Application

01968 - 2014 Roadway Reconstruction/Modernization

02217 - CSAH 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) Intersection Improvements

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	12/01/2014 1:25 PM

Primary Contact

Name:*		Christopher	Edwin	Hartzell
	Salutation	First Name	Middle Name	Last Name
Title:	Senior Project Manager			
Department:	Dakota County Transportation Department			
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What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements			

Organization Information

Name:	DAKOTA COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: 14955 GALAXIE AVE

*	APPLE VALLEY	Minnesota	55124
	City	State/Province	Postal Code/Zip

County: Dakota

Phone:* 952-891-7545 Ext.

Fax:

PeopleSoft Vendor Number 0000002621A28

Project Information

Project Name CSAH 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) Intersection Improvements

Primary County where the Project is Located Dakota

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Limit 2,800 characters; approximately 400 words)

County State Aid Highway (CSAH) 26 (Lone Oak Road) is a four-lane, divided, A-Minor Reliever Arterial roadway. The westbound and eastbound approach geometrics consists of an exclusive left turn lane, two through lanes, and an right turn lane with a free right turn movement at the southeast quadrant. The 2013 Average Annual Daily Traffic (AADT) is 24,800 west of CSAH 43 (Lexington Avenue) and 15,100 to the east. The current speed limit is 40 miles per hour west of CSAH 43 and 45 miles per hour to the east.

CSAH 43 is four-lane, divided on the northbound and undivided on the southbound, B-Minor Arterial roadway. The geometrics for the northbound approach consists of exclusive dual left turn lanes, a through lane, and a right turn lane and the southbound approach consists of two through lanes and an exclusive left turn lane. The 2013 AADT is 14,700 south of CSAH 26 and 10,900 to the north. The current speed limit is 50 miles per hour south of CSAH 26 and 40 miles per hour to the north.

Currently, the signalized intersection operates with split phase timing because of the mismatched turn lanes and roadway geometrics. To improve the safety and operations of the intersection, the following improvements are proposed:

Construct exclusive dual left turn lanes on the northbound and southbound approaches.

Construct exclusive right turn lanes on the southbound approach.

Reconstruct the signal

Change the left turn movement operation on

Lexington Avenue to protected/permissive utilizing flashing yellow operations.

Address pedestrian and ADA issues.

Include location, road name/functional class, type of improvement, etc.

Project Length (Miles) 0.44

Connection to Local Planning:

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 MnDOT 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.

Connection to Local Planning

This project has been identified in the Draft Dakota County 2015-2019 Capital Improvements Plan (pages 3-5) and the City of Eagan 2015-2019 Capital Improvement Program (pages 60, 62). In addition, this project was identified in the Dakota County Safety Plan as a high priority intersection to reduce right angle crashes (page 4-4).

Project Funding

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

If yes, please identify the source(s)

Federal Amount $2,000,000.00

Match Amount $500,000.00

Minimum of 20% of project total

Project Total $2,500,000.00

Match Percentage 20.0%

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

Source of Match Funds County/City Funds

Preferred Program Year

Select one: 2019

MnDOT State Aid Project Information: Roadway Projects

County, City, or Lead Agency Dakota County

Functional Class of Road A - Minor Reliever

Road System *TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET*	CSAH
Name of Road *Example; 1st ST., MAIN AVE*	CSAH 26 (Lone Oak Road)
Zip Code where Majority of Work is Being Performed	55121
(Approximate) Begin Construction Date	04/30/2019
(Approximate) End Construction Date	11/29/2019

LOCATION

From: **(Intersection or Address)** *Do not include legal description;* *Include name of roadway if majority of facility runs adjacent to a single corridor.*	CSAH 26
To: **(Intersection or Address)**	CSAH 43
Type of Work *Examples: grading, aggregate base, bituminous base, bituminous surface, sidewalk, signals, lighting, guardrail, bicycle path, ped ramps, bridge, Park & Ride, etc.)*	grading, aggregate base, bituminous base, bituminous surface, sidewalk, bicycle path, curb and gutter, storm sewer, signals
Old Bridge/Culvert?	No
New Bridge/Culvert?	No
Structure is Over/Under **(Bridge or culvert name):**	

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$90,000.00
Removals (approx. 5% of total cost)	$90,000.00
Roadway (grading, borrow, etc.)	$65,000.00
Roadway (aggregates and paving)	$745,000.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$430,000.00
Ponds	$90,000.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$200,000.00
Traffic Control	$20,000.00
Striping	$10,000.00
Signing	$5,000.00

Lighting	$0.00
Turf - Erosion & Landscaping	$5,000.00
Bridge	$0.00
Retaining Walls	$180,000.00
Noise Wall	$0.00
Traffic Signals	$405,000.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$90,000.00
Other Roadway Elements	$0.00
Totals	**$2,425,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$50,000.00
Sidewalk Construction	$0.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$5,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$20,000.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$0.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$75,000.00**

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
Transit and TDM Contingencies	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

OPERATING COSTS	**Cost**
Transit Operating Costs	$0.00
Totals	**$0.00**

Totals

Total Cost	$2,500,000.00
Construction Cost Total	$2,500,000.00
Transit Operating Cost Total	$0.00

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 2030 Transportation Policy Plan (amended 2013), the 2030 Regional Parks Policy Plan (amended 2013), and the 2030 Water Resources Management Policy Plan (2005).

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

2.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

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

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

4.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. Expansion, reconstruction/modernization, and bridges must be between $1,000,000 and $7,000,000. Roadway system management must be between $250,000 and $7,000,000.

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

5.The project must comply with the Americans with Disabilities Act.

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

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

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

7.The owner/operator of the facility must operate and maintain the project for the useful life of the improvement.

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

8.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

9.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

10.The project applicant must send written notification regarding the proposed projected to all affected communities and other levels and units of government prior to submitting the application.

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

Requirements - Roadways Including Multimodal Elements

Expansion and Reconstruction/Modernization Projects Only

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

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

2.Federal funds are available for roadway construction and reconstruction on new alignments or within existing right-of-way, including associated construction and excavation, bridges, or installation of traffic signals, signs, utilities, bikeway or walkway components and transit components.
The project must exclude costs for right-of-way, studies, preliminary engineering, design, or construction engineering. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding unless included as part of a larger project, which is otherwise eligible.

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

Bridge Projects Only

3.The bridge project 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.

4.Bridges selected in previous Bridge Improvement and Replacement solicitations (1994 2011) are not eligible. A previously selected project is not eligible unless it has been withdrawn or sunset prior to the deadline for proposals in this solicitation.

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

5.Projects requiring a grade-separated crossing of a Principal Arterial of freeway design 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.

6.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 sub-categories. Rail-only bridges are ineligible for funding.

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

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

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

8.Project limits for bridge projects are limited from abutment to abutment.

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

9.The project must exclude costs for studies, preliminary engineering, design, construction engineering, and right-of-way.

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

Bridge Replacement Projects Only

10.The bridge must have a sufficienty rating less than 50. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

Bridge Rehabilitiation Projects Only

11.The bridge must have a sufficienty rating less than 80. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

Other Attachments

File Name	Description	File Size
2217 Dakota Co HSIP.pdf	Crash B/C	32 KB
2652 LAYOUT.pdf	Concept layout of the CSAH 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) Intersection Improvements	672 KB
CSAH 26_CSAH 43 (East of I-35E interchange) MnDOT Letter of support.pdf	MnDOT Letter of Support	38 KB
Eagan - Letter of Support 26-43 Regional Solicit.pdf	City of Eagan Letter of Support	852 KB

Reliever: Freeway Facility or

Facility being relieved	I-494 Eastbound
Number of hours per day volume exceeds capacity (based on the Congestion Report)	1.0

Reliever: Non-Freeway Facility or

Facility being relieved	
Number of hours per day volume exceeds capacity (based on the table below)	0

Non-Freeway Facility Volume/Capacity Table

Hour	NB/EB Volume	SB/WB Volume	Capacity	Volume exceeds capacity
12:00am - 1:00am				
1:00am - 2:00am				
2:00am - 3:00am				
3:00am - 4:00am				
4:00am - 5:00am				
5:00am - 6:00am				
6:00am - 7:00am				
7:00am - 8:00am				
8:00am - 9:00am				
9:00am - 10:00am				
10:00am - 11:00am				
11:00am - 12:00pm				
12:00pm - 1:00pm				
1:00pm - 2:00pm				
2:00pm - 3:00pm				
3:00pm - 4:00pm				
4:00pm - 5:00pm				
5:00pm - 6:00pm				
6:00pm - 7:00pm				
7:00pm - 8:00pm				
8:00pm - 9:00pm				
9:00pm - 10:00pm				
10:00pm - 11:00pm				
11:00pm - 12:00am				

Expander/Connector/Augmentor/Non-Freeway Principal Arterial

Select one:

Area	0
Project Length	0
Average Distance	0

Upload Map

Measure B: Current Heavy Commercial Traffic

Location	East of CSAH 26 (Lone Oak Road) at CSAH 43 (Lexington Avenue) Intersection
Current daily heavy commercial traffic volume	992.0

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

Select all that apply

Direct connection to or within a mile of a Job Concentration	Yes
Direct connection to or within a mile of a Manufacturing/Distribution Location	Yes
Direct connection to or within a mile of an Educational Institution	Yes
Project provides a direct connection to or within a mile of an existing local activity center identified in an adopted county or city plan	Yes
County or City Plan Reference (Limit 700 characters; approximately 100 words)	This project is located in an area of job concentration, manufacturing and distribution, and multiple educational institutions as detailed in the attached regional economy map. In addition, this project provides a major east-west connection along Dakota County State Aid Highway (CSAH) 26 (Lone Oak Road) to the Eagan Community Center which is approximately 1 mile from the intersection of CSAH 26 & CSAH 43 (Lexington Avenue) located along CSAH 31 (Pilot Knob Road). The Eagan Community Center is shown in the adopted City of Eagan 2030 Comprehensive Plan (page 5-9).
Upload Map	Regional Economy Map.pdf

Measure A: Current Daily Person Throughput

Location	CSAH 26 (Lone Oak Road) between I-35E and CSAH 43
Current AADT Volume	24800.0
Existing Transit Routes on the Project	2

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	461.0
Current Daily Person Throughput	32701.0

Measure B: 2030 Forecast ADT

Use Metropolitan Council model to determine forecast (2030) ADT volume	
METC Staff - Forecast (2030) ADT volume	0
OR	
Approved county or city travel demand model to determine forecast (2030) ADT volume	Yes
Forecast (2030) ADT volume	36000.0

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Racially Concentrated Area of Poverty	
Project located in Concentrated Area of Poverty	
Projects census tracts are above the regional average for population in poverty or population of color	
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
Response (Limit 1,400 characters; approximately 200 words)	The project is surrounded by areas of above average concentration of race and poverty as show in census tracts 607.26, 607.28, and 605.05. This corridor connects areas of employment, commercial, industrial, and a few residential areas. A shared use trail on both sides of both the major and minor legs of the intersection will provide for ADA compliant safe crossings for all users. The primary benefit to the community will be realized through reduced delays and increased safety at the intersection for motorists, transit, and pedestrian users.
Upload Map	Socio-Economic Conditions Map.pdf

Measure B: Affordable Housing

City/Township	Segment Length (Miles)
Eagan	0.44

0

Total Project Length

Total Project Length	0.44

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score	Segment Length/Total Length	Housing Score Multiplied by Segment percent
Eagan	0.44	0.44	82.0	1.0	82.0
		0	**82**	**1**	**82**

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.44
Total Housing Score	82.0

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Roadway Segment Length (Miles)	Calculation	Calculation 2
1994.0	0.44	877.36	1994.0
	0	**877**	**1994**

Average Construction Year

Weighted Year	1994.0

Total Segment Length (Miles)

Total Segment Length	0.44

Measure B: Geometric, Structural, or Infrastructure Improvements

Response (Limit 1,400 characters; approximately 200 words)	Dakota County State Aid Highway (CSAH) 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) are currently four-lane, divided roadways, except on the southbound approach. The signal operates with split phase timing because of mismatched turn lanes and roadway geometrics. To improve the safety and operations of the intersection, the intersection is proposed to be constructed with exclusive dual left turn lanes on the northbound and southbound approaches and exclusive right turn lanes on all approaches of the intersection. Drainage improvements to the project will be constructed as a result of the installation of additional turn lanes and new impervious surfaces including upgrading the existing storm sewer for capacity and providing ponding per the National Pollutant Discharge Elimination System (NPDES) and Local Watershed requirements.

Measure A: Cost Effectiveness of Vehicle Delay Reduction

Total Project Cost from Cost Sheet	$2,500,000.00
Total Peak Hour Vehicle Delay Without The Project	31.0
Total Peak Hour Vehicle Delay With The Project	15.0
Total Peak Hour Vehicle Delay Reduced by Project	16.0
Cost Effectiveness	$156,250.00
Synchro or HCM Reports	Synchro Reports.pdf

Measure B: Cost Effectiveness of Emissions Reduction

Total Project Cost from Cost Sheet	$2,500,000.00
Total Peak Hour Kilograms Reduced by Project	1.52
Cost Effectiveness	$1,644,736.84
Synchro or HCM Reports	Synchro Reports - Emission Reduction.pdf

Measure A: Benefit/Cost of Crash Reduction

Project Benefit/Cost Ratio	1.14
Worksheet Attachment	Benefit-Cost Worksheet (w-Additional Primary Head & RTL).xls

Measure A: Transit Connections

Existing Routes Directly Connected to the Project	446, 489
Planned Transitways directly connected to the project (alignment and mode determined and identified in the 2030 TPP)	N/A
Upload Map	Transit Connections Map.pdf

Response

Met Council Staff Data Entry Only

Route Ridership	116787.0
Transitway Ridership	0

Measure B: Bicycle and Pedestrian Connections

Response (Limit 1,400 characters; approximately 200 words)	Both Dakota County State Aid Highway (CSAH) 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) currently have shared use trails on both sides of the roadway that provide pedestrian access to the heart of the business and commercial /industrial corridor surrounding this intersection, including the Eagandale Center Industrial Park, the United States Postal Service Bulk Mail Center, and the Eagan Promenade. The primary pedestrian and bicycle traffic that this intersection experiences will be commuter traffic that connects people to these areas of employment. CSAH 26 is listed as a Tier 2 Regional Bicycle Transportation Corridor and the CSAH 26 and CSAH 43 intersection is the primary intersection that feeds pedestrian traffic to Lexington Park via the trail systems along the roadway corridor.

Measure C: Multimodal Facilities

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

The proposed project includes reconstruction of the existing trails on the west side of the northbound approach and both sides of the southbound approach. The entire signal will be reconstructed with accessible pedestrian signals and ADA standards being applied to provide safe pedestrian and bicycle movements through the intersection.

Transit Projects Not Requiring Construction

If the applicant is completing a transit or TDM application, only Park-and-Ride and other construction projects require completion of the Risk Assessment below. Check the box below if the project does not require the Risk Assessment fields, and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment

1)Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred

100%

Stakeholders have been identified Yes

40%

Stakeholders have not been identified or contacted

0%

2)Layout or Preliminary Plan (5 Percent of Points)

Layout or Preliminary Plan completed Yes

100%

Layout or Preliminary Plan started

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion 03/30/2018

3)Environmental Documentation (10 Percent of Points)

EIS

EA

PM Yes

Document Status:

Document approved (include copy of signed cover sheet)

100%

Document submitted to State Aid for review

75%

Document in progress; environmental impacts identified

50%

Document not started Yes

0%

Anticipated date or date of completion/approval 06/30/2018

4)Review of Section 106 Historic Resources (15 Percent of Points)

No known potential for archaeological resources, no historic resources known to be eligible for/listed on the National Register of Historic Places located in the project area, and project is not located on an identified historic bridge

100%

Historic/archeological review under way; determination of no historic properties affected or no adverse effect anticipated

80%

Historic/archaeological review under way; determination of adverse effect anticipated

40%

Unknown impacts to historic/archaeological resources Yes

0%

Anticipated date or date of completion of historic/archeological review: 06/30/2018

Project is located on an identified historic bridge

5)Review of Section 4f/6f Resources (15 Percent of Points)

(4f is publicly owned parks, recreation areas, historic sites, wildlife or waterfowl refuges; 6f is outdoor recreation lands where Land and Water Conservation Funds were used for planning, acquisition, or development of the property)

No Section 4f/6f resources located in the project area Yes

100%

Project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received

100%

Section 4f resources present within the project area, but no known adverse effects

80%

Adverse effects (land conversion) to Section 4f/6f resources likely

30%

Unknown impacts to Section 4f/6f resources in the project area

0%

6)Right-of-Way (15 Percent of Points)

Right-of-way or easements not required

100%

Right-of-way or easements has/have been acquired

100%

Right-of-way or easements required, offers made

75%

Right-of-way or easements required, appraisals made

50%

Right-of-way or easements required, parcels identified Yes

25%

Right-of-way or easements required, parcels not identified

0%

Right-of-way or easements identification has not been completed

0%

Anticipated date or date of acquisition 09/28/2018

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project Yes

100%

Railroad Right-of-Way Agreement is executed (include signature page)

100%

Railroad Right-of-Way Agreement required; Agreement has been initiated

60%

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

40%

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

0%

Anticipated date or date of executed Agreement

8)Construction Documents/Plan (10 Percent of Points)

Construction plans completed/approved (include signed title sheet)

100%

Construction plans submitted to State Aid for review

75%

Construction plans in progress; at least 30% completion

50%

Construction plans have not been started Yes

0%

Anticipated date or date of completion 11/30/2018

9)Letting

Anticipated Letting Date 02/27/2019

Summary

HSIP Benefit/Cost Worksheet
Dakota County
CSAH 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue) Intersection Improvements

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 26	Intersection of CSAH 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue)	1+00	N/A	Dakota County	1/1/2011	1/1/2014

Description of Proposed Work: Calculation of proposed crash reduction treatment / factors. Add dual left turn lanes, dedicated right turn lane, two through lanes, etc. Summarization of all legs (see other worksheets)

		Accident Diagram Codes	1 Rear End	2 Sideswipe - Same Direction	3 Left Turn Main Line	5 Right Angle	4, 7 Ran Off Road	8, 9 Head On / Sideswipe -	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A			1						1
		B				1					1
		C	4	1		3					8
	Property Damage	PD	11	3		4				1	19
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal	F									
	PI	A									
		B									
		C									
	Property Damage	PD									
Change in Crashes = No. of crashes **X** % change in crashes	Fatal	F									
	PI	A			-0.28						-0.28
		B				-0.28					-0.28
		C	-1.70	-0.28		-1.13					-3.10
	Property Damage	PD	-3.08	-0.84		-1.12				-0.28	-5.32

Year (Safety Improvement Construction): 2019

Project Cost (exclude Right of Way)	$ 2,500,000
Right of Way Costs (optional)	N/A
Traffic Growth Factor	3%
Capital Recovery	
1. Discount Rate	4.5%
2. Project Service Life (n)	20

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			$ 10,300,000	
A	-0.28	-0.09	$ 550,000	$ 51,286
B	-0.28	-0.09	$ 160,000	$ 14,920
C	-3.10	-1.03	$ 81,000	$ 83,732
PD	-5.32	-1.77	$ 7,400	$ 13,111
Total				$ 163,048

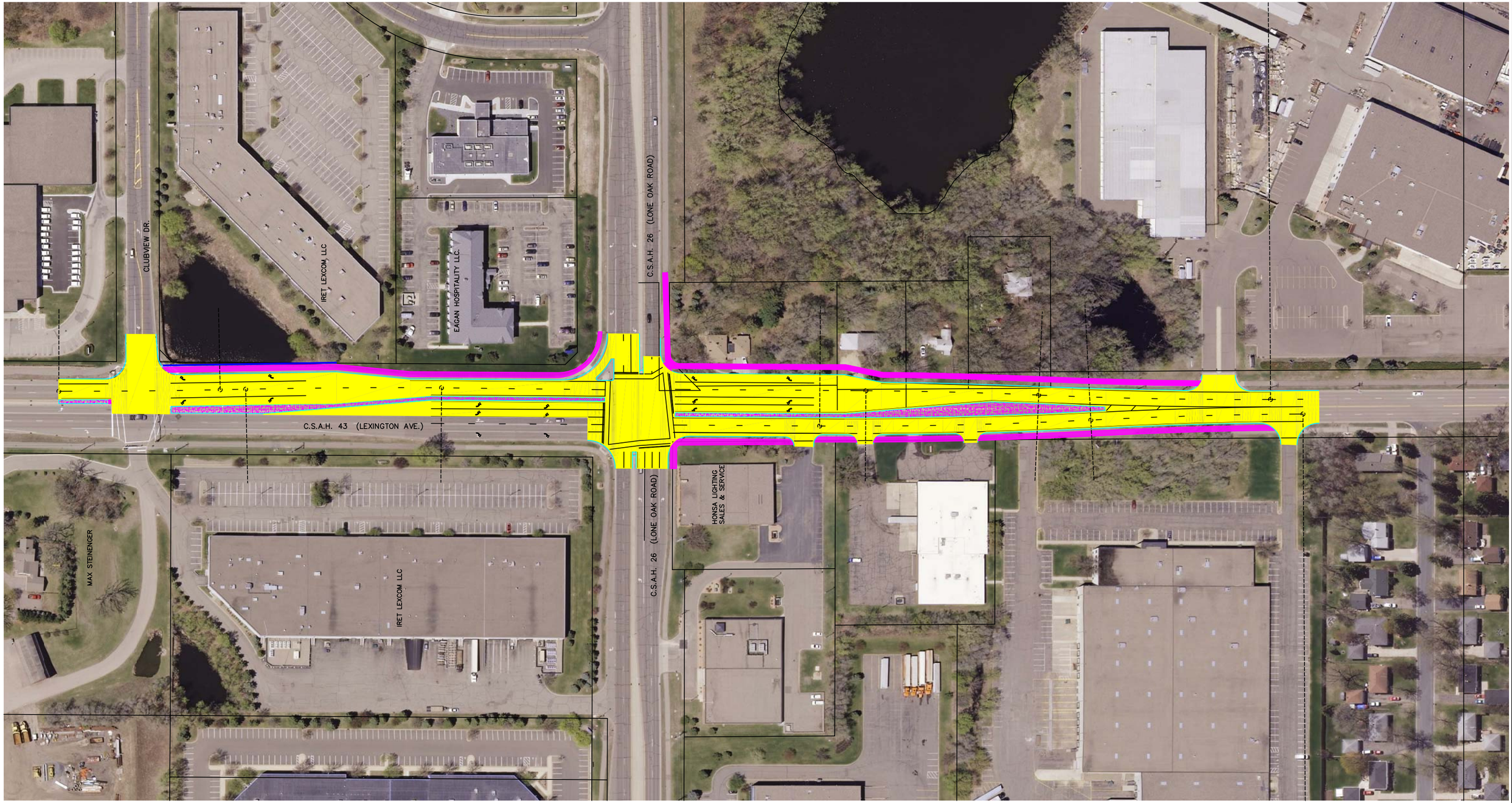
B/C= 1.14

Using present worth values,

B= $ 2,852,356

C= $ 2,500,000

See "Calculations" sheet for amortization.



HORZ. 150 75 0 150

Dakota County transportation we get you there

C.S.A.H. 26 (LONE OAK RD.) & C.S.A.H. 43 (LEXINGTON AVE.) INTERSECTION IMPROVEMENTS CONCEPT LAYOUT

Minnesota Department of Transportation
Metro District
1500 West County Road B-2
Roseville, MN 5511

November 25, 2014

Brian K. Sorenson
Assistant County Engineer
Dakota County Transportation Department
14955 Galaxie Avenue
Apple Valley, MN 55124

RE: Regional Solicitation Application for intersection improvements at CSAH26 and CSAH 43 (just east of I-35E interchange)

Dear Mr. Sorenson:

Thank you for requesting a letter of support from MnDOT for the Metropolitan Council's 2014 Regional Solicitation. Your application for intersection improvements at CSAH26 and CSAH 43 (just east of I-35E interchange) impacts MnDOT right of way on along I-35E.

As the agency with jurisdiction over I-35E, MnDOT supports the application for intersection improvements near I-35E. Details of a future maintenance agreement with the county will be determined during project development to define how the project will be maintained for the project's useful life.

This project currently has no funding from MnDOT.

Sincerely,

Scott McBride, P.E.
Metro District Engineer

Cc: Elaine Koustsoukos, Metropolitan Council
Jon Solberg, MnDOT Metro District - South Area Manager

City of Eagan

November 14, 2014

Mr. Mark Krebsbach, P.E.
Dakota County Engineer
Western Service Center
14955 Galaxie Ave. S.
Apple Valley, MN 55124

RE: Federal STP Letter of Support for Dakota County CSAH 26 and CSAH 43 Intersection Improvements (Roadway Reconstruction / Modernization) Project

Dear Mark:

The City of Eagan is supportive of Dakota County's application for federal funding for signal phasing and geometric improvements to the intersection of County State Aid Highway (CSAH) 26 (Lone Oak Road) and CSAH 43 (Lexington Avenue). This project would be a joint effort between the City of Eagan and Dakota County.

The City of Eagan is aware of and understands the proposed project will affect Dakota County CSAH 26 and CSAH 43. Dakota County has jurisdiction over CSAH 26 and CSAH 43 and commits to operate and maintain this roadway for its design life.

The City of Eagan supports this proposed project for federal funding and agrees to provide a financial commitment for the improvements directly related to CSAH 26 and CSAH 43, consistent with the current County cost participation policy. Thank you for making us aware of this application effort and the opportunity to provide support.

Sincerely,

John Gorder, P.E.
City Engineer

Municipal Center
3830 Pilot Knob Road
Eagan, MN 55122-1810
651.675.5000 phone
651.675.5012 fax
651.454.8535 TDD

Maintenance Facility
3501 Coachman Point
Eagan, MN 55122
651.675.5300 phone
651.675.5360 fax
651.454.8535 TDD

www.cityofeagan.com

Regional Economy

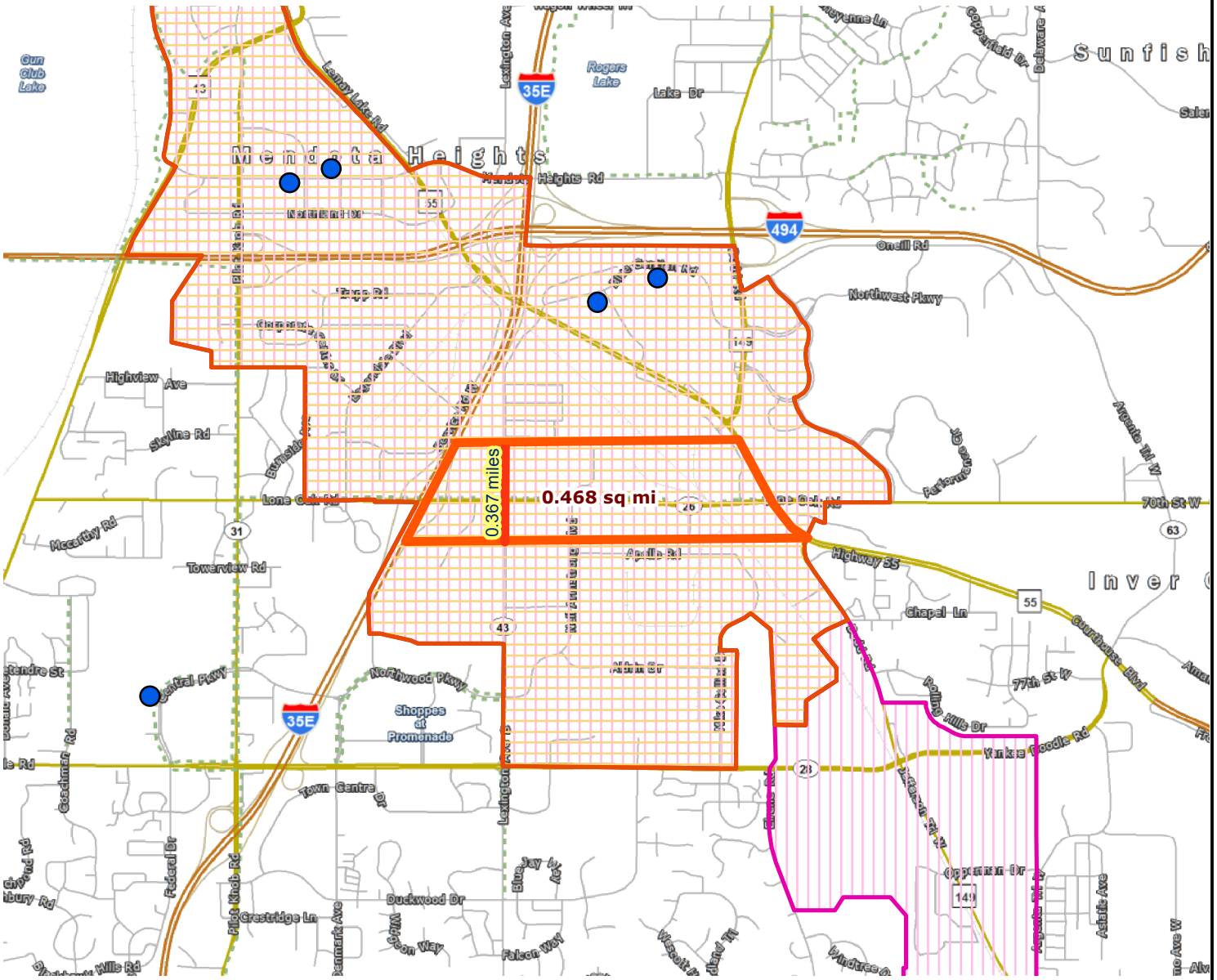
Roadway Reconstruction/Modernization Project: CSAH 26 (Lone Oak Road) & CSAH 43 (Lexington Avenue) Interse | Map ID: 1415912

Results

Project **IN** area of Job Concentration.

Project **IN** area of Manufacturing and Distribution.

Project **WITHIN ONE MI** of area of Education Institutions.



Project
Project Area
PostSecondary Education Centers
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.35 0.7 1.4 2.1 2.8 Miles

Created: 11/13/2014
LandscapeRSA5

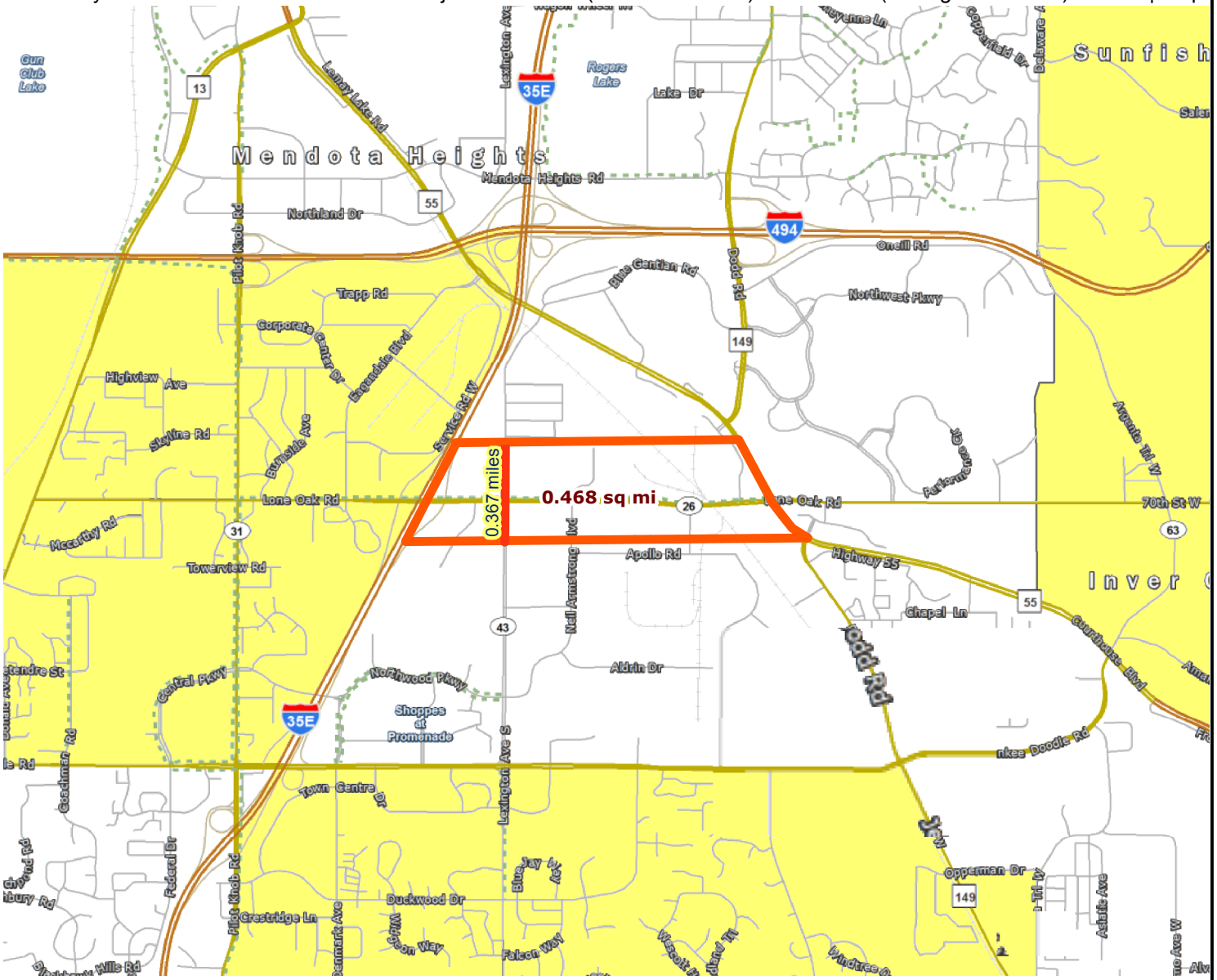
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: CSAH 26 (Lone Oak Road) & CSAH 43 (Lexington Avenue) Interse | Map ID: 1

Results

Project **NOT IN** any area of concentrated poverty.



Project
Project Area
Racially concentrated area of poverty
Concentrated area of poverty
Above reg'l avg conc of race/poverty

0 0.35 0.7 1.4 2.1 2.8 Miles

Created: 11/13/2014
LandscapeRSA2

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

METROPOLITAN COUNCIL

11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

Direction	All
Volume (vph)	3233
Total Delay / Veh (s/v)	31
CO Emissions (kg)	6.86
NOx Emissions (kg)	1.34
VOC Emissions (kg)	1.59

11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

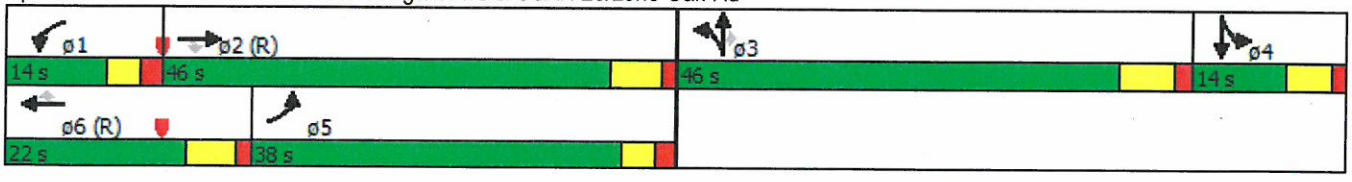
Direction	All
Volume (vph)	3233
Total Delay / Veh (s/v)	15
CO Emissions (kg)	5.80
NOx Emissions (kg)	1.13
VOC Emissions (kg)	1.34

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	1526	3164	1500	1676	3175	0
Flt Permitted	0.950			0.950			0.950	0.985		0.950		
Satd. Flow (perm)	1676	3353	1500	1676	3353	1500	1526	3164	1500	1676	3175	0
Satd. Flow (RTOR)			232			136			177		61	
Adj. Flow (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Lane Group Flow (vph)	241	925	232	61	243	34	286	594	50	50	172	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Total Split (s)	38.0	46.0	46.0	14.0	22.0	22.0	46.0	46.0	46.0	14.0	14.0	
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	3.5	3.5	3.5	3.0	3.0	
Act Effct Green (s)	34.0	52.4	52.4	8.8	25.1	25.1	36.5	36.5	36.5	10.9	10.9	
Actuated g/C Ratio	0.28	0.44	0.44	0.07	0.21	0.21	0.30	0.30	0.30	0.09	0.09	
v/c Ratio	0.51	0.63	0.30	0.50	0.35	0.08	0.62	0.62	0.09	0.33	0.50	
Control Delay	40.5	31.1	4.4	69.6	47.7	2.3	40.7	37.9	1.5	57.4	38.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.5	31.1	4.4	69.6	47.7	2.3	40.7	37.9	1.5	57.4	38.6	
LOS	D	C	A	E	D	A	D	D	A	E	D	
Approach Delay		28.3			47.1			36.8			42.9	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	156	310	0	47	90	0	212	219	0	37	42	
Queue Length 95th (ft)	240	413	53	93	137	0	296	268	9	79	80	
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	80		
Base Capacity (vph)	474	1463	785	139	702	421	540	1120	645	156	352	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.51	0.63	0.30	0.44	0.35	0.08	0.53	0.53	0.08	0.32	0.49	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 34.4 — Intersection LOS: C
Intersection Capacity Utilization 67.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

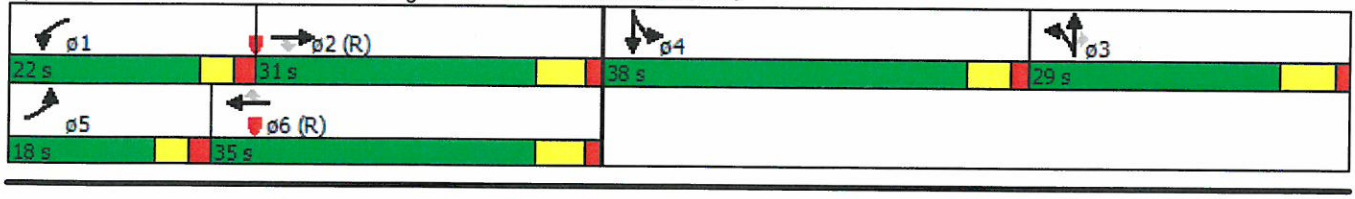


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	1526	3128	1500	1676	3219	0
Flt Permitted	0.950			0.950			0.950	0.974		0.950		
Satd. Flow (perm)	1676	3353	1500	1676	3353	1500	1526	3128	1500	1676	3219	0
Satd. Flow (RTOR)			368			127			123		43	
Adj. Flow (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Lane Group Flow (vph)	102	425	368	122	730	43	219	420	89	30	685	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Total Split (s)	18.0	31.0	31.0	22.0	35.0	35.0	29.0	29.0	29.0	38.0	38.0	
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	3.5	3.5	3.5	3.0	3.0	
Act Effct Green (s)	11.7	36.2	36.2	13.8	38.3	38.3	24.3	24.3	24.3	32.2	32.2	
Actuated g/C Ratio	0.10	0.30	0.30	0.12	0.32	0.32	0.20	0.20	0.20	0.27	0.27	
v/c Ratio	0.63	0.42	0.52	0.64	0.68	0.08	0.71	0.66	0.22	0.07	0.77	
Control Delay	67.1	24.6	10.4	64.6	49.9	4.1	48.6	40.8	2.8	31.7	43.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	67.1	24.6	10.4	64.6	49.9	4.1	48.6	40.8	2.8	31.7	43.8	
LOS	E	C	B	E	D	A	D	D	A	C	D	
Approach Delay		23.6			49.7			38.5			43.3	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	75	155	83	90	313	2	181	173	3	17	236	
Queue Length 95th (ft)	m123	220	131	m143	369	m12	182	146	m9	41	304	
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	80		
Base Capacity (vph)	195	1012	709	251	1070	565	326	669	417	488	969	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.42	0.52	0.49	0.68	0.08	0.67	0.63	0.21	0.06	0.71	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 38.6 — Intersection LOS: D
Intersection Capacity Utilization 74.3% — ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

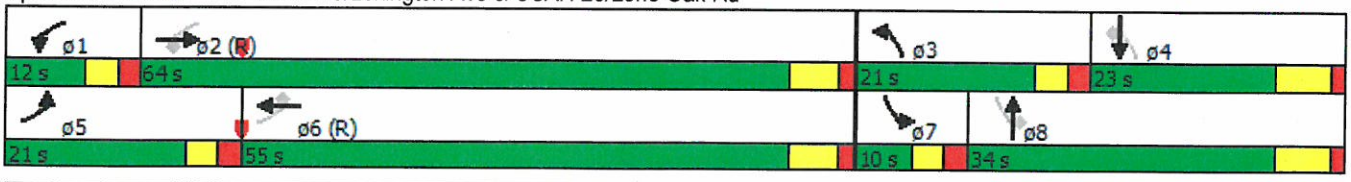


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	3252	3353	1500	3252	3353	1500
Flt Permitted	0.584			0.228			0.682			0.335		
Satd. Flow (perm)	1031	3353	1500	402	3353	1500	2335	3353	1500	1147	3353	1500
Satd. Flow (RTOR)			232			214			164			209
Adj. Flow (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Lane Group Flow (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Turn Type	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6		2	2		6	4		8	8		4
Total Split (s)	21.0	64.0	64.0	12.0	55.0	55.0	21.0	34.0	34.0	10.0	23.0	23.0
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	2.0	3.5	3.5	2.5	4.0	6.5
Act Effct Green (s)	72.6	68.5	68.5	73.4	60.7	60.7	35.4	27.9	27.9	34.9	14.9	12.4
Actuated g/C Ratio	0.60	0.57	0.57	0.61	0.51	0.51	0.30	0.23	0.23	0.29	0.12	0.10
v/c Ratio	0.35	0.48	0.24	0.19	0.14	0.04	0.56	0.54	0.11	0.11	0.27	0.18
Control Delay	10.2	17.7	1.9	9.1	14.1	0.1	32.2	39.4	0.4	28.4	48.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	17.7	1.9	9.1	14.1	0.1	32.2	39.4	0.4	28.4	48.5	1.1
LOS	B	B	A	A	B	A	C	D	A	C	D	A
Approach Delay		13.8			11.8			33.7			30.9	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	70	235	3	14	41	0	125	158	0	14	42	0
Queue Length 95th (ft)	m96	m383	m15	29	66	0	148	143	0	27	67	0
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	300		300
Base Capacity (vph)	738	1913	955	332	1696	864	842	859	506	465	530	386
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.48	0.24	0.18	0.14	0.04	0.55	0.49	0.10	0.11	0.21	0.16

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 21.3 — Intersection LOS: C
Intersection Capacity Utilization 63.7% — ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

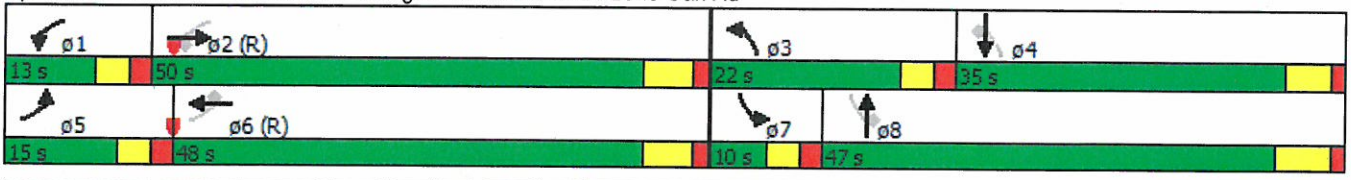


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	3252	3353	1500	3252	3353	1500
Flt Permitted	0.248			0.431			0.276			0.607		
Satd. Flow (perm)	438	3353	1500	761	3353	1500	945	3353	1500	2078	3353	1500
Satd. Flow (RTOR)			368			168			118			182
Adj. Flow (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Lane Group Flow (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Turn Type	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6		2	2		6	4		8	8		4
Total Split (s)	15.0	50.0	50.0	13.0	48.0	48.0	22.0	47.0	47.0	10.0	35.0	35.0
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	2.0	3.5	3.5	2.5	3.0	5.5
Act Effct Green (s)	59.6	52.0	52.0	59.6	51.6	51.6	48.4	42.9	42.9	48.4	28.0	25.5
Actuated g/C Ratio	0.50	0.43	0.43	0.50	0.43	0.43	0.40	0.36	0.36	0.40	0.23	0.21
v/c Ratio	0.33	0.29	0.43	0.27	0.51	0.06	0.58	0.17	0.15	0.03	0.64	0.39
Control Delay	23.4	29.4	10.4	13.2	20.3	0.1	24.3	21.6	3.1	18.9	45.1	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	29.4	10.4	13.2	20.3	0.1	24.3	21.6	3.1	18.9	45.1	7.9
LOS	C	C	B	B	C	A	C	C	A	B	D	A
Approach Delay		20.9			18.4			20.9			34.5	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	44	114	77	38	165	0	83	47	2	6	184	0
Queue Length 95th (ft)	m74	153	109	m62	204	m0	164	77	m9	15	234	58
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	300		300
Base Capacity (vph)	337	1453	858	451	1442	741	769	1233	625	910	894	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.29	0.43	0.27	0.51	0.06	0.57	0.16	0.14	0.03	0.56	0.36

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 23.2 — Intersection LOS: C
Intersection Capacity Utilization 68.5% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

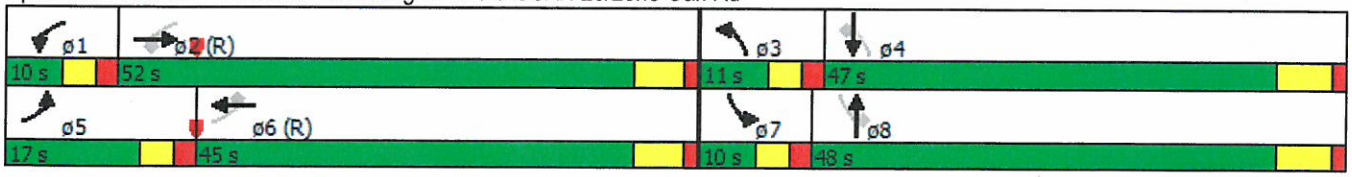


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	3252	1765	1500	3252	3353	1500
Flt Permitted	0.572			0.196			0.682			0.218		
Satd. Flow (perm)	1009	3353	1500	346	3353	1500	2335	1765	1500	746	3353	1500
Satd. Flow (RTOR)			232			168			164			164
Adj. Flow (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Lane Group Flow (vph)	241	925	232	61	243	34	462	418	50	50	111	61
Turn Type	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6		2	2		6	4		8	8		4
Total Split (s)	17.0	52.0	52.0	10.0	45.0	45.0	11.0	48.0	48.0	10.0	47.0	47.0
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	2.0	3.5	3.5	2.5	4.0	6.5
Act Effct Green (s)	63.0	59.2	59.2	63.8	51.4	51.4	45.0	37.5	37.5	44.5	34.0	31.5
Actuated g/C Ratio	0.52	0.49	0.49	0.53	0.43	0.43	0.38	0.31	0.31	0.37	0.28	0.26
v/c Ratio	0.40	0.56	0.27	0.24	0.17	0.05	0.49	0.76	0.09	0.12	0.12	0.12
Control Delay	9.0	12.9	1.3	15.2	20.4	0.1	24.7	41.7	0.3	19.9	29.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	12.9	1.3	15.2	20.4	0.1	24.7	41.7	0.3	19.9	29.5	0.5
LOS	A	B	A	B	C	A	C	D	A	B	C	A
Approach Delay		10.3			17.4			31.0			19.3	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)	50	171	2	19	62	0	111	259	0	11	32	0
Queue Length 95th (ft)	m89	m230	m11	38	90	1	130	277	0	22	51	0
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	300		300
Base Capacity (vph)	613	1655	857	258	1436	738	945	654	659	433	1201	614
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.56	0.27	0.24	0.17	0.05	0.49	0.64	0.08	0.12	0.09	0.10

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 18.5 — Intersection LOS: B
Intersection Capacity Utilization 64.4% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

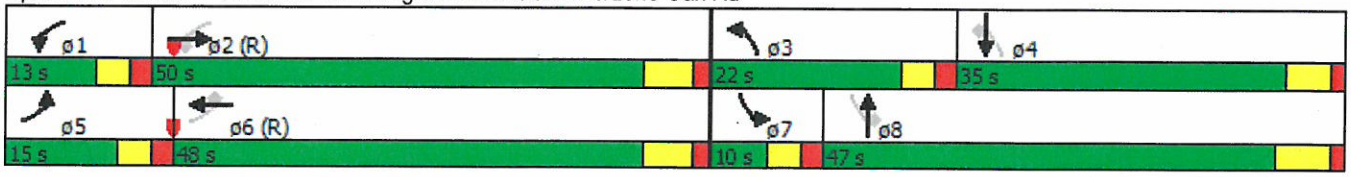


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Satd. Flow (prot)	1676	3353	1500	1676	3353	1500	3252	1765	1500	3252	3353	1500
Flt Permitted	0.248			0.431			0.276			0.541		
Satd. Flow (perm)	438	3353	1500	761	3353	1500	945	1765	1500	1852	3353	1500
Satd. Flow (RTOR)			368			168			118			182
Adj. Flow (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Lane Group Flow (vph)	102	425	368	122	730	43	439	200	89	30	503	182
Turn Type	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	6		2	2		6	4		8	8		4
Total Split (s)	15.0	50.0	50.0	13.0	48.0	48.0	22.0	47.0	47.0	10.0	35.0	35.0
Total Lost Time (s)	4.0	3.0	3.0	4.0	3.0	3.0	2.0	3.5	3.5	2.5	3.0	5.5
Act Effct Green (s)	59.6	52.0	52.0	59.6	51.6	51.6	48.4	42.9	42.9	48.4	28.0	25.5
Actuated g/C Ratio	0.50	0.43	0.43	0.50	0.43	0.43	0.40	0.36	0.36	0.40	0.23	0.21
v/c Ratio	0.33	0.29	0.43	0.27	0.51	0.06	0.58	0.32	0.15	0.04	0.64	0.39
Control Delay	23.4	29.4	10.4	13.2	20.3	0.1	24.3	24.1	3.1	18.9	45.1	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	29.4	10.4	13.2	20.3	0.1	24.3	24.1	3.1	18.9	45.1	7.9
LOS	C	C	B	B	C	A	C	C	A	B	D	A
Approach Delay		20.9			18.4			21.6			34.5	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)	44	114	77	38	165	0	83	100	2	6	184	0
Queue Length 95th (ft)	m74	153	109	m62	204	m0	164	164	m9	15	234	58
Internal Link Dist (ft)		1126			1236			735			1591	
Turn Bay Length (ft)	300		300	300		160	300		300	300		300
Base Capacity (vph)	337	1453	858	451	1442	741	769	648	625	833	894	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.29	0.43	0.27	0.51	0.06	0.57	0.31	0.14	0.04	0.56	0.36

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBWB and 6:EBWB, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 23.4 — Intersection LOS: C
Intersection Capacity Utilization 68.5% — ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd



11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

Direction	All
Volume (vph)	3233
Total Delay / Veh (s/v)	31
CO Emissions (kg)	6.86
NOx Emissions (kg)	1.34
VOC Emissions (kg)	1.59

11: CSAH 43/Lexington Ave & CSAH 26/Lone Oak Rd

Direction	All
Volume (vph)	3233
Total Delay / Veh (s/v)	15
CO Emissions (kg)	5.80
NOx Emissions (kg)	1.13
VOC Emissions (kg)	1.34

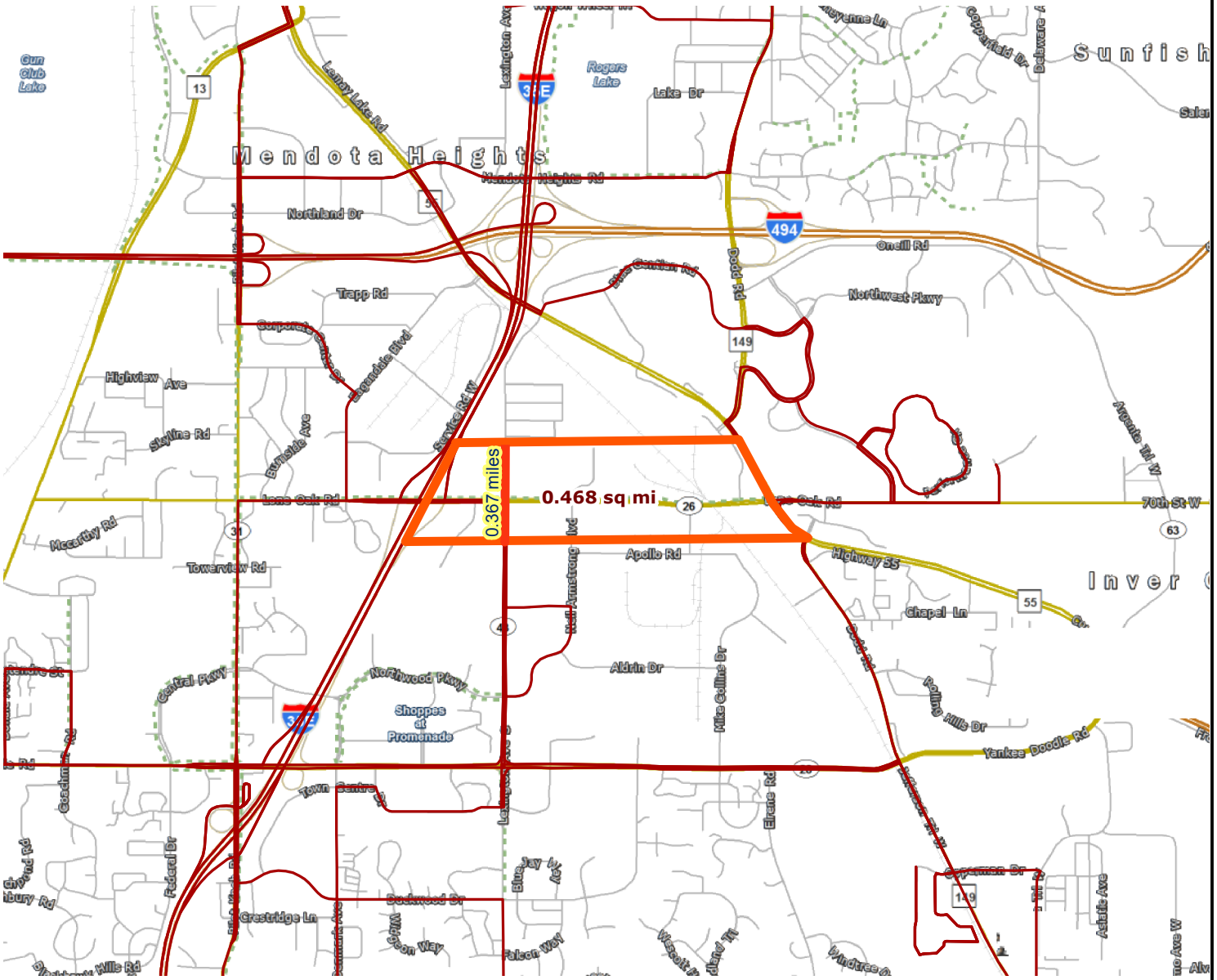
Transit Connections

Roadway Reconstruction/Modernization Project: CSAH 26 (Lone Oak Road) & CSAH 43 (Lexington Avenue) Interse | Map ID: 14159 12023

Results

Transit with a Direct Connection to project:
446 489

**indicates Planned Alignments*



Project
Transit Routes
Project Area

0 0.35 0.7 1.4 2.1 2.8 Miles

Created: 11/13/2014
LandscapeRSA3

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METROPOLITAN COUNCIL