Application

19838 - 2024 Roadway Modernization
20194 - Highway 5 and Highway 41 Intersection Reconstruction Project
Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted
Submitted Date: 12/15/2023 3:08 PM

## Primary Contact

Feel free to edit your profile anytime your information changes. Create your own personal alerts using My Alerts.

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Suite 1

* Cologne (City) Minnesota (State/Province) 55322 (Postal Code/Zip)

**Phone:*** 612-231-9170 (Phone) (Ext.)

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

## Organization Information

**Name:** CARVER COUNTY
**Jurisdictional Agency (if different):**
**Organization Type:** County Government
**Organization Website:**
**Address:** PUBLIC WORKS
11360 HWY 212 W #1

* COLOGNE (City) Minnesota (State/Province) 55322-9133 (Postal Code/Zip)

**County:** Carver
**Phone:*** (Ext.)

**Fax:**
**PeopleSoft Vendor Number** 0000026790A12

## Project Information

**Project Name** TH 5 and TH 41 Intersection Modernization
**Primary County where the Project is Located** Carver
**Cities or Townships where the Project is Located:** Chaska, Chanhassen
**Jurisdictional Agency (If Different than the Applicant):** MnDOT

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

The TH 5 and TH 41 intersection sees significant congestion and safety issues. In ten-years (2013-2022) there were 150 crashes. The most prominent crash type is rear end and the second is angle crashes. Traditional engineering would suggest conversion to an interchange. Project partners have proposed a partial displaced left turn (DLT) intersection. This is an innovative at-grade solution and will be the first in Minnesota. The primary benefit of the DLT intersection is the reduction in the number of traffic signal phases and conflict points with consequent improvements in operations and safety. The main geometric feature of the DLT intersection is the removal of left-turn movements from the main intersection to an upstream signalized location. Traffic that would turn left at the main intersection in a conventional design now has to cross opposing through lanes at a signal-controlled intersection several hundred feet upstream and then travel on a new roadway parallel to the opposing lanes. This traffic is now able to execute the left turn simultaneously with the through traffic at the main intersection. Traffic signals at the left-turn crossovers and the main intersection are operated in a coordinated mode so that vehicles do not stop multiple times in the intersection area. A DTL provides more capacity without expanding TH 41 to four lanes in a confined area. TH 5 will remain four lanes through the intersection with left turn lanes modified.

TH 5 is classified as an A-Minor Arterial Expander and Tier 2 freight corridor. TH 41 is also an A-Minor Arterial Expander but a Tier 3 freight corridor. Both corridors are intended to move people, goods and services for regional trips at higher speeds safely and efficiently. Unfortunately, the project area is unable to support this in its current design. Just south of the intersection is one of the largest industrial parks in Carver County--the Chaska North Industrial Area--relying on regional freight mobility. This is a well-established collection of manufacturing, technology, bioscience and other businesses that provide more than 5,000 jobs and an estimated $950 million in freight value each year, according to the Met Council's 2017 Regional Truck Highway Corridor Study. The project will result in a 51% reduction in crashes and 56% reduction in delays.

Over the last four years Carver County has worked in close partnership with the Minnesota Department of Transportation (MnDOT), the University of Minnesota Landscape Arboretum, and the Cities of Victoria, Chanhassen, and Chaska to develop a shared vision to improve safety and mobility for all users of the Highway 5 corridor.

*(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.**

TH 5 (ARBORETUM BLVD) and TH 41 (NORTH CHESTNUT ST) IN CHANHASSEN AND CHASKA, FROM ARBORETUM DR (TH 5); 78th ST (TH 41) TO CENTURY BLVD (TH 5); 82nd St (TH 41), MEDIAN CHANNELIZATION, TRAFFIC SIGNALS, LIGHTING, MAR

*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)**

1.2

*to the nearest one-tenth of a mile*

## Project Funding

| | |
|---|---|
| **Are you applying for competitive funds from another source(s) to implement this project?** | Yes |
| **If yes, please identify the source(s)** | MNHFP, SS4A, Rural DOT |
| **Federal Amount** | $7,000,000.00 |
| **Match Amount** | $6,526,900.00 |
| *Minimum of 20% of project total* | |
| **Project Total** | $13,526,900.00 |
| *For transit projects, the total cost for the application is total cost minus fare revenues.* | |
| **Match Percentage** | 48.25% |
| *Minimum of 20%*<br>*Compute the match percentage by dividing the match amount by the project total* | |
| **Source of Match Funds** | Carver County Local Options Sales Tax, City of Chanhassen, State Earmark, MnDOT |

*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-Roadways

**NOTE: If your project has already been assigned a State Aid Project # (SAP or SP), please Indicate SAP# here**

| | |
|---|---|
| **SAP#:** | |
| **County, City, or Lead Agency** | Carver County |
| **Functional Class of Road** | A-Minor Expander |
| **Road System** | TH |
| *TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET* | |
| **Road/Route No.** | 5 |
| *i.e., 53 for CSAH 53* | |
| **Name of Road** | Arboretum Boulevard |
| *Example; 1st ST., MAIN AVE* | |
| **TERMINI:(Termini listed must be within 0.3 miles of any work)** | |
| **From:** | |
| **Road System** | CITY STREET and CSAH |
| **Road/Route No.** | |
| *i.e., 53 for CSAH 53* | |
| **Name of Road** | Arboretum Drive (TH 5); 16/78th Street (TH 41) |
| *Example; 1st ST., MAIN AVE* | |
| **To:** | |
| **Road System** | CITY STREET |
| *DO NOT INCLUDE LEGAL DESCRIPTION* | |
| **Road/Route No.** | |
| *i.e., 53 for CSAH 53* | |
| **Name of Road** | Century Blvd (TH 5); 82nd Street (TH 41) |
| *Example; 1st ST., MAIN AVE* | |
| **In the City/Cities of:** | Chanhassen |
| *(List all cities within project limits)* | |
| **OR:** | |
| **At:** | |
| **Road System** | |
| *(TH, CSAH, MSAS, CO. RD., TWP. RD., City Street)* | |
| **Road/Route No.** | |
| *i.e., 53 for CSAH 53* | |
| **Name of Road** | |
| *Example; 1st ST., MAIN AVE* | |
| **In the City/Cities of:** | |
| *(List all cities within project limits)* | |
| **PROJECT LENGTH** | |
| **Miles** | 1.2 |
| *(nearest 0.1 miles)* | |
| **Primary Types of Work (check all the apply)** | |
| **New Construction** | |
| **Reconstruction** | Yes |
| **Resurfacing** | |
| **Bituminous Pavement** | Yes |
| **Concrete Pavement** | |
| **Roundabout** | |
| **New Bridge** | Yes |
| **Bridge Replacement** | |
| **Bridge Rehab** | |
| **New Signal** | |
| **Signal Replacement/Revision** | Yes |
| **Bike Trail** | 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):**

**OTHER INFORMATION:**

| | |
|---|---|
| **Zip Code where Majority of Work is Being Performed** | 55318 |
| **Approximate Begin Construction Date** | 03/01/2025 |
| **Approximate End Construction Date** | 03/01/2027 |
| **Miles of Trail (nearest 0.1 miles)** | 0.5 |
| **Miles of Sidewalk (nearest 0.1 miles)** | 0 |
| **Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles):** | 0.5 |
| **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:**

-Goal A: Transportation System Stewardship (p. 58)

-Objective B: Operate the regional transportation system efficiently and cost-effectively.

-Strategy A1 (p. 2.17).

-Goal B: Safety and Security (p. 60)

-Objective A: Reduce fatal and serious injury crashes and improve safety and security.

-Strategies B1 (p. 2.20), B3 (p. 2.21), B4 (p. 2.22), and B6 (p. 2.23).

-Goal C: Access to Destinations (p. 62)

-Objective A: Increase availability of multimodal travel options

-Objective B: Increase reliability and predictability for travel

-Objective D: Increase number and share of trips by transit, carpools, bicycling, and walking

-Objective E: Improve availability and quality of multimodal travel options for people of all ages and abilities

-Strategies C1 (p. 2.24), C2 (p. 2.25), C3 (p. 2.27), C9 (p. 2.32), C10 (p. 2.32), C15 (p. 2.36), C16 (p. 2.36), and C17 (p. 2.37).

-Goal D: Competitive Economy (p. 64)

-Objective B: Invest in multimodal transportation system

-Objective C: Support economic competitiveness through efficient freight movement

-Strategies D1 (p.2.38) and D3 (p. 2.39).

-Goal E: Healthy Environment (p. 66)

-Objective A: Reduce transportation-related air emissions

-Objective C: Increase availability/attractiveness of transit, bicycling, and walking to encourage active transportation

-Objective D: A transportation system that promotes community cohesion and connectivity for people of all ages and abilities

-Strategies E1 (p. 2.42), E2 (p. 2.43), E3 (p. 2.44), and E6 (p. 2.44).

-Goal F: Leveraging Transportation Investments to Guide Land Use (p. 70)

-Objective A: Focus regional growth in areas that support the full range of multimodal travel

-Objective C: Encourage land use design that integrates highways, streets, transit, walking, and bicycling

-Strategies F1 (p. 2.48), F5 (p. 2.52), F6 (p. 2.52), and F7 (p. 2.53).

*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.**

City of Chanhassen Comprehensive Plan (2020)

-Identifies TH 5 as important roadway that functions as the foundation of the city's transportation system, a major link to the metro area, and important for regional commercial access (Pp. 125-126).

-Identifies capacity issues on TH 5 and expectation for additional capacity issues with continued growth in the region (P. 115, 117). Notes need for Chanhassen to partner with other agencies to plan improvements and identify funding (P. 117), and that Carver County Transportation Plan shows a need for a 4-lane highway W of TH 41 (P. 129).

Carver County 2040 Comprehensive Plan Transportation Plan Pages 4-36 thru 4-39.

Arboretum Area Transportation Plan (2021), adopted by Carver County, Chanhassen, Chaska, and Victoria

*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 elements in more than one funding application 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).*

***Strategic Capacity (Roadway Expansion):*** *$1,000,000 to $10,000,000*
***Roadway Reconstruction/Modernization:*** *$1,000,000 to $7,000,000*
***Traffic Management Technologies (Roadway System Management):*** *$500,000 to $3,500,000*
***Spot Mobility and Safety:*** *$1,000,000 to $3,500,000*
***Bridges Rehabilitation/Replacement:*** *$1,000,000 to $7,000,000*

**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

**(TDM and Unique Project Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.**

**Date plan completed:** 02/18/2014

**Link to plan:** https://www.carvercountymn.gov/home/showdocument?id=1164

**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

## Roadways Including Multimodal Elements

*1. All roadway projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map. Bridge Rehabilitation/Replacement projects must be located on a minor collector and above functionally classified roadway in the urban areas or a major collector and above in the rural areas.*

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

**Roadway Strategic Capacity and Reconstruction/Modernization and Spot Mobility projects only:**

*2. The project must be designed to meet 10-ton load limit standards.*

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

**Bridge Rehabilitation/Replacement and Strategic Capacity projects only:**

*3. Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOT?s ?Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities? manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.*

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

*4. The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.*

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

**Bridge Rehabilitation/Replacement projects only:**

*5. The length of the in-place structure is 20 feet or longer.*

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

*6. The bridge must have a Local Planning Index (LPI) of less than 60 OR a National Bridge Inventory (NBI) Rating of 3 or less for either Deck Geometry, Approach Roadway, or Waterway Adequacy as reported on the most recent Minnesota Structure Inventory Report.*

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

**Roadway Expansion, Reconstruction/Modernization, and Bridge Rehabilitation/Replacement projects only:**

*7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact David Elvin at MnDOT (David.Elvin@state.mn.us or 651-234-7795) to determine whether your project needs to go through this process as described in Appendix F of the 2040 Transportation Policy Plan.*

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

## Requirements - Roadways Including Multimodal Elements

## Specific Roadway Elements

| CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES | Cost |
|---|---|
| Mobilization (approx. 5% of total cost) | $473,000.00 |
| Removals (approx. 5% of total cost) | $515,800.00 |
| Roadway (grading, borrow, etc.) | $1,425,500.00 |
| Roadway (aggregates and paving) | $2,747,700.00 |
| Subgrade Correction (muck) | $0.00 |
| Storm Sewer | $1,110,000.00 |
| Ponds | $100,000.00 |
| Concrete Items (curb & gutter, sidewalks, median barriers) | $1,030,500.00 |
| Traffic Control | $473,000.00 |
| Striping | $141,900.00 |
| Signing | $141,900.00 |
| Lighting | $175,000.00 |
| Turf - Erosion & Landscaping | $756,800.00 |
| Bridge | $0.00 |
| Retaining Walls | $1,375,000.00 |

| | |
|---|---|
| Noise Wall (not calculated in cost effectiveness measure) | $0.00 |
| Traffic Signals | $570,000.00 |
| Wetland Mitigation | $0.00 |
| Other Natural and Cultural Resource Protection | $0.00 |
| RR Crossing | $0.00 |
| Roadway Contingencies | $1,772,200.00 |
| Other Roadway Elements | $0.00 |
| **Totals** | **$12,808,300.00** |

## Specific Bicycle and Pedestrian Elements

| CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES | Cost |
|---|---|
| Path/Trail Construction | $20,200.00 |
| Sidewalk Construction | $0.00 |
| On-Street Bicycle Facility Construction | $0.00 |
| Right-of-Way | $0.00 |
| Pedestrian Curb Ramps (ADA) | $8,000.00 |
| Crossing Aids (e.g., Audible Pedestrian Signals, HAWK) | $570,600.00 |
| Pedestrian-scale Lighting | $0.00 |
| Streetscaping | $0.00 |
| Wayfinding | $0.00 |
| Bicycle and Pedestrian Contingencies | $119,800.00 |
| Other Bicycle and Pedestrian Elements | $0.00 |
| **Totals** | **$718,600.00** |

## 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 project has eligible PROTECT elements including storm sewer, ponding, erosion control, and retaining wall costs estimated at $3,341,800.

## Totals

| | |
|---|---|
| **Total Cost** | $13,526,900.00 |
| **Construction Cost Total** | $13,526,900.00 |
| **Transit Operating Cost Total** | $0.00 |

## Measure B: Project Location Relative to Jobs, Manufacturing, and Education

**Existing Employment within 1 Mile:** 8511

| | |
|---|---|
| **Existing Manufacturing/Distribution-Related Employment within 1 Mile:** | 3410 |
| **Existing Post-Secondary Students within 1 Mile:** | 0 |
| **Upload Map** | 1702657499211_RegionalEconomyMap.pdf |
| *Please upload attachment in PDF form* | |

## Measure C: Current Heavy Commercial Traffic

*RESPONSE: Select one for your project, based on the updated 2021 Regional Truck Corridor Study:*

| | |
|---|---|
| **Along Tier 1:** | |
| **Miles:** | 0 |
| *(to the nearest 0.1 miles)* | |
| **Along Tier 2:** | Yes |
| **Miles:** | 1.2 |
| *(to the nearest 0.1 miles)* | |
| **Along Tier 3:** | |
| **Miles:** | 0 |
| *(to the nearest 0.1 miles)* | |
| **The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:** | |
| **None of the tiers:** | |

## Measure A: Current Daily Person Throughput

| | |
|---|---|
| **Location** | East leg of TH 5/TH 41 intersection SEQ#11434 |
| **Current AADT Volume** | 29258 |
| **Existing Transit Routes on the Project** | N/A |
| *For New Roadways only, list transit routes that will likely be diverted to the new proposed roadway (if applicable).* | |
| **Upload Transit Connections Map** | 1702658033756_TransitConnectionsMap.pdf |
| *Please upload attachment in PDF form* | |

## Response: Current Daily Person Throughput

| | |
|---|---|
| **Average Annual Daily Transit Ridership** | 0 |
| **Current Daily Person Throughput** | 38035.0 |

## Measure B: 2040 Forecast ADT

**Use Metropolitan Council model to determine forecast (2040) ADT volume**

**If checked, METC Staff will provide Forecast (2040) ADT volume**

**OR**

| | |
|---|---|
| **Identify the approved county or city travel demand model to determine forecast (2040) ADT volume** | Carver County Travel Demand Model (Scenario 3.5) |
| **Forecast (2040) ADT volume** | 29600 |

## 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:**

Within a 1/2 mile of the project area, demographics include 13.4% people of color, 43% of households have children under 18, 21.8% of residents are 65 years or older, nearly 30% of workers make $40k or less and nearly 20% of workers do not have a college degree.

From 2019 to 2021, Carver County and MnDOT led the Arboretum Area Transportation Plan, a corridor study of TH 5 and the surrounding areas in the cities Chanhassen, Chaska and Victoria. The study included a multifaceted engagement effort to identify and build support for multiple projects identified in the larger plan. The study identified this project as a high-priority to improve mobility and safety along TH 5 and TH 41 through technical analysis and stakeholder input gathered early in the process to understand project-area issues.

Efforts to reach equity populations during the study focused on neighborhood-specific and general public meetings, which were held at the Landscape Arboretum. Participants received free Arboretum access, which helped generate wide participation in corridor issue identification and concept development/evaluation. About 400 people attended in-person and online (16 events). On Sept. 4, 2019, the study team held a community pop-up event at the Victoria Classic Car Night as part of the AATP. This event was widely attended by seniors and children, who provided many comments about the need for the project. In spring 2020, the team engaged with students online to gather feedback from the youth.

Concept development was directly influenced by feedback regarding access and delay issues, particularly safe access through the TH 5 and TH 41 intersection for all travel modes. Beginning in March 2020, the study team gathered public input through online surveys and web-based mapping interfaces. Online engagement allowed anyone interested in the project to provide feedback at any time of day and improved accessibility for equity populations by allowing residents with non-traditional schedules, from single-vehicle or no-vehicle households, and with disabilities to participate. More than 300 surveys were completed with 100+ comments on the interactive map which displayed all project concepts.

The project serves low-income, disabled, youth, and elderly populations through targeted programs at the Arboretum and everyday use of TH 5 and TH 41. Most of the land west of the project is owned by the University of MN for the Arboretum. Arboretum programming includes extensive youth programming to a diverse array of students and free membership for households eligible for social assistance in Carver County. The Arboretum welcomes more than 36k students arriving via TH 5 and again uses the highway when it takes its materials to schools unable to travel (10k additional students).

*(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:**

A new grade-separated crossing under the east leg of TH 5 at the TH 41 intersection will eliminate conflicts between vehicles and non-motorized users at the intersection. This improvement will provide residents from disadvantaged communities, with direct access to the TH 5 Regional Trail and improved connections to destinations within a half mile of the project. This includes places of worship, like Westwood Community Church; outdoor recreational opportunities, such as those available at Lake Minnewashta Regional Park and Bluff Creek Preserve; and health and wellness activities/facilities, which are available at Chanhassen Recreational Center for people of all ages including children and seniors at affordable prices.

The nationally renowned U of M Landscape Arboretum is located on the southeast corner of the project area. This significant cultural resource serves low-income, disabled, youth and elderly populations through targeted programs aimed at increasing public awareness and accessibility to the natural world. It also offers a complementary membership program for Carver County residents who are economically disadvantaged. The new underpass will link non-motorists north of TH 5 to the TH 5 Regional Trail, which provides direct access into the Arboretum.

The project will modernize the TH 5 and TH 41 intersection by constructing two partial displaced left turns. This innovative design will allow left turning vehicles from TH 5 to cross opposing through traffic prior to reaching the main intersection. This enhancement will improve safety and mobility for all motorists, including residents and workers from nearby disadvantaged communities, by reducing conflict points where vehicles cross paths. The project will improve corridor travel times, specifically on TH 5, as through traffic will spend less time stopped at the signal. These improvements will benefit workers traveling to the TH 41 Industrial Park, just south of the project area. The industrial park is a well-established collection of manufacturing, technology, bioscience and other businesses that provides more than 5,000 jobs.

This investment leverages over $105 million in secured funds towards a $140 million in total project costs for needs identified in the Arboretum Transportation Plan for multimodal improvements to TH 5 and CR 18.

The project is not expected to have impacts to low-income populations, people of color, children, people with disabilities, or the elderly. This innovative intersection will provide increased traffic capacity without expansion and substantial impacts to the surrounding environment.

*(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 project area is located in western Chanhassen, which is the least populated area of the city. The area west of the TH 5 and TH 41 intersection is owned by the University of Minnesota and dedicated to the Landscape Arboretum. Areas to the immediate north and south are heavily parkland and industrial, while the area to the east is commercial and residential. There are 53 publicly subsidized rental units in census tracts within one-half mile of the project area and 55 in total within the City of Chanhassen, according to Metropolitan Council Data.

Approximately 37% of the housing units in Chanhassen are affordable at some level. Of the total units, 692 (7%) are affordable to households at or below 50% of the Area Median Income (AMI) and 3,067 (30%) are affordable to households between 51% to 80% of the AMI. There are 1,556 cost-burdened households in the city, with 600 (39%) having an income at or below 30% of the AMI; 401 (26%) between 31% and 50% of the AMI and 555 (36%) between 51 and 80% of the AMI.

This project's reduced congestion and added pedestrian underpass of TH 5 linking to the existing regional trail (separated from the highway) will improve access, safety and livability in the communities surrounding the project area. Affordable housing residents also will have more reliable travel times to nearby park-and-rides. This includes Chanhassen Transit Station, approximately 3 miles east of the project area and SW Transit, approximately 3 miles south of project area in Chaska.

SouthWest Transit provides on-demand transit service to the project corridor (SouthWest Prime). SouthWest Prime allows cost-effective, on-demand transit service for residents. Improvements to TH 5 will improve transit service.

SouthWest Transit also provides event-based service for the Arboretum, which also hosts more than 30,000 students, mostly arriving by school bus. Both bus types will benefit from improved access and turning along TH 5. These services expand the opportunity for equity populations, including affordable housing residents, to access the Arboretum, enjoy the grounds and benefit from programming.

*(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):** | |
| **Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):** | Yes |
| **Upload the ?Socio-Economic Conditions? map used for this measure.** | 1702659070643_Socio-EconomicConditionsMap.pdf |

## Measure A: Year of Roadway Construction

| Year of Original Roadway Construction or Most Recent Reconstruction | Segment Length | Calculation | Calculation 2 |
|---|---|---|---|
| 1963 | 0.7 | 1374.1 | 1145.083 |
| 1954 | 0.5 | 977.0 | 814.167 |
| | **1** | **2351** | **1959** |

## Total Project Length

**Total Project Length (as entered in "Project Information" form)** 1.2

## Average Construction Year

**Weighted Year** 1959

## Total Segment Length (Miles)

**Total Segment Length** 1.2

## Measure B: Geometric, Structural, or Infrastructure Improvements

**Improved roadway to better accommodate freight movements:** Yes

**Response:**

The project will improve freight mobility on TH 41 & TH 5, both A-Minor Arterials and Tier 2 Truck routes. The project will construct a partial-displaced-left-turn intersection with two 18-ft-wide turn lanes; one from eastbound TH 5 to northbound TH 41 and one from westbound TH 5 to southbound TH 5. It will improve mobility for freight haulers by reducing conflict points. The simultaneous movement of protected left turns and opposing through movements will allow for only two traffic signal phases instead of the typical four phases, reducing delays for haulers. The project will improve corridor travel times significantly on TH 5 as through traffic will spend less time stopped at the signal.

*(Limit 700 characters; approximately 100 words)*

**Improved clear zones or sight lines:** Yes

**Response:**

Clear zones will be improved with the addition of 8-foot-wide shoulders in all directions. This includes both directions of TH 5 prior to left turn lanes crossing from the opposing direction. The intersection also will include wider medians (18-ft) between the shoulder and new displaced left turns on TH 5. The project will improve any current sightline issues for non-motorized users at the intersection by constructing a grade-separated crossing at the intersection under the east leg of TH 5. Clear zone and sight distance requirements will be met during the design phase.

*(Limit 700 characters; approximately 100 words)*

**Improved roadway geometrics:** Yes

**Response:**

The current intersection is a conventional, signalized, cross-intersection with left turn lanes, free right turn lanes and 4 signal phases. The partial DLT intersection will allow the simultaneous movement of the protected left turns and opposing thru movements and will allow for 2 traffic signal phases. The design will reduce the number of conflict points where vehicles cross paths, which will decrease the potential for crashes. The geometry for turning movements will be upgraded and enhanced by the innovative design for the displaced left turns. Geometrics throughout the project will be upgraded to current standards including shoulder width, turning radii, and median installation.

*(Limit 700 characters; approximately 100 words)*

**Access management enhancements:** Yes

**Response:**

Access management will be upgraded throughout the project corridor with 18 ft concrete center median installed on TH 5 and 6 ft center median on TH 41, varying in width away from the intersection. Today there is no center median on TH 41 in the project area. Displaced left turns and channelized right turning movements will also be funneled thru the installation of a second 18 ft median and a 4 ft median on TH 5. One maintenance driveway location to TH 5 for the Arboretum will be removed. Other maintenance driveway locations remain for the Arboretum within the project area but these are not public access roadways and no other access is permitted to TH 5 or TH 41 within the project area.

*(Limit 700 characters; approximately 100 words)*

**Vertical/horizontal alignment improvements:** Yes

**Response:**

The intersection of TH 5 and TH 41 currently has horizontal alignments that intersect perpendicularly, and this would remain in the proposed condition. There are no notable deficiencies with the existing vertical alignments or intersection grades. The proposed design will refine vertical alignments as needed to adhere to the most recent guidance in the MnDOT Road Design Manual and the MnDOT Facility Design Guide where those guidelines take precedence.

*(Limit 700 characters; approximately 100 words)*

**Improved stormwater mitigation:** Yes

**Response:**

The project will upgrade the existing rural ditch system on TH 5 and TH 41 to urban curb and gutter to properly manage stormwater runoff and drainage. Close coordination with the watershed management organizations has taken place on development of the concept in order to meet and exceed the required stormwater standards with added sensitivity to project constraints including the Arboretum research property. The contractor will be required to follow the Stormwater Pollution Prevention Plan to ensure proper sediment & erosion control.

*(Limit 700 characters; approximately 100 words)*

**Signals/lighting upgrades:** Yes

**Response:**

The proposed project will replace and improve the traffic signal. The traditional traffic signal system will be replaced with an integrated three signal system for implementation of the innovative partial displaced left intersection concept with two signal phases instead of four. All signage, striping, and lighting at the intersection will be upgraded to high-visibility, including any pedestrian crossing systems incorporated by MnDOT.

*(Limit 700 characters; approximately 100 words)*

**Other Improvements** Yes

**Response:**

New ped/bike separated grade access will be provided under the east leg of TH 5, removing conflict points between motorists and non-motorized users and linking to the TH 5 Regional Trail, which currently runs under the south leg of TH 41 via pedestrian underpass. Existing local trail facilities currently exist along the northeast quadrant of the intersection that will be upgraded with a new 10-ft-wide trail. Once improved, all trail users will experience a smoother, safer ride. All ped/bike infrastructure associated with the project will meet ADA requirements.

*(Limit 700 characters; approximately 100 words)*

## Measure A: Congestion Reduction/Air Quality

| Total Peak Hour Delay Per Vehicle Without The Project (Seconds/Vehicle) | Total Peak Hour Delay Per Vehicle With The Project (Seconds/Vehicle) | Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/Vehicle) | Volume without the Project (Vehicles per hour) | Volume with the Project (Vehicles Per Hour): | Total Peak Hour Delay without the Project: | Total Peak Hour Delay by the Project: | Total Peak hour Delay Reduced by project | EXPLANATION of methodology used to calculate railroad crossing delay, if applicable. | Synchro or HCM Reports |
|---|---|---|---|---|---|---|---|---|---|
| 71.0 | 55.0 | 16.0 | 4109 | 4109 | 291739.0 | 225995.0 | 65744.0 | N/A | 1702662494448_Synchro Reports.pdf |

**225995**

## Vehicle Delay Reduced

| Total Peak Hour Delay Reduced | Total Peak Hour Delay Reduced | Delay Reduced Total |
|---|---|---|

## Measure B: Roadway projects that do not include new roadway segments or railroad grade-separation elements

| Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): | Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): | Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): |
|---|---|---|
| 16.58 | 14.36 | 2.22 |
| **17** | **14** | **2** |

## Total

| | |
|---|---|
| **Total Emissions Reduced:** | 2.22 |
| **Upload Synchro Report** | 1702660875529_Synchro Reports.pdf |

*Please upload attachment in PDF form (Save Form, then click 'Edit' in top right to upload file.)*

## Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

| Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): | Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): | Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): |
|---|---|---|
| **0** | **0** | **0** |

## Total Parallel Roadway

| | |
|---|---|
| **Emissions Reduced on Parallel Roadways** | 0 |
| **Upload Synchro Report** | |

*Please upload attachment in PDF form (Save Form, then click 'Edit' in top right to upload file.)*

## New Roadway Portion:

| | |
|---|---|
| **Cruise speed in miles per hour with the project:** | 0 |
| **Vehicle miles traveled with the project:** | 0 |
| **Total delay in hours with the project:** | 0 |
| **Total stops in vehicles per hour with the project:** | 0 |
| **Fuel consumption in gallons:** | 0 |
| **Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):** | 0 |
| **EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)** | |
| **Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):** | 0.0 |

## Measure B: Roadway projects that include railroad grade-separation elements

| | |
|---|---|
| **Cruise speed in miles per hour without the project:** | 0 |
| **Vehicle miles traveled without the project:** | 0 |
| **Total delay in hours without the project:** | 0 |
| **Total stops in vehicles per hour without the project:** | 0 |
| **Cruise speed in miles per hour with the project:** | 0 |
| **Vehicle miles traveled with the project:** | 0 |
| **Total delay in hours with the project:** | 0 |
| **Total stops in vehicles per hour with the project:** | 0 |
| **Fuel consumption in gallons (F1)** | 0 |
| **Fuel consumption in gallons (F2)** | 0 |
| **Fuel consumption in gallons (F3)** | 0 |
| **Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):** | 0 |

**EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)**

## Measure A: Roadway Projects that do not Include Railroad Grade-Separation Elements

| | |
|---|---|
| **Crash Modification Factor Used:** | CMF 10301 = 0.877 |
| *(Limit 700 Characters; approximately 100 words)* | |
| **Rationale for Crash Modification Selected:** | CMF 10301 is used for all crash types and severities for an existing signalized intersection that is converted to a continuous flow intersection (CFI). This CMF was used because the project is expected to convert the existing signalized intersection of TH 5 and TH 41 to a continuous flow intersection with displaced lefts on the major thoroughfare. |
| *(Limit 1400 Characters; approximately 200 words)* | |
| **Project Benefit ($) from B/C Ratio** | $2,114,175.00 |
| **Total Fatal (K) Crashes:** | 0 |
| **Total Serious Injury (A) Crashes:** | 0 |
| **Total Non-Motorized Fatal and Serious Injury Crashes:** | 0 |
| **Total Crashes:** | 44 |
| **Total Fatal (K) Crashes Reduced by Project:** | 0 |
| **Total Serious Injury (A) Crashes Reduced by Project:** | 0 |
| **Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:** | 0 |
| **Total Crashes Reduced by Project:** | 5 |
| **Worksheet Attachment** | 1702661649531_HSIP Benefit Cost Worksheet and CMF.pdf |
| *Please upload attachment in PDF form* | |

## Roadway projects that include railroad grade-separation elements:

| | |
|---|---|
| **Current AADT volume:** | 0 |
| **Average daily trains:** | 0 |
| **Crash Risk Exposure eliminated:** | 0 |

## Measure B: Pedestrian Safety

***Determine if these measures do not apply to your project.*** *Does the project match either of the following descriptions?*

*If either of the items are checked yes, then* ***score for entire pedestrian safety measure is zero****. Applicant does not need to respond to the sub-measures and can proceed to the next section.*

| | |
|---|---|
| **Project is primarily a freeway (or transitioning to a freeway) and does not provide safe and comfortable pedestrian facilities and crossings.** | No |
| **Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) and project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesn?t also add pedestrian crossings and sidewalk or sidepath on one or both sides).** | No |

***SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements***

*To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. Links to resources are provided on the Regional Solicitation Resources web page.*

*Please answer the following two questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.*

***1. Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, midblock locations, and roundabouts.***

*Treatments and countermeasures should be well-matched to the roadway?s context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes). Refer to the Regional Solicitation Resources web page for guidance links.*

**Response:**

Today, pedestrians cannot cross TH 5/TH 41 intersection at-grade due to the lack of connecting multimodal infrastructure to the intersection location. The only connection is a trail on the northeast corner that connects to the signal via an unmarked free right travel lane. Once at the intersection signal, pedestrians must then navigate at-grade across 4 lanes of high volume, high speed thru traffic with left turn lanes and another free right condition. Due to there being no connecting multimodal infrastructure on the other three legs of the intersection and steep ditches and grades outside of the right of way, there is not an existing multimodal crossing route across the intersection. In order to cross this intersection from south to north today on either leg of the intersection from the TH 5 regional trail or north to south from the trail on the north side of TH 5, a pedestrian or bicyclist must travel east to Century Blvd, cross Century, cross TH 5 at-grade, cross Century again, and then travel west for a total trip length of 2/3 mile. The proposed separated grade pedestrian underpass of TH 5 will create a connected multimodal network without pedestrian-vehicle conflicts and will reduce the multimodal travel route by 0.6 miles.

The context of the corridor is important to further consider the multimodal environment and needs of the area. The University of Minnesota Landscape Arboretum research agricultural fields make up the entire west side of the intersection both north and south of TH 5. The majority of the Arboretum property is restricted from public access with 12 ft + deer fence, meaning this property adjacent to the intersection is not generating or attracting multimodal users.

Regional connections through and across TH 5 are restricted today and it is important to restore connectivity to the area. The pedestrian underpass of TH 41 shows the success of this improvement approach to this area, as it is highly used. The TH 41 underpass will remain and an additional underpass on the TH 5 east leg will be installed to connect the uses on the east side of TH 41 that are today completely separated due to lack of connecting infrastructure. At-grade pedestrian facilities will be considered for implementation by MnDOT at this location; however the preferred approach for safety and connectivity is for multimodal users to utilize the pedestrian underpass due to the decreased crossing distance (200 ft for underpass compared to 400 ft for at-grade) and elimination of pedestrian-vehicle conflicts.

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

*Is the distance in between signalized intersections increasing (e.g., removing a signal)?*

**Select one:** No

*If yes, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.).*

**Response:**

*(Limit 1,400 characters; approximately 200 words)*

*Will your design increase the crossing distance or crossing time across any leg of an intersection? (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.). This does not include any increases to crossing distances solely due to the addition of bike lanes (i.e., no other through or turn lanes being added or widened).*

**Select one:** No

*If yes,*
*? How many intersections will likely be affected?*

**Response:**

*? Describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.)*

**Response:**

*(Limit 1,400 characters; approximately 200 words)*

*? If grade separated pedestrian crossings are being added and increasing crossing time, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesn?t require much elevation change instead of pedestrian bridge with numerous switchbacks).*

**Response:**

*(Limit 1,400 characters; approximately 200 words)*

*If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity).*

**Response:**

Midblock crossings are not part of this project due to it being an intersection project and focus on providing safe pedestrian crossings of two major Trunk Highways with high-speed, high-volume traffic. The next closest crossing is ¼ mile east at the signalized intersection of TH 5 and Century Blvd. The land use to the west of the intersection is University of Minnesota Landscape Arboretum research agricultural fields with the majority restricted from public access with 12 ft + deer fence, meaning this property is not generating or attracting multimodal users needing to cross midblock across TH 5.

*(Limit 1,400 characters; approximately 200 words)*

***2. Describe how motorist speed will be managed in the project design, both for through traffic and turning movements.*** *Describe any project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.). Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.) or protect pedestrians if increasing motorist speed (e.g., buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.).*

**Response:**

The proposed separated grade pedestrian underpass of TH 5 will create a connected multimodal network without pedestrian-vehicle conflicts and will reduce the multimodal travel route by 0.6 miles, mitigating the need to cross the TH 5/Century Blvd intersection at-grade three times in order to cross TH 5. This improvement will provide a key north-south crossing of this regional intersection through protected, separated grade crossings that reduce the crossing distance compared to at-grade solution options. The separated grade pedestrian underpass of TH 41 will remain as part of the project to facilitate east-west multimodal crossings of the corridor. Both of these separated grade pedestrian underpasses will connect to the regional trail network to provide access to and across the intersection.

The highway intersection improvements are focused around an innovative intersection improvement that will decrease the signal phases from four to two phases and separate turning movements through the implementation of a partial displaced left turn concept. This intersection design will substantially increase median width while keeping a similar footprint of the existing intersection due to the implementation of an urban curb and gutter section as well as revised turning radii. Eleven foot through lanes are planned for approximately half of the through lanes associated with the intersection. The vehicle speed through the intersection is not expected to increase due to providing a modernized intersection with updated geometry and reduced delay times due to the innovative partial displaced left design approach.

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

*If known, what are the existing and proposed design, operation, and posted speeds? Is this an increase or decrease from existing conditions?*

**Response:**

Speeds on both roadways are 55 mph currently and are proposed to remain as 55 mph

*(Limit 1,400 characters; approximately 200 words)*

***SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors***

*These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.*

| | |
|---|---|
| **Existing road configuration is a One-way, 3+ through lanes** | |
| **or** | |
| **Existing road configuration is a Two-way, 4+ through lanes** | Yes |
| **Existing road has a design speed, posted speed limit, or speed study/data showing 85th percentile travel speeds in excess of 30 MPH or more** | Yes |
| **Existing road has AADT of greater than 15,000 vehicles per day** | Yes |
| **List the AADT** | 29258 |

***SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors***

*These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.*

☐

**Existing road has transit running on or across it with 1+ transit stops in the project area (If flag-stop route with no fixed stops, then 1+ locations in the project area where roadside stops are allowed. Do not count portions of transit routes with no stops, such as non-stop freeway sections of express or limited-stop routes.)**

**Existing road has high-frequency transit running on or across it and 1+ high-frequency stops in the project area (high-frequency defined as service at least every 15 minutes from 6am to 7pm weekdays and 9am to 6pm Saturdays.)**

**Existing road is within 500? of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)** Yes

**If checked, please describe:**

A Lifetime Fitness center is located in the southeast corner of the intersection, as well as a daycare center, pool and aquatic center, and café/restaurants. A trail connecting to the U of Mn Landscape Arboretum runs parallel to TH 5 through the project area and provides a key non-motorized access to the Arboretum and its bike trails.

*(Limit 1,400 characters; approximately 200 words)*

**Existing road is within 500? of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily-designated affordable housing)** Yes

**If checked, please describe:**

Multifamily housing in the northeast quadrant of the intersection. The Lifetime Fitness Center located in the southeast quadrant of the intersection often hosts team running, biking and fitness events which utilize local roadways and trails for outdoor running routes to and from the facility.

*(Limit 1,400 characters; approximately 200 words)*

## Measure A: Multimodal Elements and Existing Connections

**Response:**

Today, pedestrians cannot cross TH 5/TH 41 intersection at-grade due to the lack of connecting multimodal infrastructure to the intersection location. Due to there being no connecting multimodal infrastructure on three legs of the intersection and steep ditches and grades, there is not an existing multimodal crossing route across the intersection. The proposed separated grade pedestrian underpass of the east leg of TH 5 will create a connected multimodal network without pedestrian-vehicle conflicts and will reduce the multimodal travel route across TH 5 by 0.6 miles, mitigating the need to travel east to cross the TH 5/Century Blvd intersection at-grade three times and travel back west.

This improvement will provide a key north-south crossing of this regional intersection through protected, separated grade crossings that reduce the crossing distance compared to potential at-grade solution options. Both highways have posted speed limits of 55 mph and high volumes with TH 5 at 29,258 AADT and TH 41 at14,280 AADT. The recently constructed underpass of the south leg of TH 41 will remain to facilitate east-west multimodal crossings. Both separated grade pedestrian underpasses will connect to the regional trail network to provide access to and across the intersection for residents. This will allow improved access to schools, employment, businesses and recreational opportunities. These destinations include Bluff Creek Elementary School, Chanhassen Recreation Center and Chanhassen Nature Preserve south of TH 5, Lake Minnewashta Regional Park north of TH 5; and the Landscape Arboretum.

This project provides grade separated crossings and supporting trail network improvements to fill gaps along a RBTN Tier 1 Alignment. The TH 5 Regional Trail connects to the Lake Minnetonka Regional Trail-- another RBTN Tier 1 Alignment--approximately 2.5 miles west of the project area in the City of Victoria. TH 5 through the project area is a Tier 1 Expressway barrier and the TH 5/TH 41 intersection is a Tier 2 Expressway Barrier Crossing area, which will be directly mitigated by the new pedestrian grade separated crossing. Wide 8-ft shoulders will be implemented through the project area to serve on-road bicyclists, which would not be restricted along the expressway.

There is no fixed route transit service in the project area due to the rural project location context. Transit benefits include increased travel time reliability for school buses (36K+ students) accessing the Arboretum every year and commuters accessing the nearby park and rides (SouthWest Transit's Chanhassen Transit Station and East Creek Transit Station. SouthWest Transit provides on-demand transit service, SouthWest Prime, along the project corridor and TransitLink serves residents via the corridor.

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

## 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:**

Completed in early 2021, the Arboretum Area Transportation Plan identified the TH 5 vision and was informed with a thorough engagement plan. Tools used included in-person neighborhood meetings, and an online story map with surveys and comment map. More than 500 people attended three open houses, 10 neighborhood-focused meetings, and three stakeholder business/property owner meetings. Meetings were held on: 6/19/19,6/25/19,6/27/19,7/16/19,11/6/19,11/20/19,12/4/19,12/17/19, 3/11/20, 4/13/20, 5/29/20, 7/20/20,8/7/20,12/15//20. Public meeting dates were strategic to engage at decision-making milestones. The study team held a community pop-up event at the Victoria Classic Car Night on 9/4/19 that engaged seniors and children. Online tools enabled feedback at personal convenience, making the process accessible to families with children, seniors, and shift workers. Participants completed more than 300 online surveys and provided more than 100 comments on the web-based comment map.

The study team held two of the three open houses at the Arboretum. Participants received free access to attend ($15 value per adult) in an effort to reach those traditionally not engaged in transportation projects. This incentive generated wide public participation.

The team completed an environmental screening with the study that will inform future public engagement activities. The TH 5 project is currently in preliminary design, where NEPA and Title VI regulations are guiding engagement. The project team hosted a public open house 9/27/23 at the Arboretum. The purpose of the event was for attendees to review recommended visions from the AATP, proposed design options for TH 5 and 82nd St, and the latest project schedules and funding. All feedback received will help influence the project team as they move toward refining details and introducing construction staging options in spring 2024. More than 239 people attended the event and more than 19 organizations were represented.

TH 5 Improvements Project website: www.carvercountymn.gov/departments/public-works/projects-studies/highway-5-improvements

TH 5 Improvement Project Open House Summary (Fall 2023): www.carvercountymn.gov/home/showpublisheddocument/25507/638340115287500000

AATP Study website: https://www.carvercountymn.gov/departments/public-works/transportation-plans/arboretum-area-transportation-plan#!/

Interactive Comment Map summary: www.co.carver.mn.us/home/showpublisheddocument/18350/636991260708330000

Survey summary: www.co.carver.mn.us/home/showpublisheddocument/18469/637007653202300000

All AATP public meeting documents and summaries: www.co.carver.mn.us/departments/public-works/projects-studies/arboretum-area-transportation-plan/arboretum-area-transportation-plan-additional-information/-fsiteid-1

*(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.** Yes

*75%*

**Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points.**

*50%*

**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** 1702663552719_Project Layout-TH 5-TH 41-1.pdf

*Please upload attachment in PDF form*

**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):** | $13,526,900.00 |
| **Enter Amount of the Noise Walls:** | $0.00 |
| **Total Project Cost subtract the amount of the noise walls:** | $13,526,900.00 |
| **Enter amount of any outside, competitive funding:** | $5,000,000.00 |
| **Attach documentation of award:** | 1702664167732_MN SessionLaws2023-Ch.68-H.F.2887.pdf |
| **Points Awarded in Previous Criteria** | |
| **Cost Effectiveness** | $0.00 |

## Other Attachments

| File Name | Description | File Size |
|---|---|---|
| 2024 Regional Solicitation_CC_TH5_TH41.pdf | MnDOT Letter of Support | 209 KB |
| Affordable Housing_Project_Location_Hwy_5_and_Hwy_41_Intersection_Reconstruction.pdf | TH 5/TH 41 Affordable Housing | 2.2 MB |
| CountyMaintenanceCommitment_2023-11-16-13-34-46.pdf | County Maintenance Commitment | 168 KB |
| Letter of support for Hwy 5 and 41, 11-20-23.pdf | Letter of Support from Chanhassen Mayor | 742 KB |
| Letter of Support Highway 5 and Highway 41 Intersection Project.pdf | Letter of Support from Chaska Mayor | 669 KB |
| One Page Description-Hwy5 Hwy41 Intersection Reconstruction.pdf | One Page Summary | 385 KB |
| Project Layout-TH 5-TH 41-1.pdf | TH 5/TH 41 Layout | 2.4 MB |
| TH 5-41 Existing Conditions.pdf | TH 5 and TH 41 existing conditions photos | 852 KB |

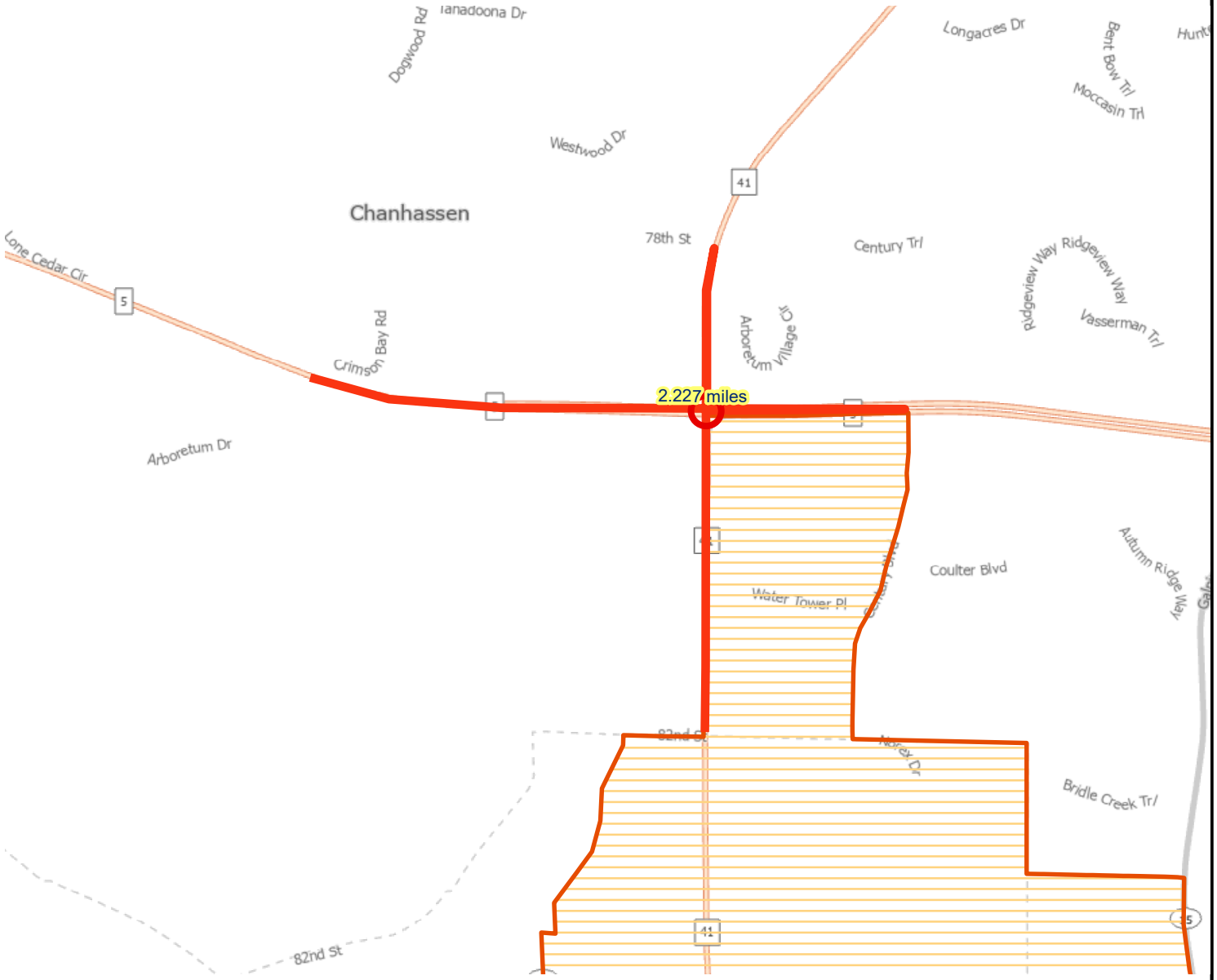
# Regional Economy

Roadway Reconstruction/Modernization Project: Highway 5 and Highway 41 Intersection Reconstruction Project | Ma

## Results

**WITHIN ONE MI** of project:
Postsecondary Students: 0

Totals by City:
**Chanhassen**
Population: 10277
Employment: 4781
Mfg and Dist Employment: 758
**Chaska**
Population: 1305
Employment: 3730
Mfg and Dist Employment: 2652




Project Points
Project
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.15 0.3 0.6 0.9 1.2 Miles

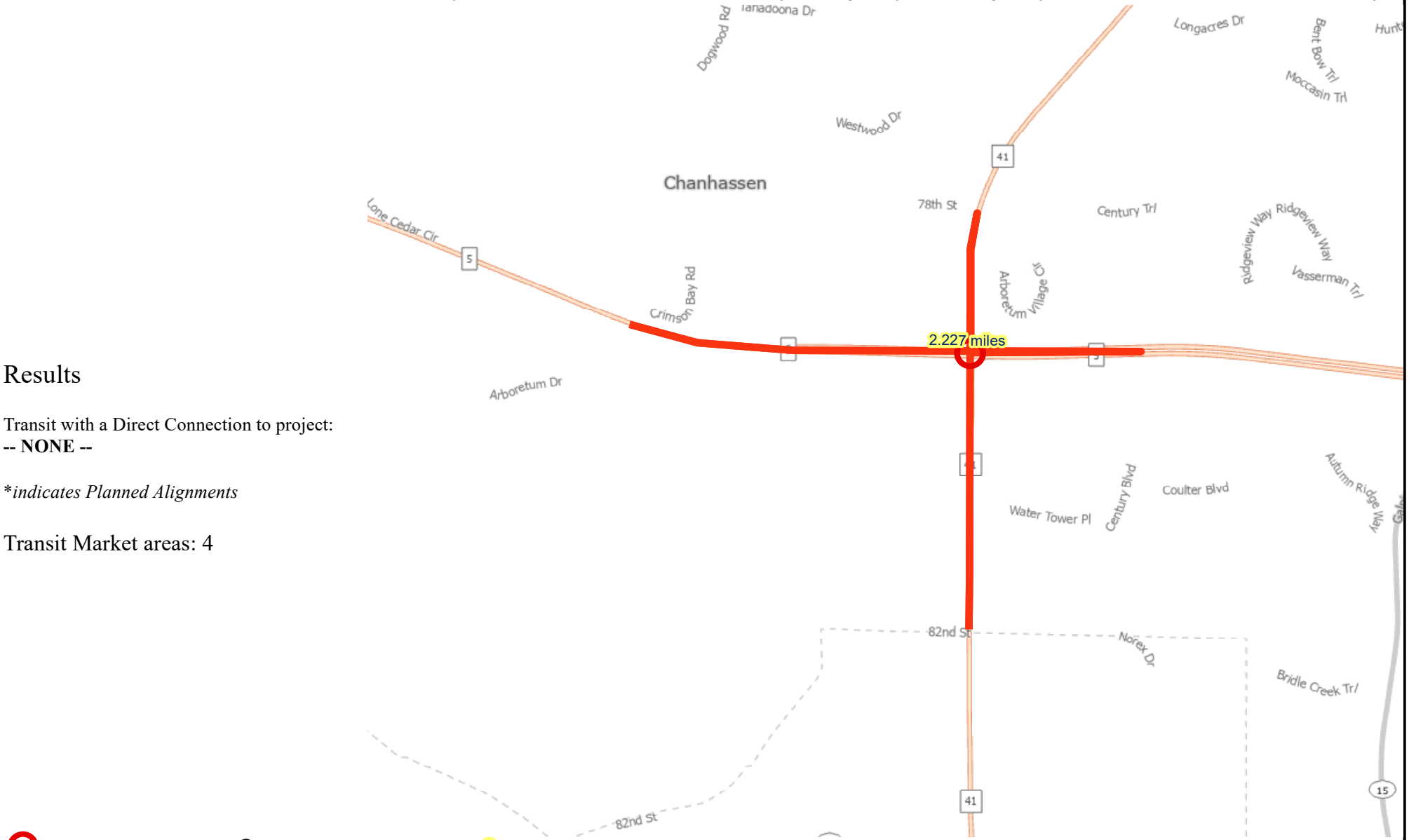
Created: 11/14/2023
LandscapeRSA5

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

METROPOLITAN COUNCIL

# Transit Connections

Roadway Reconstruction/Modernization Project: Highway 5 and Highway 41 Intersection Reconstruction Project | Ma




## Results

Transit with a Direct Connection to project:
**-- NONE --**

**indicates Planned Alignments*

Transit Market areas: 4

| | | | | | |
|---|---|---|---|---|---|
| Project Points | Commuter Rail | Commuter Rail | Dedicated Bus Rapid Transit | Arterial Bus Rapid Transit | Modern Streetcar |
| Project | Dedicated Bus Rapid Transit | Dedicated Bus Rapid Transit | Highway Bus Rapid Transit | Commuter Rail | Undetermined |
| Project Area | Highway Bus Rapid Transit | Highway Bus Rapid Transit | Light Rail | Dedicated Bus Rapid Transit | |
| Active Stop | Light Rail | Light Rail | Modern Streetcar | Highway Bus Rapid Transit | |
| Arterial Bus Rapid Transit | Arterial Bus Rapid Transit | Arterial Bus Rapid Transit | Undetermined | Light Rail | |

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 11/14/2023
LandscapeRSA3

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

METROPOLITAN COUNCIL

# Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: Highway 5 and Highway 41 Intersection Reconstruction Project | Map ID: 169

## Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 53

Project located in census tracts that are BELOW the regional average for population in poverty or population of color.


Points

Area of Concentrated Poverty

Lines

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 11/14/2023
LandscapeRSA2

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

METROPOLITAN COUNCIL

## 1: TH 41 & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 4109 |
| Total Delay / Veh (s/v) | 71 |
| CO Emissions (kg) | 11.63 |
| NOx Emissions (kg) | 2.26 |
| VOC Emissions (kg) | 2.69 |

## 1: TH 41 & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 3408 |
| Total Delay / Veh (s/v) | 24 |
| CO Emissions (kg) | 4.70 |
| NOx Emissions (kg) | 0.92 |
| VOC Emissions (kg) | 1.09 |

## 12: TH 41 & EB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 1523 |
| Total Delay / Veh (s/v) | 10 |
| CO Emissions (kg) | 1.24 |
| NOx Emissions (kg) | 0.24 |
| VOC Emissions (kg) | 0.29 |

## 14: TH 41 & WB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 1139 |
| Total Delay / Veh (s/v) | 12 |
| CO Emissions (kg) | 1.10 |
| NOx Emissions (kg) | 0.21 |
| VOC Emissions (kg) | 0.26 |

## 21: TH 5 & EB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 2739 |
| Total Delay / Veh (s/v) | 6 |
| CO Emissions (kg) | 1.63 |
| NOx Emissions (kg) | 0.32 |
| VOC Emissions (kg) | 0.38 |

## 23: WB DLT & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 2817 |
| Total Delay / Veh (s/v) | 3 |
| CO Emissions (kg) | 1.39 |
| NOx Emissions (kg) | 0.27 |
| VOC Emissions (kg) | 0.32 |

## 1: TH 41 & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 4109 |
| Total Delay / Veh (s/v) | 71 |
| CO Emissions (kg) | 11.63 |
| NOx Emissions (kg) | 2.26 |
| VOC Emissions (kg) | 2.69 |

## 1: TH 41 & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 3408 |
| Total Delay / Veh (s/v) | 24 |
| CO Emissions (kg) | 4.70 |
| NOx Emissions (kg) | 0.92 |
| VOC Emissions (kg) | 1.09 |

## 12: TH 41 & EB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 1523 |
| Total Delay / Veh (s/v) | 10 |
| CO Emissions (kg) | 1.24 |
| NOx Emissions (kg) | 0.24 |
| VOC Emissions (kg) | 0.29 |

## 14: TH 41 & WB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 1139 |
| Total Delay / Veh (s/v) | 12 |
| CO Emissions (kg) | 1.10 |
| NOx Emissions (kg) | 0.21 |
| VOC Emissions (kg) | 0.26 |

## 21: TH 5 & EB DLT

| Direction | All |
|---|---|
| Future Volume (vph) | 2739 |
| Total Delay / Veh (s/v) | 6 |
| CO Emissions (kg) | 1.63 |
| NOx Emissions (kg) | 0.32 |
| VOC Emissions (kg) | 0.38 |

## 23: WB DLT & TH 5

| Direction | All |
|---|---|
| Future Volume (vph) | 2817 |
| Total Delay / Veh (s/v) | 3 |
| CO Emissions (kg) | 1.39 |
| NOx Emissions (kg) | 0.27 |
| VOC Emissions (kg) | 0.32 |

**Traffic Safety Benefit-Cost Calculation**

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

## A. Roadway Description

| | | | | | |
|---|---|---|---|---|---|
| **Route** | TH 5 | **District** | | **County** | Carver |
| **Begin RP** | TH 41 | **End RP** | TH 41 | **Miles** | -- |
| **Location** | Victoria, Minnesota | | | | |

## B. Project Description

| | | | |
|---|---|---|---|
| **Proposed Work** | Converting traditional signalized 4-leg intersection to a continuous flow intersection (CFI) | | |
| **Project Cost*** | | **Installation Year** | 2027 |
| **Project Service Life** | 20 years | **Traffic Growth Factor** | 1.0% |

** exclude Right of Way from Project Cost*

## C. Crash Modification Factor

| | | | |
|---|---|---|---|
| 0.877 | **Fatal (K) Crashes** | **Reference** | CMF 10301 |
| 0.877 | **Serious Injury (A) Crashes** | | |
| 0.877 | **Moderate Injury (B) Crashes** | **Crash Type** | All |
| 0.877 | **Possible Injury (C) Crashes** | | |
| 0.877 | **Property Damage Only Crashes** | | www.CMFclearinghouse.org |

## D. Crash Modification Factor (optional second CMF)

| | | | |
|---|---|---|---|
| | **Fatal (K) Crashes** | **Reference** | |
| | **Serious Injury (A) Crashes** | | |
| | **Moderate Injury (B) Crashes** | **Crash Type** | |
| | **Possible Injury (C) Crashes** | | |
| | **Property Damage Only Crashes** | | www.CMFclearinghouse.org |

## E. Crash Data

| | | | | |
|---|---|---|---|---|
| **Begin Date** | 1/1/2020 | **End Date** | 12/31/2022 | 3 years |
| **Data Source** | MnCMAT | | | |

| Crash Severity | All | < optional 2nd CMF > |
|---|---|---|
| K crashes | 0 | |
| A crashes | 0 | |
| B crashes | 6 | |
| C crashes | 4 | |
| PDO crashes | 34 | |

## F. Benefit-Cost Calculation

| | | |
|---|---|---|
| $2,114,175 | **Benefit (present value)** | **B/C Ratio = N/A** |
| $0 | **Cost** | |

*Proposed project expected to reduce 2 crashes annually, 0 of which involving fatality or serious injury.*

## F. Analysis Assumptions

| Crash Severity | Crash Cost |
|---|---|
| K crashes | $1,600,000 |
| A crashes | $800,000 |
| B crashes | $250,000 |
| C crashes | $130,000 |
| PDO crashes | $15,000 |

**Link:** mndot.gov/planning/program/appendix_a.html

| | | |
|---|---|---|
| **Real Discount Rate:** | 0.8% | Default |
| **Traffic Growth Rate:** | 1.0% | **Revised** |
| **Project Service Life:** | 20 years | **Revised** |

## G. Annual Benefit

| Crash Severity | Crash Reduction | Annual Reduction | Annual Benefit |
|---|---|---|---|
| K crashes | 0.00 | 0.00 | $0 |
| A crashes | 0.00 | 0.00 | $0 |
| B crashes | 0.74 | 0.25 | $61,500 |
| C crashes | 0.49 | 0.16 | $21,320 |
| PDO crashes | 4.18 | 1.39 | $20,910 |
| | | | **$103,730** |

## H. Amortized Benefit

| Year | Crash Benefits | Present Value |
|---|---|---|
| 2027 | $103,730 | $103,730 |
| 2028 | $104,767 | $103,936 |
| 2029 | $105,815 | $104,142 |
| 2030 | $106,873 | $104,349 |
| 2031 | $107,942 | $104,556 |
| 2032 | $109,021 | $104,763 |
| 2033 | $110,111 | $104,971 |
| 2034 | $111,213 | $105,179 |
| 2035 | $112,325 | $105,388 |
| 2036 | $113,448 | $105,597 |
| 2037 | $114,582 | $105,807 |
| 2038 | $115,728 | $106,017 |
| 2039 | $116,886 | $106,227 |
| 2040 | $118,054 | $106,438 |
| 2041 | $119,235 | $106,649 |
| 2042 | $120,427 | $106,860 |
| 2043 | $121,632 | $107,072 |
| 2044 | $122,848 | $107,285 |
| 2045 | $124,076 | $107,498 |
| 2046 | $125,317 | $107,711 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |
| 0 | $0 | $0 |

**Total = $2,114,175**

*NOTE:*
*This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.*

CRASH MODIFICATION FACTORS CLEARINGHOUSE

# CMF / CRF Details

## CMF ID: 10301

## CMF Name: Convert a conventional signalized intersection to a continuous flow

## Description:

## Prior Condition: Conventional signalized intersection

## Category: Intersection geometry

## Study ID: *Development of Performance Matrices for Evaluating Innovative Intersections and Interchanges*, Zlatkovic, M. 2015

| Star Quality Rating | |
|---|---|
| Star Quality Rating: | 4 Stars |

| Crash Modification Factor (CMF) | |
|---|---|
| Value: | 0.877 |
| Adjusted Standard Error: | |
| Unadjusted Standard Error: | 0.045 |

| Crash Reduction Factor | |
|---|---|
| Value: | 12.3 |
| Adjusted Standard Error: | |
| Unadjusted Standard Error: | 4.5 |

| Applicability | |
|---|---|
| **Crash Type:** | All |
| **Crash Severity:** | All |
| **Roadway Types:** | Not specified |
| **Minimum Number of Lanes:** | |
| **Maximum Number of Lanes:** | |
| **Number of Lanes Direction:** | |
| **Number of Lanes Comment:** | |
| **Road Division Type:** | |
| **Minimum Speed Limit:** | |
| **Maximum Speed Limit:** | |
| **Speed Unit:** | |
| **Speed Limit Comment:** | |
| **Area Type:** | Not specified |
| **Traffic Volume:** | |
| **Average Traffic Volume:** | |
| **Time of Day:** | All |
| *If countermeasure is intersection-based.* | |
| **Intersection Type:** | Roadway/roadway (not interchange related) |
| **Intersection Geometry:** | 4-leg |
| **Traffic Control:** | Signalized |
| **Major Road Traffic Volume:** | |
| **Minor Road Traffic Volume:** | |

| | |
|---|---|
| **Average Major Road Volume:** | |
| **Average Minor Road Volume:** | |

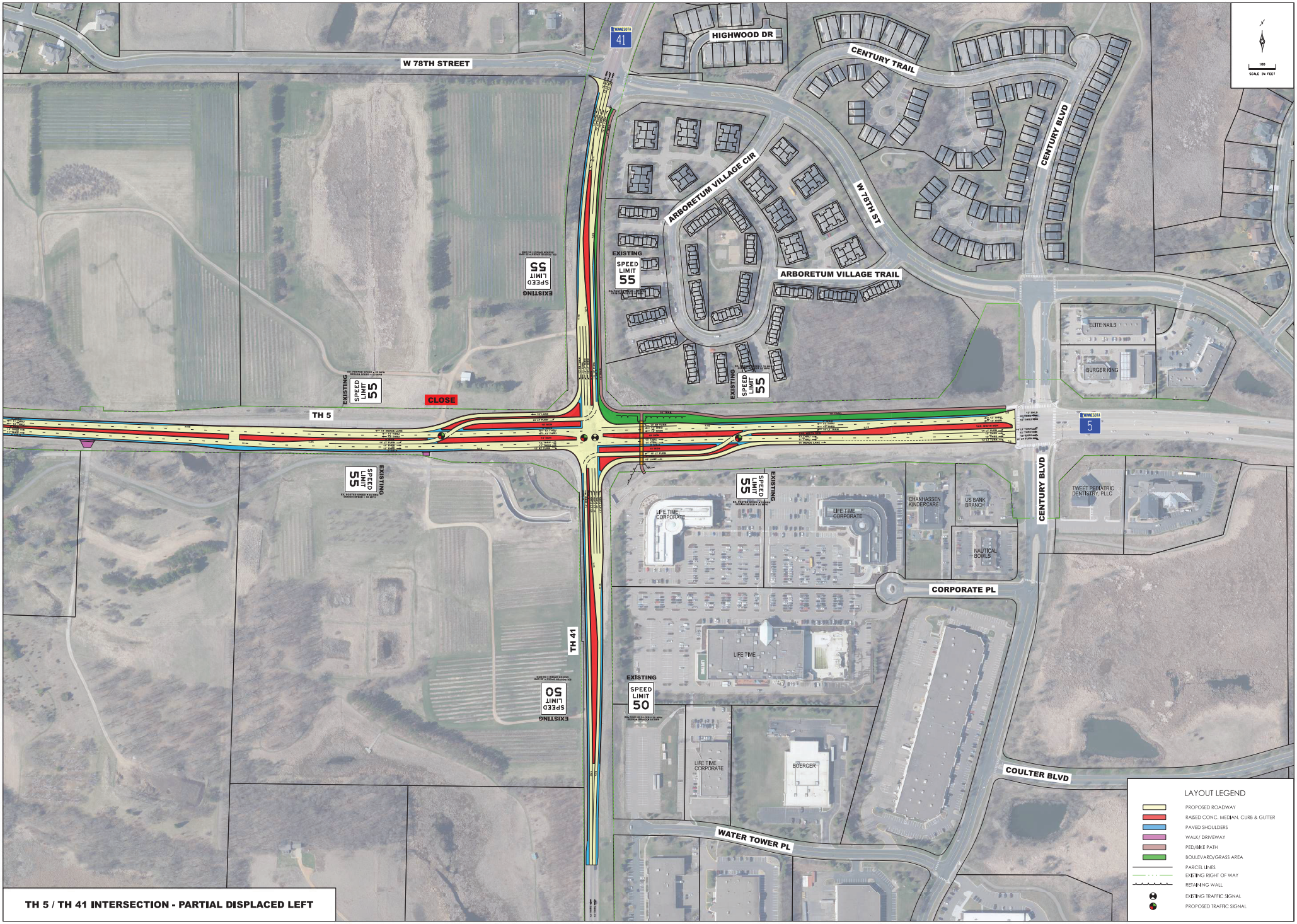
## Development Details

| | |
|---|---|
| **Date Range of Data Used:** | 2008 to 2013 |
| **Municipality:** | |
| **State:** | UT |
| **Country:** | |
| **Type of Methodology Used:** | Before/after using empirical Bayes or full Bayes |
| **Sample Size (crashes):** | 1050 crashes before, 830 crashes after |
| **Sample Size (sites):** | 7 sites before, 7 sites after |
| **Sample Size (site-years):** | **site-years before, 28 site-years after** |

## Other Details

| | |
|---|---|
| **Included in HSM:** | No |
| **Date Added to Clearinghouse:** | Mar 23, 2020 |
| **Comments:** | |

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center




**TH 5 / TH 41 INTERSECTION - PARTIAL DISPLACED LEFT**

Subd. 13. **Trunk Highway 5; Chanhassen.**

$20,000,000 in fiscal year 2024 is appropriated from the general fund to the commissioner of transportation for a grant to Carver County to complete the preliminary engineering, environmental documentation, final design, right-of-way acquisition, and construction of improvements to marked Trunk Highway 5 from Minnewashta Parkway to marked Trunk Highway 41 in the city of Chanhassen, including mainline highway expansion, cross streets, off-street trails, a bridge over Lake Minnewashta wetlands, utility relocations, and installations. This is a onetime appropriation and is available until June 30, 2027.

MnDOT Metro District
1500 West County Road B-2
Roseville, MN 55113

11/29/2023

Mr. Lyndon Robjent, PE
Public Works Director, County Engineer
Carver County Public Works
11360 Highway 212, Suite 1
Cologne, MN 55322

**Re: MnDOT Letter for Carver County**
**Metropolitan Council/Transportation Advisory Board 2024 Regional Solicitation Funding Request for TH 5 80th and Kochia Lane Improvement and the TH 5 and TH 41 Intersection Improvement**

Dear Lyndon Robjent,

This letter documents MnDOT Metro District's recognition for Carver County to pursue funding for the Metropolitan Council/Transportation Advisory Board's (TAB) 2024 Regional Solicitation for the TH 5 80th and Kochia Lane Improvement and the TH 5 and TH 41 Intersection Improvement.

This project is a locally led project on MnDOT's Trunk Highway (TH) System. The project will implement improvements for TH 5 and include improvements at the TH 5 and TH 41 intersection that will provide significant benefits to the regional transportation system and state system.

As the agency with jurisdiction over TH 5 and TH 41, MnDOT will allow Carver County to seek improvements proposed in the application. If funded, details of how the project is delivered and any future maintenance agreement with Carver County will need to be determined during the project's development to define how the improvements will be maintained for the project's useful life.

MnDOT does not anticipate partnering on local projects beyond current agreements. If your project receives funding, continue to work with MnDOT Area staff to coordinate and review needs and opportunities for cooperation.

MnDOT Metro District looks forward to continued cooperation with Carver County as this project moves forward and as we work together to improve safety and travel options within the Metro Area.

If you have questions or require additional information at this time, please reach out to your Area Manager at Bryant.Ficek@state.mn.us or 651-443-2564.

Sincerely,

Sheila Kauppi

Digitally signed by Sheila Kauppi
Date: 2023.11.29 13:48:44 -06'00'

Sheila Kauppi, PE
Metro District Engineer

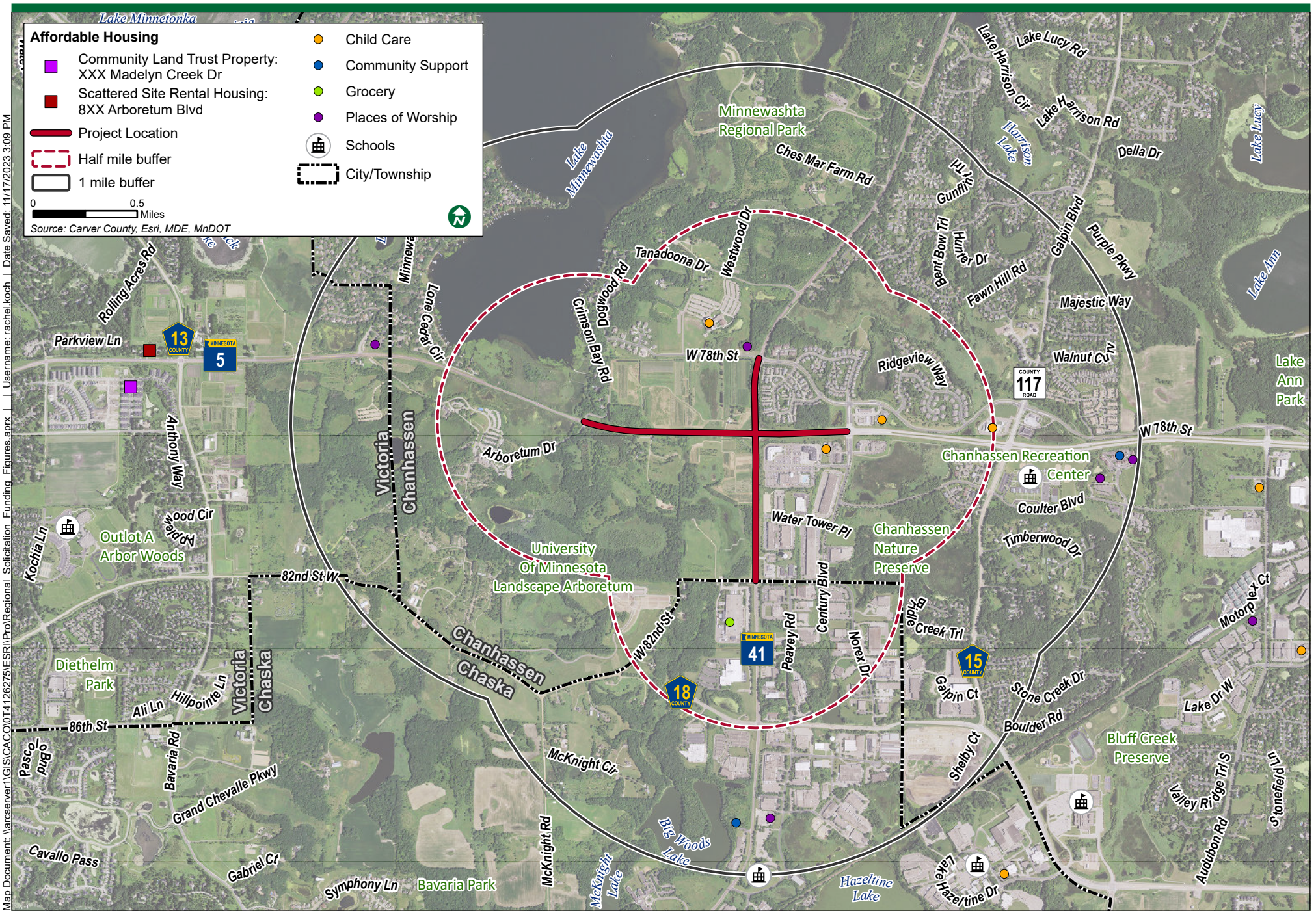
CC:
Bryant Ficek, South Area Manager
Aaron Tag, Metro Program Director
Dan Erickson, Metro State Aid Engineer

# Affordable Housing Developments

Carver County, Minnesota

## Hwy 5 and Hwy 41 Intersection Reconstruction

November 2023




Map Document: \\arcserver1\GIS\CACO\0T4126275\ESRI\Pro\Regional Solicitation Funding Figures.aprx | Username: rachel.koch | Date Saved: 11/17/2023 3:09 PM

Carver
County
Parks
11360 Highway 212 West, Suite 2
Cologne, MN55322

November 16, 2023

Elaine Koutsoukos
TAB Coordinator
Metropolitan Council

RE: Maintenance commitment for Highway 5 80th and Kochia Lane Improvement Project, the Rolling Acres Road Pedestrian Grade Separation Project, and the Highway 5 and Highway 41 Intersection Improvement Project Funding Requests

Dear Ms. Koutsoukos:

I write to you today to express Carver County's commitment for year-round maintenance, including trail and walkway snow removal, for the Highway 5 80th and Kochia Lane Improvement Project, the Rolling Acres Road Pedestrian Grade Separation Project, and the Highway 5 and Highway 41 Intersection Improvement Project. These projects will create a safer and more reliable transportation system for all users.

These project investments are of significant importance for our Carver County and the communities they serve. For more than four years, we have worked with MnDOT, the Cities of Victoria, Chanhassen, and Chaska, and the University of Minnesota Landscape Arboretum to identify transportation improvements involving Highway 5.

Sincerely,

Martin Walsh
Parks and Recreation Director
Carver County Public Works

# CITY OF CHANHASSEN

Chanhassen is a Community for Life - Providing for Today and Planning for Tomorrow

November 20, 2023

Mr. Lyndon Robjent, PE
Public Works Director, County Engineer
Carver County Public Works
11360 Highway 212, Suite 1
Cologne, MN 55322

RE: Support for the Highway 5 and Highway 41 Intersection Project Funding Request

Dear Mr. Robjent:

I write to you today to express my support for the pursuit of funding for the Highway 5 and Highway 41 Intersection Improvement Project, which will create a safer and more reliable transportation system for all users.

The proposed Highway 5 and Highway 41 improvements provide significant benefits to regional commuter and freight traffic as well as the Minnesota Landscape Arboretum and its 500,000 annual visitors. Today, Highway 5 is plagued with high numbers and severity of crashes (387 – 1 fatal crash – in ten years), backups exceeding two miles during peak travel times and stressful and dangerous crossings for vulnerable users. Highway 5 carries 27,000 vehicles through the project area—including 800 heavy commercial vehicles—per day, serving a demand 50 percent above the threshold of a two-lane section. The improvements will result in a 51 percent crash reduction and a 56 percent delay reduction including projected 2040 traffic growth.

The City of Chanhassen recognizes and understands the value of the proposed improvements on Highway 5 and Highway 41. The extreme congestion and high crash rates along Highway 5 currently create challenges for our residents to access jobs and services. Attracting growth and businesses to our community depends on a reliable transportation system. Additionally, our residents value the immense environmental amenities of Lake Minnewashta, the Arboretum, and the regional trail network. This project will expand multimodal access to these regional destinations.

The City of Chanhassen supports Carver County's funding request for Highway 5 and Highway 41 Intersection improvements. For more than four years, we have worked with Carver County, MnDOT, and other local municipalities to identify transportation improvements involving Highway 5.

Sincerely,

Elise Ryan

Elise Ryan, Mayor
City of Chanhassen, Minnesota

PH 952.227.1100 • www.chanhassenmn.gov • FX 952.227.1110

7700 MARKET BOULEVARD · PO BOX 147 · CHANHASSEN · MINNESOTA 55317

CITY OF CHASKA
ONE CITY HALL PLAZA / CHASKA MN 55318-1962

November 20, 2023

Mr. Lyndon Robjent, PE
Public Works Director, County Engineer
Carver County Public Works
11360 Highway 212, Suite 1
Cologne, MN 55322

RE: Support for the Highway 5 and Highway 41 Intersection Project Funding Request

Dear Mr. Robjent:

I write to you today to express my support for the pursuit of funding for the Highway 5 and Highway 41 Intersection Improvement Project, which will create a safer and more reliable transportation system for all users.

The proposed Highway 5 and Highway 41 improvements provide significant benefits to regional commuter and freight traffic as well as the Minnesota Landscape Arboretum and its 500,000 annual visitors. Today, Highway 5 is plagued with high numbers and severity of crashes (387 – 1 fatal crash – in ten years), backups exceeding two miles during peak travel times and stressful and dangerous crossings for vulnerable users. Highway 5 carries 27,000 vehicles through the project area—including 800 heavy commercial vehicles—per day, serving a demand 50 percent above the threshold of a two-lane section. The improvements will result in a 51 percent crash reduction and a 56 percent delay reduction including projected 2040 traffic growth.

The City of Chaska recognizes and understands the value of the proposed improvements on Highway 5 and Highway 41. The extreme congestion and high crash rates along Highway 5 currently create challenges for our residents to access jobs and services. Attracting growth and businesses to our community

depends on a reliable transportation system. Additionally, our residents value the immense environmental amenities of Lake Minnewashta, the Arboretum, and the regional trail network. This project will expand multimodal access to these regional destinations.

The City of Chaska supports Carver County's funding request for Highway 5 and Highway 41 Intersection improvements. For years, we have worked with Carver County, MnDOT, and other local municipalities to identify transportation improvements involving Highway 5.

Sincerely,

Mark Windschitl, Mayor
City of Chaska, Minnesota

# Hwy 5 & Hwy 41 Intersection Reconstruction
## Project Carver County, Minnesota

**Project Name:** Hwy 5 and Hwy 41 Intersection Reconstruction Project

**Applicant:** Carver County

**Primary Contact:**

Lyndon Robjent, P.E.
Public Works Division Director
11360 Highway 212, Suite 1, Cologne, MN
952-466-5283
lrobjent@co.carver.mn.us

### Location & Route:
Hwy 5 & Hwy 41 Intersection in Chanhassen

### Application Category:
Roadway Reconstruction/Modernization

### Funding Information:
**Requested Award Amount**: $7,000,000
**Local Match**: $6,526,900
**Project Total**: $13,526,900

### Additional Funding Sources:
- MnDOT STIP - $220,000
- State Earmark - $5,000,000
- Carver County – $996,900
- City of Chanhassen - $310,000

### Hwy 5/Hwy 41 Fast Facts:
- Approximately 26,000 AADT (Hwy 5)
- Approximately 11,500 AADT (Hwy 41)
- 1,104 HCAADT (at intersection)
- Gateway to Chaska North Industrial Area (more than 5,000 jobs)
- Improvements contribute to 51% crash reduction; 56% delay reduction

2022 Award → 2023-24 Design → 2024-26 Construction

### Project Description
The proposed project will improve infrastructure, reduce crashes and improve mobility at the Hwy 5 and Hwy 41 intersection by:

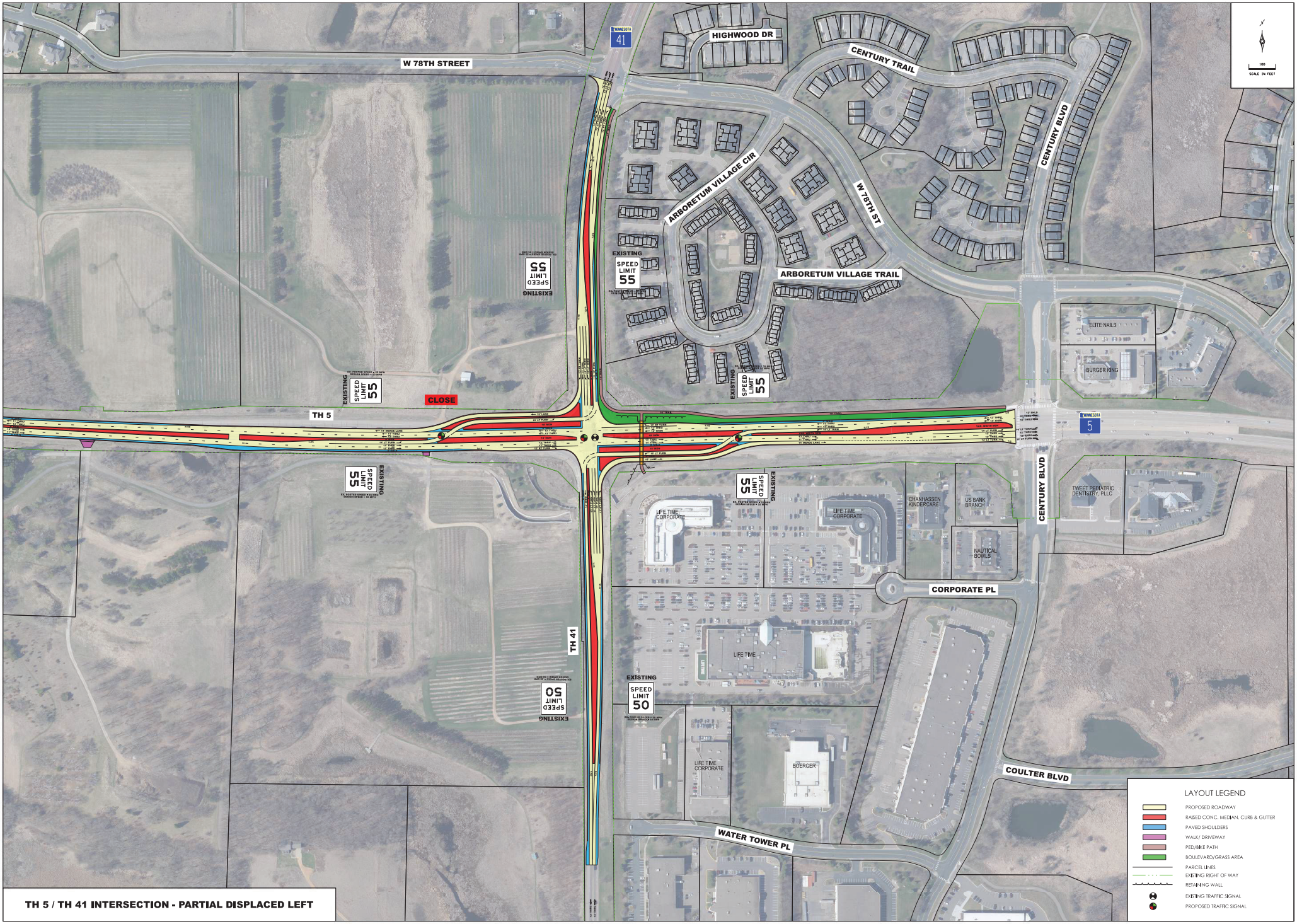
- Reconstructing and modernizing the intersection
- Adding an innovative, partial displaced left turn at the intersection
- Upgrading traffic signals and intersection configuration

### Project Benefits/Regional Significance
This project will provide a safer intersection for all users, including heavy freight haulers, by reconfiguring the intersection to improve traffic flow along two busy routes in the western Twin Cities area. Both Hwy 5 and Hwy 41 serve as primary routes connecting established and rapidly growing neighborhoods, the Minnesota Landscape Arboretum, and several surrounding regional trails and recreational areas such as Lake Minnewashta Regional Park.

The intersection also serves as the gateway to the Chaska North Industrial Area—a well-established collection of manufacturing, technology, bioscience and other businesses that provide more than 5,000 jobs and an estimated $950 million in freight value each year, according to the Metropolitan Council's 2017 Regional Truck Highway Corridor Study. Once completed, the project will improve access to the industrial area by contributing to a 51% reduction in crashes and 56% reduction in delay.

The primary benefit of a partial displaced left turn intersection is a reduction in the number of traffic signal phases and conflict points, resulting in improved operations and safety. Additionally, this intersection provides additional capacity for increased traffic without expanding Highway 41 to four lanes in a confined area. Highway 5 will continue to be four lanes through the intersection with left turn lanes modified as shown in the image.


### Project Development and Status
The Hwy 5/Hwy 41 intersection is identified as a top priority in the Arboretum Area Transportation Plan—a two-year, multiagency study completed in 2021 that developed a vision for transportation needs in the corridors surrounding the Arboretum. This project is currently in preliminary design along with other Hwy 5 improvements planned between Hwy 41 in Chanhassen and downtown Victoria.




**TH 5 / TH 41 INTERSECTION - PARTIAL DISPLACED LEFT**

**Existing path along northbound TH 47 and crossing of westbound TH 5 right turn lane**

## TH 5 looking east past TH 41 Intersection

## TH 5 looking east past TH 41 Intersection

## TH 41 looking north past TH 5 Intersection

## TH 41 looking south past TH 5 Intersection

## TH 5/TH 41 intersection looking northeast