



Application

19839 - 2024 Roadway Expansion  
20195 - Victoria Highway 5 Mobility and Safety Project  
Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted  
Submitted Date: 12/15/2023 9:47 AM

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## Primary Contact

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**Name:**\* He/him/his Jack Johansen  
Pronouns First Name Middle Name Last Name

**Title:** Transportation Planner

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Suite 1

**\* City:** Cologne **State/Province:** Minnesota **Postal Code/Zip:** 55322

**Phone:**\* 612-231-9170 **Ext.:**

**Fax:**

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

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## Organization Information

**Name:** CARVER COUNTY

**Jurisdictional Agency (if different):**

**Organization Type:** County Government

**Organization Website:**

**Address:** PUBLIC WORKS  
11360 HWY 212 W #1

**\* City:** COLOGNE **State/Province:** Minnesota **Postal Code/Zip:** 55322-9133

**County:** Carver

**Phone:**\* **Ext.:**

**Fax:**

**PeopleSoft Vendor Number:** 0000026790A12

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## Project Information

**Project Name:** Highway 5 Victoria Mobility & Safety Project

**Primary County where the Project is Located:** Carver

**Cities or Townships where the Project is Located:** Victoria

**Jurisdictional Agency (If Different than the Applicant):** MnDOT

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

The Highway 5 Victoria Mobility and Safety Improvement project expands a section of Trunk Highway 5 to a four-lane section within the City of Victoria. The existing A-Minor Arterial features a two-lane rural section and carries over 15,000 vehicles per day. Heavy commuter traffic causes congestion throughout the corridor today, and traffic growth associated with planned development is expected to further degrade the operations and safety issues experienced.

This project is directly connected to a segment of Hwy 5 (Park Kochia to west of Minnewashta Pkwy) that received Regional Solicitation funds in 2020. As such this project will preserve that award investment and carry momentum of safety and mobility benefits on Hwy 5 from Park Drive/Kochia Lane into downtown Victoria.

In addition to the four-lane expansion and modernization to an urban section, a traffic signal will be added at the Kochia Lane/Park Drive intersection, and significant pedestrian improvements will be throughout the area. The new signal at Kochia Lane/Park Drive not only provides improved cross street operations during the peak periods but greatly improves safety for these movements as one fatal crash recently occurred at this location. Expanded multi-use trail facilities will be added to Kochia Lane/Park Drive and 78th Street, forming a more continuous and cohesive system. In addition to the signalized crossing of Highway 5 at Kochia Lane/Park Drive, an enhanced crossing system with center refuge island is proposed at 78th Street, providing a controlled two-stage crossing and greatly improving mobility to the Lake Minnetonka Regional Trail north off Highway 5 and downtown Victoria.

Improvements include:

-Expanding Hwy 5 from two lanes to four lanes--two in each direction--between 80th Street and Kochia Lane/Park Drive

-Constructing a roundabout with multimodal elements to replace the existing, insufficient intersection at Hwy 5 and Commercial Avenue

-Adding a concrete median between eastbound and westbound Hwy 5 from 80th Street to Kochia Lane/Park Drive

-Adding vehicular access restrictions on Hwy 5 at Stieger Lake Lane and 78th Street

-Hwy 5 corridor and intersection lighting

This project aims to address safety risks and mobility issues on and along Hwy 5, an arterial corridor connecting rapidly growing neighborhoods to regional job centers and destinations. Once completed, the expanded highway and improvements listed above will enhance operations along this stretch of Hwy 5, improving the movement of people and goods through the corridor and regional system.

**TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP TH 5 (ARBORETUM BLVD) IN VICTORIA FR TH 5 and 80th St to TH and Park if the project is selected for funding. See MnDOT's TIP description guidance.** Dr/Kochia Ln 4-LANE SECTION, NEW ROUNDABOUT, MEDIAN CHANNELIZATION, TRAFFIC SIGNAL, MARKED CROSSWALKS, TRAILS CONNECTIONS TH 5/SIDE STS, ADA.

*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)** 0.8  
*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)** TED, MNHFP, SS4A, Rural DOT

**Federal Amount** \$10,000,000.00

**Match Amount** \$9,158,200.00

*Minimum of 20% of project total*

**Project Total** \$19,158,200.00

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

**Match Percentage** 47.8%

*Minimum of 20%*

*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 Victoria, 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** State Highway

**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 (Augie Mueller Memorial Highway)

*Example; 1st ST., MAIN AVE*

**TERMINI:(Termini listed must be within 0.3 miles of any work)**

**From:** CITY STREET

**Road System**

**Road/Route No.**

*i.e., 53 for CSAH 53*

**Name of Road** Park Drive/Kochia Lane

*Example; 1st ST., MAIN AVE*

**To:** CITY STREET

**Road System**

*DO NOT INCLUDE LEGAL DESCRIPTION*

**Road/Route No.**

*i.e., 53 for CSAH 53*

**Name of Road** 80th Street

*Example; 1st ST., MAIN AVE*

**In the City/Cities of:** Victoria

*(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** 0.8 miles  
*(nearest 0.1 miles)*

**Primary Types of Work (check all that apply)**

<b>New Construction</b>	
<b>Reconstruction</b>	Yes
<b>Resurfacing</b>	
<b>Bituminous Pavement</b>	Yes
<b>Concrete Pavement</b>	
<b>Roundabout</b>	Yes
<b>New Bridge</b>	
<b>Bridge Replacement</b>	
<b>Bridge Rehab</b>	
<b>New Signal</b>	Yes
<b>Signal Replacement/Revision</b>	
<b>Bike Trail</b>	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** 55386

**Approximate Begin Construction Date** 03/01/2025

**Approximate End Construction Date** 03/31/2027

**Miles of Trail (nearest 0.1 miles)** 0.1

**Miles of Sidewalk (nearest 0.1 miles)** 0.2

**Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles):** 0

**Is this a new trail?** No

**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 Victoria Comprehensive Plan (2019)

-Survey identified widening of TH 5 between CSAH 13 and CSAH 11 as the second highest priority major roadway improvement in the city (P. 98). TH 5 upgrades and bike/ped access identified as the top priority for Victoria's implementation program (P. 144).

-TH 5 is noted as having a current capacity deficiency in the proposed project area (P. 116) as well as forecasted future deficiencies (P. 122).

-Identifies TH 5 corridor as a key concern; acute congestion will get worse. Notes Victoria's role in the TH 5 Corridor Study (P. 143).

-Identifies Policy T-2.1 to cooperate with others on improvements to TH 5. This policy falls under Goal T-2 (An Efficient Roadway System) (P. 100). Goal T-8 (Facilitate Bike and Ped Travel) also includes Policy T-8.5 which mentions the encouragement of safe crossings for off-road bicycles and pedestrians on highways such as TH 5 (P. 103).

-Identifies greenway opportunities, including Madelyn Creek across TH 5. The greenway system should include link to the Minnesota Landscape Arboretum and other area amenities (Pp. 40-41).

-References planned TH 5 Regional Trail, connecting to Lake Minnetonka LRT Trail (P. 80). Shown as a planned facility in Figure 7.1: Existing Parks and Trails (P. 82).

-Goal PROS-4 - develop a trail system relates to Policy T-8.5. Policy PROS-4.2 - connect city trails to regional trails to provide seamless connections (P. 86). Policy PROS-4.6 - grade-separation for trail crossings of major roadways to minimize potential conflicts (P. 89). Policy PROS-7.2 - trail connections from neighborhoods to regional trails, parks and facilities includes an action item for trail connections to Carver Park Reserve and the MN Landscape Arboretum (P. 92).

-High priority trail gap noted for Bavaria Rd S of TH 5 in Figure 7.3: Trail Gaps (P. 88).

City of Chaska Comprehensive Plan (2020)

-Notes TH 5 as one of the most heavily traveled routes for commercial vehicles in Carver County (P. 6-50).

-Identifies potential for a Southwest Transit park and ride system located at TH 5/Rolling Acres Road (P. 6-62), close to the proposed project area.

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

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## 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.

Yes

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## Requirements - Roadways Including Multimodal Elements

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### Specific Roadway Elements

#### CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

	<b>Cost</b>
Mobilization (approx. 5% of total cost)	\$623,300.00
Removals (approx. 5% of total cost)	\$449,100.00
Roadway (grading, borrow, etc.)	\$1,198,000.00
Roadway (aggregates and paving)	\$2,948,500.00
Subgrade Correction (muck)	\$6,600,000.00
Storm Sewer	\$1,161,800.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$1,216,700.00
Traffic Control	\$623,300.00
Striping	\$187,000.00
Signing	\$187,000.00
Lighting	\$100,000.00
Turf - Erosion & Landscaping	\$935,000.00
Bridge	\$0.00
Retaining Walls	\$57,000.00
Noise Wall (not calculated in cost effectiveness measure)	\$0.00
Traffic Signals	\$580,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$1,837,100.00
Other Roadway Elements	\$203,000.00
<b>Totals</b>	<b>\$18,906,800.00</b>

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### Specific Bicycle and Pedestrian Elements

#### CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

	<b>Cost</b>
Path/Trail Construction	\$12,000.00
Sidewalk Construction	\$170,600.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$16,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$20,000.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$0.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$32,800.00
Other Bicycle and Pedestrian Elements	\$0.00
<b>Totals</b>	<b>\$251,400.00</b>

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### Specific Transit and TDM Elements

#### CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

	<b>Cost</b>
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



**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 area has very poor soils which is resulting in roadway sinking. Stabilization efforts are necessary to reconstruct the road and prevent future sinking. Costs estimate associated with subgrade corrections, storm sewer, erosion control, and retaining walls is approximately \$8,753,800.

**Totals**

Total Cost	\$19,158,200.00
Construction Cost Total	\$19,158,200.00
Transit Operating Cost Total	\$0.00

**Congestion within Project Area:**

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the "Level of Congestion" map. The analysis will compare the peak hour travel speed within the project area to free-flow conditions.

<b>Free-Flow Travel Speed:</b>	53
<i>The Free-Flow Travel Speed is the black number.</i>	
<b>Peak Hour Travel Speed:</b>	42
<i>The Peak Hour Travel Speed is the red number.</i>	
<b>Percentage Decrease in Travel Speed in Peak Hour compared to Free-Flow:</b>	20.75%
<b>Upload Level of Congestion map:</b>	1702608004395_LevelofCongestionMap.pdf

**Congestion on adjacent Parallel Routes:**

<b>Adjacent Parallel Corridor</b>	CSAH 10
<b>Adjacent Parallel Corridor Start and End Points:</b>	
<b>Start Point:</b>	CSAH 11
<b>End Point:</b>	Chaska Creek Blvd
<b>Free-Flow Travel Speed:</b>	40
<i>The Free-Flow Travel Speed is the black number.</i>	
<b>Peak Hour Travel Speed:</b>	31
<i>The Peak Hour Travel Speed is the red number.</i>	
<b>Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow:</b>	22.5%
<b>Upload Level of Congestion Map:</b>	1702608004395_LevelofCongestionMap.pdf

**Principal Arterial Intersection Conversion Study:**

**Proposed interchange or at-grade project that reduces delay at a High Priority Intersection:**

*(80 Points)*

**Proposed at-grade project that reduces delay at a Medium Priority Intersection:**

*(60 Points)*

**Proposed at-grade project that reduces delay at a Low Priority Intersection:**

*(50 Points)*

**Proposed interchange project that reduces delay at a Medium Priority Intersection:**

*(40 Points)*

**Proposed interchange project that reduces delay at a Low Priority Intersection:**

*(0 Points)*

Not listed as a priority in the study:

Yes

(0 Points)

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

Existing Employment within 1 Mile:	1417
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	149
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1702609033797_RegionalEconomyMap.pdf

Please upload attachment in PDF form

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### 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
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(to the nearest 0.1 miles)

#### Along Tier 2:

Miles:	0
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(to the nearest 0.1 miles)

Along Tier 3:	Yes
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Miles:	0.8
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(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:

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### Measure A: Current Daily Person Throughput

Location	TH 5 between 80th Street and Kochia Lane/Park Drive in Victoria, MN
Current AADT Volume	15200
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	1702609264829_TransitConnectionsMap.pdf
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Please upload attachment in PDF form

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### Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	19760.0

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### 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)
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Forecast (2040) ADT volume	23600
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### 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 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:**

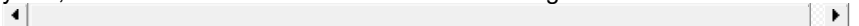
From 2019 to 2021, Carver County and MnDOT led the Arboretum Area Transportation Plan (AATP), a full corridor study of TH 5 and surrounding areas in the cities of Victoria, Chanhassen and Chaska. The study included a multifaceted engagement effort to identify and build support for multiple projects identified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

People who are 65 or more years old represent approximately 11% of the population in Victoria, greater than that of neighboring cities and the overall Twin Cities metro area. Victoria also has a higher percentage of residents below age 15 than Chanhassen, Chaska, Carver County and the overall Twin Cities metro area. On September 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. The study team also engaged with students online in spring 2020 to gather feedback from the youth.

Efforts to reach equity populations during the study focused on neighborhood-specific and general public meetings, which were held at the Minnesota 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).

Beginning in March 2020, the study team gathered public input through online surveys and web-based mapping interfaces. This allowed anyone interested in the project to provide feedback at any time of day. Including engagement efforts online 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 online surveys were completed with 100+ comments on the interactive map.

The project was a direct result of public feedback expressing need for greater mobility, user safety, accessibility and connectivity in and around Victoria. Past, and current engagement during the project's design phase, will directly influence the outcome of the project. The county continues to seek and prioritize input from people of color, low-income populations, persons with disabilities, youth, older adults and residents in affordable housing.



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

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## Measure B: Disadvantaged Communities Benefits and Impacts

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

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

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

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

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

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

**Response:**

The project will improve safety and mobility along a section of TH 5 that transitions from a high-speed highway near Kochia Lane to lower speeds into downtown Victoria. TH 5 bisects downtown and a large residential community south of the highway, which includes equity populations and affordable housing. TH 5 is a barrier discouraging and restricting safe travel between this area and downtown Victoria, its amenities, and the regional trail system.

A Downtown Victoria redevelopment plan calls for three phases with a total of 20,000 square feet of retail space, 300-plus units of residences in multifamily rental buildings and several owner-occupied townhomes, and public gathering space. The first phase will include a 149-unit apartment building. The proposed high-density development will allow more affordable housing options for varying income populations to enjoy the high quality of life the community has to offer.

This project will improve safety and mobility for residents by constructing a roundabout with multimodal elements to replace the existing, insufficient intersection at TH 5 and Commercial Avenue. The roundabout will slow traffic on the expanded TH 5 entering downtown from the east. The project also will add a concrete median on TH 5 and vehicular access restrictions on TH 5 at Stieger Lake Lane and 78th Street. The improvements will maximize other corridor investments, including a fully funded grade-separated pedestrian crossing of TH 5 at 78th Street.

Census data indicates that 5% of Victoria's population lives with a disability. Without these traffic-slowing measures, elderly pedestrians and those with disabilities must cross fast-moving traffic at-grade. Additionally, the area north of TH 5 is in the 88th percentile nationally (and 95th percentile statewide) for unemployment rate, the area immediately south of TH 5 is in the 77th percentile for residents more than 64 years old, and the 52nd percentile (64th percentile statewide) for unemployment rate. This project represents a significant investment in local and regional mobility for these vulnerable groups, improving accessible, safe and high-quality, low-cost transportation.

The improvements will enhance access to the Arboretum, a cultural resource 1.5 miles east of the project that serves low-income, disabled, youth and elderly populations through targeted programs aimed at increasing public awareness and accessibility to the natural world. It offers complementary membership for Carver County residents who are economically disadvantaged. Non-motorized users will have improved access to the regional trail system north of TH 5, providing access to the Arboretum without interacting with motorists/high-speed traffic.

## 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 is in the City of Victoria, which is about 10.5 square miles in total area. There are 3,908 total housing units in the city, of which 3,701 are occupied, according to Met Council's January 2023 Housing Assessment. Approximately 23% of the housing units in Victoria are affordable at some level. Of the total units, 202 (5%) are affordable to households at or below 50% of the Area Median Income (AMI) and 687 (18%) are affordable to households between 51% to 80% of the AMI.

In total, the city has 457 "naturally-occurring" affordable housing (NOAF) units. The largest concentration of these units are downtown rentals and older, single-family housing south of downtown about 0.5 miles from the project, as shown in the attached Affordable Housing Map.

In 2020, the city partnered with AbellLight Village to construct a senior housing development approximately 0.5 miles south of the project. 11 of 52 units are affordable at or below 50% of the AMI. This site includes independent living for adults with developmental and intellectual disabilities.

Additionally, Carver County CDA recently purchased a property on the 800 block of Arboretum Blvd, approximately 0.5 miles from the project area, which will be rented at 60% of AMI. There are three scattered site public housing units where residents pay 30% of their income--one each on Marigold Circle, Fieldcreek Circle, and Victoria Drive. Some private landlords throughout the city also accept Housing Choice Vouchers.

There are 323 cost-burdened households in the city, with 124 (38%) having an income at or below 30% of the AMI; 65 (20%) between 31% and 50% of the AMI and 134 (41%) between 51 and 80% of the AMI. Victoria is committed to providing enough affordable housing to serve all residents and has designated available vacant land as high-density residential to meet their allocation of affordable housing per Met Council guidelines. This includes the adjacent Downtown West master plan, which calls for three phases with a total of 20,000 square feet of retail space, 300-plus units of residences in multifamily rental buildings and several owner-occupied townhomes and public gathering space. The first phase will include a 149-unit apartment building. The proposed high-density development will allow more affordable housing options for varying income populations to enjoy the high quality of life the community has to offer. A full list of Victoria's housing goals and policies is included in the 2040 Comprehensive Plan.

The proposed project will provide increased safety and access for pedestrians and motorists where TH 5 currently serves as a barrier to and from downtown jobs and amenities, Lake Minnetonka Regional Trail and Carver Park Reserve. This includes pedestrians from AbellLight and NOAF south of TH 5.

**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. 1702609829562\_Socio-EconomicConditionsMap.pdf

**Measure A: Infrastructure Age**

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation
1954.0	1.0	1954.0	1954.0
	1	1954	1954

**Average Construction Year**

Weighted Year 1954.0

**Total Segment Length (Miles)**

Total Segment Length 1.0

**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
5.0	15.6	-10.6	5249	5357	26245.0	83569.2	-57324.2	N/A	1702612571539_Synchro Reports.pdf
						<b>83569</b>			

**Vehicle Delay Reduced**

Total Peak Hour Delay Reduced	Total Peak Hour Delay Reduced	Delay Reduced Total
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**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):
3.94	4.803	-0.863
4	5	-1

**Total**

Total Emissions Reduced: -0.863  
 Upload Synchro Report 1702613591532\_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: Benefit of Crash Reduction**

Crash Modification Factor Used:

CMF 227 = 0.56, CMF 228 = 0.18. CMF 320 = 0.33, CMF 9821 = 0.55, CMF 2375 = 0.89

*(Limit 700 Characters; approximately 100 words)*

**Rationale for Crash Modification Selected:**

CMF 227 is used for all crash types and severities for an existing stop-controlled intersection that is being converted to a single-lane roundabout. This CMF was used because the project is expected to convert the stop-controlled intersection of TH 5 and Commercial Avenue to a single-lane roundabout. CMF 228 was used for all crash types and crash severities A, B, and C because the project is expected to convert the stop-controlled intersection of TH 5 and Commercial Avenue to a single-lane roundabout. CMF 320 is used for all crash types and injury crash severities for installing a traffic signal at an existing stop-controlled intersection. This CMF is used because the project will install a signal at the intersection of TH 5 and Kochia Lane / Park Drive. CMF 9821 is used for all crash types and severities for converting an existing stop-control intersection to a right-in/right-out. This CMF was used because the project will convert the intersection of TH 5 and 78th Street / Stieger Lake Lane to a right-in/right-out intersection. CMF 2375 is used for all crash types and severities for the installation of curb and gutter. This CMF was used because the project will install curb and gutter along TH 5.

*(Limit 1400 Characters; approximately 200 words)*

<b>Project Benefit (\$) from B/C Ratio:</b>	\$10,908,865.00
<b>Total Fatal (K) Crashes:</b>	1
<b>Total Serious Injury (A) Crashes:</b>	0
<b>Total Non-Motorized Fatal and Serious Injury Crashes:</b>	0
<b>Total Crashes:</b>	7
<b>Total Fatal (K) Crashes Reduced by Project:</b>	1
<b>Total Serious Injury (A) Crashes Reduced by Project:</b>	0
<b>Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:</b>	0
<b>Total Crashes Reduced by Project:</b>	5
<b>Worksheet Attachment</b>	1702616720660_HSIP Benefit Cost Worksheets CMFs.pdf

*Please upload attachment in PDF form*

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

<b>Current AADT volume:</b>	0
<b>Average daily trains:</b>	0
<b>Crash Risk Exposure eliminated:</b>	0

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**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:**

TH 5 is a high-speed, high-volume roadway that features little to no pedestrian facilities within the project area and is a barrier to a large area of the city from accessing downtown Victoria and its commercial areas via non-motorized travel. Additionally, the downtown area lacks adequate parking spaces to serve all visitors traveling by vehicle, further discouraging visits to the downtown area. Kochia Lane and 78th Street both feature existing pedestrian facilities that end at the trunk highway and pedestrians must cross the highway at uncontrolled, unsigned, and unmarked locations or walk along the paved shoulder next to traffic often traveling at or above 55 mph. The project will expand the pedestrian network within the project limits by adding at-grade, controlled facilities to Park Dr and north of TH 5 at 78th St.

The proposed traffic signal at Kochia Ln/Park Dr will serve as a new controlled crossing of the busy highway, serving all users with ADA compliant ramps, APS system components and a designated, marked crossing area. Lighting integral to the signal system will increase pedestrian visibility at night. At 78th Street where a right-in/right-out intersection is proposed, a center refuge island and enhanced pedestrian crossing system will be implemented to accommodate safe crossing of the east leg of the intersection. An enhanced crossing system will follow FHWA STEP and TEM guidance, and system details will be determined during the next design phase.

The project will also install a single-lane roundabout with crosswalks on all approaches at the intersection of TH 5 and Commercial Ave within Downtown Victoria. This will replace a side street stop-controlled intersection that provides access to a convenience store, fast food business, and high-density housing. The roundabout will provide safe pedestrian crossings and refuge medians where no accommodations exist today to access destinations that create high pedestrian and traffic demand. The roundabout will also slow highway traffic and reduce conflict points with pedestrians.

A new trail north of TH 5 will connect this crossing to the existing RBTN Tier 1 Lake Minnetonka Regional Trail and to downtown Victoria. The project also adds 1,000 feet of new trail along TH 5, a RBTN Tier 1 alignment. This new trail will connect to trail and underpass facilities to be constructed in 2015 by the TH 5 Arboretum Area Mobility and Access Improvement, providing connection to area parks and the U of M Landscape Arboretum. The project is not adding trail along the entire extent of TH 5 due to the proximity of the regional trail adjacent to the corridor. Additionally, the county has already secured funding to construct a pedestrian overpass north of 78th St to connect to existing sidewalks/trails.

*(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:**

Yes

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

**Response:**

4

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

**Response:**

The existing intersections currently do not provide any pedestrian facilities aiding in safe crossing of TH 5 as they are side-street stop-controlled intersections with high-speed, freeflow traffic on TH 5. Added signage, markings, signal systems, and lighting will all increase ped safety & offset the added exposure to traffic due to the expanded roadway.

At Kochia Lane/Park Dr, the proposed signal system will provide a controlled crossing that is not provided under existing conditions and will improve having to cross 75 ft. of pavement without any crossing aid or signalization with vertical curve and sight distance issues and traffic at 55 mph.

At 78th St, a fully funded grade separated pedestrian bridge will eliminate interaction between pedestrians and high-speed highway traffic. The ped. crossing amenities will be improved and decrease the pedestrian safety risk compared to existing conditions where pedestrians crossing from 78th St west to Downtown Victoria must wait for a gap traffic on TH 5 and attempt to cross 70 ft of pavement and then proceed along a rural ditch/shoulder area another 200+ ft to Stieger Lake Ln.

At Commercial Ave, a single-lane roundabout will provide traffic calming and two-stage crossings to improve pedestrian safety.

*(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:**

At 78th St, a fully funded grade separated pedestrian bridge will eliminate interaction between pedestrians and high-speed highway traffic. The grade separation is a direct alignment between a large residential area and the regional trail connection into Downtown Victoria. Especially during peak hour traffic, the pedestrian grade separation will reduce pedestrian travel time since today TH 5 sees limited gaps in traffic for local access of pedestrians and vehicles. Overall the pedestrian crossing amenities will be improved and decrease the pedestrian safety risk compared to existing conditions where pedestrians crossing from 78th St west to Downtown Victoria must wait for a gap traffic on TH 5 and attempt to cross 70 ft of pavement and then proceed along a rural ditch/shoulder area another 200+ ft to Stieger Lake Ln.

*(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:**

Multiple locations for pedestrian crossings of TH 5 will be provided where none exist today. The new crossings are located where existing and future demand will be. The existing local road and neighborhood connectivity and relation to the downtown do not generate demand at mid-block crossing locations within the proposed project.

*(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 project will increase capacity by expanding TH 5 to a 4-lane section but will urbanize the segment with a raised center median and curb and gutter on the shoulders and maintain the 55-mph design speed. A roundabout at the existing intersection of TH 5 and Commercial Ave will calm motorist speed along the corridor and serve as gateway into the downtown Victoria area.

New pedestrian accommodations, where none exist today, will increase the awareness of pedestrians and aid in calming traffic speeds as travelers enter Downtown Victoria. This includes pedestrian crossings at all legs of the Commercial Ave roundabout with center median refuges and a new traffic signal at the Kochia Lane/Park Drive intersection provides a controlled crossing of TH 5.

Additionally, at 78th St, a fully funded grade separated pedestrian bridge will provide a vertical element in the corridor and eliminate interaction between pedestrians and high-speed highway traffic.

◀ [ ] ▶

*(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:**

Existing posted speeds are 55 mph and there are no plans to change the posted speed limit.

*(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

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 15200

**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:

ENKI Brewing Taproom and Eatery is within 500' of the western project limits. This facility, located on Stieger Lake Lane, is a major attraction within the city and greater Carver County. The brewery provides the only craft beer experience in the city, serves food and frequently hosts corporate, private and public events. On-site parking is limited, as is parking in downtown Victoria. Locals who wish to walk to this destination would be well served by the proposed pedestrian crossing enhancements provided by the project through improved safety and mobility. Downtown Victoria has several other restaurants and commercial destinations adjacent to the project.

*(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 and single-family housing is present at multiple locations along the project area. A city park is also located on the east end of the project and the Lake Minnetonka Regional Trail runs parallel to the project area just north of TH 5. Downtown Victoria is adjacent to the northwest end of the project area and draws large amounts of pedestrian traffic as downtown parking is limited and large areas of residential land use are located south of TH 5. The highway is seen as a barrier to pedestrian mobility downtown but lack of parking often forces uncomfortable pedestrian crossings to take place.

(Limit 1,400 characters; approximately 200 words)

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## Measure A: Multimodal Elements and Existing Connections

Response:

The few existing pedestrian facilities in the project area terminate at TH 5 and do not provide any crossing treatments, resulting in TH 5 acting as a barrier to non-motorized mobility and limiting use of the nearby Lake Minnetonka Regional Trail and non-motorized trips to and from downtown Victoria.

The project includes multimodal elements to improve safety and security for non-motorized users by constructing a roundabout to replace the existing, insufficient intersection at TH 5 and Commercial Ave. ADA-compliant improvements include marked crosswalks and pedestrian refuge islands on all four legs of the intersection. Currently, TH 5 crosswalks closest to the project area are at CSAH 11 and CSAH 13, representing a 1.5-mile gap between existing crosswalks. The new crosswalks would allow residents south of downtown to access employment, amenities, and recreational opportunities north of TH 5. This proposed roundabout also will slow vehicle traffic entering downtown from the east. This will result in a safer crossing at the roundabout and at CSAH 11, which currently is the only north-south marked crossing between downtown and neighborhoods south of TH 5.

Those walking, bicycling, or rolling will have an easier time accessing either of the two nearby regional trails, both of which are classified as Tier 1 Bicycle and Trail Network alignments. This includes the TH 5 Regional Trail and Lake Minnetonka Regional Trail, which connects to a regional park--the Carver Park Reserve. Non-motorized connections are a priority of this project, given the project's proximity to these regional destinations. The improvements also will enhance dial-a-ride and SW Prime transit service by removing pedestrians from the roadway. A fully funded grade-separated pedestrian crossing of TH 5 at 78th Street will further enhance non-motorized mobility and safety within the project area.

TH 5 is not designated as a Regional Bicycle Barrier at this location; however, TH 5 east of this project is a 4-lane divided expressway identified as a Tier 2 Regional Bicycle Barrier. The AATP recommends expansion of TH 5 in the project area to a 4-lane roadway, which is a key element of this proposed project. This project will expand TH 5 from two lanes to four lanes between Commercial Ave and Kochia Ln/Park Dr. This represents one section of a larger TH 5 expansion to accommodate projected congestion and growth in the county to the west. With this expansion, TH 5 through the project area and to the east will likely become a bicycle barrier in the future without the proposed multimodal elements.

(Limit 2,800 characters; approximately 400 words)

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## 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](http://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](http://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](http://www.co.carver.mn.us/home/showpublisheddocument/18350/636991260708330000)

Survey summary:

[www.co.carver.mn.us/home/showpublisheddocument/18469/637007653202300000](http://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](http://www.co.carver.mn.us/departments/public-works/projects-studies/arboretum-area-transportation-plan/arboretum-area-transportation-plan-additional-information/-fsiteid-1)

**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. Yes

100%

A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid ? colleen.brown@state.mn.us.

100%

For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

75%

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

50%

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**

1702640187244\_TH 5 80th Kochia Layout.pdf

Please upload attachment in PDF form

**Additional Attachments**

1702640187231\_Layout Support Letters.pdf

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):	\$19,158,200.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$19,158,200.00
Enter amount of any outside, competitive funding:	\$0.00
Attach documentation of award:	
Points Awarded in Previous Criteria	
Cost Effectiveness	\$0.00

---

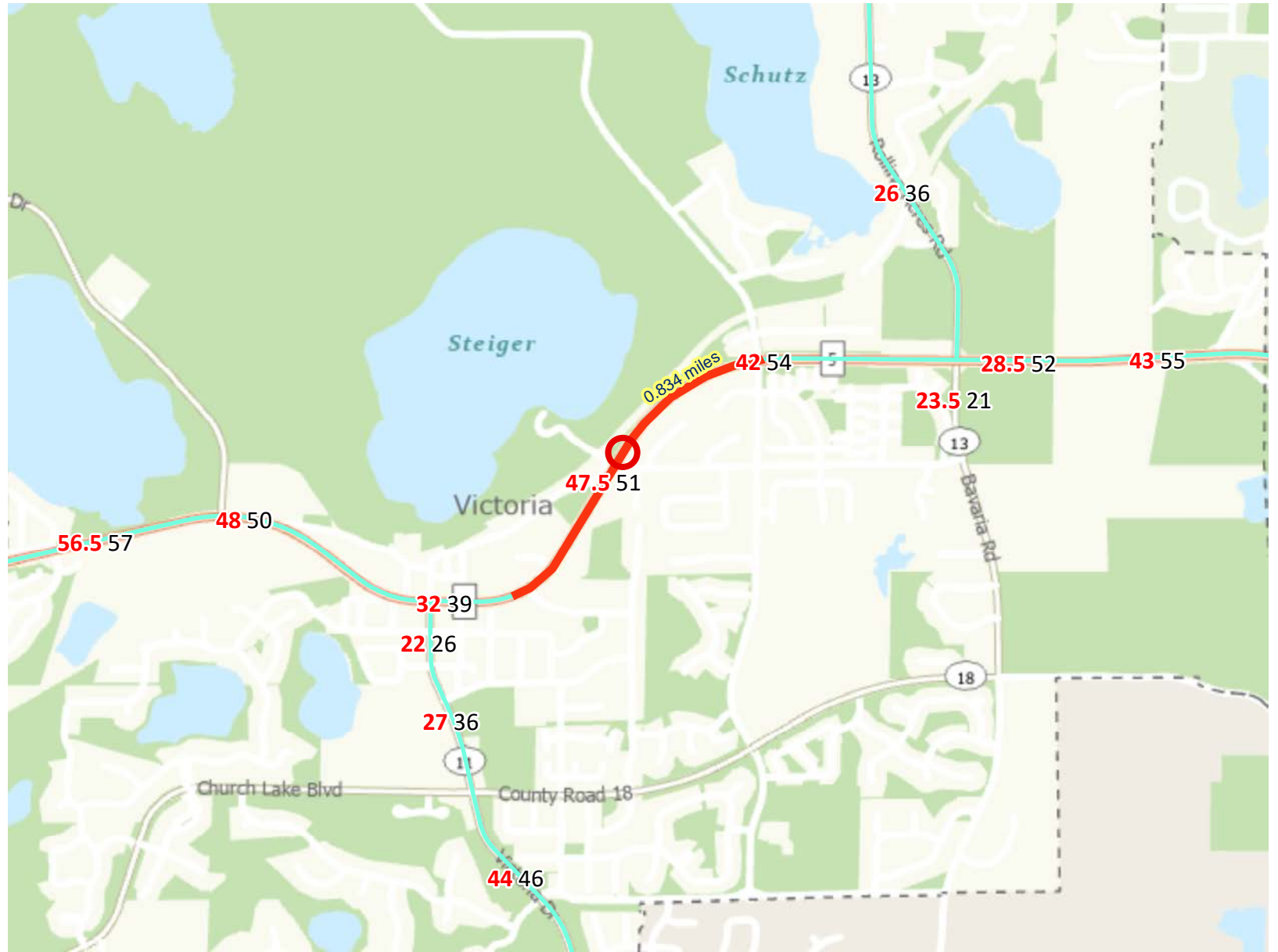
### Other Attachments

File Name	Description	File Size
2024RegionalSolicitation_CC_TH5.pdf	MnDOT Letter of Support	2.3 MB
Affordable_Housing_Hwy_5_Mobility_and_Safety.pdf	TH 5 Affordable Housing	2.3 MB
County Maintenance Commitment_2023-11-16-13-34-46.pdf	County Maintenance Commitment	168 KB
LoS_City of Victoria Mayor and PW.pdf	Letters of Support from City of Victoria Mayor and Public Works	1.2 MB
OnePageDescription-Hwy5MobilitySafetyProject.pdf	One Page Summary	428 KB
TH 5 80th Kochia Layout.pdf	TH 5 Layout	3.0 MB
TH 5_80th_Kochia_Existing Conditions Photos.pdf	TH 5 existing conditions photos	439 KB



# Level of Congestion

Strategic Capacity Project: Highway 5 Mobility and Safety Project | Map ID: 1699654769376



- Project Points
- Project
- Principal Arterials
- A Minor Arterials
- Principal Arterials Planned
- A Minor Arterials Planned



Created: 11/10/2023  
LandscapeRSA1

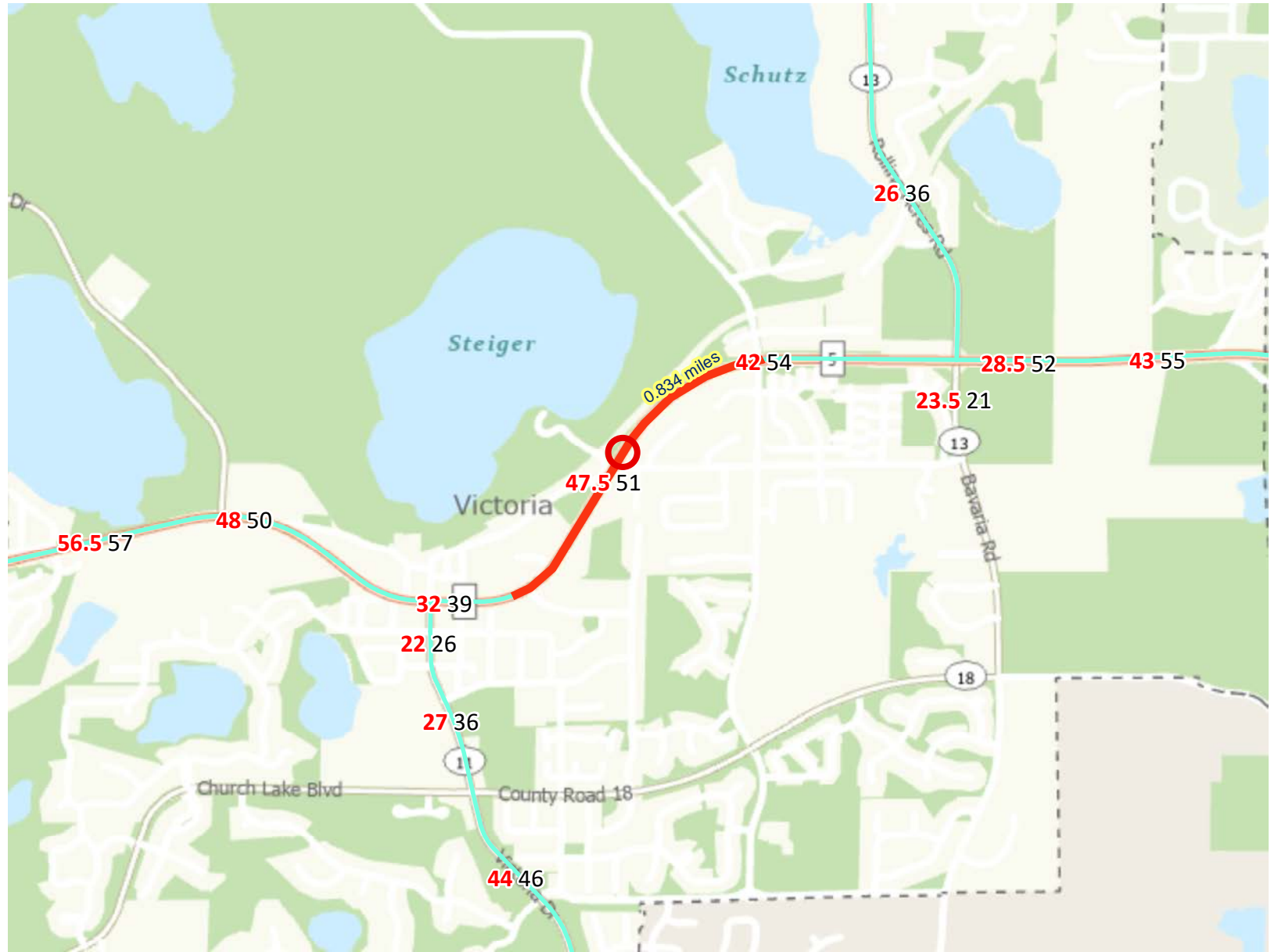


For complete disclaimer of accuracy, please visit <https://gisweb.site.metc.state.mn.us/gis/site/notice.aspx>



# Level of Congestion

Strategic Capacity Project: Highway 5 Mobility and Safety Project | Map ID: 1699654769376



- Project Points
- Project
- Principal Arterials
- A Minor Arterials
- Principal Arterials Planned
- A Minor Arterials Planned



Created: 11/10/2023  
LandscapeRSA1



For complete disclaimer of accuracy, please visit <https://gisweb.site.metc.state.mn.us/gis/site/notice.aspx>



# Regional Economy

## Results

**WITHIN ONE MI** of project:

Postsecondary Students: 0

Totals by City:

**Laketown Twp.**

Population: 597

Employment: 305

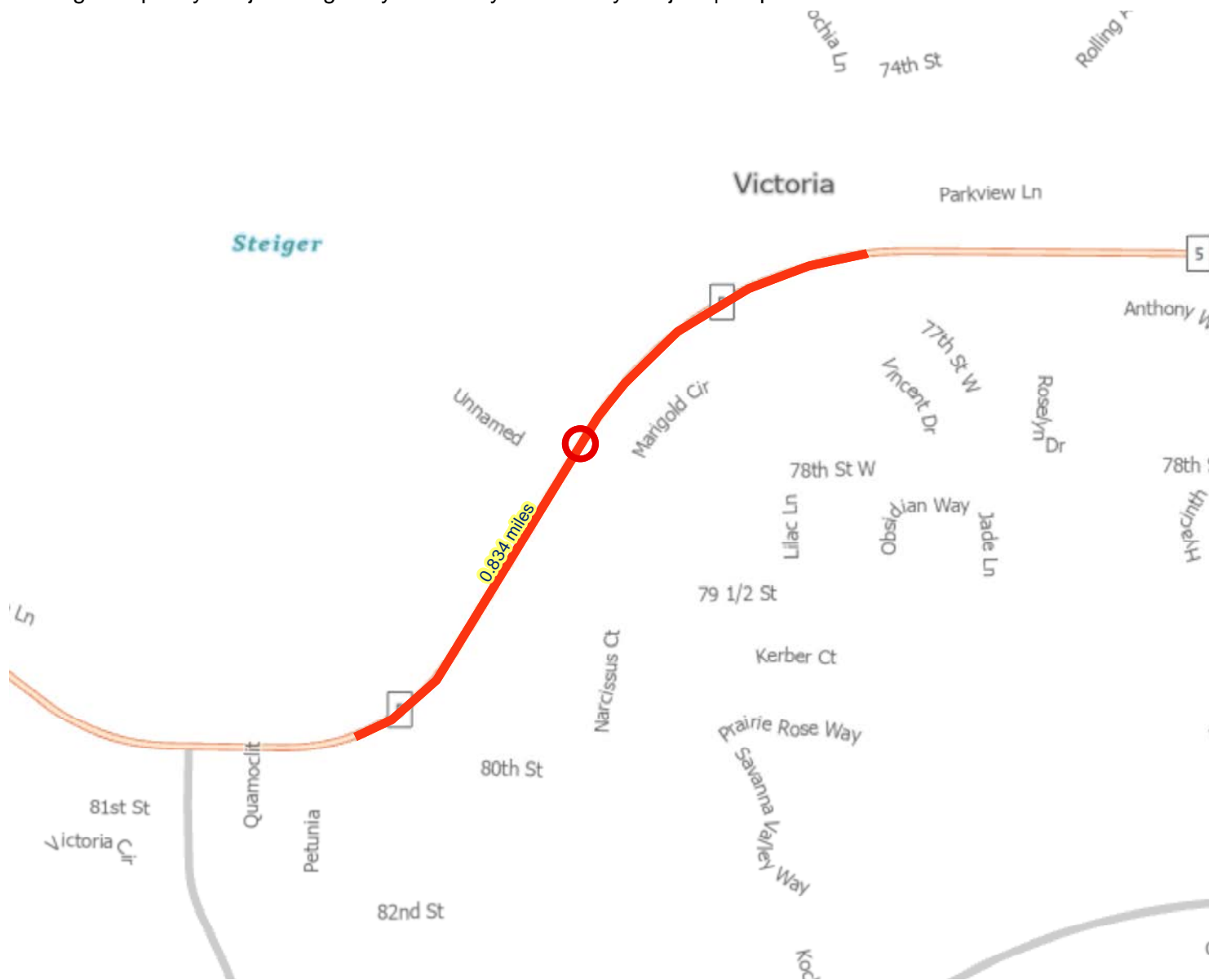
Mfg and Dist Employment: 13




**Victoria**

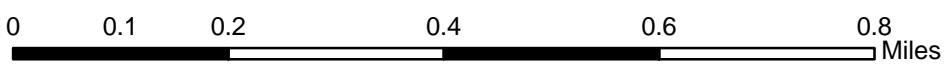
Population: 9033

Employment: 1112

Mfg and Dist Employment: 136



-  Project Points
-  Manufacturing/Distribution Centers
-  Project
-  Job Concentration Centers



Created: 11/10/2023  
LandscapeRSA5



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



# Transit Connections

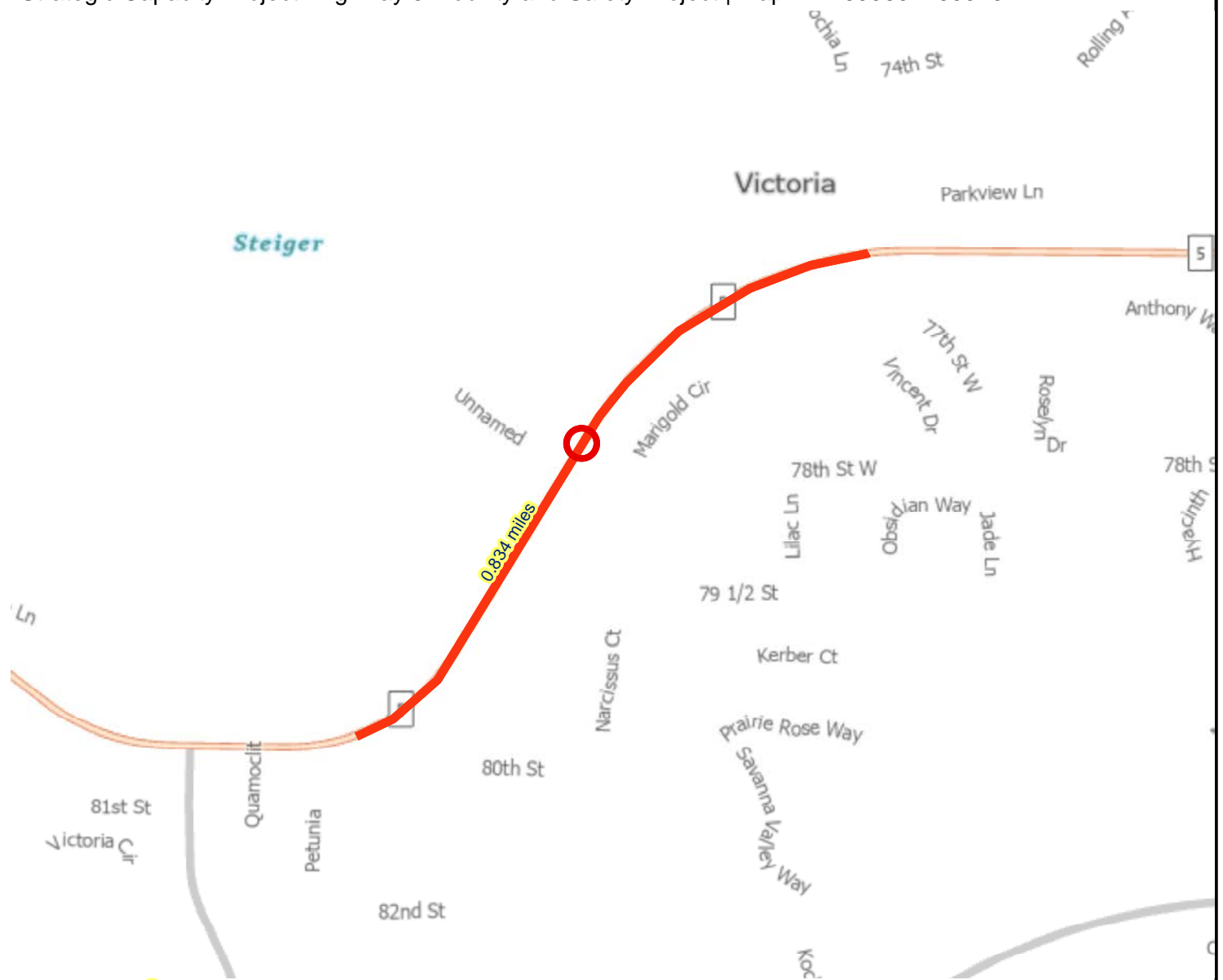
Strategic Capacity Project: Highway 5 Mobility and Safety Project | Map ID: 1699654769376

## Results

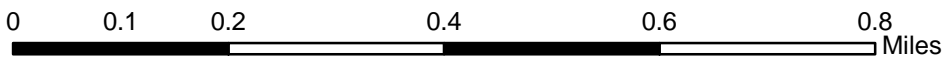
Transit with a Direct Connection to project:  
-- NONE --

*\*indicates Planned Alignments*

Transit Market areas: 5



- |                            |                             |                             |                             |                             |                           |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------|
| 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 | Highway Bus Rapid Transit |
| Active Stop                | Light Rail                  | Light Rail                  | Modern Streetcar            | Highway Bus Rapid Transit   | Light Rail                |
| Arterial Bus Rapid Transit | Arterial Bus Rapid Transit  | Arterial Bus Rapid Transit  | Undetermined                |                             |                           |



Created: 11/10/2023  
LandscapeRSA3



For complete disclaimer of accuracy, please visit <https://giswebsite.metc.state.mn.us/gis/site/notice.aspx>



# Socio-Economic Conditions

## Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 119

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 0.1 0.2 0.4 0.6 0.8 Miles

Created: 11/10/2023  
LandscapeRSA2



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



---

**1: TH 5 & 80th Street**

---

Direction	All
Future Volume (vph)	1397
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.58
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.13

---

**2: TH 5 & Commercial Avenue**

---

Direction	All
Future Volume (vph)	1443
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.68
NOx Emissions (kg)	0.13
VOC Emissions (kg)	0.16

---

**3: TH 5 & Stieger Lake Lane**

---

Direction	All
Future Volume (vph)	1468
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.49
NOx Emissions (kg)	0.09
VOC Emissions (kg)	0.11

---

**4: TH 5 & 78th Street**

---

Direction	All
Future Volume (vph)	1441
Total Delay / Veh (s/v)	1
CO Emissions (kg)	1.05
NOx Emissions (kg)	0.20
VOC Emissions (kg)	0.24

---

**5: Kochia Lane/Park Drive & TH 5**

---

Direction	All
Future Volume (vph)	1461
Total Delay / Veh (s/v)	1
CO Emissions (kg)	1.28
NOx Emissions (kg)	0.25
VOC Emissions (kg)	0.30

1: TH 5 & 80th Street

Direction	All
Future Volume (vph)	1399
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.52
NOx Emissions (kg)	0.10
VOC Emissions (kg)	0.12

3: TH 5 & Stieger Lake Lane

Direction	All
Future Volume (vph)	1504
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.44
NOx Emissions (kg)	0.08
VOC Emissions (kg)	0.10

4: TH 5 & 78th Street

Direction	All
Future Volume (vph)	1466
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.99
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

5: Kochia Lane/Park Drive & TH 5

Direction	All
Future Volume (vph)	1513
Total Delay / Veh (s/v)	10
CO Emissions (kg)	2.19
NOx Emissions (kg)	0.43
VOC Emissions (kg)	0.51

2: TH 5 & Commercial Avenue Performance by movement

Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.8	0.0	1.4	0.0	2.4
Total Del/Veh (s)	6.6	3.0	2.9	3.8	5.3	5.3	5.9	4.2	5.6
Fuel Used (gal)	0.2	0.0	0.0	0.0	1.0	0.0	1.5	0.1	2.8
Fuel Eff. (mpg)	32.5	34.8	32.7	34.3	33.3	31.6	29.4	30.7	31.1
HC Emissions (g)	0	0	0	0	10	0	15	0	25
CO Emissions (g)	18	4	0	4	264	4	387	10	692
NOx Emissions (g)	2	1	0	1	38	1	58	2	101
Vehicles Exited	30	10	1	13	554	14	850	36	1508
Hourly Exit Rate	30	10	1	13	554	14	850	36	1508
Input Volume	19	9	2	15	532	20	826	42	1465
% of Volume	158	111	50	87	104	70	103	86	103



Intersection: 2: TH 5 & Commercial Avenue

Movement	EB	NB	SB
Directions Served	LTR	ULTR	ULTR
Maximum Queue (ft)	56	113	150
Average Queue (ft)	19	22	23
95th Queue (ft)	50	77	93
Link Distance (ft)	868	264	226
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

**1: TH 5 & 80th Street**

Direction	All
Future Volume (vph)	1397
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.58
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.13

**2: TH 5 & Commercial Avenue**

Direction	All
Future Volume (vph)	1443
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.68
NOx Emissions (kg)	0.13
VOC Emissions (kg)	0.16

**3: TH 5 & Stieger Lake Lane**

Direction	All
Future Volume (vph)	1468
Total Delay / Veh (s/v)	1
CO Emissions (kg)	0.49
NOx Emissions (kg)	0.09
VOC Emissions (kg)	0.11

**4: TH 5 & 78th Street**

Direction	All
Future Volume (vph)	1441
Total Delay / Veh (s/v)	1
CO Emissions (kg)	1.05
NOx Emissions (kg)	0.20
VOC Emissions (kg)	0.24

**5: Kochia Lane/Park Drive & TH 5**

Direction	All
Future Volume (vph)	1461
Total Delay / Veh (s/v)	1
CO Emissions (kg)	1.28
NOx Emissions (kg)	0.25
VOC Emissions (kg)	0.30

1: TH 5 & 80th Street

Direction	All
Future Volume (vph)	1399
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.52
NOx Emissions (kg)	0.10
VOC Emissions (kg)	0.12

3: TH 5 & Stieger Lake Lane

Direction	All
Future Volume (vph)	1504
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.44
NOx Emissions (kg)	0.08
VOC Emissions (kg)	0.10

4: TH 5 & 78th Street

Direction	All
Future Volume (vph)	1466
Total Delay / Veh (s/v)	0
CO Emissions (kg)	0.99
NOx Emissions (kg)	0.19
VOC Emissions (kg)	0.23

5: Kochia Lane/Park Drive & TH 5

Direction	All
Future Volume (vph)	1513
Total Delay / Veh (s/v)	10
CO Emissions (kg)	2.19
NOx Emissions (kg)	0.43
VOC Emissions (kg)	0.51

2: TH 5 & Commercial Avenue Performance by movement

Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.8	0.0	1.4	0.0	2.4
Total Del/Veh (s)	6.6	3.0	2.9	3.8	5.3	5.3	5.9	4.2	5.6
Fuel Used (gal)	0.2	0.0	0.0	0.0	1.0	0.0	1.5	0.1	2.8
Fuel Eff. (mpg)	32.5	34.8	32.7	34.3	33.3	31.6	29.4	30.7	31.1
HC Emissions (g)	0	0	0	0	10	0	15	0	25
CO Emissions (g)	18	4	0	4	264	4	387	10	692
NOx Emissions (g)	2	1	0	1	38	1	58	2	101
Vehicles Exited	30	10	1	13	554	14	850	36	1508
Hourly Exit Rate	30	10	1	13	554	14	850	36	1508
Input Volume	19	9	2	15	532	20	826	42	1465
% of Volume	158	111	50	87	104	70	103	86	103

---

Intersection: 2: TH 5 & Commercial Avenue

---

Movement	EB	NB	SB
Directions Served	LTR	ULTR	ULTR
Maximum Queue (ft)	56	113	150
Average Queue (ft)	19	22	23
95th Queue (ft)	50	77	93
Link Distance (ft)	868	264	226
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

### Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project



#### A. Roadway Description

Route	TH 5	District		County	Carver
Begin RP	80th Street	End RP	Kochia Lane	Miles	0.780
Location	Victoria, Minnesota				

#### B. Project Description

Proposed Work	Road widening, roundabout installation, signal installation				
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

0.89	Fatal (K) Crashes	Reference	CMF 2375		
0.89	Serious Injury (A) Crashes				
0.89	Moderate Injury (B) Crashes	Crash Type	All (curb/gutter+median)		
0.89	Possible Injury (C) Crashes				
0.89	Property Damage Only Crashes		<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>		

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

0.55	Fatal (K) Crashes	Reference	CMF 2981		
0.55	Serious Injury (A) Crashes				
0.55	Moderate Injury (B) Crashes	Crash Type	All (Access Management - Right-in/out)		
0.55	Possible Injury (C) Crashes				
0.55	Property Damage Only Crashes		<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>		

#### E. Crash Data

Begin Date	1/1/2020	End Date	12/31/2022	3 years
Data Source	MnCMAT2			
Crash Severity	All (curb/gutter+median)		All (Access Management - Right-in/out)	
K crashes	1		0	
A crashes	0		0	
B crashes	2		0	
C crashes	1		1	
PDO crashes	3		1	

#### F. Benefit-Cost Calculation

\$2,143,456	Benefit (present value)	<b>B/C Ratio = N/A</b>
\$0	Cost	

Proposed project expected to reduce 1 crashes annually, 1 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](http://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	0.11	0.04	\$58,667
A crashes	0.00	0.00	\$0
B crashes	0.22	0.07	\$18,333
C crashes	0.56	0.19	\$24,267
PDO crashes	0.78	0.26	\$3,900

**\$105,167**

### H. Amortized Benefit

Year	Crash Benefits	Present Value
2027	\$105,167	\$105,167
2028	\$106,218	\$105,375
2029	\$107,281	\$105,584
2030	\$108,353	\$105,794
2031	\$109,437	\$106,004
2032	\$110,531	\$106,214
2033	\$111,637	\$106,425
2034	\$112,753	\$106,636
2035	\$113,880	\$106,848
2036	\$115,019	\$107,060
2037	\$116,169	\$107,272
2038	\$117,331	\$107,485
2039	\$118,504	\$107,698
2040	\$119,689	\$107,912
2041	\$120,886	\$108,126
2042	\$122,095	\$108,340
2043	\$123,316	\$108,555
2044	\$124,549	\$108,771
2045	\$125,795	\$108,987
2046	\$127,053	\$109,203
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
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0

**Total = \$2,143,456**

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

**Traffic Safety Benefit-Cost Calculation**

Highway Safety Improvement Program (HSIP) Reactive Project

**A. Roadway Description**

Route	TH 5	District		County	Carver
Begin RP	80th Street	End RP	Kochia Lane	Miles	0.780
Location	Victoria, Minnesota				

**B. Project Description**

Proposed Work	Road widening, roundabout installation, signal installation				
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**

0.56	Fatal (K) Crashes	Reference	CMF 227, 228		
0.18	Serious Injury (A) Crashes				
0.18	Moderate Injury (B) Crashes	Crash Type	All (Roundabout)		
0.18	Possible Injury (C) Crashes				
0.56	Property Damage Only Crashes		<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>		

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

0.33	Fatal (K) Crashes	Reference	CMF 320		
0.33	Serious Injury (A) Crashes				
0.33	Moderate Injury (B) Crashes	Crash Type	All (Signal)		
0.33	Possible Injury (C) Crashes				
	Property Damage Only Crashes		<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>		

**E. Crash Data**

Begin Date	1/1/2020	End Date	12/31/2022	3 years
Data Source	MnCMAT2			
	Crash Severity	All (Roundabout)	All (Signal)	
	K crashes	0	1	
	A crashes	0	0	
	B crashes	1	0	
	C crashes	0	0	
	PDO crashes	2	0	

**F. Benefit-Cost Calculation**

\$8,765,409	Benefit (present value)	<b>B/C Ratio = N/A</b>
\$0	Cost	

Proposed project expected to reduce 1 crashes annually, 1 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](http://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	0.67	0.22	\$357,333
A crashes	0.00	0.00	\$0
B crashes	0.82	0.27	\$68,333
C crashes	0.00	0.00	\$0
PDO crashes	0.88	0.29	\$4,400

**\$430,067**

### H. Amortized Benefit

Year	Crash Benefits	Present Value
2027	\$430,067	\$430,067
2028	\$434,367	\$430,920
2029	\$438,711	\$431,775
2030	\$443,098	\$432,632
2031	\$447,529	\$433,490
2032	\$452,004	\$434,350
2033	\$456,524	\$435,212
2034	\$461,090	\$436,075
2035	\$465,701	\$436,941
2036	\$470,358	\$437,808
2037	\$475,061	\$438,676
2038	\$479,812	\$439,547
2039	\$484,610	\$440,419
2040	\$489,456	\$441,293
2041	\$494,351	\$442,168
2042	\$499,294	\$443,046
2043	\$504,287	\$443,925
2044	\$509,330	\$444,805
2045	\$514,423	\$445,688
2046	\$519,567	\$446,572
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
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0

**Total = \$8,765,409**

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

**Traffic Safety Benefit-Cost Calculation**

Highway Safety Improvement Program (HSIP) Reactive Project



A. Roadway Description					
Route	TH 5	District		County	Carver
Begin RP	80th Street	End RP	Kochia Lane	Miles	0.780
Location	Victoria, Minnesota				

B. Project Description			
Proposed Work	Road widening, roundabout installation, signal installation		
Project Cost*		Installation Year	
Project Service Life		Traffic Growth Factor	

\* exclude Right of Way from Project Cost

C. Crash Modification Factor	
Fatal (K) Crashes	Reference See previous BC worksheets
Serious Injury (A) Crashes	
Moderate Injury (B) Crashes	Crash Type
Possible Injury (C) Crashes	
Property Damage Only Crashes	<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>

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	<a href="http://www.CMFclearinghouse.org">www.CMFclearinghouse.org</a>

E. Crash Data			
Begin Date		End Date	o years
Data Source			
Crash Severity	< enter target crashes >	< optional 2nd CMF >	
K crashes			
A crashes			
B crashes			
C crashes			
PDO crashes			

F. Benefit-Cost Calculation		
\$10,908,865	Benefit (present value)	<b>B/C Ratio = N/A</b>
\$0	Cost	

Proposed project expected to reduce 0 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](http://mndot.gov/planning/program/appendix_a.html)

Real Discount Rate: 0.8% Default  
 Traffic Growth Rate: 0.0% Default  
 Project Service Life: 10 years Default

### 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	0.00	0.00	\$0
C crashes	0.00	0.00	\$0
PDO crashes	0.00	0.00	\$0

\$0

### H. Amortized Benefit

Year	Crash Benefits	Present Value	
0	\$0	\$0	<b>Total = \$0</b>
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	
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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	

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

## CMF / CRF Details

**CMF ID: 227**

**CMF Name: Convert intersection with minor-road stop control to modern round**

**Description:**

**Prior Condition: No Prior Condition(s)**

**Category: Intersection geometry**

**Study ID:** [NCHRP Report 572: Applying Roundabouts in the United States, Rodegerdts et al. 2007](#)

Star Quality Rating	
Star Quality Rating:	4 Stars

Crash Modification Factor (CMF)	
Value:	0.56
Adjusted Standard Error:	0.05
Unadjusted Standard Error:	0.04

Crash Reduction Factor	
Value:	44
Adjusted Standard Error:	5
Unadjusted Standard Error:	4

Applicability	
<b>Crash Type:</b>	All
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Not Specified
<b>Minimum Number of Lanes:</b>	1
<b>Maximum Number of Lanes:</b>	2
<b>Number of Lanes Direction:</b>	
<b>Number of Lanes Comment:</b>	
<b>Road Division Type:</b>	
<b>Minimum Speed Limit:</b>	
<b>Maximum Speed Limit:</b>	
<b>Speed Unit:</b>	
<b>Speed Limit Comment:</b>	
<b>Area Type:</b>	All
<b>Traffic Volume:</b>	
<b>Average Traffic Volume:</b>	
<b>Time of Day:</b>	
<i>If countermeasure is intersection-based.</i>	
<b>Intersection Type:</b>	Roadway/roadway (not interchange related)
<b>Intersection Geometry:</b>	4-leg
<b>Traffic Control:</b>	Stop-controlled
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

<b>Average Major Road Volume:</b>	
<b>Average Minor Road Volume:</b>	

<b>Development Details</b>	
<b>Date Range of Data Used:</b>	
<b>Municipality:</b>	
<b>State:</b>	
<b>Country:</b>	
<b>Type of Methodology Used:</b>	Before/after using empirical Bayes or full Bayes

<b>Other Details</b>	
<b>Included in HSM:</b>	Yes. HSM lists this CMF in <b>font</b> to indicate that it has the highest
<b>Date Added to Clearinghouse:</b>	Dec 01, 2009
<b>Comments:</b>	Countermeasure name changed from

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## CMF / CRF Details

**CMF ID: 228**

**CMF Name: Convert intersection with minor-road stop control to modern round**

**Description:**

**Prior Condition: No Prior Condition(s)**

**Category: Intersection geometry**

**Study ID:** [NCHRP Report 572: Applying Roundabouts in the United States, Rodegerdts et al. 2007](#)

### Star Quality Rating

Star Quality Rating:	4 Stars
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### Crash Modification Factor (CMF)

Value:	0.18
Adjusted Standard Error:	0.04
Unadjusted Standard Error:	0.03

### Crash Reduction Factor

Value:	82
Adjusted Standard Error:	4
Unadjusted Standard Error:	3

Applicability	
<b>Crash Type:</b>	All
<b>Crash Severity:</b>	A (serious injury),B (minor injury),C (possible injury)
<b>Roadway Types:</b>	Not Specified
<b>Minimum Number of Lanes:</b>	1
<b>Maximum Number of Lanes:</b>	2
<b>Number of Lanes Direction:</b>	
<b>Number of Lanes Comment:</b>	
<b>Road Division Type:</b>	
<b>Minimum Speed Limit:</b>	
<b>Maximum Speed Limit:</b>	
<b>Speed Unit:</b>	
<b>Speed Limit Comment:</b>	
<b>Area Type:</b>	All
<b>Traffic Volume:</b>	
<b>Average Traffic Volume:</b>	
<b>Time of Day:</b>	
<i>If countermeasure is intersection-based.</i>	
<b>Intersection Type:</b>	Roadway/roadway (not interchange related)
<b>Intersection Geometry:</b>	4-leg
<b>Traffic Control:</b>	Stop-controlled
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	



<b>Average Major Road Volume:</b>	
<b>Average Minor Road Volume:</b>	

<b>Development Details</b>	
<b>Date Range of Data Used:</b>	
<b>Municipality:</b>	
<b>State:</b>	
<b>Country:</b>	
<b>Type of Methodology Used:</b>	Before/after using empirical Bayes or full Bayes

<b>Other Details</b>	
<b>Included in HSM:</b>	Yes. HSM lists this CMF in <b>font</b> to indicate that it has the highest
<b>Date Added to Clearinghouse:</b>	Dec 01, 2009
<b>Comments:</b>	Countermeasure name changed from

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## CMF / CRF Details

**CMF ID:** 320

**CMF Name:** Install a traffic signal

**Description:**

**Prior Condition:** No Prior Condition(s)

**Category:** Intersection traffic control

**Study ID:** [NCHRP Report 491: Crash Experience Warrant for Traffic Signals, McGee et al. 2003](#)

Star Quality Rating	
Star Quality Rating:	5 Stars

Crash Modification Factor (CMF)	
Value:	0.33
Adjusted Standard Error:	0.24
Unadjusted Standard Error:	0.2

Crash Reduction Factor	
Value:	67
Adjusted Standard Error:	24
Unadjusted Standard Error:	20

Applicability	
<b>Crash Type:</b>	Angle
<b>Crash Severity:</b>	K (fatal),A (serious injury),B (minor injury),C (possible injury)
<b>Roadway Types:</b>	Not specified
<b>Minimum Number of Lanes:</b>	
<b>Maximum Number of Lanes:</b>	
<b>Number of Lanes Direction:</b>	
<b>Number of Lanes Comment:</b>	
<b>Road Division Type:</b>	
<b>Minimum Speed Limit:</b>	
<b>Maximum Speed Limit:</b>	
<b>Speed Unit:</b>	
<b>Speed Limit Comment:</b>	
<b>Area Type:</b>	Urban
<b>Traffic Volume:</b>	
<b>Average Traffic Volume:</b>	
<b>Time of Day:</b>	
<i>If countermeasure is intersection-based.</i>	
<b>Intersection Type:</b>	Roadway/roadway (not interchange related)
<b>Intersection Geometry:</b>	4-leg
<b>Traffic Control:</b>	Stop-controlled
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

<b>Average Major Road Volume:</b>	
<b>Average Minor Road Volume:</b>	

<b>Development Details</b>	
<b>Date Range of Data Used:</b>	
<b>Municipality:</b>	
<b>State:</b>	
<b>Country:</b>	
<b>Type of Methodology Used:</b>	Before/after using empirical Bayes or full Bayes

<b>Other Details</b>	
<b>Included in HSM:</b>	No
<b>Date Added to Clearinghouse:</b>	Dec 01, 2009
<b>Comments:</b>	Countermeasure name has been slightly modified for consistency across Clearinghouse

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# CMF / CRF Details

**CMF ID: 2375**

**CMF Name: Install curb and gutter**

**Description: Install AASHTO Type B curb along the outside (right) shoulder of f**

**Prior Condition: Suburban four-lane facilities without curb on the outside (right**

**Category: Shoulder treatments**

**Study ID:** [Collision Models for Multilane Highway Segments to Examine the Safety of Curbs, Baek and Hummer 2008](#)

Star Quality Rating	
Star Quality Rating:	4 Stars

Crash Modification Factor (CMF)	
Value:	0.89
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor	
Value:	11
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability	
<b>Crash Type:</b>	All
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Not Specified
<b>Minimum Number of Lanes:</b>	4
<b>Maximum Number of Lanes:</b>	4
<b>Number of Lanes Direction:</b>	
<b>Number of Lanes Comment:</b>	
<b>Road Division Type:</b>	Divided by Median
<b>Minimum Speed Limit:</b>	45
<b>Maximum Speed Limit:</b>	55
<b>Speed Unit:</b>	mph
<b>Speed Limit Comment:</b>	
<b>Area Type:</b>	Suburban
<b>Traffic Volume:</b>	Minimum of 8333 to Maximum of 57138
<b>Average Traffic Volume:</b>	
<b>Time of Day:</b>	All
<i>If countermeasure is intersection-based.</i>	
<b>Intersection Type:</b>	
<b>Intersection Geometry:</b>	
<b>Traffic Control:</b>	
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

<b>Average Major Road Volume:</b>	
<b>Average Minor Road Volume:</b>	

<b>Development Details</b>	
<b>Date Range of Data Used:</b>	2001 to 2003
<b>Municipality:</b>	
<b>State:</b>	NC
<b>Country:</b>	
<b>Type of Methodology Used:</b>	Regression cross-section
<b>Sample Size (crashes):</b>	2274 crashes

<b>Other Details</b>	
<b>Included in HSM:</b>	No
<b>Date Added to Clearinghouse:</b>	Jan 01, 1970
<b>Comments:</b>	

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# CMF / CRF Details

**CMF ID: 9821**

**CMF Name: Install right-in-right-out (RIRO) operations at stop-controlled intersections**

**Description:**

**Prior Condition: No Prior Condition(s)**

**Category: Access management**

**Study ID:** [Safety Effects of Turning Movement Restrictions at Stop-Controlled Intersections, Le et al. 2018](#)

Star Quality Rating	
Star Quality Rating:	4 Stars

Crash Modification Factor (CMF)	
Value:	0.55
Adjusted Standard Error:	
Unadjusted Standard Error:	0.09

Crash Reduction Factor	
Value:	45
Adjusted Standard Error:	
Unadjusted Standard Error:	9



Applicability	
<b>Crash Type:</b>	All
<b>Crash Severity:</b>	All
<b>Roadway Types:</b>	Not specified
<b>Minimum Number of Lanes:</b>	4
<b>Maximum Number of Lanes:</b>	6
<b>Number of Lanes Direction:</b>	
<b>Number of Lanes Comment:</b>	4 and 6 Lanes
<b>Road Division Type:</b>	Divided by Median
<b>Minimum Speed Limit:</b>	
<b>Maximum Speed Limit:</b>	
<b>Speed Unit:</b>	
<b>Speed Limit Comment:</b>	
<b>Area Type:</b>	Urban
<b>Traffic Volume:</b>	
<b>Average Traffic Volume:</b>	
<b>Time of Day:</b>	All
<i>If countermeasure is intersection-based.</i>	
<b>Intersection Type:</b>	Roadway/roadway (not interchange related)
<b>Intersection Geometry:</b>	3-leg
<b>Traffic Control:</b>	Stop-controlled
<b>Major Road Traffic Volume:</b>	Minimum of 13433 to Maximum of 75000 Annual Average Daily Traffic (AADT)
<b>Minor Road Traffic Volume:</b>	Minimum of 51 to Maximum of 2600 Annual Average Daily Traffic (AADT)

<b>Average Major Road Volume:</b>	38724 Annual Average Daily Traffic (AADT)
<b>Average Minor Road Volume:</b>	519 Annual Average Daily Traffic (AADT)

<b>Development Details</b>	
<b>Date Range of Data Used:</b>	
<b>Municipality:</b>	
<b>State:</b>	CA
<b>Country:</b>	USA
<b>Type of Methodology Used:</b>	Regression cross-section
<b>Sample Size (crashes):</b>	483 crashes
<b>Sample Size (sites):</b>	138 sites

<b>Other Details</b>	
<b>Included in HSM:</b>	No
<b>Date Added to Clearinghouse:</b>	Oct 27, 2018
<b>Comments:</b>	This CMF compares urban, three-legged, stop-controlled intersections with RIRO operation to full movement. This CMF looks at Total crashes. Total crashes are defined as all crashes within 100 ft of intersection (all types and severities combined)

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# LAYOUT LEGEND

- PAVEMENT
- CONCRETE
- TRAIL
- LANDSCAPING
- TH 5 EXPANSION (NOT INCLUDED IN PROJECT)
- ALTERNATIVE PEDESTRIAN CROSSING (NOT INCLUDED IN PROJECT)
- PARCEL LINES



ALTERNATIVE PEDESTRIAN CROSSING IS FULLY FUNDED AND NOT INCLUDED WITH THIS PROJECT



Commercial Ave to Kochia Ln  
Victoria, MN  
December 2022

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](mailto: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

# CITY OF VICTORIA

Victoria, MN  Est. 1915

December 4, 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 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 Mr. Robjent:

I write to you today to express my support for the pursuit of funding 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.

The proposed Highway 5 improvement projects 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 Victoria recognizes and understands the value of the proposed improvements on Highway 5. 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 Victoria supports Carver County's Community Project Funding request for Highway 5 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,

*David Shoger*

Dave Shoger, Public Works Director

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**

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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](mailto: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'

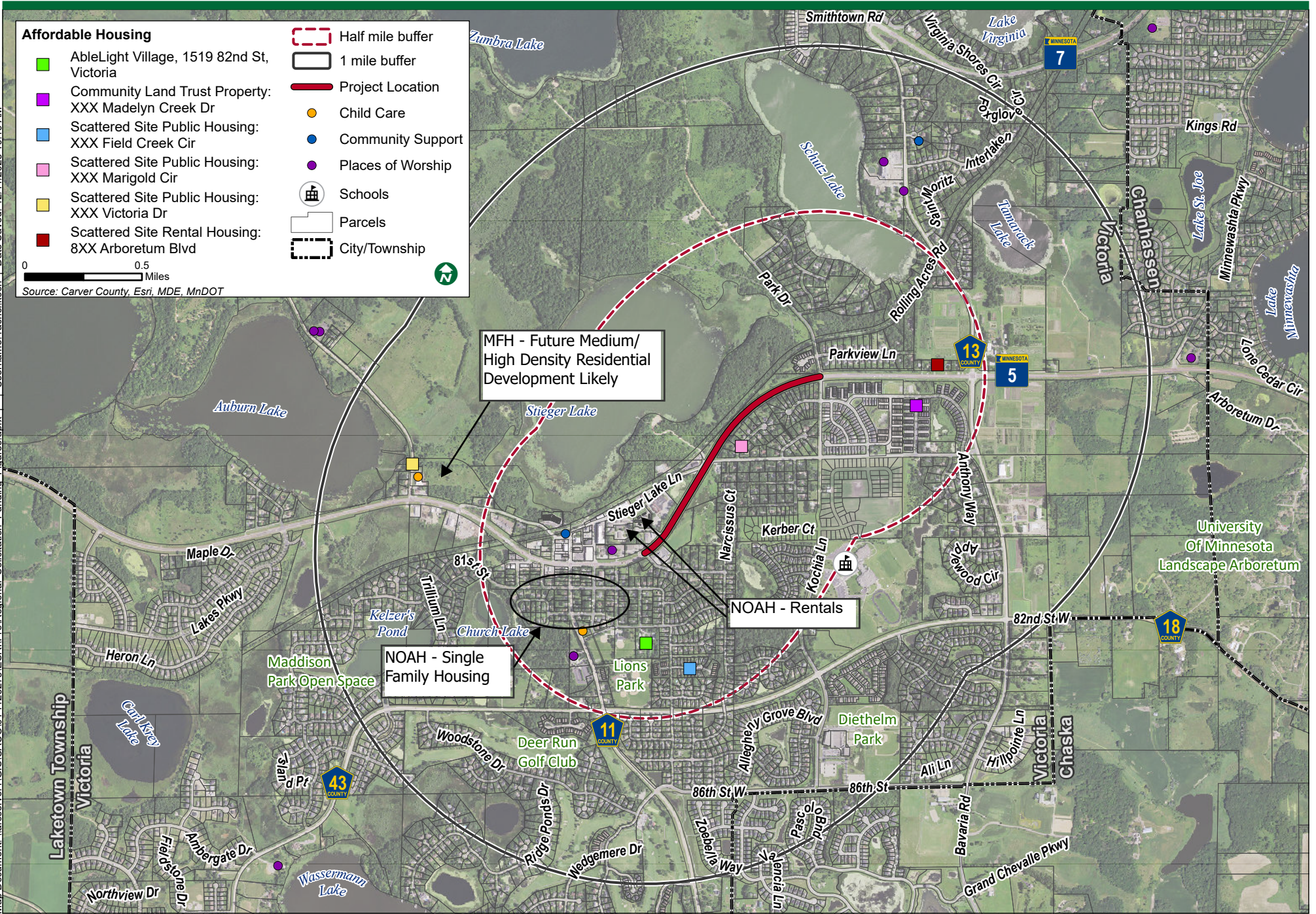
Sheila Kauppi, PE  
Metro District Engineer

CC:

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



Map Document: \\arcserver1\GIS\CACAO\OT4\26275\ESRI\Pro\Regional\_Solicitation\_Funding\_Figures.aprx | | User: rachel.koch | Date Saved: 12/11/2023 10:19 AM





**Carver  
County  
Parks**

11360 Highway 212 West, Suite 2  
Cologne, MN 55322

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 VICTORIA

Victoria, MN  Est. 1915

December 4, 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 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 Mr. Robjent:

I write to you today to express my support for the pursuit of funding 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.

The proposed Highway 5 improvement projects 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 Victoria recognizes and understands the value of the proposed improvements on Highway 5. 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 Victoria supports Carver County's Community Project Funding request for Highway 5 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,

*David Shoger*

Dave Shoger, Public Works Director

# CITY OF VICTORIA

Victoria, MN



Est. 1915

December 4, 2023

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

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The City of Victoria supports Carver County's Community Project Funding request for Highway 5 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,

Deb McMillan, Mayor



# Victoria Hwy 5 Mobility & Safety Project

## Carver County, Minnesota

**Project Name:** Hwy 5 Mobility & Safety Project

**Applicant:** Carver County, MN

**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](mailto:lrobjent@co.carver.mn.us)



**Location & Route:**

Hwy 5 between 80<sup>th</sup> Street and Kochia Lane/Park Drive in Victoria, MN



**Application Category:**

Strategic Capacity (Roadway Expansion)



**Funding Information:**

**Requested Award Amount:** \$10,000,000

**Local Match:** \$9,158,200

**Project Total:** \$19,158,200



**Additional Funding Sources (including soft costs):**

- Carver County – \$7,458,200
- City of Victoria - \$200,000
- MnDOT - \$1,500,000



**Hwy 5 Corridor Fast Facts:**

- A-Minor Arterial
- 15,200 AADT (current)
- 26,100 AADT (2045)
- 150 HCAADT (current)
- 300 HCAADT (2045)
- Two-mile backups during peak travel times (corridor wide)
- 387 crashes (one fatal) in 10-year span (corridor wide)



**Project Description**

The proposed project will alleviate safety and congestion issues on the Hwy 5 corridor between 80<sup>th</sup> Street and Kochia Lane/Park Drive by expanding roadway capacity. The project will carry the momentum of an already funded project that will expand Hwy 5 from Hwy 41 to Park Drive/Kochia Lane. This Regional Solicitation funding award would allow for the Hwy 5 expansion to extend west to downtown Victoria.

Improvements include:

- Expanding Hwy 5 from two lanes to four lanes—two in each direction—between Commercial Avenue and Kochia Lane/Park Drive
- Constructing a roundabout with multimodal elements to replace the existing, insufficient intersection at Hwy 5 and Commercial Avenue
- Adding a concrete median between eastbound and westbound Hwy 5 from 80<sup>th</sup> Street to Kochia Lane/Park Drive
- Adding vehicular access restrictions on Hwy 5 at Stieger Lake Lane and 78th Street
- Hwy 5 corridor and intersection lighting



**Project Benefits/Regional Significance**

This project aims to address safety risks and mobility issues on and along Hwy 5, an arterial corridor connecting rapidly growing neighborhoods to regional job centers and destinations. Once completed, the expanded highway and improvements listed above will enhance operations along this stretch of Hwy 5, improving the movement of people and goods through the corridor and regional system. If improvements are not made, safety and mobility issues will worsen as population growth drives greater traffic volume. Carver County is Minnesota’s fastest growing county. Between 2010 and 2020 the county’s population grew by 19% from 91,042 to 108,520 and anticipated to grow 49% by 2040.

**Project Development and Status**

This project is currently in preliminary design along with other Hwy 5 improvements planned between Hwy 41 in Chanhassen and downtown Victoria.



Contact: [lrobjent@co.carver.mn.us](mailto:lrobjent@co.carver.mn.us)

# LAYOUT LEGEND

- PAVEMENT
- CONCRETE
- TRAIL
- LANDSCAPING
- TH 5 EXPANSION (NOT INCLUDED IN PROJECT)
- ALTERNATIVE PEDESTRIAN CROSSING (NOT INCLUDED IN PROJECT)
- PARCEL LINES



ALTERNATIVE PEDESTRIAN CROSSING IS FULLY FUNDED AND NOT INCLUDED WITH THIS PROJECT



Commercial Ave to Kochia Ln  
Victoria, MN  
December 2022

TH 5 at Kochia Lane/Park Dr Existing Conditions – looking west



Kochia Lane/Park Dr at TH 5 Existing Conditions – looking north





TH 5 at 78<sup>th</sup> Street Existing Conditions – looking southwest



TH 5 at 78<sup>th</sup> Street Existing Conditions – looking west

