700	$7,875			$9,135
County Road E	15	at Old Snelling Ave.	AH	AH	Construction	$1,800					$1,800
County Road J	81	Centerville Rd.to Otter Lake Rd.	RC	NO/WBT	Construction	$750	$1,250	$25,500			$27,500
County Road J	81	at Hodgson Rd.	AC	SV	Construction		$2,820				$2,820
Dale Street	53	Como Ave. to TH 36	RC	SP/RV	Construction	$500	$3,300				$3,800
Dale Street	53	Grand Ave. to Inglehart St.	RC	SP	Construction	$150	$300	$2,100			$2,550
Eustis Street	127	St Paul Border to Larpenteur Ave	RC	LD	Construction	$300	$610	$1,910			$2,820
Hodgson Road	49	Gramsie Rd. to CSAH 96	RC	SV/VH	Construction	$11,365					$11,365
Jackson Street	55	Pennsylvania Ave. to Acker St.	RC	SP	Construction	$400	$400	$1,910	$1,025	$1,050	$4,785
Jackson Street	55	Rose Ave. to Arlington Ave.	RC	SP	Construction	$400	$400	$1,000	$11,000		$12,800
Lexington Parkway	51	Shepard Rd. to W. 7th St.	RC	SP	Construction	$4,000					$4,000
Maryland Avenue	31	Clark to Edgerton St.	RC	SP	Construction		$275	$200	$1,400		$1,875
Old Highway 8	77	Over MCRR	RC	NB	Bridge Replacement					$2,400	$2,400
Otter Lake Road	60	CSAH 96 to 4th Ave.	RC	WB	Construction	$1,100	$4,285				$5,385
Rice Street	49	CR B2 to South Owasso Blvd	RC	LC/RV	Planning/Design				$500	$3,000	$3,500
Rice Street	49	Maryland Ave. to Wheelock Pkwy	RC	SP	Construction	$600	$13,400				$14,000
Rice Street	49	Pennsylvania Ave. to Maryland Ave.	RC	SP	Construction	$750		$8,100			$8,850
Rice Street	49	Wheelock Pkwy. to CR B	RC	MW/RV/SP	Construction	$450			$7,800		$8,250
TCAAP Spine Road		CSAH 96 to CR H	RC	AH	Construction					$20,000	$20,000
TH120		TH36 Interchange	MnDOT	NSP	Construciton					$40,000	$40,000
White Bear Ave	65	Larpenteur Ave. to North St Paul Rd.	RC	MW/SP	Construction		$9,051				$9,051
					Total	**$23,325**	**$41,891**	**$49,595**	**$28,325**	**$66,450**	**$209,586**

2023 Projects

Roadway Construction Improvements													
Road Name	Road No.	Termini	Lead Agency	City	Work Type	CSAH	County	County Turnback	Local	State	Federal	Other	Total
County Road C	23	Lexington Ave. to Little Canada Rd.	RC	LC/RV	Planning/Design	$200							$200
County Road D	19	Greenbrier St. to CR D Cir.	RC	LC/MW/VH	Planning/Design	$450			$110				$560
County Road E	15	at Old Snelling Ave.	RC	AH	Construction	$1,300			$500				$1,800
County Road J	81	Centerville Rd. to Otter Lake Rd.	RC	NO/WBT	Planning/Design/ROW	$250			$250			$250	$750
Dale Street	53	Como Ave. to TH 36	RO	SP/RV	Planning/Design/ROW	$250			$250				$500
Dale Street	53	Grand Ave. to Inglehart St.	RC	SP	Planning/Design/ROW	$150							$150
Eustis Street	127	St Paul Border to Larpenteur Ave.	RC	LD	Planning/Design		$300		$0				$300
Hodgson Road	49	Gramsie Rd. to CSAH 96	RC	SV/VH	Construction			$9,640	$1,725				$11,365
Jackson Street	55	Pennsylvania Ave. to Acker St.	RC	SP	Planning/Design	$200			$200				$400
Jackson Street	55	Rose Ave. to Arlington Ave.	RC	SP	Planning/Design	$200			$200				$400
Lexington Parkway	51	Shepard Rd. to W. 7th St.	RC	SP	Construction				$1,500		$2,500		$4,000
Old Highway 8	77	CR E to 5th St. NW	RC	NB	Preservation/Signals	$1,300	$1,300		$300				$2,900
Otter Lake Rd	60	CSAH 96 to 4th St.	RC	WB	Right of way	$550			$550				$1,100
Rice Street	49	Maryland Ave. to Wheelock Pkwy	RC	SP	Right of way			$300	$300				$600
Rice Street	49	Pennsylvaniua Ave. to Maryland Ave.	RC	SP	Right of way			$500	$250				$750
Rice Street	49	Wheelock Pkwy to CR B	RC	SP/MW/RV	Right of way			$300	$150				$450
Total						**$4,650**	**$1,600**	**$10,740**	**$6,285**	**$0**	**$2,500**	**$250**	**$26,225**

2024 Projects

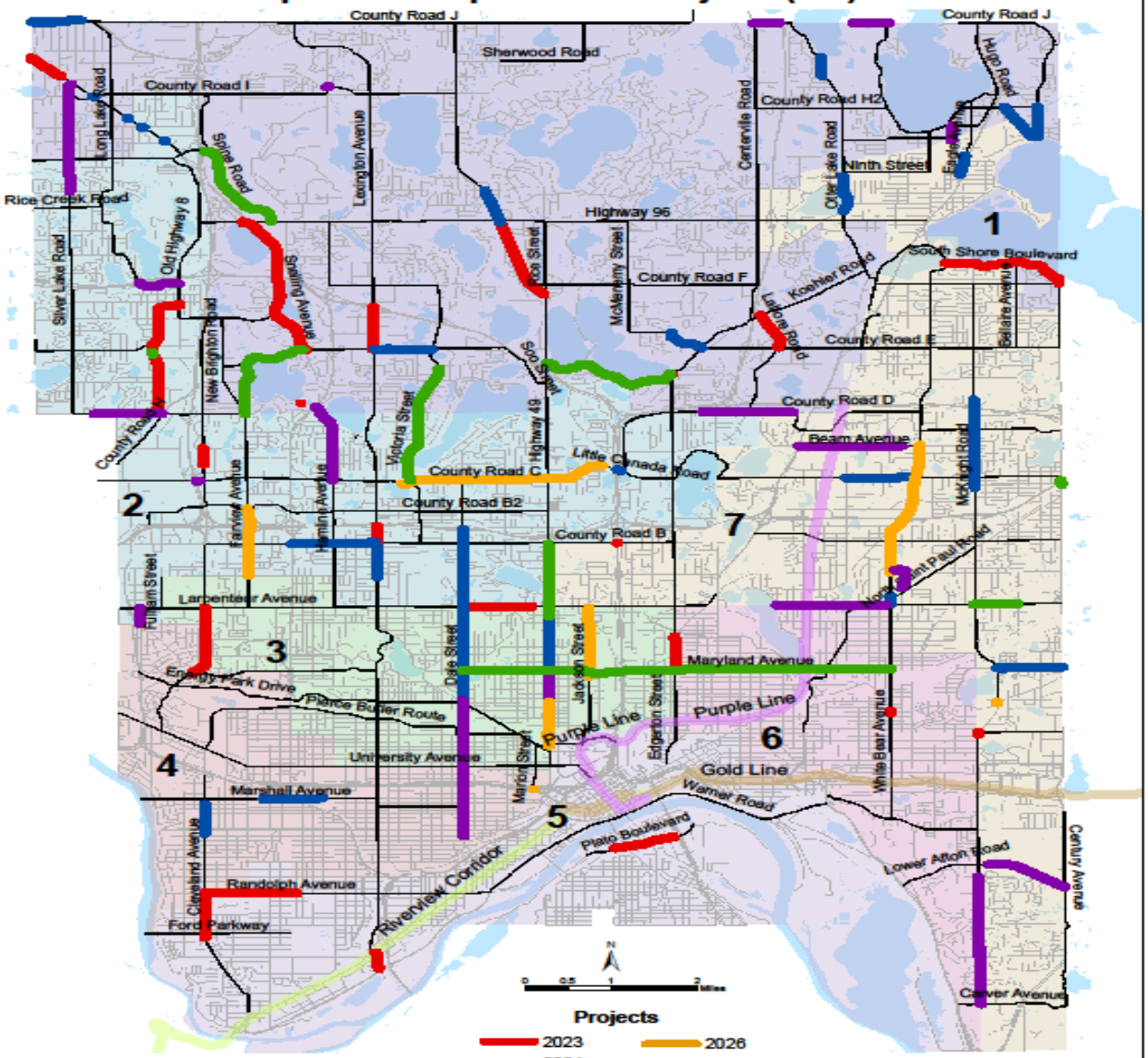
Roadway Construction Improvements													
Road Name	Road No.	Termini	Lead Agency	City	Work Type	CSAH	County	County Turnback	Local	State	Federal	Other	Total
County Road B	25	Snelling Ave.to Lexington Ave.	RC	RV	Construction	$3,900			$900				$4,800
County Road C	23	Lexington Ave. to Little Canada Rd.	RC	LC/RV	Planning/Design	$300			$300				$600
County Road D	19	Greenbrier St. to CR D Cir.	RC	LC/MW/VH	Right of way	$350			$350				$700
County Road J	81	Centerville Rd. to Otter Lake Rd.	RC	NO/WBT	Right of way	$500			$500			$250	$1,250
County Road J	81	at Hodgson Rd.	Anoka	SV/LL	Construction	$1,000			$20			$1,800	$2,820
Dale Street	53	Como Ave. to TH36	RC	RV/SP	Construction	$1,750			$650		$900		$3,300
Dale Street	53	Grand Ave. to Inglehart St.	RC	SP	Right of way		$300						$300
Eustis Street	127	St Paul Border to Larpenteur Ave.	RC	LD	Right of way		$305		$305				$610
Jackson Street	55	Pennsylvania Ave. to Acker St.	RC	SP	Planning/Design	$200			$200				$400
Jackson Street	55	Rose Ave. to Arlington Ave.	RC	SP	Planning/Design	$200			$200				$400
Maryland Avenue	31	Clark St. to Edgerton St.	RC	SP	Planning/Design	$200			$75				$275
Otter Lake Road	60	CSAH 96 to 4th St.	RC	WB	Construction	$4,055			$230				$4,285
Rice Street	49	Maryland Ave. to Wheelock Pkwy	RC	SP	Construction	$6,100		$2,500	$1,300		$3,500		$13,400
White Bear Avenue	65	Larpenteur Ave. to North St Paul Rd.	RC	MW/SP	Construction	$8,372			$679				$9,051
Total						**$26,927**	**$605**	**$2,500**	**$5,709**	**$0**	**$4,400**	**$2,050**	**$42,191**

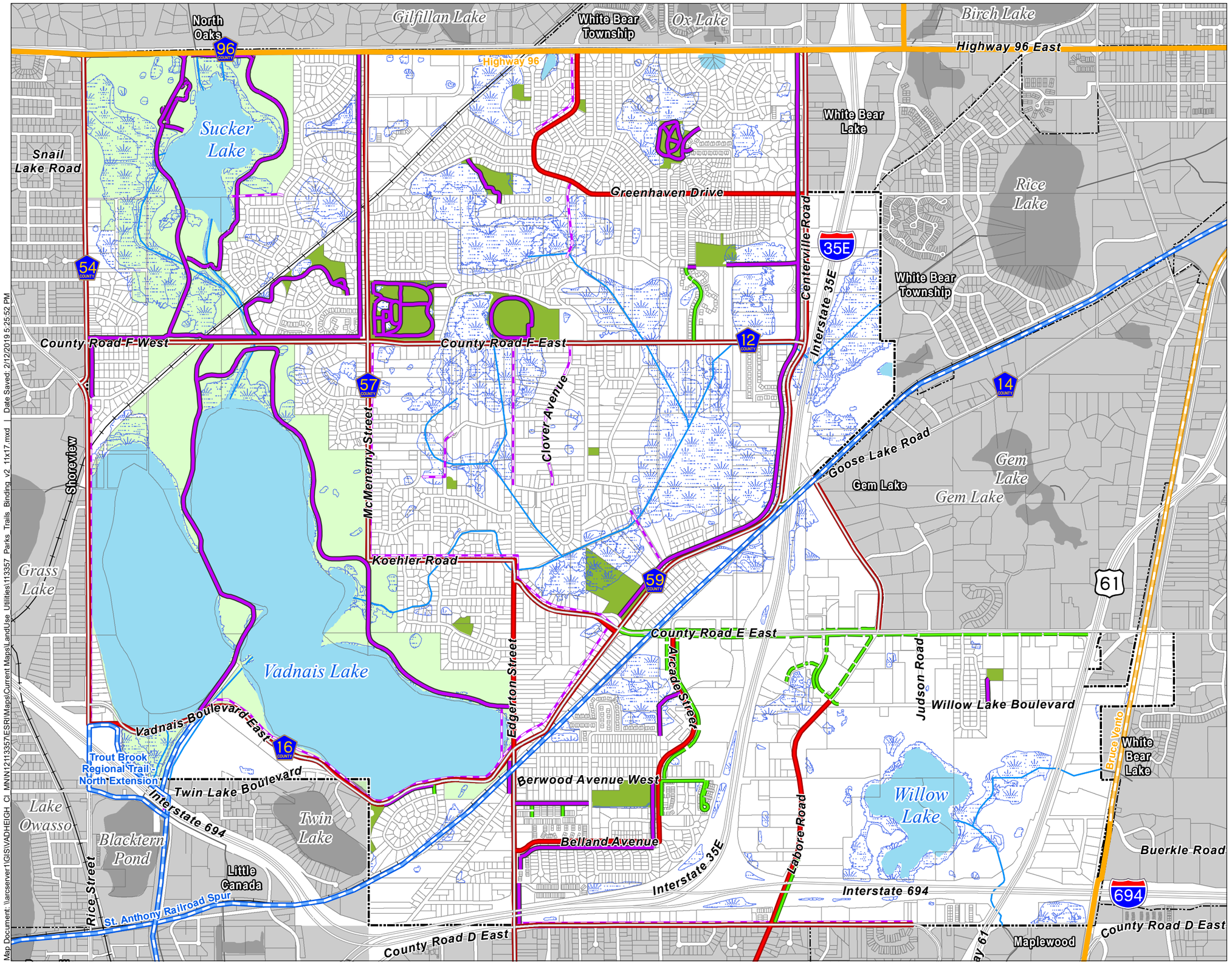
2025 Projects

Roadway Construction Improvements													
Road Name	Road No.	Termini	Lead Agency	City	Work Type	CSAH	County	County Turnback	Local	State	Federal	Other	Total
County Road C	23	Lexington Ave. to Little Canada Rd.	RC	LC/RV	Right of Way	$600			$400				$1,000
County Road D	19	Greenbrier St. to CR D Cir.	RC	LC/MW/VH	Construction	$6,975			$900				$7,875
County Road J	81	Centerville Rd. to Otter Lake Rd.	RC	NO/WBT	Construction	$3,500			$1,000	$10,000	$10,000	$1,000	$25,500
Dale Street	53	Grand Ave. to Inglehart St.	RC	SP	Construction		$100				$2,000		$2,100
Eustis Street	127	St Paul Border to Larpenteur Ave.	RC	LD	Construction		$1,800		$110				$1,910
Jackson Street	55	Pennsylvania Ave. to Acker St.	RC	SP	Right of Way	$500			$500				$1,000
Jackson Street	55	Rose Ave. to Arlington Ave.	RC	SP	Right of Way	$500			$500				$1,000
Maryland Avenue	31	Clark St. to Edgerton St.	RC	SP	Right of Way	$100			$100				$200
Rice Street	49	Front St. to Maryland Ave.	RC	SP	Construction			$3,100	$1,500		$3,500		$8,100
Total						**$12,175**	**$1,900**	**$3,100**	**$5,010**	**$10,000**	**$15,500**	**$1,000**	**$48,685**

Roadway Pavement Preservation Improvements													
Road Name	Road No.	Termini	Lead Agency	City	Work Type	CSAH	County	County Turnback	Local	State	Federal	Other	Total
Beam Avenue	20	US 61 to Swanson St. (Mall Entrance)	RC	MW	Pavement Preservation		$750						$750
County Road D	19	Silver Lake Rd. to US88	RC	SA/NB/RV	Pavement Preservation	$1,170							$1,170
Division Street	151	Stillwater Rd. to Park Ave.	RC	WBT	Pavement Preservation		$150						$150
Hamline Avenue	50	CR C to Snelling Ave.	RC	RV/AH	Pavement Preservation		$715						$715
Hodgson Road	49	Hwy 96 to Tanglewood Dr	RC	SV	Pavement Preservation		$150						$150
Larpenteur Avenue	30	East Shore Dr to Flandrau St.	RC	MW/SP	Pavement Preservation	$550							$550
Long Lake Road/10th Street	45/12	I-694 to Old Hwy 8	RC	NB	Pavement Preservation		$460						$460
McKnight Road	68	Carver Ave. to Londin ln.	RC	MW/SP	Pavement Preservation		$770						$770
Silver Lake Road	44	Mississippi St. to Mounds View Blvd	RC	NB/MV	Pavement Preservation	$650	$550						$1,200
Van Dyke Street	150	Ripley Ave. to White Bear Ave.	RC	MW	Pavement Preservation		$250						$250
Total						**$2,370**	**$3,795**	**$0**	**$0**	**$0**	**$0**	**$0**	**$6,165**

Transportation Improvement Projects (TIP)





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Vision Vadnais Heights 2040

Parks and Trails

2040 Comprehensive Plan

City of Vadnais Heights, Minnesota

Legend

- Existing Regional Trail
- Planned Regional Trail
- Regional Trail Search Corridor
- Concrete Sidewalk
- Sidewalk or Off-Road Path
- Paved Shoulder
- Planned Sidewalk/Off-Road Path
- Railroad
- Streams
- Vadnais Heights City Limits
- City/Township Boundaries
- National Wetland Inventory

Parks and Trails

- Existing City Park
- Existing Regional Park

0 2,000 Feet

Source: MnGeo, City of Vadnais Heights, Ramsey County

BOLTON & MENK
Real People. Real Solutions.

Vadnais Heights

February 2019