



Application

01967 - 2014 Roadway Expansion

02251 - Reconstruction of CSAH 31 from I-35 to Northwood/Central Parkway in Eagan

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted

Submitted Date: 12/01/2014 10:12 AM

Primary Contact

Name:* John Gorder
Salutation First Name Middle Name Last Name

Title: City Engineer

Department:

Email: jgorder@cityofeagan.com

Address: 3830 Pilot Knob Road

***** Eagan Minnesota 55122
City State/Province Postal Code/Zip

Phone:* 651-675-5645
Phone Ext.

Fax:

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

Organization Information

Name: EAGAN, CITY OF

Jurisdictional Agency (if different):

Organization Type:

City

Organization Website:

Address:

3830 PILOT KNOB RD

*

EAGAN

Minnesota

55122

City

State/Province

Postal Code/Zip

County:

Dakota

Phone:*

651-681-4600

Ext.

Fax:

PeopleSoft Vendor Number

0000026812A1

Project Information

Project Name

Reconstruction of CSAH 31 from I-35E to Northwood/Central Parkway in Eagan

Primary County where the Project is Located

Dakota

Jurisdictional Agency (If Different than the Applicant):

Dakota County

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

This project involves the reconstruction of CSAH 31 (Pilot Knob Road), an A Minor Expander highway, in Eagan to address safety, capacity, and operational concerns, which were identified in the Pilot Knob Corridor Study conducted jointly by Dakota County and the City of Eagan in 2013. The proposed reconstruction includes an extension and revised design of the center median, the modification of city streets, and the construction of right turn lanes at various intersections to address safety and access management issues. The project also includes the addition of a third lane for traffic on southbound CSAH 31, which will provide a connection to the existing lane to access the I-35 southbound ramp. The signal systems at the CSAH 31 intersections with CSAH 28 and Northwood/Central Parkway will be replaced due to the improvements to the roadway and will match the proposed roadway configuration.

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

Project Length (Miles) 0.86

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 both Dakota Countys 2014-2018 Capital Improvements Plan and the City of Eagans 2015-2019 Capital Improvements Plan. Funding has been allocated for the project in each plan. In addition to being identified in each CIP, the City and County cooperated in conducting the Pilot Knob Corridor Study, which was completed in 2013 and outlined several traffic related issues pertaining to the safety and operations of CSAH 31 in Eagan between CSAH 28 and Northwood/Central Parkway. The study was adopted by both Dakota County and the City of Eagan.

Project Funding

Are you applying for funds from another source(s) to implement this project?

Yes

If yes, please identify the source(s)

MnDOT Local Roads Improvement Program

Federal Amount

\$3,600,000.00

Match Amount

\$900,000.00

Minimum of 20% of project total

Project Total

\$4,500,000.00

Match Percentage

20.0%

Minimum of 20%

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

Source of Match Funds

State Aid

Preferred Program Year

Select one:

2017 (Roadway Projects Only)

MnDOT State Aid Project Information: Roadway Projects

County, City, or Lead Agency

Dakota County (Lead Agency) and City of Eagan

Functional Class of Road	A Minor Expander
Road System	CSAH
<i>TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET</i>	
Name of Road	Pilot Knob Road (CSAH 31)
<i>Example; 1st ST., MAIN AVE</i>	
Zip Code where Majority of Work is Being Performed	55122
(Approximate) Begin Construction Date	04/18/2016
(Approximate) End Construction Date	10/28/2016
LOCATION	
From: (Intersection or Address)	I-35E
<i>Do not include legal description; Include name of roadway if majority of facility runs adjacent to a single corridor.</i>	
To: (Intersection or Address)	Northwood/Central Parkway
Type of Work	Grading, aggregate base, bituminous surface, curb and gutter, storm sewer, signals, lighting, bicycle path, ped ramps
<i>Examples: grading, aggregate base, bituminous base, bituminous surface, sidewalk, signals, lighting, guardrail, bicycle path, ped ramps, bridge, Park & Ride, etc.)</i>	
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)	\$225,000.00
Removals (approx. 5% of total cost)	\$225,000.00
Roadway (grading, borrow, etc.)	\$841,000.00
Roadway (aggregates and paving)	\$768,000.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$267,000.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$292,000.00
Traffic Control	\$75,000.00
Striping	\$52,000.00

Signing	\$10,000.00
Lighting	\$400,000.00
Turf - Erosion & Landscaping	\$10,000.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall	\$0.00
Traffic Signals	\$750,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$400,000.00
Other Roadway Elements	\$0.00
Totals	\$4,315,000.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$100,000.00
Sidewalk Construction	\$0.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$25,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$40,000.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$0.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$20,000.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$185,000.00

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	\$4,500,000.00
Construction Cost Total	\$4,500,000.00
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 project 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 MnDOT's Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

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

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 sufficiency 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 Rehabilitation Projects Only

11. The bridge must have a sufficiency 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
2251 Eagan HSIP.pdf	Crash B/C	29 KB
27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm.pdf	HCADT Counts	72 KB
31-76 LAYOUT.pdf	Preliminary Layout/Concept Drawing	714 KB
CSAH 31 Regional Solicitation Support Letter.pdf	Dakota County Letter of Support	206 KB
Project Location_CoRd31(2).pdf	Project Location Map	311 KB

Reliever: Freeway Facility or

Facility being relieved

Number of hours per day volume exceeds capacity (based on the Congestion Report) 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			0	
1:00am - 2:00am			0	
2:00am - 3:00am			0	
3:00am - 4:00am			0	
4:00am - 5:00am			0	
5:00am - 6:00am			0	
6:00am - 7:00am			0	
7:00am - 8:00am			0	
8:00am - 9:00am			0	
9:00am - 10:00am			0	
10:00am - 11:00am			0	
11:00am - 12:00pm			0	
12:00pm - 1:00pm			0	
1:00pm - 2:00pm			0	
2:00pm - 3:00pm			0	
3:00pm - 4:00pm			0	
4:00pm - 5:00pm			0	
5:00pm - 6:00pm			0	
6:00pm - 7:00pm			0	
7:00pm - 8:00pm			0	
8:00pm - 9:00pm			0	
9:00pm - 10:00pm			0	
10:00pm - 11:00pm			0	
11:00pm - 12:00am			0	

Expander/Augmentor/Non-Freeway Principal Arterial

Select one:	Expander
Area	1.192
Project Length	0.86
Average Distance	1.386
Upload Map	Roadway Map.pdf

Measure B: Current Heavy Commercial Traffic

Location	CSAH 31/CSAH 28 Intersection (see HCADT Counts attachment)
Current daily heavy commercial traffic volume	1548.0

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)

CSAH 31 is located within one mile of both job concentration centers and manufacturing and distribution centers as shown on the Regional Economy map. CSAH 31 is connected to CSAH 28, which provides access to Town Centre and Shoppes at Promenade. The Eagan Community Center and Central Park, owned by the City of Eagan and identified in Eagans Comprehensive Plan, is located adjacent to CSAH 31. Argosy University is located within one mile of CSAH 31 with access being provided via Central Parkway. CSAH 31 also provides direct access to businesses such as Granite City Restaurant, Wells Fargo Bank, and the former Lockheed Martin site, which is proposed for a future commercial development.

Upload Map Regional Economy Map.pdf

Measure A: Current Daily Person Throughput

Location	CSAH 31
Current AADT Volume	25500.0
Existing Transit Routes on the Project	437, 445, 446, 470, 480, 484

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	2042.0
Current Daily Person Throughput	35192.0

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 47000.0

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 Yes

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.

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

CSAH 31 serves as a primary access to the Commons on Marice, an assisted living residence for the elderly, and the Intergenerational Learning Center, an early childhood educational and care facility. CSAH 31 also serves as a primary access to Lakeshore Family Townhomes, which is subsidized housing for moderate-income families with children, and Glen Pond apartments. The project will enhance mobility by adding an additional travel lane on CSAH 31 at the intersection with CSAH 28, which will reduce delays and congestion. The project also includes the addition of right and left turn lanes at multiple intersections and the channelization of left turn lanes, which will increase safety along the corridor. Some accesses along this corridor will have restricted turning movements, which may provide a slight increase in travel distance but will also improve safety and reduce intersection delay. A shared use trail currently exists on both sides of CSAH 31. The trail will be reconstructed on both sides and the signals will be brought to ADA compliance. These improvements to CSAH 31 will provide safer access for motorists and non-motorized users, including children, the elderly, and the disabled, to these housing areas along CSAH 31.

Upload Map

Socioeconomic Map.pdf

Measure B: Affordable Housing

City/Township	Segment Length (Miles)
Eagan	0.86
	1

Total Project Length

Total Project Length 0.86

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	0.86	0.86	82.0	1.0	82.0
		1	82	1	82

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.86
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
1960.0	0.2	392.0	455.814
1982.0	0.66	1308.12	1521.07
	1	1700	1977

Average Construction Year

Weighted Year	1976.884
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Total Segment Length (Miles)

Total Segment Length	0.86
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Measure A: Cost Effectiveness of Vehicle Delay Reduction

Total Project Cost from Cost Sheet	\$4,500,000.00
Total Peak Hour Vehicle Delay Without The Project	88090.0
Total Peak Hour Vehicle Delay With The Project	84260.0
Total Peak Hour Vehicle Delay Reduced by Project	3830.0
Cost Effectiveness	\$1,174.93
Synchro or HCM Reports	Synchro.pdf

Measure B: Cost Effectiveness of Emissions Reduction

Total Project Cost from Cost Sheet	\$4,500,000.00
Total Peak Hour Kilograms Reduced by Project	0
Cost Effectiveness	\$0.00
Synchro or HCM Reports	Synchro.pdf

Measure A: Benefit/Cost of Crash Reduction

Project Benefit/Cost Ratio	1.89
Worksheet Attachment	31-76 Benefit-Cost-worksheet(2).xls

Measure A: Transit Connections

Existing Routes Directly Connected to the Project	437, 445, 446, 470, 480, 484
Planned Transitways directly connected to the project (alignment and mode determined and identified in the 2030 TPP)	N/A
Upload Map	Transit Map.pdf

Response

Met Council Staff Data Entry Only

Route Ridership	545696.0
Transitway Ridership	0

Measure B: Bicycle and Pedestrian Connections

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

CSAH 31 currently has shared-use trails, separated from the highway, to accommodate bicycles and pedestrians on both the east and west side of the highway between CSAH 28 and Northwood/Central Parkway. The existing trails are located in a commercial area of Eagan and provide bicycle and pedestrian access to businesses, educational facilities, and housing units along the corridor, including the parcel on the west side of CSAH 31, which is proposed for a future commercial development. The north/south trails on CSAH 31 connect to east west trails on CSAH 28 and Northwood/Central Parkway, providing a connection to additional commercial areas as well as the Eagan Community Center and Central Park in the northwest quadrant of the intersection of CSAH 31 and Northwood/Central Parkway.

Measure C: Multimodal Facilities

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

The scope of this project includes the reconstruction of the existing trails on the east and west side of CSAH 31. The project also involves the replacement of the existing traffic signals at the CSAH 31 intersections with CSAH 28 and Northwood/Central Parkway. The new signals, as well as the crosswalks, will comply with ADA standards and provide for safe bicycle and pedestrian movements across CSAH 31. This project will also assess the feasibility of a future trail on the west side of CSAH 31 south of CSAH 28.

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 Yes

100%

Stakeholders have been identified

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 11/17/2014

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 06/30/2015

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/listing 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 Yes

80%

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

40%

Unknown impacts to historic/archaeological resources

0%

Anticipated date or date of completion of historic/archeological review: 05/29/2015

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

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 Yes

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 12/31/2015

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 10/30/2015

9)Letting

Anticipated Letting Date 01/22/2016

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 31	From I-35E to Northwood/Central Parkway			16+00.471	17+00.028	Eagan	1/1/2011	12/31/2013
		Description of Proposed Work Total of all crash reduction factors: increase number of lanes, improve longitudinal grade, install right turn lane, create directional openings in median to allow for left turns and u-turns, change permissive left turn phasing to permissive/protected, introduce painted left turn lane channelization (refer to individual worksheets for details)									
Accident Diagram Codes		1	2	3	5	4, 7	8, 9		6, 90, 98, 99		
								Pedestrian	Other	Total	
Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A									
		B	1							1	2
		C	10			5	1	1	2	2	21
Property Damage	PD	29		5	1	10	1	1	7	54	
% Change in Crashes <small>*Use FHWA cmfclearingho use for Crash Reduction Factors</small>	Fatal	F									
	PI	A									
		B									
		C									
Property Damage	PD										
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F									
	PI	A									
		B	-0.80							-0.57	-1.37
		C	-6.33			-3.26	-0.33	-0.68	-0.90	-1.00	-12.50
Property Damage	PD	-17.07		-3.07	-0.67	-5.22	-0.67	-0.57	0.00	-3.18	-30.45
Year (Safety Improvement Construction)		2016									
Project Cost (exclude Right of Way)		\$ 4,500,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit				
Right of Way Costs (optional)			F			\$ 1,100,000					
Traffic Growth Factor		3%	A			\$ 550,000					
Capital Recovery			B	-1.37	-0.46	\$ 160,000	\$ 73,067				
1. Discount Rate		4.5%	C	-12.50	-4.17	\$ 81,000	\$ 337,500				
2. Project Service Life (n)		20	PD	-30.45	-10.15	\$ 7,400	\$ 75,110				
			Total			\$ 485,677					

B/C= 1.89

Using present worth values,
B= \$ 8,496,388
C= \$ 4,500,000

See "Calculations" sheet for amortization.



Traffic Data Inc

PO Box 16296
St. Louis Park, MN 55416

File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 1

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 Southbound						CSAH 28 (Yankee Doodle Rd) Westbound					CSAH 31 Northbound					CSAH 28 (Yankee Doodle Rd) Eastbound					Int. Total			
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru		Right	Peds	App. Total
06:00 AM	0	11	7	10	0	28	0	11	73	3	0	87	0	10	44	23	2	79	0	14	40	12	1	67	261
06:15 AM	0	8	11	6	0	25	0	21	73	7	3	104	0	29	68	18	0	115	0	10	67	6	0	83	327
06:30 AM	0	10	19	2	0	31	3	31	107	8	2	151	0	26	87	32	0	145	0	12	114	24	0	150	477
06:45 AM	0	10	22	4	0	36	2	24	104	12	0	142	0	47	132	55	0	234	0	23	69	15	0	107	519
Total	0	39	59	22	0	120	5	87	357	30	5	484	0	112	331	128	2	573	0	59	290	57	1	407	1584
07:00 AM	0	10	35	7	0	52	4	31	99	13	0	147	0	25	160	37	2	224	0	17	111	25	1	154	577
07:15 AM	0	13	32	8	0	53	5	48	108	26	0	187	0	49	203	55	0	307	0	19	101	23	0	143	690
07:30 AM	0	13	44	10	0	67	12	56	142	26	0	236	0	58	222	77	1	358	0	26	156	30	0	212	873
07:45 AM	1	16	46	14	0	77	2	75	178	41	0	296	0	77	264	99	0	440	0	31	135	25	0	191	1004
Total	1	52	157	39	0	249	23	210	527	106	0	866	0	209	849	268	3	1329	0	93	503	103	1	700	3144
08:00 AM	0	10	42	11	0	63	5	46	154	23	3	231	0	62	219	67	0	348	0	34	133	39	0	206	848
08:15 AM	0	11	49	12	0	72	2	49	157	30	1	239	0	52	153	66	2	273	0	24	121	26	0	171	755
08:30 AM	0	10	46	12	0	68	1	47	127	27	1	203	1	59	117	67	1	245	0	29	125	24	3	181	697
08:45 AM	0	14	50	11	1	76	0	71	123	36	0	230	0	40	106	79	0	225	0	24	101	18	2	145	676
Total	0	45	187	46	1	279	8	213	561	116	5	903	1	213	595	279	3	1091	0	111	480	107	5	703	2976
09:00 AM	1	13	36	12	0	62	0	71	147	34	0	252	0	34	94	62	0	190	0	14	111	25	0	150	654
09:15 AM	0	20	50	16	0	86	0	49	96	34	0	179	0	37	91	61	0	189	0	17	92	22	0	131	585
09:30 AM	0	13	42	11	0	66	0	67	83	28	0	178	0	25	68	62	1	156	0	14	100	18	0	132	532
09:45 AM	0	18	60	4	0	82	0	46	82	13	0	141	1	23	85	48	0	157	0	19	97	30	1	147	527
Total	1	64	188	43	0	296	0	233	408	109	0	750	1	119	338	233	1	692	0	64	400	95	1	560	2298
10:00 AM	0	27	42	14	0	83	0	59	77	14	0	150	0	28	48	51	0	127	0	15	103	25	0	143	503
10:15 AM	0	18	42	7	2	69	1	46	77	17	2	143	0	19	52	29	0	100	0	24	102	31	0	157	469
10:30 AM	0	28	33	13	0	74	0	60	77	15	2	154	0	25	50	51	2	128	0	16	91	39	2	148	504
10:45 AM	0	22	62	8	0	92	0	55	70	20	0	145	0	38	66	48	0	152	0	20	115	31	1	167	556
Total	0	95	179	42	2	318	1	220	301	66	4	592	0	110	216	179	2	507	0	75	411	126	3	615	2032
11:00 AM	0	32	71	27	0	130	0	79	90	25	1	195	0	27	59	54	0	140	0	16	110	29	2	157	622
11:15 AM	0	35	47	13	0	95	0	52	79	18	1	150	2	24	43	46	0	115	0	20	132	39	0	191	551
11:30 AM	0	39	82	16	0	137	0	91	124	19	0	234	0	31	55	52	0	138	0	24	139	35	0	198	707
11:45 AM	0	45	78	17	0	140	1	71	96	14	1	183	0	26	73	46	1	146	0	21	132	52	0	205	674
Total	0	151	278	73	0	502	1	293	389	76	3	762	2	108	230	198	1	539	0	81	513	155	2	751	2554
12:00 PM	0	53	91	23	0	167	0	76	101	16	1	194	0	18	65	43	0	126	0	36	149	44	0	229	716
12:15 PM	0	46	74	17	0	137	0	76	92	22	2	192	0	42	68	55	0	165	0	32	125	41	1	199	693
12:30 PM	0	52	74	12	0	138	0	83	113	24	0	220	0	31	74	57	0	162	0	43	136	51	0	230	750
12:45 PM	0	38	78	15	0	131	0	90	115	34	0	239	1	46	77	48	0	172	0	32	112	40	0	184	726
Total	0	189	317	67	0	573	0	325	421	96	3	845	1	137	284	203	0	625	0	143	522	176	1	842	2885
01:00 PM	1	34	77	26	0	138	0	71	107	29	0	207	3	40	64	51	0	158	0	25	139	42	0	206	709
01:15 PM	0	26	70	27	0	123	1	84	100	25	3	213	1	33	71	63	1	169	0	38	130	20	0	188	693
01:30 PM	0	41	77	27	0	145	2	77	83	27	1	190	0	32	60	67	0	159	1	18	111	27	1	158	652
01:45 PM	1	34	87	17	0	139	1	76	82	20	0	179	0	31	74	61	2	168	1	20	129	36	1	187	673
Total	2	135	311	97	0	545	4	308	372	101	4	789	4	136	269	242	3	654	2	101	509	125	2	739	2727



Traffic Data Inc

PO Box 16296
St. Louis Park, MN 55416

File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 2

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN

Groups Printed- Cars + - Trucks

Start Time	CSAH 31 Southbound						CSAH 28 (Yankee Doodle Rd) Westbound					CSAH 31 Northbound					CSAH 28 (Yankee Doodle Rd) Eastbound					Int. Total			
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru		Right	Peds	App. Total
02:00 PM	0	29	61	14	0	104	0	81	96	15	1	193	0	18	42	61	2	123	0	23	122	44	0	189	609
02:15 PM	0	34	73	16	1	124	1	68	100	21	0	190	0	21	68	67	0	156	0	17	146	26	0	189	659
02:30 PM	0	31	100	16	0	147	0	78	87	25	0	190	0	19	48	52	1	120	0	23	129	41	1	194	651
02:45 PM	0	19	88	24	1	132	2	81	80	30	0	193	1	24	69	64	0	158	0	24	136	37	1	198	681
Total	0	113	322	70	2	507	3	308	363	91	1	766	1	82	227	244	3	557	0	87	533	148	2	770	2600
03:00 PM	0	37	106	27	0	170	2	97	65	13	1	178	0	31	54	62	1	148	0	15	129	42	1	187	683
03:15 PM	0	35	100	18	0	153	1	89	82	22	4	198	0	28	52	52	0	132	0	21	134	48	0	203	686
03:30 PM	0	34	141	12	1	188	0	110	95	22	3	230	0	20	50	56	1	127	0	22	167	46	1	236	781
03:45 PM	0	33	150	26	0	209	0	110	93	23	0	226	1	40	57	62	1	161	0	21	147	38	0	206	802
Total	0	139	497	83	1	720	3	406	335	80	8	832	1	119	213	232	3	568	0	79	577	174	2	832	2952
04:00 PM	0	43	159	20	0	222	1	119	86	25	0	231	0	21	49	55	2	127	0	32	188	40	0	260	840
04:15 PM	0	41	155	19	0	215	1	124	102	21	1	249	0	42	60	61	1	164	0	25	180	50	0	255	883
04:30 PM	0	35	196	26	0	257	1	111	110	31	0	253	0	42	52	57	0	151	0	37	181	51	1	270	931
04:45 PM	0	39	172	26	0	237	4	107	107	22	0	240	1	46	63	59	1	170	0	29	192	55	1	277	924
Total	0	158	682	91	0	931	7	461	405	99	1	973	1	151	224	232	4	612	0	123	741	196	2	1062	3578
05:00 PM	0	41	207	18	0	266	1	114	92	26	0	233	0	32	73	65	1	171	0	31	223	63	0	317	987
05:15 PM	0	51	182	26	1	260	0	122	133	32	1	288	0	61	48	77	1	187	1	20	178	53	1	253	988
05:30 PM	0	40	162	18	2	222	0	129	125	35	0	289	1	35	78	62	4	180	0	29	172	60	2	263	954
05:45 PM	0	41	143	25	0	209	0	120	117	36	4	277	0	42	72	82	1	197	0	17	124	50	0	191	874
Total	0	173	694	87	3	957	1	485	467	129	5	1087	1	170	271	286	7	735	1	97	697	226	3	1024	3803
06:00 PM	1	40	100	22	0	163	1	94	109	26	1	231	0	37	56	52	1	146	0	12	131	38	1	182	722
06:15 PM	0	36	69	17	0	122	3	98	92	16	1	210	0	25	44	67	1	137	0	18	122	42	1	183	652
06:30 PM	0	20	60	21	1	102	0	78	76	17	1	172	1	23	36	58	1	119	0	16	158	39	0	213	606
06:45 PM	0	18	54	15	0	87	1	90	85	21	2	199	0	31	29	52	2	114	0	15	131	46	0	192	592
Total	1	114	283	75	1	474	5	360	362	80	5	812	1	116	165	229	5	516	0	61	542	165	2	770	2572
Grand Total	5	1467	4154	835	10	6471	61	3909	5268	1179	44	10461	14	1782	4212	2953	37	8998	3	1174	6718	1853	27	9775	35705
Apprch %	0.1	22.7	64.2	12.9	0.2		0.6	37.4	50.4	11.3	0.4		0.2	19.8	46.8	32.8	0.4		0	12	68.7	19	0.3		
Total %	0	4.1	11.6	2.3	0	18.1	0.2	10.9	14.8	3.3	0.1	29.3	0	5	11.8	8.3	0.1	25.2	0	3.3	18.8	5.2	0.1	27.4	
Cars +	5	1449	4078	789	8	6329	60	3688	4951	1151	29	9879	14	1707	4131	2799	29	8680	3	1107	6364	1777	18	9269	34157
% Cars +	100	98.8	98.2	94.5	80	97.8	98.4	94.3	94	97.6	65.9	94.4	100	95.8	98.1	94.8	78.4	96.5	100	94.3	94.7	95.9	66.7	94.8	95.7
Trucks	0	18	76	46	2	142	1	221	317	28	15	582	0	75	81	154	8	318	0	67	354	76	9	506	1548
% Trucks	0	1.2	1.8	5.5	20	2.2	1.6	5.7	6	2.4	34.1	5.6	0	4.2	1.9	5.2	21.6	3.5	0	5.7	5.3	4.1	33.3	5.2	4.3



Traffic Data Inc

PO Box 16296
St. Louis Park, MN 55416

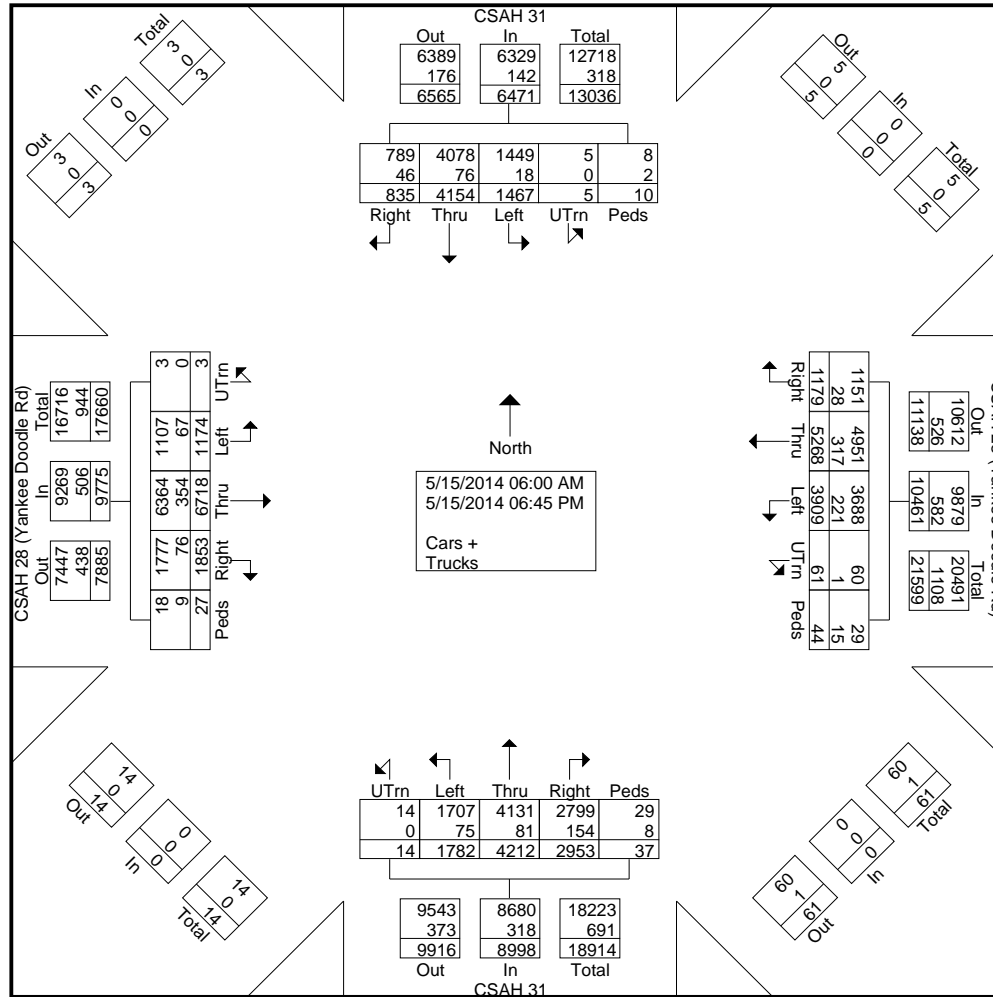
File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 3

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN





Traffic Data Inc

PO Box 16296
St. Louis Park, MN 55416

File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 4

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN

Start Time	CSAH 31 Southbound						CSAH 28 (Yankee Doodle Rd) Westbound						CSAH 31 Northbound						CSAH 28 (Yankee Doodle Rd) Eastbound						Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:30 AM																									
07:30 AM	0	13	44	10	0	67	12	56	142	26	0	236	0	58	222	77	1	358	0	26	156	30	0	212	873
07:45 AM	1	16	46	14	0	77	2	75	178	41	0	296	0	77	264	99	0	440	0	31	135	25	0	191	1004
08:00 AM	0	10	42	11	0	63	5	46	154	23	3	231	0	62	219	67	0	348	0	34	133	39	0	206	848
08:15 AM	0	11	49	12	0	72	2	49	157	30	1	239	0	52	153	66	2	273	0	24	121	26	0	171	755
Total Volume	1	50	181	47	0	279	21	226	631	120	4	1002	0	249	858	309	3	1419	0	115	545	120	0	780	3480
% App. Total	0.4	17.9	64.9	16.8	0		2.1	22.6	63	12	0.4		0	17.5	60.5	21.8	0.2		0	14.7	69.9	15.4	0		
PHF	.250	.781	.923	.839	.000	.906	.438	.753	.886	.732	.333	.846	.000	.808	.813	.780	.375	.806	.000	.846	.873	.769	.000	.920	.867



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St. Louis Park, MN 55416

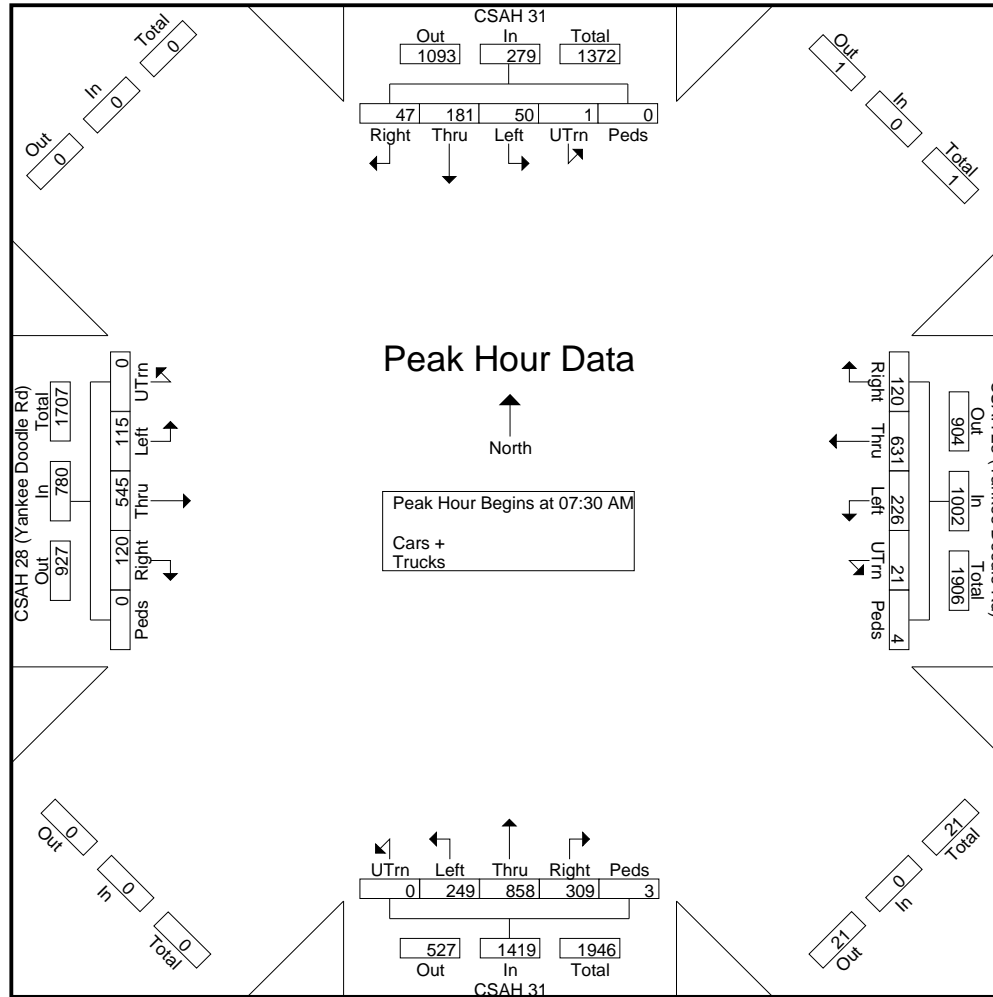
File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 5

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN





Traffic Data Inc

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St. Louis Park, MN 55416

File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm
 Site Code : 27
 Start Date : 5/15/2014
 Page No : 6

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN

Start Time	CSAH 31 Southbound						CSAH 28 (Yankee Doodle Rd) Westbound						CSAH 31 Northbound						CSAH 28 (Yankee Doodle Rd) Eastbound						Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 12:00 PM																									
12:00 PM	0	53	91	23	0	167	0	76	101	16	1	194	0	18	65	43	0	126	0	36	149	44	0	229	716
12:15 PM	0	46	74	17	0	137	0	76	92	22	2	192	0	42	68	55	0	165	0	32	125	41	1	199	693
12:30 PM	0	52	74	12	0	138	0	83	113	24	0	220	0	31	74	57	0	162	0	43	136	51	0	230	750
12:45 PM	0	38	78	15	0	131	0	90	115	34	0	239	1	46	77	48	0	172	0	32	112	40	0	184	726
Total Volume	0	189	317	67	0	573	0	325	421	96	3	845	1	137	284	203	0	625	0	143	522	176	1	842	2885
% App. Total	0	33	55.3	11.7	0		0	38.5	49.8	11.4	0.4		0.2	21.9	45.4	32.5	0		0	17	62	20.9	0.1		
PHF	.000	.892	.871	.728	.000	.858	.000	.903	.915	.706	.375	.884	.250	.745	.922	.890	.000	.908	.000	.831	.876	.863	.250	.915	.962



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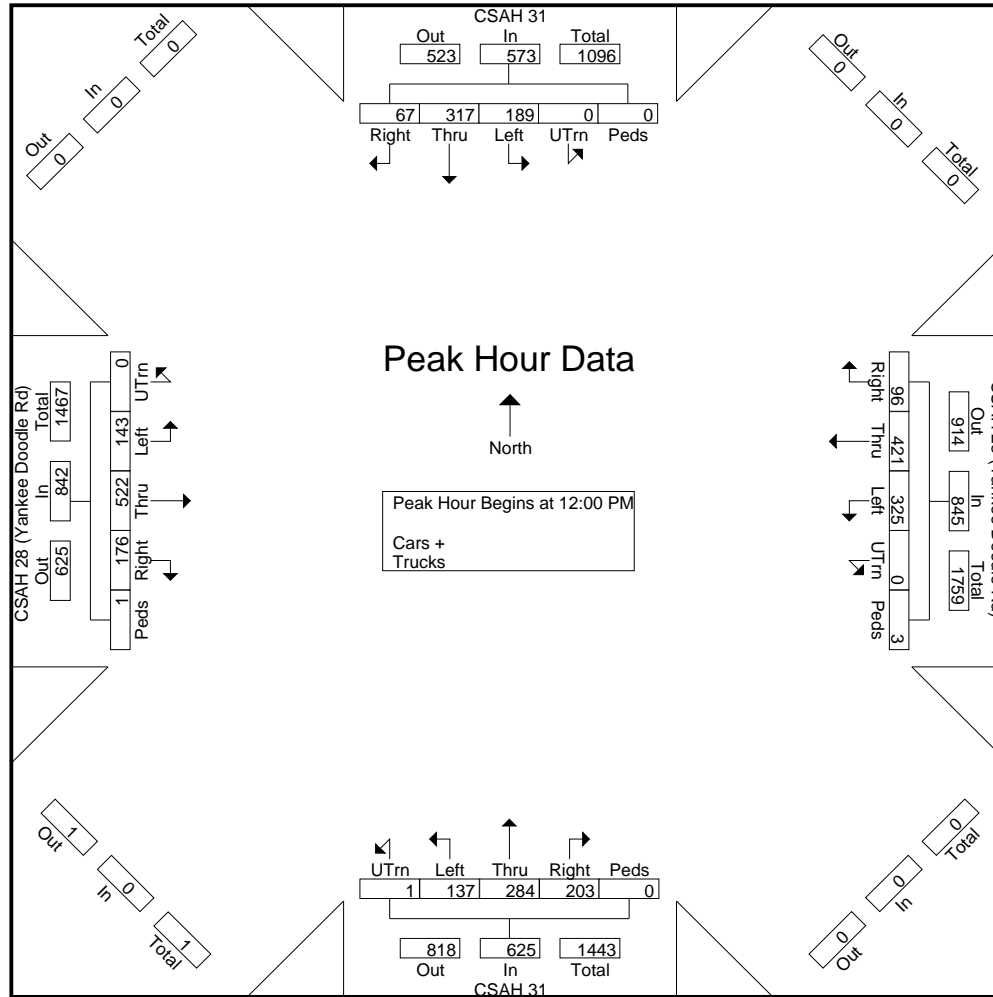
File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 7

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN





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PO Box 16296
St. Louis Park, MN 55416

File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

Site Code : 27

Start Date : 5/15/2014

Page No : 8

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN

Start Time	CSAH 31 Southbound						CSAH 28 (Yankee Doodle Rd) Westbound						CSAH 31 Northbound						CSAH 28 (Yankee Doodle Rd) Eastbound						Int. Total
	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	UTrn	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	39	172	26	0	237	4	107	107	22	0	240	1	46	63	59	1	170	0	29	192	55	1	277	924
05:00 PM	0	41	207	18	0	266	1	114	92	26	0	233	0	32	73	65	1	171	0	31	223	63	0	317	987
05:15 PM	0	51	182	26	1	260	0	122	133	32	1	288	0	61	48	77	1	187	1	20	178	53	1	253	988
05:30 PM	0	40	162	18	2	222	0	129	125	35	0	289	1	35	78	62	4	180	0	29	172	60	2	263	954
Total Volume	0	171	723	88	3	985	5	472	457	115	1	1050	2	174	262	263	7	708	1	109	765	231	4	1110	3853
% App. Total	0	17.4	73.4	8.9	0.3		0.5	45	43.5	11	0.1		0.3	24.6	37	37.1	1		0.1	9.8	68.9	20.8	0.4		
PHF	.000	.838	.873	.846	.375	.926	.313	.915	.859	.821	.250	.908	.500	.713	.840	.854	.438	.947	.250	.879	.858	.917	.500	.875	.975



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St. Louis Park, MN 55416

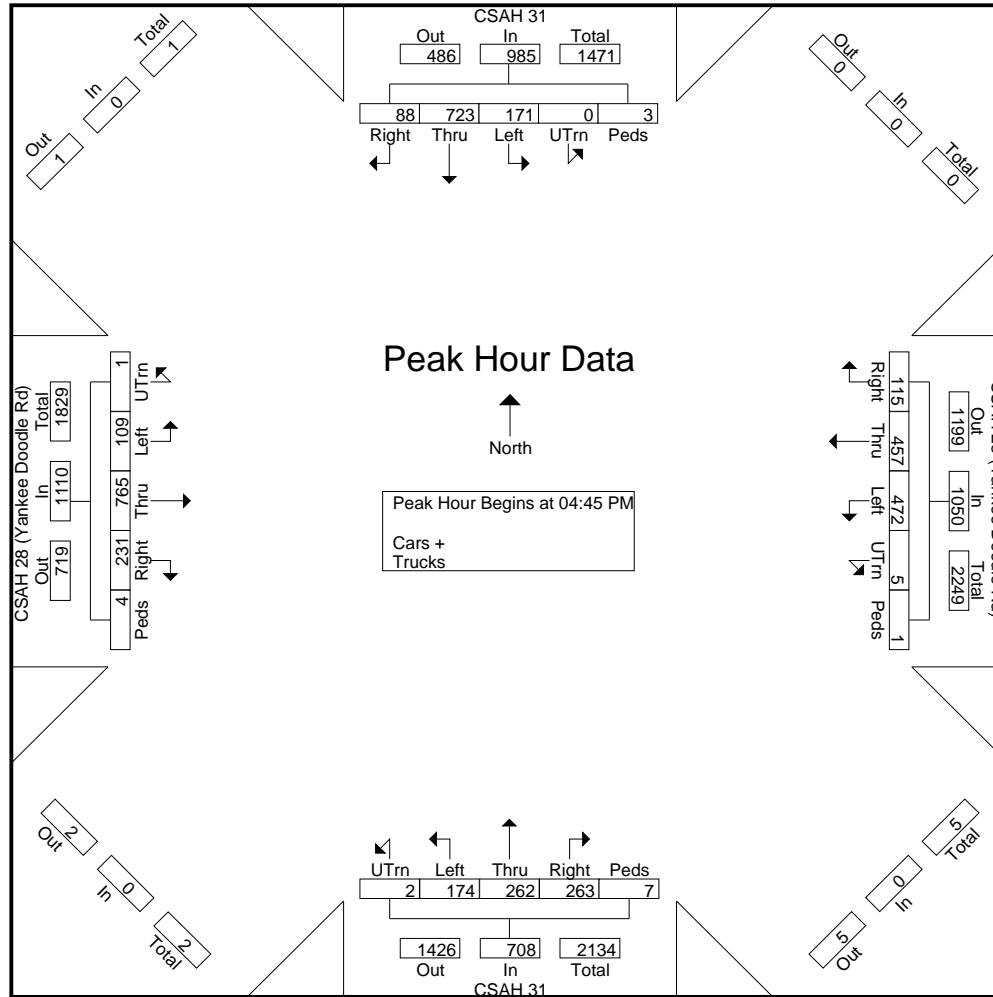
File Name : 27 - CSAH 28 (Yankee Doodle Rd) & CSAH 31, 5-15-14, 6am-7pm

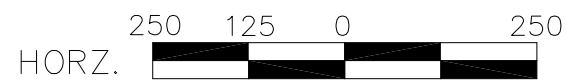
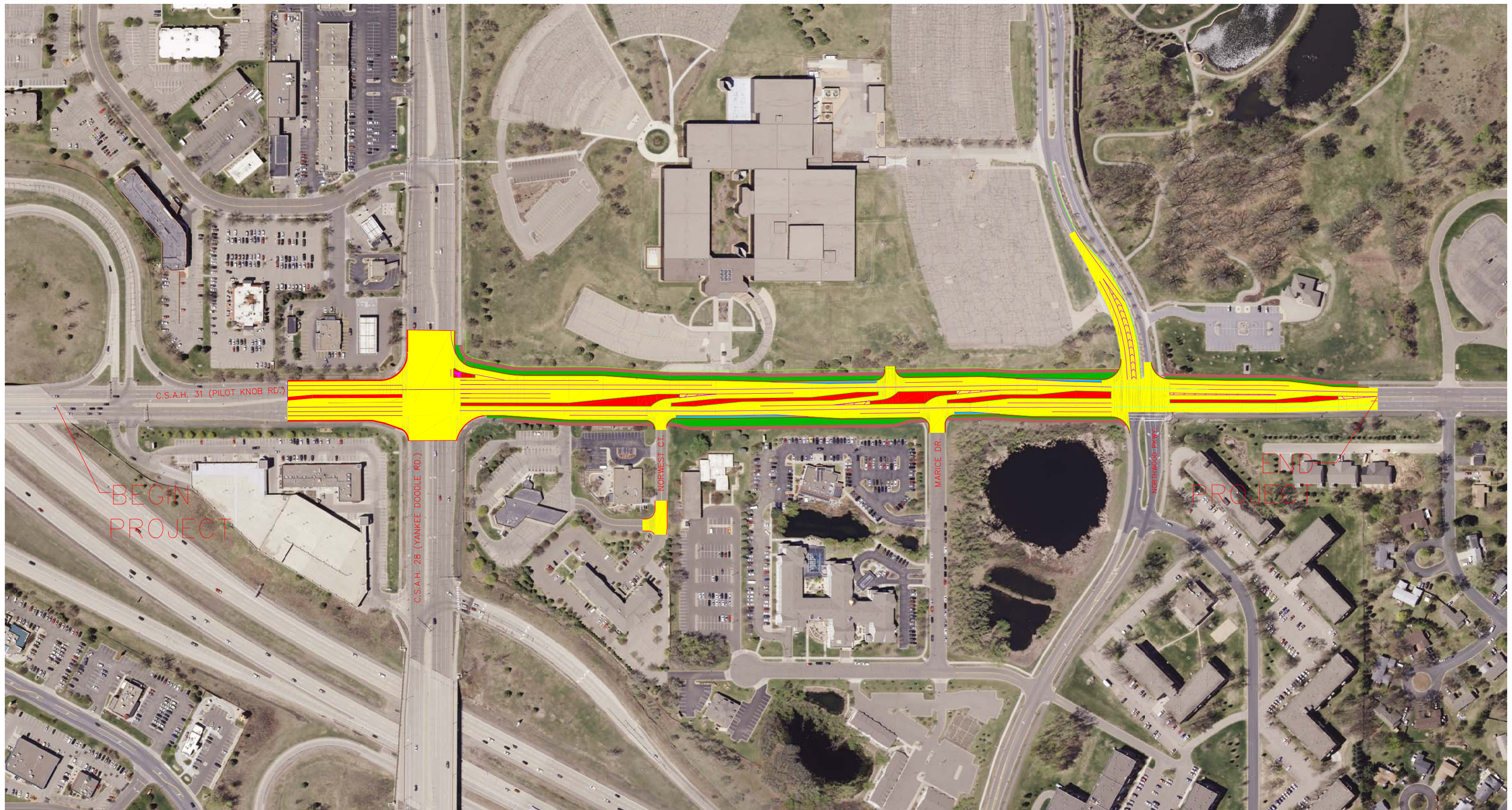
Site Code : 27

Start Date : 5/15/2014

Page No : 9

CSAH 28 (Yankee Doodle Rd) & CSAH 31
Eagan, MN





C.S.A.H. 31 (PILOT KNOB RD.) RECONSTRUCTION CONCEPT LAYOUT



Physical Development Division
Steven C. Mielke, Director

November 21, 2014

Dakota County
Western Service Center
14955 Galaxie Avenue
Apple Valley, MN 55124-8579

John Gorder
City of Eagan
3830 Pilot Knob Road
Eagan, MN 55122

952.891.7000
Fax 952.891.7031
www.dakotacounty.us

RE: Regional Solicitation Application for CSAH 31 Improvements

Environmental Resources
Land Conservation
Groundwater Protection
Surface Water
Waste Regulation
Environmental Initiatives

Dear Mr. Gorder:

Dakota County wishes to extend its support for the Regional Solicitation federal funding application for the proposed reconstruction of CSAH 31 in Eagan.

Office of Planning

Dakota County is aware of and is participating in the proposed project on Dakota County State Aid Highway (CSAH) 31. Dakota County has jurisdiction over CSAH 31 and commits to operate and maintain this roadway for its design life.

Operations Management
Facilities Management
Fleet Management
Parks

Dakota County supports this proposed project for federal funding and agrees to provide a financial commitment for the improvements directly related to CSAH 31, consistent with County cost participation policy at the time. Thank you for making us aware of this application effort and the opportunity to provide support.












Transportation
Highways
Surveyor's Office
Transit Office

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark J. Krebsbach".

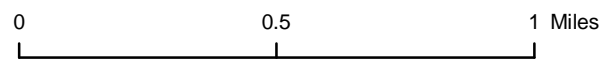
Mark J Krebsbach, P.E.
Dakota County Transportation Director/County Engineer

Legend

-  Project Area
-  Businesses
-  Bikeways
-  Licensed Day Care
-  Places of Worship
-  CDA Senior Housing
-  CDA Workforce Housing
-  City / Township Hall
-  Fire Station
-  Park
-  Schools & School Offices



Roadway Expansion Project: CSAH 31



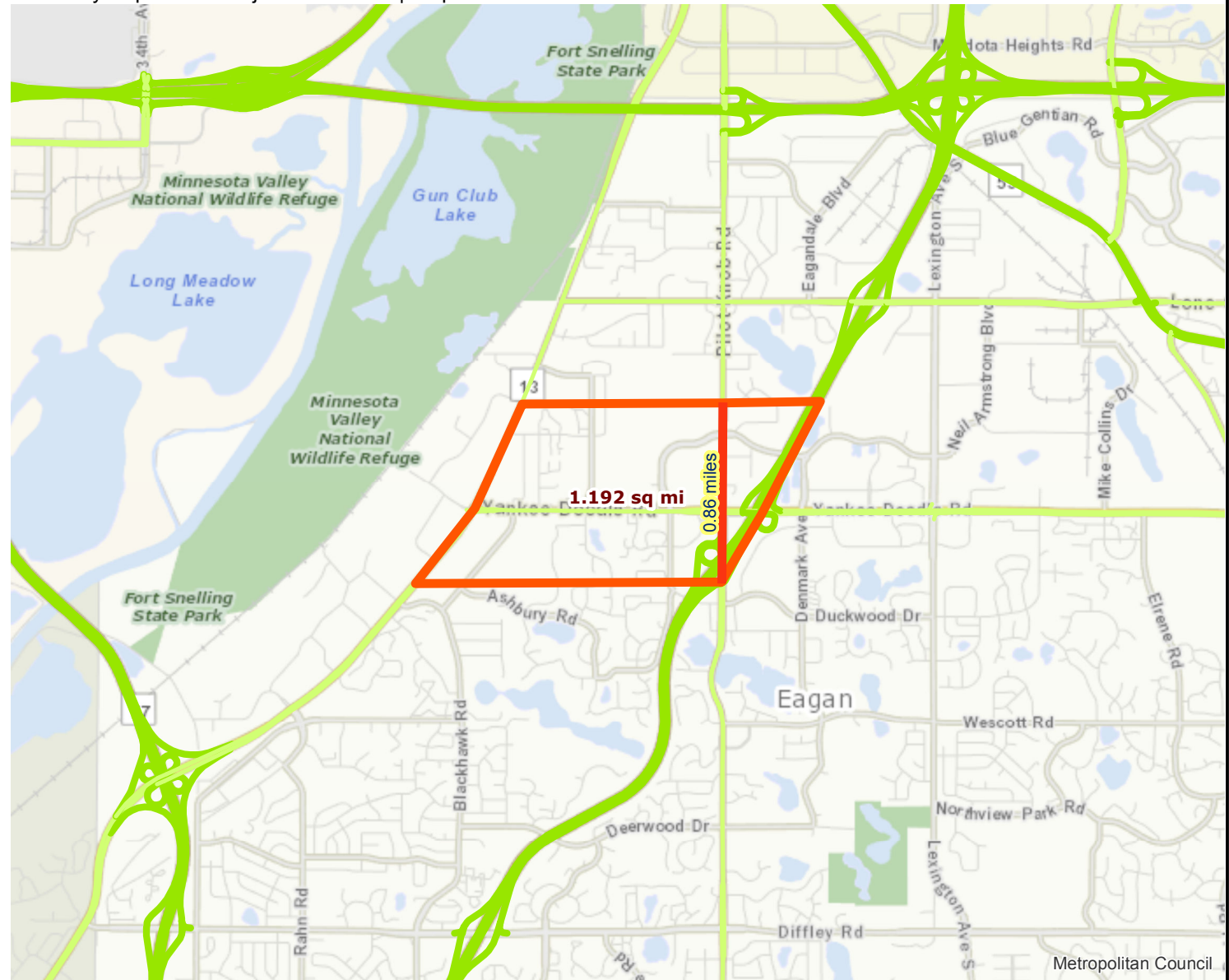
Roadway Area Definition

Roadway Expansion Project: CSAH 31 | Map ID: 1414597156722

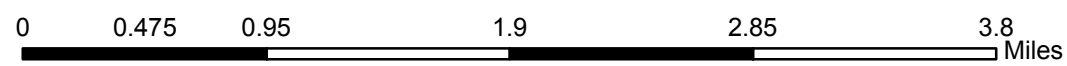
Results

Project Length: 0.86 miles

Project Area: 1.192 sq mi



- Project
- Project Area
- Principal Arterials
- A Minor Arterials
- Principal Arterials Planned
- A Minor Arterials Planned



Created: 10/29/2014
LandscapeRSA1

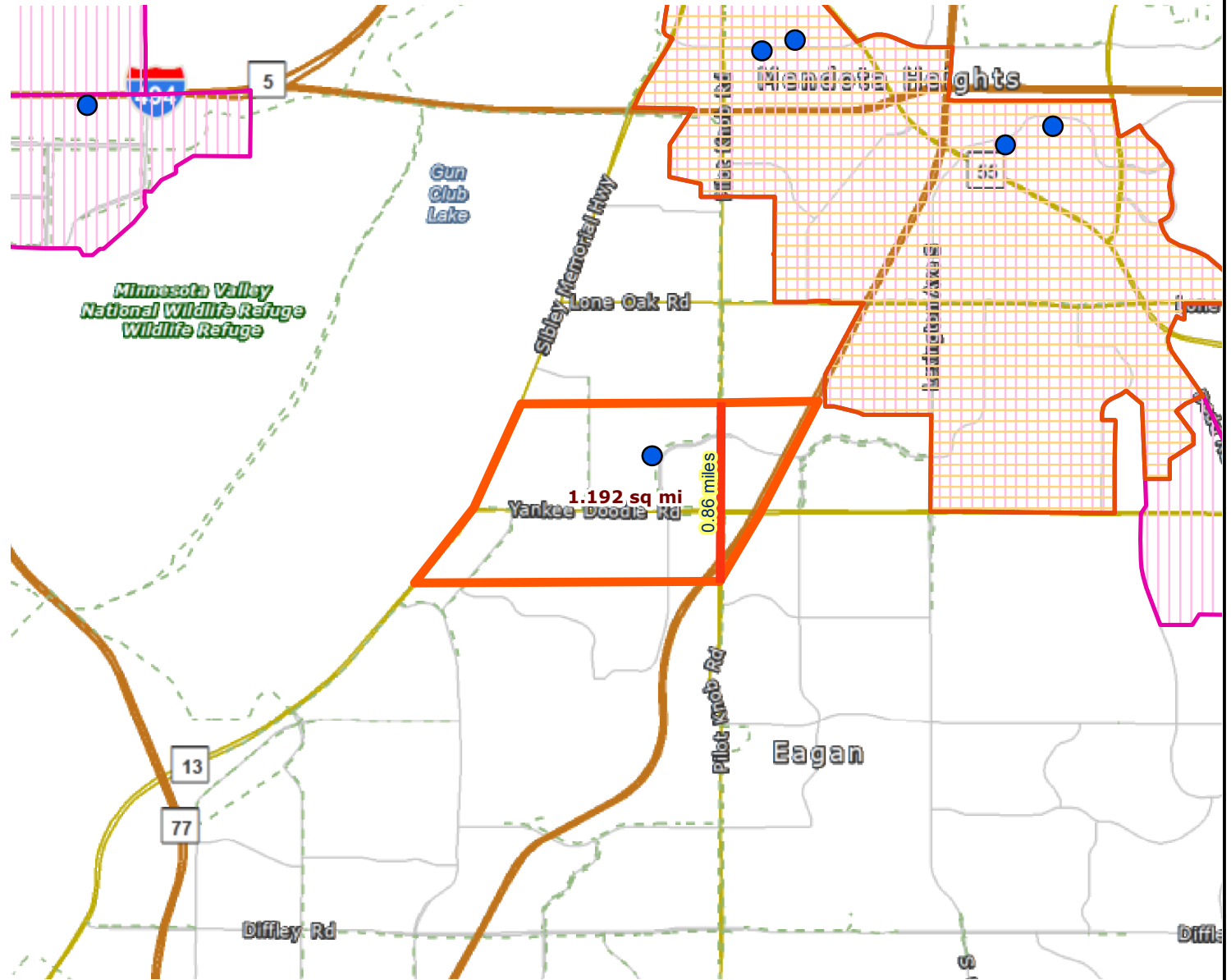


For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx>



Regional Economy

Roadway Expansion Project: CSAH 31 | Map ID: 1414597156722



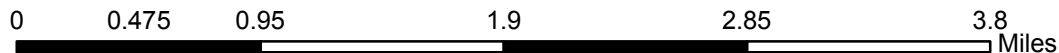
Results

Project **WITHIN ONE MI** of area of Job Concentration.

Project **WITHIN ONE MI** of area of Manufacturing and Distribution.

Project **CONNECTED** to area of Education Institutions.

- Project
- Project Area
- PostSecondary Education Centers
- Manufacturing/Distribution Centers
- Job Concentration Centers



Created: 10/29/2014
LandscapeRSA5

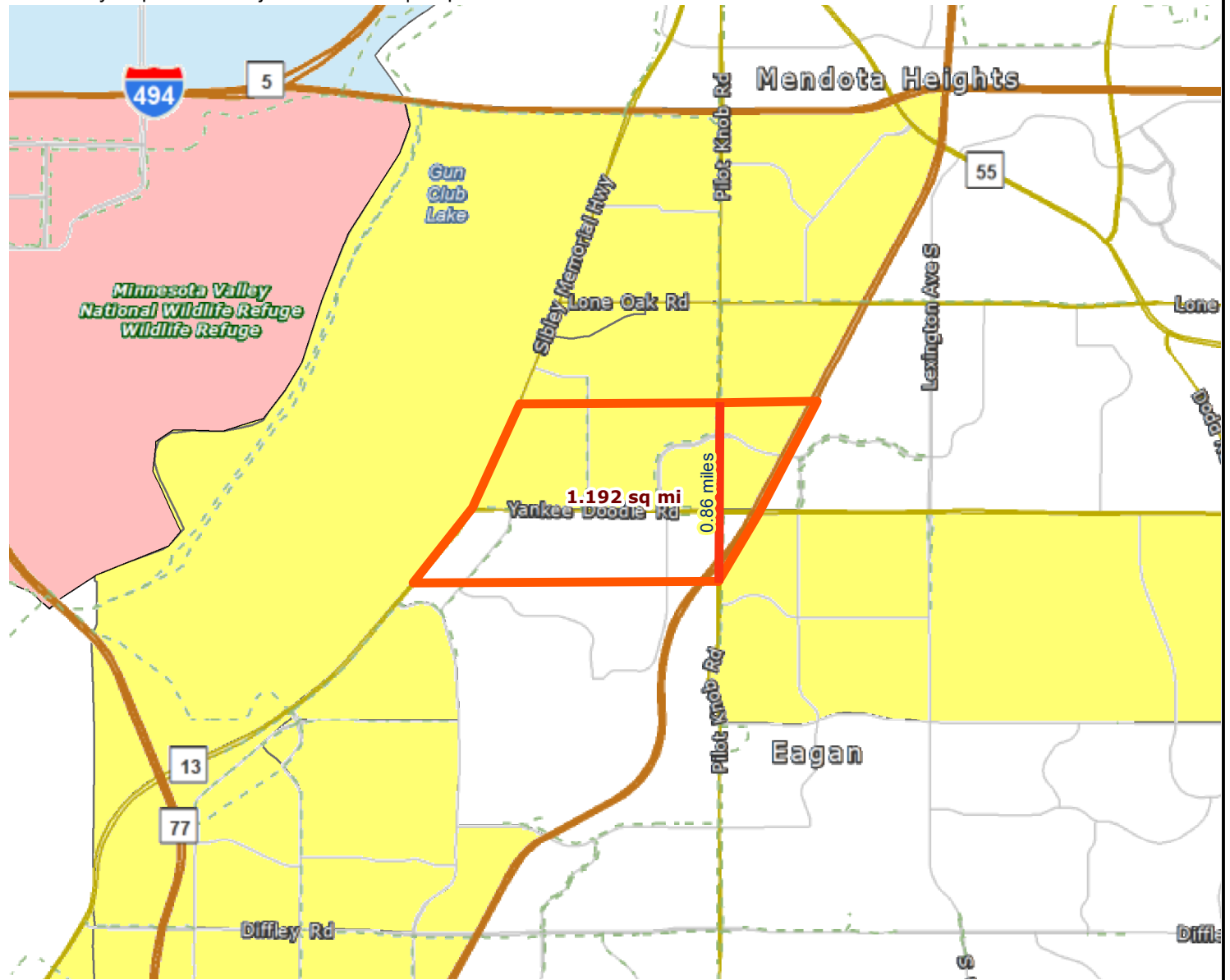


For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx>

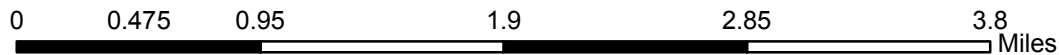


Results

Project IN area of above average concentration of race or poverty.



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



Created: 10/29/2014
LandscapeRSA2



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12: CSAH 31 & CSAH 28

Direction	All
Volume (vph)	3830
Total Delay / Veh (s/v)	22
CO Emissions (kg)	5.25
NOx Emissions (kg)	1.02
VOC Emissions (kg)	1.22

12: CSAH 31 & CSAH 28

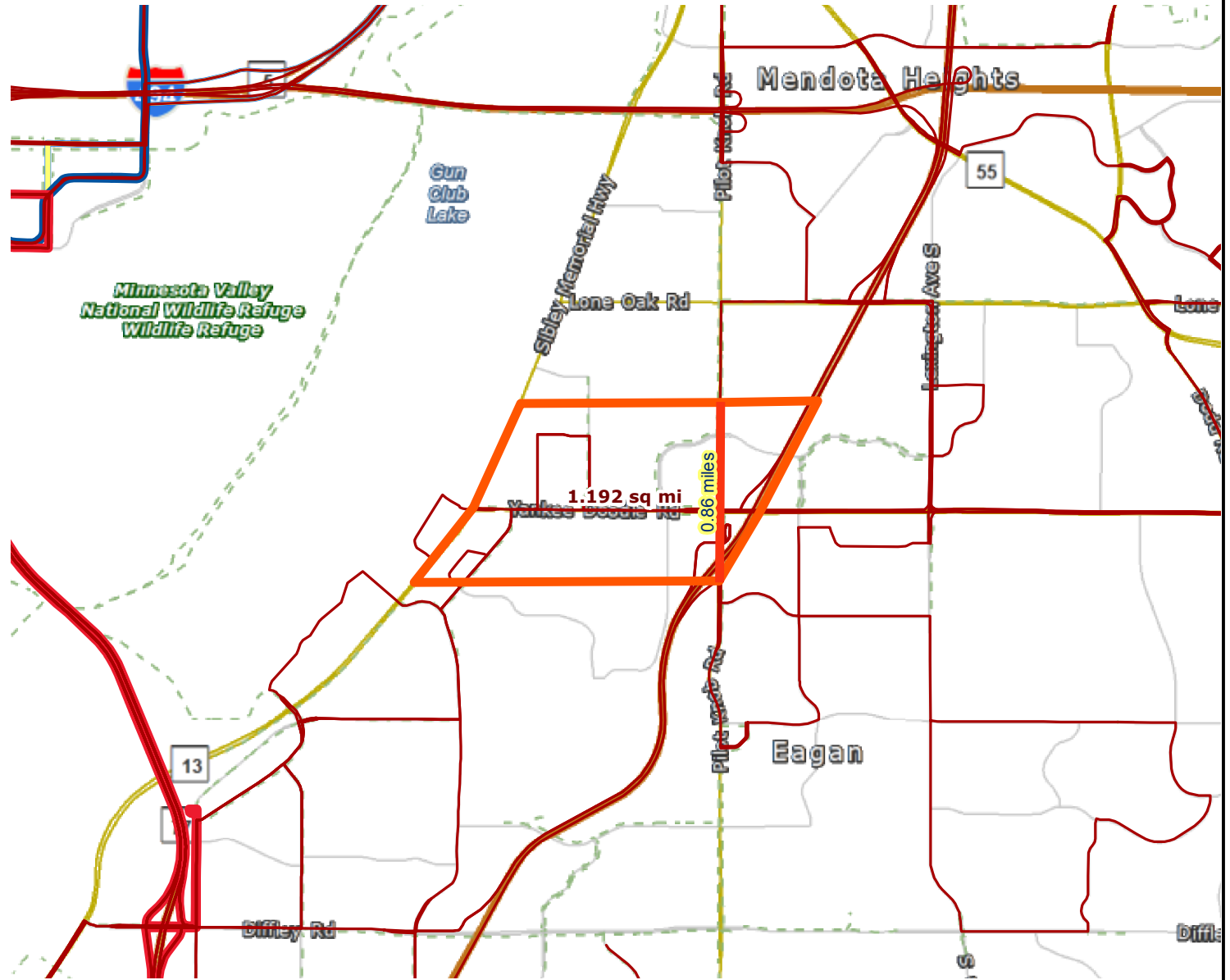
Direction	All
Volume (vph)	3830
Total Delay / Veh (s/v)	23
CO Emissions (kg)	5.08
NOx Emissions (kg)	0.99
VOC Emissions (kg)	1.18

12: CSAH 31 & CSAH 28

Direction	All
Volume (vph)	3830
Total Delay / Veh (s/v)	22
CO Emissions (kg)	5.25
NOx Emissions (kg)	1.02
VOC Emissions (kg)	1.22

12: CSAH 31 & CSAH 28

Direction	All
Volume (vph)	3830
Total Delay / Veh (s/v)	23
CO Emissions (kg)	5.08
NOx Emissions (kg)	0.99
VOC Emissions (kg)	1.18

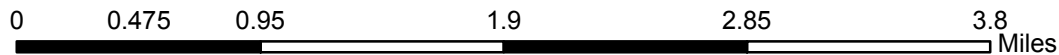


Results

Transit with a Direct Connection to project:
437 445 446 470 480 484

**indicates Planned Alignments*

- Project
- Transit Routes
- Blue Line
- Red Line
- Arterial BRT
- Planned Alignments**
- Project Area



Created: 10/29/2014
LandscapeRSA3



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

