Application

04774 - 2016 Roadway Modernization

05087 - CSAH 30 Safety Improvement Project

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	07/14/2016 8:52 AM

Primary Contact

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

Organization Information

Name:	CARVER COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: PUBLIC WORKS

11360 HWY 212 W #1

*			
	COLOGNE	Minnesota	55322-9133
	City	State/Province	Postal Code/Zip

County: Carver

Phone:* Ext.

Fax:

PeopleSoft Vendor Number 0000026790A12

Project Information

Project Name CSAH 30 Safety Improvement Project

Primary County where the Project is Located Carver

Jurisdictional Agency (If Different than the Applicant): N/A

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

The proposed project includes the reconstruction and modernization of County State-Aid Highway (CSAH) 30 (70th Street) from Trunk Highway (TH) 25 (Ash Avenue South) to CSAH 10 in Carver County. CSAH 30 is currently a two-lane A-Minor Connector rural highway with 12-foot lanes and two-foot gravel shoulders. The project is located entirely within Waconia Township.

The improvements will upgrade CSAH 30 to state standards, which includes a full depth reclamation of the 12-foot travel lanes, and shoulder widening to eight-foot shoulders (six foot paved and two foot aggregate). The extra shoulder width and flattened inslopes will improve safety for motorists, bicyclists, heavy commercial vehicles, farming equipment and provide a safe emergency stopping area for vehicles.

CSAH 30 is a crucial link to the regional transportation network. CSAH 30 is a major east-west connector in Carver County that links New Germany to Mayer west of the project area and two standalone communities (Mayer and Waconia). The City of Waconia is located on the eastern edge of the project area and is growing rapidly. Population is expected to double in the community between 2010 and 2040 (11,520 to 24,000). An additional 4,700 jobs are also forecasted during this period. CSAH 30 provides a direct connection to six area schools and 94 different district bus routes serving over 3,700 students on a daily basis. The district is expecting to grow rapidly to 6,000 students by 2030.

CSAH 30's rural significance is related to its access to major north-south A Minor Connectors (TH 25 and CSAH 10), which link to the regional transportation network. TH 25 and CSAH 10 serve

as one of the few continuous north-south routes in rural Carver County that provides access to TH 5 (A Minor Connector), US 212 (Principal Arterial) and TH 7 (Principal Arterial). Mayer and Waconia rely on these connections heavily. These corridors will also see a significant increase in travel demand over the next ten to twenty years. This has been demonstrated in the County's most recent Travel Demand Model, which indicates CSAH 30's traffic volumes to more than triple over the next 15 years (2,650 vehicles per day to 9,000 vehicles per day).

Based on the area's growth, there is an immediate need to upgrade CSAH 30 to meet state standards. The improvements will provide multimodal benefits, including the freight and bicycle communities, who have limited paved options in rural parts of the region.

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)	N/A
Project Length (Miles)	3.9

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	$3,641,200.00
Match Amount	$910,300.00

Minimum of 20% of project total

Project Total	$4,551,500.00
Match Percentage	20.0%

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

Source of Match Funds	Carver County

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: 2019

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

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$174,000.00
Removals (approx. 5% of total cost)	$412,500.00
Roadway (grading, borrow, etc.)	$679,000.00
Roadway (aggregates and paving)	$1,732,500.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$214,500.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$0.00
Traffic Control	$139,000.00
Striping	$19,500.00
Signing	$136,500.00
Lighting	$0.00
Turf - Erosion & Landscaping	$282,000.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall (do not include in cost effectiveness measure)	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$414,000.00
Other Roadway Elements	$348,000.00
Totals	**$4,551,500.00**

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
Substotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$4,551,500.00
Construction Cost Total	$4,551,500.00
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:

Goal B: Safety and Security (2040 TPP, pg. 2.7)- The regional transportation system is safe and secure for all users.Objectives: Reduce crash rates and improve safety and security for all modes of passenger travel and freight transport.

Strategies:B1 - Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the processes of planning, funding, construction, operation.

B3 - Regional transportation partners should monitor and routinely analyze safety and security data by mode and severity to identify priorities and progress.

B6 - Regional transportation partners will use best practices to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system.

Goal D: Competitive Economy (2040 TPP, pg. 2.11)- The regional transportation system supports the economic competitiveness, vitality, and prosperity of the regions and state.Objectives: Support the region?s economic competitiveness through the efficient movement of freight.

Strategies: D5 - The Council and MnDOT will work with transportation partners to identify the impacts of highway congestion on freight and identify cost-effective mitigation.

Goal F: Leveraging Transportation Investment to Guide Land Use (2040 TPP, pg 2.14)- The region leverages transportation investments to guide land

use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability. Objectives: Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

Strategies:F7 - Local governments should include bicycle and pedestrian elements in local comprehensive plans.

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

List the applicable documents and pages:

The CSAH 30 project is listed in the Carver County Roadway Safety Plan (2013). CSAH 30 is ranked in the rural segment prioritization category for road departure. The corridor is also identified in the edge risk assessment as risky (worst rating) for shoulder width and clear zone.

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 MnDOTs Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

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

4.The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that 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.

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

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

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

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

Requirements - Roadways Including Multimodal Elements

Project Information-Roadways

County, City, or Lead Agency	Carver County
Functional Class of Road	A-Minor Connector
Road System *TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET*	CSAH
Road/Route No. *i.e., 53 for CSAH 53*	30
Name of Road *Example; 1st ST., MAIN AVE*	CSAH 30
Zip Code where Majority of Work is Being Performed	55387
(Approximate) Begin Construction Date	06/01/2020
(Approximate) End Construction Date	06/30/2021

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

From: **(Intersection or Address)**	TH 25
To: **(Intersection or Address)** *DO NOT INCLUDE LEGAL DESCRIPTION*	CSAH 10
Or At	
Primary Types of Work *Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.*	Grading, Agg Base, Bit Base, Traffic Control, Striping

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:	N/A
New Bridge/Culvert No.:	N/A
Structure is Over/Under **(Bridge or culvert name):**	N/A

Expander/Augmentor/Connector/Non-Freeway Principal Arterial

Select one:	
Area	21.2
Project Length	3.9

Average Distance	5.4359
Upload Map	1468246805053_Roadway Area Definition.pdf

Reliever: Relieves a Principal Arterial that is a Freeway Facility

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

Reliever: Relieves a Principal Arterial that is a Non-Freeway Facility

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

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

Existing Employment within 1 Mile:	113
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	42
Existing Students:	0
Upload Map	1468246856157_Regional Economy.pdf

Measure C: Current Heavy Commercial Traffic

Location:	CSAH 30 from TH 25 to CSAH 10
Current daily heavy commercial traffic volume:	350
Date heavy commercial count taken:	2016

Measure D: Freight Elements

Approximately 14 percent of the corridor's recorded traffic is by way of heavy commercial vehicles which includes agricultural equipment and delivery trucks alike. CSAH 30 is a critical two-lane rural east-west connector roadway that is relied on heavily to carry regional traffic and goods and services between two standalone communities (City of Mayer and City of Waconia) and surrounding areas as well as serve local agricultural trips between farm operations located on CSAH 30.

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

CSAH 30 is a critical route for shipping dairy products and animals by connecting agricultural industries to major north-south A Minor Connectors (TH 25 and CSAH 10), which link to the regional transportation network. TH 25 and CSAH 10 serve as one of the few continuous north-south routes in rural Carver County that provides access to TH 5 (A Minor Connector), US 12 (Principal Arterial) and TH 7 (Principal Arterial).

Improvements from the proposed project will allow local freight vehicles safer and more efficient access to regional freight routes and into the Cities of Mayer and Waconia. The extra roadway width will reduce edge stress and the potential for edge drop-offs. Widening the roadway shoulder width will also improve freight safety and mobility for over-sized agricultural equipment and freight implements.

Measure A: Current Daily Person Throughput

Location	CSAH 30 west of Polk Avenue/Goose Lake Drive
Current AADT Volume	2650

Existing Transit Routes on the Project	N/A
For New Roadways only, list transit routes that will be moved to the new roadway	
Upload Transit Map	1468247354202_Transit Connections.pdf

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	3445.0

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	Approved Met Council County Travel Demand Model
Forecast (2040) ADT volume	9000

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

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

The project is 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. However, within the project area is Watertown Township, which is above regional average for concentrated race/poverty per the Metropolitan Council map generator.

CSAH 30 improvements will provide safer commuter and freight travel along the project corridor, both of which will support the health and growth of the county?s local economy. The direct east-west connection between TH 25 and CSAH 10 will enable efficient connections to regional employment with ½ hour of Waconia Township, including the job concentration centers located in Plymouth, Wayzata, Victoria, Chanhassen, Eden Prairie, Chaska, and Shakopee.

Waconia's major employer is Ridgeview Medical Center located just outside the downtown area. The center has additional plans for long-term growth at this campus. The city is also home to six area schools, serving over 3,900 students and employing approximately 625.

Future Industrial, institutional, mixed-use, and residential land use development will occur on the north side of CSAH 30 and west of Quartz Avenue. The city of Mayer will continue their development with an infill and redevelopment approach in order to maximize public investment to infrastructure (see Issues Map for development areas).

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

Upload Map

1468247522956_SocioEconomic Conditions.pdf

Measure B: Affordable Housing

City/Township	Segment Length in Miles (Population)
Waconia Township	3.9
	4

Total Project Length

Total Project Length (Total Population)	3.9

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)	3.9
Total Housing Score	0

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1953	3.9	7616.7	1953.0
	4	**7617**	**1953**

Average Construction Year

Weighted Year	1953

Total Segment Length (Miles)

Total Segment Length	3.9

Measure B: Geometric, Structural, or Infrastructure Improvements

Improving a non-10-ton roadway to a 10-ton roadway: Yes

Response (Limit 700 characters; approximately 100 words)

The proposed CSAH 30 reconstruction and modernization project improvements will accommodate heavy freight vehicles and agricultural equipment weighing over 10-tons. CSAH 30 is currently posted as a ten-ton route. The reconstruction of CSAH 30 will maintain this designation.

Improved clear zones or sight lines: Yes

Response (Limit 700 characters; approximately 100 words)

CSAH 30 has a crash rate that is more than triple the statewide average. Many of these crashes are lane departure crashes. The existing two-foot shoulders do not provide an adequate area for motorists who cross the lane line to regain control of the vehicle safely.

The proposed shoulder widening of CSAH 30 from two-feet to eight-feet will provide a clear zone for operators to regain control of their vehicle. The extra shoulder width will also provide a safe emergency stopping area for vehicles.

Improved roadway geometrics: Yes

Response (Limit 700 characters; approximately 100 words)

The proposed project will address the roadway geometrics associated with this curve and upgrade geometry to a 55 mph design speed. The project will also include an eight foot shoulder (six foot paved and two foot aggregate).

Access management enhancements: Yes

Response (Limit 700 characters; approximately 100 words)

Currently, there are no safety concerns from an access management perspective. Future access and roadways will be located in areas with adequate visibility and away from curves.

Vertical/horizontal alignments improvements: Yes

Response (Limit 700 characters; approximately 100 words)

The in-place slopes are rather steep and the proposed project will flatten the inslopes to meet state standards.

Improved stormwater mitigation:	Yes
Response (Limit 700 characters; approximately 100 words)	The proposed project will apply the appropriate stormwater mitigation measures for a rural two-lane roadway.
Signals/lighting upgrades:	Yes
Response (Limit 700 characters; approximately 100 words)	The proposed project will include the appropriate lighting at county road intersections. Signals are not included as part of this project.
Other Improvements	No
Response (Limit 700 characters; approximately 100 words)	N/A

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
8.0	8.0	0	1516	0	N/A	1468248108665_CSAH 30 Synchro.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):
1.37	1.37	0	1516.0	0

1	1	1516	0

Total

Total Emissions Reduced:	0
Upload Synchro Report	1468248730748_CSAH 30 Synchro.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

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)	

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

100%

Stakeholders have been identified	Yes

40%

Stakeholders have not been identified or contacted

0%

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

Layout or Preliminary Plan completed	Yes

100%

Layout or Preliminary Plan started

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion

3)Environmental Documentation (5 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% 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 12/31/2019

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: 12/31/2019

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

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 Yes

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 01/31/2020

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 03/01/2020

10)Letting

Anticipated Letting Date 03/01/2020

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

Crash Modification Factor Used: 0.86

CSAH 30 from TH 25 to CSAH 10

Improvements include reconstructing the roadway and adding a paved shoulder

CR1=Increase pavement friction

CR2=Install a paved shoulder

CR=1 - (1-CR1)*(1-CR2)

Rationale for Crash Modification Selected:

Angle Crashes (PDO): 1 - (1-.21)*(1-.42) = .54

Head On, ROR, Sideswipe (PDO): 1 - (1-.41)*(1-.77) = .86

ROR (Injury): 1 - (1-.41)*(1-.77) = .86

Other (PDO): 1 - (1-.41)*(1-.42) = .66

Other (Injury): 1 - (1-.41)*(1-.72) = .83

Rear End (PDO): 1 - (1-.70)*(1-.42) = .83

The crash modifications are consistent with the proposed improvements. See attachment for more information

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio $2,599,988.00

Worksheet Attachment 1468249742612_Complete Crash CSAH 30.pdf

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

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

CSAH 30 currently lacks safe accommodations for pedestrians and bicycles. Currently, the existing roadway has two-foot gravel shoulders, and pedestrians and cyclists using CSAH 30 for commuter or recreational uses including regional access to the several area lakes, parks and trails are forced to walk or cycle on the road or in the roadway's narrow shoulder alongside commuter and freight traffic. Pavement markings are worn and faded in many areas along the corridor. Pavement conditions are poor and patched in many locations and the pavement is at the end of its useful life and needs replacement.

The improved pavement condition and widening of the shoulders (six foot paved and two foot aggregate) will safely accommodate on-road bike commuters and recreational riders who use CSAH 30, as well as those who wish to gain access to the Dakota Ridge Trail or access any of the area lakes.

The paved Dakota Rail Regional Trail extends 13.5 miles through Carver County from the county line (roughly two miles west of New Germany) to the east county line on the northeast side of Lake Waconia. The trail is part of the larger 44-mile, three county trail. The trail can be accessed from two of CSAH 30's northern intersecting roads; Quartz Lane, and Goose Lake Drive. At its closest distance, the trail is only 125 feet away from the CSAH 30 right-of-way.

Carver County is currently developing a Lake Waconia Regional Park and Coney Island Master Plan. The plan discusses details to revitalize Coney Island and the current park layout, develop paved multi-purpose trails, lakefront walks, and perform numerous facility upgrades to promote recreational

activities. When completed, this will become a regional destination for recreation and interpretation uses. This regional destination emphasis the need for CSAH 30 improvements to provide safe access between the City of Mayer, surrounding Townships and Waconia.

Currently, transit is not incorporated into the CSAH 30 project. The TPP's Transit Investment Plan does not show any area transitway investments planned for Waconia Township, City of Waconia, City of Mayer, or Watertown Township in the Current Revenue Scenario. In that respect, the improved shoulders will enhance the limited multimodal transportation options located in this part of the county.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	$4,551,500.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$4,551,500.00
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
CSAH 30_Complete Crash.pdf	CSAH 30 - Complete Crash Report	632 KB
CSAH 30_Concept Drawing.pdf	Figure 1 CSAH 30 Concept Drawing	333 KB
CSAH 30_Google Street View.pdf	Figure 3 CSAH 30 - Existing Conditions - Google Street View	277 KB
CSAH 30_References to County Plans.pdf	CSAH 30 - References to County Plans	1.9 MB
Figure 2.pdf	Figure 2 Issues Map	2.9 MB

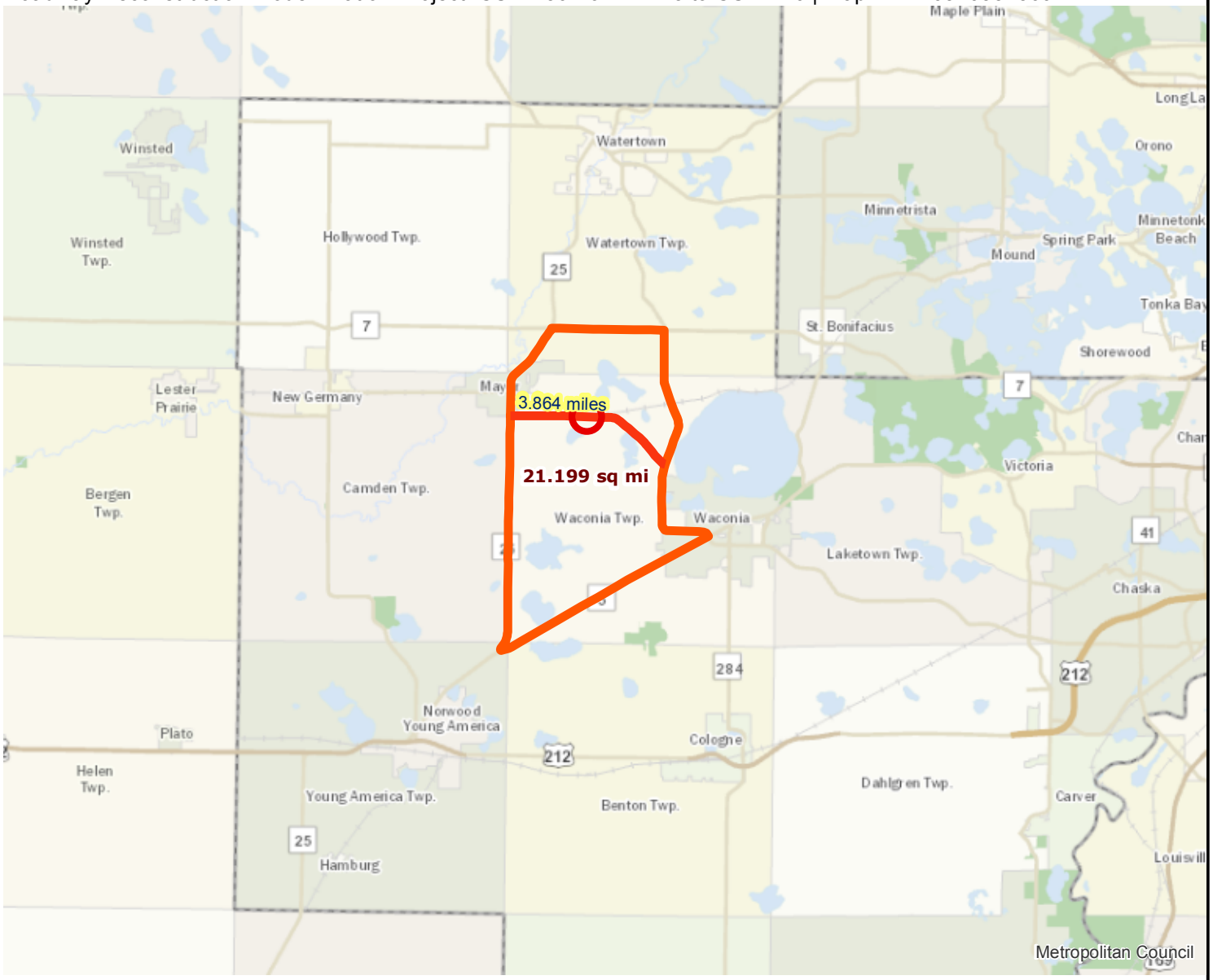
Roadway Area Definition

Roadway Reconstruction/Modernization Project: CSAH 30 from TH 25 to CSAH 10 | Map ID: 1465405545697

Results

Project Length: 3.864 miles

Project Area: 21.199 sq mi



Project Points Project Area

Project

0 2 4 8 12 16 Miles

Created: 6/8/2016
LandscapeRSA1

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

METROPOLITAN COUNCIL

Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 30 from TH 25 to CSAH 10 | Map ID: 1465405545697

Results

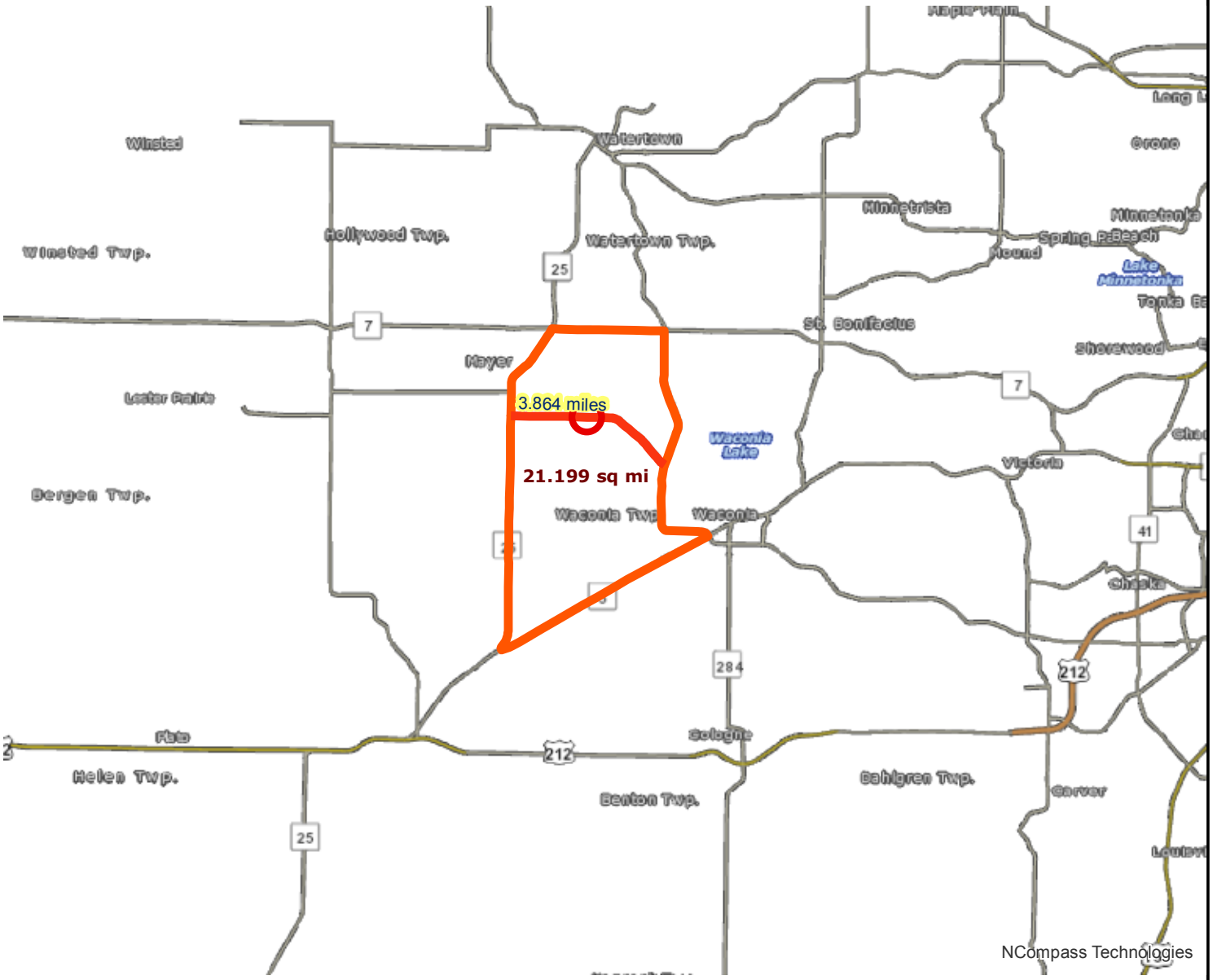
WITHIN ONE MI of project:

Totals by City:

Waconia Twp.
Population: 628
Employment: 67
Mfg and Dist Employment: 42

Watertown Twp.
Population: 195
Employment: 46
Mfg and Dist Employment: 0

Postsecondary Students:
0



Project Points
Project Area
Project

0 2 4 8 12 16 Miles

Created: 6/8/2016
LandscapeRSA5

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

METROPOLITAN COUNCIL

Transit Connections

Roadway Reconstruction/Modernization Project: CSAH 30 from TH 25 to CSAH 10 | Map ID: 1465405545697

Results

Transit with a Direct Connection to project:
-- NONE --

**indicates Planned Alignments*

Project Points
Project Area
Project

0 2 4 8 12 16 Miles

Created: 6/8/2016
LandscapeRSA3

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

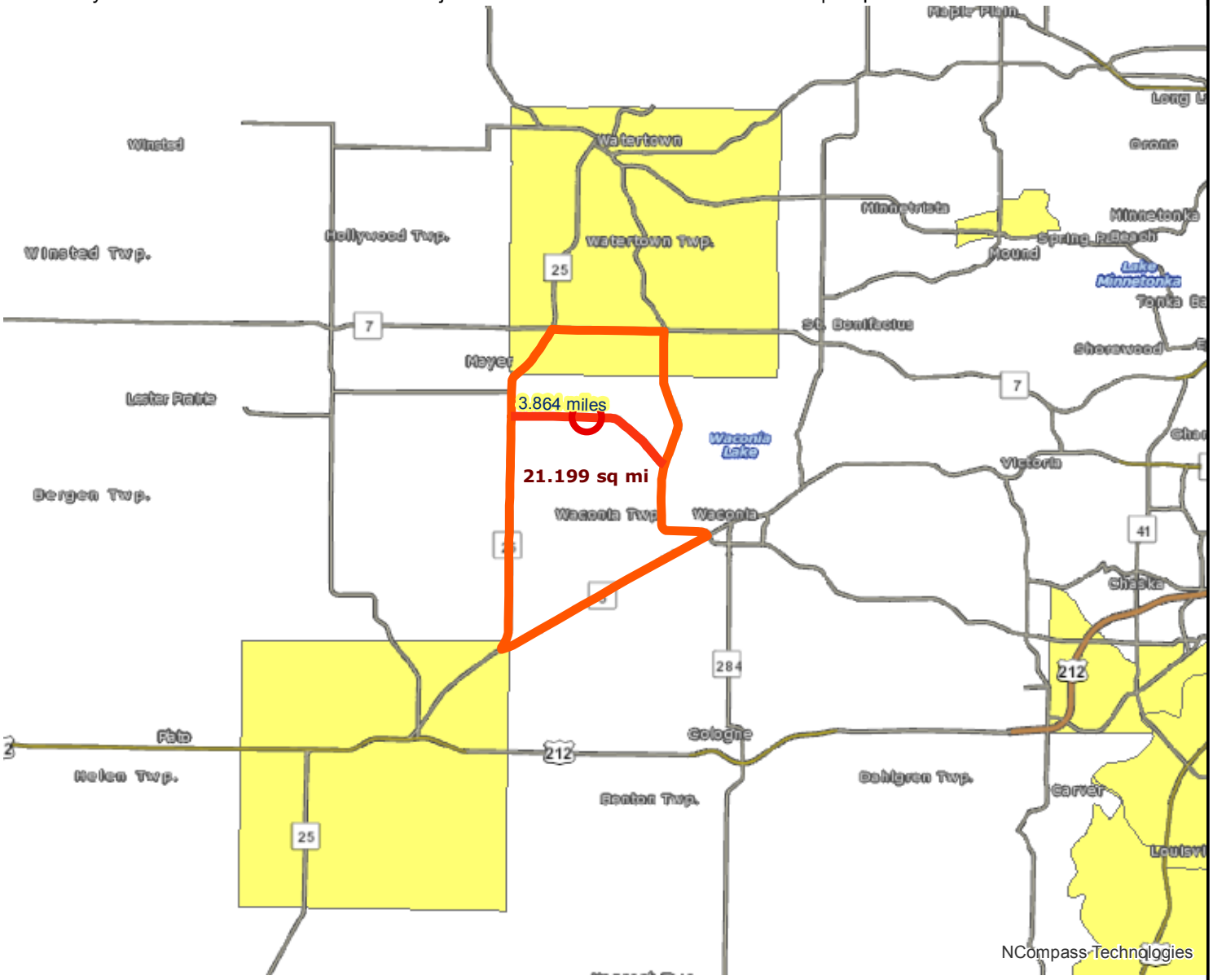
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: CSAH 30 from TH 25 to CSAH 10 | Map ID: 1465405545697

Results

Project located in
a census tract that is below
the regional average for
population in poverty
or populations of color,
or includes children,
people with disabilities,
or the elderly:
(0 to 12 Points)



Project Points
Project
Project Area

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

0 2 4 8 12 16 Miles

Created: 6/8/2016
LandscapeRSA2

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

METROPOLITAN COUNCIL

2: CSAH 10 & CSAH 30

Direction	All
Future Volume (vph)	923
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.59
NOx Emissions (kg)	0.11
VOC Emissions (kg)	0.14

7: TH 25 & CSAH 30

Direction	All
Future Volume (vph)	593
Total Delay / Veh (s/v)	5
CO Emissions (kg)	0.37
NOx Emissions (kg)	0.07
VOC Emissions (kg)	0.09

2: CSAH 10 & CSAH 30

Direction	All
Future Volume (vph)	923
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.59
NOx Emissions (kg)	0.11
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VOC Emissions (kg)	0.09

HSIP 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 30	CSAH 10 to TH 25			Carver	1/1/2013	12/31/2015

Description of Proposed Work: Reconsruct roadway and add paved shoulders

Accident Diagram Codes			1 Rear End	2 Sideswipe Same Direction	3 Left Turn Main Line	5 Right Angle	4,7 Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 Other	Total
Study Period: Number of Crashes	Fatal	**F**									
	Personal Injury (PI)	**A**									
		B					1				**1**
		C					3				**3**
	Property Damage	**PD**	4	1		1	5	1		2	**14**
% Change in Crashes *Use Crash Modification Factors Clearinghouse	Fatal	**F**									
	PI	**A**									
		B					-86%				
		C					-86%				
	Property Damage	**PD**	-83%	-86%		-54%	-86%	-86%		-66%	
Change in Crashes = No. of crashes **X** % change in crashes	Fatal	**F**									
	PI	**A**									
		B					**-0.86**				**-0.86**
		C					**-2.58**				**-2.58**
	Property Damage	**PD**	**-3.32**	**-0.86**		**-0.54**	**-4.30**	**-0.86**		**-1.32**	**-11.20**

Year (Safety Improvement Construction): **2020**

		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Project Cost (exclude Right of Way)	**$ 4,551,500**					
Right of Way Costs (optional)		**F**			**$ 1,400,000**	
Traffic Growth Factor	**3%**	**A**			**$ 570,000**	
Capital Recovery		**B**	**-0.86**	**-0.29**	**$ 170,000**	**$ 48,778**
1. Discount Rate	**4.5%**	**C**	**-2.58**	**-0.86**	**$ 83,000**	**$ 71,445**
2. Project Service Life (n)	**20**	**PD**	**-11.20**	**-3.74**	**$ 7,600**	**$ 28,399**
		Total				**$ 148,622**

B/C= 0.57

Using present worth values,

B= $ 2,599,988

C= $ 4,551,500

See "Calculations" sheet for amortization.

Office of Traffic, Safety and Technology **September 2014**

CSAH 30 From TH 25 to CSAH 10 (2013 - 2015) - created on 06-17-2016 by rile1che

Crash data is managed by the Mn/DOT Office of Traffic, Safety, and Operations.

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U
04	10000030	007+00.299	0410000030	7.299	Z		1	2	R
04	10000030	007+00.690	0410000030	7.690	Z		2	2	R
04	10000030	007+00.700	0410000030	7.700	Z		3	0	R
04	10000030	008+00.111	0410000030	8.111	Z		3	2	R
04	10000030	008+00.160	0410000030	8.160	E		2	2	R
04	10000030	008+00.229	0410000030	8.229	Z		2	2	R
04	10000030	008+00.410	0410000030	8.410	W		1	2	R
04	10000030	008+00.714	0410000030	8.714	Z		2	3	R
04	10000030	009+00.150	0410000030	9.150	Z		1	2	R
04	10000030	009+00.572	0410000030	9.572	Z		2	2	R
04	10000030	009+00.650	0410000030	9.650	E		1	2	R
04	10000030	009+00.650	0410000030	9.650	W		1	2	R
04	10000030	009+00.650	0410000030	9.650	Z		2	2	R
~~04~~	~~10000030~~	~~009+00.744~~	~~0410000030~~	~~9.744~~	~~Z~~	—	~~3~~	~~2~~	~~R~~
04	10000030	009+00.773	0410000030	9.773	Z		3	2	R
~~04~~	~~10000030~~	~~009+00.830~~	~~0410000030~~	~~9.830~~	~~Z~~	—	~~2~~	~~2~~	~~R~~
04	10000030	009+00.900	0410000030	9.900	Z		2	2	R
04	10000030	010+00.150	0410000030	10.150	W		2	2	R
04	10000030	010+00.950	0410000030	10.950	Z		2	2	R
04	10000030	011+00.119	0410000030	11.119	Z		1	2	R

ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV
DRIVER OF UNIT #1 REAR ENDED DRIVER OF UNIT #2. DRIVERS STATED SUN WAS VERY BRIGHT IN EYES AND HA'	10	0000	6-Fri	9	18	2015	0729	N
UNIT 1 TRAVELING EAST ON CR30. UNIT 1 STRUCK DEER.	10	0000	6-Fri	10	23	2015	2047	N
	10	0000	1-Sun	12	28	2014	0815	N
DRIVER OF #1 WAS EASTBOUND ON CSAH 30. ROAD WAS ICE COVERED, SHE SAID SHE STARTED TO FISHTAIL. SLID	10	0000	5-Thu	2	14	2013	1011	C
UNIT ONE WAS TRAVELING EAST ON CO RD 30 WHEN IT LOST CONTROL AND LEFT THE ROADWAY TO THE RIGHT. UNI	10	0000	1-Sun	1	5	2014	1132	N
VEHICLE 1 WAS TRAVELLING EASTBOUND ON CO RD 30 APPROXIMATELY ONE MILE EAST OF HWY 25. THE DRIVER OF	10	0000	6-Fri	7	31	2015	1612	N
UNIT ONE WAS TRAVELING WEST ON CO RD 30 WHEN IT ATTEMPTED TO PASS UNIT TWO ON ITS LEFT. UNIT ONE HI	10	0000	7-Sat	1	4	2014	1017	N
	10	0000	1-Sun	11	8	2015	1740	N
DRIVER VEH 1 SAID HE FELL ASLEEP AND WOKE UP AFTER CRASH, HE CROSSED CENTER LINE, DROVE INTO ONCOMI	10	0000	4-Wed	8	6	2014	2149	N
UNIT 1 DRIVER INDICATED HE BLACKED OUT AND RAN OFF THE ROADWAY. THE VEHICLE LEFT THE ROADWAY ON TH	10	0000	3-Tue	10	27	2015	1325	C
DRIVER WAS TRAVELING EASTBOUND ON CO RD 30. DRIVER STATED VEHICLE HIT ICY SPOT ON ROADWAY AND BEGA	10	0000	7-Sat	12	20	2014	0915	N
DRIVER WAS TRAVELING WESTBOUND ON CO RD 30. DRIVER STATED VEHICLE HIT ICY SPOT ON ROADWAY AND BEGAN	10	0000	7-Sat	12	20	2014	0854	N
DRIVER OF UNIT #1 WAS HEADING WESTBOUND ON CO. RD. 30 AND RAN OFF ROAD RIGHT SIDE. MODERATE DAMAGE	10	0000	5-Thu	10	15	2015	1100	N
~~VEH 1 STRUCK DEER THAT WAS STANDING IN ROADWAY, DEER RAN OFF, UNABLE TO LOCATE DEER. WHITE COPY IS~~	~~10~~	~~0000~~	~~4-Wed~~	~~1~~	~~23~~	~~2013~~	~~1816~~	~~N~~
UNIT 1 WAS TRAVELING WESTBOUND ON CO RD 30 WHEN IT RAN OFF THE ROAD TO THE RIGHT. THE VEHICLE ENTER	10	0000	7-Sat	12	21	2013	0229	B
~~VEH 1 HIT DEER, MOVED VEH TO SAFE LOCATION IN DRIVEWAY OF 12325 CO RD 30. DEER GOA. DRIVER DROVE~~	~~10~~	~~0000~~	~~5-Thu~~	~~10~~	~~30~~	~~2014~~	~~1935~~	~~N~~
DRIVER #1 STATED HE WAS DRIVING SE ON CO RD 30. DRIVER #1 STATED A DEER WALKED INTO THE ROADWAY.	10	0000	7-Sat	10	24	2015	1825	N
UNIT ONE WAS TRAVELING WEST ON CO RD 30 WHEN IT FAILED TO SLOW DOWN TO ALLOW UNIT TWO TO MAKE A LEF	10	0000	2-Mon	8	19	2013	0926	N
VEH 1 WAS EB ON CO RD 30 NEAR 78TH ST. ROAD WAS DRY WITH SOME ICY AND SNOW PACKED AREAS. VEH 1 DROV	10	0000	1-Sun	12	28	2014	0823	C
DRIVER OF UNIT #1 PULLED OUT IN FRONT OF UNIT #2 AS IT WAS HEADING EAST ON CO. RD. 30. UNIT #1 HAD	10	0000	6-Fri	6	19	2015	1108	N

															PERSON1		
NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM	VTYPE	DIR	ACT
0	2	1	55	1	1	1	98	2	1	0	1	1	8	152640024	1	3	1
0	1	1	55	8	8	1	98	6	3	0	2	1	8	152970028	4	3	1
0	1	0	55	51	0	0	98	1	1	0	5	0	0	150330031	1	3	1
0	1	1	55	51	7	4	98	1	2	0	5	1	8	130450122	4	3	1
0	1	1	55	37	7	4	98	1	7	0	5	1	8	140050061	1	3	1
0	2	1	55	1	1	1	98	1	1	0	1	1	8	152130035	3	3	1
0	2	1	55	1	2	1	98	1	5	7	5	1	8	140050028	1	7	15
0	1	1	55	8	90	1	98	6	2	0	1	1	8	153280051	2	7	1
0	1	1	55	30	4	8	98	6	1	0	1	1	8	142180200	1	3	1
0	1	1	55	51	7	4	98	1	1	1	1	1	8	153000169	1	3	1
0	1	4	55	35	4	4	98	1	6	0	2	5	8	143540084	1	3	1
0	1	1	55	35	7	4	98	1	6	0	2	5	8	143540077	1	7	1
0	1	1	55	37	7	4	98	1	1	0	1	6	8	152880114	1	7	1
~~0~~	~~1~~	~~1~~	~~55~~	~~8~~	~~90~~	~~1~~	~~98~~	~~6~~	~~1~~	~~0~~	~~1~~	~~7~~	~~8~~	~~130240014~~	~~2~~	~~7~~	~~1~~
0	1	1	55	51	7	4	98	6	1	0	1	6	8	133590131	2	7	1
~~0~~	~~1~~	~~1~~	~~55~~	~~8~~	~~90~~	~~1~~	~~98~~	~~6~~	~~2~~	~~0~~	~~1~~	~~4~~	~~8~~	~~143030166~~	~~1~~	~~7~~	~~1~~
0	1	1	55	8	5	1	98	6	3	0	2	1	8	152990016	2	4	1
0	2	1	55	1	1	1	98	1	1	0	1	3	8	132310063	1	7	1
0	1	1	55	37	7	4	98	1	2	0	5	1	8	143620040	1	3	1
0	2	7	55	1	90	1	4	1	1	0	1	6	8	151730029	3	3	0

								PERSON2											PERSON3
FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE
4	0	1	N	4	1	16	F	1	3	57	1	0	1	N	4	1	17	F	
1	0	1	N	4	1	33	M												
0	0	1	N	4	0	53	M												
46	0	1	C	4	1	30	F												
61	0	1	N	4	1	32	M												
15	0	1	N	4	1	18	M	1	3	11	1	0	1	N	4	1	26	M	
3	61	1	N	4	1	49	F	38	7	1	1	0	1	N	4	1	52	M	
1	0	1	N	4	1	28	M												
15	6	1	N	4	7	18	M												
15	90	1	C	4	1	20	M												
61	0	1	N	4	1	26	F												
61	0	1	N	4	1	57	M												
99	99	1	N	4	1	47	F												
~~1~~	~~0~~	~~1~~	~~N~~	~~4~~	~~1~~	~~30~~	~~M~~												
18	0	1	C	4	2	23	M												
~~1~~	~~0~~	~~1~~	~~N~~	~~4~~	~~1~~	~~36~~	~~M~~												
1	0	1	N	4	1	77	M												
15	4	1	N	4	1	22	M	1	7	6	1	0	1	N	4	1	66	M	
13	0	1	C	4	1	53	M												
1	0	1	N	4	1	30	M	1	90	37	2	0	1	N	4	98	83	M	


PERSON4
DIR
ACT
FAC1
FAC2
POSN
INJ
EQP
PHYS
AGE
SEX
VTYPE
DIR
ACT
FAC1
FAC2
POSN
INJ
EQP
PHYS
AGE
SEX

- Countermeasure: Improve pavement friction (increase skid resistance)

CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
0.799	20.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.667	33.3	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.819	18.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.797	20.3	★★★★☆	All	All	All	Lyon and Persaud, 2008	
1.271	-27.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.426	57.4	★★★★☆	Wet road	All	All	Lyon and Persaud, 2008	
0.372	62.8	★★★★☆	Wet road	All	All	Lyon and Persaud,	

0.575	42.5	★★★★☆	Rear end,Wet road	All		Lyon and Persaud, 2008
0.59	41	★★★☆☆	All	All	All	Lyon and Persaud, 2008
0.589	41.1	★★★☆☆	All	All	All	Lyon and Persaud, 2008
0.361	63.9	★★★☆☆	Wet road	All	All	Lyon and Persaud, 2008
0.304	69.6	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008
0.943	5.7	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008
0.504	49.6	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008

0.221	77.9	★★★☆☆	Rear end,Wet road	All	All	Lyon and Persaud, 2008
0.787	21.3	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.828	17.2	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.898	10.2	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.799	20.1	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008
0.47	53	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008
0.828	17.2	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008

- Countermeasure: Install curb and gutter
- Countermeasure: Install paved shoulder and rumble strips
- Countermeasure: Pave a 3 to 4 ft sod shoulder
- Countermeasure: Pave narrow shoulder through curve
- Countermeasure: Pave shoulder
- Countermeasure: Paved right shoulder vs. other right shoulder type on freeway ramp
- Countermeasure: Upgrade narrow unpaved shoulder (< 5 ft) to wide paved shoulder (> 5 ft)

Compare	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
☐	0.58	42	★★★☆☆	All	All	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]
☐	0.28	72	★★★☆☆	All	Fatal,Serious injury,Minor injury	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]
☐	0.23	77	★★★☆☆	Head on,Run off road,Sideswipe	All	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]

Compare Reset Compare

**NOTE: You can compare CMFs across countermeasures, subcategories, and categories.*

- Countermeasure: Upgrade unpaved or non-existent shoulders to composite shoulders
- Subcategory: Shoulder rumble strips (338)

Dual CRF for CSAH 24 from CSAH 10 to Market Rd

Improvements include reconstructing the roadway and adding a paved shoulder

CR1=Increase pavement friction
CR2=Install a paved shoulder

CR=1 – (1-CR1)*(1-CR2)

Angle Crashes (PDO): 1 – (1-.21)*(1-.42) = .54
Head On, ROR, Sideswipe (PDO): 1 – (1-.41)*(1-.77) = .86
ROR (Injury): 1 – (1-.41)*(1-.77) = .86
Other (PDO): 1 – (1-.41)*(1-.42) = .66
Other (Injury): 1 – (1-.41)*(1-.72) = .83
Rear End (PDO): 1 – (1-.70)*(1-.42) = .83

HSIP 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 30	CSAH 10 to TH 25			Carver	1/1/2013	12/31/2015

Description of Proposed Work: Reconsruct roadway and add paved shoulders

Accident Diagram Codes			1 Rear End	2 Sideswipe Same Direction	3 Left Turn Main Line	5 Right Angle	4,7 Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 Other	Total
Study Period: Number of Crashes	Fatal	**F**									
	Personal Injury (PI)	**A**									
		B					1				**1**
		C					3				**3**
	Property Damage	**PD**	4	1		1	5	1		2	**14**
% Change in Crashes *Use Crash Modification Factors Clearinghouse	Fatal	**F**									
	PI	**A**									
		B					-86%				
		C					-86%				
	Property Damage	**PD**	-83%	-86%		-54%	-86%	-86%		-66%	
Change in Crashes = No. of crashes **X** % change in crashes	Fatal	**F**									
	PI	**A**									
		B					**-0.86**				**-0.86**
		C					**-2.58**				**-2.58**
	Property Damage	**PD**	**-3.32**	**-0.86**		**-0.54**	**-4.30**	**-0.86**		**-1.32**	**-11.20**

Year (Safety Improvement Construction): **2020**

		Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
Project Cost (exclude Right of Way)	**$ 4,551,500**					
Right of Way Costs (optional)		**F**			**$ 1,400,000**	
Traffic Growth Factor	**3%**	**A**			**$ 570,000**	
Capital Recovery		**B**	**-0.86**	**-0.29**	**$ 170,000**	**$ 48,778**
1. Discount Rate	**4.5%**	**C**	**-2.58**	**-0.86**	**$ 83,000**	**$ 71,445**
2. Project Service Life (n)	**20**	**PD**	**-11.20**	**-3.74**	**$ 7,600**	**$ 28,399**
		Total				**$ 148,622**

B/C= 0.57

Using present worth values,

B= $ 2,599,988

C= $ 4,551,500

See "Calculations" sheet for amortization.

Office of Traffic, Safety and Technology **September 2014**

CSAH 30 From TH 25 to CSAH 10 (2013 - 2015) - created on 06-17-2016 by rile1che

Crash data is managed by the Mn/DOT Office of Traffic, Safety, and Operations.

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U
04	10000030	007+00.299	0410000030	7.299	Z		1	2	R
04	10000030	007+00.690	0410000030	7.690	Z		2	2	R
04	10000030	007+00.700	0410000030	7.700	Z		3	0	R
04	10000030	008+00.111	0410000030	8.111	Z		3	2	R
04	10000030	008+00.160	0410000030	8.160	E		2	2	R
04	10000030	008+00.229	0410000030	8.229	Z		2	2	R
04	10000030	008+00.410	0410000030	8.410	W		1	2	R
04	10000030	008+00.714	0410000030	8.714	Z		2	3	R
04	10000030	009+00.150	0410000030	9.150	Z		1	2	R
04	10000030	009+00.572	0410000030	9.572	Z		2	2	R
04	10000030	009+00.650	0410000030	9.650	E		1	2	R
04	10000030	009+00.650	0410000030	9.650	W		1	2	R
04	10000030	009+00.650	0410000030	9.650	Z		2	2	R
~~04~~	~~10000030~~	~~009+00.744~~	~~0410000030~~	~~9.744~~	~~Z~~	—	~~3~~	~~2~~	~~R~~
04	10000030	009+00.773	0410000030	9.773	Z		3	2	R
~~04~~	~~10000030~~	~~009+00.830~~	~~0410000030~~	~~9.830~~	~~Z~~	—	~~2~~	~~2~~	~~R~~
04	10000030	009+00.900	0410000030	9.900	Z		2	2	R
04	10000030	010+00.150	0410000030	10.150	W		2	2	R
04	10000030	010+00.950	0410000030	10.950	Z		2	2	R
04	10000030	011+00.119	0410000030	11.119	Z		1	2	R

ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV
DRIVER OF UNIT #1 REAR ENDED DRIVER OF UNIT #2. DRIVERS STATED SUN WAS VERY BRIGHT IN EYES AND HA'	10	0000	6-Fri	9	18	2015	0729	N
UNIT 1 TRAVELING EAST ON CR30. UNIT 1 STRUCK DEER.	10	0000	6-Fri	10	23	2015	2047	N
	10	0000	1-Sun	12	28	2014	0815	N
DRIVER OF #1 WAS EASTBOUND ON CSAH 30. ROAD WAS ICE COVERED, SHE SAID SHE STARTED TO FISHTAIL. SLID	10	0000	5-Thu	2	14	2013	1011	C
UNIT ONE WAS TRAVELING EAST ON CO RD 30 WHEN IT LOST CONTROL AND LEFT THE ROADWAY TO THE RIGHT. UNI	10	0000	1-Sun	1	5	2014	1132	N
VEHICLE 1 WAS TRAVELLING EASTBOUND ON CO RD 30 APPROXIMATELY ONE MILE EAST OF HWY 25. THE DRIVER OF	10	0000	6-Fri	7	31	2015	1612	N
UNIT ONE WAS TRAVELING WEST ON CO RD 30 WHEN IT ATTEMPTED TO PASS UNIT TWO ON ITS LEFT. UNIT ONE HI	10	0000	7-Sat	1	4	2014	1017	N
	10	0000	1-Sun	11	8	2015	1740	N
DRIVER VEH 1 SAID HE FELL ASLEEP AND WOKE UP AFTER CRASH, HE CROSSED CENTER LINE, DROVE INTO ONCOMI	10	0000	4-Wed	8	6	2014	2149	N
UNIT 1 DRIVER INDICATED HE BLACKED OUT AND RAN OFF THE ROADWAY. THE VEHICLE LEFT THE ROADWAY ON TH	10	0000	3-Tue	10	27	2015	1325	C
DRIVER WAS TRAVELING EASTBOUND ON CO RD 30. DRIVER STATED VEHICLE HIT ICY SPOT ON ROADWAY AND BEGA	10	0000	7-Sat	12	20	2014	0915	N
DRIVER WAS TRAVELING WESTBOUND ON CO RD 30. DRIVER STATED VEHICLE HIT ICY SPOT ON ROADWAY AND BEGAN	10	0000	7-Sat	12	20	2014	0854	N
DRIVER OF UNIT #1 WAS HEADING WESTBOUND ON CO. RD. 30 AND RAN OFF ROAD RIGHT SIDE. MODERATE DAMAGE	10	0000	5-Thu	10	15	2015	1100	N
~~VEH 1 STRUCK DEER THAT WAS STANDING IN ROADWAY, DEER RAN OFF, UNABLE TO LOCATE DEER. WHITE COPY IS~~	~~10~~	~~0000~~	~~4-Wed~~	~~1~~	~~23~~	~~2013~~	~~1816~~	~~N~~
UNIT 1 WAS TRAVELING WESTBOUND ON CO RD 30 WHEN IT RAN OFF THE ROAD TO THE RIGHT. THE VEHICLE ENTER	10	0000	7-Sat	12	21	2013	0229	B
~~VEH 1 HIT DEER, MOVED VEH TO SAFE LOCATION IN DRIVEWAY OF 12325 CO RD 30. DEER GOA. DRIVER DROVE~~	~~10~~	~~0000~~	~~5-Thu~~	~~10~~	~~30~~	~~2014~~	~~1935~~	~~N~~
DRIVER #1 STATED HE WAS DRIVING SE ON CO RD 30. DRIVER #1 STATED A DEER WALKED INTO THE ROADWAY.	10	0000	7-Sat	10	24	2015	1825	N
UNIT ONE WAS TRAVELING WEST ON CO RD 30 WHEN IT FAILED TO SLOW DOWN TO ALLOW UNIT TWO TO MAKE A LEF	10	0000	2-Mon	8	19	2013	0926	N
VEH 1 WAS EB ON CO RD 30 NEAR 78TH ST. ROAD WAS DRY WITH SOME ICY AND SNOW PACKED AREAS. VEH 1 DROV	10	0000	1-Sun	12	28	2014	0823	C
DRIVER OF UNIT #1 PULLED OUT IN FRONT OF UNIT #2 AS IT WAS HEADING EAST ON CO. RD. 30. UNIT #1 HAD	10	0000	6-Fri	6	19	2015	1108	N

															PERSON1		
NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM	VTYPE	DIR	ACT
0	2	1	55	1	1	1	98	2	1	0	1	1	8	152640024	1	3	1
0	1	1	55	8	8	1	98	6	3	0	2	1	8	152970028	4	3	1
0	1	0	55	51	0	0	98	1	1	0	5	0	0	150330031	1	3	1
0	1	1	55	51	7	4	98	1	2	0	5	1	8	130450122	4	3	1
0	1	1	55	37	7	4	98	1	7	0	5	1	8	140050061	1	3	1
0	2	1	55	1	1	1	98	1	1	0	1	1	8	152130035	3	3	1
0	2	1	55	1	2	1	98	1	5	7	5	1	8	140050028	1	7	15
0	1	1	55	8	90	1	98	6	2	0	1	1	8	153280051	2	7	1
0	1	1	55	30	4	8	98	6	1	0	1	1	8	142180200	1	3	1
0	1	1	55	51	7	4	98	1	1	1	1	1	8	153000169	1	3	1
0	1	4	55	35	4	4	98	1	6	0	2	5	8	143540084	1	3	1
0	1	1	55	35	7	4	98	1	6	0	2	5	8	143540077	1	7	1
0	1	1	55	37	7	4	98	1	1	0	1	6	8	152880114	1	7	1
~~0~~	~~1~~	~~1~~	~~55~~	~~8~~	~~90~~	~~1~~	~~98~~	~~6~~	~~1~~	~~0~~	~~1~~	~~7~~	~~8~~	~~130240014~~	~~2~~	~~7~~	~~1~~
0	1	1	55	51	7	4	98	6	1	0	1	6	8	133590131	2	7	1
~~0~~	~~1~~	~~1~~	~~55~~	~~8~~	~~90~~	~~1~~	~~98~~	~~6~~	~~2~~	~~0~~	~~1~~	~~4~~	~~8~~	~~143030166~~	~~1~~	~~7~~	~~1~~
0	1	1	55	8	5	1	98	6	3	0	2	1	8	152990016	2	4	1
0	2	1	55	1	1	1	98	1	1	0	1	3	8	132310063	1	7	1
0	1	1	55	37	7	4	98	1	2	0	5	1	8	143620040	1	3	1
0	2	7	55	1	90	1	4	1	1	0	1	6	8	151730029	3	3	0

								PERSON2											PERSON3
FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE
4	0	1	N	4	1	16	F	1	3	57	1	0	1	N	4	1	17	F	
1	0	1	N	4	1	33	M												
0	0	1	N	4	0	53	M												
46	0	1	C	4	1	30	F												
61	0	1	N	4	1	32	M												
15	0	1	N	4	1	18	M	1	3	11	1	0	1	N	4	1	26	M	
3	61	1	N	4	1	49	F	38	7	1	1	0	1	N	4	1	52	M	
1	0	1	N	4	1	28	M												
15	6	1	N	4	7	18	M												
15	90	1	C	4	1	20	M												
61	0	1	N	4	1	26	F												
61	0	1	N	4	1	57	M												
99	99	1	N	4	1	47	F												
~~1~~	~~0~~	~~1~~	~~N~~	~~4~~	~~1~~	~~30~~	~~M~~												
18	0	1	C	4	2	23	M												
~~1~~	~~0~~	~~1~~	~~N~~	~~4~~	~~1~~	~~36~~	~~M~~												
1	0	1	N	4	1	77	M												
15	4	1	N	4	1	22	M	1	7	6	1	0	1	N	4	1	66	M	
13	0	1	C	4	1	53	M												
1	0	1	N	4	1	30	M	1	90	37	2	0	1	N	4	98	83	M	


PERSON4
DIR
ACT
FAC1
FAC2
POSN
INJ
EQP
PHYS
AGE
SEX
VTYPE
DIR
ACT
FAC1
FAC2
POSN
INJ
EQP
PHYS
AGE
SEX

- Countermeasure: Improve pavement friction (increase skid resistance)

CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
0.799	20.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.667	33.3	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.819	18.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.797	20.3	★★★★☆	All	All	All	Lyon and Persaud, 2008	
1.271	-27.1	★★★★☆	All	All	All	Lyon and Persaud, 2008	
0.426	57.4	★★★★☆	Wet road	All	All	Lyon and Persaud, 2008	
0.372	62.8	★★★★☆	Wet road	All	All	Lyon and Persaud,	

0.575	42.5	★★★★☆	Rear end,Wet road	All		Lyon and Persaud, 2008
0.59	41	★★★☆☆	All	All	All	Lyon and Persaud, 2008
0.589	41.1	★★★☆☆	All	All	All	Lyon and Persaud, 2008
0.361	63.9	★★★☆☆	Wet road	All	All	Lyon and Persaud, 2008
0.304	69.6	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008
0.943	5.7	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008
0.504	49.6	★★★☆☆	Rear end	All	All	Lyon and Persaud, 2008

0.221	77.9	★★★☆☆	Rear end,Wet road	All	All	Lyon and Persaud, 2008
0.787	21.3	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.828	17.2	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.898	10.2	★★★☆☆	Angle	All	All	Lyon and Persaud, 2008
0.799	20.1	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008
0.47	53	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008
0.828	17.2	★★★☆☆	Angle,Wet road	All	All	Lyon and Persaud, 2008

- Countermeasure: Install curb and gutter
- Countermeasure: Install paved shoulder and rumble strips
- Countermeasure: Pave a 3 to 4 ft sod shoulder
- Countermeasure: Pave narrow shoulder through curve
- Countermeasure: Pave shoulder
- Countermeasure: Paved right shoulder vs. other right shoulder type on freeway ramp
- Countermeasure: Upgrade narrow unpaved shoulder (< 5 ft) to wide paved shoulder (> 5 ft)

Compare	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
☐	0.58	42	★★★☆☆	All	All	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]
☐	0.28	72	★★★☆☆	All	Fatal,Serious injury,Minor injury	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]
☐	0.23	77	★★★☆☆	Head on,Run off road,Sideswipe	All	Rural	Zeng et al., 2013	The cross sectional model compares ... [*read more*]

Compare Reset Compare

**NOTE: You can compare CMFs across countermeasures, subcategories, and categories.*

- Countermeasure: Upgrade unpaved or non-existent shoulders to composite shoulders
- Subcategory: Shoulder rumble strips (338)

CSAH 30 from TH 25 to CSAH 10

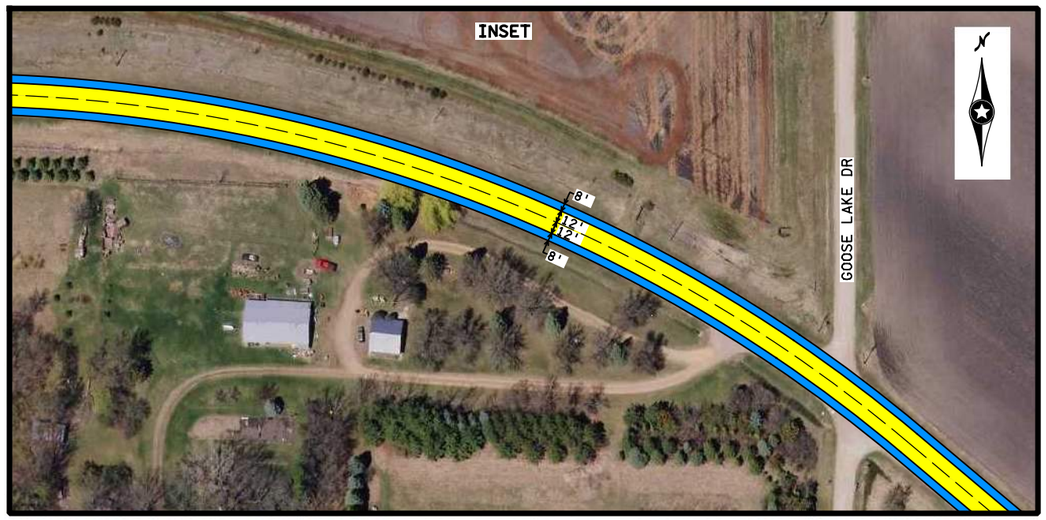
Improvements include reconstructing the roadway and adding a paved shoulder

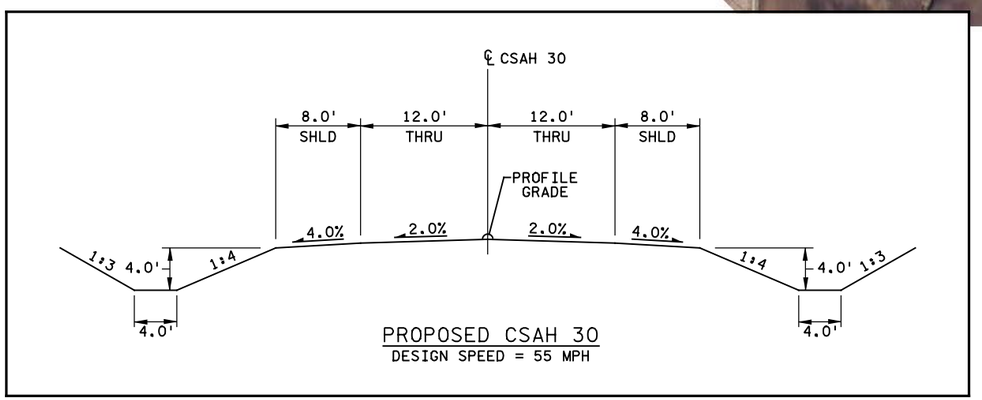
CR1=Increase pavement friction
CR2=Install a paved shoulder

CR=1 – (1-CR1)*(1-CR2)

Angle Crashes (PDO): 1 – (1-.21)*(1-.42) = .54
Head On, ROR, Sideswipe (PDO): 1 – (1-.41)*(1-.77) = .86
ROR (Injury): 1 – (1-.41)*(1-.77) = .86
Other (PDO): 1 – (1-.41)*(1-.42) = .66
Other (Injury): 1 – (1-.41)*(1-.72) = .83
Rear End (PDO): 1 – (1-.70)*(1-.42) = .83

EXISTING CSAH 30
DESIGN SPEED = 55 MPH





PROPOSED CSAH 30
DESIGN SPEED = 55 MPH

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SRF Consulting Group, Inc.

CSAH 30 Improvements

CSAH 30 from TH 25 to CSAH 10
Carver County

Job #9282
6/22/2016

Figure 1

Western Project Limit, Looking east

Figure 3

Typical Section, Looking East

Eastern Project Limit, Looking west

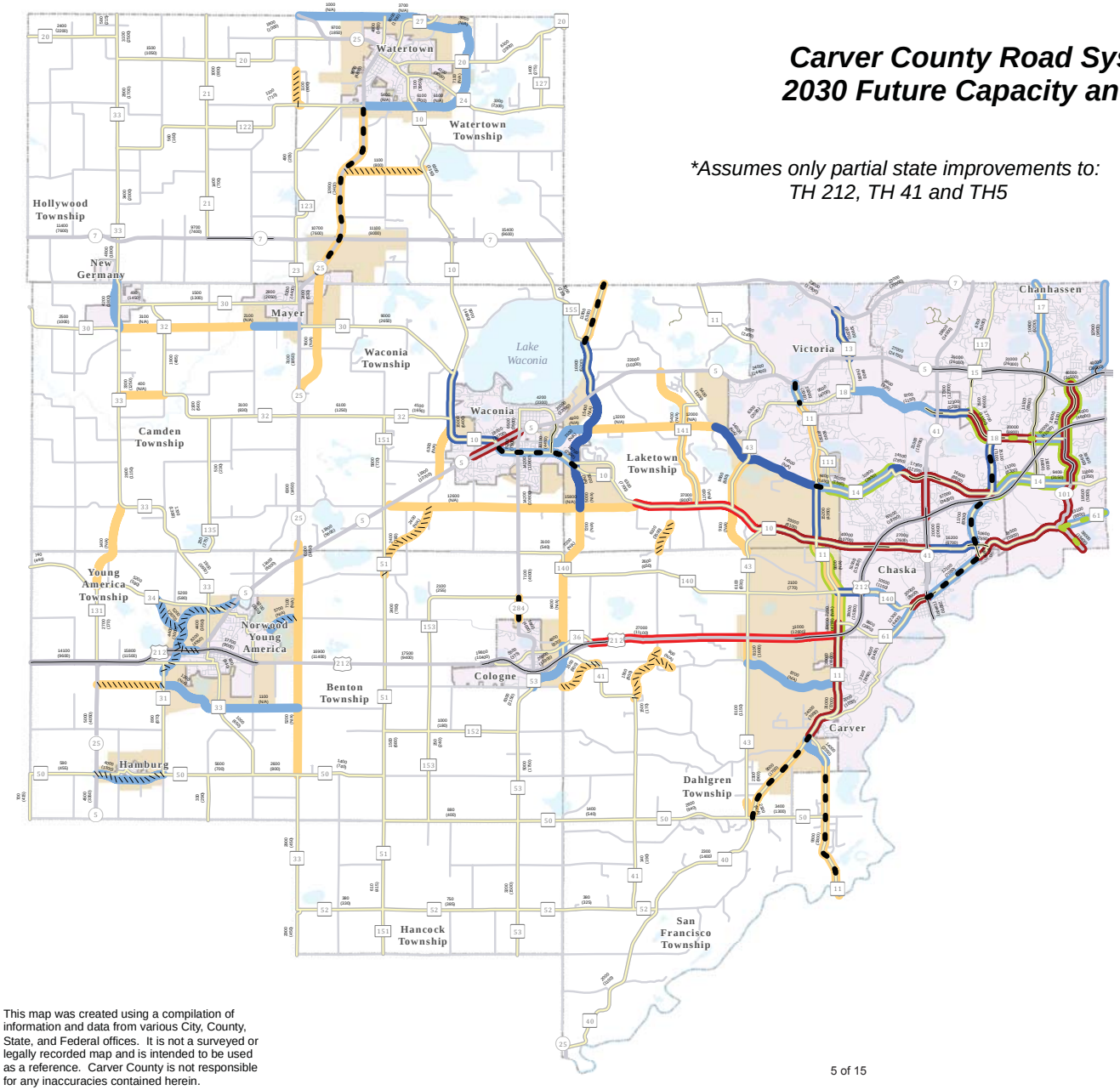
Typical residential driveway along CSAH 30

Typical cross-street intersection with CSAH 30 (at Polk Ave)

Figure 1

Carver County Road System Plan - 2014 Amendment
2030 Future Capacity and Connectivity Improvements

**Assumes only partial state improvements to: TH 212, TH 41 and TH5*



Traffic Information — Traffic Volumes #,### - 2030 (#,###) - 2011

Existing Roadway Network

- 2 Lane County Road
- 4 Lane County Road
- 2 Lane Trunk Highway
- 4 Lane Trunk Highway

Recommended Roadway Network

- 2-lane rural
- 2-lane divided rural
- 2-lane urban
- 2-lane divided urban
- 4-lane rural
- 4-lane urban

Project Status

- Halo Denotes Completed
- In Progress
- Sufficient
- Post 2030 Project

City/Township Boundary

- Existing City
- City/Township Boundary
- City Growth Areas 2030

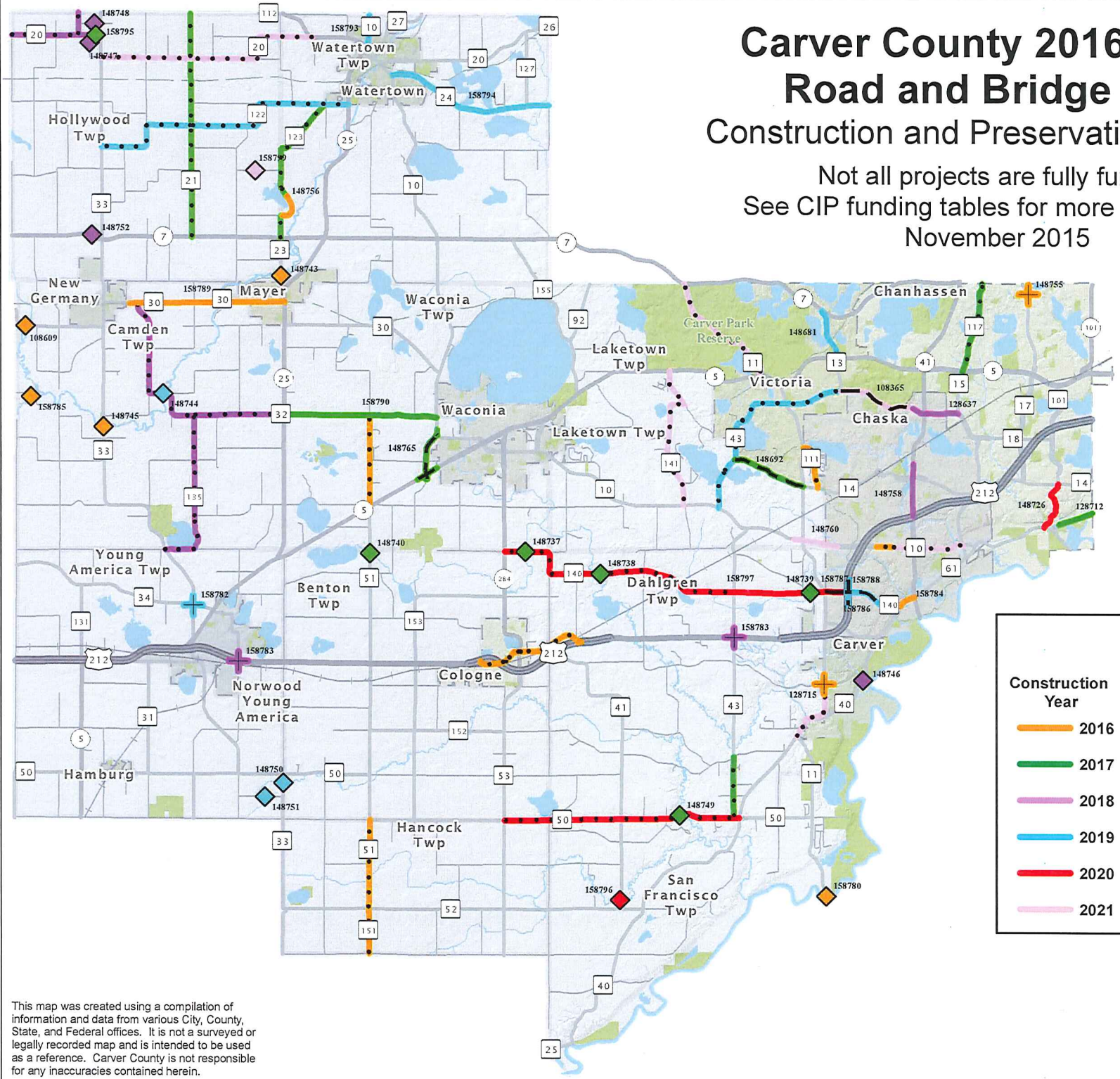
Public Works Division
11360 Hwy 212, Suite 1
Cologne, MN 55322
(952) 466-5200

Created: 7/16/2014

Carver County 2016 - 2021 Road and Bridge Plan

Construction and Preservation Projects

Not all projects are fully funded
See CIP funding tables for more information
November 2015



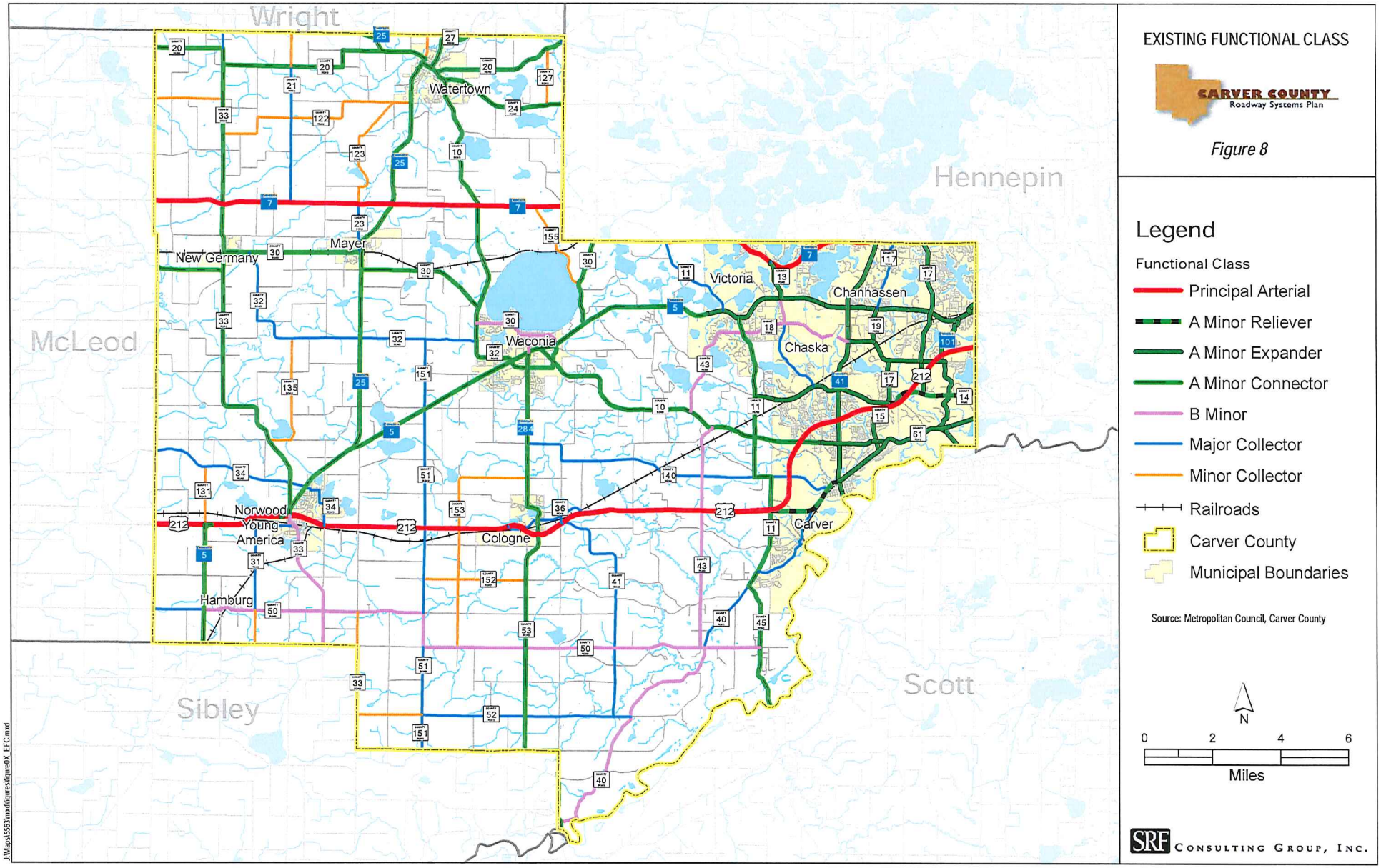
Legend

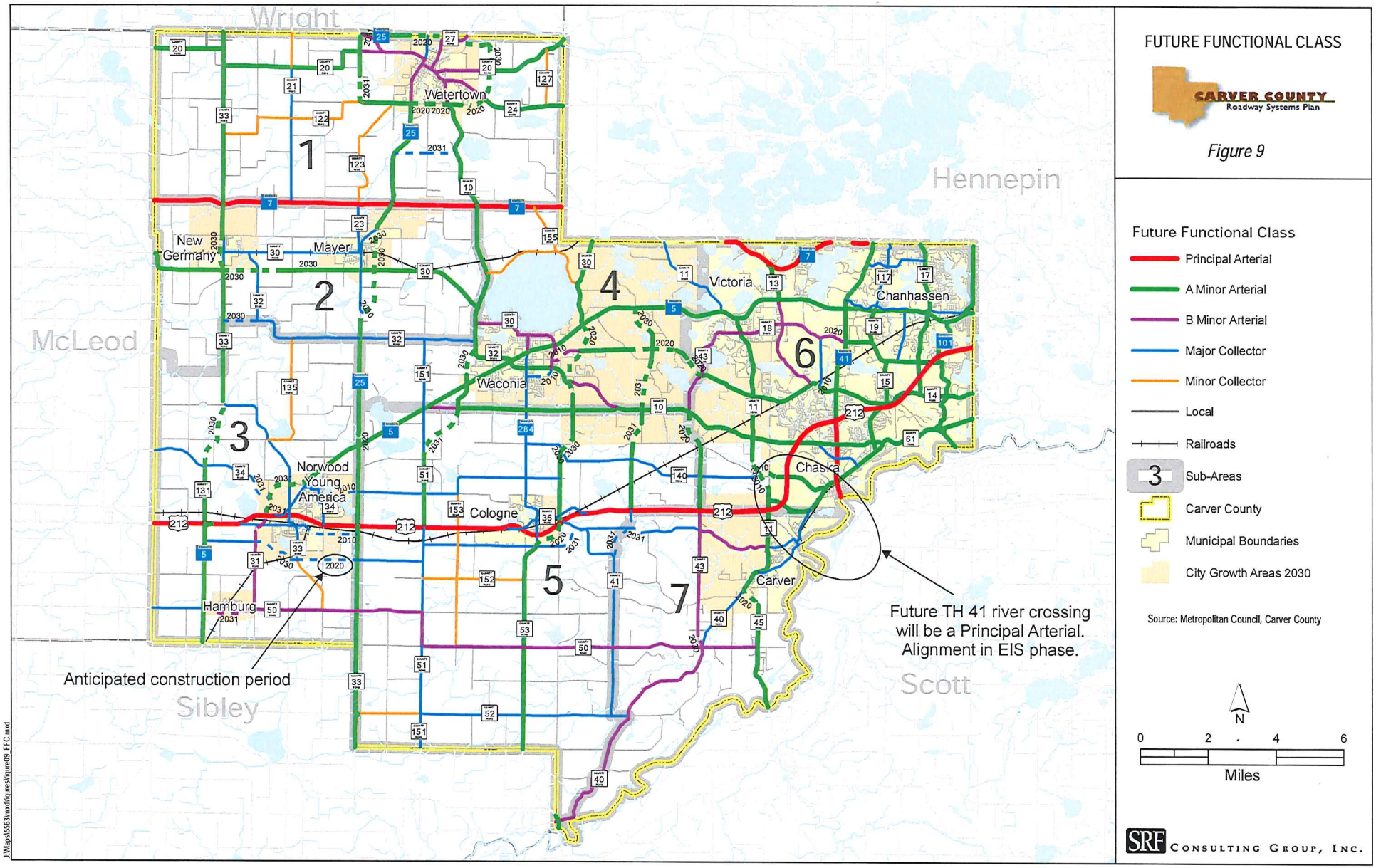
Construction Year	
2016	Bridge
2017	Intersection Imp.
2018	Corridor Construction
2019	Corridor Preservation
2020	Development Driven
2021	Label Example: 148712 - Project Number

This map was created using a compilation of information and data from various City, County, State, and Federal offices. It is not a surveyed or legally recorded map and is intended to be used as a reference. Carver County is not responsible for any inaccuracies contained herein.

CARVER COUNTY
Public Works Division
11360 Hwy 212, Suite 1
Cologne, MN 55322
(952) 466-5200

Created: 11/19/2015


Wright
Hennepin
McLeod
Sibley
Scott
Watertown
Mayer
New Germany
Waconia
Victoria
Chanhassen
Chaska
Carver
Cologne
Norwood
Young
America
Hamburg
EXISTING FUNCTIONAL CLASS
CARVER COUNTY
Roadway Systems Plan
Figure 8
Legend
Functional Class
Principal Arterial
A Minor Reliever
A Minor Expander
A Minor Connector
B Minor
Major Collector
Minor Collector
Railroads
Carver County
Municipal Boundaries
Source: Metropolitan Council, Carver County
N
0
2
4
6
Miles
SRF Consulting Group, Inc.
J:\Maps\15563\mxd\figures\figure0X_EFC.mxd



FUTURE FUNCTIONAL CLASS

CARVER COUNTY
Roadway Systems Plan

Figure 9

Future Functional Class

- Principal Arterial
- A Minor Arterial
- B Minor Arterial
- Major Collector
- Minor Collector
- Local
- Railroads
- 3 Sub-Areas
- Carver County
- Municipal Boundaries
- City Growth Areas 2030

Source: Metropolitan Council, Carver County

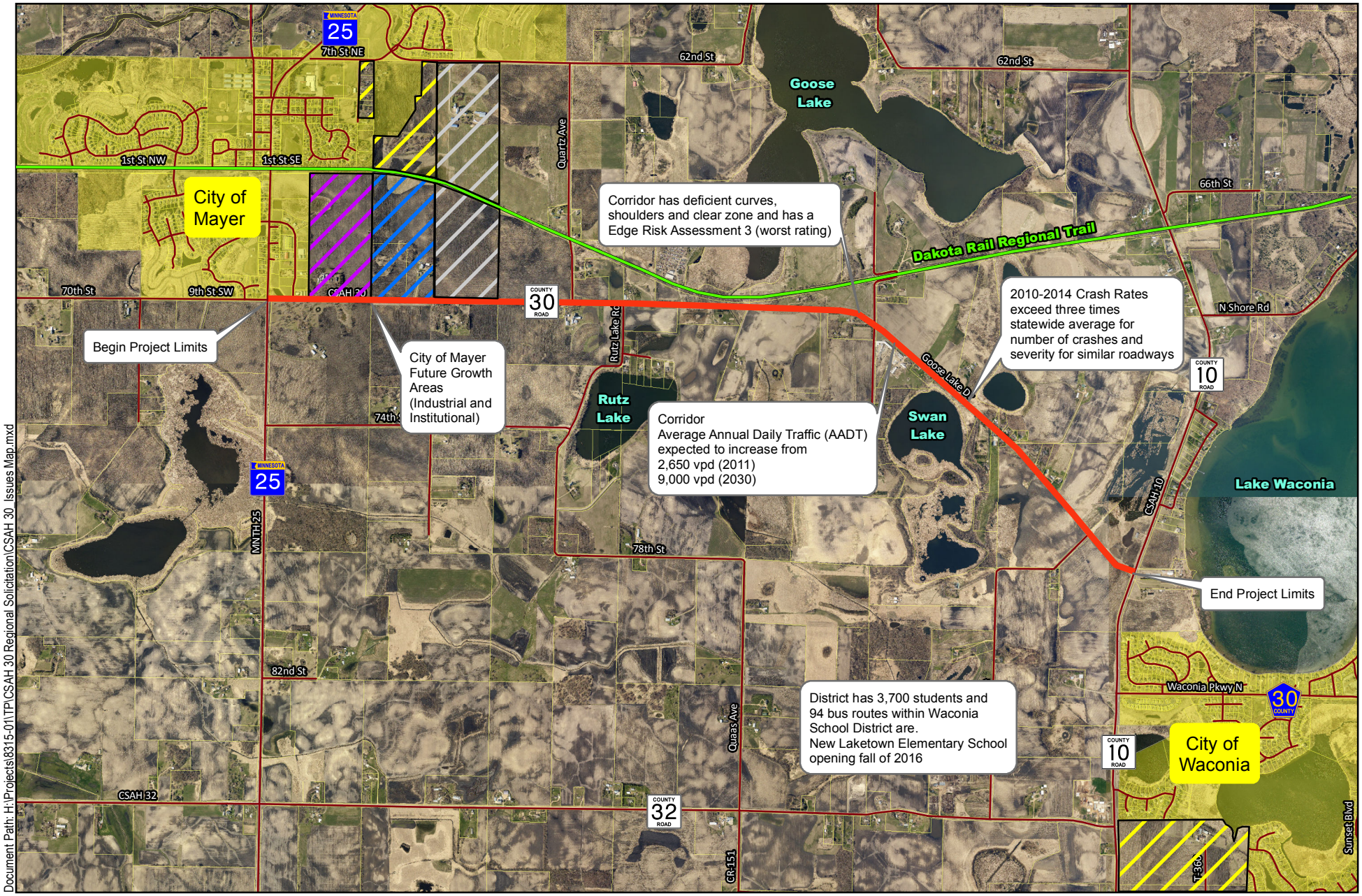
N

0 2 4 6

Miles

SRF Consulting Group, Inc.

J:\Maps\15563\mxd\figures\Figure09_FFC.mxd



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Issues Map

CSAH 30 from TH 25 to CSAH 10
Carver County

Figure 2