

Application

 10353 - 2018 Roadway Expansion

 10823 - 7. CSAH 17 (Lexington Ave NE) Roadway Expansion in Blaine (Pheasant Ridge to CSAH 14)

 Regional Solicitation - Roadways Including Multimodal Elements

 Status:
 Submitted

 Submitted Date:
 07/13/2018 9:51 AM

Primary Contact

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

Organization Information

Name:

Jurisdictional Agency (if different):

Organization Type:	County Government
Organization Website:	
Address:	1440 BUNKER LAKE BLVD

*	ANDOVER	Minnesota	55304
	City	State/Province	Postal Code/Zip
County:	Anoka		
Phone:*	763-324-3100		
		Ext.	
Fax:	763-324-3020		
PeopleSoft Vendor Number	0000003633A15		

Project Information

Project Name	CSAH 17 (Lexington Avenue NE) Expansion in Blaine
Primary County where the Project is Located	Anoka
Cities or Townships where the Project is Located:	Blaine
Jurisdictional Agency (If Different than the Applicant):	

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

(Limit 2,800 characters; approximately 400 words)

TIP Description <u>Guidance</u> (will be used in TIP if the project is selected for funding)

Project Length (Miles)

to the nearest one-tenth of a mile

The roadway section proposed for the improvement is CSAH 17 (Lexington Avenue NE) from Pheasant Ridge Drive to CSAH 14 (125th Avenue NE) in the city of Blaine. CSAH 17, an A Minor Expander, is currently a four-lane divided roadway that has experienced substantial traffic growth in recent years and needs expansion to a six-lanes, for which the roadway was originally designed. The median of the existing roadway was designed so that the roadway could easily be expanded to the inside. The expansion project will also include turning lane treatments at major intersections.

CSAH 17 (Lexington Avenue NE) Expansion from Pheasant Ridge Drive to CSAH 14 in Blaine

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	\$5,132,000.00
Match Amount	\$1,283,000.00
Minimum of 20% of project total	
Project Total	\$6,415,000.00
Match Percentage	20.0%
Minimum of 20% Compute the match percentage by dividing the match amount by the project total	1
Source of Match Funds	Anoka County Highway Fund
A minimum of 20% of the total project cost must come from non-federal sources; sources	additional match funds over the 20% minimum can come from other federal
Preferred Program Year	
Select one:	2023
Select 2020 or 2021 for TDM projects only. For all other applications, select 2022	? or 2023.
Additional Program Years:	
Select all years that are feasible if funding in an earlier year becomes available.	

Project Information: Roadway Projects

County, City, or Lead Agency	Anoka County Highway Department	
Functional Class of Road	A Minor Arterial	
Road System	CSAH	
TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET		
Road/Route No.	17	
i.e., 53 for CSAH 53		
Name of Road	Lexington Avenue NE	
Example; 1st ST., MAIN AVE		
Zip Code where Majority of Work is Being Performed	55449	
(Approximate) Begin Construction Date	04/01/2023	
(Approximate) End Construction Date	11/02/2023	
TERMINI:(Termini listed must be within 0.3 miles of any work)		
From: (Intersection or Address)	Pheasant Ridge NE	

To: (Intersection or Address)

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Primary Types of Work

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):

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 (2015), the 2040 Regional Parks Policy Plan (2015), 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.

GRADE, AGG BASE, BIT SURF, STORM SEWER, CURB and

GUTTER, MEDIAN

CSAH 14(125th Avenue NE)

From the 2040 TPP, Table 2-1, pages 2.6 through 2.16 as well as text from pages 2.17 to 2.55. A. Goal: Transportation System Stewardship. Objectives:

A. Efficiently preserve and maintain the regional transportation system in a state of good repair.B.Operate the regional transportation system to efficiently and cost-effectively connect people and freight to destinations.

Strategies: A1.

A2.

B. Goal: Safety and Security.Objectives:A. Reduce crashes and improve safety and security for all modes

of passenger travel and freight transport. List the goals, objectives, strategies, and associated pages:

> Strategies: B1.

B6.

C. Goal: Access to Destinations. Objectives:

A.Increase the availability of multimodal travel options, especially in congested highway corridors.B.Increase travel time reliability and predictability for travel on highway and transit systems

E.Improve multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically underrepresented populations.

Strategies:	
C3.	
C4.	
. .	

C7. C9.

C10.

D. Goal: Competitive Economy.

Objectives:

B.Invest in a multimodal transportation system to attract and retain businesses and residents.C.Support the region?s economic competitiveness through the efficient movement of freight.

Strategies: D1. D4.

E. Goal: Healthy Environment. Objectives:

A. Reduce transportation-related air emissions. B.Reduce impacts of transportation construction, operations, and use on the natural, cultural, and developed environments.

C. Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities and active car-free lifestyles.D.Provide a transportation system that promotes community cohesion and connectivity for people of all ages and abilities, particularly for historically under-represented populations.

Strategies:

- E1.
- E3.
- E4.
- E5.
- E6.
- E7.

F. Goal: Leveraging Transportation Investments to Guide Land Use.

Objectives:

C.Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

Strategies:

F1.

F3.

F7.

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:

Anoka County 2030 Transportation Plan, Pages 7-18 through 7-20.

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.

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

5. Applicants that are not 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.

Roadway Expansion: \$1,000,000 to \$7,000,000

Roadway Reconstruction/ Modernization Modernization and Spot Mobility: \$1,000,000 to \$7,000,000 Traffic Management Technologies (Roadway System Management): \$250,000 to \$7,000,000 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, or be substantially working towards, completing 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 applicant is a public agency that employs 50 or more people and has an adopted ADA transition plan that covers the public right of way/transportation.

Date plan adopted by governing body

02/01/2018

The applicant is a public agency that employs 50 or more people and is currently working towards completing an ADA transition plan that covers the public rights of way/transportation.

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

The applicant is a public agency that employs fewer than 50 people and is working towards completing an ADA self-evaluation that covers the public rights of way/transportation.

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

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.

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

12. The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

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

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

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

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

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

Roadways Including Multimodal Elements

1.All roadway 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. Yes

Roadway Expansion 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 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 MnDOTs 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 <u>are exclusively</u> 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.

5. The length of the bridge must equal or exceed 20 feet.

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

6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.

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

Roadway Expansion, Reconstruction/Modernization and Spot Mobility, 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.

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

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$565,000.00
Removals (approx. 5% of total cost)	\$438,000.00
Roadway (grading, borrow, etc.)	\$491,000.00
Roadway (aggregates and paving)	\$1,772,000.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$948,000.00
Ponds	\$515,000.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$480,000.00
Traffic Control	\$62,000.00
Striping	\$73,000.00
Signing	\$32,000.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$256,000.00
Bridge	\$0.00
Retaining Walls	\$47,000.00
Noise Wall (not calculated in cost effectiveness measure)	\$0.00

Traffic Signals	\$688,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$28,000.00
Totals	\$6,395,000.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
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)	\$20,000.00
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
Totals	\$20,000.00

Specific Transit and TDM Elements

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

Totals

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	\$6,415,000.00
Construction Cost Total	\$6,415,000.00
Transit Operating Cost Total	\$0.00

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	TH 65
Adjacent Parallel Corridor Start and End Points:	
Start Point:	105th Avenue NW
End Point:	CSAH 14
Free-Flow Travel Speed:	53
The Free-Flow Travel Speed is black number.	
Peak Hour Travel Speed:	44
The Peak Hour Travel Speed is red number.	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow:	16.98%
Upload Level of Congestion Map:	1530634482514_1. LOC Map.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)	

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

Existing Employment within 1 Mile:	5460
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	1857
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1530634611498_4. RE Map.pdf
Please upload attachment in PDF form.	

Measure C: Current Heavy Commercial Traffic

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

None of the tiers:	Yes
The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:	
Along Tier 3:	
Along Tier 2:	
Along Tier 1:	

Measure A: Current Daily Person Throughput

Upload Transit Connections Map	1530634748170_3. TC Map.pdf
For New Roadways only, list transit routes that will likely be diverted to the new pro-	oposed roadway (if applicable).
Existing Transit Routes on the Project	N/A
Current AADT Volume	23600
Location	CSAH 17, between Pheasant Ridge and CSAH 12

Please upload attachment in PDF form.

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	30680.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	No
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	Met Council ABM (refined by SEH/Haifeng Xiao for use on the Anoka County 2040 Transportation Plan)
Forecast (2040) ADT volume	37500

Measure A: Connection to disadvantaged populations and projects benefits, impacts, and mitigation

Select one:

Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50):

(up to 100% of maximum score)

Project located in Area of Concentrated Poverty:

(up to 80% of maximum score)

Projects census tracts are above the regional average for population in poverty or population of color:

(up to 60% of maximum score)

Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly:

Yes

(up to 40% of maximum score)

1.(0 to 3 points) A successful project is one that has actively engaged low-income populations, people of color, children, persons with disabilities, and the elderly during the project's development with the intent to limit negative impacts on them and, at the same time, provide the most benefits.

Describe how the project has encouraged or will engage the full cross-section of community in decision-making. Identify the communities to be engaged and where in the project development process engagement has occurred or will occur. Elements of quality engagement include: outreach to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in the community engagement related to transportation projects; residents or users identifying potential positive and negative elements of the project; and surveys, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

Response:

When developing a project, Anoka County reaches out to all members of the community, ranging from residents and businesses located adjacent to the project as well as commuters that may use the facility. For residents and businesses adjacent to the project, our design and environmental impact team meet with them early in the process and provide them a project folder containing information on the project as well as information for their own use such as plats and right-of-way limits. A robust stakeholder engagement plan will also be defined that involves collaboration with city staff, emergency service providers, and directly with the public through a series of project open houses and small group meetings (e.g. city council meetings, chamber of commerce, and citizen advocacy groups). Additional outreach efforts include the use of social media, newsletters, local cable access tv stations, and variable message boards to alert the public of upcoming meetings and/or events. Additionally, our Anoka County Highway Department website contains links for people to contact us for general information or requests, project specifics, and even grievances. Furthermore, the ACHD just recently completed our ADA Transition Plan, which is readily available at various outlets (including websites) to maximize its usefulness for us in reaching out to the public on how we can improve our projects.

(Limit 1,400 characters; approximately 200 words)

2.(0 to 7 points) Describe the projects benefits to low-income populations, people of color, children, people with disabilities, and the elderly. Benefits could relate to safety; public health; access to destinations; travel time; gap closure; leveraging of other beneficial projects and investments; and/or community cohesion. Note that this is not an exhaustive list. **Response:**

CSAH 17 (Lexington Avenue) is an important regional route because it serves as a north/south arterial corridor through the eastern part of Anoka County. CSAH 17 connects several communities (East Bethel, Columbus, Ham Lake, Blaine, Circle Pines and Lexington) to I-35W. The study area includes children, people with disabilities, people of color, elderly residents, and low-income populations; although not in concentrations recognized by the Metropolitan Council. The CSAH 17 project is located in an area defined as a Transit Market Area IV by the Met Council (i.e. an area that supports dial-a-ride and peak period express/commuter service). Therefore, this project will improve multimodal connectivity between transit facilities and benefit populations that depend on transit services to access job centers, shopping, recreational facilities, educational opportunities, and other destinations throughout the Twin Cities. The proposed roadway improvements and existing trail provide safety, security, and travel time benefits for all motorized and non-motorized users, including children, the elderly, and the disabled, and will be compliant with the Americans with Disabilities Act (ADA).

(Limit 2,800 characters; approximately 400 words)

3.(-3 to 0 points) Describe any negative externalities created by the project along with measures that will be taken to mitigate them. Negative externalities can result in a reduction in points, but mitigation of externalities can offset reductions.

Below is a list of negative impacts. Note that this is not an exhaustive list.

Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.

Increased noise.

Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.

Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, 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.

Displacement of residents and businesses.

Construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings. These tend to be temporary.

Other

Response:	None.

(Limit 2,800 characters; approximately 400 words)

Upload Map

1530635069858_2. SE Map.pdf

Measure B: Affordable Housing

City	Segment Length (For stand-alone projects, enter population from Regional Economy map) within each City/Township	Segment Length/Total Project Length	Score	Housing Score Multiplied by Segment percent
Blaine	2.3	1.0	83.0	83.0

Total Project Length

Total Project Length (as entered in the "Project Information" form) 2.3

Affordable Housing Scoring

Total Project Length (Miles) or Population	2.3
Total Housing Score	83.0

Affordable Housing Scoring

Measure A: Infrastructure Age

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
2004.0	2.3	4609.2	2004.0
	2	4609	2004

Average Construction Year

Weighted Year

Total Segment Length (Miles)

Total Segment Length

2.3

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/Veh icle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/Veh icle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/Veh icle)	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATIO N of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
15.2	13.0	2.2	2518	5539.6		15306408667 64_1-2 CSAH 17 at 12 Synchro DELAY Reports.pdf

Measure A: Congestion Reduction/Air Quality

Vehicle Delay Reduced		
Total Peak Hour Delay Reduced	5539.6	

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):		
3.38	3.18	0.2		
3	3	0		

Total

Total Emissions Reduced:

0.2

Upload Synchro Report

1530641592952_3-4 CSAH 17 at 12 Synchro EMISSION Reports.pdf

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

0

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

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

	CMF Used: 0.85
Crash Modification Factor Used:	Safety Improvements include:
	Expand the existing 4-lane divided roadway to a 6- lane divided roadway.
(Limit 700 Characters; approximately 100 words)	
	CMF Used: 0.85
	Safety Improvements include:
Rationale for Crash Modification Selected:	Expand the existing 4-lane divided roadway to a 6-
	lane divided roadway. CMF 7924 of 0.85 (15%
	reduction) applied to all crash severities and types
(Limit 1400 Characters; approximately 200 words)	
Project Benefit (\$) from B/C Ratio:	0.26
Worksheet Attachment	1531164109420_5- CSAH 17 (Lexington Ave) - N of Pheasant Ridge Dr.pdf
Please upload attachment in PDF form.	

Roadway projects that include railroad grade-separation elements:

Current AADT volume:

0 0

Measure A: Multimodal Elements and Existing Connections

Response:

Within the study area, an existing multiuse trail exists along the west side of CSAH 17. This trail corridor has long been identified in the Anoka County Transportation Plan and is categorized as a Tier II trail alignment on the Regional Bicycle Transportation Network (RBTN). No fixed transit service is provided on CSAH 17 within the project limits. However, the project is located in an area designated as a "Transit Market Area IV" by the Met Council (i.e. an area that supports dial-a-ride and peak period express/commuter service). The CSAH 17 capacity improvements will achieve much more than supporting this designation. Nearby bus stops (14831 and 14771) on Route 250, located approximately 0.6 miles south of the project area, provide a multi-modal connection to community amenities and provide greater opportunities to access jobs, shopping/retail, recreational, and public services for individuals without having to depend on a vehicle.

The improvements will provide a more comfortable, safe, and reliable travel experience for all modes. Bicycles, pedestrians, and general traffic will be separated throughout the project area, which also continues both north and south along CSAH 17. The project will also include ADA compliant curb ramps to allow easy access for disabled (wheelchairs) users.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

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

Yes

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)Layout (30 Percent of Points)

Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties that the project goes through or agencies that maintain the roadway(s)). A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

Attach Layout

1531415529843_7. CSAH 17_PheasantRidge-CSAH14_07-12-2018.pdf

Please upload attachment in PDF form.

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

50%

Attach Layout

Please upload attachment in PDF form.

Layout has not been started

0%

Anticipated date or date of completion

2) Review of Section 106 Historic Resources (20 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

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%

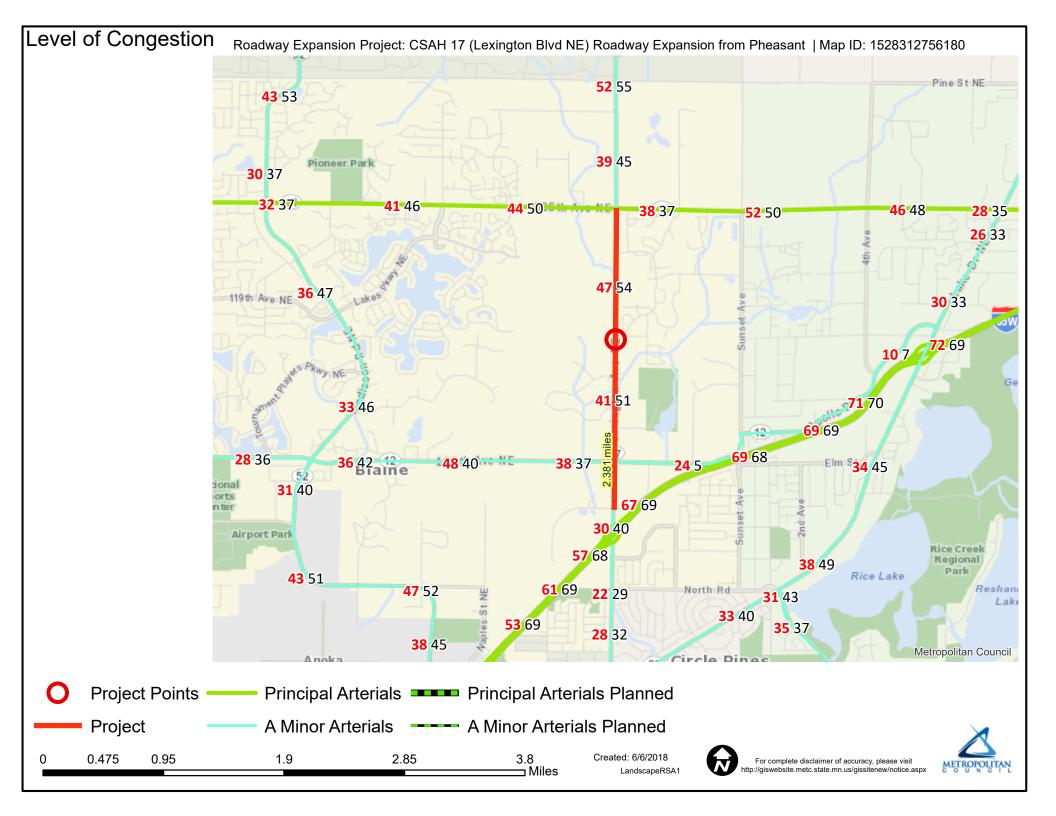
Project is located on an identified historic bridge	
3)Right-of-Way (30 Percent of Points)	
Right-of-way, permanent or temporary easements either not required or all have been acquired	Yes
100%	
Right-of-way, permanent or temporary easements required, plat, legal descriptions, or official map complete	
50%	
Right-of-way, permanent or temporary easements required, parcels identified	
25%	
Right-of-way, permanent or temporary easements required, parcels not all identified	
0%	
Anticipated date or date of acquisition	
4)Railroad Involvement (20 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%	
Anticipated date or date of executed Agreement	

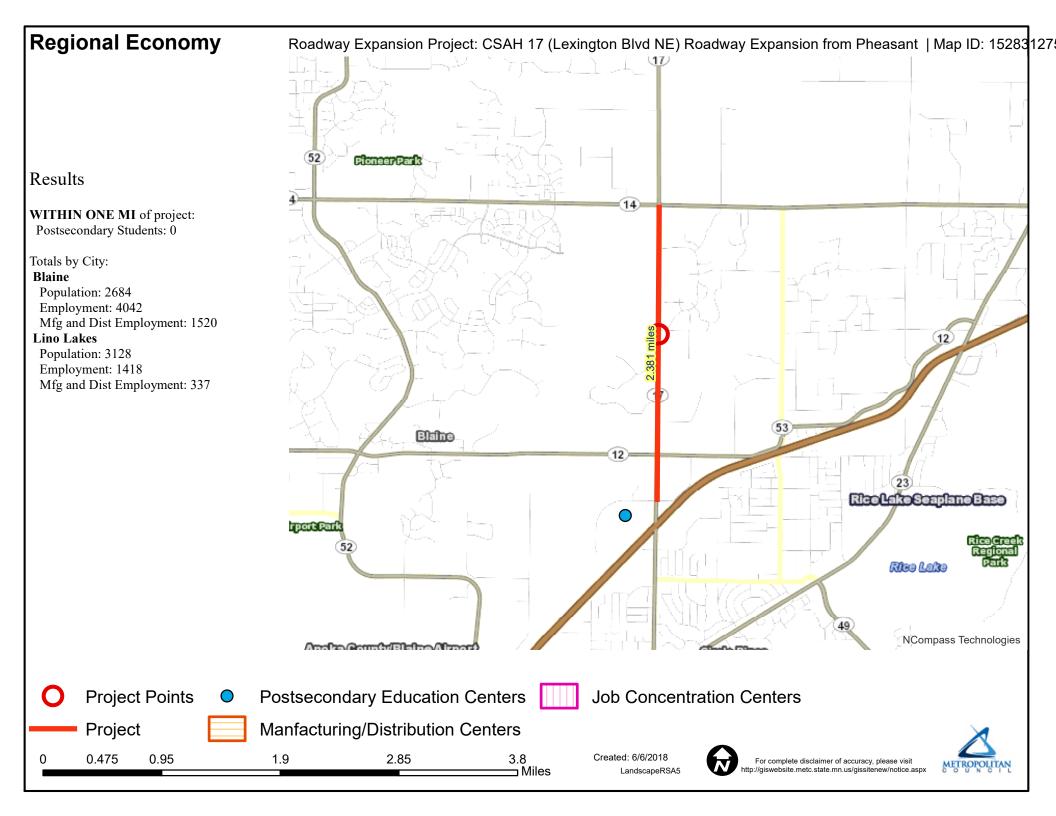
Measure A: Cost Effectiveness

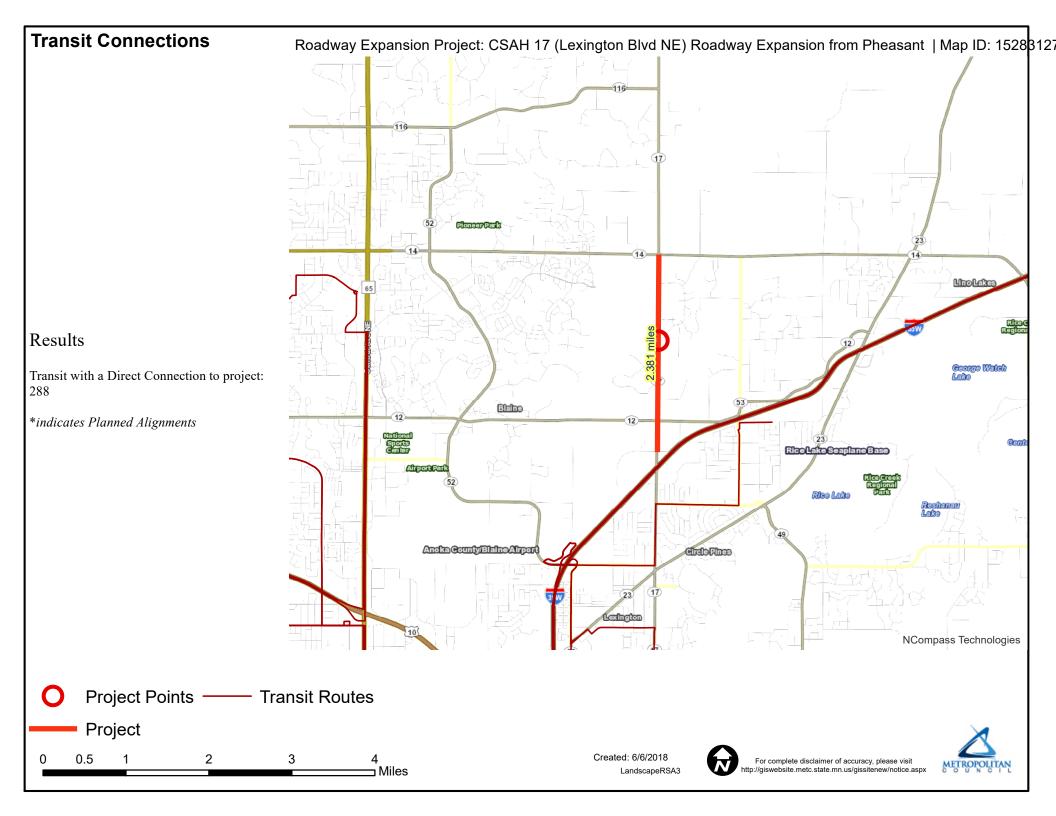
Total Project Cost (entered in Project Cost Form):	\$6,415,000.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$6,415,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	\$0.00

Other Attachments

File Name	Description	File Size
1-Page Project Information Sheet - CSAH 17 Expansion in Blaine.pdf	1-Page Project Information Sheet	450 KB
Anoka County Resolution of Support for CSAH 17.pdf	Anoka County Resolution of Support for CSAH 17	668 KB
CSAH 17 Letter of Support from Blaine.pdf	Letter of Support from Blaine for CSAH 17	278 KB
PROJECT Area Map - CSAH 17 Expansion Project - Blaine.pdf	Project Area Map	296 KB







Socio-Economic Conditions

Roadway Expansion Project: CSAH 17 (Lexington Blvd NE) Roadway Expansion from Pheasant | Map ID: 1528312756180

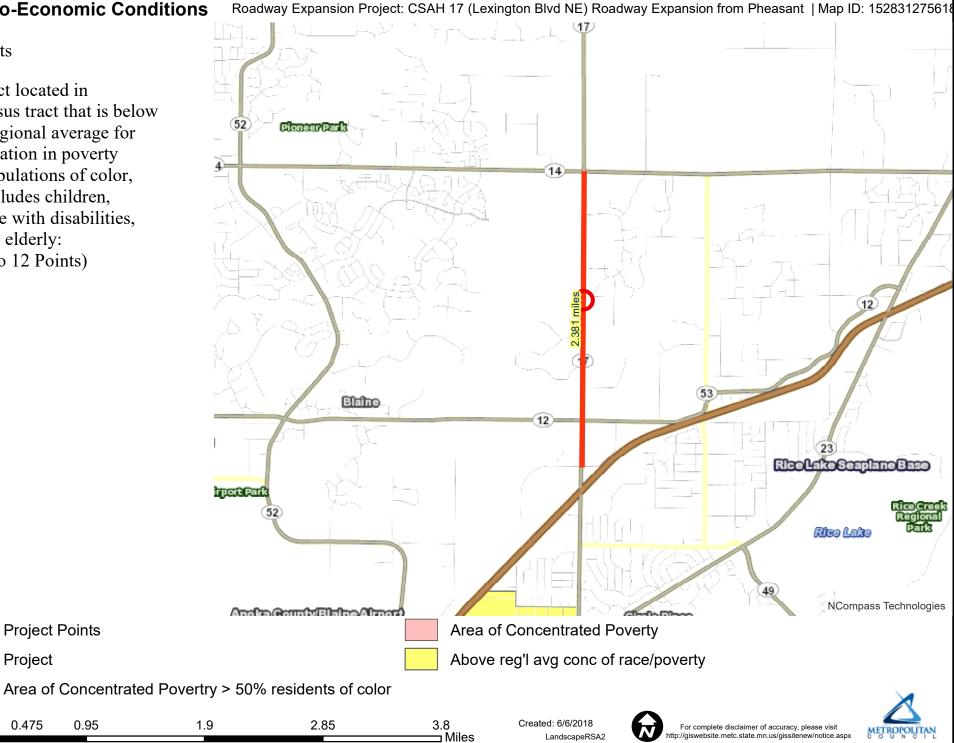
Results

Project located in a census tract that is below the regional average for population in poverty or populations of color, or includes children, people with disabilities, or the elderly:

(0 to 12 Points)

Project

0.475



DELAY - WITHOUT Improvement 3: CSH 17/CSAH 17 & 109th

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘኘ	∱ î≽		ሻሻ	<u></u>	1	<u>۲</u>	∱ î≽		1	A1⊅	
Traffic Volume (vph)	108	132	167	116	117	74	255	1024	90	43	325	42
Future Volume (vph)	108	132	167	116	117	74	255	1024	90	43	325	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	450		325	325		0	500		0
Storage Lanes	2		0	2		1	1		0	1		0
Taper Length (ft)	135			165			300			165		
Satd. Flow (prot)	3433	3242	0	3433	3539	1583	1770	3497	0	1770	3479	0
Flt Permitted	0.950			0.554			0.510			0.143		
Satd. Flow (perm)	3433	3242	0	2002	3539	1583	950	3497	0	266	3479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		183				91		20			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		915			814			838			962	
Travel Time (s)		20.8			18.5			19.0			21.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	328	0	127	128	81	280	1223	0	47	403	0
Turn Type	Prot	NA	Ű	Perm	NA	Perm	Perm	NA	Ū	Perm	NA	Ű
Protected Phases	7	4			8			2			6	
Permitted Phases	·	•		8	Ű	8	2	_		6	Ū	
Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	
Total Split (s)	8.0	28.0		20.0	20.0	20.0	32.0	32.0		32.0	32.0	
Total Split (%)	13.3%	46.7%		33.3%	33.3%	33.3%	53.3%	53.3%		53.3%	53.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lag			Lead	Lead	Lead						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Act Effct Green (s)	4.0	24.0		16.0	16.0	16.0	28.0	28.0		28.0	28.0	
Actuated g/C Ratio	0.07	0.40		0.27	0.27	0.27	0.47	0.47		0.47	0.47	
v/c Ratio	0.52	0.23		0.24	0.14	0.17	0.63	0.74		0.38	0.25	
Control Delay	35.7	5.8		18.7	17.3	5.1	20.1	16.3		21.4	9.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	35.7	5.8		18.7	17.3	5.1	20.1	16.3		21.4	9.3	
LOS	D	А		В	В	А	С	В		С	А	
Approach Delay		13.8			14.9			17.0			10.6	
Approach LOS		В			В			В			В	
Stops (vph)	103	85		88	84	15	194	852		35	191	
Fuel Used(gal)	2	3		2	2	1	4	16		1	5	
CO Emissions (g/hr)	150	208		117	114	44	267	1105		49	318	
NOx Emissions (g/hr)	29	41		23	22	9	52	215		10	62	
VOC Emissions (g/hr)	35	48		27	26	10	62	256		11	74	
Dilemma Vehicles (#)	0	0		0	0	0	0	0		0	0	
Queue Length 50th (ft)	22	16		18	18	0	72	175		10	39	
Queue Length 95th (ft)	#45	38		38	36	24	#151	246		40	63	
Internal Link Dist (ft)		835			734	27	"101	758			882	
		000			707			700			502	

7. CSAH 17 and Pheasant Ridge 2018 STP 05/17/2017 Existing PM Peak Hour

Synchro 10 Report Page 1 DELAY - WITHOUT Improvement 3: CSH 17/CSAH 17 & 109th

7. CSAH 17 and 12 Intersection 2017 EXISTING_PM.syn 07/03/2018

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	375			450		325	325			500		
Base Capacity (vph)	228	1406		533	943	488	443	1642		124	1640	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.52	0.23		0.24	0.14	0.17	0.63	0.74		0.38	0.25	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced	to phase 2:	NBTL and	6:SBTL	, Start of (Green							
Natural Cycle: 60												
Control Type: Pretimed												
Maximum v/c Ratio: 0.74												
Intersection Signal Delay: 1				In	tersection	LOS: B						
Intersection Capacity Utiliza	ation 60.6%			IC	U Level c	of Service	В					
Analysis Period (min) 15												
# 95th percentile volume e			eue may	be longer								
Queue shown is maximu	im after two	cycles.										
Splits and Phases: 3: CS	H 17/CSAH	17 & 109	Pth									

Ø2 (R)	— •Ø4	
32 s	28 s	
Ø6 (R)	● Ø8	
32 s	20 s	8 s

Direction	All	
Future Volume (vph)	2518	
Control Delay / Veh (s/v)	15	
Total Delay / Veh (s/v)	15	

DELAY WITH IMPROVEMENT Summary Report

Lane Configurations FBL EBT EBR WBI WBT WBR NBI NBT NBT SBI SBIT SBIT Lane Configurations Y1 ++ P Y ++ P Y ++ P<		۶	+	*	4	+	*	<	1	1	*	Ŧ	~
Traffic Volume (vph) 108 132 167 116 117 74 255 1024 90 43 325 42 Iduar Volume (vph) 1900 100 1010 10	Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (vph) 108 132 167 116 117 74 255 1024 90 43 325 42 Iduar Volume (vph) 1900 100 1010 10	Lane Configurations	ሻሻ	≜1 ≱		ካካ	<u></u>	1	۲.	ተተቡ		۲.	*††	
Ideal Flow (php) 1900 190	Traffic Volume (vph)			167			74	255		90	43		42
Slorage Lengh (ft) 375 0 450 325 325 0 500 0 Storage Lanes 2 0 2 1 1 0 1 0 Satal, Flow (prot) 3433 3242 0 3433 3539 1583 1770 5024 0 0.06 0 File Permitted 0.950 0.505 0.506 0.166 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.056 0.050	Future Volume (vph)	108	132	167	116	117	74	255	1024	90	43	325	42
Storage Lanes 2 0 2 1 1 0 1 0 Taper Length (ft) 135 165 300 165 300 165 Stale, Flow (prot) 3433 3242 0 3433 3539 1583 1770 5024 0 1770 4999 0 FIP Fermitted 0.950 0.554 0.506 0.166 533 533 943 3024 0 309 4999 0 Right Fum on Red Yes Yes Yes Yes Yes Yes Yes Stat, Flow (RTOR) 183 91 32 46 101% 101	Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
	Storage Length (ft)	375		0	450		325	325		0	500		0
Said. Flow (proft) 3433 3242 0 3433 3539 1583 1770 5024 0 1770 4999 0 FII Permitted 0.950 0.554 0.506 0.506 0.166 0.166 0.166 0.166 0.166 0.506 0.166 0.166 0.99 0 Right Turn on Red 333 3242 0 2022 3539 1583 913 30 300 300 0 999 0 Right Turn on Red Yes Y	Storage Lanes	2		0	2		1	1		0	1		0
Fit Permitted 0.950 0.554 0.506 0.166 Satal, Flow (perm) 343 3242 0 2002 3539 1583 943 5024 0 309 4999 0 Satal, Flow (RTOR) 183 91 32 46 Yes Yes Yes Satal, Flow (RTOR) 183 91 32 46 Yes Yes Yes Satal, Flow (RTOR) 183 91 30 30 30 30 30 30 30 30 30 30 21.9 Peak Hour Factor 0.92	Taper Length (ft)	135			165			300			165		
Sald. Flow (perm) 3433 3242 0 2020 3539 1583 943 5024 0 309 4999 0 Right Turn on Red Yes	Satd. Flow (prot)	3433	3242	0	3433	3539	1583	1770	5024	0	1770	4999	0
Right Turo n RedYesYesYesYesYesSaid. Flow (RTOR)1839130303046Link Speed (mph)3030303020Link Distance (ft)91520.818.519.020.920	Flt Permitted				0.554			0.506			0.166		
Said. Flow (RTOR)183913246Link Speed (mph)3030303030Link Distance (ft)915814838992Travel Time (s)20.818.519.021.9Peak Hour Factor0.920.920.920.920.920.920.920.92Growth Factor101%101%101%101%101%101%101%101%101%Shared Lane Traffic (%) </td <td></td> <td>3433</td> <td>3242</td> <td>0</td> <td>2002</td> <td>3539</td> <td>1583</td> <td>943</td> <td>5024</td> <td>0</td> <td>309</td> <td>4999</td> <td>0</td>		3433	3242	0	2002	3539	1583	943	5024	0	309	4999	0
	Right Turn on Red			Yes			Yes			Yes			Yes
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Satd. Flow (RTOR)		183				91		32			46	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Link Speed (mph)		30			30			30			30	
Peak Hour Factor 0.92	Link Distance (ft)		915			814			838			962	
Growth Factor 101% </td <td>Travel Time (s)</td> <td></td> <td>20.8</td> <td></td> <td></td> <td>18.5</td> <td></td> <td></td> <td>19.0</td> <td></td> <td></td> <td>21.9</td> <td></td>	Travel Time (s)		20.8			18.5			19.0			21.9	
Shared Lane Traffic (%) Lane Group Flow (vph) 119 328 0 127 128 81 280 1223 0 47 403 0 Turn Type Prot NA Perm NA Perm PA Perm NA NA Perm NA <	Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Lane Group Flow (vph) 119 328 0 127 128 81 280 1223 0 47 403 0 Turn Type Prot NA Perm Perm NA Perm Perm NA Perm NA Perm Perm NA Perm Perm NA Perm Perm <pern<pern<pern<pern<pern<pern<pern<pern< td=""><td>Growth Factor</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td><td>101%</td></pern<pern<pern<pern<pern<pern<pern<pern<>	Growth Factor	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Shared Lane Traffic (%)												
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Lane Group Flow (vph)	119	328	0	127	128	81	280	1223	0	47	403	0
Permitted Phases 8 8 2 6 Minimum Split (s) 8.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 32.0	Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Minimum Split (s) 8.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 32.0	Protected Phases	7	4			8			2			6	
Total Split (s) 8.0 28.0 20.0 20.0 32.0 32.0 32.0 32.0 Total Split (%) 13.3% 46.7% 33.3% 33.3% 53.3%	Permitted Phases				8		8	2			6		
Total Split (%) 13.3% 46.7% 33.3% 33.3% 33.3% 53.3%	Minimum Split (s)	8.0	20.0		20.0	20.0	20.0	20.0	20.0		20.0	20.0	
Yellow Time (s) 3.5	Total Split (s)	8.0	28.0		20.0	20.0	20.0	32.0	32.0		32.0	32.0	
All-Red Time (s) 0.5 <td>Total Split (%)</td> <td>13.3%</td> <td>46.7%</td> <td></td> <td>33.3%</td> <td>33.3%</td> <td>33.3%</td> <td>53.3%</td> <td>53.3%</td> <td></td> <td>53.3%</td> <td>53.3%</td> <td></td>	Total Split (%)	13.3%	46.7%		33.3%	33.3%	33.3%	53.3%	53.3%		53.3%	53.3%	
Lost Time Adjust (s)0.00.00.00.00.00.00.00.00.0Total Lost Time (s)4.04.04.04.04.04.04.04.04.04.0Lead/LagLagLead <td>Yellow Time (s)</td> <td>3.5</td> <td>3.5</td> <td></td> <td>3.5</td> <td>3.5</td> <td>3.5</td> <td>3.5</td> <td>3.5</td> <td></td> <td>3.5</td> <td>3.5</td> <td></td>	Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	All-Red Time (s)	0.5	0.5		0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lead/LagLagLeadLeadLeadLeadLead-Lag Optimize?YesYesYesYesYesAct Effct Green (s)4.024.016.016.016.028.028.028.028.0Actuated g/C Ratio0.070.400.270.270.470.470.470.47 Vc Ratio0.520.230.240.140.170.640.520.330.17Control Delay35.75.818.717.35.120.411.917.98.4Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach LOSBBACBBAStops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306VOC Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)0000000 <t< td=""><td>Lost Time Adjust (s)</td><td>0.0</td><td>0.0</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td></td><td>0.0</td><td>0.0</td><td></td></t<>	Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Lead-Lag Optimize?YesYesYesYesYesAct Effct Green (s)4.024.016.016.016.028.028.028.0Actuated g/C Ratio0.070.400.270.270.270.470.470.47V/c Ratio0.520.230.240.140.170.640.520.330.17Control Delay35.75.818.717.35.120.411.917.98.4Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBBAStops (vph)1038588841519671232174Fuel Used(gal)23221414CO Emissions (g/hr)1502081171144426897946306VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Act Effct Green (s)4.024.016.016.016.028.028.028.028.0Actuated g/C Ratio0.070.400.270.270.270.470.470.470.47v/c Ratio0.520.230.240.140.170.640.520.330.17Control Delay35.75.818.717.35.120.411.917.98.4Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBBAStops (vph)1038588841519671232174Fuel Used(gal)232214144CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180<	Lead/Lag	Lag			Lead	Lead	Lead						
Actuated g/C Ratio0.070.400.270.270.270.470.470.47v/c Ratio0.520.230.240.140.170.640.520.330.17Control Delay35.75.818.717.35.120.411.917.98.4Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBACBAStops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
v/c Ratio 0.52 0.23 0.24 0.14 0.17 0.64 0.52 0.33 0.17 Control Delay 35.7 5.8 18.7 17.3 5.1 20.4 11.9 17.9 8.4 Queue Delay 0.0	Act Effct Green (s)	4.0	24.0		16.0	16.0	16.0	28.0	28.0		28.0	28.0	
Control Delay35.75.818.717.35.120.411.917.98.4Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBB1519671232Stops (vph)1038588841519671232Fuel Used(gal)232214141CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Actuated g/C Ratio	0.07	0.40		0.27	0.27	0.27	0.47	0.47		0.47	0.47	
Queue Delay0.00.00.00.00.00.00.00.00.0Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBBAStops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	v/c Ratio	0.52	0.23		0.24	0.14	0.17	0.64	0.52		0.33	0.17	
Total Delay35.75.818.717.35.120.411.917.98.4LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBAStops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Control Delay	35.7	5.8		18.7	17.3	5.1	20.4	11.9		17.9	8.4	
LOSDABBACBBAApproach Delay13.814.913.59.4Approach LOSBBBBAStops (vph)1038588841519671232174Fuel Used(gal)23221414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Approach Delay13.814.913.59.4Approach LOSBBBAStops (vph)1038588841519671232174Fuel Used(gal)23221414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Total Delay	35.7	5.8		18.7	17.3	5.1	20.4	11.9		17.9	8.4	
Approach LOSBBBAStops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	LOS	D	А		В	В	А	С	В		В	А	
Stops (vph)1038588841519671232174Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)00000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Approach Delay		13.8			14.9			13.5			9.4	
Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Approach LOS		В			В			В			А	
Fuel Used(gal)2322141414CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	Stops (vph)	103	85		88	84	15	196	712		32	174	
CO Emissions (g/hr)1502081171144426897946306NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640		2	3		2	2	1	4	14		1	4	
NOx Emissions (g/hr)29412322952191960VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640											46		
VOC Emissions (g/hr)3548272610622271171Dilemma Vehicles (#)000000000Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640			41		23	22	9	52	191		9	60	
Dilemma Vehicles (#) 0											11		
Queue Length 50th (ft)221618180721031025Queue Length 95th (ft)#4538383624#1541383640	, o												
Queue Length 95th (ft) #45 38 38 36 24 #154 138 36 40	.,												
	Internal Link Dist (ft)		835			734			758			882	

DELAY WITH IMPROVEMENT Summary Report

	٦	-	\mathbf{F}	4	╉	*	1	1	1	1	ţ	~
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)	375			450		325	325			500		
Base Capacity (vph)	228	1406		533	943	488	440	2361		144	2357	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.52	0.23		0.24	0.14	0.17	0.64	0.52		0.33	0.17	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced	to phase 2:	NBTL and	6:SBTL	, Start of (Green							
Natural Cycle: 60												
Control Type: Pretimed												
Maximum v/c Ratio: 0.64												
Intersection Signal Delay: 13					tersection							
Intersection Capacity Utiliza	ition 51.1%			IC	U Level c	of Service	А					
Analysis Period (min) 15												
# 95th percentile volume e	exceeds cap	bacity, qu	eue may	be longer	•							
Queue shown is maximu	im after two	cycles.										
Splits and Phases: 3: CS	H 17/CSAH	17 & 109	9th									
			-									

Ø2 (R)	→ _{Ø4}	
32 s	28 s	
Ø6 (R)	4 ▼ Ø8	▶ Ø1
32 s	20 s	8 s

Direction	All	
Future Volume (vph)	2518	
Control Delay / Veh (s/v)	13	
Total Delay / Veh (s/v)	13	

Direction	All
Future Volume (vph)	2518
Total Delay / Veh (s/v)	15
CO Emissions (kg)	2.37
NOx Emissions (kg)	0.46
VOC Emissions (kg)	0.55

Direction	All
Future Volume (vph)	2518
Total Delay / Veh (s/v)	13
CO Emissions (kg)	2.23
NOx Emissions (kg)	0.43
VOC Emissions (kg)	0.52

HS			Control Section	T.H. / Roadway			Location				Beginning Ref. Pt.	Endiı Ref. I	0	State, County, City or Township	Study Period Begins	Study Period Ends
				CSAH 17	Phea	sant Ridge l	Dr to CSA	AH 14 (125th)	Ave)		2+00.641	5+00.0)40	Anoka Co.	1/1/2013	12/31/2015
			Descripti Proposed		Evna	nd CSAH 1	7 (Levino	ton Avenue)	from 4 lanes d	livid	led to 6 lanes	divided				
Accide			1 Rear End		2 Sid	eswipe Direction			5 Right Angle			8,9 Head C Sideswipe -			6, 90, 99	
						b		←				Opposite Dir	ection	Pedestrian	Other	Total
	al					-			>							
	T) Fatal	F														
Study	Personal Injury (PI)	Α														
Period: Number of	sonal I ₁	В							3						1	4
Crashes		С		5		1		3					3		1	13
	Property Damage	PD		9		1			5				2		4	21
% Change	Fatal	F														
in Crashes		A														
*Use Desktop	PI	в							-15%						-15%	
Reference for Crash Reduction		С		-15%		-15%		-15%					-15%		-15%	
Factors	Property Damage	PD		-15%		-15%			-15%				-15%		-15%	
	Fatal	F														
		A														
Change in Crashes	PI	В							-0.45						-0.15	-0.60
= No. of		С		-0.75		-0.15		-0.45					-0.45		-0.15	-1.95
crashes X % change in crashes	Property Damage	PD		-1.35		-0.15			-0.75				-0.30		-0.60	-3.15
Year (Safety I	mprov	ement	t Construct	tion)		2018										
Project Cost	(exclue	de Rig	ght of Way)	\$	6,415,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes		Cost per Crash	Annu Benef			B/C=	0.26
Right of Way	o Cost	s (opt	ional)				F			\$	1,140,000			Using present	worth value	<i>s</i> ,
Traffic Grow	th Fa	ctor				3.1%	Α			\$	570,000			B=		<u>697,498</u>
Capital Reco	very						В	-0.60	-0.20	\$	170,000	\$ 34	4,031	C= See "Calculat		415,000
1. Discount	t Rate					4.5%	С	-1.95	-0.65	\$	83,000	\$ 5.	3,999	amortization.	ions sneel j	UI
2. Project S	Servic	e Lif	e (n)			20	PD	-3.15	-1.05	\$	7,600	\$	7,987	Office of The	eeso Safat	and
							Total					\$ 9	6,018	Office of Tra Technology	ffic, Safety Augus	

Year	Crash Benefits	Present Worth Benefits	Present Worth Costs
2018	\$ 96,018	\$ 96,018	\$ 6,415,000
2019	\$ 96,018 \$ 99,013	\$ 94,750	
2020	\$ 102,103	\$ 93,498	
2021	\$ 105,288	\$ 92,264	
2022	\$ 108,573	\$ 91,045	
2023	\$ 111,961	\$ 89,843	
2024	\$ 115,454	\$ 88,657	
2025	\$ 119,056	\$ 87,486	
2026	\$ 122,771	\$ 86,330	
2027	\$ 126,601	\$ 85,190	
2028	\$ 130,551	\$ 84,065	
2029	\$ 134,624	\$ 82,955	
2030	\$ 138,824	\$ 81,860	
2031	\$ 143,156	\$ 80,779	
2032	\$ 147,622	\$ 79,712	
2033	\$ 152,228	\$ 78,659	
2034	\$ 156,978	\$ 77,621	
2035	\$ 161,875	\$ 76,596	
2036	\$ 166,926	\$ 75,584	
2037	\$ 172,134	\$ 74,586	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ -	\$ -	
0	\$ - \$ -	\$ - \$ -	
0	\$ -	\$ -	
	Totals =	\$ 1,697,498 (B)	\$ 6,415,000 (C)

Amortizing...

year (n)= 1, 2, 3,.... discount rate (i) = 7%

> Crash Benefits (@ year n) = (Crash Benefits)_{n-1} X (1 + Traffic Growth Factor)

Present Worth Benefits
(@ year n) = (Crash Benefits)_n
$$X 1/(1 + Discount Rate)^n$$

Compare	CMF	CRF(%)	Quality	TV STATES AND A ST		Area Type	Reference	Comments
	0.85	15	****	All	All	Urban	Park et al., 2015	
	0.847	15.3	****	All	All	Urban	Park et al., 2015	CMF after 2nd year of [<i>read more</i>]
	0.798	20.2	****	All	All	Urban	Park et al., 2015	CMF after 3rd year of [<i>read more</i>]
	0.802	19.8	****	All	All	Urban	Park et al., 2015	CMF after 4th year of [<i>read more</i>]
	0.761	23.9	****	All	K,A,B,C	Urban	Park et al., 2015	
	0.755	24.5	ROOR	All	K,A,B,C	Urban	Park et al., 2015	CMF after 2nd year of [<i>read more</i>]
	0.696	30.4		All	K,A,B,C	Urban	Park et al., 2015	CMF after 3rd year of [read more]
0	0.702	29.8	Richory	All	K,A,B,C	Urban	Park et al., 2015	CMF after 4th year of [read more]
	0.809	19.1	****	All	All	Urban	Park et al., 2015	LOS change from E (4 [<i>read more</i>]
	0.657	34.3	RRARE	All	K,A,B,C	Urban	Park et al., 2015	LOS change from E (4 [<i>read more</i>]
	0.737	26.3	****	All	All	Urban	Park et al., 2015	Shoulder width of 6 feet [read more]



CMF / CRF Details

CMF ID: 7924

Increase from 4 lanes to 6 lanes

Description:

Prior Condition: 4 lane roadway

Category: Roadway

Study: <u>Assessment of safety effects for widening urban roadways in developing</u> <u>crash modification functions using nonlinearizing link functions, Park et al., 2015</u>

Star Quality Rating:	全会会会会 [View score details]

Crash Modification Factor (CMF)		
Value:	0.85	
Adjusted Standard Error:		
Unadjusted Standard Error:	0.073	

Crash Reduction Factor (CRF)	
Value:	15 (This value indicates a decrease in crashes)
Adjusted Standard Error:	

Applicability		
Crash Type:	All	
Crash Severity:	All	
Roadway Types:	Not specified	
Number of Lanes:		
Road Division Type:		
Speed Limit:	40-60	
Area Type:	Urban	
Traffic Volume:	20500 to 60683 Annual Average Daily Traffic (AADT)	
Time of Day:		
If countermeasure is intersection-based		

Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details		
Date Range of Data Used:	2003 to 2012	
Municipality:		
State:	FL	

Country:	
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	
Other Details	
Included in Highway Safety Manual?	No

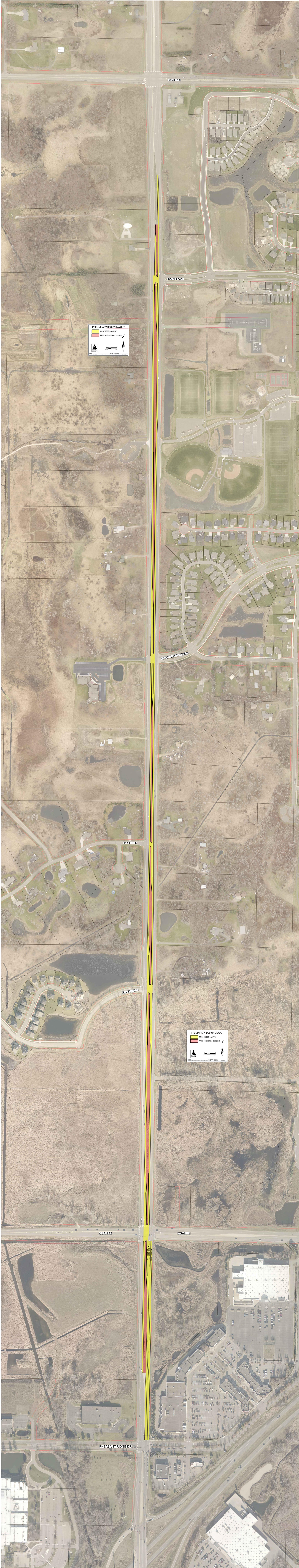
This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

Mar-08-2016

Date Added to Clearinghouse:

Comments:

The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.



Project Area Map: CSAH 17 Expansion in Blaine





1-Page Information Sheet: CSAH 17 Expansion in Blaine

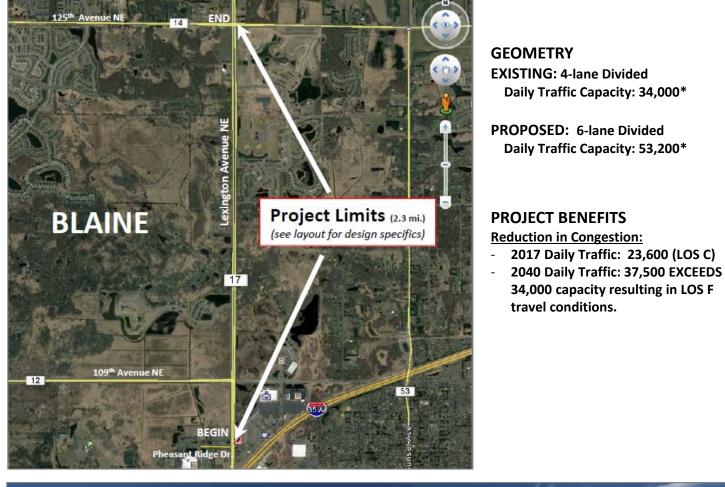


Anoka County MINNESOTA tful, Innovative, Fiscally Responsible

PROJECT NAME: CSAH 17 (Lexington Avenue NE) Expansion to 6-lanes GEOGRAPHIC LIMITS: 2.3 miles. From north of Pheasant Ridge Ave. NE to CSAH 14 (125th Avenue NE) **PROJECT LOCATION:** City of Blaine, Anoka County **APPLICANT: Anoka County Highway Department FUNDING REQUEST: \$5,132,000** TOTAL PROJECT COST: \$6,415,000

PROJECT DESCRIPTION

CSAH 17, an A Minor Expander, is currently a four-lane divided roadway that has experienced substantial traffic growth in recent years and needs expansion to a six-lanes, for which the roadway was originally designed. The median of the existing roadway was designed so that the roadway could easily be expanded to the inside. The expansion project will also include turn-lane treatments at major intersections.





* Daily Capacity of the roadway was obtained directly for the roadway from the Met Council Regional Activity Based Model. For simplicity, when volume exceeds capacity the roadway is congested.

BOARD OF COUNTY COMMISSIONERS

Anoka County, Minnesota

DATE: May 22, 2018 OFFERED BY COMMISSIONER: Schulte **RESOLUTION #2018-80**

AUTHORIZING SUBMITTAL OF FEDERAL FUNDING APPLICATION FOR THE CSAH 17 EXPANSION PROJECT

WHEREAS, CSAH 17 (Lexington Avenue NE) is an "A" Minor Arterial Expander route that provides an important north-south transportation connection in Anoka County; and,

WHEREAS, traffic volumes on CSAH 17 have been increasing over the past decade and are expected to continue to increase in the future as the area continues to grow; and,

WHEREAS, existing and future traffic volumes are such that congestion is and will continue to negatively impact the ability of the corridor to move traffic; and,

WHEREAS, existing and future traffic volumes are such that safety is a concern at intersections and along some segments of the corridor; and,

WHEREAS, Anoka County and the City of Blaine have worked together in the past to make capacity and safety improvements to other segments of CSAH 17 to serve long-term growth and development along the corridor:

NOW, THEREFORE, BE IT RESOLVED that the Anoka County Highway Department is hereby authorized to submit an application through the Metropolitan Council's 2018 Regional Solicitation program to the Transportation Advisory Board to receive federal transportation funds to make capacity and safety improvements on CSAH 17 (Lexington Avenue NE) from Pheasant Ridge Avenue NE to CSAH 14 (125th Avenue NE) in the Roadway Expansion category.

STATE OF MINNESOTA) COUNTY OF ANOKA) ^{SS}

I, Jerry Soma, County Administrator, Anoka County, Minnesota, hereby certify that I have compared the foregoing copy of the resolution of the county board of said county with the original record thereof on file in the Administration Office, Anoka County, Minnesota, as stated in the minutes of the proceedings of said board at a meeting duly held on May 22, 2018, and that the same is a true and correct copy of said original record and of the whole thereof, and that said resolution was duly passed by said board at said meeting.

Witness my hand and seal this 22nd day

of May 2018 JERRY SOMA COUNTY ADMINISTRATOR

	YES	NO
District #1 – Look	Х	
District #2 – Braastad	Х	
DISTRICT #3 – WEST	Х	
District #4 – Kordiak	Х	
DISTRICT #5 – GAMACHE	Х	
DISTRICT #6 – SIVARAJAH	Х	
DISTRICT #7 – SCHULTE	Х	



July 3, 2018

Doug Fischer, PE County Engineer Anoka County Highway Department 1440 Bunker Lake Blvd. NW Andover, MN 55304

Subject: Letter of Support for CSAH 17 Corridor Improvements

Dear Mr. Fischer,

This letter documents the City of Blaine's support for Anoka County's funding request to the Metropolitan Council for the 2018 Regional Solicitation for 2022-2023 funding for the expansion of CSAH 17 (Lexington Avenue NE). to six lanes from Pheasant Ridge to CSAH 14 (125th Avenue NE).

Blaine looks forward to continued cooperation with Anoka County as this project moves forward and as we work together to improve travel mobility and safety in Anoka County. If you have any questions or require additional information, please reach out to me at 763-785.6121

Sincerely,

Just An

Clark Arneson Blaine City Manager

Project Area Map: CSAH 17 Expansion in Blaine



