



Application

17070 - 2022 Roadway System Management

17609 - 2026 Signal Equipment Replacement and Signal Optimization

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted  
Submitted Date: 04/14/2022 9:09 AM

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## Primary Contact

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Pronouns First Name Middle Name Last Name

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**Department:** MnDOT Metro Traffic

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**\*** Roseville Minnesota 55113  
City State/Province Postal Code/Zip

**Phone:\*** 651-234-7819  
Phone Ext.

**Fax:**

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

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## Organization Information

**Name:** STATE OF MN

**Jurisdictional Agency (if different):**

**Organization Type:**

State Government

**Organization Website:**

**Address:**

MN DOT

MS725

1500 W COUNTY RD B2 #250

\*

ROSEVILLE

Minnesota

55113

City

State/Province

Postal Code/Zip

**County:**

Ramsey

**Phone:\***

651-366-3452

Ext.

**Fax:**

**PeopleSoft Vendor Number**

0000024577A36

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## Project Information

**Project Name**

2026 Cabinet and Controller Upgrade with Signal Optimization

**Primary County where the Project is Located**

Multiple

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

Metrowide Project - with Signal Optimization of TH 65 (7.1 miles)

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

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

This project will sustainably upgrade the current TS1 Cabinets and Non-Ethernet compatible Controllers throughout the MnDOT Metro District. These technological expansion upgrades will allow MnDOT to become CAV (Connected and Automated Vehicle) ready for future deployments of that emerging technology. The technological expansion upgrades will also allow MnDOT to seamlessly connect the remaining infrastructure to their Automated Traffic Management System (Kinetics) program allowing the Metro District to use High Resolution Data to better manage the Arterial Corridors. These signal systems technological expansion upgrades are located throughout the Metro District.

In addition, this project will utilize the current MnDOT ATMS (Kinetics) to do signal optimization along the TH 65 corridor from the city of Columbia Heights to Blaine. This optimization will be done in concert with Met Transit to obtain the best TSP (Transit Signal Priority) available for the corridor.

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

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

Metrowide deployment of Signal Cabinet and Controllers w/Optimization

*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)** 7.1

*to the nearest one-tenth of a mile*

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## Project Funding

**Are you applying for competitive funds from another source(s) to implement this project?** No

**If yes, please identify the source(s)**

**Federal Amount** \$2,400,000.00

**Match Amount** \$600,000.00

*Minimum of 20% of project total*

**Project Total** \$3,000,000.00

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

**Match Percentage** 20.0%

Minimum of 20%

Compute the match percentage by dividing the match amount by the project total

**Source of Match Funds** State

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:** 2026

Select 2024 or 2025 for TDM and Unique projects only. For all other applications, select 2026 or 2027.

### Additional Program Years:

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

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## Project Information: Roadway Projects

**County, City, or Lead Agency**

MnDOT

Varies - This project will replace outdated signal cabinets and equipment at numerous locations throughout the Metro District along the TH system which include a variety of functional classes of roadways.

**Functional Class of Road**

TH 65 will be provided a signal optimization project working in concert with Met Transit. Currently Met Transit has TSP along the southern portion of TH 65.

**Road System**

TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET

**Road/Route No.**

999

i.e., 53 for CSAH 53

Varies - List may include signals along any of the Metro District roadways.

**Name of Road**

Example; 1st ST., MAIN AVE

**Zip Code where Majority of Work is Being Performed**

55113

**(Approximate) Begin Construction Date**

03/02/2026

**(Approximate) End Construction Date**

11/20/2026

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

**From:**

**(Intersection or Address)**

40th in Columbia Height

**To:**

**(Intersection or Address)**

TH 10 in Blaine

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Miles of Sidewalk (nearest 0.1 miles)	0
Miles of Trail (nearest 0.1 miles)	0
Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles)	0
Primary Types of Work	Signals

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER, STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

### BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

Structure is Over/Under  
(Bridge or culvert name):

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## 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.

## Safety and Security

Goal #1 - To provide a more reliable transportation system by preserving and maintaining the roadway system through the replacement of obsolete roadside infrastructure.

Objectives: - Efficiently preserve and maintain the regional transportation system and operate the regional transportation system to efficiently and cost-effectively move people and freight.

Strategies: - Regional transportation partners will place the highest priority for transportation investments on strategically preserving, maintaining, and operating the transportation system.

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

## Access to Destinations

Goal #2 - Ensuring that the roadside infrastructure is compatible with other technologies like TSP (Transit Signal Priority) or emerging CAVx ethernet communications.

Objectives: Increase the availability of multimodal travel options, increase travel time reliability, and improve the availability of and quality of multimodal options.

Strategies: Regional transportation partners will continue to work together to plan and implement transportation systems that are multimodal and provide connections between modes.

Goal #3 - To provide a reliable roadside infrastructure for pedestrians and bikes to provide access across arterial roadways.

Strategies: Local units of government should provide a network of interconnected roadways, bicycle facilities, and pedestrian facilities to meet local travel needs using Complete Streets principles.

Goal #4 - To provide equipment capable of being remotely controlled by the ATMS (Advanced Traffic Management System) which can be used to provide real-time signal timing changes as needed for all users.

Strategies: The Metropolitan Council will work with MnDOT and local governments to implement transit advantages that support fast, reliable alternatives.

*Limit 2,800 characters, approximately 400 words*

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

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

Replacement of roadside infrastructure falls under several MnDOT plans. Including the TAMP (Transportation Asset Management Plan) and the Capital Improvement Program.

*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 2022 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 the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

**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:**

**Link to plan:**

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

**Date self-evaluation completed:**

**Link to plan:**

**Upload plan or self-evaluation if there is no link**

*Upload as PDF*

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

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

11. The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. 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 and bridge 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.

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

### 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.

### 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 bridge clear span must exceed 20 feet.

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

6. The bridge must have a National Bridge Inventory Rating of 6 or less for rehabilitation projects and 4 or less for replacement projects.

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 Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) 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.

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## Requirements - Roadways Including Multimodal Elements

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### Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST  
ESTIMATES

Cost

Mobilization (approx. 5% of total cost)	\$200,000.00
Removals (approx. 5% of total cost)	\$0.00
Roadway (grading, borrow, etc.)	\$0.00
Roadway (aggregates and paving)	\$0.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$0.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$0.00
Traffic Control	\$200,000.00
Striping	\$0.00
Signing	\$0.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$0.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall (not calculated in cost effectiveness measure)	\$0.00
Traffic Signals	\$2,600,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$0.00
<b>Totals</b>	<b>\$3,000,000.00</b>

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## Specific Bicycle and Pedestrian Elements

<b>CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES</b>	<b>Cost</b>
Path/Trail Construction	\$0.00
Sidewalk Construction	\$0.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$0.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$0.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$0.00

Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$0.00
Other Bicycle and Pedestrian Elements	\$0.00
<b>Totals</b>	<b>\$0.00</b>

## Specific Transit and TDM Elements

<b>CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES</b>	<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
<b>Totals</b>	<b>\$0.00</b>

## 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

## Totals

Total Cost	\$3,000,000.00
Construction Cost Total	\$3,000,000.00
Transit Operating Cost Total	\$0.00

## Measure A: Functional Classification of Project

The majority of the project funds will be invested on the principal arterial system: Yes

(50 points)

The majority of the project funds will be invested on the A-minor arterial system:

(25 points)

The majority of the project funds will be invested on the collector or local system with some investment either on the principal arterial or A-minor arterial system:

(0 points)

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## Measure 1B: Regional Truck Corridor Tiers

RESPONSE (Select one for your project, based on the updated 2021 Regional Truck Corridors):

The majority of the project funds will be invested on either a Tier 1, Tier 2, or Tier 3 corridor: Yes

(50 Points)

Miles (to the nearest 0.1 miles): 10.0

If box above is checked, fill in length.

A majority of the project funds will NOT be invested on a Tier 1, Tier 2, or Tier 3 corridor, but at least 10 percent of the funds will be invested on these corridors:

(25 Points)

Miles (to the nearest 0.1 miles): 0

If box above is checked, fill in length.

No project funds will be invested on a Tier 1, Tier 2, or Tier 3 corridor:

(0 Points)

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## Measure C: Integration within existing traffic management systems

Response:

The upgrade of the signal cabinet and equipment will be integrated into the current ATMS (Kinetics) being used by MnDOT.

(Limit 2,800 characters; approximately 400 words)

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## Measure D: Coordination with other agencies

**Response:**

Depending on which signal cabinets are replaced, the local coordination will be enhanced as MnDOT will take over operational control of the signals and the locals will be providing the coordination timing for their corridors. An example would be TH 62 @ Penn Avenue which are currently operated by Hennepin County. When MnDOT takes over the signal operations at these signals - Hennepin County will set the coordination parameter for their corridor. This is called shared coordination and MnDOT/Locals are currently in the process of developing this plan throughout the Metro District.

The management of the system will be done by both parties (MnDOT and Local). In the example above both MnDOT and Hennepin County have the same ATMS (Kinetics) and can simultaneously coordinate signal timing. In the future Kinetics will have the ability to do center to center signal optimization which allows either agency to make changes to the signal systems.

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

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## Measure A: Current Daily Person Throughput

<b>Location</b>	TH 65 @ MEDTRONIC/OLD CENTRAL- (Signal ID#1735531)
<b>Current AADT Volume</b>	37000.0
<b>Existing transit routes at the location noted above</b>	10, 11, 25, 801, Other
<i>Select all transit routes that apply.</i>	
<b>Upload "Transit Connections" map</b>	1648489992541_2026 Transit Map.pdf
<i>Please upload attachment in PDF form.</i>	

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## Response - Daily Person Throughput

<b>Average Annual Daily Transit Ridership</b>	0
<b>Current Daily Person Throughput</b>	48100.0

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## Measure B: 2040 Forecast ADT

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

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

Forecast (2040) ADT volume

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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:*

**Response:**

There was no engagement for this solicitation as it mainly concerns infrastructure upgrades. Upon the signal optimization portion of the project, MnDOT contacts all of the local agencies and alerts them to the signal optimization efforts. During these engagements, MnDOT explains the benefits of the signal optimization project and what to expect with the new signal timings.

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

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## Measure B: Equity Population Benefits and Impacts

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

*This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations 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.*

**Response:**

The signal optimization project will impact all pedestrians, vehicles, buses, and any other mode of transportation along TH 65. In addition, the replacement of the obsolete signal equipment will provide more reliable service to all modes of transportation and provide benefits to anyone utilizing the signal systems.

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

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## Measure C: Affordable Housing Access

*Describe any affordable housing development 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:*

*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:**

There are existing affordable housing units along the TH 65 corridor and with the expanded TSP timings this will benefit all of the different modes of transportation.

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

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## Measure D: BONUS POINTS

**Project is located in an Area of Concentrated Poverty:** Yes

**Projects 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):**

**Upload the Socio-Economic Conditions map used for this measure.** 1648490855459\_2026 Social Map.pdf

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## Measure A: Upgrades to obsolete equipment

As mentioned in the project description:

This project will sustainably upgrade the current TS1 Cabinets and Non-Ethernet compatible Controllers throughout the MnDOT Metro District. These technological expansion upgrades will allow MnDOT to become CAV (Connected and Automated Vehicle) ready for future deployments of that emerging technology. The technological expansion upgrades will also allow MnDOT to seamlessly connect the remaining infrastructure to their Automated Traffic Management System (Kinetics) program allowing the Metro District to use High Resolution Data to better manage the Arterial Corridors. These signal systems technological expansion upgrades are located throughout the Metro District.

**RESPONSE:**

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

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## Measure A: Congested Roadway

*RESPONSE:*

<b>Corridor:</b>	TH 65 - Note numbers based on TH 65 @ Central
<b>Corridor Start and End Points:</b>	
<b>Start Point:</b>	40th Street in Columbia Heights
<b>End Point:</b>	TH 10 in Blaine
<b>Free-Flow Travel Speed:</b>	55
<i>Free-Flow Travel Speed is black number.</i>	
<b>Peak Hour Travel Speed:</b>	42.0
<i>Peak Hour Travel Speed is red number.</i>	
<b>Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (online calculation):</b>	23.64%
<b>Upload the "Level of Congestion" map used for this measure.</b>	1648491195058_2026 Level of Congestion Map.pdf

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## Measure 5B: Emissions and congestion benefits of project



**Response:**

The signal optimization portion of this project will reduce delay, CO, NOX, and VOC along the TH 65 corridor. Attached (see the attachments) is the Synchro Modeling with before and after conditions at TH 65 and Medtronic/Central Ave. In addition, we provided a summary of the benefits of the signal optimization portion of the project for emissions and delay. They include reductions in CO (18.83 kg), NOx (2.09 kg), and VOC (0.86 kg). The reduction in delay equaled 139 seconds per vehicle and overall delay reduction of 207 hours.

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

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## **Measure A: Benefit of Crash Reduction**

**Crash Modification Factor Used:**

0.92

*(Limit 700 Characters; approximately 100 words)*

Based on CMF information found in the "Changes in Crash Risk Following Re-Timing of Traffic Signal Change Intervals". This corresponds to a CRF of (8%) - [Which is a decrease] for the retiming effort. Includes "ALL" crash types and "ALL" crash severity as stated in the CMF clearinghouse. In addition, it can't easily be attained through CMF, but the replacement of obsolete signal equipment will help alleviate any unnecessary down time at the signal systems. This will reduce crashed due to unexpected traffic control on our corridors.

**Rationale for Crash Modification Selected:**

Note: A majority of this project is an infrastructure upgrade which doesn't have a known CMF from the clearing house. In lieu of that, the B/C of just the signal optimization portion of this project would be  $\$1,078,718/\$57,000 = 18.9$  - however, that would only hold true if all the intersections contained the same number of severity. So I will provide the B/C provided by our traffic safety office as 0.36.

Note: Total Fatal (K) Crashes Reduced = 0.45 not 1 - but application needed a "Whole Number". Same for Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project. The total crashes reduced was 5.7.

*(Limit 1400 Characters; approximately 200 words)*

<b>Project Benefit (\$) from B/C Ratio</b>	\$1,078,718.00
<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>	1
<b>Total Crashes:</b>	14
<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>	1
<b>Total Crashes Reduced by Project:</b>	6

## Measure 6B: Safety issues in project area

**Response:**

This project addresses replacement of obsolete signal equipment that has since been replaced by newer technology. In fact, this project will bring some of the signal equipment up to our current standards thereby reducing the chances of the signal to go into an all red flash mode. The all red flash mode constitutes an all way stop which increases the likely hood of crashes due to unexpected traffic control. This new equipment will also alert the Signal Operations Central System that there is a problem in the field with the traffic control signal system and MnDOT can dispatch maintenance crews more timely. The addition of new controllers helps utilize the MMU more efficiently and allows MnDOT to detect other issues that may cause disruption to the traveling public including pedestrian pushbutton issues, vehicle detection issues, and pre-emption issues.

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

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## Measure A: Multimodal Elements and Existing Connections

**Response:**

As mentioned in the safety section, the addition of new signal equipment helps identify issues with the infrastructure. One of the most important is making sure that APS (Accessible pedestrian signals) are working optimally. The new equipment can be utilized to find if the APS units are placing calls or are constant calling which causes the entire corridor to slow down reducing through put.

*(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** Yes

---

## 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.**

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.** Yes

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:**

Since this project is replacing existing cabinets there was no outreach to the local communities involved. Before we do the signal optimization portion of this project, we reach out to our local partners to let them know we are changing (or may change) signal timing along the corridor (TH 65).

(Limit 2,800 characters; approximately 400 words)

### 2. Layout (25 Percent of Points)

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

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

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

Yes

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

*Please upload attachment in PDF form.*

#### Additional Attachments

*Please upload attachment in PDF form.*

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

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

Yes

100%

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

100%

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

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

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

0%

Project is located on an identified historic bridge

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

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

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

25%

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

0%

#### 5.Railroad Involvement (15 Percent of Points)

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

100%

##### Signature Page

Please upload attachment in PDF form.

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

50%

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

0%

---

### Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form): \$3,000,000.00

Enter Amount of the Noise Walls: \$0.00

Total Project Cost subtract the amount of the noise walls: \$3,000,000.00

Enter amount of any outside, competitive funding: \$0.00

Attach documentation of award:

Points Awarded in Previous Criteria

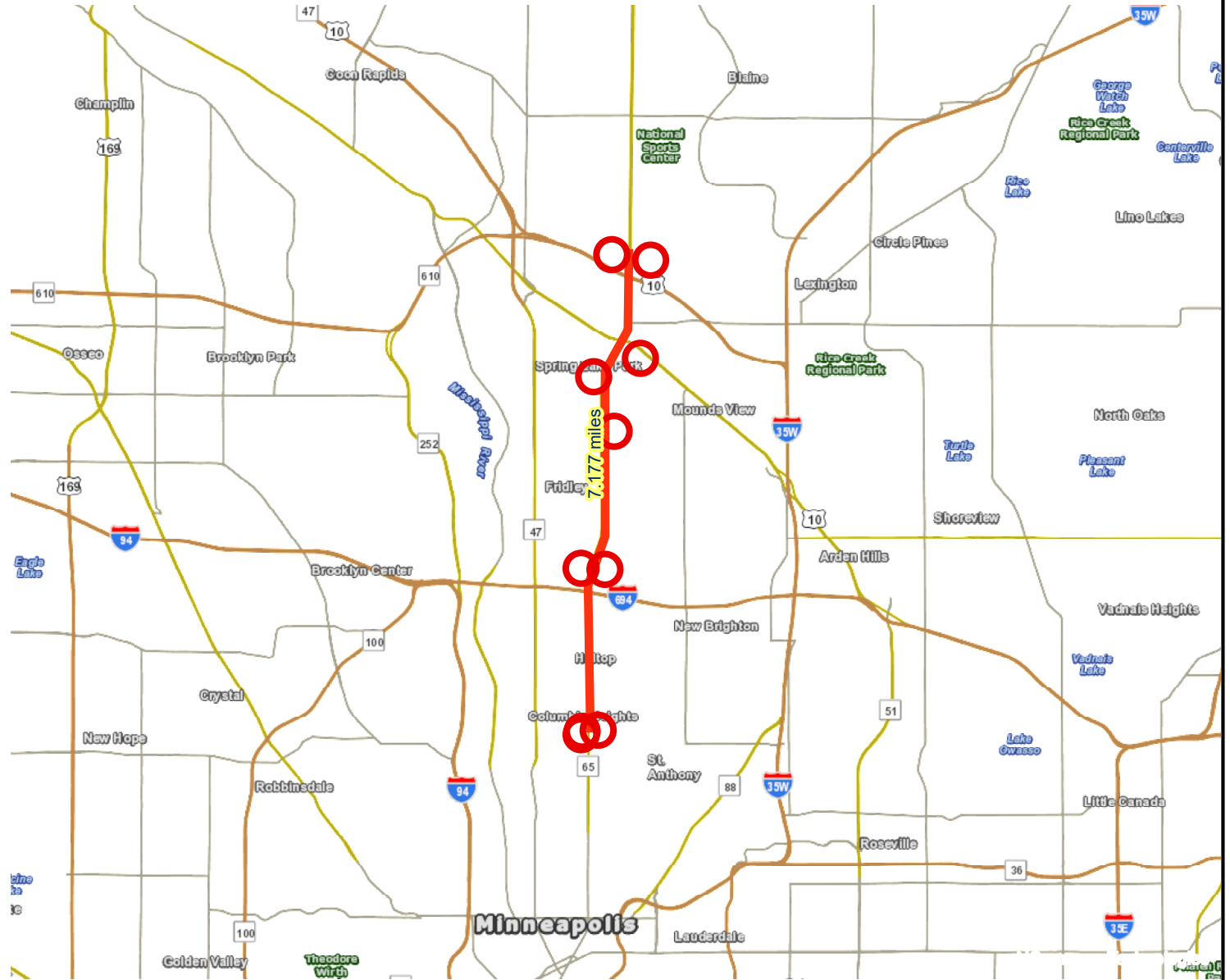
Cost Effectiveness \$0.00

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## Other Attachments

File Name	Description	File Size
Summary MOE - CMAQ.pdf	Summary of delay, CO, NOx, and VOC.	103 KB
TH 65_Pattern 7 PM PEAK After 210 sec - 04-07-2022.pdf	Synchro Before Condition	51 KB
TH 65_Pattern 7 PM PEAK After 210 sec - 04-07-2022.pdf	Synchro After Condition	51 KB

# Transit Connections



## Results

Transit with a Direct Connection to project:

10 11 25 801

\*F Line

*\*indicates Planned Alignments*

Transit Market areas: 2, 3

-  Project Points
-  Project
-  Project Area



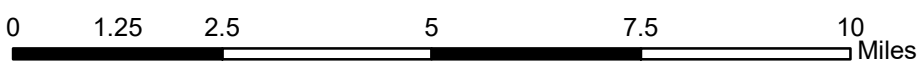
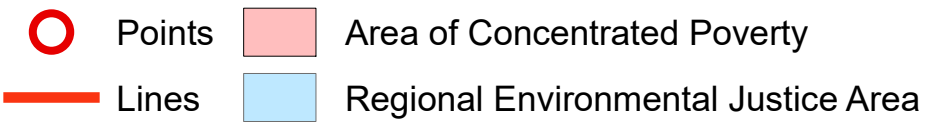
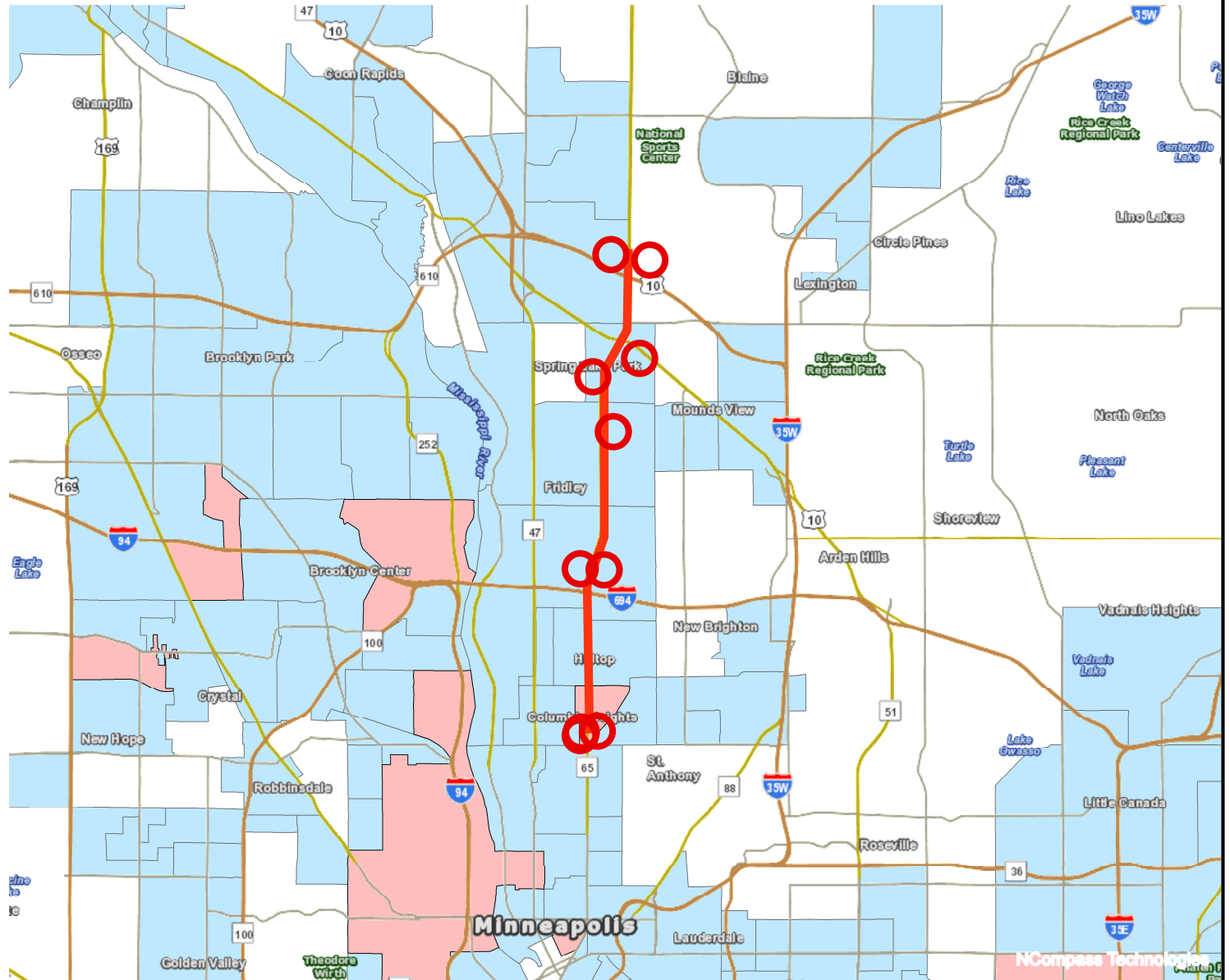


# Socio-Economic Conditions

## Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 1519

Project located IN an Area of Concentrated Poverty.



Created: 3/28/2022  
LandscapeRSA2

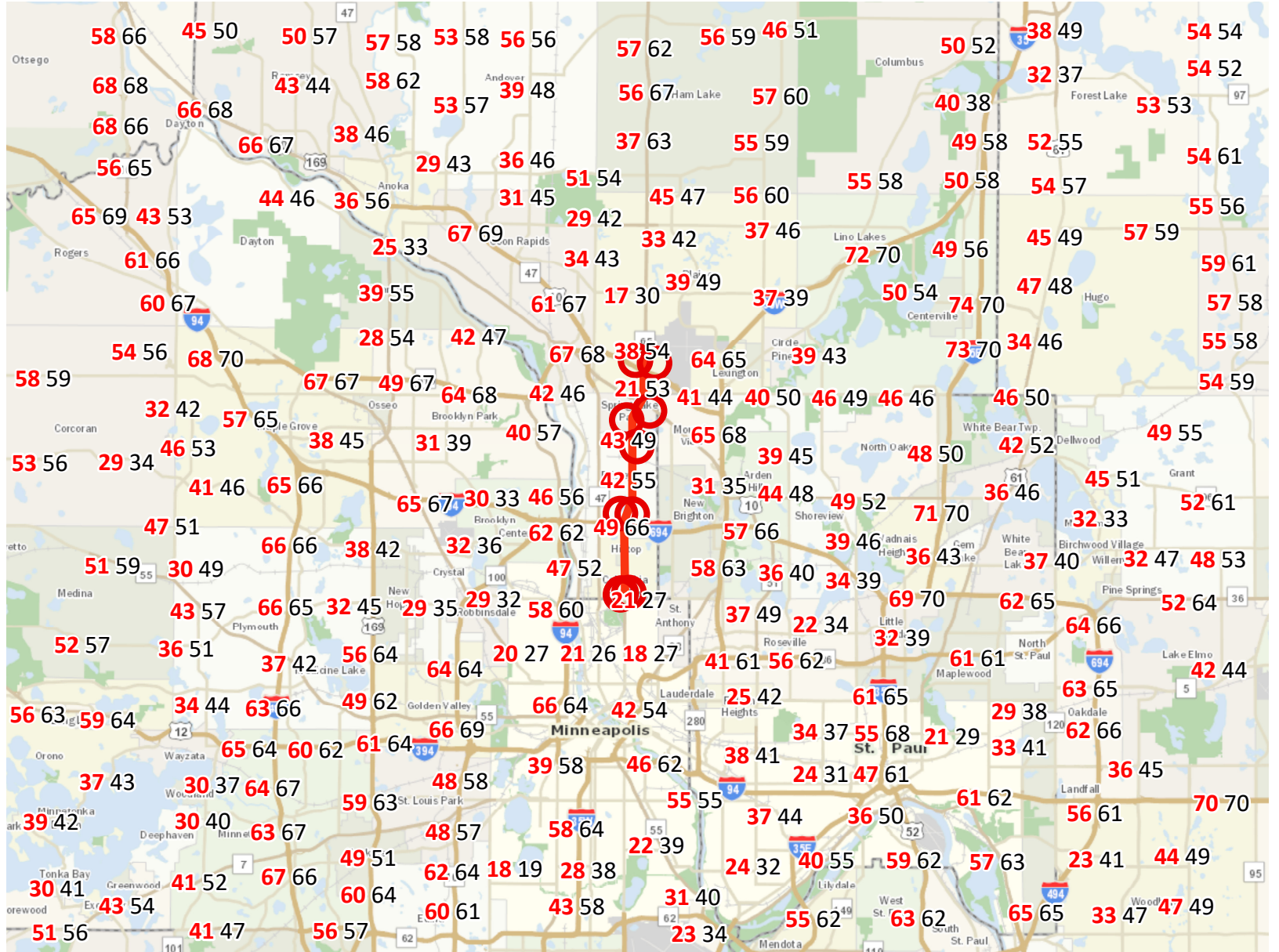


For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gis/site/notice.aspx>



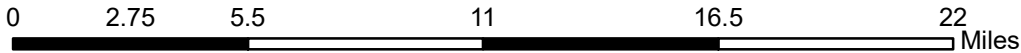
# Level of Congestion

Traffic Management Technologies Project: 2026 Roadway System Management | Map ID: 1648489615476



○ Project Points

— Project



Created: 3/28/2022  
LandscapeRSA1



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



Synchro MOE's for 2026 CMAQ Applications		Single intersection	Multiple intersections	
		Highway 65 @ Medtronic Pkwy / Central Ave	19 intersections	
Delay	Total Project Cost	\$3,000	\$57,000	
	(Before) Delay/Vehicle without Project (sec)	55	1053	
	(After) Delay/Vehicle with Project (sec)	48	914	
	Delay/Vehicle Reduced by Project (sec)	7	139	
	Intersection Volume (veh)	5373	102087	
	Total (Volume Weighted) Delay Reduced by Project (Hrs)	11	207	
Emissions	CO	(Before) Total CO Emissions without Project (kg)	28.07	533.29
		(After) Total CO Emissions with Project (kg)	27.08	514.46
		Total CO Emissions Reduced by Project (kg)	0.99	18.83
	NOx	(Before) Total NOx Emissions without Project (kg)	2.71	51.45
		(After) Total Nox Emissions with Project (kg)	2.60	49.36
		Total NOx Emissions Reduced by Project (kg)	0.11	2.09
	VOC	(Before) Total VOC Emissions without Project (kg)	0.8	14.63
		(After) Total VOC Emissions with Project (kg)	0.73	13.78
		Total VOC Emissions Reduced by Project (kg)	0.05	0.86
	Total Reduction of CO, NOx, & VOC Emissions (kg)		1.15	21.77

**NOTES:**

There are 19 intersections from 40th ave NE to 89th ave. Delay output is in seconds per vehicle.  
Emissions output is in kg per peak hour, not per vehicle (includes all vehicles)

12: TH 65 & Medtronic Pkwy/Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.2	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay (hr)	4.2	6.7	2.6	17.1	1.8	0.9	0.3	3.4	22.1	0.5	0.1	2.5
Total Del/Veh (s)	162.0	237.6	29.2	115.2	90.6	33.8	83.3	92.7	37.8	2.8	129.9	116.3
Stop Delay (hr)	4.0	6.4	2.2	15.7	1.7	0.8	0.2	3.1	12.4	0.0	0.1	2.3
Stop Del/Veh (s)	153.1	227.3	24.5	105.6	85.0	29.8	78.6	84.6	21.1	0.1	125.7	107.5
Total Stops	123	156	215	533	61	71	10	128	1060	1	5	78
Stop/Veh	1.32	1.53	0.66	1.00	0.85	0.70	0.91	0.97	0.50	0.00	1.25	1.03
Travel Dist (mi)	14.8	15.5	47.2	51.6	7.0	9.5	2.0	24.8	399.2	109.7	2.8	46.9
Travel Time (hr)	4.7	7.2	4.1	18.8	2.0	1.3	0.3	4.1	32.6	3.7	0.2	3.5
Avg Speed (mph)	3	2	12	3	3	7	6	6	12	29	13	13
Fuel Used (gal)	1.5	2.1	2.0	5.6	0.7	0.5	0.1	1.6	17.5	2.8	0.1	2.1
Fuel Eff. (mpg)	9.6	7.5	24.2	9.3	10.3	17.4	15.5	15.1	22.8	39.6	23.6	22.7
HC Emissions (g)	5	12	13	25	4	3	1	15	190	39	1	13
CO Emissions (g)	345	455	705	793	192	183	46	695	5703	1425	36	793
NOx Emissions (g)	20	30	47	73	12	10	2	42	626	121	3	66
Vehicles Entered	92	96	318	525	71	101	10	129	2064	598	4	74
Vehicles Exited	86	92	317	511	69	99	11	123	2076	596	4	72
Hourly Exit Rate	86	92	317	511	69	99	11	123	2076	596	4	72
Input Volume	92	96	312	544	64	104	12	136	2239	636	4	80
% of Volume	93	96	102	94	108	95	92	90	93	94	100	90
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	5	7	4	19	2	1	0	4	33	4	0	3

12: TH 65 & Medtronic Pkwy/Central Ave Performance by movement

Movement	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	0.1
Total Delay (hr)	10.7	0.2	73.2
Total Del/Veh (s)	30.9	10.6	48.1
Stop Delay (hr)	7.0	0.0	56.0
Stop Del/Veh (s)	20.2	2.5	36.8
Total Stops	525	31	2997
Stop/Veh	0.42	0.47	0.55
Travel Dist (mi)	734.5	41.3	1506.9
Travel Time (hr)	25.9	1.1	109.5
Avg Speed (mph)	28	37	14
Fuel Used (gal)	25.8	1.3	63.7
Fuel Eff. (mpg)	28.4	30.9	23.6
HC Emissions (g)	385	19	725
CO Emissions (g)	14904	803	27077
NOx Emissions (g)	1471	73	2598
Vehicles Entered	1229	66	5377
Vehicles Exited	1220	64	5340
Hourly Exit Rate	1220	64	5340
Input Volume	1248	64	5631
% of Volume	98	100	95
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			237
Occupancy (veh)	26	1	109

12: TH 65 & Medtronic Pkwy/Central Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.2	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay (hr)	4.2	6.7	2.6	17.1	1.8	0.9	0.3	3.4	22.1	0.5	0.1	2.5
Total Del/Veh (s)	162.0	237.6	29.2	115.2	90.6	33.8	83.3	92.7	37.8	2.8	129.9	116.3
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Stop Del/Veh (s)	153.1	227.3	24.5	105.6	85.0	29.8	78.6	84.6	21.1	0.1	125.7	107.5
Total Stops	123	156	215	533	61	71	10	128	1060	1	5	78
Stop/Veh	1.32	1.53	0.66	1.00	0.85	0.70	0.91	0.97	0.50	0.00	1.25	1.03
Travel Dist (mi)	14.8	15.5	47.2	51.6	7.0	9.5	2.0	24.8	399.2	109.7	2.8	46.9
Travel Time (hr)	4.7	7.2	4.1	18.8	2.0	1.3	0.3	4.1	32.6	3.7	0.2	3.5
Avg Speed (mph)	3	2	12	3	3	7	6	6	12	29	13	13
Fuel Used (gal)	1.5	2.1	2.0	5.6	0.7	0.5	0.1	1.6	17.5	2.8	0.1	2.1
Fuel Eff. (mpg)	9.6	7.5	24.2	9.3	10.3	17.4	15.5	15.1	22.8	39.6	23.6	22.7
HC Emissions (g)	5	12	13	25	4	3	1	15	190	39	1	13
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Input Volume	92	96	312	544	64	104	12	136	2239	636	4	80
% of Volume	93	96	102	94	108	95	92	90	93	94	100	90
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	5	7	4	19	2	1	0	4	33	4	0	3

12: TH 65 & Medtronic Pkwy/Central Ave Performance by movement

Movement	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.2
Denied Del/Veh (s)	0.0	0.0	0.1
Total Delay (hr)	10.7	0.2	73.2
Total Del/Veh (s)	30.9	10.6	48.1
Stop Delay (hr)	7.0	0.0	56.0
Stop Del/Veh (s)	20.2	2.5	36.8
Total Stops	525	31	2997
Stop/Veh	0.42	0.47	0.55
Travel Dist (mi)	734.5	41.3	1506.9
Travel Time (hr)	25.9	1.1	109.5
Avg Speed (mph)	28	37	14
Fuel Used (gal)	25.8	1.3	63.7
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Vehicles Exited	1220	64	5340
Hourly Exit Rate	1220	64	5340
Input Volume	1248	64	5631
% of Volume	98	100	95
Denied Entry Before	0	0	0
Denied Entry After	0	0	0
Density (ft/veh)			237
Occupancy (veh)	26	1	109