



Application

04775 - 2016 Roadway System Management

05397 - Traffic Signal Communication Upgrades

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted

Submitted Date: 07/15/2016 2:09 PM

Primary Contact

Name:*	Joseph	Gustafson		
	<small>Salutation</small>	<small>First Name</small>	<small>Middle Name</small>	<small>Last Name</small>
Title:	Traffic Engineer			
Department:	Washington County Public Works			
Email:	joe.gustafson@co.washington.mn.us			
Address:	11660 Myeron Road North			
	11660 Myeron Road North			
*	Stillwater	Minnesota	55082	
	<small>City</small>	<small>State/Province</small>	<small>Postal Code/Zip</small>	
Phone:*	651-430-4351	4304351		
	<small>Phone</small>	<small>Ext.</small>		
Fax:	651-430-4351			
What Grant Programs are you most interested in?	Regional Solicitation - Bicycle and Pedestrian Facilities			

Organization Information

Name: WASHINGTON CTY

Jurisdictional Agency (if different):

Organization Type:

Organization Website:

Address:

PUBLIC WORKS

11660 MYERON RD

*

STILLWATER

Minnesota

55082

City

State/Province

Postal Code/Zip

County:

Washington

Phone:*

651-430-4325

Ext.

Fax:

PeopleSoft Vendor Number

0000028637A10

Project Information

Project Name

Traffic Signal Communication Upgrades

Primary County where the Project is Located

Washington

Jurisdictional Agency (If Different than the Applicant):

This project proposes to upgrade remaining Washington County traffic signal cabinet hardware to allow for remote connection via IP protocol (via fiber or cellular data modem). This conversion will allow for the county to integrate its traffic signals into a central traffic management system, allowing for timely detection of traffic signal malfunctions and outages, allowing for faster response time and improved safety and efficiency.

Washington County currently has remote connectivity to most traffic signals via "land line" modems, using non-broadband dial-up technology identical to that which was popular in the 1990's. This method allows communication with the Washington County signal shop for only one zone at a time and does not allow for real-time identification of malfunctions such as red flash conditions or stuck pedestrian pushbuttons, which can cause congestion, diversion of traffic, and potential safety issues if left unaddressed.

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

Modern traffic management systems require each signal control cabinet to have an IP address, which cannot be accomplished with our current outdated software and equipment. Washington County does not have to purchase a new central software system, as such a system was previously funded for Dakota County through a previous funding solicitation. This new system is anticipated to be on-line in late 2016, and will allow for other metro agencies to utilize the new shared system by purchasing individual licenses, currently estimated at \$500 per intersection, which is a considerable savings over each agency purchasing its own software system.

This project proposes to implement improvements

to make all Washington County signalized intersections ready to connect to this new interagency traffic management system. Depending on the location, its existing hardware, and its proximity to existing fiber optic lines, this connectivity will be accomplished through an assortment of short fiber optic linkages, cellular data modems, and necessary internal switching equipment. The project also includes several CCTV cameras for remote intersection monitoring of critical locations, in order to more quickly diagnose and remedy any malfunctions. Traffic management software also allows for signal timing to be adjusted remotely to respond to unusual traffic conditions.

The primary corridors targeted by this project are CSAH 13 and CSAH 10 in the cities of Woodbury and Oakdale, which serve as significant supporting roadways to Interstates 94, 494, and 694, which will be used for the mapping portion of this application. However other primary roadways in this area including CSAH 16 (Valley Creek Road) and CSAH 19 (Woodbury Drive) are also included, as are other isolated signal systems outside of this urbanized portion of the county.

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

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

Traffic Signal Communication Upgrades

Project Length (Miles)

7.03

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

\$654,880.00

Match Amount

\$163,720.00

Minimum of 20% of project total

Project Total

\$818,600.00

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 State Aid and/or Local Funds

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one: 2020

For TDM projects, select 2018 or 2019. For Roadway, Transit, or Trail/Pedestrian projects, select 2020 or 2021.

Additional Program Years: 2017, 2018, 2019

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

Project Information: Roadway Projects

County, City, or Lead Agency Washington County

Functional Class of Road A Minor Arterial

Road System CSAH

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

Road/Route No.

i.e., 53 for CSAH 53

Name of Road Various Locations throughout Washington County
(more than can be fit within this 250 character limit).
Refer to attached list of intersections.

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55125

(Approximate) Begin Construction Date 04/15/2020

(Approximate) End Construction Date 06/30/2020

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

From:
(Intersection or Address)

To:
(Intersection or Address)

DO NOT INCLUDE LEGAL DESCRIPTION

Or At Various Locations

Primary Types of Work Traffic Signal Equipment Replacement

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

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

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

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$0.00
Removals (approx. 5% of total cost)	\$0.00
Roadway (grading, borrow, etc.)	\$0.00
Roadway (aggregates and paving)	\$0.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$0.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$0.00
Traffic Control	\$0.00
Striping	\$0.00
Signing	\$0.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$0.00
Bridge	\$0.00
Retaining Walls	\$0.00
Noise Wall (do not include in cost effectiveness measure)	\$0.00
Traffic Signals	\$818,600.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$0.00
Totals	\$818,600.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
--	------

Path/Trail Construction	\$0.00
Sidewalk Construction	\$0.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$0.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$0.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$0.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$0.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$0.00

Specific Transit and TDM Elements

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

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	\$0.00
Subtotal	\$0.00
Other Costs - Administration, Overhead,etc.	\$0.00

Totals

Total Cost	\$818,600.00
Construction Cost Total	\$818,600.00
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 2040 Transportation Policy Plan, the 2040 Regional Parks Policy Plan (2015), and the 2040 Water Resources Policy Plan (2015).

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

2. The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan objectives and strategies that relate to the project.

List the goals, objectives, strategies, and associated pages:

This project is consistent with the Thrive 2040 goal of Transportation System Stewardship (Page 58) by efficiently operating existing system assets. The project is also consistent with the goal of Safety and Security (Page 60) by reducing response time to system outages and malfunctions through immediate automated notification to county crews.

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

This project is consistent with all four goals of the Washington County 2030 Comprehensive Plan, as listed on Page 1-7, by minimizing the duration, safety issues, and inefficiencies caused by traffic signal malfunctions:

To promote the health, safety, and quality of life of citizens

To provide accessible, high-quality services in a timely and respectful manner

To address today's needs while proactively planning for the future

To maintain public trust through responsible use of public resources, accountability, and openness of government

List the applicable documents and pages:

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of bicycle/pedestrian projects, transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible.

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

5. Applicants that are not cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

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

6. Applicants must not submit an application for the same project elements in more than one funding application category.

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

7. The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below.

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

Roadway Reconstruction/ Modernization: \$1,000,000 to \$7,000,000

Roadway System Management \$250,000 to \$7,000,000

Bridges Rehabilitation/ Replacement: \$1,000,000 to \$7,000,000

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

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

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

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

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

10. 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

11. 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

12. 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

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

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

Roadways Including Multimodal Elements

1. All roadway and bridge projects must be identified as a Principal Arterial (Non-Freeway facilities only) or A-Minor Arterial as shown on the latest TAB approved roadway functional classification map.

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

Roadway Expansion and Reconstruction/Modernization projects only:

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

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

Bridge Rehabilitation/Replacement projects only:

3. Projects requiring a grade-separated crossing of a Principal Arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using 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. Yes

4. The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

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

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

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

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

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

Requirements - Roadways Including Multimodal Elements

Measure A: Functional Classification

Area	24.279
Project Length	7.016
Average Distance	3.4605
Upload Map	1468596011703_RdwyAreaDef.pdf

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

Existing Employment within 1 Mile:	19286.0
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	1390.0
Existing Students:	1667.0
Upload Map	1468596089125_RegnlEconomy.pdf

Measure C: Current Heavy Commercial Traffic

Location:	CSAH 10 west of I-694
Current daily heavy commercial traffic volume:	678
Date heavy commercial count taken:	05/24/16

Measure D: Freight Elements

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

By enabling improved monitoring and real-time notification of signal malfunctions such as red flash conditions, stuck pedestrian push buttons, or failed vehicle detectors, this project will allow for quicker repairs by county crews, which reduces congestion and inefficiency for all vehicles, including freight vehicles.

Measure A: Current Daily Person Throughput

Location	Radio Drive south of I-94
Current AADT Volume	36500.0
Existing Transit Routes on the Project	70, 219, 294, 351, 353, 355, 375
Upload Transit Map	1468597974593_TransitConnectns.pdf

Response - Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	47450.0

Measure B: 2040 Forecast ADT

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

If checked, METC Staff will provide Forecast (2040) ADT volume

OR

Identify the approved county or city travel demand model to determine forecast (2040) ADT volume

Forecast (2040) ADT volume

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

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

Project located in Area of Concentrated 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 2,800 characters; approximately 400 words)

See attached map. This project will improve intersection efficiency for all intersection users, including pedestrians or transit users who cannot afford an automobile, by allowing for quicker response and repair of red flash malfunctions or broken pedestrian buttons or vehicle detectors.

The response should address the benefits, impacts, and mitigation for the populations affected by the project.

Upload Map 1468598424000_SocioEconomic.pdf

Measure B: Affordable Housing

City/Township	Segment Length in Miles (Population)
Lake Elmo	0.75
Oakdale	2.75
Woodbury	3.53

Total Project Length

Total Project Length (Total Population) 7.03

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
		0	0	0	0

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles) 7.03

Total Housing Score 0

Measure A: Equipment Improvements and Installation Year

Equipment to be Improved Land-Line Modems, Controllers, and software.

Date of Equipment Installation (year) Existing equipment is of various ages, depending on location.

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project	Total Peak Hour Delay Per Vehicle With The Project	Total Peak Hour Delay Per Vehicle Reduced by Project	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
0	0	0	36500	0	No railroad crossings.	14686006764_84_5A&5B Response.pdf

Total Delay

Total Peak Hour Delay Reduced 0

Measure B: Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced Per Vehicle by the Project (Kilograms):	Volume (Vehicles Per Hour):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	0	0	36500.0	0
0	0	0	36500.0	0
0	0	0	73000	0

Total

Total Emissions Reduced: 0

Upload Synchro Report 1468600779296_5A&5B Response.pdf

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

Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced Per Vehicle by the Project (Kilograms):	Volume (Vehicles Per Hour):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	0	0	0	0

Total Parallel Roadways

Emissions Reduced on Parallel Roadways 0

Upload Synchro Report

New Roadway Portion:

Cruise speed in miles per hour with the project: 0

Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons:	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0.0

Measure B: Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0
Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

Measure A: Roadway Projects that do not Include Railroad Grade-Separation Elements

Crash Modification Factor Used:	0
Rationale for Crash Modification Selected:	Crash modification factors cannot be effectively used for traffic signal communication improvements, even though such improvements would likely provide a safety benefit by allowing for quicker response to traffic signal malfunctions.
<i>(Limit 1400 Characters; approximately 200 words)</i>	
Project Benefit (\$) from B/C Ratio	\$0.00

Roadway projects that include railroad grade-separation elements:

Current AADT volume:	0
Average daily trains:	0
Crash Risk Exposure eliminated:	0

Measure A: Multimodal Elements and Existing Connections

This project, if approved and implemented, is expected to improve the safety and experience of pedestrian, bicycle, and transit users by allowing for automated notification of traffic signal malfunctions, including red-flash conditions and malfunctioning vehicle detectors or pedestrian pushbuttons, all of which contribute to unnecessary delay and potential safety problems for intersection users if not addressed in a timely manner.

A red flash condition can lead to safety problems by causing the intersection to revert to all-way stop control, which can create congestion and diversion onto surrounding roadways. At intersections with large numbers of approach lanes, all-way stop operation during red flash conditions can cause crashes due to the high number of vehicles arriving simultaneously. Red flash malfunctions can cause very significant delays for all vehicle movements including transit, even in the absence of crashes, and can be detrimental to pedestrian and bicycle movements due to the lack of orderly traffic flow during all-way stop operations.

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

A malfunctioning vehicle detector will cause the signal system to operate inefficiently by giving green time to an approach that may have no vehicles on it, thereby holding up other approaches and any waiting pedestrians. This may incentivize crosswalk users to cross against the signal rather than wait for the signal to change, thus leading to safety concerns.

A malfunctioning pedestrian pushbutton will cause the signal system to operate inefficiently by giving ?Walk? and pedestrian clearance time to a crosswalk that has no pedestrians on it, thereby holding up conflicting vehicle approaches and any

pedestrians waiting at adjacent crosswalks. Because pedestrian timing is often quite long, and because serving pedestrian movements often causes the intersection to fall out of sync with the rest of the corridor, significant corridor inefficiencies can result and therefore unnecessary pedestrian calls should be kept to a minimum.

All of these malfunction types cause delay and safety concerns for all intersection users when they occur, including for pedestrian, bicycle, and transit users of the intersection. Project intersections throughout the county encompass several active transit routes: Routes 70, 219, 294, 351, 353, 355, and 375.

The system also includes CCTV cameras at critical intersection locations to allow county staff to quickly assess problems remotely when practical, ensuring more effective response to critical incidents around the county.

Transit Projects Not Requiring Construction

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

Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment

1) Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred Yes

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

100%

Layout or Preliminary Plan started

50%

Layout or Preliminary Plan has not been started

Yes

0%

Anticipated date or date of completion

3)Environmental Documentation (5 Percent of Points)

EIS

EA

PM

Document Status:

Document approved (include copy of signed cover sheet)

100%

Document submitted to State Aid for review

75%

date submitted

Document in progress; environmental impacts identified; review request letters sent

50%

Document not started

Yes

0%

Anticipated date or date of completion/approval

4)Review of Section 106 Historic Resources (10 Percent of Points)

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

Yes

100%

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%

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

0%

Anticipated date or date of completion of historic/archeological review:

Project is located on an identified historic bridge

5)Review of Section 4f/6f Resources (10 Percent of Points)

4(f) Does the project impacts any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or public private historic properties?

6(f) Does the project impact any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or historic property that was purchased or improved with federal funds?

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

100%

No impact to 4f property. The 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%

Project impacts to Section 4f/6f resources likely coordination/documentation has begun

50%

Project impacts to Section 4f/6f resources likely coordination/documentation has not begun

30%

Unsure if there are any impacts to Section 4f/6f resources in the project area

0%

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

Right-of-way, permanent or temporary easements not required Yes

100%

Right-of-way, permanent or temporary easements has/have been acquired

100%

Right-of-way, permanent or temporary easements required, offers made

75%

Right-of-way, permanent or temporary easements required, appraisals made

50%

Right-of-way, permanent or temporary easements required, parcels identified

25%

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

0%

Right-of-way, permanent or temporary easements identification has not been completed

0%

Anticipated date or date of acquisition

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)Interchange Approval (15 Percent of Points)*

**Please contact Karen Scheffing at MnDOT (Karen.Scheffing@state.mn.us or 651-234-7784) to determine if your project needs to go through the Metropolitan Council/MnDOT Highway Interchange Request Committee.*

Project does not involve construction of a new/expanded interchange or new interchange ramps Yes

100%

Interchange project has been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

100%

Interchange project has not been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

0%

9)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 06/30/2020

10) Letting

Anticipated Letting Date 03/19/2020

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form): \$818,600.00

Enter Amount of the Noise Walls: \$0.00

Total Project Cost subtract the amount of the noise walls: \$818,600.00

Points Awarded in Previous Criteria

Cost Effectiveness \$0.00

Other Attachments

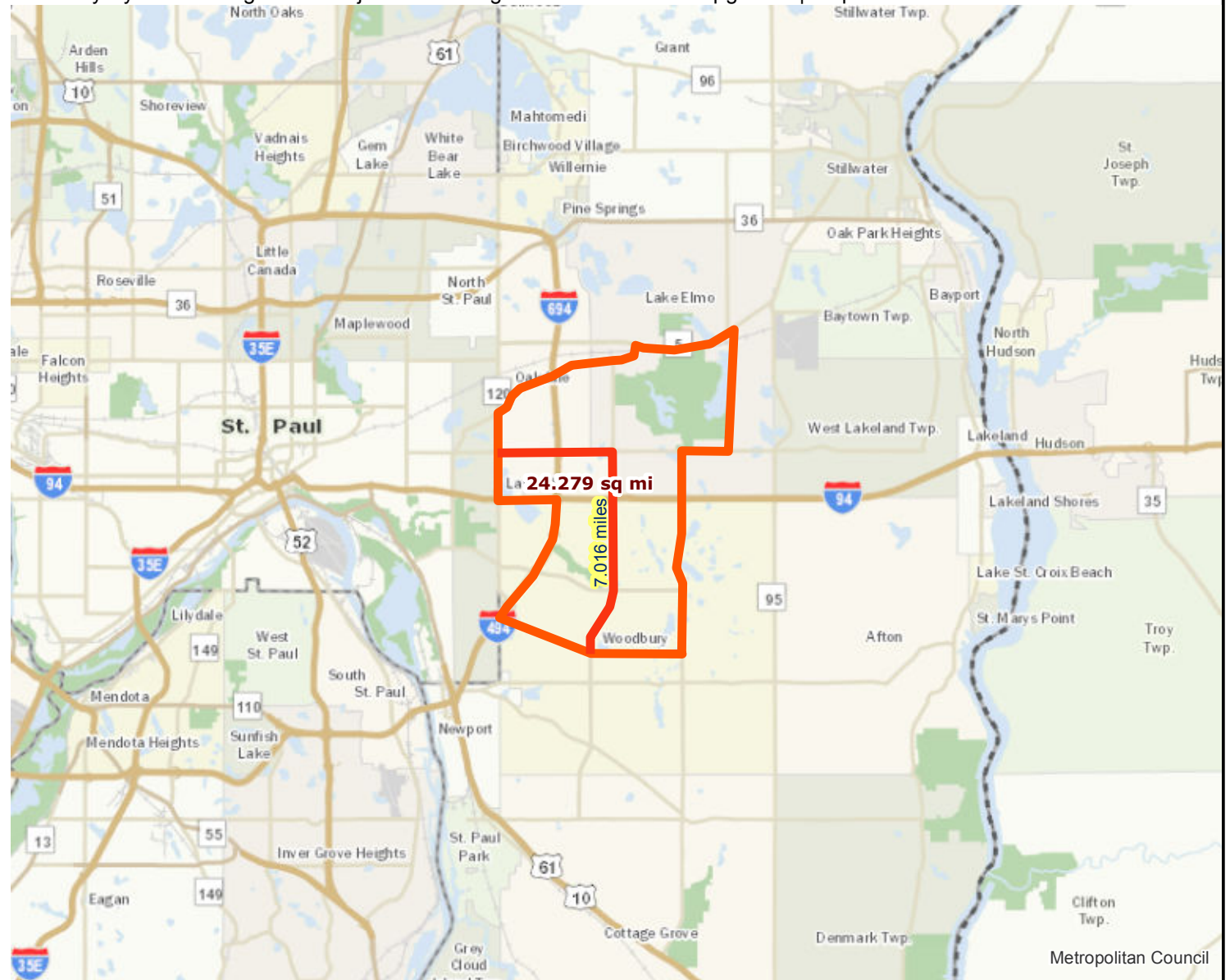
File Name	Description	File Size
Project Estimate.pdf	Preliminary Project Estimate	12 KB
Project Map.pdf	Map of included intersection locations. Note that most of the included are outside of the primary corridor (CSAH 13 + CSAH 10) which was used for the mapping calculations of socioeconomic indicators, etc.	1.3 MB

Roadway Area Definition

Results

Project Length: 7.016 miles

Project Area: 24.279 sq mi



-  Project
-  Project Area



Created: 7/13/2016
LandscapeRSA1



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



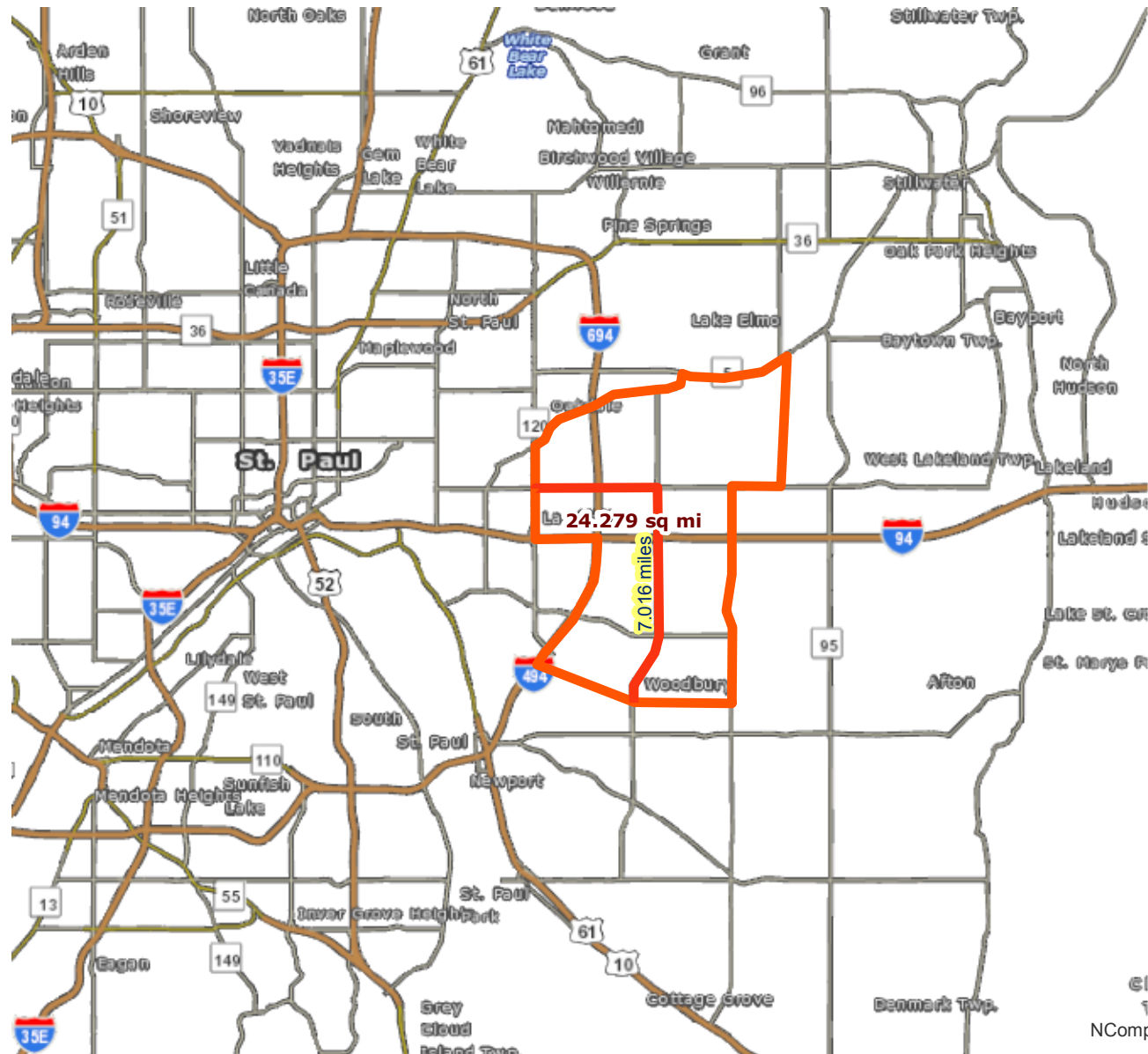
Regional Economy

Results

WITHIN ONE MI of project:

Total Population: 64349
Total Employment: 19286
Mfg and Dist Employment: 1390

Postsecondary Students:
1667



©
NCompass Technologies

- Project
- Project Area

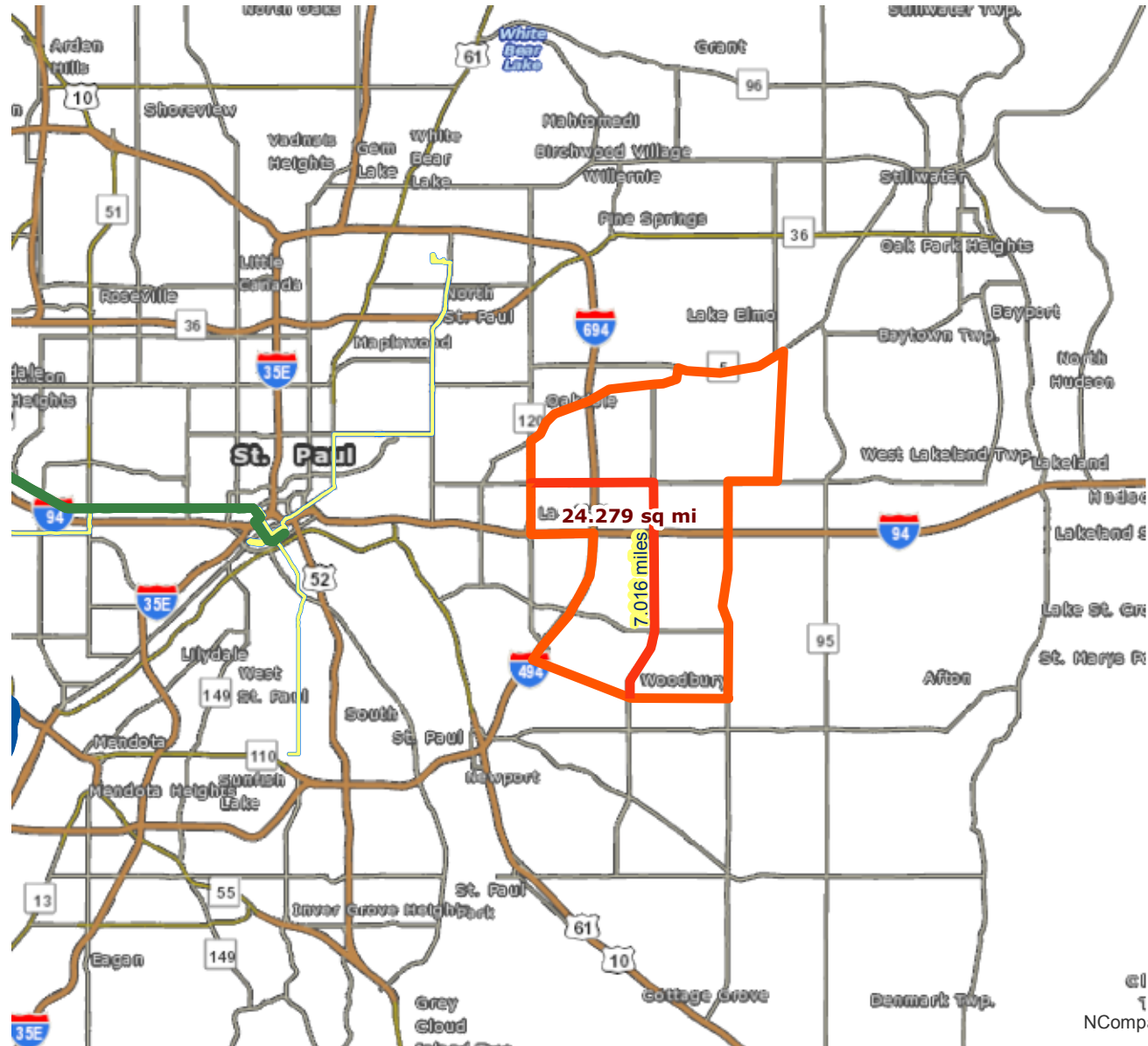


Created: 7/13/2016
LandscapeRSA5



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





Results

Transit with a Direct Connection to project:

219 294 351 375

*Gold Line

*indicates Planned Alignments

Note: This project is county-wide. Additional transit lines which run through project intersections include Routes 353 and 355 on CSAH 16 in Woodbury, and Route 70 on CSAH 25 (Century Ave) on the Woodbury/Maplewood boundary.

- ▬ Project
- ▬ Transitway
- ▬ Green Line
- ▬ Planned Alignments
- Project Area
- ▬ Blue Line
- ▬ Arterial BRT



Created: 7/13/2016
LandscapeRSA3



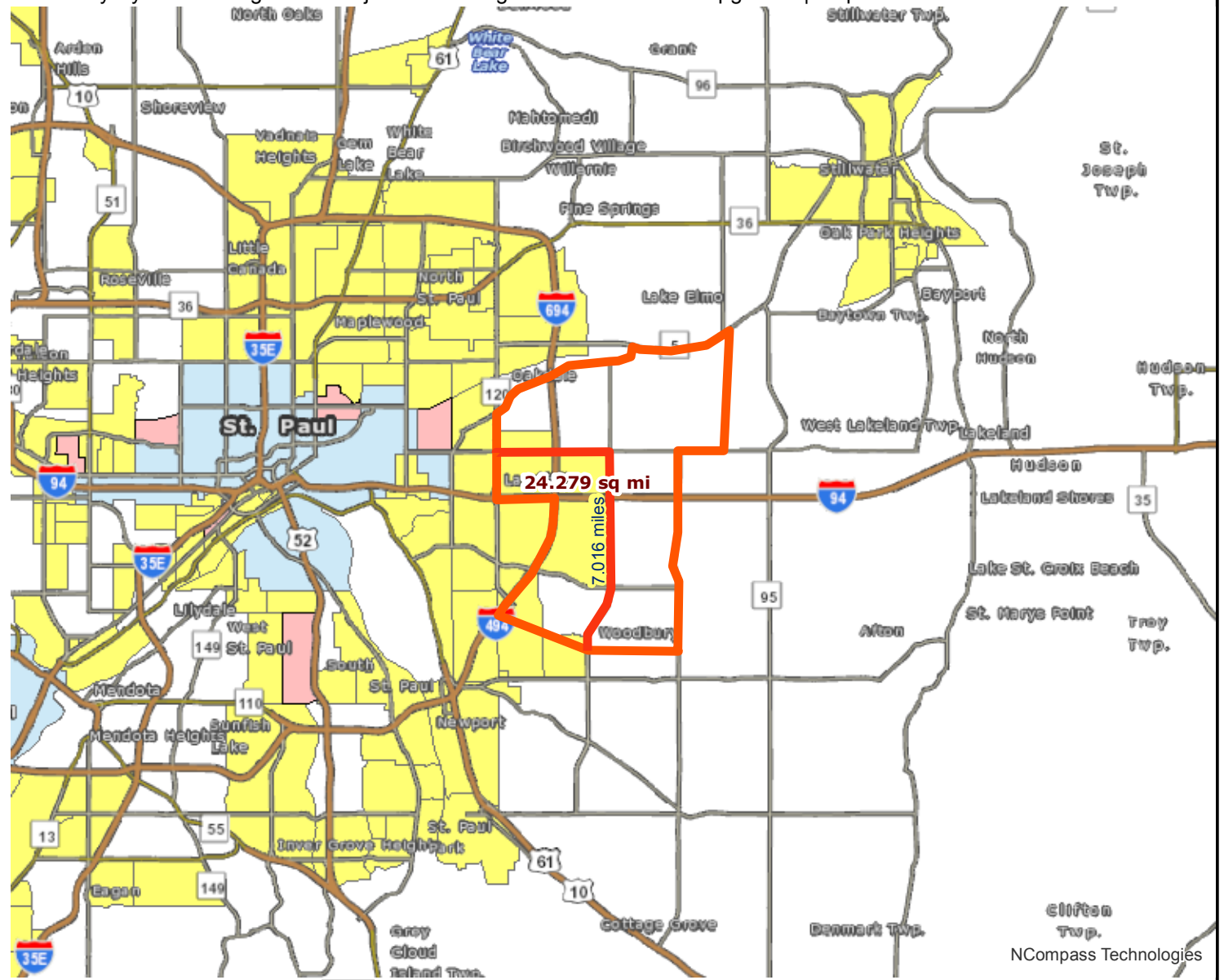
For complete disclaimer of accuracy, please visit <http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx>

CI
1
NCompass Technologies



Results

Project census tracts are above the regional average for population in poverty or population of color: (0 to 18 Points)



- Project
- Project Area
- Area of Concentrated Poverty > 50% residents of color
- Area of Concentrated Poverty
- Above reg'l avg conc of race/poverty



Created: 7/13/2016
LandscapeRSA2



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

NCompass Technologies



STP Application – 2016 Submittal

Washington County Traffic Signal Communication Upgrade

Part 5A and 5B response:

This project, if approved and implemented, would not by itself reduce delay on a normal day at any of the project intersections. However, the project would allow for all intersections to be incorporated into a planned ATMS (Advanced Traffic Management System) operated from the Washington County Public Works main office. The project scope includes the cost of necessary software licenses to bring these intersections online.

The project IS expected to reduce delay and congestion by allowing for automated notification of traffic signal malfunctions, including red-flash conditions and malfunctioning vehicle detectors or pedestrian pushbuttons, all of which contribute to unnecessary delay for intersection users if not addressed in a timely manner.

A red flash condition obviously causes very significant delays and congestion by causing the intersection to revert to all-way stop control. These malfunctions are normally caused by electrical problems, often due to damage from water intrusion or rodent infestation.

A malfunctioning vehicle detector will cause the signal system to operate inefficiently by giving green time to an approach that may have no vehicles on it, thereby holding up other approaches and any waiting pedestrians.

A malfunctioning pedestrian pushbutton will cause the signal system to operate inefficiently by giving “Walk” and pedestrian clearance time to a crosswalk that has no pedestrians on it, thereby holding up conflicting vehicle approaches and any pedestrians waiting at adjacent crosswalks. Because pedestrian timing is often quite long, and because serving pedestrian movements often causes the intersection to fall out of “sync” with the rest of the corridor, significant corridor inefficiencies can result and therefore unnecessary pedestrian calls should be kept to a minimum.

All of these malfunction types cause excess delay and vehicle emissions when they occur. However, since malfunctions occur randomly, the level of improvement cannot be effectively modeled with Synchro/HCM software.

The system also includes CCTV cameras at critical intersection locations to allow county staff to quickly assess problems remotely when practical, ensuring more effective response to critical incidents around the county.

STP Application – 2016 Submittal

Washington County Traffic Signal Communication Upgrade

Part 5A and 5B response:

This project, if approved and implemented, would not by itself reduce delay on a normal day at any of the project intersections. However, the project would allow for all intersections to be incorporated into a planned ATMS (Advanced Traffic Management System) operated from the Washington County Public Works main office. The project scope includes the cost of necessary software licenses to bring these intersections online.

The project IS expected to reduce delay and congestion by allowing for automated notification of traffic signal malfunctions, including red-flash conditions and malfunctioning vehicle detectors or pedestrian pushbuttons, all of which contribute to unnecessary delay for intersection users if not addressed in a timely manner.

A red flash condition obviously causes very significant delays and congestion by causing the intersection to revert to all-way stop control. These malfunctions are normally caused by electrical problems, often due to damage from water intrusion or rodent infestation.

A malfunctioning vehicle detector will cause the signal system to operate inefficiently by giving green time to an approach that may have no vehicles on it, thereby holding up other approaches and any waiting pedestrians.

A malfunctioning pedestrian pushbutton will cause the signal system to operate inefficiently by giving "Walk" and pedestrian clearance time to a crosswalk that has no pedestrians on it, thereby holding up conflicting vehicle approaches and any pedestrians waiting at adjacent crosswalks. Because pedestrian timing is often quite long, and because serving pedestrian movements often causes the intersection to fall out of "sync" with the rest of the corridor, significant corridor inefficiencies can result and therefore unnecessary pedestrian calls should be kept to a minimum.

All of these malfunction types cause excess delay and vehicle emissions when they occur. However, since malfunctions occur randomly, the level of improvement cannot be effectively modeled with Synchro/HCM software.

The system also includes CCTV cameras at critical intersection locations to allow county staff to quickly assess problems remotely when practical, ensuring more effective response to critical incidents around the county.

STP Application – 2016 Submittal

Washington County Traffic Signal Communication Upgrades

Part 6 (Safety) Response:

This project, if approved and implemented, would not by itself improve safety under normal conditions at any of the project intersections. However, the project would allow for all intersections to be incorporated into a planned ATMS (Advanced Traffic Management System) operated from the Washington County Public Works main office. The project scope includes the cost of necessary software licenses to bring these intersections online.

The project IS expected to improve safety by allowing for automated notification of traffic signal malfunctions, including red-flash conditions and malfunctioning vehicle detectors or pedestrian pushbuttons, all of which contribute to unnecessary delay for intersection users if not addressed in a timely manner.

A red flash condition can lead to safety problem by causing the intersection to revert to all-way stop control, which can create congestion and diversion onto surrounding roadways. At intersections with large numbers of approach lanes, all-way stop operation during red flash conditions can cause crashes due to the high number of vehicles arriving simultaneously. Red flash malfunctions are normally caused by electrical problems, often due to damage from water intrusion or rodent infestation.

A malfunctioning vehicle detector will cause the signal system to operate inefficiently by giving green time to an approach that may have no vehicles on it, thereby holding up other approaches and any waiting pedestrians. This may incentivize pedestrians to cross against the signal rather than wait for the signal to change, thus leading to safety concerns.

A malfunctioning pedestrian pushbutton will cause the signal system to operate inefficiently by giving “Walk” and pedestrian clearance time to a crosswalk that has no pedestrians on it, thereby holding up conflicting vehicle approaches and any pedestrians waiting at adjacent crosswalks. Because pedestrian timing is often quite long, and because serving pedestrian movements often causes the intersection to fall out of “sync” with the rest of the corridor, significant corridor inefficiencies can result and therefore unnecessary pedestrian calls should be kept to a minimum.

All of these malfunction types cause safety concerns when they occur. However, since malfunctions occur randomly, the level of improvement cannot be effectively modeled with crash modification factors.

The system also includes CCTV cameras at critical intersection locations to allow county staff to quickly assess problems remotely when practical, ensuring more effective response to critical incidents around the county.

Preliminary Estimated Quantities

Intersection	VDSL Unit	Fiber Link	Fiber Switch	Cell Modem	Camera	ATMS License	Controller
CSAH 5 at Curve Crest	1	0	0	0	1	1	0
CSAH 5 at Orleans/Wild Pines	1	0	0	0	0	1	0
CSAH 5 at Croixwood Blvd	1	0	0	0	0	1	0
CSAH 8 at Victor Hugo Blvd	0	0	0	1	0	1	1
CSAH 10 at Gershwin	1	1	0	1	0	1	1
CSAH 10 at Greenway	1	0	0	0	0	1	1
CSAH 10 at Hadley	1	0	0	0	0	1	0
CSAH 10 at Hallmark	1	0	0	0	1	1	0
CSAH 10 at 694 SB	1	0	0	0	0	1	1
CSAH 10 at 694 NB	1	0	0	0	0	1	1
CSAH 10 at Helmo	1	1	0	0	0	1	1
CSAH 10 at Heron	1	0	0	0	0	1	1
CSAH 10 at CSAH 13	1	1	0	0	0	1	1
CSAH 12 at CSAH 29	0	1	0	0	0	1	1
CSAH 12 at CSAH 17	0	1	0	0	0	1	0
CSAH 12 at Maryknoll	0	1	0	0	0	1	0
CSAH 13 at Hargis Pkwy	0	1	0	0	0	1	0
CSAH 13 at Commonwealth	1	0	0	0	0	1	0
CSAH 13 at Lake Rd	1	0	0	0	0	1	1
CSAH 13 at Afton/Pioneer	1	0	0	0	0	1	1
CSAH 13 at Central Park Pl	1	1	0	0	0	1	1
CSAH 13 at CSAH 16	1	0	0	0	1	1	0
CSAH 13 at City Center	1	0	0	0	0	1	1
CSAH 13 at Pinehurst	1	0	0	0	1	1	0
CSAH 13 at Seasons	1	0	0	0	0	1	0
CSAH 13 at Tamarack	1	0	0	0	0	1	1
CSAH 13 at Hudson Rd S Jct	1	0	0	0	1	1	1
CSAH 13 at Hudson Rd N Jct	1	0	0	0	0	1	0
CSAH 13 at I-94 EB	1	0	0	0	0	1	1
CSAH 13 at I-94 WB	1	0	0	0	0	1	1
CSAH 13 at 4th St	1	1	0	0	0	1	1
CSAH 14 at Grenada	0	0	1	0	0	1	0
CSAH 14 at Hadley	0	0	1	0	0	1	0
CSAH 14 at 694 SB	0	0	1	0	0	1	1
CSAH 14 at 694 NB	0	0	1	0	0	1	1
CSAH 14 at Market/Imation	0	0	1	0	1	1	0
CSAH 14 at CSAH 13	0	0	1	0	0	1	0
CSAH 14 at CSAH 17 W Jct	1	1	0	0	0	1	0
CSAH 14 at CSAH 17 E Jct	1	0	0	0	1	1	0
CSAH 15 at 58th St N	1	0	0	0	0	1	0
CSAH 15 at Liberty	1	1	0	0	0	1	0

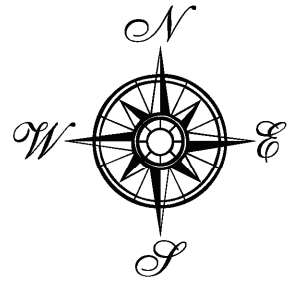
Preliminary Esimated Costs

VDSL Unit	Fiber Link	Fiber Switch	Cell Modem	Camera	ATMS License	Controller	Total
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600
\$2,500	\$20,000	\$0	\$2,500	\$0	\$500	\$3,600	\$29,100
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$3,600	\$26,600
\$0	\$20,000	\$0	\$0	\$0	\$500	\$3,600	\$24,100
\$0	\$20,000	\$0	\$0	\$0	\$500	\$0	\$20,500
\$0	\$20,000	\$0	\$0	\$0	\$500	\$0	\$20,500
\$0	\$20,000	\$0	\$0	\$0	\$500	\$0	\$20,500
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$3,600	\$26,600
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$3,600	\$21,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$0	\$0	\$1,500	\$0	\$0	\$500	\$0	\$2,000
\$0	\$0	\$1,500	\$0	\$0	\$500	\$0	\$2,000
\$0	\$0	\$1,500	\$0	\$0	\$500	\$3,600	\$5,600
\$0	\$0	\$1,500	\$0	\$0	\$500	\$3,600	\$5,600
\$0	\$0	\$1,500	\$0	\$15,000	\$500	\$0	\$17,000
\$0	\$0	\$1,500	\$0	\$0	\$500	\$0	\$2,000
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$0	\$23,000
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$0	\$23,000

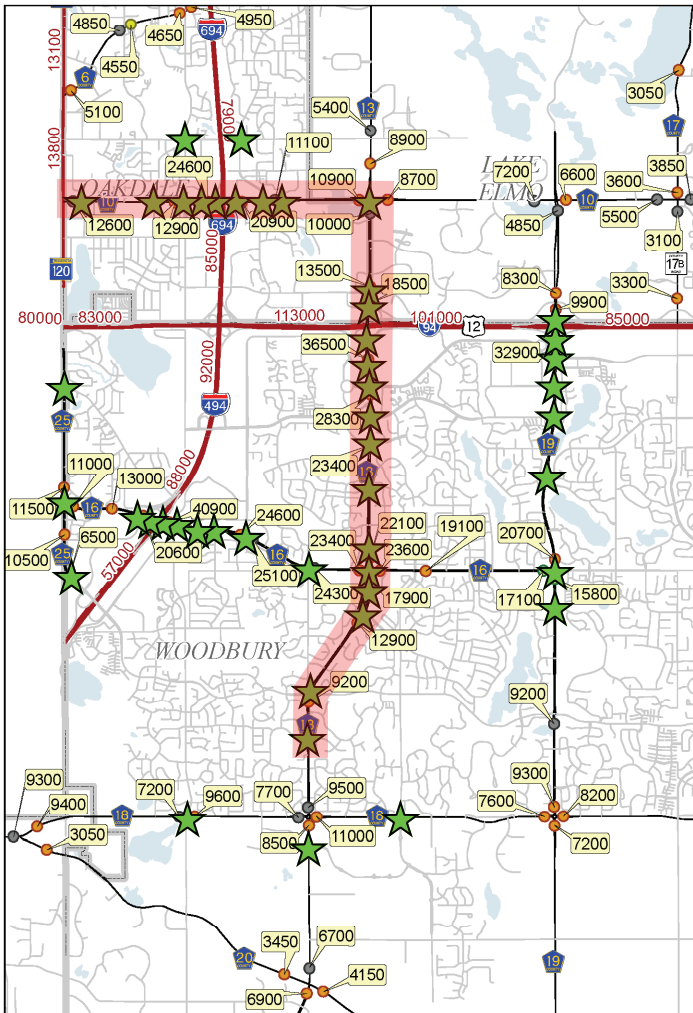
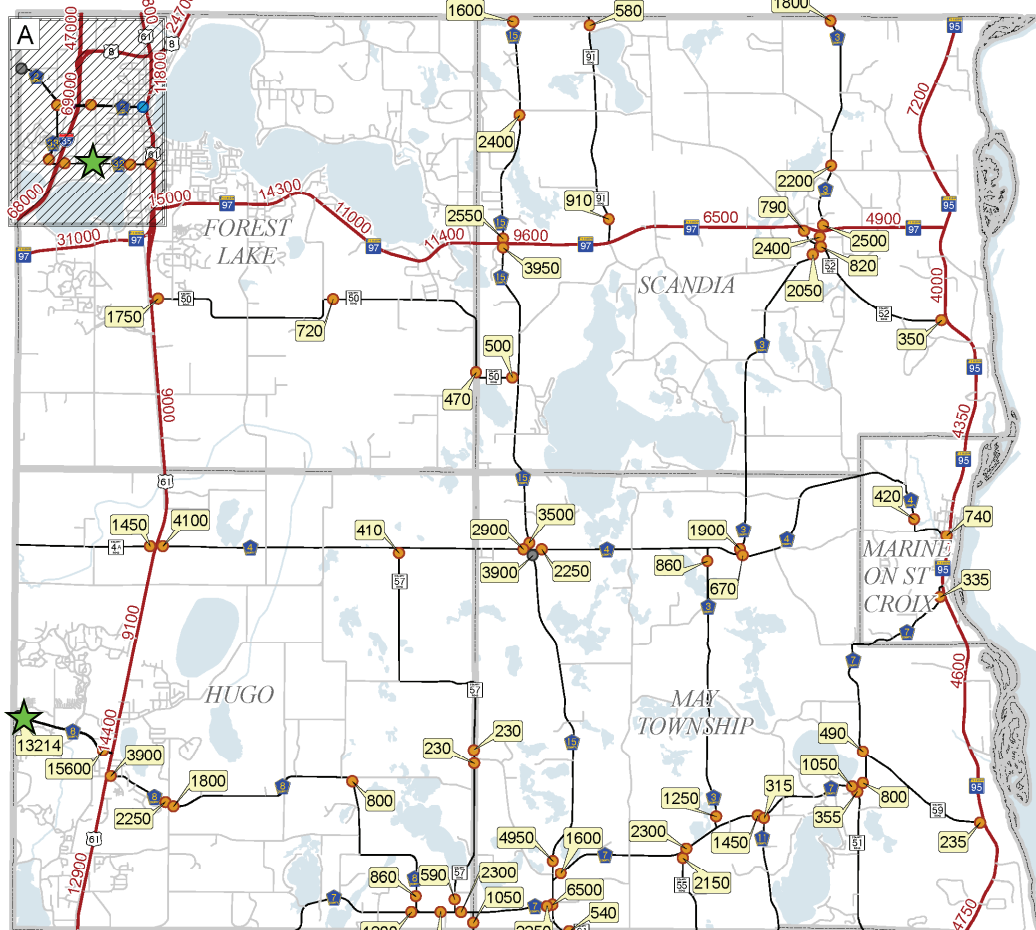
CSAH 15 at Settlers	1	0	0	0	0	1	0
CSAH 15 at CSAH 12	1	0	0	0	1	1	0
CSAH 15 at 80th St N	1	1	0	0	0	1	0
CSAH 16 at Weir Drive	1	0	0	0	0	1	1
CSAH 16 at 494 SB	1	0	0	0	0	1	1
CSAH 16 at 494 NB	1	0	0	0	1	1	1
CSAH 16 at Woodlane	1	0	0	0	0	1	1
CSAH 16 at Valley Plaza	1	0	0	0	0	1	1
CSAH 16 at Queens	1	0	0	0	0	1	1
CSAH 16 at Bielenberg	1	0	0	0	1	1	0
CSAH 16 at Tower	1	0	0	0	0	1	0
CSAH 16 Donegal	1	0	0	0	0	1	0
CSAH 16 at Interlachen	1	0	0	0	0	1	0
CSAH 16 at Colby Lake	1	0	0	0	0	1	0
CSAH 18 at Woodlane	0	0	0	1	0	1	0
CSAH 18 at Pioneer	0	0	0	1	0	1	0
CSAH 19 at Park Crossing	1	0	0	0	0	1	0
CSAH 19 at CSAH 16	1	1	0	0	1	1	0
CSAH 19 at Fox Run	1	0	0	0	0	1	0
CSAH 19 at Tamarack	1	0	0	0	0	1	0
CSAH 19 at Commerce	1	0	0	0	1	1	1
CSAH 19 at Hudson Rd	1	1	0	0	0	1	0
CSAH 19 at I-94 EB	1	0	0	0	0	1	1
CSAH 19 at I-94 WB	1	0	0	0	0	1	1
CSAH 21 at Inspiration Pkwy	0	0	0	1	0	1	0
CSAH 22 at US 61	1	0	0	1	0	1	0
CSAH 22 at CSAH 38	1	0	0	0	0	1	0
CSAH 22 at Meadow Grass	1	0	0	1	0	1	0
CSAH 22 at Hardwood Ave	1	0	0	0	0	1	0
CSAH 24 at 62nd St N	0	0	0	1	0	1	1
CSAH 25 at Lake Rd	1	0	0	0	0	1	1
CSAH 25 at CSAH 16	1	0	0	0	0	1	1
CSAH 25 at Upper Afton Rd	1	0	0	0	0	1	1
CSAH 32 at 12th Street	0	0	0	1	0	1	0
CSAH 39 at 80th/Hadley	0	0	0	0	0	1	0
CR 66 at Curve Crest	0	0	0	1	0	1	1
Market Pl at Curve Crest Blvd (Contract)	1	0	0	0	0	1	0
15th & Hadley (Contract)	0	0	0	1	0	1	1
15th & Helmo (Contract)	0	0	0	1	0	1	1

\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$0	\$23,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$3,600	\$21,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$0	\$18,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$2,500	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$2,500	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$20,000	\$0	\$0	\$15,000	\$500	\$0	\$38,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$0	\$15,000	\$500	\$3,600	\$21,600
\$2,500	\$20,000	\$0	\$0	\$0	\$500	\$0	\$23,000
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$2,500	\$0	\$500	\$0	\$5,500
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$2,500	\$0	\$0	\$2,500	\$0	\$500	\$0	\$5,500
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$3,600	\$6,600
\$0	\$0	\$0	\$2,500	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$0	\$0	\$500	\$0	\$500
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600
\$2,500	\$0	\$0	\$0	\$0	\$500	\$0	\$3,000
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600
\$0	\$0	\$0	\$2,500	\$0	\$500	\$3,600	\$6,600

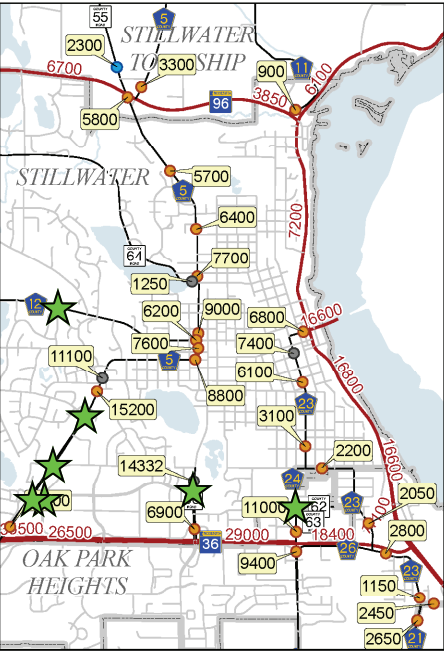
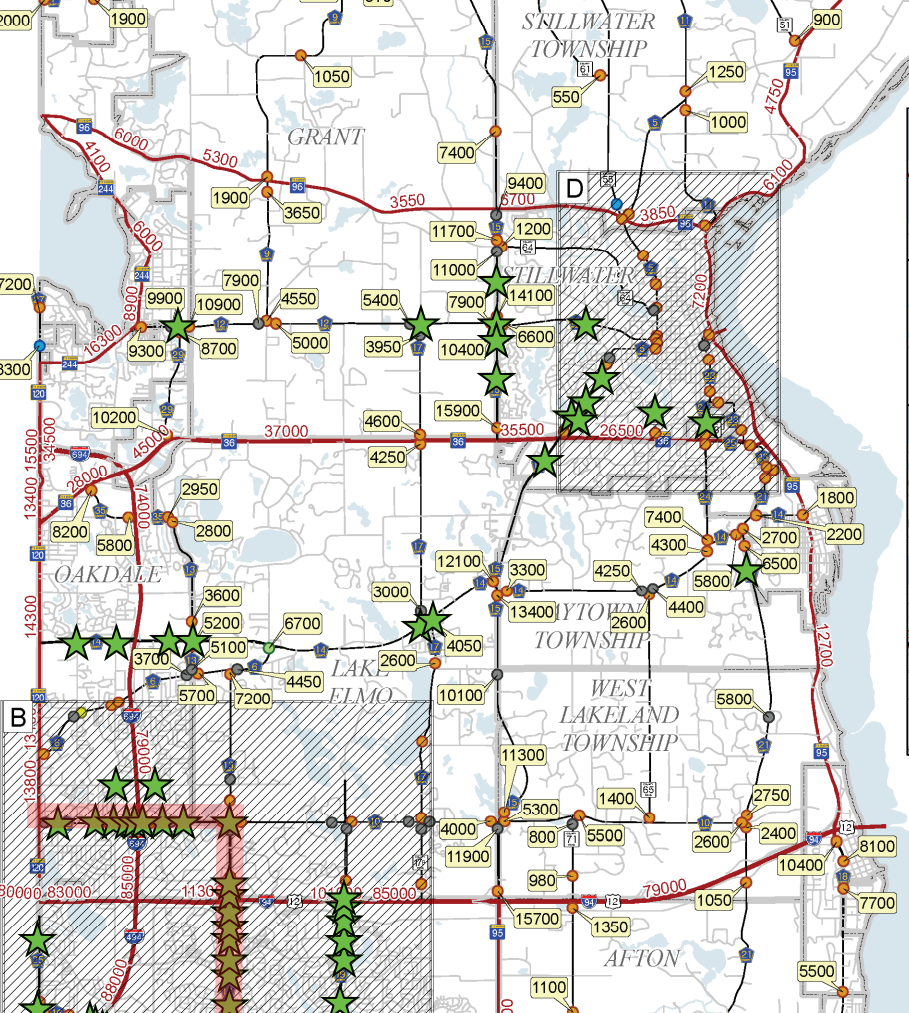
Grand Total:	\$818,600
80% Fed	\$654,880
20% Match	\$163,720



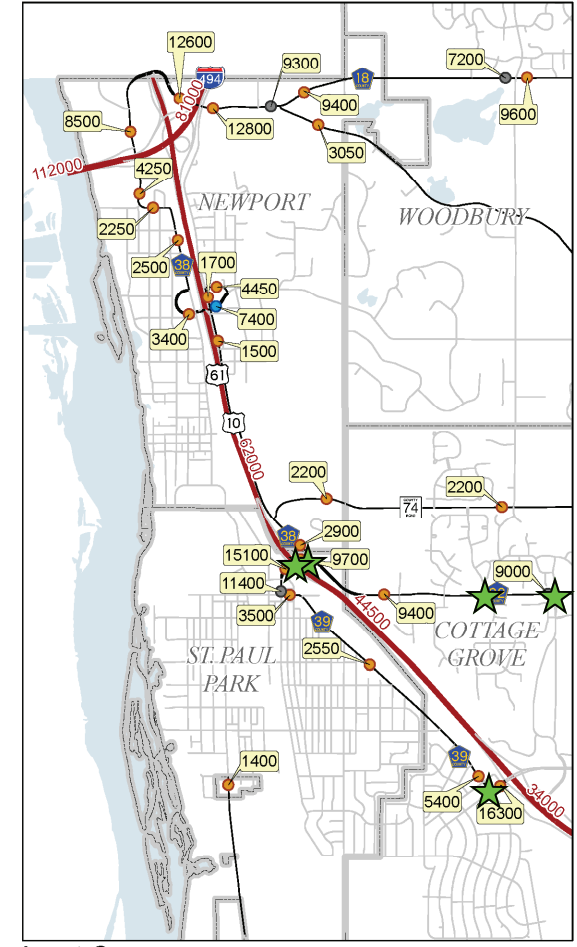
Inset A



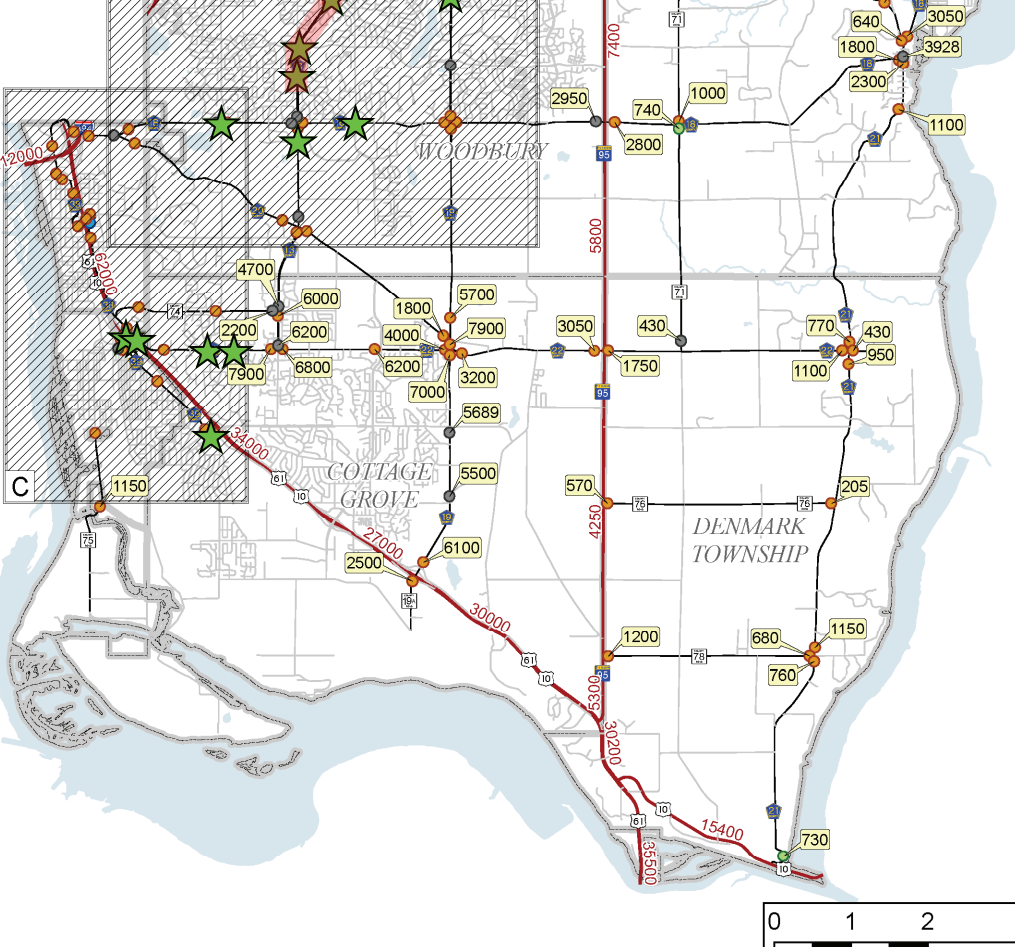
Inset B



Inset D



Inset C



- Project Intersection
- Primary Corridor Used for Application

- Year Recorded**
- 2015 Traffic Volume
 - 2014 Traffic Volume
 - 2013 Traffic Volume
 - 2012 Traffic Volume
 - 2011 Traffic Volume
 - 2004 to 2010 Traffic Volume

- INTERSTATE HIGHWAY
- U.S. TRUNK HIGHWAY
- STATE TRUNK HIGHWAY
- COUNTY STATE AID HIGHWAY
- COUNTY ROAD

CURRENT STATE HIGHWAY VOLUMES. (AADT_Current_2014_Traffic_Segments) 4100

This map is neither a legally recorded map nor a survey and is not intended to be used as one. The Digital Data is a compilation of records, information and data from various city, county and state offices and other sources and should be used for reference only. No representation is made that the features presented accurately reflect true location. Washington County or any other entity from which data was obtained assumes no liability for any errors or omissions herein. If discrepancies are found, please contact the Washington County Public Works

File: R:\PublicWorks\GIS\Maps\Traffic Volumes Created May 3rd, 2016

Scale 1:79,285

