Executive Summary

US 52 Safety, Access, and Interchange Location Study

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

December 28, 2012

Prepared For:

Prepared By:

HRGreen

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Introduction

The *US 52 Safety, Access, and Interchange Location Study* was a collaborative effort lead by the Minnesota Department of Transportation (MnDOT) and Goodhue County, with input from the adjoining townships (Cannon Falls, Leon, Stanton) and Federal Highway Administration (FHWA). The purpose of this effort was to study options for transportation improvements to address the severe safety issues along US 52 within the project area and to implement the long term vision for US 52. The study area included a 10-mile segment of US 52 between the City of Cannon Falls and the Hader Community (an unincorporated area). The official study limits included US 52 and the surrounding areas extending from Highview Road on the north to County Road 50 on the south. The study area is shown Figure 1. The existing characteristics of the study area are shown in Figure 2.

The long-term vision is to convert US 52 to a fully access-controlled freeway facility between I-90 and I-494, a segment which MnDOT has identified as a High Priority Inter-Regional Corridor (IRC). Therefore, it is MnDOT's goal to remove all at-grade intersections and signals on the study segment of US 52. This will include the construction of an interchange in the vicinity of County State Aid Highway (CSAH) 9 or CSAH 1 and related access management improvements. Specific improvements studied include the following:

1. ***Interchange Location***: The locally supported location and preliminary design of an interchange in the vicinity of CSAH 1 or CSAH 9 to replace the existing at-grade intersections.
2. ***Closure of At-Grade Intersections***: Option for closure of the high-volume, at-grade intersections within the study area. These include CSAH 1 and CSAH 9 which would be replaced by a future interchange, as well as CSAH 14.
3. ***Access Management Strategies***: Potential tools for long term access modifications for lower volume roadways within the study area.

A. Study Overview

The purpose of this document is to summarize the study process, findings, and next steps. This Executive Summary is not intended to provide a detailed study report, but rather to be a high level summary of the overall study. The appendix to this document includes several technical memoranda which provide detailed study documentation. A brief summary of each of these documents is included in the following pages.

Technical Memorandum 1: Project Framework (Appendix A)

This memorandum establishes a framework of guiding principles for the study. Included is a summary of the project history and development of the project goals and objectives, study work plan, public engagement program, and decision-making framework. The goals and objectives provide the basis for the development and evaluation of improvement alternatives.

Technical Memorandum 2: Project Background (Appendix B)

This memorandum summarizes the study data collection efforts and includes a summary which identifies initial issues and needs. Included is an overview of the characteristics of the area, such as planning context, transportation system, traffic characteristics, access inventory, and crash history. The existing intersection at US 52 and CSAH 9 was identified as a high crash location and the high number of at-grade access points (47) along the corridor were identified as a safety issue.

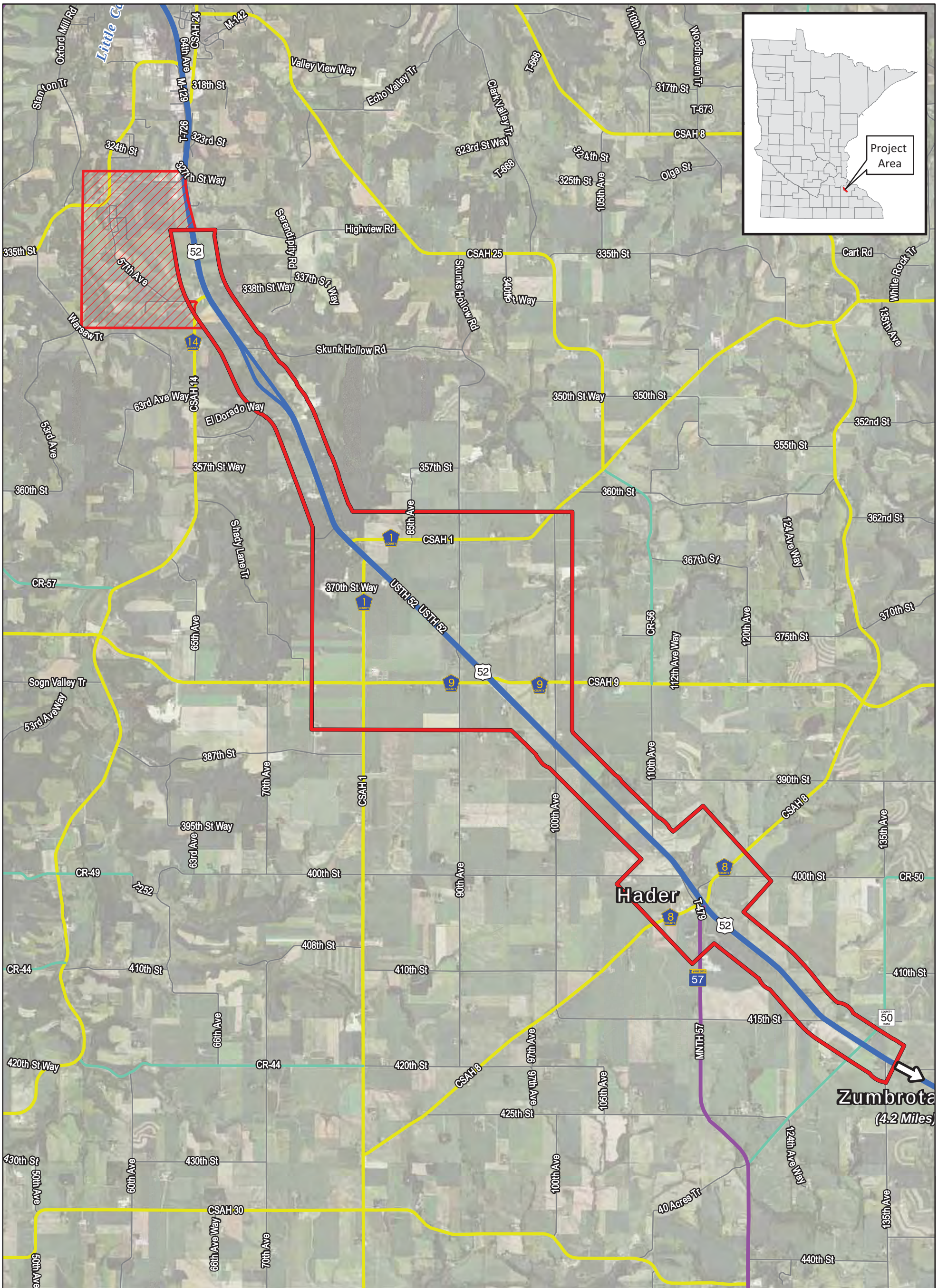

FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

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FIGURE 2
ISSUES MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- Project Study Area
- CSAH 14 Subarea
- High Crash/Severity Intersection
- Potential Interchange Study Area
- Lakes/Ponds
- Streams
- Wetlands (NWI)
- 100-Year Floodplain
- 500-Year Floodplain
- Corporate Boundaries

XX,XXX 2009 Traffic Volume (AADT)
(YY,YYY) 2025 Forecast Traffic Volume (AADT)
X,XXX 2007 Traffic Volume (AADT)
(Y,YYY) 2025 Forecast Traffic Volume (AADT)

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

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Traffic Data Collection Technical Memorandum (Appendix C)

This memorandum summarizes the traffic field data collected as part of the initial data collection process.

Technical Memorandum 3: Purpose and Need (Appendix D)

This technical memorandum expands on the initial project goals and objects to develop a purpose and need framework. The purpose and need framework provided a starting point for the development of alternative evaluation criteria and laid the groundwork for a formal purpose and need statement in a future National Environmental Policy Act (NEPA) process.

Technical Memorandum 4: Alternative Development and Evaluation (Appendix E)

This memorandum documents the development and evaluation of alternatives based on the project's purpose and need framework. Improvements considered include an interchange in the vicinity of CSAH 1 or CSAH 9, related local roadway network improvements, and treatment options for the US 52 and CSAH 14 intersection. The evaluation of alternatives establishes a foundation for further analysis and provides decision makers and governmental review agencies with the rationale for selecting locally supported alternatives. This effort also continued the public engagement program with the development of a project newsletter, project website, neighborhood meeting, and public open house. The results of the alternative evaluation process are summarized in *Section C: Findings and Recommendations* of this document.

Technical Memorandum 5: Access Management Overview (Appendix F)

This memorandum includes a brief overview of general access management principles and rationale, a detailed access inventory for the project area, and a general access management "toolbox" summarizing potential strategies and their applicability to the different types of at-grade access types along US 52. A summary of the access management toolbox findings is included in *Section C: Findings and Recommendations* of this document.

Technical Memorandum 6: Interchange Design Evaluation (Appendix G)

After a recommended interchange location was selected, additional analysis was completed. This memorandum includes an evaluation of alternatives for the rerouting of CSAH 1 east of US 52 and alternative design concepts developed for the proposed interchange at US 52 and CSAH 9. The results of this effort are summarized in *Section C: Findings and Recommendations* of this document.

B. Public Engagement Process

A key emphasis of the study was to promote effective decision-making by fostering a cooperative spirit among state, regional and local partners, and corridor stakeholders. The public engagement activities completed as part of this study are listed below. A more detailed account of each public meeting is included in the Appendix.

- ***Public Open Houses***: The Project Management Team (PMT) hosted three open house meetings at critical study milestones (i.e., early, middle, and end of study), to provide opportunities for corridor residents and the general public to participate in the study process.

- ***Neighborhood Meeting***: The PMT hosted a small group meeting with residents adjacent to the US 52 corridor to seek input on the study evaluation criteria and to discuss alternate property access opportunities.

- ***Newsletters and Website Updates***: A project website was developed and updated periodically throughout the study process. In addition, newsletters were mailed to area residents at four key study milestones in order to establish good communications with stakeholders and the general

public. These were used to inform stakeholders on upcoming public meetings, provide project updates, and advise the public on key study analyses and recommendations.

- ***The Project Management Team (PMT)***: Composed of key technical staff from MnDOT and Goodhue County, as well as representation from the Goodhue County Board of Commissioners and each of the adjacent townships. The PMT met regularly during the study period in order to review technical analyses, guide the overall study process, review input generated by public engagement activities, evaluate alternatives, and approve the overall study products and recommendations. A total of 13 PMT meetings were held throughout the course of the study.

C. Findings and Recommendations

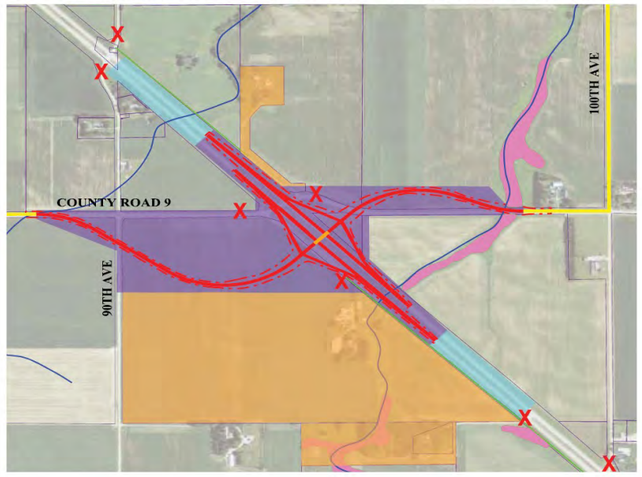
The primary intent of the study was to identify a range of locally supported actions to improve safety, access, and mobility within the study area and to carry these forward into a future NEPA Process. The improvement options evaluated included an interchange in the vicinity of CSAH 1 or CSAH 9, closure of high-volume at-grade intersections (CSAH 1 and CSAH 14), and related local roadway network improvements. In addition, a range of potential access management strategies for the remaining low-volume at-grade intersections were identified as part of the study effort. The following are the key findings and recommendations resulting from the planning process. Refer to Appendices E, F, and G for additional detail on each.

1. ***Locally Supported Interchange Location:*** CSAH 9 was identified as the locally supported location for a future interchange along US 52. Several alternative interchange design concepts were developed to complete a preliminary evaluation of impacts; however a recommended alternative was not selected. Once funding has been secured, the formal environmental assessment and design process for the project can begin, at which point a detailed evaluation of interchange design alternatives will occur and a final design will be selected. A preliminary interchange footprint area representing a composite of the three preliminary interchange configurations studied has been developed in order to guide future planning and development within the area, prior to the environmental assessment and design process. The preliminary interchange design configurations and the composite interchange footprint are illustrated in Figure 3.

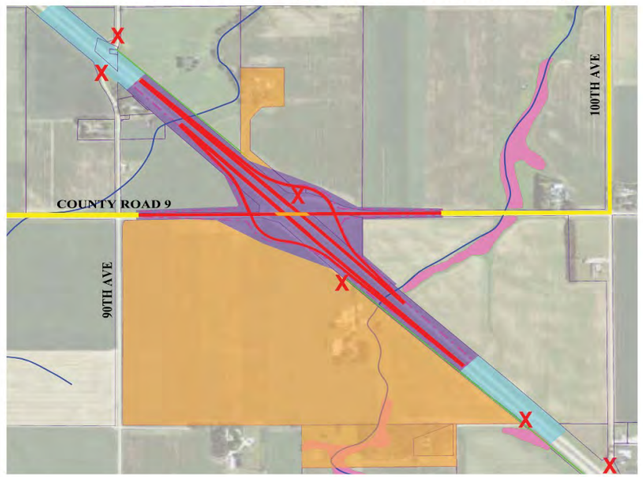
2. ***Local Roadway Improvements:*** With the construction of an interchange at US 52 and CSAH 9, access to US 52 at CSAH 1 would be closed or restricted to right-in/right-out only. A supporting county road connection will then be needed on the east side of US 52 between CSAH 1 and CSAH 9 in order to serve redirected CSAH 1 traffic and maintain adequate local and regional connectivity. Based on the planning-level alternatives screening process completed as part of this study, an alignment following 100th Avenue was selected as the locally supported alternative for the rerouting of CSAH 1. The 100th Avenue alignment is illustrated in Figure 4.

3. ***Closure of High-Volume Intersections (CSAH 14 Extension):***This study also considered options for the closure of the at-grade intersection at CSAH 14 and US 52 and the extension of CSAH 14 to connect to the planned CSAH 24 interchange in Cannon Falls, to serve local access needs. Based on the planning-level alternative evaluation process, a backage road running parallel to US 52 and connecting to the frontage road system planned as part of the CSAH 24 interchange project was selected as the locally supported alternative, as it best accomplishes the study goals. The recommended CSAH 14 alignment is shown in Figure 5.

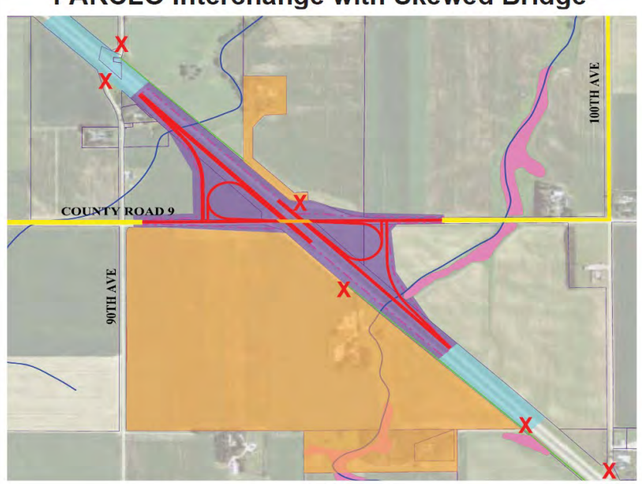
Diamond Interchange with Perpendicular Bridge

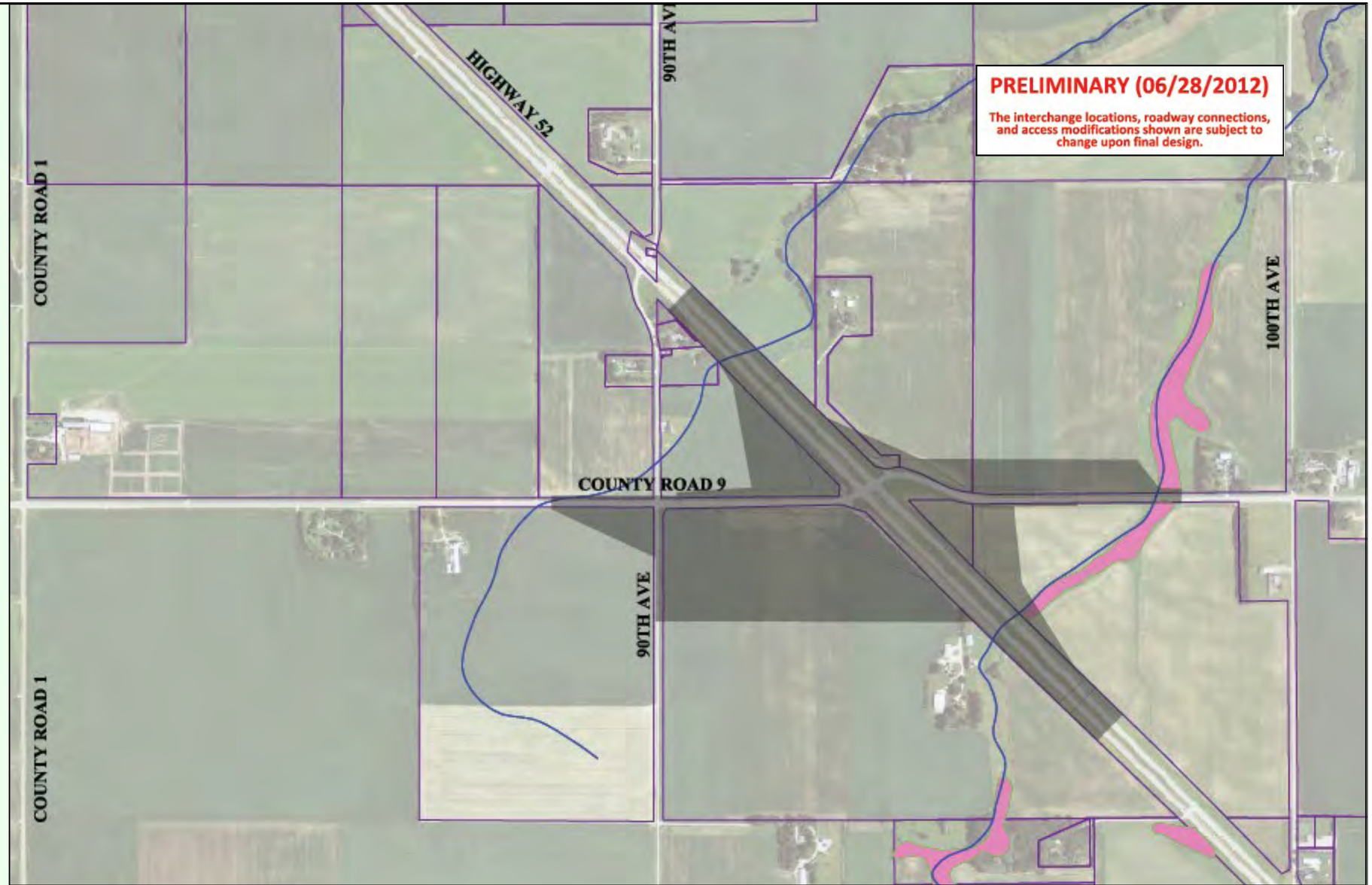


Diamond Interchange with Skewed Bridge



PARCLO Interchange with Skewed Bridge





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- PROPOSED INTERCHANGE ALIGNMENT
- UPGRADED CR ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES
- COMBINED INTERCHANGE FOOTPRINT AREA

FIGURE 3
PRELIMINARY INTERCHANGE CONCEPTS AND FOOTPRINT

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

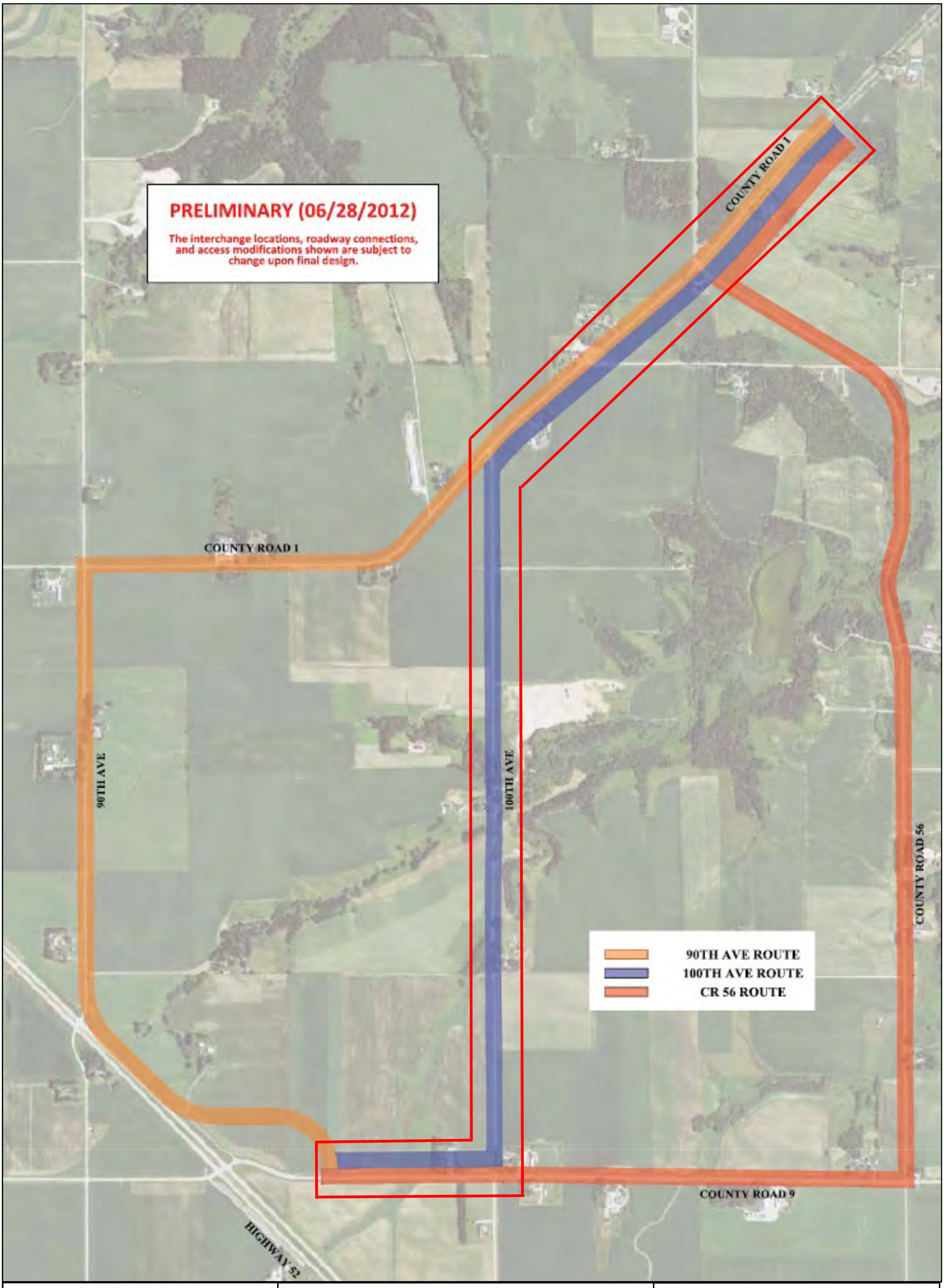

FIGURE 4
RECOMMENDED CSAH 1 REROUTING ALTERNATIVES

US 52 Safety, Access, and Interchange Location Study

Goodhue County, MN

Recommended CSAH 1 Alignment

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FIGURE 5
RECOMMENDED CSAH 14 TREATMENT

US 52 Safety, Access, and Interchange Location Study

Goodhue County, MN

- Alternative 1.A
- Alternative 1.B.1
- Alternative 1.B.2
- Alternative 1.C
- Planned Cannon Falls Improvements*
- Closed Access

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4. ***Access Management Strategies for Low Volume Intersections:*** While the primary objective of this effort was to identify options to replace the high-volume intersections along US 52 (i.e., CSAH 1, CSAH 9, and CSAH 14), the study also examined a range of potential access modification strategies which could be applicable to the remaining at-grade intersections within the study area. This included the development of a general access management "toolbox" summarizing the potential strategies and their applicability to the different types of at-grade access types along US 52. This access management toolbox is intended to provide the basis for the identification of future access management improvements and assist in future planning efforts. A summary of the access management toolbox is included in Table 1.

Table 1: US 52 Access Management Toolbox Summary

Tool	Description	Implementation
1. Grade-separation with Interchange	Replace at-grade access with a bridge and interchange ramps.	• State Highways • County Highways
2. Grade-separation without Interchange	Close at-grade access and replace with a bridge.	• State Highways • County Highways
3. Closure with Frontage/Backage Road	Close at-grade access and construct a frontage/backage road for alternative access.	• County Highways • County Roads • Township Roads
4. Driveway Redirection	Close at-grade driveway and redirect to an existing county or township road for alternative access.	• Commercial/Industrial • Residential • Field/Agricultural
5. Interim Access Modifications - Right-in/right-out - 3/4 Access (no opposing road lefts or crossing movements)	Modify access to limit vehicle movement via a raised median or other channelization and signage.	• County Highways • Township Roads • Commercial/Industrial • Residential • Field/Agricultural
6. Property Acquisition	If alternate driveway access is not feasible from an economic or engineering perspective, property acquisition may be considered.	• Commercial/Industrial • Residential • Field/Agricultural

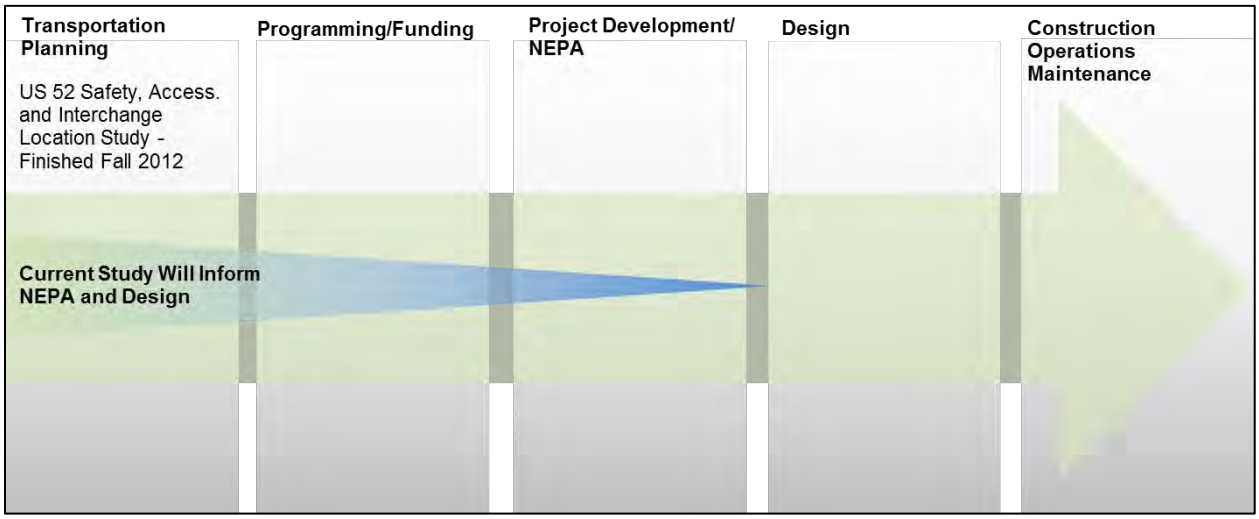
D. Next Steps

At the outset of the study process, the final product of this effort was intended to be a project-level NEPA evaluation and related documentation. However, changes in FHWA policy that took effect after the study began limited the scope of this effort to a planning-level study as funding for the potential improvements has not been identified and the project has not been programmed by MnDOT or Goodhue County. As a result, the scope of the study was reshaped with a focus on conducting a planning process and developing meaningful products which could be incorporated into later NEPA efforts.

With a future NEPA process in mind, the study sought to eliminate alternatives that do not meet the overall project goals and the transportation needs in the study area, and to select a range of locally supported improvements as described above in *Section C: Findings and Recommendations*. The final

build alternative(s) will be determined as part of a future preliminary design/NEPA process, which will proceed once project funding is secured. The project development process is illustrated in Figure 6.

Figure 6: Project Development Process



The information developed as part of the *US 52 Safety, Access, and Interchange Location Study* will be incorporated into the future environmental evaluation and documentation. In order to facilitate this process, a Planning and Environmental Linkages (PEL) Questionnaire was completed.[1] The intent of the PEL questionnaire is to provide a concise summary of the planning process undertaken to ease the transition from planning to a future NEPA process once project funding is secured. The *US 52 Safety, Access, and Interchange Location Study PEL Questionnaire* is included in Appendix H.

[1] The US 52 Safety, Access, and Interchange Location Study PEL Questionnaire follows the guidance and format set forth by the Federal Highway Administration (FHWA) for the Planning and Environmental Linkages process and questionnaire as described in *Guidance on Using Corridor and Subarea planning to Inform NEPA (April 5, 2011)*.

Appendix A: Technical Memorandum 1: Project Framework

Technical Memorandum 1

US 52 Safety, Access, and Interchange Location Study
Project Framework

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

May 4, 2012

Prepared For:

Prepared By:

HRGreen

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Introduction

The *US 52 Safety, Access and Interchange Location Study* is a collaborative effort lead by the Minnesota Department of Transportation (MnDOT) and Goodhue County, with input from the adjoining townships (Cannon Falls and Leon) and Federal Highway Administration (FHWA). The project area is located within a segment of US 52 categorized by MnDOT as a high priority Interregional Corridor (IRC), connecting two regional trade centers (Twin Cities and Rochester). The one-mile wide project area is a 10-mile corridor along US 52, extending from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52 to south of County Road (CR) 50 (near Hader). The project area is shown Figure 1.

The purpose of the US 52 Safety, Access and Interchange Location Study is to address the severe safety issues along US 52 within the project area and to implement the vision for US 52. The long-term vision (Vision 52) is for US 52 to be developed as a fully access-controlled freeway facility between I-90 and I-494. It is MnDOT's goal to remove all at grade intersections and signals on this segment of US 52, which is identified as a high priority IRC. For over a decade, various planning studies have been completed for the US 52 corridor, focusing on at improving safety. The *US 52 Corridor Management and Safety Plan* in 2000, concluded with a recommendation that an interchange be constructed in the vicinity of County State Aid Highway (CSAH) 9 or CSAH 1.

The current study will identify US 52 safety improvements between the City of Cannon Falls and Hader (an unincorporated community). It will determine a recommended location for an interchange along US 52 in the vicinity of CSAH 1 and/or CSAH 9. The study will also include related roadway network and access management improvements, such as a potential realignment of CSAH 14 on the north and new access roads to maintain system connectivity due to closed access points. Implementation of project recommendations will provide enhanced connectivity between US 52 and the supporting roadway network and vastly improve traffic safety.

Project Frame Work Memorandum Purpose

The purpose of this technical memorandum is to introduce the following elements, which collectively comprise the framework for this study:

A. Project Goals and Objectives
B. Project Work Plan and Key Tasks
C. Public Involvement Plan
D. Decision-Making Framework

A. Project Goals and Objectives

A range of project goals and objectives were established by the Project Management Team (PMT) to guide the proposed project and to ensure that proposed solutions address critical project issues and needs. The proposed project goals and objectives are described below.

GOAL 1: *Enhance the safety of the traveling public along US 52 in the project corridor.*

Objectives:

- Reduce the crash rate and severity rate throughout the corridor, particularly at high crash intersections.
- Improve roadway geometry and /or sight distance.
- Reduce or eliminate variations in traffic speed caused by merging/diverging traffic.

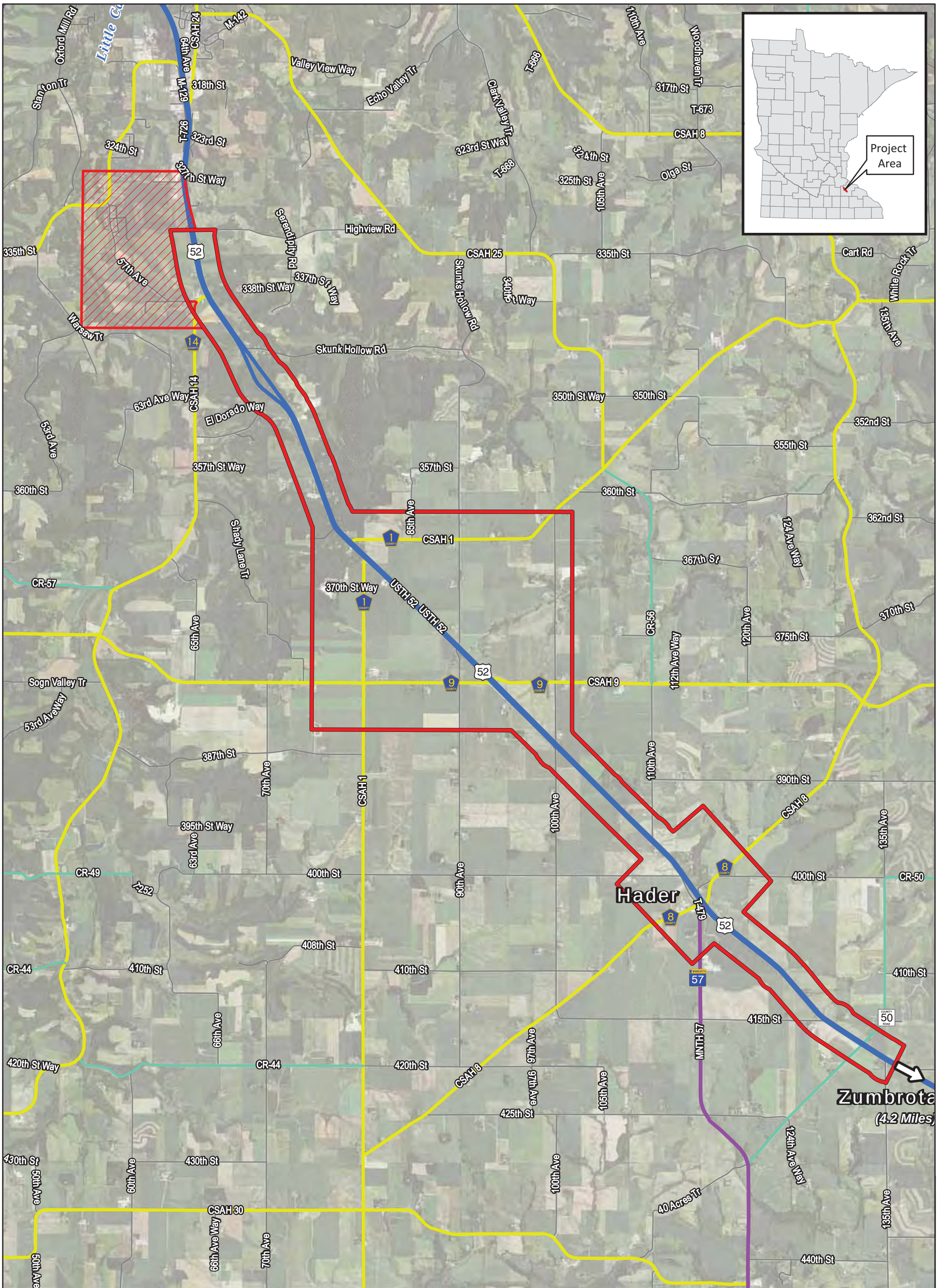

FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

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GOAL 2: *Identify access management improvements along US 52 within the project area.*

Objectives:

- Develop an implementation plan for interim and long term access management which removes all at-grade access and intersections within the project area.
- Develop efficient means to provide replacement access to affected properties and local roadways which is consistent with the regional transportation system.

GOAL 3: *Enhance mobility and connectivity along US 52 and throughout the supporting roadway network within the project area.*

Objectives:

- Develop improvements to maintain and/or enhance the mobility on US 52, in accordance with high priority IRC performance goals and the findings of previous US 52 corridor safety and planning studies.
- Provide efficient regional roadway connections that ensure functionality, mobility, accessibility and connectivity within the regional transportation systems and to US 52.
- Provide efficient local and neighborhood roadway connections that ensure functionality, mobility, accessibility and connectivity to regional transportation systems.
- Allow improvements at low impact intersection which will likely remain for many years due to low return on investment.

GOAL 4: *Minimize social, economic, and environmental impacts to the study corridor while improving the safety, access and mobility of the local and regional transportation system.*

Objectives:

- Minimize adverse impacts to the social environment which could include travel time, farmland, and right of way.
- Reduce and/or minimize impacts to the natural environment which could include wetlands, water resources, floodplains, and natural habitat.

GOAL 5: *Maximize cost effectiveness of the overall system vision, as well as its flexibility to be implemented over time.*

Objectives:

- Implement cost effective solutions.
- Provide beneficial returns on investment.
- Allow interim improvements which can be staged over time, in accordance with the ultimate improvement project.

B. Project Work Plan

The project work plan is divided into three phases in order to efficiently address the identification, evaluation/justification and development of safety improvements along US 52 and the supporting roadway network. The three project phases are:

1. *Phase I* –Includes the identification of issues and opportunities within the study area, key stakeholder concerns, and the goals and objectives necessary to develop and evaluate alternatives. A series of brief technical memos will be created to facilitate project direction, as well as other

study documentation to identify recommended alternatives to improve safety along this segment of US 52.

2. *Phase II* – Consists of completing the appropriate environmental documentation (assumed to be a Planning and Environmental Linkages Memorandum), a design memorandum, and staff approved preliminary study layout.
3. *Phase III* - Includes the development of a phasing and implementation plan for recommended alternatives and improvements.

Within the three project phases described above a number of tasks will be completed. A summary of key tasks comprising the project work is listed below.

Phase I Tasks

- *Project Management* – Manage the project to deliver quality products on schedule and on budget, as well as foster a cooperative spirit through a strong and continuous communications and coordination process. The project management task will be ongoing throughout the duration of the project, spanning all three phases.
- *Establish Project Framework* – Define the project framework, which includes developing high-level study goals, preparing a Public Involvement Plan and establishing the decision-making framework. This task results in the development of Technical Memorandum #1.
- *Data Collection* – Assemble relevant background information necessary to identify community, transportation, social, economic, environmental, and energy issues and constraints within the US 52 Safety, Access and Interchange Location Study area. This task results in the development of Technical Memorandum #2.
- *Analyze Data, Confirm Issues, Goals, Problems, and Needs* – Summarize the key elements including community and regional goals and issues; consistency of transportation functions with land use and community plans; transportation deficiencies and needs; multimodal considerations, impact of alternative interchange configurations and network connections; and social, economic, and environmental issues in the study. This task initiates the public and agency involvement process, including meetings with the Project Management Team (PMT), elected officials, and the general public. This task results in the development of Technical Memorandum #3.
- *Additional Data Collection* – After completing the analysis of available data and obtaining feedback from the initial public and agency meetings, additional data may be necessary to address all project issues. This task results in the amendment of Technical Memorandum #2 to incorporate a general description of additional data as needed.
- *Identify Initial Alternatives* – Develop a range of preliminary interchange alternatives (including a no build alternative) for CSAH 1 and CSAH 9, as well as supporting roadway network improvements such as a CSAH 14 extension and potential local roadway improvements. The initial interchange and roadway network alternatives will be screened to narrow interchange and roadway network alternatives for further study. This task establishes the preliminary screening criteria and results in the development of Technical Memorandum # 4.
- *Traffic Forecasts* – Review the *US 52 Corridor Management and Safety Plan (2000),* the *Goodhue County Transportation Plan (2004)*, and the recently completed documentation for the adjacent US 52 Cannon Falls project for relevant traffic projections. Prepare traffic projections at an appropriate level of detail and scope to address the alternatives under consideration. This task results in the development of Technical Memorandum #5.
- *Screen Alternatives and Prepare Preliminary Study Layout and Profiles for Recommended Alternative* – Complete a preliminary screening of the initial alternatives to determine which

alternatives best address project issues, problems, and needs and that are consistent with the overall study goals. Present details of initial alternatives at a PMT meeting to seek stakeholder input/feedback. This task will result in the development of Technical Memorandum #6 will include an evaluation as to which alternatives best satisfy the purpose and need of this project. The recommended alternative identified in this memorandum will be utilized in the preparation of a preliminary environmental document. This memorandum will utilize information from the previously developed technical memorandums to construct a comprehensive record of key issues, alternatives, events and decisions.

- *Develop and Evaluate Detailed Alternatives* – Perform a detailed evaluation to provide the rationale for a recommended alternative. Present details of the advanced alternatives at a public meeting to seek input in order to verify/confirm the recommended alternative. Prepare preliminary study layouts and profiles for the recommended alternative and a preliminary environmental review of potential impacts.
- *Visualization* – Develop visual representations of the proposed project to assist with the public involvement process and build stakeholder acceptance. Results will be displayed in two renderings for each location (CSAH 1/CSAH9).

Phase II Tasks

- *Environmental Documentation* – Identify and complete the necessary environmental documentation required to initiate the National Environmental Pollution Agency (NEPA) requirements for this project. This will result in the preparation of a Planning and Environmental Linkages (PEL) memorandum which will serve as the framework for future environmental documentation.
- *Design Memorandum* – Prepare a design memorandum to document the project design standards and any design exceptions being requested.
- *Prepare Preliminary Study Layout and Construction Limits for Interchange Area* – Complete a preliminary study layout and profiles of the recommended alternative. Based on the proposed roadway geometry and profiles.

Phase III Tasks

- *Project Phasing and Implementation* –Prepare an estimate of project costs and construction phasing based upon the final preliminary study layout.
- *Official Map Documents* – Prepare official map plats and documents for the recommended alternative to document anticipated future right-of-way needs and controlled access locations, as deemed appropriate by the PMT.
- *Design Surveys* – Conduct field surveys as necessary to supplement State provided Aerial Mapping. Incorporate this data into a digital terrain model and base mapping.

C. Public Involvement Framework

Public involvement is critical for the successful implementation of any plan or project. Successful public involvement includes fostering cooperation among a wide range of stakeholders to develop common goals and objectives, solutions that accomplish stated goals, and consensus about the eventual outcome. In order to facilitate meaningful public engagement, a project public involvement framework was created, based on *MnDOT's Hear Every Voice* Guide. This framework was developed to be flexible enough to respond to changing directions and will be adjusted continually as issues arise. Further, the proposed public involvement framework is tailored to include a wide range of stakeholders, including agency staff,

elected officials, business owners, local interest groups, and Goodhue County residents. The public involvement plan for the proposed project is summarized below.

Public Involvement Techniques

Various public involvement techniques such as public open houses, neighborhood meetings, newsletters, and electronic communications are proposed to accommodate different stakeholder groups and project tasks.

- *Public Meetings* – Up to five public open houses will be held between April 2010 and February 2013. These meetings will be held at the Urland Lutheran Church near the project area. The open houses will engage a wide range of stakeholders, including Goodhue County residents, businesses owners, elected officials, local interest groups, and interested agencies. The objective of the first open house is to gain input on project goals, issues, and needs. This information will be used to develop alternatives for the proposed improvements. During the second open house, participants will give input on these alternatives and the evaluation and screening criteria. At the third open house, the public will be informed of the results of the conceptual alternatives screening evaluation process and give their input on the final conceptual designs. A public meeting will also be held in Summer/Fall 2012 during the environmental review process to obtain input concerning the environmental documentation for the recommended safety improvement alternatives along the corridor.
- Neighborhood Meetings – Neighborhood meetings and workshops will be held to engage key stakeholders throughout the public involvement process for a variety of purposes. These meetings will be held to develop consensus around a potential project location areas and to develop a range of potential design alternatives for the project. Workshops will be used to review the preliminary screening evaluations and to develop consensus on recommended conceptual design alternatives.
- Communications – A project website will be established that will include meeting minutes, project reports, and updates at project milestones. The website will be used to notify people of upcoming open houses and other project meetings. In addition to the project website, a newsletter will be distributed through the Goodhue County website after key project milestones.

D. Decision Making Framework

Many decisions will need to be made throughout the course of the project across all levels of government. These decisions will range from policy-level decisions on how access might be treated to technical level decisions on interchange and roadway design. A study process has been developed to encourage agency participation and stakeholder input throughout the process. The intent of this process is to foster support of selection of a recommended alternative, preliminary design, and approval of any required environmental documentation. As shown in Figure 2, there are three main levels to the decision-making process including staff level decisions, Project Management Team meetings, and Policy Makers. These level are described below

Staff Decisions:

Staff meetings will be held with key technical staff from various agencies impacted by the project (MnDOT, Goodhue County, etc.). The intent of these meetings is to address the many technical issues that will arise during the process. Many of these decisions can be made at the staff level and won't be elevated to the PMT. An example of these issues might be how to coordinate data collection, technical design assumptions or preferences, and administrative issues. Notes will be recorded for these meetings on action items (work that needs to be done), decisions that are made, and information that will be elevated to the PMT.

Project Management Team Meetings:

The PMT is a larger group of both policy and technical staff. This group represents agencies and key stakeholders affected by the project, including representatives from MnDOT, Goodhue County, Cannon Falls and Leon Townships. This group will guide the overall project and determine project direction, provide guidance at key decision points, participate in development/evaluation of alternatives, and develop study recommendations. Key recommendations from this body will advance to individual governmental policy bodies for approval. Notes will be recorded for these meetings on action items and decisions that are made.

Policy Makers:

There are several agencies involved in this project who are part of the decision making process. This necessitates inter-agency cooperation to develop a common solution. These policy bodies include MnDOT, FHWA, Goodhue County, and Cannon Falls and Leon Townships. In addition, several environmental organizations such as watersheds and the State Historic Preservation Office may have roles to play as well. Policy bodies will be asked to approve study recommendations and project designs for improvements in their respective jurisdictions.

E. PMT Approval of Project Framework

Technical Memorandum 1 – Project Framework was presented to the PMT on January 6, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued for PMT approval on February 8, 2012. Final approval of Technical Memorandum 1 was received on May 4, 2012.

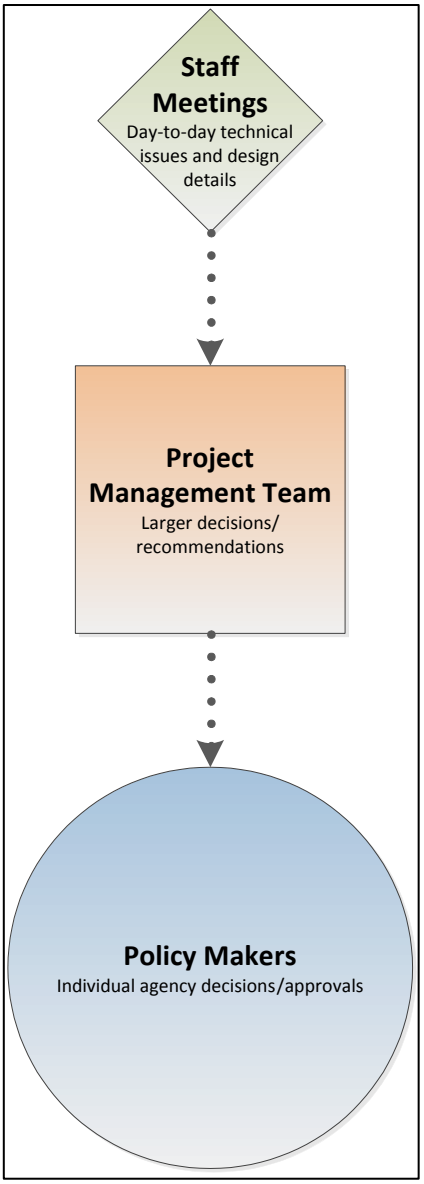

Figure 2: Decision Making Framework

Appendix B: Technical Memorandum 2: Project Background

Technical Memorandum 2

US 52 Safety, Access, and Interchange Location Study
Project Background

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

May 4, 2012

Prepared For:

Prepared By:

HRGreen

HRG: 832470J

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Introduction

The objective of this memorandum is to document and summarize the relevant background data collected for the US 52 Safety, Access and Interchange Location Study. The one-mile wide project area includes a 10-mile corridor along US 52, extending from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52, to south of County Road (CR) 50 (near Hader). The project area is shown Figure 1.

Summaries of previous planning efforts and existing corridor characteristics (demographics; land use; roadway network; traffic; safety; and social, economic and environmental (SEE) resources) within the project area are a part this technical memorandum. This information will provide the Project Management Team (PMT) with an understanding of the key project issues and constraints. It will also be used to identify project problems and needs, and to develop solutions that effectively respond to these issues. This information will serve as the basis for the development and evaluation of alternative improvement options.

A secondary goal of this memorandum is to provide the PMT an opportunity to identify any additional data or background information that may be useful for the study. Information discussed in this memorandum will serve as the framework for the development of the necessary environmental documentation required to meet the National Environmental Pollutions Agency (NEPA) requirements for this project. This memorandum will be updated as new data and analysis becomes available.

A. Planning Context

Several local and regional planning documents have been developed that provide input and direction on the existing and future transportation system of the project area. Further, the segment of US 52 within the project area is categorized by MnDOT as a High Priority Interregional Corridor (IRC), as it connects two regional trade centers (Twin Cities and Rochester). The long-range comprehensive and transportation plans for Goodhue County, as well as other local planning efforts, are critical to understanding the existing issues and future needs for the transportation system of the area. These documents were reviewed in order to identify the key findings and recommendations relevant to the US 52 Safety, Access and Interchange Location Study.

In addition, the *Statewide IRC Study (1999)*, the *Highway 52 Corridor Study and Management Plan (2000)*, and the *Highway 52 IRC Management Plan (2002)* were reviewed. These planning studies were prepared on behalf of the MnDOT and the affected local jurisdictions, in order to develop a more defined transportation system plan for the IRC system and the US 52 Corridor. The key findings and recommendations from each of these documents, relevant to the proposed US 52 project, are summarized below (presented in chronological order):

Statewide IRC Study (1999)

- The IRC Study identified US 52 as a high-priority interregional corridor and reinforces its principle function of maintaining safe, timely, and efficient transportation services between regional centers by providing predictable and acceptable travel times for corridor travelers. The Study acknowledges that US 52 provides the primary link between Rochester and the Twin Cities.

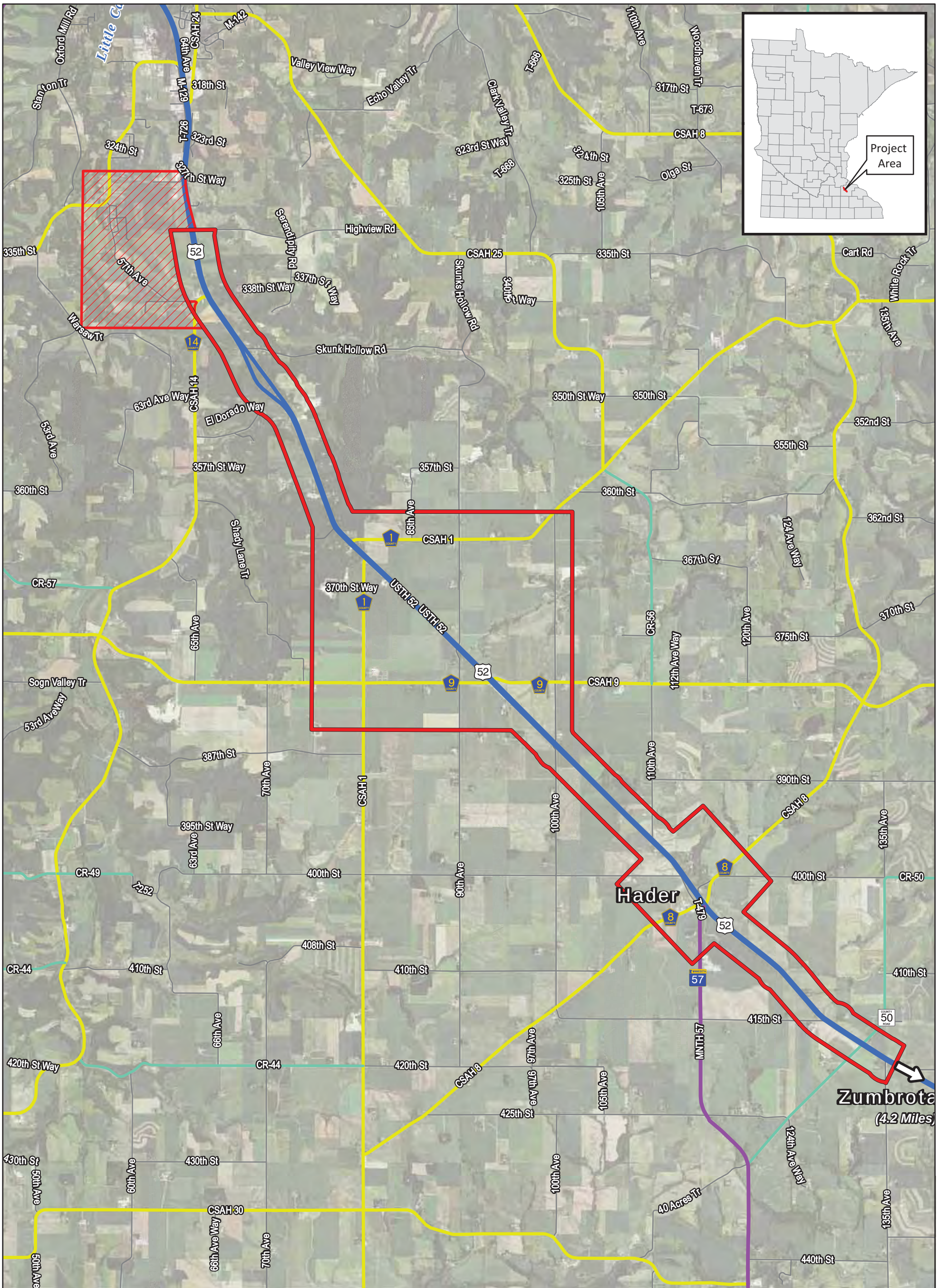

FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

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- As a High-Priority Interregional Corridor, a performance goal of 61-65 mph average travel speed has been established for US 52. While the study acknowledges that US 52 currently meets this target, it also notes that the entire length of the corridor is expected to fall below this target by 2020 unless new improvements are made.
- The IRC Study also identified US 52 as being "at-risk" for signal proliferation due to expected growth in mainline traffic and on a number of county roads and city streets intersecting it.

Highway 52 Corridor Study and Management Plan (2000)

- This study was initiated to address growing concerns about the role of the corridor in the State's transportation system. A key finding of this effort was a determination that US 52 is "at-risk" of not meeting its safety and mobility performance goals in the future.
- A major outcome of this study was the establishment of a long term vision to:
  "Develop US 52 as a fully access-controlled, freeway facility, in order to maintain the corridor's function as a high-speed, high-mobility route."
- The recommended corridor management plan includes the identification of eight new interchange locations in order to transition US 52 into a freeway facility, as well as two reconstructed/reconfigured interchanges. This includes a proposed interchange at Goodhue County CSAH 9 within the project area for the *US 52 Safety, Access, and Interchange Location Study*. The corridor management plan also identifies a new alignment of CSAH 1 linking to the proposed interchange at CSAH 9, and a new bridge over US 52 at CSAH 8 to serve regional traffic.
- In addition to converting at-grade intersections to grade-separated interchanges (as described above), the following corridor management strategy recommendations are also consistent with the goals and objectives of the *US 52 Safety, Access, and Interchange Location Study*:
  - Maintain existing levels of safety and mobility, before the transition to a freeway is completed, by building turn lanes, acceleration lanes and other improvements as necessary.
  - Create a supporting local road network, to serve new and existing interchanges.
  - Close existing at-grade access and highway medians as needs arise.

Highway 52 IRC Management Plan (2002)

- This Highway 52 IRC Management Plan identifies a number of actions intended to protect and enhance the US 52 Corridor and to ensure that it provides for high speed, safe, and predictable travel conditions.
- The Plan found that US 52 is at risk for developing performance problems in the future based on increasing traffic volumes and the potential for signal proliferation at cross streets.
  - Traffic volumes on US 52 have increased steadily and are projected to reach between 29,125 and 86,775 vehicles per day by 2025, up from 17,550 to 46,800 in 2000.
  - Traffic has also increased on the cross streets. This creates problems on US 52 as it becomes more difficult to merge onto the highway and signals are installed at these intersections.
  - Due to the large number of access points along the corridor (approximately 4.5 per mile average), the potential for numerous signal installations is high.
- Based on the performance issues described above, the Plan established a vision for future improvements to the highway known as "Vision 52." The ultimate vision for US 52 is to develop a fully access controlled, freeway facility.

- In the interim until the ultimate vision is achieved, the Plan recommends US 52 be managed to ensure it continues to serve as the safest, most direct route and highest mobility link for moving people and goods between Rochester and the Twin Cities.
- To work toward the vision, several strategies were identified in the Plan to maintain mobility on US 52 while transitioning to a freeway facility. These strategies are listed below:
    - Strategy 1: Convert selected at-grade intersections to grade-separated interchanges.
    - Strategy 2: Maintain existing levels of safety and mobility before the transition to a freeway is completed by building turn lanes, acceleration lanes, and making other improvements as necessary.
    - Strategy 3: Create a supporting local road network, where necessary, to serve new and existing interchanges.
    - Strategy 4: Severely limit the installation of any additional traffic signals.
    - Strategy 5: Close existing at-grade access and highway medians as needs arise.
    - Strategy 6: Implement local planning and land development strategies that support the Highway 52 vision.
    - Strategy 7: Establish a US 52 Internal Management Team (IMT).
- Within the project area for the *US 52 Safety, Access, and Interchange Location Study*, the Plan identified the following issues:
    - Inadequate median width for truck storage
    - Poor visibility (skewed intersections and grade issues)
    - Need for acceleration lanes
    - Need for access consolidation (township roads, fields, farmsteads)
    - Increasing crashes at intersections
- Based on the issues above, the following recommendations were developed. Recommendations specific to the *US 52 Safety, Access, and Interchange Location study area include:*
    - Continue to monitor safety at County Road 1 and 9 intersections. Consider modifications if safety concerns continue to grow such as median restrictions.
    - Construct an interchange at either County Road 1 or County Road 9. The study concluded that County Road 9 would offer the better location as it better serves the interconnecting county and regional transportation systems.
    - Additional study on access for properties to the north of County Road 1 if the County Road 1 intersection was removed.
    - Close all remaining at-grade access as safety issues and/or opportunities arise.

Goodhue County Transportation Plan (2004)

- The *US 52 Safety, Access and Interchange Location Study* will support the goals of the Goodhue County Transportation Plan, including the following:
    - Goal 1 – Safety: Develop and maintain a transportation network that promotes safety for its users.
    - Goal 2 – Efficient Movement: Strive to ensure that the transportation network promotes the efficient movement of people and goods.
    - Goal 3 – Multimodal: Promote transportation mode choice as part of the county transportation system.
    - Goal 4 – Land Use/Development: Recognize the linkage between Goodhue County's desired growth and its transportation system to ensure that decisions regarding transportation are fully integrated with locally approved land use planning and development policies.
    - Goal 5 – Coordination between Jurisdictions: Build cooperation and coordination among state and local jurisdictions.

  - Goal 6 – Economic Development: Recognize economic development issues when managing the transportation system's resources.
  - Goal 7 – Investments and Use of Funding: Investigate opportunities to secure new funding for transportation needs and maximize the efficiency of current resources.
- The issues map included in the Plan (see Appendix A) identified a number a general issues along US 52 throughout the county, including heavy commercial vehicle traffic, high crash rates, high speeds, skewed/unmarked intersections, and northbound/southbound grade differences. The following were noted as issues within the study area for the US 52 Safety, Access, and Interchange Location Area Study:
  - An uneven grade issue was identified along southbound US 52 between County State Aid Highway (CSAH) 1 and CSAH 9.
  - The existing US 52 intersections with CSAH 9, CSAH 1, CSAH 14, and TH 57/CSAH 8 were identified as high crash locations. The segment of US 52 from CSAH 1 to Cannon Falls was identified as a high crash segment.
  - Planned future interchanges within the project area were identified in the vicinity of CSAH 9 or CSAH 1 and at the intersection of US 52 and TH 57/CSAH 8. The Plan also identified the realignment of CSAH 1 and/or CSAH 9, north of US 52, in order to meet the proposed future interchange.
  - A planned future on-road trail within the project area on CSAH 1, east of US 52 was identified.
- The Future System Designation Section in the Plan identified the existing segment of CSAH 1 from US 52 to County Road (CR) 56 as a potential CSAH to Township turn back as the planned new segment of CSAH 1/CSAH 9 would extend from CR 56 to the planned US 52 interchange in this area. CSAH 1 from US 52 to CR 49 was identified for a potential CSAH to CR designation change.
- The Implementation Section in the Plan identified the recommended access spacing for US 52 as a high priority IRC and a principal arterial. This includes a recommendation for intersections by interchange only and no traffic signals or private access points.
- The Regional Priorities project list in the Plan includes a number of short-, medium-, and long-range planned improvements relevant to the study area. These include the following:
  - Completion of final design for a new 2.2 mile alignment of CSAH 1, from CR 56 to US 52, was identified as a short-range priority.
  - Construction of a new interchange on US 52, south of Cannon Falls in the area of CSAH 24 was identified as a medium-range improvement.
  - Construction of the new 2.2 mile alignment of CSAH 1, from CR 56 to US 52, was identified as a long-range improvement.

Goodhue County Comprehensive Plan, Inventory Document (2004)

- This document includes a summary of the historic development trends within the county, as well as a demographic profile and inventory of the existing characteristics of the county. The plan identifies US 52 as a "Regional Growth Corridor," connecting the Twin Cities area to Rochester.

The planning direction established by MnDOT and Goodhue County will serve as the basis for the development and evaluation of alternatives for the *US 52 Safety, Access and Interchange Location Study*.

B. Existing Characteristics

It is important to understand the existing characteristics of the study area in order to develop meaningful transportation solutions. The following discussion provides a snapshot of existing characteristics,

including a review of existing development patterns and future land use plans, demographic trends, existing roadway network, traffic operations, and crash history. The key issues identified as part of this review are illustrated in Figure 2.

Land Use

Goodhue County's existing and future land use plans were reviewed in order to identify major trip generators, economic growth factors, and the potential for additional growth and expansion within the study area. The existing and future land use trends relative to the study area are described below.

Goodhue County is an agricultural center with an abundance of farmland and convenient access to the Mississippi River and agricultural transshipment points. The county has placed a high value on these rural, agricultural areas by enacting and enforcing strong zoning policies, maintaining agricultural preservation policies, and encouraging growth within existing communities.

The majority of the land surrounding the US 52 Safety, Access and Interchange Location Study area (approximately CSAH 1 to the south study limit) is zoned as an Agricultural Protection District. The purpose of this zoning district is to maintain, conserve, and enhance agricultural lands that are valuable for crop production, pasture and natural habitat for plant and animal life. The intent is to encourage long-term agricultural uses and preserve prime agricultural farmland by restricting the location and density of non-farm dwellings and other non-farm uses.

The remainder of the study area (approximately CSAH 1 to the north study limit) falls within a general Agricultural District. Like the Agricultural Protection District, the purpose of the Agricultural District is to conserve and maintain agricultural investments and prime agricultural farmland. However, the Agricultural District allows a slightly higher density of dwellings than the Agricultural Protection District does. Maps showing the Goodhue County Zoning Districts relative to the study area are included in Appendix B.

Based on PMT meeting discussions with Goodhue County, Cannon Falls Township, and Leon Township representatives, it was determined that there are currently no plans for the project area land use to change within the foreseeable future. Therefore, as a baseline for calculations such as traffic growth and future development, it will be assumed that there are no land use changes within the study area.

Demographic Trends

In addition to existing development patterns and future land use change, growth in population can result in changes in travel patterns and traffic operation. Over the past 20 years, the population of the study area has declined slightly; however, moderate gains are expected over the next decade. Table 1 identifies the historic and forecast growth in population for the townships that comprise the study are and Goodhue County as a whole. While Goodhue County has gained population, Cannon Falls and Leon Townships have lost population. Collectively, the two townships within the study area have lost a total of 330 people over the past 20 years, representing a population decline of 14 percent. During the same time period, the total population of Goodhue County grew by 5,493 people or 13 percent, as development and growth has occurred in population centers such as Red Wing and Cannon Falls.

Despite this moderate decline in population over the past two decades, the study area is expected to add population by the year 2025. According to projections prepared as part of the Goodhue County Transportation Plan (2004), the total population of Cannon Falls Township is expected to grow by 515 people (48 percent) by 2025 reaching a total population of 1,585 by 2025. Likewise, Leon Township is expected to add 323 (36 percent) growing to 1,208 by 2025.

FIGURE 2
ISSUES MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- Project Study Area
- CSAH 14 Subarea
- High Crash/Severity Intersection
- Potential Interchange Study Area
- Lakes/Ponds
- Streams
- Wetlands (NWI)
- 100-Year Floodplain
- 500-Year Floodplain
- Corporate Boundaries

XX,XXX 2009 Traffic Volume (AADT)
(YY,YYY) 2025 Forecast Traffic Volume (AADT)
X,XXX 2007 Traffic Volume (AADT)
(Y,YYY) 2025 Forecast Traffic Volume (AADT)

0 0.5 1 Miles
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Table 1: Study Area Population Trends

	Population			Forecast	Growth					
	1990	2000	2010	(2025)	1990 - 2000		2000 - 2010		2010 - 2025	
Cannon Falls Twp.	1,369	1,236	1,070	1,585	-133	-10%	-166	-13%	515	48%
Leon Twp.	916	942	885	1,208	26	3%	-57	-6%	323	36%
Goodhue Co.	40,690	44,127	46,183	51,180	3,437	8%	2,056	5%	4,997	11%

Source: Historic population and population forecasts from Goodhue Co. Transportation Plan (2004). 2010 population from US Census Bureau, 2010 Census.

In addition to the moderate population growth expected within the study area, the population of the Minneapolis/St. Paul and Rochester Metropolitan areas is also expected to increase by the year 2025. As shown in Table 2, the total population of the Twin Cities area is expected to increase by 828,233 people for a gain of 29 percent. The population of the Rochester Metropolitan Area is also expected to, add 39,080 people (21 percent) by 2025. As a High Priority IRC, the primary function of US 52 is to provide a direct connection between Rochester and the Twin Cities. Given the intended function of the corridor, it is reasonable to assume that the anticipated growth in these regional centers will be accompanied by some growth in travel demand along US 52, including the project study area.

Table 2: Twin Cities/Rochester Population Trends

	Population		Change	
	2010	2025		
Mpls.-St. Paul-Bloomington MSA	2,879,567	3,707,800	828,233	29%
Rochester MSA	188,820	227,900	39,080	21%

Source: 2010 population from US Census Bureau, 2010 Census.
2025 population forecast from MN State Demographic Center, June 2007.

Existing Roadway Network

The existing roadway network within the study area is served by US 52, as well as supporting regional and local roadway networks. US 52 is classified by MnDOT as a High Priority IRC and a Rural Principal Arterial Expressway (1A-F). Its intended function is to provide a high degree of mobility between the Rochester and Twin Cities Metropolitan Areas. US 52 is currently a high-speed, access controlled expressway (four-lane divided) with several at-grade intersections and access points throughout the project area. As shown in Figure 1, the major intersecting roadways within the study area include CSAH 14, CSAH 1, CSAH 9, and CR 8/TH 57, all of which are two-lane undivided, rural facilities and have at-grade, side-street stop controlled intersections along US 52. The CSAH 1 intersection is skewed and off-set, with the east junction approximately 1,140 feet north of the west junction, creating additional turning movements onto and off-of US 52 for through traffic. At the CSAH 9 intersection, there is a hill on southbound US 52, south of CSAH 9, which limits sight distance for through traffic on CSAH 9 and left-turns from US 52. The CSAH 8/TH 57 intersection in Hader is a five-legged intersection at the junction of US 52, TH 57, and CSAH 8.

As discussed in the *Planning Context* section, a future vision for a fully access controlled US 52 has been established, in order to improve safety and maintain a high level of mobility. As part of MnDOT's *Statewide IRC Study (1999)*, a performance goal of 61 to 65 miles per hour was established for this route. The existing and forecasted performance for US 52 is discussed in further detail in *Traffic Operations* section below.

The primary regional roadways within the study area are CSAH 1, CSAH 9, and CSAH 14, all of which are Goodhue County routes. These routes provide regional connectivity between the study area and the surrounding county and state roadway networks. In addition, these routes provide accessibility to

regional activity centers such as Cannon Falls and Wanamingo for the individual properties within the study area. Given the critical importance of these routes, any improvements to US 52 will need to be planned and designed in a manner which provides efficient regional connections and replacement access for any township road or private driveway modifications.

Access Inventory

Management of roadway access, both in terms of cross-street spacing and driveway placement, is a critical means of preserving and enhancing a roadway's functional classification and its efficient operation. In addition, providing access management in some form, whether through grade-separated crossings, frontage and backage roads or right-in/right-out access, reduces the number of vehicle conflict points resulting in improved safety. A number of studies conducted by government and academic researchers (FHWA Access Research Report No. FHWA-RD-91-044) have demonstrated a direct relationship between the number of full access points and the rate of crashes, showing a positive correlation between access density (access points per mile) and the frequency of crashes (crash rates). Given this relationship, access management is an important roadway safety tool.

Both MnDOT and Goodhue County have established access management policies and guidelines in order to ensure sound access management on their respective roadways. According to *MnDOT's Access Management Manual (January 2, 2008)* access along the study segment of US 52 (High-Priority Interregional Corridor) should be permitted by interchange only, with no traffic signals or private access points. Further, primary full movement intersections (e.g., CSAH 1 and CSAH 9) should be spaced at a minimum distance of one-mile apart, to ensure safe and efficient mobility. Secondary or partial movement intersections should be spaced at 1/2-mile. The supporting access management guidelines for Goodhue County are presented in the *Goodhue County Transportation Plan (2004),* which recognizes MnDOT's access management policy for US 52 within the study area. These policies and guidelines support the previously established vision to convert US 52 to a fully access controlled (i.e., access by interchange only) freeway facility.

The study segment of US 52 does not currently meet MnDOT's access spacing guidelines due to multiple at-grade intersections and direct access driveways. Currently, there are 43 at-grade access points along the project segment of US 52 for an average of 4.3 access points per mile. This includes intersections with public roadways (county highways, township roads, etc.), residential driveways, farm and field accesses, and commercial/industrial entrances all with direct US 52 highway access. In addition, the off-set intersection at CSAH 1 does not meet the intersection spacing guidelines (1-mile) as the north and south junctions are spaced at approximately 1,200 feet apart. Table 3 shows the approximate number of direct access points along US 52 by access type, based on a desktop review of current aerial photography.

Table 3: US 52 Access Point Inventory

Type	Number of Accesses
Public Roadway	14
Residential/Farm	18
Private (Non-Residential)	3
Field/Agricultural	8
TOTAL	**43**

The high number of access points along US 52 detracts from its ability to provide safe and reliable mobility. Consolidation and/or closure of access points should be considered as part of any improvement project, in order to ensure the safe and efficient operations of this corridor. Any access modifications along US 52 should be accompanied by related improvements to the supporting regional and local roadway networks, in order to ensure an adequate level of regional and local mobility. This includes ensuring adequate local roadway connections to the City of Cannon Falls and Hader (unincorporated

community), as well as any existing and/or planned interchanges along US 52 (including the planned interchange at CSAH 24 in Cannon Falls) within the project area, in order to replace any access points along US 52 which are closed.

Traffic Operations

In order to determine how traffic is currently operating in the study area, and to understand traffic growth trends, traffic operations were analyzed for the project area segment of US 52. Average Annual Daily Traffic (AADT) traffic count data was obtained from MnDOT traffic volumes maps for the years 1999 through 2009. As shown in Table 4, during the past decade (1999 – 2009), the annual rate of traffic growth along the study segment of US 52 was modest, ranging from 1.6 percent to 2.9 percent annually. Growth in traffic volumes appeared to level off towards the latter half of the 10-year period, which is a trend comparable to that experienced on many roadways throughout the region.

Table 4: US 52 AADT Trends

Location	1999	2000	2002	2004	2006	2007	2009	Growth Factor	Annual Growth Rate
North of CSAH 1	15,200	18,400	18,900	17,800	17,900	17,900	18,800	1.24	2.2%
CSAH 1 to CSAH 8/TH 57	15,200	16,600	17,500	15,500	17,100	17,100	17,800	1.17	1.6%
CSAH 8/TH 57 to CSAH 7	12,900	15,900	16,500	16,500	17,800	17,800	17,100	1.33	2.9%

Source: MnDOT Traffic Volume Maps, 2009

In addition, traffic volumes for the key cross streets within the study area for the years 1999, 2003, 2007, and 2011 was obtained from MnDOT and Goodhue County. AADT volumes for study area cross streets are shown in Table 5**.** Cross street traffic volume growth has been varied, with modest growth in traffic volumes on CSAH 9 (3.9 to 4.1%) and TH 57 (1.4%) and a modest decline in traffic volumes on CSAH 1 (-2.3 to -0.4%). Traffic volume trends on CSAH 8 have been mixed with modest growth south of US 52 (2.3%) and modest decline north of US 52 (-1.7%).

Table 5: Cross Street AADT Trends

Year	CSAH 1 (North)	CSAH 1 (South)	CSAH 9 (West)	CSAH 9 (East)	CSAH 8 (North)	CSAH 8 (South)	CSAH 14	TH 57
1999	900	580	840	650	620	260	810	1,150
2003	1,050	530	990	860	570	465	1,000	1,350
2007	550*	550	1,200	990	550	250	930	1,350
2011	650	550	1,300	1,050	450	355	880	1,450*
Growth Factor	**0.72**	**0.95**	**1.55**	**1.62**	**0.73**	**1.37**	**1.09**	**1.26**
Growth Rate	**-2.3%**	**-0.4%**	**3.9%**	**4.1%**	**-1.7%**	**2.1%**	**0.5%**	**1.4%**

Source: Goodhue County 2011 Draft AADT Report

* TH 57 volumes are from MnDOT Traffic Volume Maps, 2009.

Existing Roadway Capacity

The ratio of volume to capacity provides a common measure of congestion along a stretch of roadway and can help determine where capacity improvements are needed. Congestion on a roadway segment is judged to exist when the ratio of traffic volume to roadway capacity (V/C ratio) approaches or exceeds 1.0.

The *Goodhue County Transportation Plan (2004)* provides typical planning-level average daily traffic (ADT) capacity thresholds for each of the roadway facility types within the project area, based upon guidance from the Highway Capacity Manual and professional engineering judgment. The capacity thresholds for the roadways within the project area are presented in Table 6 below.

Table 6: Planning-Level Capacity Thresholds

Roadway	Facility Type	Planning-Level Capacity Threshold
US 52	Rural Expressway (4-lane divided, 55-65mph)	45,000 vehicles per day
CSAH 14	Two-Lane Undivided, Rural	14,000 vehicles per day
CSAH 1	Two-Lane Undivided, Rural	14,000 vehicles per day
CSAH 9	Two-Lane Undivided, Rural	14,000 vehicles per day
CSAH 8	Two-Lane Undivided, Rural	14,000 vehicles per day
TH 57	Two-Lane Undivided, Rural	14,000 vehicles per day

Source: Goodhue County Transportation Plan (2004)

A V/C analysis for the study segment of US 52 and the key cross streets within the study area was conducted based on the existing traffic volume data presented in Table 4 and Table 5. This analysis is presented in Table 7 and Table 8. It is important to note that this planning-level analysis did not consider delays that a motorist may experience at intersections.

Table 7: US 52 V/C Analysis (Existing Conditions)

Location	Volume (2009 AADT)	Capacity Threshold	V/C Ratio
North of CSAH 1	18,800	45,000	0.42
CSAH 1 to CSAH 8/TH 57	17,800	45,000	0.40
CSAH 8/TH 57 to CSAH 7	17,100	45,000	0.38

Table 8: Cross Street V/C Analysis (Existing Conditions)

Location	Volume (2011 AADT)	Capacity Threshold	V/C Ratio
CSAH 14	880	14,000	0.06
CSAH 1 (north)	650	14,000	0.05
CSAH 1 (south)	550	14,000	0.04
CSAH 9 (west)	1,300	14,000	0.09
CSAH 9 (east)	1,050	14,000	0.08
CSAH 8 (north)	450	14,000	0.03
CSAH 8 (south)	355	14,000	0.03
TH 57	1,450	14,000	0.10

Based on the V/C analysis described above, it is clear that the study segment of US 52, as well as the cross streets analyzed, are not currently capacity deficient (i.e., existing traffic volumes do not exceed roadway capacities). As a result, roadway congestion is not a major concern within the study area based on the existing roadway characteristics and current traffic volumes.

Future Roadway Capacity

In addition to the existing roadway traffic capacity described above, future traffic projections were also reviewed in order to identify future capacity deficiencies within the study area. This included a review of the forecasted 2025 AADT volumes prepared as part of the Goodhue County Transportation Plan (2004).

Using the methodology described in the *Existing Roadway Capacity* section above, a future roadway capacity analysis was conducted. The results are shown in Table 9 and Table 10.

Table 9: US 52 V/C Analysis (2025 Forecasts)

Location	Forecast Volume (2025 AADT)	Capacity Threshold	V/C Ratio
North of CSAH 1	35,100	45,000	0.78
CSAH 1 to CSAH 8/TH 57	33,000	45,000	0.73
CSAH 8/TH 57 to CSAH 7	31,800	45,000	0.71

Source: Goodhue County Transportation Plan (2004)

Table 10: Cross Street V/V Analysis (2025 Forecasts)

Location	Forecast Volume (2025 AADT)	Capacity Threshold	V/C Ratio
CSAH 14	970	14,000	0.07
CSAH 1 (north)	1,140	14,000	0.08
CSAH 1 (south)	1,790	14,000	0.13
CSAH 9 (west)	1,730	14,000	0.13
CSAH 9 (east)	1,070	14,000	0.08
CSAH 8 (north)	1,040	14,000	0.07
CSAH 8 (south)	470	14,000	0.03
TH 57	2,500	14,000	0.18

Source: Goodhue County Transportation Plan (2004)

As shown in the tables above, although traffic volumes are expected to increase, neither the study segment of US 52 or its cross streets are expected to exceed their design capacity based on 2025 traffic forecasts.

It should be noted that the projected traffic volumes reflect a county-wide level of analysis. Traffic volumes on specific roadways may change based on future development and land use changes. As described in the *Land Use* section above, it was determined that there are currently no plans for the project area land use to change within the foreseeable future. Therefore, the county level traffic projects and future capacity analysis presented in the *Goodhue County Transportation Plan (2004)* were deemed to provide an acceptable level of detail for the US 52 Safety, Access and Interchange Location Study.

Safety Analysis

The safety of the roadway network is a high priority for the study partners and for all agencies that are responsible for improving and maintaining transportation facilities. A planning-level crash analysis was performed using the most recent crash data from MnDOT District 6 to evaluate potential safety problems within the study area. This dataset was reviewed to identify the number, location, and severity of crashes within the project study area along US 52 for the years 2006 through 2011. Overall, there were 311 crashes within the study area during this time period. Of these six involved fatalities, nine involved incapacitating injuries, 92 involved personal injury or possible injury, and 204 involved property damage only. Of the six fatalities recorded, two occurred within the last year (2011). These recent fatal crashes within the project area underscore the need to evaluate safety. As described below, three primary factors

were considered when analyzing the historic crash data: (1) crash rates, (2) critical crash rate, and (3) crash severity. Table 11 presents the annual crash totals by severity.

Crash Rate

Crashes are proven to be a function of vehicle exposure. For example, intersections with higher traffic volumes will experience more crashes than similar intersections with lower traffic volumes. Consequently, it is important to understand crash rates rather than simply documenting the number of crashes in order to normalize the traffic volumes at different, but comparable, intersections.

Table 11: US 52 Safety, Access, and Interchange Location Study Area Crashes (2006-2011)

Year	Fatal Crashes	Personal Injury Crashes			Property Damage Crashes	Total Crashes
		Type A Incapacitating Injury	Type B Non-Incapacitating Injury	Type C Possible Injury		
2006	1	2	8	3	21	35
2007	3	1	4	6	28	42
2008	0	2	14	4	39	59
2009	0	1	5	12	40	58
2010	0	2	11	9	39	61
2011	2	1	5	11	37	56
6-Year Total	6	9	47	45	204	311
6-Year Average	1	2	8	8	34	52

Source: MnDOT, District 6

Based on the historic crash data from 2006 through 2011, crash rates were calculated for both intersections and segments within the project area. The intersection crash rate is defined as the number of crashes per million vehicles entering the intersection and the segment crash rate is defined as the number of crashes per million vehicle miles.

To indicate potential problems, the crash rates for intersections or segments were compared to the MnDOT District 6 average crash rates from 2008 through 2010 (most recent data), for similar intersection or roadway facility types (Rural Through/Stop for intersections and Rural Four-Lane Expressway for segments) Locations with a crash rate lower than average are considered to be relatively safe. Locations exhibiting crash rates above average may be due to the random nature of accidents, or may be the result of a problem or defect in the location.

Intersection crash rates calculated as part of this analysis are shown in Table 12. A comparison to the district average crash rates for similar facilities shows that the following three intersections should be evaluated for safety issues:

- US 52 with CSAH 14
- US 52 with CSAH 9
- US 52 with TH 57/CSAH 8

Table 12: US 52 Intersection Crash Rates (2006 - 2011)

Intersection	Crash Rate	Average Crash Rate
US 52 with CSAH 14	**0.44**	**0.40**
US 52 with CSAH 1 N	0.29	0.40
US 52 with CSAH 1 S	0.26	0.40
US 52 with CSAH 9	**1.21**	**0.40**
US 52 with TH 57 & CSAH 8	**0.54**	**0.40**

Segment crash rates were calculated for US 52 as shown in Table 13. A comparison with average crash rates shows the following three segments should be evaluated for safety issues:

- RP 94.961 – RP 91.942 (CSAH 14 to CSAH 1N)
- RP 89.922 – RP 86.704 (CSAH 9 to CSAH 8/TH 57)
- RP 86.704 – RP 85.516 (CSAH 8/TH 57 to South End)

Table 13: US 52 Segment Crash Rates (2006 - 2011)

Segment	Location	Crash Rate	Average Crash Rate
RP 95.565 – RP 94.961	N. END to CSAH 14	0.24	0.70
RP 94.961 – RP 91.942	**CSAH 14 to CSAH 1N**	**0.80**	**0.70**
RP 91.942 – RP 89.922	CSAH 1N to CSAH 9	0.63	0.70
RP 89.922 – RP 86.704	CSAH 9 to CSAH 8/TH 57	**0.94**	0.70
RP 86.704 – RP 85.516	**CSAH 8/TH 57 to SOUTH END**	**0.85**	**0.70**

Critical Crash Rate

Higher than average crash rates may indicate that there is a safety issue at a given location; however, this alone does not prove that an issue exists. Average crash rates do not account for the variation in traffic volume among facilities or the random nature of crashes. Therefore, the critical crash rate for the key intersections and roadway segments studied was calculated to determine the statistical significance of the crash rate comparison. This method identifies those locations that have a crash rate higher than similar locations at a statistically significant level. This additional comparison helps to provide an additional level of confidence that the safety indicator is reliable and not random, taking into account the traffic volumes of each intersection or segment and the random nature of crashes. For purposes of this calculation a 95th-percentile confidence level was selected as the threshold. This means one can be 95 percent confident that the intersections with crash rates below the critical crash rate but above the district average crash rate are relatively safe and that the higher than average crash rate is due to the random nature of crashes.

Locations where the crash rate is greater than the critical crash rate are thought to have a higher than average crash frequency and therefor a safety issue exists. These locations should be investigated further. The critical crash rates for each intersection and segment studied are summarized in Table 14 and Table 15.

Table 14: US 52 Critical Crash Rates – Intersections (2006-2011)

Intersection	Crash Rate	Critical Crash Rate
US 52 with CSAH 14	0.44	0.57
US 52 with CSAH 1 N	0.29	0.57
US 52 with CSAH 1 S	0.26	0.58
US 52 with CSAH 9	**1.21**	**0.58**
US 52 with TH 57 & CSAH 8	0.54	0.58

Table 15: US 52 Critical Crash Rates – Segments (2006-2011)

Segment	Location	Crash Rate	Critical Crash Rate
RP 95.565 – RP 94.961	N. END to CSAH 14	0.24	1.00
RP 94.961 – RP 91.942	CSAH 14 to CSAH 1N	0.80	0.83
RP 91.942 – RP 89.922	CSAH 1N to CSAH 9	0.63	0.86
RP 89.922 – RP 86.704	**CSAH 9 to CSAH 8/CR 57**	**0.94**	**0.83**
RP 86.704 – RP 85.516	CSAH 8/CR 57 to SOUTH END	0.85	0.92

As shown in Table 14, when comparing crash rates to the critical crash rates, all intersections are below the critical crash rate, with the exception of the following intersection:

- US 52 at CSAH 9

As the intersection of US 52 at CSAH 9 has a crash rate which exceeds the critical crash rate, it can be concluded that this location has a higher than average crash frequency and a safety deficiency exists.

As shown in in Table 15, a similar analysis for segments along US 52 shows that all segments are below the critical crash rate, with the exception of the following segment:

- RP 89.922 – RP 86.704 (CSAH 9 to CSAH 8/TH 57)

The segment of US 52 from RP 89.922 to RP 86.704 (CSAH 9 to CSAH 8/TH 57) has a crash rate which exceeds the critical crash rate, and therefore it can be concluded that this location has a higher than average crash frequency and a safety deficiency exists.

Crash Severity Rate

The simplest definition of crash severity rate is "How bad are the crashes?" As noted in Table 11, crashes are typically categorized as follows:

- Property damage (no injuries occurred) – not severe
- Injury crashes (injuries occurred, but no fatalities) – more severe
- Fatal crashes – most severe

The calculation of crash severity rates allows the identification of locations that may experience a low crash rate but have a high percentage of injury or fatal crashes. Conversely, intersections which have higher crash rates, but have a higher percentage of property damage crashes, may not be as deficient as the crash rate alone would indicate. The severity rate is simply the percentage of injury and fatal crashes at an intersection or segment as compared to the total number of crashes. Table 16 and Table 17 summarize the severity rates for the study area.

Table 16: US 52 Crash Severity Rate – Intersections (2006 – 2011)

Intersection	Severity Rate	Avg. Severity Rate
US 52 with CSAH 14	0.53	0.60
US 52 with CSAH 1 N	0.34	0.60
US 52 with CSAH 1 S	0.44	0.60
US 52 with CSAH 9	**2.69**	**0.60**
US 52 with TH 57 & CSAH 8	**1.15**	**0.60**

Table 17: US 52 Crash Severity Rate – Segments (2006-2011)

Segment	Location	Severity Rate	Avg. Severity Rate
RP 95.565 – RP 94.961	N. END to CSAH 14	0.36	1.10
RP 94.961 – RP 91.942	CSAH 14 to CSAH 1N	1.06	1.10
RP 91.942 – RP 89.922	CSAH 1N to CSAH 9	0.94	1.10
RP 89.922 – RP 86.704	**CSAH 9 to CSAH 8/TH 57**	**1.71**	**1.10**
RP 86.704 – RP 85.516	**CSAH 8/TH 57 to SOUTH END**	**1.60**	**1.10**

As shown in the Table 16, the following two intersections have a crash severity rate above the MnDOT average:

- US 52 with CSAH 9
- US 52 with TH 57 & CSAH 8

As shown in the Table 17, the following two segments have a crash severity rate above the MnDOT average:

- RP 89.922 – RP 86.704 (CSAH 9 to CSAH 8/TH 57)
- RP 86.704 – RP 85.516 (CSAH 8/TH 57 to SOUTH END)

Safety Analysis Results

Based on the analysis described above, one intersection and two segments along US 52 within the study area were identified as safety deficient, as they exhibit a high crash frequency and a high crash severity. These include the intersection of TH 52 with CSAH 9, the segment from CSAH 9 to CSAH 8/TH 57, and the segment from CSAH 8/TH 57 to the southern terminus of the study area (CR 50). In addition, although not a high crash frequency location, the intersection of US 52 and TH 57/CSAH 8 was identified as a high crash severity location. The following is an overview of the crash history for each of these high crash frequency and/or severity locations:

US 52 and CSAH 9 Intersection

At the intersection of TH 52 at CSAH 9, an analysis of crash report data indicates that 57 percent of the reported crashes are right angle collisions. Of these, 27 right angle crashes, a total of 23 (85%) involved the northbound/eastbound direction of travel. A failure to yield was listed as a contributing factor in 15 of the 27 right angle crashes. Finally, over 26 percent of the drivers involved in crashes at the intersection were age 60 or older. Further analysis of this intersection is recommended with particular attention given to the apparent failure to yield the right of way on the northbound and eastbound approaches. A sight distance study may be appropriate to evaluate if the existing guard rail (along the north bound lanes) is obstructing a motorist's line of sight at this intersection or if there are other contributing factors that may be corrected.

US 52 and TH 57/CSAH 8 Intersection

An analysis of crash report data for the intersection of TH 52 at TH 57/CSAH 8 indicates that 52 percent of the reported crashes are right angle collisions. This amounts to 82 percent of all reported injury crashes at the intersection. Also, it should be noted that 17 percent of the drivers involved with accidents at the intersection were age 60 and older.

US 52 from CSAH 9 to CSAH 8/TH 57

An analysis of the crash report data along the segment between the intersections of CSAH 9 and CSAH 8/TH 57 on US 52 indicates that 58 percent (41 of 71) of the reported crashes were vehicles that had ran off the road. Of these, a total of 21 occurred during poor weather conditions. The crash report data for the intersection of US 52 and CSAH 9, as discussed above, contributes heavily to the overall high segment crash rate and high segment crash severity rate.

US 52 from CSAH 8/TH 57 to Southern Terminus

Analysis of the crash data along the segment of US 52 south of the intersection of TH 57/CSAH 8 indicates that 82 percent (14 of 17) of the reported crashes were vehicles that had ran off the road. Of these, a total of 12 occurred during poor weather conditions. The crash report data for the intersection of US 52 and CSAH 8/TH 57, as discussed above, contributes heavily to the overall high segment crash rate and high segment crash severity rate.

It should be noted that there is currently a safety study underway for the intersection of US 52 and CSAH 9 within the project area, as part of a separate project. Recognizing the significant safety concerns in this area, MnDOT and the University of Minnesota initiated a safety improvement study in 2009, focusing on the intersection of US 52 and CSAH 9. This initiative is currently underway and includes the implementation of innovative Intelligent Transportation Systems (ITS) designed to help drivers judge when it is safe to enter the intersection. This treatment is still under evaluation.

Social, Economic, and Environmental (SEE) Concerns

Potential SEE issues will be addressed in greater detail during the formal environmental documentation or Planning and Environmental Linkages (PEL) study for the proposed US 52 Safety, Access and Interchange Location Study improvements. Additional information will also be obtained through agency coordination and the public input process.

Potential issues include farmland impacts, wetlands, Karst (sinkhole) conditions, stream crossings, woodlands, and socio-economic concerns associated with access management (travel time impacts, emergency vehicle impacts, etc.). Rare, threatened, and endangered species are also present in the study area. Potential cultural resources impacts are expected but unknown at this time.

There are no known historic structures within 1/2 mile of the intersection of US 52 and CSAH 1 or CSAH 9. However, there may be other properties in the general project area that have not been inventoried. A broad map of archaeological potential for cultural resources within the project area was also obtained; no known cultural resource sites were identified in the project area. However, much of the area has not been surveyed. Therefore it is likely that a cultural resources survey will be necessary once a general area for the interchange has been selected. The cultural resource information will inform the selection of a preferred alternative.

C. Public Meeting Results

A public informational meeting for the US 52 Safety, Access and Interchange Location Study was held on August 25, 2010. The purpose of this meeting was to provide interested stakeholders with an overview of the project, including schedule, study process and partners, issues and opportunities, and potential interchange concepts.

In addition, a project questionnaire was also administered. The purpose of this questionnaire was to solicit stakeholder input on several of the important aspects of the project, and to allow stakeholders to provide other comments and feedback. A summary of the questionnaire results are included in Appendix C.

D. Other Issues

CAPX2020

A transmission line project known as CapX2020 has been proposed within the study area. This project would be built in phases and would be designed to meet the growth in electricity demand as well as to tap into vast wind energy resources in southern and western Minnesota and the Dakotas. Maps showing the location of the proposed CAPX2020 project, relative to the study segment of US 52, are included in Appendix D.

The proposed CapX2020 project will include construction of three 345 kilovolt (kV) transmission lines, one 230 kV line, and associated substations. The Group 1 projects include a 150-mile, 345 kV line between Hampton and Rochester continuing to La Crosse, Wisconsin.

The route of this power line could provide the ability to create north-south mobility improvements for local traffic that is currently served by direct access on US 52. The power lines need continuous maintenance access throughout the project area. If the utility line is constructed, a potential opportunity for MnDOT and Goodhue County exists to expand this access road, creating a township road for the low volume of local traffic to use and potentially eliminate several access points directly onto US 52.

Rochester Rail Link Feasibility Study (2003)

The City of Rochester, together with MnDOT, assessed the potential of the US 52 Corridor as a multi-modal corridor and a key connector for the future. The study examined the feasibility of rail service supporting interurban mobility and connections between its cities at the regional level of the Midwest. The study evaluated the potential for the US 52 corridor as a high speed rail connection between the Twin Cities and Rochester international airports. The report identified two alternative routes (See Appendix E). No recommendations were made in the report.

E. PMT Approval of Project Background

Technical Memorandum No. 2 – Project Background was presented to the PMT on January 6, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued for PMT approval on March 9, 2012. Final approval of Technical Memorandum 2 was received on May 4, 2012.

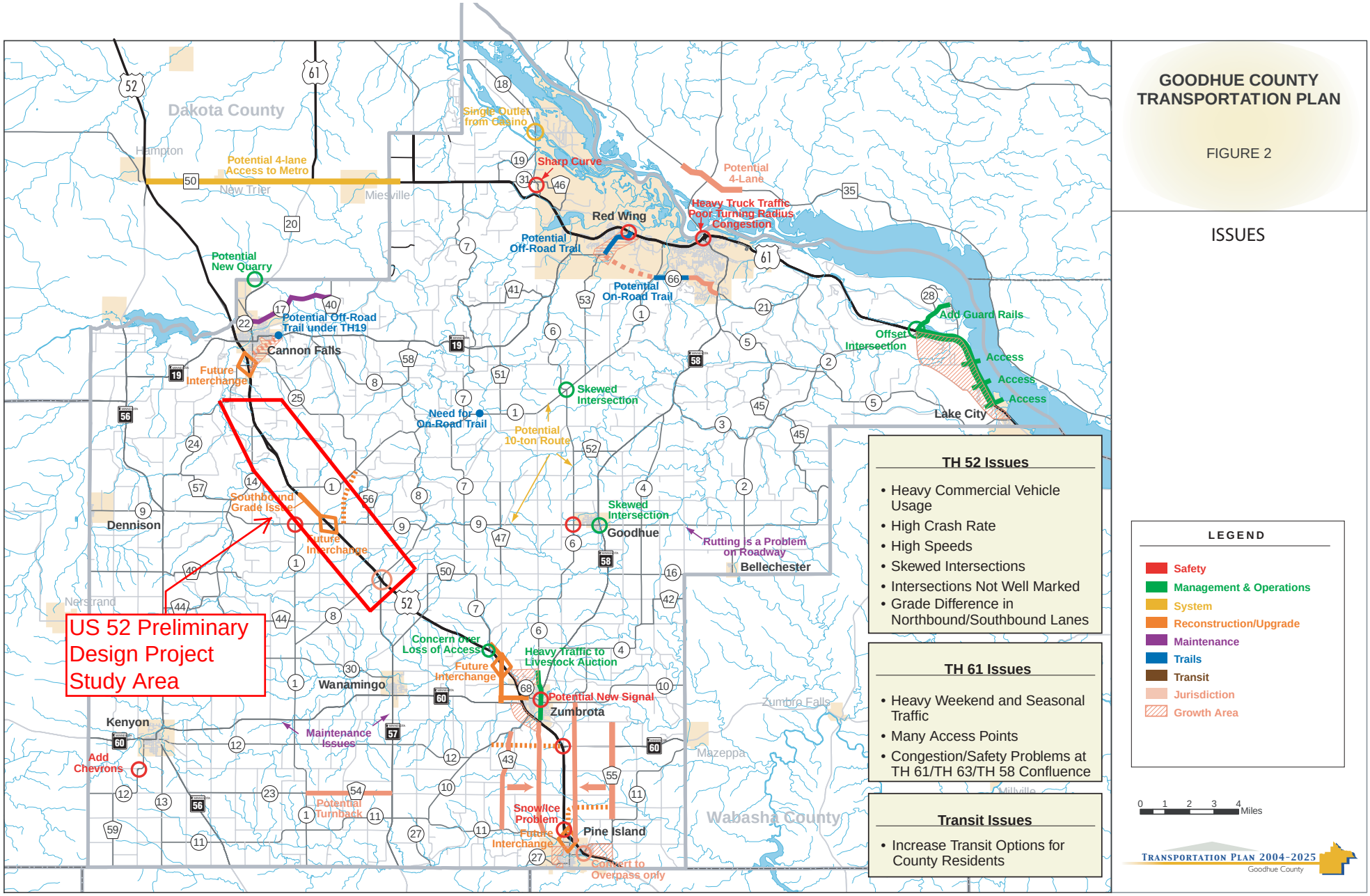
List of Appendices

List of References

Minnesota Department of Transportation. *Interregional Corridor Study*. November 1999.
Minnesota Department of Transportation. *Highway 52 IRC Corridor Management Plan*. April 2002.
Goodhue County, Minnesota. *Transportation Plan*. June 2004.
Goodhue County, Minnesota. *Comprehensive Plan – Inventory Document*. 2004.

Appendix A: Goodhue County Transportation Plan (2004) – Issues Map

Appendix A


GOODHUE COUNTY TRANSPORTATION PLAN
FIGURE 2
ISSUES
Dakota County
Hampton
New Trier
Miesville
Potential 4-lane Access to Metro
Singer Outlet from Casino
Sharp Curve
Potential 4-Lane
Heavy Truck Traffic Poor Turning Radius Congestion
Red Wing
Potential Off-Road Trail
Potential New Quarry
Potential On-Road Trail
Potential Off-Road Trail under TH19
Cannon Falls
Future Interchange
Add Guard Rails
Offset Intersection
Access
Access
Access
Lake City
Skewed Intersection
Need for On-Road Trail
Potential 10-ton Route
Southbound Grade Issue
Future Interchange
Dennison
Skewed Intersection
Goodhue
Rutting is a Problem on Roadway
Bellechester
Nerstrand
US 52 Preliminary Design Project Study Area
Concern over Loss of Access
Future Interchange
Heavy Traffic to Livestock Auction
Wanamingo
Potential New Signal
Zumbrota
Zumbro Falls
Kenyon
Maintenance Issues
Add Chevrons
Mazeppa
Potential Turnback
Snow/Ice Problem
Future Interchange
Pine Island
Millville
Wabasha County
Culvert to Overpass only
TH 52 Issues
• Heavy Commercial Vehicle Usage
• High Crash Rate
• High Speeds
• Skewed Intersections
• Intersections Not Well Marked
• Grade Difference in Northbound/Southbound Lanes
TH 61 Issues
• Heavy Weekend and Seasonal Traffic
• Many Access Points
• Congestion/Safety Problems at TH 61/TH 63/TH 58 Confluence
Transit Issues
• Increase Transit Options for County Residents
LEGEND
Safety
Management & Operations
System
Reconstruction/Upgrade
Maintenance
Trails
Transit
Jurisdiction
Growth Area
0 1 2 3 4 Miles
TRANSPORTATION PLAN 2004-2025
Goodhue County

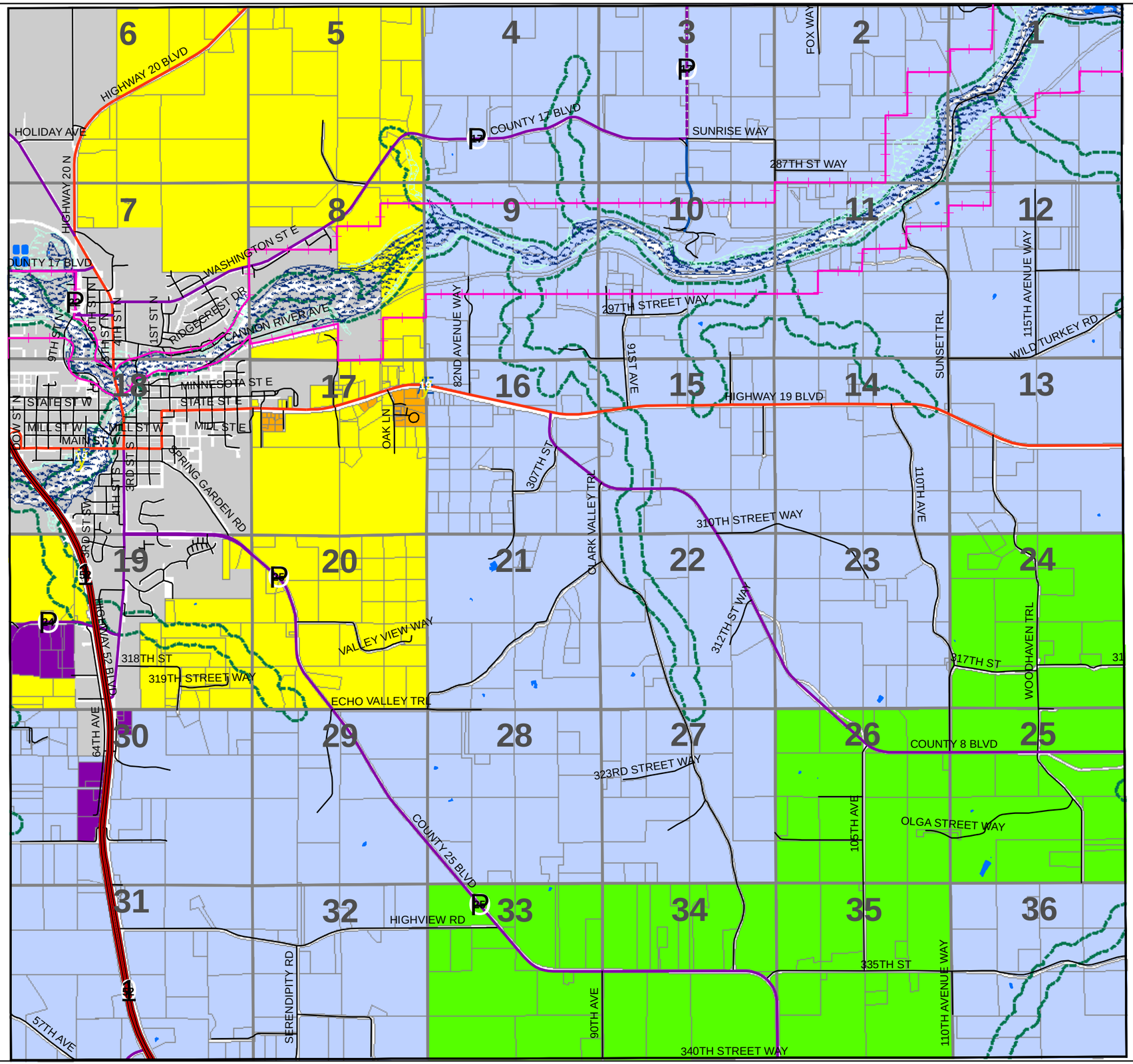
Appendix B: Goodhue County Zoning Districts – Cannon Falls and Leon Townships

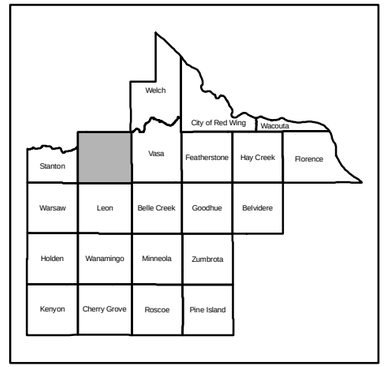
Appendix B

Goodhue County Zoning Districts

Cannon Falls

Township





Legend

- Lakes
- Section Lines
- Wild & Scenic
- Shoreland
- 100-year Flood
- 500-year Flood

Zoning Districts

Description

- A1 - Agricultural Protection
- A2 - Agricultural
- A3 - Urban Fringe
- B1 - General Business
- B2 - Highway Business
- CR - Commercial Recreation
- I - Industry
- R1 - Suburban Residential
- Within City Limits or No Data
- Township Boundaries

N W E S GOODHUE COUNTY LAND USE MANAGEMENT SURVEY GIS COPYRIGHT 2006

ABOUT THIS MAP:
This map is derived from a combination of data sets. The information on this map is only as accurate as the original source material.

FLOODPLAIN:
100 and 500-year flood inundation areas are provided via Q3 Flood Data produced for Flood Insurance Rate Maps by FEMA (Federal Emergency Management Agency).

WILD & SCENIC:
River layer encompassing wild and scenic river management districts created by the DNR and based on State PLS section boundary lines. Due to the fit of this shapefile to section lines, it is NOT considered to be legally accurate.

SHORELINE:
The shoreline coverage was developed by creating a 300ft buffer of protected streams and a 1000ft buffer from lakes. The protected streams coverage was developed in-house using 1980 DNR 24K stream data along with a 1996 map of Protected Waters and Wetlands provided by the DNR Division of Waters.

ZONING:
Zoning information was provided by the Goodhue County Land Use Management Office and was best fit to the existing digital parcel coverage.

DATA DISCLAIMER:
Goodhue County assumes NO liability for the accuracy or completeness of this map OR responsibility for any associated direct, indirect, or consequential damages that may result from its use or misuse.

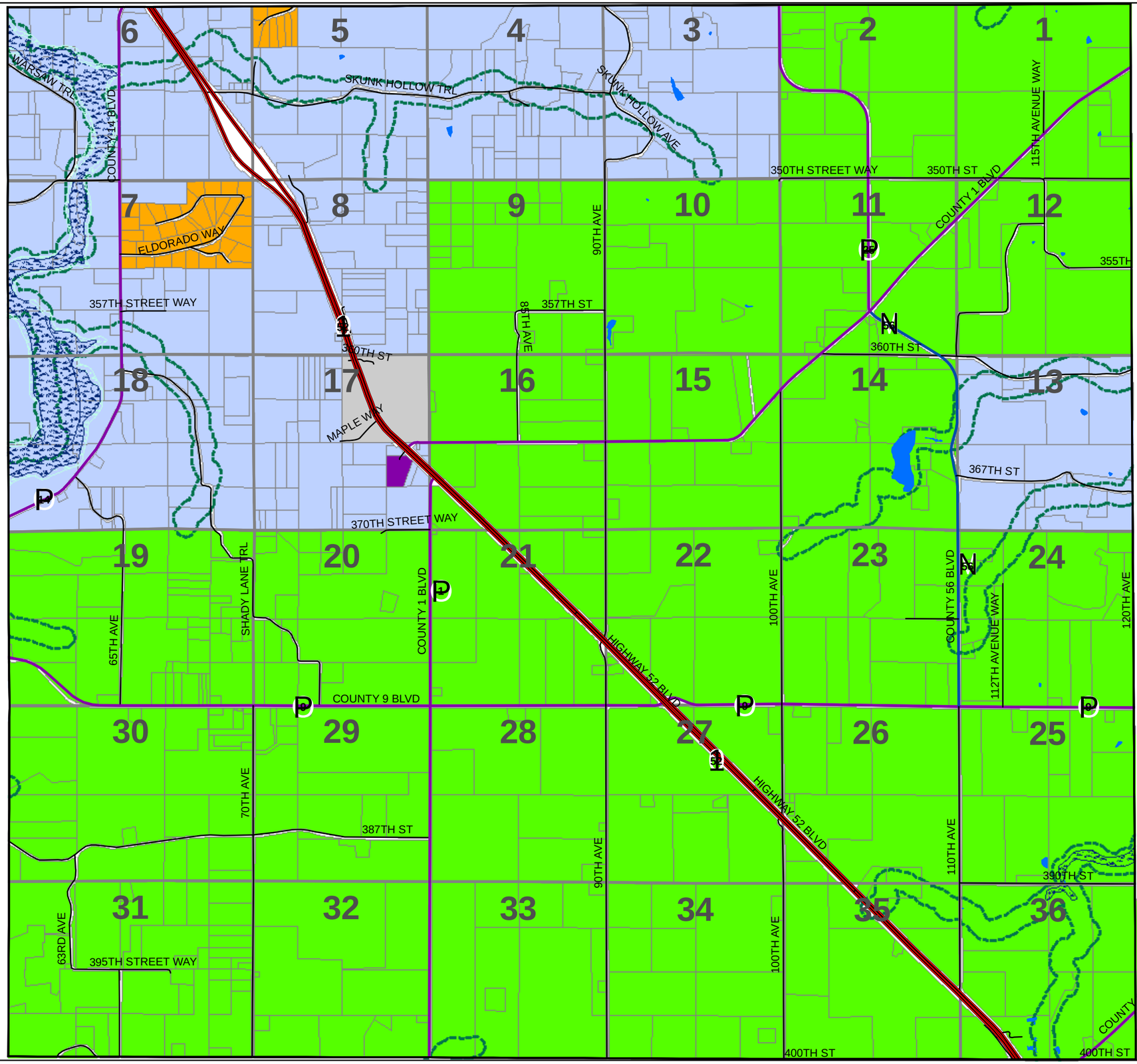
Map Created 9/25/2006

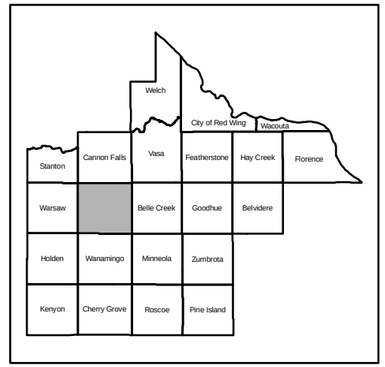
Appendix B

Goodhue County Zoning Districts

Leon

Township





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Map Created 9/25/2006

Appendix C: Stakeholder Questionnaire Results

Hwy 52 Safety & Access Study: Hadar to Cannon Falls

Questionnaire - RESULTS

Project Objective

- To address safety concerns and improvements to the regional and local road networks along the Hwy 52 corridor from Hadar to Cannon Falls.

Project Goal

- To establish priorities for infrastructure investments along the surrounding Hwy 52 corridor.

Study Area

Hwy 52 corridor (Hadar to Cannon Falls)

The Minnesota Department of Transportation and Goodhue County have begun a preliminary design of Hwy 52 from Hadar to the southern limits of Cannon Falls. The first step in the project will be to identify all the potential issues and key factors associated with the corridor improvements. The project team wants to hear from you on the best possible ways to provide these safety improvements along the corridor.

Please take a few minutes and let us know your thoughts – we welcome your comments and suggestions. If you need more space, please attach additional sheets.

A completed questionnaire may be mailed, faxed, or emailed to:

Jack Broz
HR Green Company
2550 University Avenue, Suite 400N
Saint Paul, MN 55114
Fax: 651.644.9446
Jbroz@hrgreen.com

1. Where do you usually get on and off Hwy 52?

Near 88 mile marker, my driveway.
County 1 6
At Hader 2
Highway 19 1
Highway 52 and County 1 to go north; Highway 52 and 100th to go south. 1
County 1 but many times #9 to Zumbrota and Rochester. 1
3759 Maple Way 1
Wagner Hill Way 2
County 9 2
County 9 and 100th Ave 1
At County Road 14 1
At 90th Avenue 1

2. Where do you usually cross Hwy 52?

Near 88 mile marker, my driveway. 1
County 1 2
County 9 6
At Hader 2
90th Avenue 1
Wagner Hill Way 2
Highway 19 and 24 1
County 1 and also County 9 1
County 9 and 100th Ave. 1
County Road 14 1
At 90th Ave. and C.R. 9 1

3. **When using Hwy 52 from your home, do you usually go?**

North toward Cannon Falls 13
South toward Rochester 1
Both equally 8

4. **How long is your typical trip on Hwy 52?**

Less than 5 miles 0
5-10 miles 6
10-25 miles 7
Over 25 miles 5
All equally 1

5. Do you have a field access that connects to Hwy 52? If so, where? On what portion of Hwy 52 do you need to drive farm equipment?

Yes, near 110th Street
County 1 to 90th Avenue
Yes, Through Wagner Hill Way
Yes, at 90th Avenue
Between 100th Ave. and County #9
No 10
N/A 2

Would you be interested in having this access changed right away to avoid the need to use Hwy 52?

1 No
2 Yes
For the sake of the farmers in the ara who need to cross the highway.

6. Do you have a driveway that connects to Hwy 52? If your driveway connected to a road other than Hwy 52, would you prefer this to be:

No 6
Street in front of your property 4
Street behind your property 0
Cross street that connects to Hwy 52 1
Yes - Prefer to go north towards Skunk Hollow
If our driveway can connect to Cty. 14, that would be best for us (via a frontage road or access going west on our property lines with no frontage road.
N/A 1

7. **If a new interchange is built, where would you prefer it to be located?**

At Hwy 1 6
At Hwy 9 10
At Hader 1

Somewhere between Hwy 1 and Hwy 9 1
Don't want an interchange 1

Why do you prefer this location?

Keep County 9 straight - County 1 is a mess already
Appears to be the logical location.
Logical location.
Used most.
Because our trips go north and it would add miles to a daily commute.
Closer access.
Makes more sense - less homes/businesses - interrupted
For access to Red Wing and to Urland Lutheran Church
Close to our place
Located closer to our place
Closer for me
Amount of Traffic. I think an overpass at County #1 is also needed.
Less interruption of homes
It is more accessible to farmers who need to cross the highway. The C.R. 1 option is at the edge of the area that is farmed intensively by those with large equipment. The area of C.R. 1 has many sinkholes.

8. Do you think there is a need for trails (biking or walking) in the project area? Where?

No 11
Not necessarily 1
No, I would prefer not to go biking or walking next to a highway. Cannon Falls already has a beautiful bike trail.
Yes 1
Yes, by Edgewood @ Salvon now 1
Snowmobile trail crossing 1
County Road 14 is already used by bikers as well as our road - 65th Ave. (between 9 & 14) 1

9. Do you ever bike or walk across or along Hwy 52? Where do you cross Hwy 52 when biking or walking?

No 16
No. 1 1
County 9 1
No, we do not cross Hwy 52 walking or biking. I have only seen 1 bicycle in the 12 years of living here riding down the highway. The only people walking were because of a car breakdown.

10. Do you think that Hwy 52 is a safe highway? If not, where are the most serious safety problems?

No 15
Yes, if people actually droe at the posted speed limit. Hwy. access points are safety issues going from 0 to 65 MPH with no acceleration lane. I used the acceleration lane at 57 & 52 today - Very nice!

Highway 9 2
No. 1 going north cannot see traffic coming from South
No. 1 and No. 9
At intersections
Speed
So many accesses
All intersections - especially at #9
County 1 and County 9
At all accesses
All over on weekends - It gets very busy.
Traffic is too fast.
In 1968 I had a serious accident with injuries crossing #9 east going west.
Intersections of #9/#1/#8
Speed, blind/limited vision to access highway

Yes .....
For the most part, yes. The biggest challenge is drivers on cell phones not paying attention.
Most Dangerous sites area CR 1, CR 9, and the Hiwy 57/CR 8 junctions.

11. What important historic features, natural features or tribal lands, if any, are in the project area? Where are they located approximately?

None..... 4
N/A
None known
Unaware, new to area
Obviously, there are streams to cross that must be protected.
A graveyard (unmarked) is present just north of 52 on 90th Ave. My driveway is the first one on the right. The trees at the beginning of my driveway mark the site.

12. What other concerns do you have about this project or issues do you think need to be addressed?

Concerns of emergency vehicles and safe crossings

The effect it would have if #1 would be re-routed through farmland and to 100th Avenue. Believe it would be more cost effective to have an overpass to connect #1 on both sides of Highway #52.

The effect of 100th Avenue between County #1 and 9 - safety of an active gravel pit.

In the interim, the exit lane for Wagner Hill on the southbound could be lengthened when turning east (gravel pit direction).
If access to 52 is restricted, the best solution would be to build a driveway out to Cty. 14 for us but it would require easements from the property owners behind us.
Give us a speed up lane going to the north as I have Rock & Lime Business. Use big trucks to haul.
Would be nice to have start-up lanes at #1 going north. Hard to get on North lane because of hill. Can't see cars coming. Also hard to cross over to get on #1 going east.
The traffic light at #1 is not very good. I do not think many people are using it. - I'm not!!
What kind/number/location of service roads will be available.
Concern over disrupting beauty of this area.

13. Would you like to be on an email distribution list? If so, please provide your email address.

fhalvorson@frontiernet.net
farmergr@frontiernet.net
Pauline@frontiernet.net
mnerison@hotmail.com
sjhome@frontiernet.net
jkdahms@mmm.com
macrob4@verizon.net
wbtheman@hotmail.com
Karen.m.barnes@hotmail.com
LJHernke@hotmail.com
mwgrasslands@frontiernet.net
cherylwelt@frontiernet.net

Please use additional sheets if you need additional space for comments

THANK YOU for completing this questionnaire

Appendix D: CapX2020 Location Maps

Sheetmap 7

Existing Transmission
(HDR, WI PSC)

- Substation
- 69 kV Transmission Line
- 115 kV Transmission Line
- 161 kV Transmission Line
- 345 kV Transmission Line

Route Corridors

- Proposed 1000' Route Corridor
- Preferred 345 kV Route
- Alternative 345 kV Route
- Route Option
- MN Scoping Route
- Preferred 161 kV Route
- Alternative 161 kV Route

Substation Siting Area

- Preferred
- Alternative

- Municipality

0 0.125 0.25
Miles

DATA SOURCES: MN DNR, WI DNR, BTS, USGS, BTS, WIPSC, LMIC
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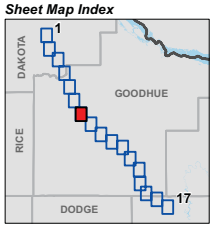
PDF LOCATION: P:\2007\07180025.00_CAPX\GIS\Maps\MatrixCalcs\Hwy52

Sheet Map Index



CapX2020

Hampton • Rochester • La Crosse 345 kV Transmission Project

Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI • Southern Minnesota Municipal Power Agency

Sheetmap 8

Existing Transmission
(HDR, WI PSC)

- Substation
- 69 kV Transmission Line
- 115 kV Transmission Line
- 161 kV Transmission Line
- 345 kV Transmission Line

Route Corridors

- Proposed 1000' Route Corridor
- Preferred 345 kV Route
- Alternative 345 kV Route
- Route Option
- MN Scoping Route
- Preferred 161 kV Route
- Alternative 161 kV Route

Substation Siting Area

- Preferred
- Alternative

- Municipality

0 0.125 0.25
Miles

DATA SOURCES: MN DNR, WI DNR, BTS, USGS, BTS, WIPSC, LMIC
FILENAME: HHwy52_Sheetmap
MXD LOCATION: P:\2007\07180025.00_CAPX\GIS\Layouts\MatrixCalcs\Hwy52
PDF LOCATION: P:\2007\07180025.00_CAPX\GIS\Maps\MatrixCalcs\Hwy52

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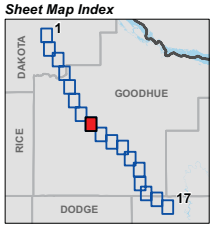
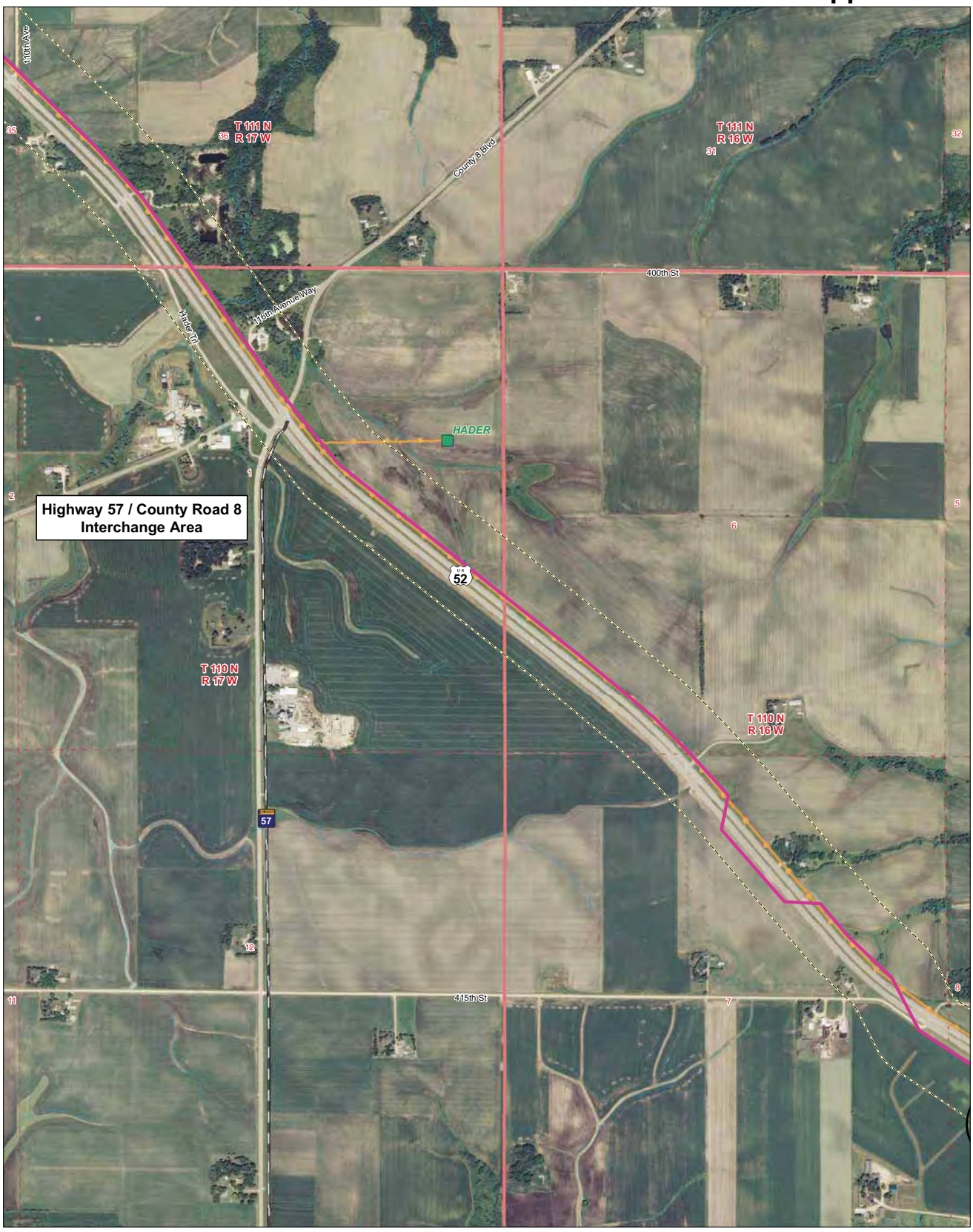


CapX2020

Hampton • Rochester • La Crosse 345 kV Transmission Project

Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI • Southern Minnesota Municipal Power Agency



Sheetmap 9

Existing Transmission
(HDR, WI PSC)

- Substation
- 69 kV Transmission Line
- 115 kV Transmission Line
- 161 kV Transmission Line
- 345 kV Transmission Line

Route Corridors

- Proposed 1000' Route Corridor
- Preferred 345 kV Route
- Alternative 345 kV Route
- Route Option
- MN Scoping Route
- Preferred 161 kV Route
- Alternative 161 kV Route

Substation Siting Area

- Preferred
- Alternative

- Municipality

0 0.125 0.25
Miles

DATA SOURCES: MN DNR, WI DNR, BTS, USGS, BTS, WIPSC, LMIC
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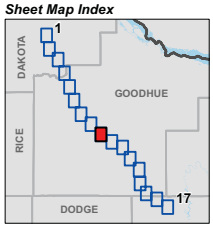
Sheet Map Index



CapX2020

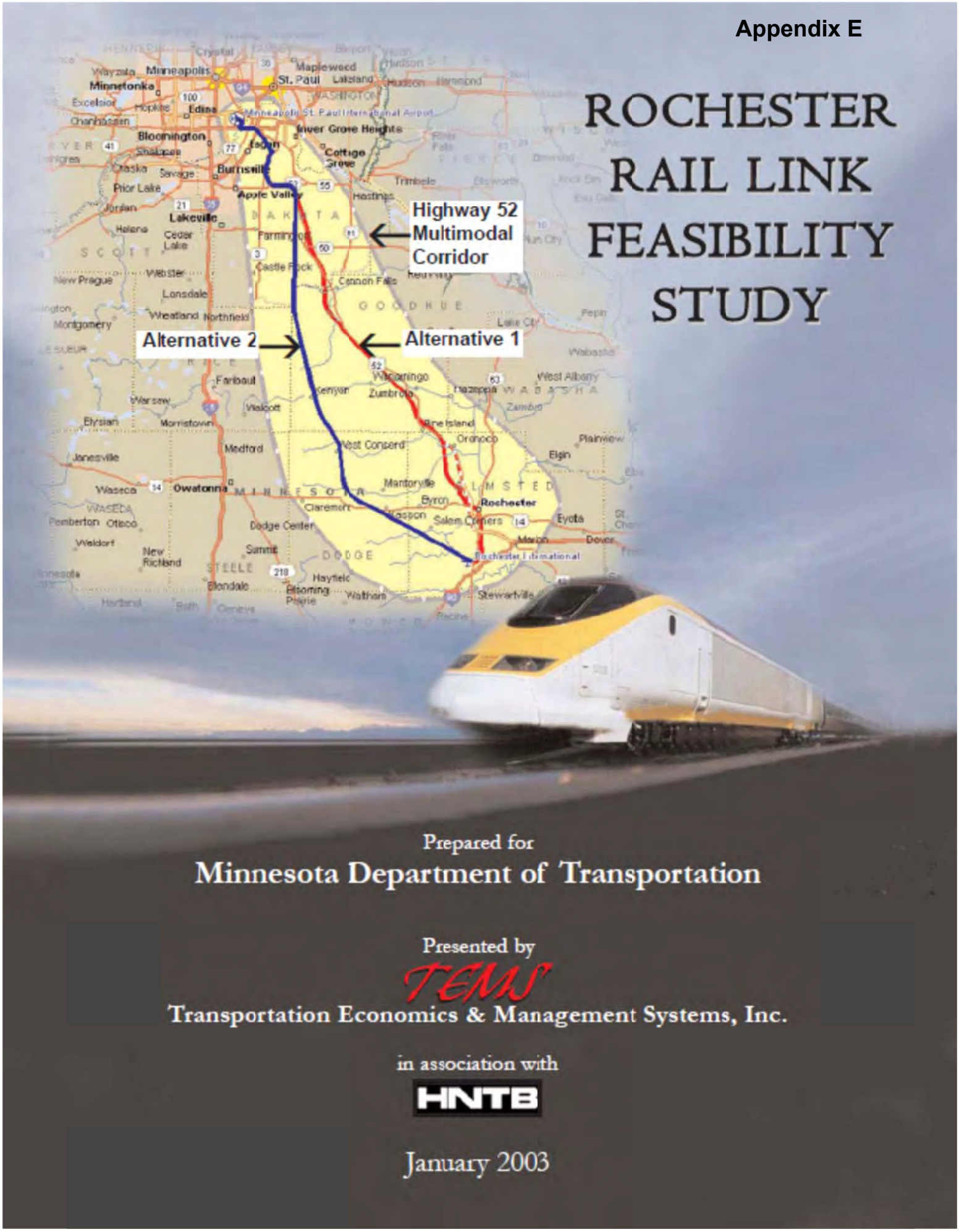
Hampton • Rochester • La Crosse 345 kV Transmission Project

Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI • Southern Minnesota Municipal Power Agency

Appendix E: Rochester Rail Link Alternatives

Appendix E

ROCHESTER RAIL LINK FEASIBILITY STUDY



Prepared for

Minnesota Department of Transportation

Presented by

TEMS

Transportation Economics & Management Systems, Inc.

in association with

HNTB

January 2003

Appendix C: Technical Memorandum: Traffic Counts

HRGreen

MEMO

To:	Heather Lukes PE
From:	Ryan Allers PE, PTOE Jordan Horejsi EIT
Subject:	US 52 Safety, Access, and Interchange Location Study - Traffic Counts
Date:	April 24th, 2012

Traffic Counts, Movements, and Delays

Traffic counts at CSAH 1 and CSAH 9 were conducted using Pneumatic Tube Counters laid out on the roadway. The counters were in place for 48 hours on every leg of CSAH 1 and the west leg of CSAH 9, and for 24 hours on the east leg of CSAH 9. Traffic counters were in place on CSAH 1 West from November 16th, 2010 at 3 pm to November 18th, 2010 at 3 pm. Traffic counters were in place on CSAH 9 East from November 16th, 2010 at 4 pm to November 17th, 2010 at 4 pm. Traffic counters were in place on CSAH 1 East and CSAH 9 West from December 7th, 2010 at 9 am to December 9th, 2010 at 11 am.

Using the data from the traffic counts, charts for ADT and Percentage Heavy Vehicles were created for each leg of CSAH 1 and CSAH 9. The charts and raw data are provided in the attached spreadsheets. The data for CSAH 9 east was collected over a one day period, instead of the desired 2 day period. When HR Green went to retrieve the counter, it was rolled up on the side of the road because someone had pulled it up. Therefore, data had only been collected for one day. Also, the data from 9:15 am to 3:45 pm only gave total number of vehicles, not the class of vehicle. Thus, the heavy vehicle percentage is lower than what would be expected.

Traffic movements and delays were recorded for CSAH 9 for peak hours in the AM (6 am to 9 am) and the PM (4 pm to 6 pm). See attached figure for a layout of the CSAH 9 and US 52 intersection. The number of left, through, and right turns were tallied and a table was created showing the number of each movement in 15 minutes blocks for both eastbound and westbound traffic.

Vehicle delays were recorded using a Jamar Count Board, such that it shows the time in the queue for each vehicle at the CSAH 9 and US 52 intersection. Using the raw data, a chart showing the average vehicle delay for each travel direction in the AM and the PM was created. The chart, the movement count tables, and the raw data are in the attached spreadsheets.

Project HWY 52

Howard R. Green Company

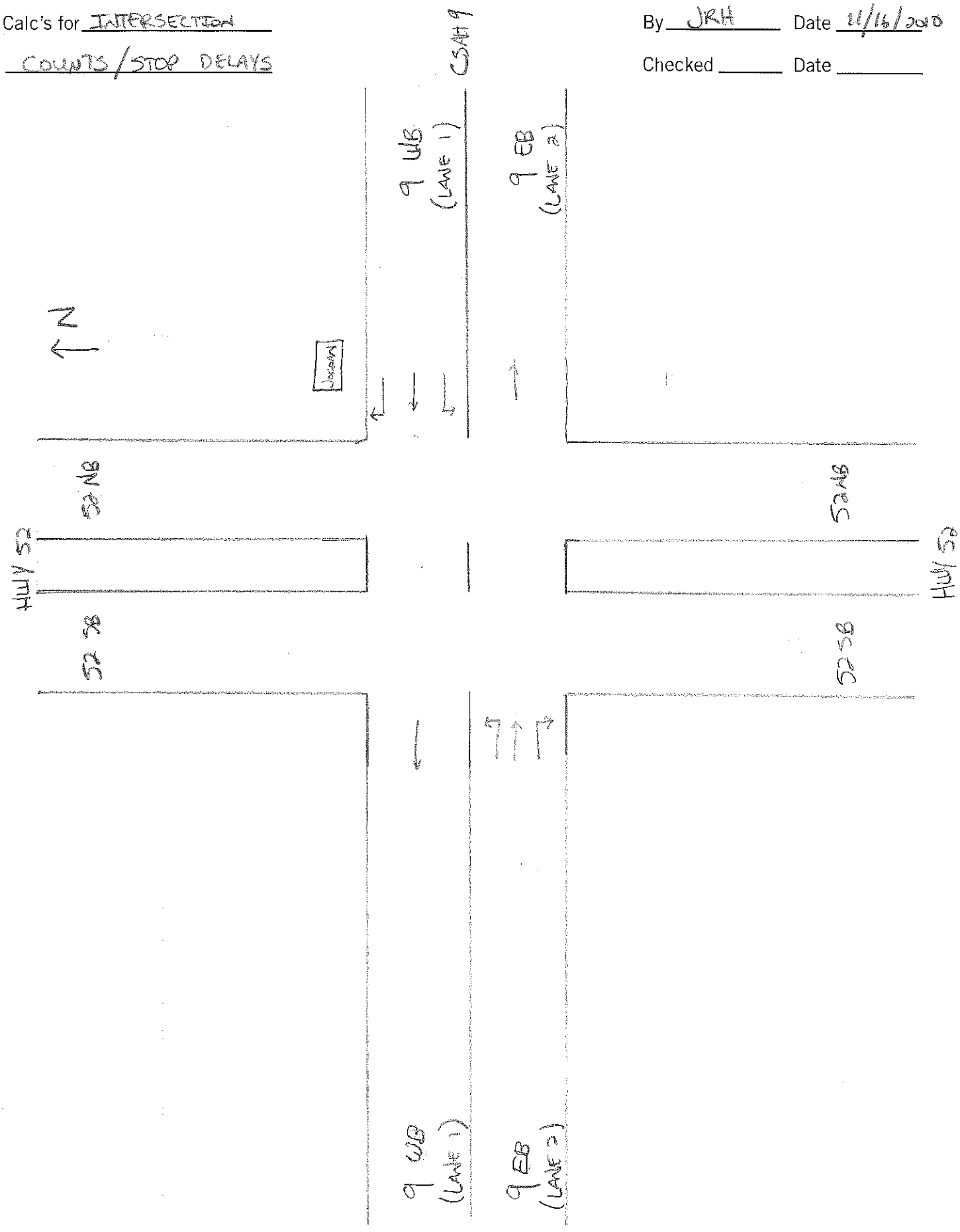
Sheet No. _____ of 12

Job No. 83247DJ

Calc's for INTERSECTION COUNTS / STOP DELAYS

By JRH Date 11/16/2010

Checked _____ Date _____



Appendix D: Technical Memorandum 3: Purpose and Need

Technical Memorandum 3

US 52 Safety, Access, and Interchange Location Study
Project Issues and Needs

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

August 21, 2012

Prepared For:

Prepared By:

HRGreen

HRG: 832470J

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Introduction

The purpose of this memorandum is to summarize the US 52 Safety, Access, and Interchange Location Study goals and objectives, as well as summarize key project issues and constraints as documented in Technical Memorandum 1 (May 4, 2012) and Technical Memorandum 2 (May 4 2012). This information will provide an outline for a Purpose and Need Statement for the project. The Purpose and Need Statement will be used as a framework to develop the initial screening criteria which will serve as the basis for the development and evaluation of improvement alternatives. It will also be incorporated into the environmental documentation process needed to meet the project's National Environmental Policy Act (NEPA) requirements.

The one-mile wide project area is a 10-mile corridor along US 52. It extends from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52, to south of County Road (CR) 50 (near Hader). The project area is shown Figure 1.

Issues and Constraints

In order to develop meaningful transportation solutions, it is important to understand the existing characteristics of the study area. As described in Technical Memorandum 2, a review of the existing planning context, development patterns and future land use plans, demographic trends, existing roadway network, traffic operations, and crash history was conducted to identify issues and constraints that could have an impact on the project development process. The key issues identified as part of this review are illustrated in Figure 2 and summarized below:

- *Land Use* – The majority of the land surrounding the US 52 Safety, Access and Interchange Location Study area is used for agriculture. There are also several residential uses and some commercial/industrial uses along the project segment of US 52. Many of the land uses along the corridor rely on US 52 to provide roadway access and mobility. The existing land uses within the study area are not expected to significantly change in the foreseeable future.
- *Demographic Trends* – Despite a moderate decline in population over the past two decades, the population of the study area is expected to grow by as much as 40 percent (830 people) by the year 2025. This population growth within the study area, in addition to the growth anticipated for the Minneapolis/St. Paul and Rochester Metropolitan areas, will have an impact on future travel demand along the project segment of US 52.
- *Existing Roadway Network* – The existing roadway network within the study area includes US 52 as well as a supporting roadway system of state, county, and township roads. US 52 is a four-lane divided facility which serves as the primary roadway connection between the Minneapolis/St. Paul and Rochester Metropolitan areas. Numerous at-grade access points and skewed intersections along US 52 detract from its ability to provide safe and reliable mobility. In addition, there is an uneven grade along southbound US 52 between CSAH 1 and CSAH 9, which causes sight line issues.
- *Traffic Operations* – Based on a planning level traffic operations analysis, it was determined that existing and forecast future traffic volumes along US 52 and the major cross streets are not capacity deficient (i.e., existing traffic volumes do not exceed roadway capacities). As a result roadway congestion is not a major concern within the study area.
- *Safety Analysis* – There are recognized safety issues along the project segment of US 52 with multiple locations exhibiting both high crash frequency and severity rates.

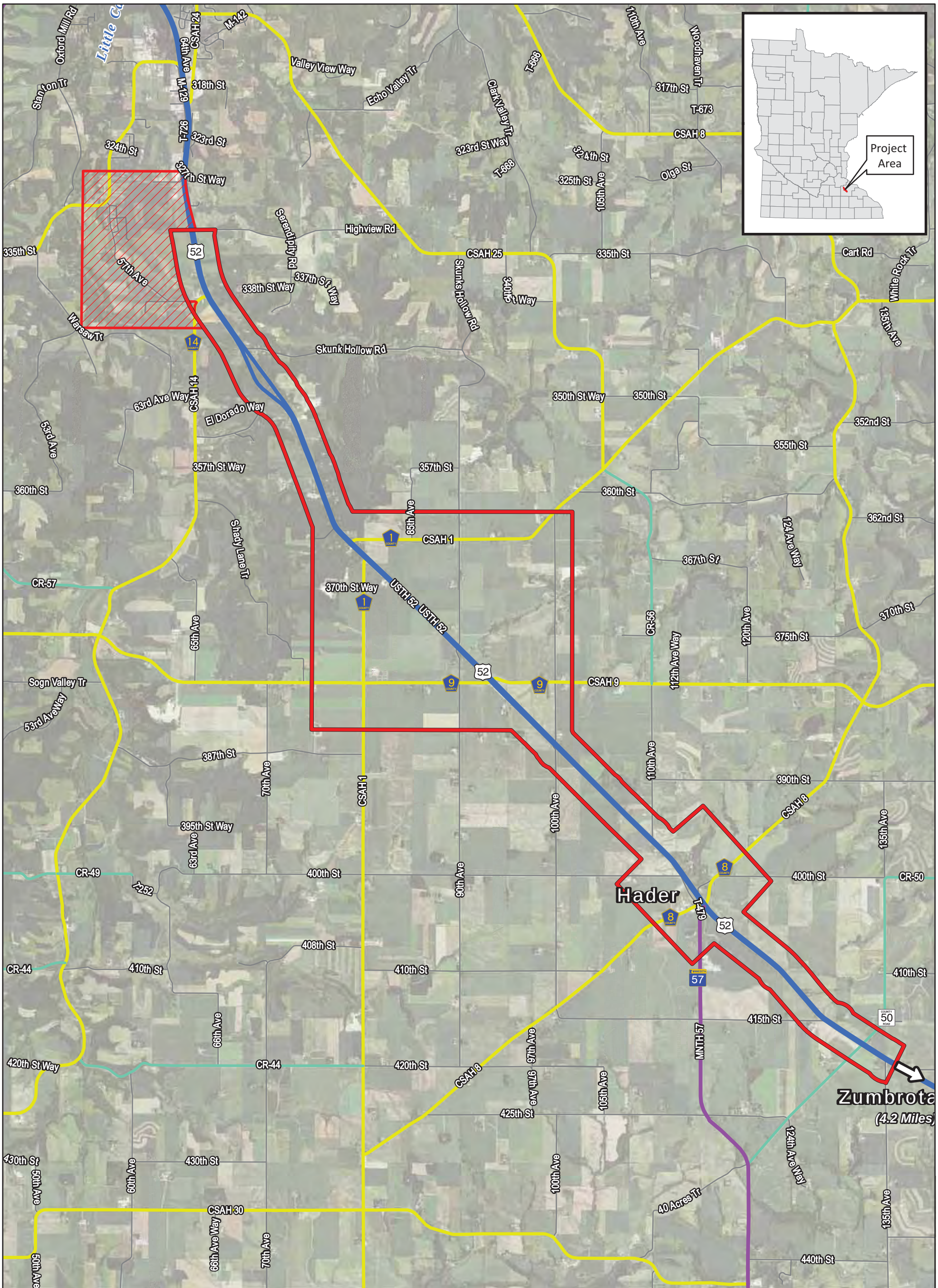

FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

N W E S

MINNESOTA DEPARTMENT OF TRANSPORTATION

HRGreen

FIGURE 2
ISSUES MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- Project Study Area
- CSAH 14 Subarea
- High Crash/Severity Intersection
- Potential Interchange Study Area
- Lakes/Ponds
- Streams
- Wetlands (NWI)
- 100-Year Floodplain
- 500-Year Floodplain
- Corporate Boundaries

XX,XXX 2009 Traffic Volume (AADT)
(YY,YYY) 2025 Forecast Traffic Volume (AADT)
X,XXX 2007 Traffic Volume (AADT)
(Y,YYY) 2025 Forecast Traffic Volume (AADT)

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

N W E S

MINNESOTA DEPARTMENT OF TRANSPORTATION

GOODHUE COUNTY

HRGreen

- *Social, Economic, and Environmental (SEE) Concerns* – Potential issues include farmland impacts, wetlands, Karst (sinkhole) conditions, stream crossings, woodlands, and socio-economic concerns associated with access management (travel time impacts, emergency vehicle impacts, etc.). Rare, threatened, and endangered species are also present in the study area. Potential cultural resources impacts are expected but unknown at this time. Potential SEE issues will be addressed in greater detail during the formal environmental documentation or Planning and Environmental Linkages (PEL) study for the proposed US 52 Safety, Access and Interchange Location Study improvements.

A. Study Goals and Objectives

Goals and objectives were established by the study's Project Management Team (PMT) to guide the proposed project and to ensure proposed recommendations address the critical transportation system issues and needs of the project. These goals and objectives provide the framework for the development of a Purpose and Need Statement. The project goals and objectives are summarized in Table 1 below. Refer to Technical Memorandum 1 for additional detail.

Table 1: Summary of Project Goals and Objectives

Goals	Objectives
Safety	• Reduce the crash rate and severity. • Improve roadway geometry and /or sight distance. • Reduce variations in traffic speed.
Access Management	• Eliminate at-grade along US 52. • Provide efficient replacement access.
Mobility and Connectivity	• Maintain/enhance mobility on US 52. • Provide efficient regional roadway connections. • Provide efficient local and neighborhood roadway connections. • Allow low impact intersection to remain.
Social, Economic, and Environmental (SEE)	• Minimize adverse impacts to the social environment. • Minimize impacts to the natural environment.
Cost Effectiveness	• Implement cost effective solutions. • Provide beneficial returns on investment. • Allow interim improvements.

B. Purpose and Need Framework

The following is a draft purpose and need framework for the proposed project. This framework entails a draft purpose statement, followed by several need statements, as well as a brief summary of the supporting data and analysis, as and documented in Technical Memorandum 2. It is intended to provide the analysis and documentation needed to support the project goals and objectives. The framework aids in establishing measureable criteria for the development and evaluation of improvement alternatives which will lead to the selection of recommended alternatives. The purpose and need statements will be continually reviewed, expanded, and revised as part of the project development and environmental documentation process.

Purpose

The purpose of the project is to identify recommended locations for US 52 transportation system improvements that improve safety and access, enhance regional connectivity and mobility, and respect the environmental context of the area.

Needs

Improve Safety

One of the primary driving factors behind this project is the urgent need to improve safety along the project segment of US 52. As documented in Technical Memorandum 2, safety improvements along US 52 and intersecting roadways within the study area are needed. According to the most recent crash data from MnDOT District 6, there were a total of 311 crashes within the study area from 2006 through 2011. Of these six involved fatalities, nine involved incapacitating injuries, 92 involved personal injury or possible injury, and 204 involved property damage only. Of the six fatalities recorded, two occurred within the last year (2011). The recent fatal crashes within the project area underscore the immediate need for safety improvements within the area.

A corridor crash analysis was performed to evaluate the potential safety problems within the study area. Based on this analysis one intersection and two segments along US 52 within the study area were identified as safety deficient, as they exhibit a high crash frequency and a high crash severity rate. These include the following:

- US 52 intersection with CSAH 9
- US 52 segment from CSAH 9 to CSAH 8/TH 57
- US 52 segment from CSAH 8/TH 57 to the southern terminus of the study area (CR 50)

In addition, although not a high crash frequency location, the intersection of US 52 and TH 57/CSAH 8 was identified as a high crash severity location and therefore merits consideration for future safety improvements.

Improve Access Management

Management of roadway access, both in terms of cross-street spacing and driveway placement, is a critical means of preserving and enhancing a roadway's functional classification and its efficient operation. Providing access management in some form, whether through grade-separated crossings, frontage and backage roads or right-in/right-out access, reduces the number of vehicle conflict points resulting in improved safety.

Both MnDOT and Goodhue County have established access management policies and guidelines in order to ensure sound access management on their respective roadways. According to *MnDOT's Access Management Manual (January 2, 2008)* access along the study segment of US 52 (High-Priority Interregional Corridor) should be permitted by interchange only, with no traffic signals or private access points. Further, primary full movement intersections (e.g., CSAH 1 and CSAH 9) should be spaced at a minimum distance of one-mile apart, to ensure safe and efficient mobility. Secondary or partial movement intersections should be spaced at 1/2-mile. The supporting access management guidelines for Goodhue County are presented in the *Goodhue County Transportation Plan (2004),* which recognizes MnDOT's access management policy for US 52 within the study area. These policies and guidelines support the previously established vision to convert US 52 to a fully access controlled (i.e., access by interchange only) freeway facility.

The study segment of US 52 does not currently meet MnDOT's access spacing guidelines due to multiple at-grade intersections and direct access driveways. As shown in Table 2, there are currently 43 at-grade access points along the project segment of US 52. This includes intersections with public roadways

(county highways, township roads, etc.), residential driveways, farm and field accesses, and commercial/industrial entrances all with direct US 52 highway access. In addition, the off-set intersection at CSAH 1 does not meet the intersection spacing guidelines (1-mile) as the north and south junctions are spaced at approximately 1,200 feet apart.

Table 2: US 52 Access Point Inventory

Type	Number of Accesses
Public Roadway	14
Residential/Farm	18
Private (Non-Residential)	3
Field/Agricultural	8
TOTAL	**43**

Source: Desktop Review of Aerial Photography

The high number of access points along US 52 detracts from its ability to provide safe and reliable mobility. Consolidation and/or closure of access points should be considered as part of any improvement project, in order to ensure the safe and efficient operations of this corridor. However, any access modifications must be accompanied by related regional and local roadway network improvements in order to replace any access points which are closed, and to ensure an adequate level of regional and local mobility.

Improve System Connectivity and Mobility

The existing roadway network within the study area is served by US 52, as well as supporting regional and local roadway networks. US 52 is classified by MnDOT as a High Priority IRC and a Rural Principal Arterial Expressway (1A-F), and as such is intended to provide a high degree of mobility. Currently, US 52 is a high-speed, access controlled expressway (four-lane divided) with several at-grade intersections and access points throughout the project area (see Figure 1), which have the potential to limit mobility on this route.

As discussed Technical Memorandum 2, several previous planning studies have established goals, set a vision, and identified proposed improvements along the project segment of US 52. The following is a summary of the relevant outcomes from the key planning efforts related to the corridor;

- *Statewide IRC Study (1999)* – As part of this study, a performance goal of 61 to 65 miles per hour was established for the project segment of US 52 (High Priority IRC Performance Goal).
- *Highway 52 Corridor Study and Management Plan (2000)* – This effort concluded that US 52 is at-risk of not meeting its performance goals (High Priority IRC) if improvements for mobility and connectivity are not made. This study also established a long-term vision for a fully access controlled US 52, with no at-grade intersections, in order to maintain and enhance mobility and connectivity.
- *Highway 52 IRC Management Plan (2002)* – This study identified the need for an interchange on US 52 within the vicinity of CSAH 1 and/or CSAH 9, in order to improve safety and maintain a high level of mobility. The study also recommended closure of all at-grade access points along US 52.

As safety, access management, and mobility improvements along US 52 occur, the supporting roadway network will become increasingly important in terms of providing an adequate level of local and regional connectivity. The primary regional roadways within the study area are CSAH 1, CSAH 9, and CSAH 14, all of which are Goodhue County routes. These routes provide regional connectivity between the study area and the surrounding county and state roadway networks. In addition, these routes provide

accessibility to regional activity centers such as Cannon Falls and Wanamingo for the individual properties within the study area.

Given the critical importance of these routes, any improvements to US 52 need to be planned and designed in a manner which provides efficient regional connections and replacement access for any county road, township road, or private driveway modifications. This includes ensuring adequate local roadway connections to the City of Cannon Falls, Hader (unincorporated community), and Wanamingo, as well as connections to any existing and/or planned interchanges along US 52 (including the planned interchange at CSAH 24 in Cannon Falls) within the project area, in order to replace any access points along US 52 which are closed.

Respect Social, Economic, and Environmental Context

As improvements to address the safety, access, and mobility needs along the study segment of US 52 are evaluated, there is a need to give consideration to environmental and regulatory constraints which may be present. Potential improvements need to be designed to minimize or mitigate impacts to the social, economic, and natural environments. Potential social and economic considerations include adverse travel time resulting from transportation system modifications, residential or commercial relocations, and property acquisition. Natural environment considerations include minimizing adverse impacts to areas of special concern such as wetlands, streams, and floodplains, woodlands, etc., in order to protect the natural environmental and to ensure compliance with state and federal regulations.

Provide a Cost Effective Solution

As improvement alternatives are developed and evaluated, there is a need to consider overall cost effectiveness, in recognition of the limited resources available for project implementation. Proposed improvements should seek to maximize the cost effectiveness of the overall system vision, as well as its flexibility to be implemented over time. This includes consideration for both capital and operating costs.

In addition, to recognizing fiscal constraints, planned improvements must consider the potential trade-offs in cost effectiveness and return on investment between providing improved access to impacted properties versus property acquisition.

C. PMT Approval of Project Issues and Needs

Technical Memorandum No. 3 – Project Issues and Needs, was presented to the PMT on January 6, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued for PMT approval on March 16, 2012. Final approval of Technical Memorandum 3 was received on August 21, 2012.

Appendix E: Technical Memorandum 4: Alternative Development and Evaluation

Technical Memorandum 4

US 52 Safety, Access, and Interchange Location Study
Alternative Development and Evaluation

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

September 18, 2012

Prepared For:

Prepared By:

HRGreen

HRG: 832470J

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Introduction

The purpose of this memorandum is to document the alternative evaluation process for the US 52 Safety, Access, and Interchange Location Study. The evaluation of alternatives establishes a sound foundation for further analysis and provides decision makers and governmental review agencies with the rationale for eliminating alternatives. It also helps demonstrate that the locally supported alternative provides the best solution to issues and needs identified for the project.

The one-mile wide project area is a 10-mile corridor along US 52. It extends from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52, to south of County Road (CR) 50 (near Hader). The project study area is shown Figure 1.

A. Study Subareas

In order to facilitate a meaningful evaluation of alternatives, the study area was divided into seven subareas based on the logical termini and independent utility of potential improvements. The project subareas are described below and illustrated in Figure 2.

- Subarea 1: The area extending north of the existing US 52/CSAH 14 intersection to the planned CSAH 24 interchange project.
- Subarea 2: The southbound lanes of the segment of US 52, from Highview Road to approximately CSAH 1.
- Subarea 3: The northbound lanes of the segment of US 52, from approximately CSAH 1 to Highview Road.
- Subarea 4: The general area surrounding the US 52/CSAH 1 and US 52/CSAH 9, including the mainline and the local and regional roadway systems.
- Subarea 5: The southbound lanes of the segment of US 52, from approximately CSAH 9 to the Hader area.
- Subarea 6: The northbound lanes of US 52, from approximately Hader to CSAH 9.
- Subarea 7: The area generally surrounding the US 52/TH 57/CSAH 8 intersection and the segment of US 52 from Hader to the southern limit of the project area (just south of CR 50).

The remainder of this memorandum focuses on Subarea 1 and Subarea 4 for alternative development and evaluation. These two subareas were chosen by the Project Management Team (PMT) as priority areas to address the most critical safety needs along the corridor and to fully leverage the improvements programmed as part of the planned interchange at CSAH 24 and US 52 in Cannon Falls.

B. Evaluation Criteria

The development and evaluation of alternatives was an iterative process that began with preliminary goals and objectives (presented in Technical Memorandum 1). These goals and objectives were established early in the project to provide a basis for the development of alternatives, and were further refined as part of the preliminary purpose and need statement (see Technical Memorandum 3).

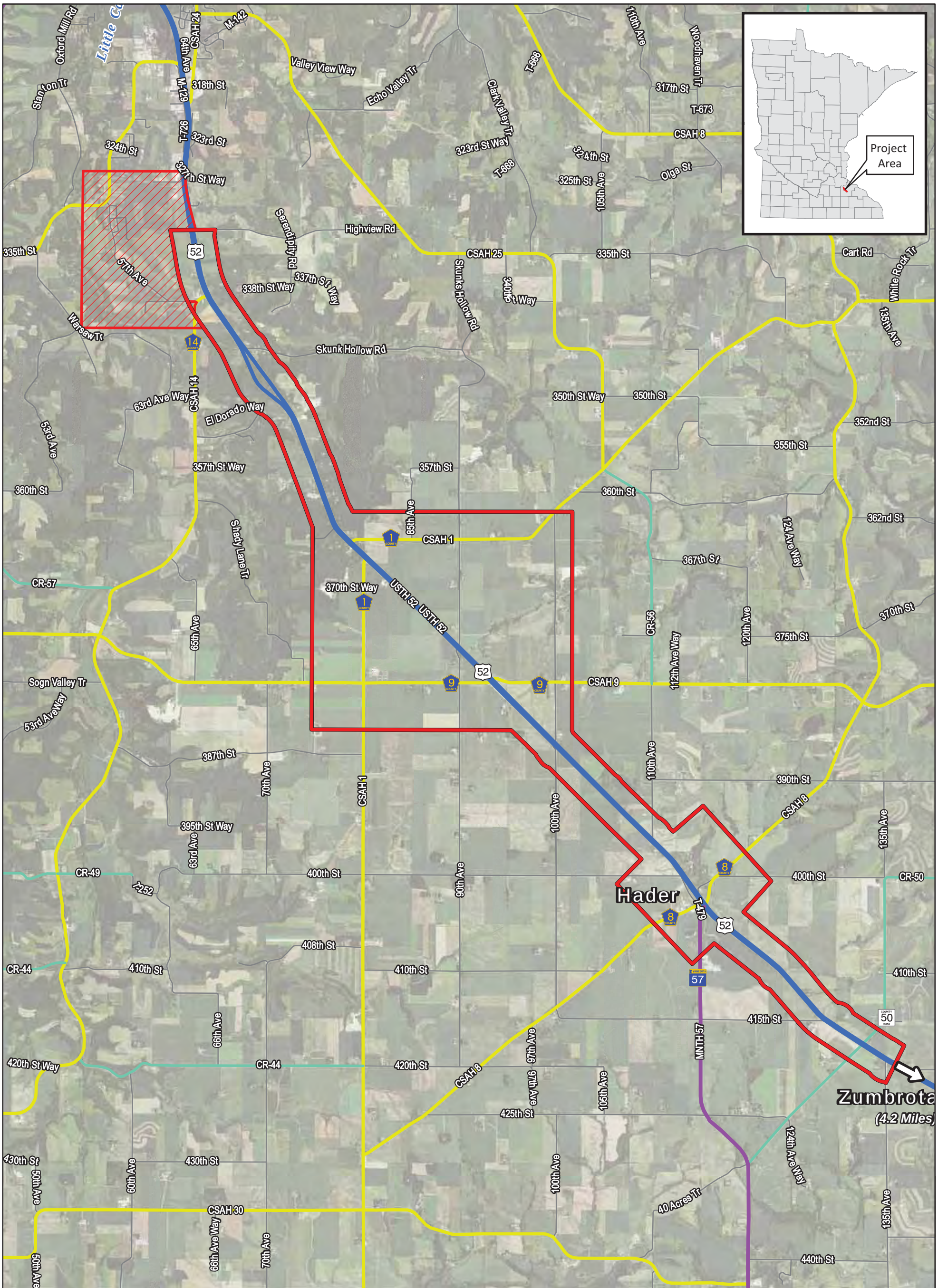


FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

N W E S

MINNESOTA DEPARTMENT OF TRANSPORTATION

HRGreen

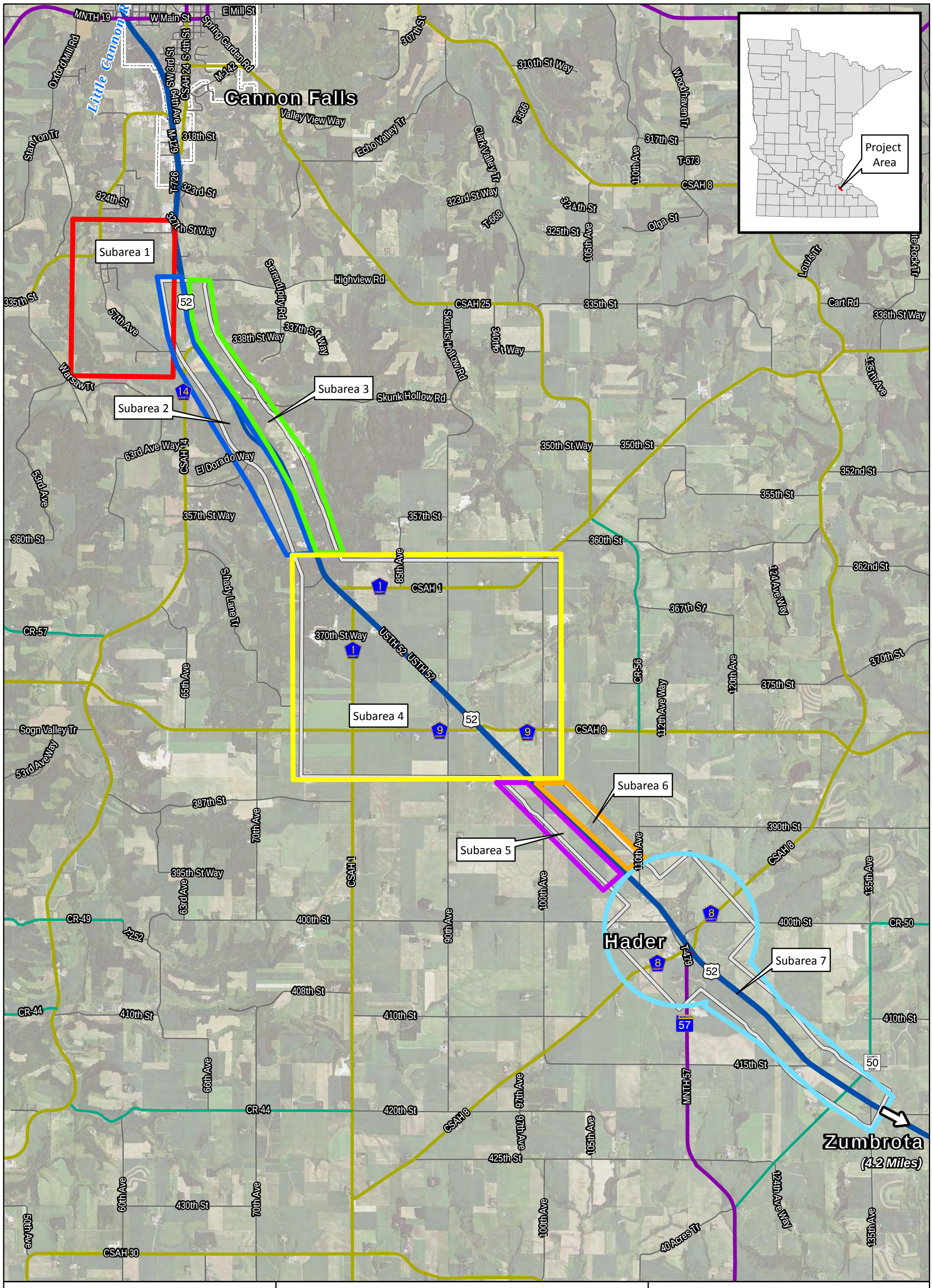


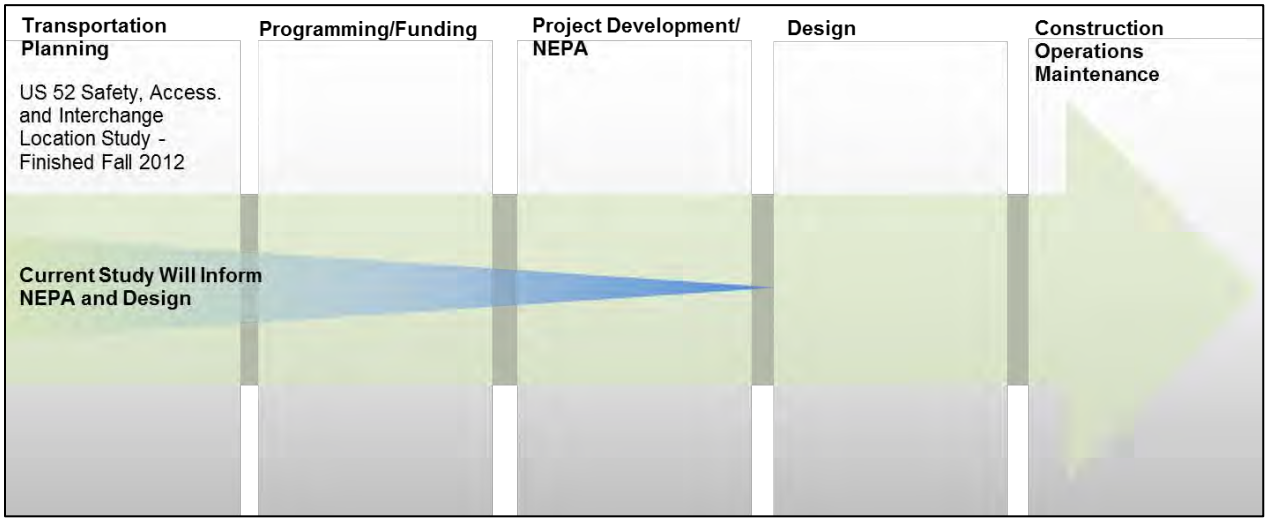
FIGURE 2
PROJECT SUBAREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

For each of the project goals, measures of effectiveness were developed as part of the alternative evaluation process. The objective of this evaluation is to eliminate alternatives that do not meet the overall project goals and the transportation needs in the study area, ultimately resulting in the selection of the locally supported alternative. This evaluation is intended to narrow the range of alternatives for Subarea 1 and Subarea 4, in order to guide future planning. The final build alternative(s) will be determined as part of a future preliminary design/National Environmental Policy Act (NEPA) process, which will proceed once project funding is secured (see Figure 3). The following is a summary of the project goals and corresponding measures of effectiveness used in the evaluation:

Figure 3: Project Development Process



I. Safety

This goal acknowledges the need to correct the critical safety issues that currently exist along the project segment of US 52.

Measures of effectiveness:

- Reduce the crash rate/severity, particularly at high crash locations.
- Improve roadway geometry/sight distance.
- Reduce variations in traffic speed caused by merging/diverging traffic.

II. Access Management

This goal reflects the direct relationship between access management, safety, and mobility and seeks to implement MnDOT's vision for US 52 as a High Priority Interregional Corridor (IRC).

Measures of effectiveness:

- Close at-grade intersections and access points along US 52.
- Provide replacement access to affected properties and local roadways.

III. Mobility and Connectivity

This goal reflects the need to provide safe and efficient roadway connections between major activity centers along US 52 and within the local and regional transportation systems, in accordance with the *US 52 Corridor Management and Safety Plan (2002)* and the *Goodhue County Transportation Plan (2004)*.

Measures of effectiveness:

- Maintain or improve mobility on US 52, in accordance with IRC goals and previous studies.
- Provide efficient regional roadway connections that ensure functionality, mobility, accessibility, and connectivity within the regional transportation system and to US 52.
- Provide efficient local and neighborhood mobility, accessibility, and connectivity to the regional transportation systems.
- Allow improvements at low volume/low speed intersections which will likely remain for many years.

IV. Social, Economic, and Environmental (SEE)

This goal acknowledges that the proposed improvements should support and enhance the transportation system, while minimizing impacts to important social, economic, and environmental elements as well as consider regulatory requirements.

Measures of effectiveness:

- *Minimize social and economic impacts*
  - Number of residential relocations (number of units).
  - Number of residential properties impacted, but not relocated (number of units).
  - Number of properties where right-of-way acquisition is needed (number of units).
  - Right-of-way acquisition (acres).
  - Farmland impacted (acres).
- *Natural Environment Impacts*
  - Wetland impacts (acres).
  - Floodplain impacts (acres).
  - Woodland impacts (acres).
  - Stream impacts (number of crossings).
  - Sinkhole areas (number of parcels).

V. Cost Effectiveness

This goal reflects the limited overall financial resources that are available to fund transportation improvements over time. Improvements need to be cost effective and able to be staged over time within interim and long-term project development processes.

Measures of effectiveness:

- Provide a relatively cost effective solution (as compared to the other alternatives).
- Provide a beneficial return on investment.
- Allow interim improvements in accordance with the ultimate project.

C. Alternative Development

Concept alternatives were developed for Subarea 1 and Subarea 4 in order to respond to the overall study goals, while considering future travel patterns, physical site limitations and impacts, connections to local systems, and fit within the regional system. The concept alternatives for Subarea 1 and Subarea 4 are summarized below.

Subarea 1 Alternatives (CSAH 14 Connection)

A total of four concept alternatives were developed for Subarea 1. Based on the preliminary purpose and need statement for the project (see Technical Memorandum 3) and PMT direction, the primary purpose of the Subarea 1 alternative develop process was to identify the improvement alternatives which would best accomplish the study goals by providing a connection from the existing CSAH 14/ US 52 intersection on the south to the planned interchange at CSAH 24 in Cannon Falls. For each alternative the CSAH 14 access at US 52 would be closed. The following is a summary or the Subarea 1 alternatives. Refer to Appendix A for a more detailed illustration.

- Alternative 1.A: This alternative upgrades the existing 57th Avenue alignment, beginning in the vicinity of the existing intersection with CSAH 14 on the south and ending at the CSAH 24 intersection on the north.
- Alternative 1.B.1: This alternative includes constructing a new alignment from the existing intersection between CSAH 14 and 57th Avenue, extending to the terminus of the backage road (approximately Highview Road) planned as part of the CSAH 24 interchange project in Cannon Falls. This alternative passes to the west of and across an existing ridgeline located to north of 340th Street Way in the area between the existing CSAH 14 alignment and Highview Road.
- Alternative 1.B.2: Like alternative 1.B.1, this alternative is a new CSAH 14 alignment connecting to the planned backage road in Cannon Falls and passing to the west if the existing ridgeline. The difference between alternatives 1.B.1 and 1.B.2 is the location of the tie-in point to existing CSAH 14. Unlike Alternative 1.B.1, Alternative 1.B.2 crosses 57th Avenue west of the existing CSAH 14 and 57th Avenue intersection and connects to the existing CSAH 14 alignment further south.
- Alternative 1.C: This alternative includes a new alignment, parallel to US 52. This alternative extends from the existing intersection between CSAH 14 and 57th Avenue to the planned backage road in Cannon Falls (approximately Highview Road).

Subarea 4 Alternatives (CSAH 1/9 Interchange Location)

A total of seven concept alternatives were developed for Subarea 4. Based on the preliminary purpose and need statement for the project (see Technical Memorandum 3) and PMT direction, the primary purpose of the alternative development process for Subarea 4 was to identify a location for an interchange within the vicinity of CSAH 1 and CSAH 9, which would best accomplish the study goals. The following is a summary or the Subarea 4 alternatives. Refer to Appendix A for detailed layouts for each alternative.

- Alternative 4.A: Partial cloverleaf interchange in the vicinity of the existing intersection of US 52 and CSAH 1.
- Alternative 4.B: Diamond interchange in the vicinity of the existing intersection of US 52 and CSAH 1.
- Alternative 4.C.1: Diamond interchange between CSAH 1 and CSAH 9.
- Alternative 4.C.2: Diamond interchange between CSAH 1 and CSAH 9 with a frontage road connection to CSAH 9 on the east side of US 52.
- Alternative 4.D.1: Split diamond interchange at CSAH 1 and CSAH 9 and use the existing roadway network.
- Alternative 4.D.2: Split diamond interchange at CSAH 1 and CSAH 9 with frontage roads in between.
- Alternative 4.E: Diamond interchange in the vicinity of the existing intersection of US 52 and CSAH 9.

D. Evaluation of Alternatives

Using the measures of effectiveness described in *Section B: Evaluation Criteria*, the PMT collaborated on the evaluation process to rate subarea alternatives according to their ability to achieve the project goals and objectives. This comprehensive evaluation process resulted in the selection of a set of locally supported solutions for further study. This included a recommended alignment for the proposed CSAH 14 extension in Subarea 12 and a recommended interchange location in Subarea 4. The following is a summary of the evaluation the alternatives for Subarea 1 and Subarea 4, plus a description of how they were rated against the project goals and the key differentiating factors. This summary represents an averaging of the ratings for the individual measures of effectiveness within each goal. Note that while not included in the summary below, the actual evaluation process also considered a No-Build Alternative for each subarea. Refer to Appendix B for a detailed evaluation matrix which shows the ratings for each objective.

For the purpose of this summary, each alternative was rated using the system below:

- Green (+): Alternative meets the goal.
- Yellow (0): Alternative is neutral or results in no impact.
- Red (-): Alternative does not meet the goal or results in a negative impact.

Subarea 1 Evaluation Summary (CSAH 14 Connection)

- Alternative 1.A: This alternative best accomplishes the SEE and cost effectiveness goals as the use of the existing 57th Avenue alignment would minimize environmental impacts and construction costs. However, is did not score well under the safety goal as it adds traffic to the existing 57th Avenue which currently provides access to a number of residential properties.
- Alternatives 1.B.1 and 1.B.2: These alternatives both generally meet the majority of the project goals and scored well under the safety goal as both close an at-grade intersection (CSAH 14) on US 52 and provide a new and continuous alignment built to accepted engineering standards. However, Alternatives 1.B.1 and 1.B.2 have lower cost effectiveness than the other alternatives as the new alignments cross challenging topography.
- Alternative 1.C: This alternative meets the project's goals and scored well in safety as it closes an at-grade intersection (CSAH 14) on US 52 and provides a new and continuous alignment built to accepted engineering standards. It also scored well in access management as it provides replacement access for existing residential properties which currently have direct access to US 52. Alternative 1.C scored well in cost effectiveness due to its relatively low estimated cost (as compared to other Subarea 1 alternatives) and its ability to leverage utility investments planned as part of the CSAH 24 interchange project in Cannon Falls.

A summary of the Subarea 1 alternative evaluation process is presented Table 1. Refer to Appendix B for a detailed evaluation matrix.

Table 1: Subarea 1 Evaluation Summary

		Safety	Access Management	Mobility and Connectivity	Social, Economic, and Environmental	Cost Effectiveness
1.A	Improved 57th Ave	-	0	0	+	+
1.B.1	Backage Road – west	+	0	0	0	0
1.B.2	Backage Road - west with south connection	+	0	0	0	0
1.C	Backage Road – Parallel to US 52	+	+	+	0	+

Subarea 4 Evaluation Summary (CSAH 1/9 Interchange Location)

- Alternative 4.A and 4.B: As these alternatives share a common location (interchange at CSAH 1), both received similar ratings and were seen to generally meet the project goals. However, an interchange at CSAH 1 creates a circuitous route for local and regional traffic as a result of the need to reroute CSAH 9, thereby limiting connectivity and mobility. These alternatives also require the replacement of several access points in an area of challenging topography, affecting their ability to accomplish the access management and cost effectiveness goals. Both alternatives generally accomplish the safety goals with the construction of a grade separated interchange, but the realignment of CSAH 9 (additional left turns), and the partial access at CSAH 9 and US 52 (right-in/right-out), makes these alternatives relatively less beneficial to safety than some of the alternative interchange locations (4.D and 4.E).
- Alternative 4.C.1: While this alternative accomplishes the safety goal, it received a low score under the access management goal due to its inability to close high volume, at-grade access points along US 52. It also has a relatively high farmland and right-of-way acquisition impacts (as compared to other Subarea 4 alternatives).
- Alternative 4.C.2: This alternative provides additional safety benefits as compared to Alternative 4.C.1 as the proposed frontage road eliminates the circuitous rerouting of CSAH 9 traffic. The frontage road also provides an efficient replacement for closed access points, thereby improving access management over Alternative 4.C.1.
- Alternative 4.D.1 and 4.D.2: Both alternatives provide clear safety benefits by replacing the at-grade access at both CSAH 1 and CSAH 9 with grade separated interchange access. They also scored relatively high in mobility and connectivity as the split diamond would minimize adverse travel time impacts. While both alternatives generally achieve the access management goal, Alternative 4.D.2 ranks better as the proposed frontage roads provide an efficient replacement access. Both alternatives have relatively high right-of-way and farmland impacts and therefore do not rank well under the SEE and cost effectiveness goals.
- Alternative 4.E: This alternative achieves the study goals with clear benefits in safety, access management, SEE considerations, and cost effectiveness. The grade-separated interchange improves safety, the proposed access closures are easily replaced, and there is minimal impact to mobility and connectivity. This alternative also has the fewest SEE impacts and highest cost effectiveness as compared to the other Subarea 4 alternatives.

A summary of the Subarea 4 alternative evaluation process is presented in Table 2. Refer to Appendix B for a detailed evaluation matrix.

Table 2: Subarea 4 Evaluation Summary

		Safety	Access Management	Mobility and Connectivity	Social, Economic, and Environmental	Cost Effectiveness
4.A	Parclo AB Interchange at CSAH 1	**0**	**0**	**0**	**0**	**-**
4.B	Diamond Interchange at CSAH 1	**0**	**0**	**0**	**0**	**-**
4.C.1	Diamond Interchange between CSAH 1 & CSAH 9	**0**	**-**	**0**	**0**	**0**
4.C.2	Diamond Interchange between CSAH 1 & CSAH 9 w/Frontage Road connection to CSAH 9	**+**	**0**	**0**	**0**	**0**
4.D.1	Split Diamond Interchange at CSAH 1 & CSAH 9 w/existing roadway network.	**+**	**0**	**+**	**-**	**-**
4.D.2	Split Diamond Interchange at CSAH 1 & CSAH 9 w/Frontage Road connections	**+**	**+**	**+**	**-**	**-**
4.E	Diamond Interchange at CSAH 9	**+**	**+**	**0**	**+**	**+**

E. Summary of Evaluation Results

Based on the alternative evaluation process described above, the PMT rated **Alternative 1.C – Backage Road Parallel to US 52** as the preliminary recommendation for Subarea 1. For Subarea 4, the PMT rated **Alternative 4.E – Diamond Interchange at CSAH 9** as the preliminary recommendation. These alternatives best achieve the project goals and have the potential to produce the greatest overall benefit.

F. Public Input

The results of the alternative evaluation for Subareas 1 and 4 were presented at a public open house on May 15, 2012. The purpose of this meeting was to present the project history, goals and objectives, alternative development and evaluation, and to seek input on the preliminary recommendations for Subarea 1 and Subarea 4. Meeting participants generally accepted the urgent need for improvements to enhance safety and expressed support for closing CSAH 14 at US 52 and extending it to the north (Subarea1). Participants also supported the construction of an interchange in the vicinity of CSAH 1 and CSAH 9 (Subarea 4).

Subarea 1

For Subarea 1, the preliminary recommendation of Alternative 1.C (backage road) was generally well received and had the highest level of public support when compared to the other alternatives.

Subarea 4

For Subarea 4, there was some support for the preliminary recommendation for Alternative 4.E (diamond interchange at CSAH 9), however a number of concerns were raised:

- CSAH 1 Connection – Some participants expressed concern over the proposed rerouting of CSAH 1 along 100th Avenue, east of US 52 and suggested alternative routes such as 90th Avenue or CR 56.
- Interchange Design – While there was general support for the proposed interchange location at CSAH 9, some participants had concerns over the preliminary interchange design.
- Access Management – Meeting participants expressed general concern over local access and connectivity impacts if CSAH 1 were closed. In particular, residents of the area were concerned over travel time impacts

In response to these concerns, the PMT conducted addition technical analysis in order to fully evaluate the issues raised. This analysis is documented in *Technical Memorandum 5: Access Management Overview* and *Technical Memorandum 6: Interchange Design Evaluation*, and summarized below:

1. An evaluation of alternatives for the proposed CSAH 1 connection east of US 52 was conducted. This evaluation rated 90th Avenue, 100th Avenue, and CR 56, based on their ability to satisfy the project goals and objective. **This analysis validated the 100th Avenue alternative as the recommended route for the proposed CSAH 1 connection east of US 52.**
2. An interchange design evaluation was conducted in order to further understand the range of alternative design configurations for an interchange at US 52 and CSAH 9. The results of this effort will be used to guide future planning in the area. **A final interchange design will be selected as part of a future preliminary design and environmental assessment process once project funding is secured.**
3. An evaluation of potential alternative access configurations was conducted in order to present potential options and travel time impacts to the public. This effort identified a range of access configurations including no-action, and various frontage road configurations, and evaluated each based on overall impacts, including travel time. **No access management modifications are planned at this time as no project funding has been secured.**

A second public meeting was held on June 28, 2012, in order to present the results of the analysis described above and to seek further input. The analysis conducted validated the preliminary recommendation for the interchange location at CSAH 9 (Subarea 1). A summary of this meeting is included in Appendix D.

Based on the information presented, Alternative 1.C (backage road) was generally accepted as the recommendation for Subarea 1. In addition, there was some support for the recommended interchange location at CSAH 9 (Alternative 4.E) for Subarea 4.

As a result of this process, **Alternative 1.C** (backage road) was selected as the locally supported alternative for Subarea 1, and **Alternative 4.E** (interchange at CSAH 9 with a CSAH 1 connection along 100th Avenue) was selected as the locally supported alternative for Subarea 4.

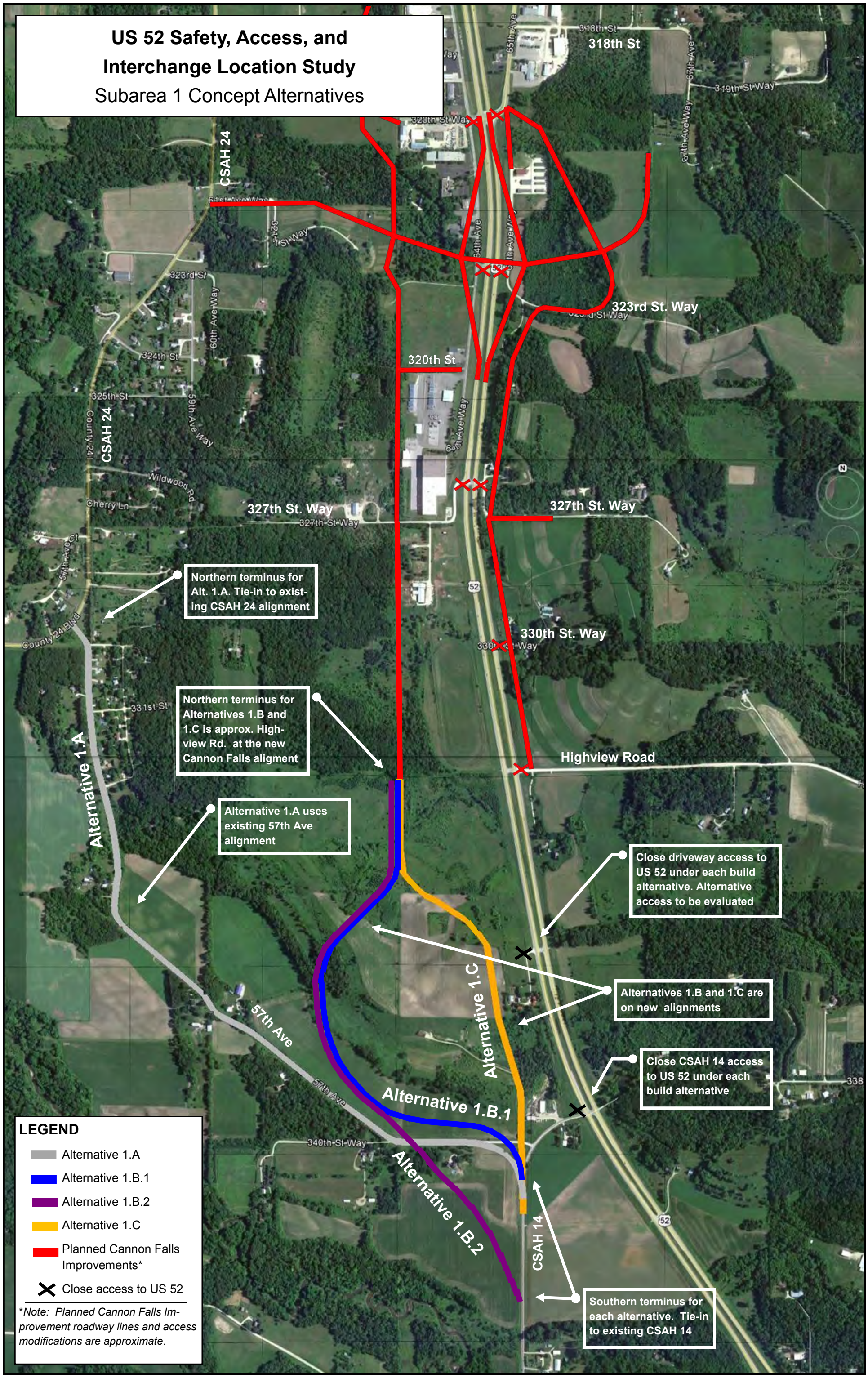
G. PMT Approval of Evaluation of Alternatives

Technical Memorandum No. 4 – Evaluation of Alternatives was presented to the PMT on May 14, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued. Final approval of Technical Memorandum 4 was received on September 18, 2012.

Appendix A: Subarea 1 and Subarea 4 Figures

US 52 Safety, Access, and Interchange Location Study

Subarea 1 Concept Alternatives



Date: 3/16/12

ALTERNATIVE 4.A: PARCLO AB INTERCHANGE AT CSAH 1

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

COUNTY ROAD 1

COUNTY ROAD 1

COUNTY ROAD 1

90TH AVE

90TH AVE

100TH AVE

100TH AVE

HIGHWAY 52

HIGHWAY 52

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

1200

SCALE IN FEET

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4.B: DIAMOND INTERCHANGE AT CSAH 1

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200
SCALE IN FEET

COUNTY ROAD 1
COUNTY ROAD 1
COUNTY ROAD 1
90TH AVE
90TH AVE
100TH AVE
100TH AVE
HIGHWAY 9
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4.C.1:
DIAMOND INTERCHANGE BETWEEN CSAH 1 & 9 USING EXISTING GRID

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200
SCALE IN FEET

COUNTY ROAD 1
COUNTY ROAD 1
HIGHWAY 52
90TH AVE
100TH AVE
COUNTY ROAD 1
90TH AVE
100TH AVE
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9
90TH AVE

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4.C.2:
DIAMOND INTERCHANGE BETWEEN CSAH 1 & 9 WITH FRONTAGE ROAD

COUNTY ROAD 1

COUNTY ROAD 1

HIGHWAY 52

90TH AVE

100TH AVE

COUNTY ROAD 1

90TH AVE

100TH AVE

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

90TH AVE

1200

SCALE IN FEET

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4.D.1:
SPLIT DIAMOND INTERCHANGE
AT CSAH 1 & 9 USING EXISTING GRID

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200

SCALE IN FEET

COUNTY ROAD 1

COUNTY ROAD 1

COUNTY ROAD 1

90TH AVE

90TH AVE

100TH AVE

HIGHWAY 52

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

90TH AVE

100TH AVE

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4.D.2:
SPLIT DIAMOND INTERCHANGE
AT CSAH 1 & 9 WITH FRONTAGE ROAD

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200
SCALE IN FEET

COUNTY ROAD 1
COUNTY ROAD 1
90TH AVE
100TH AVE
HIGHWAY 52
COUNTY ROAD 1
PROPOSED FRONTAGE ROAD
PROPOSED FRONTAGE ROAD
COUNTY ROAD 1
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9
90TH AVE
90TH AVE
100TH AVE
HIGHWAY 52

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4E: DIAMOND INTERCHANGE AT CSAH 9

PRELIMINARY (05/15/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200
SCALE IN FEET

COUNTY ROAD 1
COUNTY ROAD 1
COUNTY ROAD 1
90TH AVE
90TH AVE
100TH AVE
100TH AVE
HIGHWAY 52
HIGHWAY 52
HIGHWAY 52
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 1
COUNTY ROAD 1
90TH AVE

- PROPOSED INTERCHANGE ALIGNMENT
- NEW CSAH 9 ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

Appendix B: Detailed Alternative Evaluation Matrix

US 52 Safety, Access, and Interchange Location Study
Alternative Evaluation Matrix

Goals			Safety[1]			Access Management[2]		Connectivity and Mobility[3]				Social, Economic, and Environmental(SEE)[4]										Cost Effectiveness[5]		
												Social & economic impacts					Natural environment impacts							
												Residential Impacts (number of units)												
Measures of Effectiveness			Reduce the crash rate/severity (particularly at high crash intersections)	Improve roadway geometry/sight distance	Reduce variations in traffic speed caused by merging/diverging traffic	Close at-grade intersection accesses on US 52	Provide replacement access to affected properties & local roadways	Improve mobility on US 52 in accordance with IRC goals and previous studies	Provide efficient regional roadway connections that ensure functionality, mobility, accessibility and connectivity within the regional transportation systems and to US 52	Provide efficient local and neighborhood mobility, accessibility and connectivity to the regional transportation systems.	Allow improvements at low impact intersection which will likely remain for many years	Relocations	Impacted Parcels (without ROW).	No. of Parcels Where ROW is Needed	ROW (acres)	Farmlands (acres)	Wetlands (acres)	Floodplains (acres)	Woodlands (acres)	Streams (number of crossings)	Sinkhole Areas (parcels)	Cost effective	Beneficial return on investment	Allows interim improvements
Subarea 1 Alternatives	1.NB	No-Build Alternative - Subarea 1	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1.A	Route CSAH 14 along an improved 57th Ave	Close CSAH 14 Adds traffic to 57th Ave	Existing Alignment	Close CSAH 14 Adds traffic to 57th Ave	Close CSAH 14 at US 52	Provides CSAH 14 connection to the north	Close CSAH 14	Circuitous regional connection	Need connection for homes on US 52	Low impact driveways can remain	0	17	0	10.9	0.0	0.0	0.0	0.0	0	0	$1.5-2M Existing alignment	Local rd investment	Allows interim imps. to 57th Ave
	1.B.1	Route CSAH 14 along a new alignment (Backage Road - west)	Close CSAH 14	New alignment built to standards	Close CSAH 14 at US 52	Close CSAH 14 at US 52	Provides CSAH 14 connection to the north	Close CSAH 14	Circuitous regional connection	Need connection for homes on US 52	Low impact driveways can remain	0	0	1	28.1	13.6	0.0	0.0	11.0	0	0	$3-5M New alignment Steep slopes Longer route	Supports dev./ utility coordination	No clear interim improvements
	1.B.2	Route CSAH 14 along a new alignment (Backage Road - west with south connection)	Close CSAH 14	New alignment built to standards	Close CSAH 14 at US 52	Close CSAH 14 at US 52	Provides CSAH 14 connection to the north	Close CSAH 14	Circuitous regional connection	Need connection for homes on US 52	Low impact driveways can remain	0	1	1	30.2	12.4	0.0	0.0	9.9	0	0	$3-5M New alignment Steep slopes Longer route	Supports dev./ utility coordination	No clear interim improvements
	1.C	Route CSAH 14 along a new alignment (Backage Road - East)	Close CSAH 14	New alignment built to standards	Close CSAH 14 at US 52	Close CSAH 14 & 1 res driveway on US 52	CSAH 14 connection and replacement access via backage road	Close CSAH 14 Close 1 driveway	Direct regional route	Easy local connections	Low impact driveways can remain	0	2	2	25.9	7.5	0.0	0.0	7.9	0	0	$1.5-2.5M New alignment	Supports dev./ utility coordination	No clear interim improvements

US 52 Safety, Access, and Interchange Location Study
Alternative Evaluation Matrix

		Goals	Safety[1]			Access Management[2]		Connectivity and Mobility[3]				Social, Economic, and Environmental(SEE)[4]										Cost Effectiveness[5]		
												Social & economic impacts					Natural environment impacts							
		Measures of Effectiveness	Reduce the crash rate/severity (particularly at high crash intersections)	Improve roadway geometry/sight distance	Reduce variations in traffic speed caused by merging/diverging traffic	Close at-grade intersection accesses on US 52	Provide replacement access to affected properties & local roadways	Improve mobility on US 52 in accordance with IRC goals and previous studies	Provide efficient regional roadway connections that ensure functionality, mobility, accessibility and connectivity within the regional transportation systems and to US 52	Provide efficient local and neighborhood mobility, accessibility and connectivity to the regional transportation systems	Allow improvements at low impact intersection which will likely remain for many years	Residential Impacts (number of units)			ROW (acres)	Farmlands (acres)	Wetlands (acres)	Floodplains (acres)	Woodlands (acres)	Streams (number of crossings)	Sinkhole Areas (parcels)	Cost effective	Beneficial return on investment	Allows interim improvements
												Relocations	Affected Prop.	No. of Props where ROW Acq. Is Needed										
Subarea 4 Alternatives	4.NB	No-Build Alternative - Subarea 4	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	Does not achieve project goal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4.A	Parclo AB Interchange at CSAH 1.	Right-in/Right-out (RI/RO) @ CSAH 9 Grd sep CSAH 1	Realignment introduces add'l left turns	RI/RO are less safe	6 res. 1 com. 1 pub clse & 1 RI/RO	Many access replacements, challenging topography	Each alt achieves No differentiation	Major CSAH 9 re-routes (higher volume), high travel time impact (net +14.4 min)	Provides US 52 access to homes north of CSAH 1	Low impact driveways & RI/RO roadways remain	0	11	6	80	23.4	0.0	0.0	0.3	2	1	$15.5-19M	N/A for this subarea	
	4.B	Diamond Interchange at CSAH 1.	RI/RO @ CSAH 9 Grd sep CSAH 1	Realignment introduces add'l left turns	RI/RO are less safe	6 res. 1 com. 1 pub clse & 1 RI/RO	Many access replacements, challenging topography	Each alt achieves No differentiation	Major CSAH 9 re-routes (higher volume), high travel time impact (net +14.4 min)	Provides US 52 access to homes north of CSAH 1	Low impact driveways & RI/RO roadways remain	0	11	7	60	12.7	0.0	0.0	1.7	2	1	$15-18.5M	N/A for this subarea	
	4.C.1	Diamond Interchange between CSAH 1 and CSAH 9.	Grd. sep btw CSAH1/9 RI/RO @CSAH 1&9	Realignment introduces add'l left turns	RI/RO are less safe	2 res. 2 pub clse & 1RI/RO	Multiple access replacements	Each alt achieves No differentiation	Re-routes higher volume CSAH 9, high travel time impact (net +15.4 min)	Provides access mid-way between CSAH 1 & 9	Low impact driveways & RI/RO roadways remain	0	2	6	115	27.0	0.0	0.0	0.0	1	0	$12.5-15.5M	N/A for this subarea	
	4.C.2	Diamond Interchange between CSAH 1 and CSAH 9 with Frontage Road connection to CSAH 9.	Grd. sep btw CSAH1/9 RI/RO @CSAH 1&9	Frontage road minimizes left turns	RI/RO are less safe	2 res. 2 pub clse & 1RI/RO	Frontage roads provide replacement access	Each alt achieves No differentiation	Re-routes higher volume CSAH 9	Provides access mid-way between CSAH 1 & 9	Low impact driveways & RI/RO roadways remain	0	2	9	130	27.0	0.0	0.0	0.0	1	0	$15-18.5M	N/A for this subarea	
	4.D.1	Split Diamond Interchange at CSAH 1 and CSAH 9 using the existing roadway network.	Grade sep CSAH1/9	Built to standards, min. left turns	Grade sep./full access closures	9 res. 3 pub close	Many access replacements, challenging topography	Each alt achieves No differentiation	Minimal travel time impact (net +0.2 min)	Provides US 52 access to homes west of CSAH 1	Minimal opportunities	0	13	11	150	20.7	0.1	0.0	1.7	5	1	$15.5-20M	N/A for this subarea	
	4.D.2	Split Diamond Interchange at CSAH 1 and CSAH 9 with Frontage Road connections in-between.	Grade sep CSAH1/9	Built to standards, min. left turns	Grade sep./full access closures	9 res. 3 pub close	Frontage roads provide replacement access, challenging topography	Each alt achieves No differentiation	Minimal travel time impact (net -2.3 min)	Provides US 52 access to homes west of CSAH 1	Minimal opportunities	0	12	23	160	23.3	0.1	0.0	1.7	6	1	$17.5-23M	N/A for this subarea	
	4.E	Diamond Interchange at CSAH 9.	RI/RO @ CSAH 1 Grd sep CSAH 9	Built to standards, min. left turns	RI/RO are less safe	1 res. 2 pub close & 1 RI/RO	Few accesses to replace	Each alt achieves No differentiation	Min. impact for thru traffic on higher volume CSAH 9, moderate travel time impact (net +7.9 min)	Creates circuitous route for homes north of CSAH 1	Low impact driveways & RI/RO roadways remain	0	3	7	70	12.8	0.1	0.0	0.0	3	0	$11-13.5M	N/A for this subarea	

1 Alternative 4.A, 4.B, and 4.C.1, scored lower on the "improve roadway geometry" objectives as the realigned CSAH 9 route introduces additional left turns which are less safe. Alternatives 4.A, 4.B, 4.C.1, 4.C.2, and 4.1 scored lower on the "reduce variations in traffic speed" objective as they would allow right-in/right-out access to US 52 to remain.

2 Alternatives 4.C.1 abd 4.C.2 scored lower in the "close at-grade intersections" objective as they would close fewer high volume intersections than the other alternatives. Alternatives 4.A, 4.B, and 4.D.1 scored low in the "provide efficient replacement access" objective as challenging topogrphy limits options for frontage roads.

3 Alternatives 4.A, 4.B, and 4.C.1 scored lower in the "provide efficient regional connections" objective to due a high impact to regional travel times as a result of re-routing CSAH 9.

4 SEE ratings were based of quantity of the resources impacted, and scored based on their relative impact as compared to the other alternatives .

5 The ratings for the "cost effective" objective were based on a comparison of the estimated project costs with under $14M million scoring "green," $14 - 16M scoring "yellow," and over $16M scoring "red." Alternatives 1B.1, 1.B.2, and 1.C scored higher on the "beneficial return on

Appendix C: Public Meeting Summary (May 15, 2012)

Meeting Summary

US 52 Safety, Access, and Interchange Location Study

Public Open House
Urland Lutheran Church
5:00 – 6:30 p.m., May 15, 2012

Agency Representatives in Attendance:

Heather Lukes, MnDOT	Ken Bjornstad, Goodhue County	Dan Edgerton, HR Green
Greg Paulson, MnDOT	Steve Betcher, Goodhue County	
Kristin Kammueller, MnDOT	Jack Broz, HR Green	
Mike Kempinger, MnDOT	Ryan Allers, HR Green	

Meeting Overview

A public open house for the US 52 Safety, Access, and Interchange Location Study was held on May 15, 2012 from 5:00 – 6:30 pm, with a formal presentation from project staff at 5:30 pm. Meeting attendance included nine agency representatives (see table above) and approximately 40 residents. The sign-in sheet from the meeting is included as Appendix A.

The purpose of this meeting was to inform stakeholders of recent study activities and to seek their input. In particular, participants were asked to comment on the alternatives and analysis completed by the study team for Subarea 1 (CSAH 14) and Subarea 4 (interchange location).

The following is a summary of the comments received, both verbal and written (including email). Copies of the written comments submitted are included as Appendix B. In addition, the project team responded to a number of comments via email. Copies of these responses are included in Appendix C.

Subarea 1 (CSAH 14) Comments

- For Subarea 1 (CSAH 14), many participants expressed support for Alternative 1.C as the preferred option.
- Some residents commented that closing CSAH 14 at US 52 would be an acceptable safety improvement as long as an alternative connection to Cannon Falls was provided.
- It was noted that alternatives 1.B.1 and 1.B.2 would likely have negative impacts on adjacent residential properties.

Subarea 4 (interchange location) Comments

- Several participants expressed support for Alternative 4.E (CSAH 9) as the preferred interchange location and general agreed with the analysis and evaluation of alternatives presented at the meeting.

- Many residents expressed concern over the adverse travel time impacts of Alternative 4.E (CSAH 9) for properties north of CSAH 1, in the absence of a frontage road.
- Some residents of the CSAH 1 area felt that leaving right-in/right-out access at the CSAH 1 intersection would be acceptable as this would minimize adverse travel time impacts.
- One resident suggested locating the interchange at CSAH 1 and bridging CSAH 9. This would allow through traffic on CSAH 9 while accommodating the many residential and commercial properties north of CSAH 1.
- Some participants expressed support for Alternative 4.D.1/4.D.2 (split diamond) as the preferred interchange option.
- One resident generally agreed with CSAH 9 as preferred interchange location, but expressed concern over the re-routing of the CSAH 1 and CSAH 9 shown on Alternative 4.E. This would route additional traffic along 100th Avenue east of US 52. 100th Avenue is currently a gravel road and would require a significant investment to upgrade. Further, this route is already a safety concern due to poor sight lines. In addition, Alternative 4.E would add to the already high truck traffic along 100th Avenue, negatively impacting quality of life for the three residences at the intersection of CSAH 9 and 100th Avenue. This resident also commented that 90th Avenue or County Road 56 would be better as they would have less impacts. Finally, this resident questioned the design of Alternative 4.E stating that the bridge approaches appeared to be too long and would encourage higher travel speeds on CSAH 9.

General Comments

- Regardless of the interchange location, many residents were interested in the ultimate plan for direct access onto US 52 and wanted to know if their properties would be acquired and if their driveways would be closed or remain open.
- Many residents had questions about the planned CapX 2020 project and wanted to know how it would be coordinated with the US 52 Safety, Access, and Interchange Location Study. Some suggested that the CapX 2020 project could provide an opportunity to develop frontage roads along the east side of US 52.
- Many residents were interested in the timeline and funding for the improvements being study. Participants were interested in both the schedule for interchange construction and for the full conversion of US 52 into a freeway facility.

Appendix A: Meeting Sign-in Sheet

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
Millie Christat	900 Mill St. W #317	mchristat26@gmail.com
Jim Bryant	Goodhue County	jcbryant@knwb.net
Jim Edlund	111 West Trail Ct. CF	jjedlund@frontiernet.net
Steve Betcher	Goodhue County	steve.betcher@co.goodhue.mn.us
Dawn Friedrich	38245 70th Ave CF	Sdfriedrich@frontiernet.net
Carla Samuelson	35871 Hwy 52	
Bjorn Olson	9889 County 9 Blvd CF.	Olson37@yahoo.ie
Lowell + Nancy Brown	45679 County 1 Blvd Wanamingo	
Al + Betty Rex Hunke	37080 City 1 Blvd CF.	abhenke@frontiernet.net
John R. McDonald	35253 Hwy 52 Blvd.	
Lodenne Sauter	35890 85th Ave CF	markroxsauter@gmail.com
Laurie Jacobson	38266 70th Ave CF	ltjzoo@frontiernet.net

May 15, 2012

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
MIKE KEMPINGER	Rochester	
Heather Lukes	"	
Kathy & Wally Jacobson	3808 70th Ave C.F.	KWjacobs@frontiernet.net
CHRIS CULBERTSON	ROCHESTER	
Kristin Kammueller	Rochester	kristin.kammueller@state.mn.us
LeAnn Thorburn	Skunk Hollow Trail, C.F.	mandl@frontiernet.net
Mike Thorburn	Skunk Hollow Trail C.F.	treepeople@hotmail.com
Roger & Joan Risley	6520 357th Way	
Peg McNamara	1002 3rd ave Goodhue	MCNA@SLEEPEYETEL.NET
Paul Olson		paul.olson@charter.net
DAN SHEA	6762 HIGHVIEW RD.	DSHEA@FRONTIERNET.NET
Brian Todd	Rochester	

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
John D Olson	10055 Cty 9 Blvd CF	
Justin Bave	31913 64th Ave CF	Youfirejustin@Gmail.com
Don Mattson	703 Bullis St. Kenyon, MN	
Marlene C. Mattson		
Cindy Fisher-Brown	45291 C.I Blvd. Wanamingo	fisherbr@wildblue.net
Nick Weber	36101 Hwy. 52 Blvd. Cannon Falls, MN 55009	weber381@umn.edu
Walter & Karen Barnes	34469 HWY 52 Blvd	WalteraBarnes@Hotmail.com
DICK MATZ/JANELL DAHMS	35000 WAGNER HILLWAY,	quilthnwood@gmail.com.
Hank Ohmann	61553 CF 387th St Kenyon MN. 55018	
David E. Tamplin	33789 57th Ave Cannon Falls	dbt77@frontiernet.net
Nancy Castelline	45166 Eldorado Way CF	nancyg.public@hotmail.com

May 15, 2012

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
Judy Barnett	7005 Co 9 Blvd Cannon Falls MN	
Larry L Olson	9300 Cty 9 Blvd CR	
Dan Rechtzigel	1140 2nd St. Kenyon, MN 55946	rudy396@yahoo.com
John & Robin McDonald	35253 Hwy 52 BLVD Cannon Falls, MN 55009	
Lyle Lorenson	34465 Hwy 52 BLVD	
KEN HAGGERTY	27875 MICHAEL C.F MN 55009	
JOHN SCHUELLER	GCPW	

May 15, 2012

Appendix B: Written Comments

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

We need your input to guide decisions about an interchange location between CR 1 and CR 9. Please write your comments below and leave in the "Comments" box on the table.

If you prefer, you may mail or e-mail your comments **by May 30, 2012** to:

Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

I PROPOSE A BRIDGE ON CO 9 OVER HWY 52 AND AN INTERSECTION AT CO 1. ANY WEST BOUND TRAFFIC ON CO 9 WILL GO SOUTH ON HWY 58 FROM GOODHUE OR SOUTH ON CO 8 IF THERE IS AN INTERSECTION AT HADER. IN MY SCENARIO ALL CO 9 TRAFFIC COULD TURN NORTH ON CO 1 TO AN INTERSECTION AT CO 1.

FROM CO 1 TO THE TOP OF WAGNER HILL THERE ARE 20+- HOMES ALONG HWY 52 AND 3 BUSINESSES. MOST OF THESE PEOPLE WILL BE GOING BETWEEN THEIR HOMES AND CANNON FALLS. AN INTERSECTION ANYWHERE SOUTH OF CO 1 WILL ADD MILES TO THEIR COMMUTE AND COLLECTIVELY, CAUSE A BIG INCREASE IN FUEL USE.

WILL MY DRIVEWAY BE BLOCKED OUTO HWY 52 ?

WILL I BE LOOKING AT A FRONTAGE OR BACKAGE ROAD.?

Name (optional) DAVID JOHNSON

Address (optional) 36404 HWY 52 BLVD CANNON FALLS, MN 55009

Telephone (optional) H: 507-263-3354 CELL: 507-298-0260

E-mail (optional)* DAVE614@FRONTIERNET.NET

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

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If you prefer, you may mail or e-mail your comments **by May 30, 2012** to:

Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

Regarding the County Road 14 options, I see Alternative 1C as the best answer. Advantages being cost effective; less land to develop; 1C would provide maximum investment and efficiency for the new Common Facis interchange. Safety issues should also favor 1C. The nice part of 1C is it will keep the Soqn Valley people happy. And that speaks for the future which will see immense population growth here and Connector/service roadways will be instrumental in years to come. Do it properly. Thank you to the engineers, planners, etc. for the good work on these proposals, which appear excellent.

I favor plan Alternative 1C

Name (optional)

Address (optional)

Telephone (optional)

E-mail (optional)*

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

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Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

We live just south of cty road 14. Our preference for the cty road 14 interchange - our preference would be option 1C vs. the other options.

Name (optional) Walter Barnes
Address (optional) 34469 HWY 52 blvd
Telephone (optional) 507 263 0783
E-mail (optional)* Walter a Barnes @ Hotmail.com

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

We need your input to guide decisions about an interchange location between CR 1 and CR 9. Please write your comments below and leave in the "Comments" box on the table.

If you prefer, you may mail or e-mail your comments **by May 30, 2012** to:

Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

CR 1 and CR 9
CR 1 Cross over then east of
River Flume Turn about
CR 9 Clover Leaf

Name (optional)

Address (optional)

Telephone (optional)

E-mail (optional)*

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

We need your input to guide decisions about an interchange location between CR 1 and CR 9. Please write your comments below and leave in the "Comments" box on the table.

If you prefer, you may mail or e-mail your comments **by May 30, 2012** to:

Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

Split Diamond Cty 1 and Cty 9

Name (optional) _____

Address (optional) _____

Telephone (optional) _____

E-mail (optional)* _____

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Edgerton, Dan

Subject: FW: HWY 52 study and plans feedback

From: bjorn olson [mailto:olson37@yahoo.ie]
Sent: Tuesday, May 15, 2012 8:58 PM
To: Lukes, Heather A (DOT)
Subject: HWY 52 study and plans feedback

Dear Heather,

I was at the meeting tonight and I am over whelmed with feeling that these plans are thought through in a boardroom and haven't gotten much face time with your team members.

I'm not sure where to start so I will just go through my list.

1. I don't think that your group understands what 100th ave is and how much money will be need to upgrade sight lines, road width, and the fact the you have to cross 3 water ways. The fact that county road 56 is not being offered as an option is a little fishy and short sided. Like the county wasn't willing to offer it and case closed. You really need to see what other options there are. On the map it might not look like a big deal, but I know it will cost many millions.
2. **Piggy backing on the first one, I have a great option that was not mentioned in your plans. That would be creating a single frontage road on the east side of 52 north to 90th ave and use this to access county road 1 to the east. There would not be a need for one on the west. There is only one water way to cross it has better sight lines currently, so less costly, it is not a very long route, there are fewer houses and businesses than on 100th, and it would have less impact on our community. Also you would be making the intersection at Cty 1 safer since there would be less truck traffic coming from farmers since there would be less farmers to the west of the intersection.**
3. Following number 2 there is so much truck traffic on 100th to start, now you are asking it shift the burden of an accident zone onto us. You are asking to put two county roads of traffic on to a bad road that has trucks entering and exiting a gravel pit. I cannot wrap my mind around this. Also the sight lines for people exiting 100th to Cty 9 are bad, there is a knoll to the east on 9 that is asking for someone to pullout into traffic, much like the current 52/9 alignment.
4. Currently I live on the corner of Cty 9 and 100th ave. All trucks coming from the west are starting from a stop at 52 which is ½ a mile away to 100th ave. Those trucks are going so fast that they need to Jake brake by my house. Now the road slopes up to help them but that's not enough. Now you are asking to put fast moving trucks that don't come to a stop a half mile away to stop. What is going to do to my quality of life? I live less than a hundred feet from 9. There are 3 houses at the intersection. What will it sound like? Would you like that? If moved to 90th this would lessen this impact.
5. I'm not sure why we need such big loops coming from the number nine bridge? I would think allowing traffic crossing 9 to drive faster is not very thought out. If anything making it a sharper turn and slowing traffic down when the meet cars using the ramps. Look at the over pass on 52 and 58 in Zumbrota. The sightlines are horrible and the traffic is only moving at 20 mph. Now you want to keep traffic on 9 at 60 mph and use ramps?

6. I understand the cost advantages of moving the intersection at 9 south to take advantage of the hills and the grade. What I don't understand is on the west side going so far south into the crop land. You would have to build up a large chunk of 9 to meet old 9, and tear up good road for no reason. Wouldn't it cost less to have the bridge at an angle? You could shoot southeast to northwest use more of the current road have to buy less right of way. All that would be needed is to haul in a little more dirt on the west side of 52. Also your drawing shows cutting through 90th ave on the west side, isn't that a little much? This seems like over engineering.
7. With this plan the county has currently ruined some of your crop land on the west side of 52 when the widened Cty 9 years ago. They left the grade so poorly that if you changed Cty 9's route you would not only half to fix the new grade but you would make it near impossible to farm near the current Cty 9. This would also need to be altered, adding to the cost. We will not accept poor planning on your part that will impact my livelihood.
8. With these big curves and the rate of speed people will be entering the intersection, are we just raising the danger up in the air. This can't just be safer that what we have, but safe compared to all intersections. Good enough is not good enough.
9. Why is the public input not asked until now? I think you could have saved time money and man hours if you would have done some fact finding and asking. I know many people at the meeting felt that "here is what is going to happen, you can complain until May 3oth than deal with it." It that's what you want to get across we hear you loud and clear. We might know a couple of things you can't find on the maps.
10. What is considered hardship? There are a few houses that are going to be a lot less bearable to live in with ramps and mentioned traffic? What happens to my house value and quality of life?
11. With capX 2020 coming in before you, have you made plans so the projects don't interfere?

Now I know if I could make a thought out list of 11 issues in about an hour I know there are more issues that should have been looked at and need to be. I would love to hear back from you. Email is the best way to reach me, but if anyone on your team would like to come out here and have me show you in person my concerns I will make time for them. I think seeing them in person is important.

Thank you for your time, this was not meant to come off as us vs you, I just think that with proper communication and logic we can improve a much needed life saving improvement.

Thank you

Bjorn Olson

612-695-1361

From: Anna Olson <annamholson@gmail.com>
Sent: Wednesday, May 30, 2012 7:33 AM
To: Lukes, Heather A (DOT)
Subject: Highway 52 and County Road 9

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Hello Heather,

I think it's unfortunate that this is the first time the public has been invited to share their concerns regarding proposed changes to where Highway 52 meets County Road 9. While the accidents that make the news leave the conciousness of most people minutes after they see the news report, we don't forget because we live right at the intersection. The crashes that make the news are the absolute worst - critical injuries and fatalities. What doesn't get reported are the near-misses, the close calls, and the scary situations that make you reconsider ever getting in a car again. We know it because we live it.

While no one wants an overpass running through their yard I know that changes are necessary to make driving through the area safer so I'm not going to take a "Not in MY backyard" approach. However, I think parts of the proposal border on being ridiculous. I'm sure the ideas look good on paper in a board room full of engineers and I don't want to take anything away from their knowledge or skills, but how can you really know what the road situation is like without talking to the people that live in the area? I'm sure your studies are intended to determine the solution that provides the greatest benefit to the largest amount of people, but what gets lost is the impact such a change will have on the neighborhood. Not to mention the fact that unnecessary money will be spent to create an infrastructure that already exists - if you're willing to look for it.

As the main thoroughfare for a very active gravel pit, 100th Avenue is likely one of the busiest gravel roads you'll find. There are semis and other large trucks passing over it at all times of the day and night. The sight lines where 100th meets 9 are very poor and by making the proposed changes to 100th Avenue you aren't fixing the problems currently facing Highway 52/County Road 9 - you're simply moving them a bit further east. Why isn't 56 being considered as an alternative? It is already paved, it crosses fewer waterways, and it has better sight lines in both directions.

I've gotten this far and I still haven't mentioned the impact these changes will have on farmers who depend on the land that will be used for this project as their livelihood. Is it really wise to take some of the best farmland in the state and turn it in to asphalt? How are you planning to compensate the farmers that will lose their income as a result of this 'improvement'? Are you working with CapX to make sure your plans coordinate or are we going to live through one major construction project just to have it immediately re-done? It's obvious that there are still many significant unanswered questions. What happens next?

Ultimately, I think you need to consider the concerns of the residents of Leon Township, especially those of us closest to the proposed 'hardship' areas, before moving forward. It seems as if parts of the proposal were not thought through carefully and weren't thoroughly researched before being presented. If you were to live on the corner of 52/9/100th Avenue as we do, how would you feel about the plan? Would you feel safe having your kids live there? While we always knew that an interchange was a possibility and that it would likely have a negative impact on our quality of life and the resale value of our property, we never imagined that 100th would be included. This piece of the plan makes no logical sense.

I've yet to see any state vehicles near our home doing any kind of surveying or studying the road use. Have the people that put this proposal together ever even been to these intersections and watched traffic? I'd be glad to let them sit in our driveway so they can see for themselves exactly how 52 feeds into 100th and just how dangerous it would be to divert even more vehicles to this intersection, at even faster speeds.

While the open meetings are appreciated, they feel like an afterthought. Do you truly want input or is this just your way of telling us what's going to happen, whether we like it or not?

Concerned for our future,
Anna Olson

May 29, 2012

To Heather Lukes,

I want to thank you for the public meeting at Urland Church on May 28, 2012, for the Highway 52 crossings. My son was told that there were other such public meetings and yet this is the only one of which we were made aware. I understand, however, that our township sent one supervisor to some earlier meetings at which the county presented their options. To my knowledge, no public input had been taken into consideration to facilitate the development of these options.

I have always considered an access at County 1 and an overpass at County 9 to best serve the community's needs. It would provide the least amount of back tracking for our residents and others considering which local towns they go to. It would also provide the best fire and emergency access to the residents. One of the officials at the meeting stated that such traffic would be allowed to cross the median. However, we all know that in time these residents and their emergency services will be blocked from immediate access to Highway 52. The cost of these service roads should be taken into consideration in the final cost.

Traffic going east or west on County 9 coming from North 52 could easily get off at County 1. Traffic coming from South 52 to go east on County 9 could have easily gotten off earlier for access to their destination. Traffic coming from South 52 to West 9 would have to get off at County 8 or back track 1 ¼ miles on County 1 going south.

Re-doing 100th Avenue is a major expense. Those funds could go toward paying for a second overpass. There are two major waterways to consider in addition to one with significant water flow and another that is very deep below the road surface.

If you feel it necessary to have access to County 9, that access should come up to County 9 from the north side because you have created a portion of land that will not be favorable to farm by moving County 9 so far south. What is the reasoning for your proposal to move County 9 this far south and why such long, high speed curves? The only reason to have access here in the first place is because you assume a significant amount of traffic will be coming from or going onto highway 52. If this is, indeed, the case, it should not be high speed traffic.

I would like to remind you that, according to the 2004 Goodhue County Comprehensive Plan, two of the major goals are to preserve and conserve prime agricultural land. Port Byron A and B soils are where you propose the interchange at County 9. These soils, according to the 1976 soil survey map, have the highest crop equivalent rating in the county if not the state and have been taxed accordingly.

Upon completing my degrees in soil science at the University of Minnesota, I chose to return to Cannon Falls and farm. I had the chance to buy the family farm and now my son is farming and in the process of taking over. Next year it will become a century farm. According to my Aunt, my Grandfather registered the farm with the County as Walnut Grove Farm. I have since planted two more walnut groves, one of which your proposal would take out the grove planted in 1972. Your proposal would take approximately 1/3 of this farms' acreage. The grain handling expansion I did last year might not have been necessary. My son, brother, nephew and I farm along County 9 on both the east and west sides of highway 52. We share equipment and labor. It is essential for us to readily access both sides of Highway 52.

How do you take into consideration the hardship, inconvenience, and extra expense that will be incurred by local residents by not having an access at County 1 and an overpass at County 9? A straight access going east and west on County 9 rather than the proposed long curve is preferable to us and would better serve the residential traffic.

Thank you for your consideration.

Regards,

Larry L. Olson

9300 County 9 Blvd.

Cannon Falls, MN 55009

(507) 263-5670

From: Janell Dahms <quiltnwood@gmail.com>
Sent: Friday, May 18, 2012 7:56 PM
To: Lukes, Heather A (DOT)
Subject: Comments on Highway 52 Interchange Location Study

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Dear Ms. Lukes,

We would like to make comments regarding the Highway 52 Interchange Location Study.

1. Location of CapX2020 line. In none of the evaluations presented this past Tuesday, location of the CAPX2020 line was not mentioned and how it may impact the location of interchanges and access roads. Since the administrative law judge has now confirmed the route, which will impact some of the areas under study, how will this impact the project? Are some of the decisions about the road going to be competing with some of the same land as the line? If so, who will have the first right of choice--line or road?

2. Decisions section by section v. having an overall plan. It appeared after the Tuesday meeting that the process of rating the choices/options for a given area (for example Highway 9) without having an overall plan in mind invites the opportunity to make incompatible decisions or narrow future options. As impacted homeowners whose driveway is between the County 14 and County 1/9 area, we would like to see that there are plans/options in place for our area at the same time as decisions are being made about 14/1/9. While we recognize that the whole project cannot be carried out at once and that funding isn't available for the entire project, it seems that there should be an overall plan before starting anything. If we heard correctly on Tuesday, the plans for the 14 and 1/9 area will be made and requests will be made for the budget without yet knowing how the in-between areas and beyond will be handled.

3. Need for traveling both directions. We would like to again state our position that it is important for homeowners whose driveways will be closed to be able to travel both north and south to gain access to Highway 52. We agree that making Highway 52 a freeway will provide improved safety; however, it should not be improved safety at the expense of the homeowners access to travel the direction they wish. For our driveway, which is at the crest of Wagner Hill Way, we do not want to have to drive almost 4 miles to the south to the new 1/9 interchange to get onto Highway 52 to go north. Our neighbors who share our drive feel the same way--we wish to have access to both north and south. We were told at an earlier meeting that the topography of the east side of the Wagner Hill Way area will make it too difficult to put a frontage road to the north, but yet the CAPX2020 line seems to plan to come up the hill along that side. Can the state/county work with the individuals who will be locating the line and see if a common solution can be found and take advantage of the line construction efforts. Again, this raises the importance of seeing the whole plan (point number 2) and the line (point 1), especially since the line will be installed prior to the completion of the Highway 52 project.

4. Rating system and community input. Do the ratings that were shared at Tuesday's meeting have individuals impacted by the changes participating in the process? We know there are representatives from the consulting firm, the state DOT, the county and perhaps the townships included, but are there actual homeowners/citizens involved as representatives?? It would seem that there is an important voice missing if there are not citizens included.

Thanks for the opportunity provide comments.

Janell Dahms and Dick Matz
35000 Wagner Hill Way
Cannon Falls, MN

From: candl@frontiernet.net
Sent: Wednesday, May 30, 2012 8:35 AM
To: Lukes, Heather A (DOT)
Subject: Highway 52 Interchange
Attachments: May 29,52 and 9.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Heather,

Please share the attached comments with the county and advise.

Thank you,
Larry L.Olson

Edgerton, Dan

From: Broz, Jack
Sent: Friday, May 18, 2012 7:32 AM
To: Heather Lukes; Kempinger, Michael (DOT); 'greg.isakson@co.goodhue.mn.us'; Ken.Bjornstad@co.goodhue.mn.us
Cc: Edgerton, Dan; Allers, Ryan
Subject: FW: Hwy 52 study for area in Goodhue Co CSAH 1- 9 - 8 comments

FYI

Jack Broz, P.E.
Project Director
HR GREEN, INC.

From: Thomas Steger [mailto:tsteger@hcinet.net]
Sent: Thursday, May 17, 2012 10:05 PM
To: Broz, Jack
Subject: Hwy 52 study for area in Goodhue Co CSAH 1- 9 - 8 comments

I was not able to attend the meeting held recently but I reviewed the documents on the web and wanted to offer my comments.

My job is based in the town of Goodhue and includes much travel all around Goodhue County. It is obvious that safety issues exist at all of the intersections with Highway 52.

While it would be nice to have multiple interchanges in order to accommodate all residents and minimize the construction of frontage and backage roads this would, this of course would not be possible.

With 22 years experience of driving around the county I see a number of reasons that point to one location:

Assuming that new interchanges will be built at Cannon Falls and the north side of Zumbrota, it would seem clear that the intersection of CSAH 9 and Hwy 52 is the most logical site.
With CSAH 9 being a high quality road and the only one that transverses the county east – west, again this would be the logical location for a single mid county interchange.
An interchange built at 9 and 52 would cause the least disruption in residences and topography.
Your charts for traffic flow point out 9 & 52 as being the highest load now and predicted.

In the short term I believe that the acceleration lanes and wider medians are a good way to help address safety concerns.

Thank you for considering my comments and if you would include me in future mailings it would be appreciated.

Tom Steger
tsteger@hcinet.net

Appendix C: Project Team Response to Comments

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Friday, June 01, 2012 11:34 AM
To: Mark Sauter
Cc: greg.isakson@co.goodhue.mn.us
Subject: RE: Highway 52 input

Mr. and Mrs. Sauter,
We would like to thank-you for taking the time to comment about the project. Public feedback is an important part of the evaluation process in selecting a recommended alternative. We are looking to schedule a public meeting to review the recommended alternative for the interchange within the next month and half. At the meeting we also plan to discuss access to a future interchange location. Public notices will be distributed for this meeting. I encourage you to attend if your schedule allows.

Thank-you again for your time!

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Mark Sauter [mailto:markroxsauter@gmail.com]
Sent: Thursday, May 31, 2012 7:25 PM
To: Lukes, Heather A (DOT)
Cc: greg.isakson@co.goodhue.mn.us
Subject: Highway 52 input

Hello
We have been studying the highway 52 proposed interchanges between Co Rds 1 & 9. We live 1 mile east of highway 52 and Co. Rd 1. As we look at the impact for us and for our neighbors, our conclusion is that 4.C.2 (Diamond between 1 & 9 with frontage road) would be best for the community. Travel time for access to the highway would be minimal and thinking of the valley below us and all the housing for them to access the highway heading south would be lessened and we are not sure how that community will drive to go north on 52. Even though farmland is precious and valuable, this negative aspect is more than offset by the positive aspects of this alternative.
We are the furthest farm north that the Wanamingo fire department services. The middle interchange would help them arrive more promptly than an exit at 9 would.
Thank you for allowing us to express our opinion on this issue.
Mark and Roxanne Sauter

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Friday, June 22, 2012 12:14 PM
To: Janell Dahms (quiltnwood@gmail.com)
Cc: greg.isakson@co.goodhue.mn.us
Subject: FW: Comments on Highway 52 Interchange Location Study

Dear Ms. Dahms and Mr. Matz,

Thank you for your interest in the US 52 Safety, Access, and Interchange Location Study, and taking time to provide comments. MnDOT and Goodhue County understand your concerns on this project. Your input will help us to make this a better project for the community.

It is important to stress that this is a long-range planning study and that drawings shown at the meeting are preliminary concepts only and not final. The improvements under consideration are currently unfunded. This general goal of this study is to recommend an interchange location which will be further evaluated in the future once the project has been funded.

The intent of the material presented at the meeting was to gather public input on the interchange location (i.e., CR 1, CR 9, in-between, etc.). Based on the input received, the study team will further refine the design including choosing the bridge alignment and the routing of the county road network (i.e. 90th Ave, 100th Ave, CR 56, etc.). There will be additional opportunities to provide input on this project, including a public meeting on June 28, 2012, at 5:00 pm, at Urland Lutheran Church.

Responses to each of your comments are provided below. Please let us know if you have any further questions or concerns.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Janell Dahms [mailto:quiltnwood@gmail.com]
Sent: Friday, May 18, 2012 7:56 PM
To: Lukes, Heather A (DOT)
Subject: Comments on Highway 52 Interchange Location Study

Dear Ms. Lukes,

We would like to make comments regarding the Highway 52 Interchange Location Study.

1. Location of CapX2020 line. In none of the evaluations presented this past Tuesday, location of the CAPX2020 line was not mentioned and how it may impact the location of interchanges and access roads. Since the administrative law judge has now confirmed the route, which will impact some of the areas under study, how will this impact the project? Are some of the decisions about the road going to be competing with some of the same land as the line? If so, who will have the first right of choice--line or road?

- *MnDOT and Goodhue County have and will continue to coordinate with CapX2020.*

2. Decisions section by section v. having an overall plan. It appeared after the Tuesday meeting that the process of rating the choices/options for a given area (for example Highway 9) without having an overall plan in mind invites the opportunity to make incompatible decisions or narrow future options. As impacted homeowners whose driveway is between the County 14 and County 1/9 area, we would like to see that there are plans/options in place for our area at the same time as decisions are being made about 14/1/9. While we recognize that the whole project cannot be carried out at once and that funding isn't available for the entire project, it seems that there should be an overall plan before starting anything. If we heard correctly on Tuesday, the plans for the 14 and 1/9 area will be made and requests will be made for the budget without yet knowing how the in-between areas and beyond will be handled.

- *It is important to note that this is a planning study intended to set the basis for future improvements, when funding is received. The primary purpose of this effort is to select an interchange location. Design details such as potential driveway closures and frontage roads will be developed in future phases of the project. The construction of an interchange at either CR 1 or 9 will have no direct impact on driveways outside of the interchange influence area. These driveways will remain in-place until such a time that safety or operational needs require alternative access. However, the proposed improvements are being studied with an overall access management plan in mind. While specific access treatments are not being proposed at this time, a range of general access replacement options has been developed. Information regarding alternative roadway and driveway access plans will be presented at the next public meeting (June 28, 2012).*

3. Need for traveling both directions. We would like to again state our position that it is important for homeowners whose driveways will be closed to be able to travel both north and south to gain access to Highway 52. We agree that making Highway 52 a freeway will provide improved safety; however, it should not be improved safety at the expense of the homeowners access to travel the direction they wish. For our driveway, which is at the crest of Wagner Hill Way, we do not want to have to drive almost 4 miles to the south to the new 1/9 interchange to get onto Highway 52 to go north. Our neighbors who share our drive feel the same way--we wish to have access to both north and south. We were told at an earlier meeting that the topography of the east side of the Wagner Hill Way area will make it too difficult to put a frontage road to the north, but yet the CAPX2020 line seems to plan to come up the hill along that side. Can the state/county work with the individuals who will be locating the line and see if a common solution can be found and take advantage of the line construction efforts. Again, this raises the importance of seeing the whole plan (point number 2) and the line (point 1), especially since the line will be installed prior to the completion of the Highway 52 project.

- *Thank you for the input and we will consider your comments. As stated above, information regarding alternative roadway and driveway access plans will be presented at the next public meeting (June 28, 2012).*

4. Rating system and community input. Do the ratings that were shared at Tuesday's meeting have individuals impacted by the changes participating in the process? We know there are representatives from the consulting firm, the state DOT, the county and perhaps the townships included, but are there actual homeowners/citizens involved as representatives?? It would seem that there is an important voice missing if there are not citizens included.

- *Input from residents is a critical part of the ratings and evaluation process and your input will influence the ultimate recommendations of this study. The study's project management team is composed of MnDOT and Goodhue County staff and township representatives. County Board members have attended meetings and provided comments and recommendations on the various project aspects. In addition, the study team held separate small group meetings with residents in April 2011 to seek input.*

Thanks for the opportunity provide comments.

Janell Dahms and Dick Matz
35000 Wagner Hill Way
Cannon Falls, MN

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Friday, June 22, 2012 11:09 AM
To: annamholson@gmail.com
Cc: greg.isakson@co.goodhue.mn.us
Subject: FW: Highway 52 and County Road 9

Dear Mrs. Olson,
Thank you for your interest in the US 52 Safety, Access, and Interchange Location Study, and taking time to provide comments. MnDOT and Goodhue County understand your concerns on this project. Your input will help us to make this a better project for the community.

It is important to stress that this is a long-range planning study and that drawings shown at the meeting are preliminary concepts only and not final. The improvements under consideration are currently unfunded. This general goal of this study is to recommend an interchange location which will be further evaluated in the future once the project has been funded.

The intent of the material presented at the meeting was to gather public input on the interchange location (i.e., CR 1, CR 9, in-between, etc.). Based on the input received, the study team will further refine the design including choosing the bridge alignment and the routing of the county road network (i.e. 90th Ave, 100th Ave, CR 56, etc.). There will be additional opportunities to provide input on this project, including a public meeting on June 28, 2012, at 5:00 pm, at Urland Lutheran Church.

Responses to each of your comments are provided below. Please let us know if you have any further questions or concerns.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Anna Olson [mailto:annamholson@gmail.com]
Sent: Wednesday, May 30, 2012 7:33 AM
To: Lukes, Heather A (DOT)
Subject: Highway 52 and County Road 9

Hello Heather,

I think it's unfortunate that this is the first time the public has been invited to share their concerns regarding proposed changes to where Highway 52 meets County Road 9. While the accidents that make the news leave the conciousness of most people minutes after they see the news report, we don't forget because we live right at the intersection. The crashes that make the news are the absolute worst - critical injuries and fatalities.
What doesn't get reported are the near-misses, the close calls, and the scary situations that make you reconsider ever getting in a car again. We know it because we live it.

- *Safety is the primary factor driving this study. The safety issues along this stretch of US 52 and in particular at the CR 9 intersection are well understood. This was the third public meeting for this project. The first was held on 8/25/2010 and the second was 4/7/2011. Refer to the project website for summaries of these meetings.*

While no one wants an overpass running through their yard I know that changes are necessary to make driving through the area safer so I'm not going to take a "Not in MY backyard" approach. However, I think parts of the proposal border on being ridiculous. I'm sure the ideas look good on paper in a board room full of engineers and I don't want to take anything away from their knowledge or skills, but how can you really know what the road situation is like without talking to the people that live in the area? I'm sure your studies are intended to determine the solution that provides the greatest benefit to the largest amount of people, but what gets lost is the impact such a change will have on the neighborhood. Not to mention the fact that unnecessary money will be spent to create an infrastructure that already exists - if you're willing to look for it.

- *Thank you for your input, these concerns will be noted in the evaluation process.*

As the main thoroughfare for a very active gravel pit, 100th Avenue is likely one of the busiest gravel roads you'll find. There are semis and other large trucks passing over it at all times of the day and night. The sight lines where 100th meets 9 are very poor and by making the proposed changes to 100th Avenue you aren't fixing the problems currently facing Highway 52/County Road 9 - you're simply moving them a bit further east. Why isn't 56 being considered as an alternative? It is already paved, it crosses fewer waterways, and it has better sight lines in both directions.

- *The preliminary concepts presented at the last meeting were developed based on high level review of the existing transportation system within the area. The 100th Avenue alignment was chosen for the purposes of analysis due to its central location. Following last month's meeting, the study team evaluated other alignments including 100th Avenue considering public input (your comments), safety, route continuity, travel time, cost to upgrade, environmental impacts, etc. This evaluation included 90th Ave, 100th Ave, and CR 56. The results of this process will be presented at the next public meeting.*

  The primary cause of the safety issues at the US 52/CR 9 intersection are the vehicle conflicts which occur between traffic on US 52 and traffic on CR 9. If an interchange is constructed at CR 9 these conflicts would be removed and safety improved.
  Whether an interchange is constructed at CR 9 or CR 1, improvements will be necessary for the new CR 1 or CR 9 route along one of the following routes: 90th Ave, 100th Ave, or CR 56. This is necessary to maintain the east/west connectivity of these county routes and bring the new section of the county route to current county road design. Please note as part of the final design process (once improvements are funded), design details such as any sightline issues, roadway grades, horizontal and vertical curves would be studied and addressed.

I've gotten this far and I still haven't mentioned the impact these changes will have on farmers who depend on the land that will be used for this project as their livelihood. Is it really wise to take some of the best farmland in the state and turn it in to asphalt? How are you planning to compensate the farmers that will lose their income as a result of this 'improvement'? Are you working with CapX to make sure your plans coordinate or are we going to live through one major construction project just to have it immediately re-done? It's obvious that there are still many significant unanswered questions. What happens next?

- *As stated earlier, this is a long-range planning study and that drawings shown at the previous meeting are preliminary concepts only and not final. The improvements under consideration are currently unfunded. The general goal of this study is to recommend an interchange location which will be further evaluated in the future once the project has been funded.*

  Following last month's meeting, additional CR 9 interchange concepts were evaluated that reduce impacts to farmland. The additional CR 9 concepts will be presented at the next public meeting. MnDOT and Goodhue County have been and will continue to coordinate with CapX as both projects progress.

Ultimately, I think you need to consider the concerns of the residents of Leon Township, especially those of us closest to the proposed 'hardship' areas, before moving forward. It seems as if parts of the proposal were not thought through carefully and weren't thoroughly researched before being presented. If you were to live on the corner of 52/9/100th Avenue as we do, how would you feel about the plan? Would you feel safe having your kids live there? While we always knew that an interchange was a possibility and that it would likely have a negative impact on our quality of life and the resale value of our property, we never imagined that 100th would be included. This piece of the plan makes no logical sense.

- *Thank you for the input and we understand your concerns. As noted above, the goal of this study is to recommend an interchange location (i.e., CR 1, CR 9, somewhere else). Design details such as replacement access and alternative county road configurations will be fully evaluated in the future when the project is funded. This study represents the first step in a long project development process.*

  It is important to understand that regardless of the interchange location, the county will need to re-route traffic on either CR 1 or CR 9 to maintain connectivity of county road system east and west of Hwy 52. Following last month's public meeting 90th Avenue and CR 56 were evaluated in addition to 100th Avenue. The evaluation results will be presented at the next public meeting.

I've yet to see any state vehicles near our home doing any kind of surveying or studying the road use. Have the people that put this proposal together ever even been to these intersections and watched traffic? I'd be glad to let them sit in our driveway so they can see for themselves exactly how 52 feeds into 100th and just how dangerous it would be to divert even more vehicles to this intersection, at even faster speeds.

- *Safety is the primary factor driving this study and the need for improvements. County and state officials have conducted field visits, including driving the routes under consideration, observing the intersection of CR 9 and 100th Ave, and conducting turning movement counts.*

While the open meetings are appreciated, they feel like an afterthought. Do you truly want input or is this just your way of telling us what's going to happen, whether we like it or not?

- *Public input is a critical component of the study process. It is important to stress that this is a long-range planning study and that drawings shown at the meeting are preliminary concepts only and not final. The improvements under consideration are currently unfunded. The general goal of this study is to recommend an interchange location (i.e., CR 1, CR 9, somewhere else), which will be further evaluated in the future once the project has been funded. We encourage you to attend the fourth public meeting (June 28, 2012) to discuss these issues with MnDOT and Goodhue County staff.*

Concerned for our future,
Anna Olson

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Friday, June 22, 2012 11:50 AM
To: candl@frontiernet.net
Cc: greg.isakson@co.goodhue.mn.us
Subject: RE: Highway 52 Interchange
Attachments: Response to Larry Olson_May 2952 and 9.docx

Dear Mr. Olson,
Thank you for your interest in the US 52 Safety, Access, and Interchange Location Study, and taking time to provide comments. MnDOT and Goodhue County understand your concerns on this project. Your input will help us to make this a better project for the community.

It is important to stress that this is a long-range planning study and that drawings shown at the meeting are preliminary concepts only and not final. The improvements under consideration are currently unfunded. This general goal of this study is to recommend an interchange location which will be further evaluated in the future once the project has been funded.

The intent of the material presented at the meeting was to gather public input on the interchange location (i.e., CR 1, CR 9, in-between, etc.). Based on the input received, the study team will further refine the design including choosing the bridge alignment and the routing of the county road network (i.e. 90th Ave, 100th Ave, CR 56, etc.). There will be additional opportunities to provide input on this project, including a public meeting on June 28, 2012, at 5:00 pm, at Urland Lutheran Church.

Responses to each of your comments are have been included in the attached document. Please let us know if you have any further questions or concerns.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design
-----Original Message-----
From: candl@frontiernet.net [mailto:candl@frontiernet.net]
Sent: Wednesday, May 30, 2012 8:35 AM
To: Lukes, Heather A (DOT)
Subject: Highway 52 Interchange

Heather,

Please share the attached comments with the county and advise.

Thank you,
Larry L.Olson

May 29, 2012

To Heather Lukes,

I want to thank you for the public meeting at Urland Church on May 28, 2012, for the Highway 52 crossings. My son was told that there were other such public meetings and yet this is the only one of which we were made aware. I understand, however, that our township sent one supervisor to some earlier meetings at which the county presented their options. To my knowledge, no public input had been taken into consideration to facilitate the development of these options.

- *Public input is a critical component of the study process. The primary purpose for this meeting was to seek input on a potential interchange location. The range of options presented developed were based on documented safety concerns at both CR 1 and 9, and input received at a public meeting in August of 2010.*

I have always considered an access at County 1 and an overpass at County 9 to best serve the community's needs. It would provide the least amount of back tracking for our residents and others considering which local towns they go to. It would also provide the best fire and emergency access to the residents. One of the officials at the meeting stated that such traffic would be allowed to cross the median. However, we all know that in time these residents and their emergency services will be blocked from immediate access to Highway 52. The cost of these service roads should be taken into consideration in the final cost.

- *It is important to note that this is a planning study intended to set the basis for future improvements, when and if funding is received. The primary purpose of this effort is to select an interchange location. General concepts for future local access will be discussed at the public meeting that is scheduled for June 28th. Design details such as potential driveway closures and frontage roads will be developed in future phases of the project; however planning level costs associated with providing replacement access were considered in the evaluation process. Local access and emergency responders are and will continue to be major considerations in the project development process.*

Traffic going east or west on County 9 coming from North 52 could easily get off at County 1. Traffic coming from South 52 to go east on County 9 could have easily gotten off earlier for access to their destination. Traffic coming from South 52 to West 9 would have to get off at County 8 or back track 1 ¼ miles on County 1 going south.

- *As presented at the last public meeting, an evaluation considering safety, connectivity, mobility, environmental impacts, and costs was completed in order to help make a decision as to a recommended interchange location. The mobility and connectivity evaluation included an analysis of travel time impacts for regional and local traffic. This effort shows that as CR 9 carries more than double the amount of traffic as CR 1, an interchange at CR 9 would have less adverse travel time impacts than CR 1 for the majority of traffic. If access at CR 1 were to be closed, suitable replacement access would be provided.*

Re-doing 100th Avenue is a major expense. Those funds could go toward paying for a second overpass. There are two major waterways to consider in addition to one with significant water flow and another that is very deep below the road surface.

- *The county will need to re-route CR 1 or CR 9 traffic, regardless of the interchange location. Improvements to a north-south local road will be needed to maintain connectivity of the county road system. In addition to 100th Ave, 90th Ave and CR 56 are also under evaluation. The evaluation results will be presented at the next public meeting.*

If you feel it necessary to have access to County 9, that access should come up to County 9 from the north side because you have created a portion of land that will not be favorable to farm by moving County 9 so far south. What is the reasoning for your proposal to move County 9 this far south and why such long, high speed curves? The only reason to have access here in the first place is because you assume a significant amount of traffic will be coming from or going onto highway 52. If this is, indeed, the case, it should not be high speed traffic.

- *The specific design of the potential interchange will be developed in the future, once the project has been funded. The concept shown was attempting to take advantage of the existing topography and use the hill in the southwest quadrant of the CR 9/US 52 intersection. Potential new concepts have been developed and will be available at the upcoming public meeting.*

I would like to remind you that, according to the 2004 Goodhue County Comprehensive Plan, two of the major goals are to preserve and conserve prime agricultural land. Port Byron A and B soils are where you propose the interchange at County 9. These soils, according to the 1976 soil survey map, have the highest crop equivalent rating in the county if not the state and have been taxed accordingly.

- *Preservation is an important consideration in this study. Another component of the comprehensive planning process was the 2004 Goodhue County Transportation Plan, which identified the need for an interchange at CR 9 in order to address critical safety concerns. Every effort will be made to balance the conservation and safety objective when the final design for this intersection is completed, sometime in the future.*

Upon completing my degrees in soil science at the University of Minnesota, I chose to return to Cannon Falls and farm. I had the chance to buy the family farm and now my son is farming and in the process of taking over. Next year it will become a century farm. According to my Aunt, my Grandfather registered the farm with the County as Walnut Grove Farm. I have since planted two more walnut groves, one of which your proposal would take out the grove planted in 1972. Your proposal would take approximately 1/3 of this farms' acreage. The grain handling expansion I did last year might not have been necessary. My son, brother, nephew and I farm along County 9 on both the east and west sides of highway 52. We share equipment and labor. It is essential for us to readily access both sides of Highway 52.

- *We understand your concerns over this sensitive issue. As stated previously, the primary purpose of this effort is to select an interchange location. Final design will not be completed until the project has received funding. Once this project receives funding, the environmental impact process and final designs, including potential farm land impacts, will be evaluated further.*

How do you take into consideration the hardship, inconvenience, and extra expense that will be incurred by local residents by not having an access at County 1 and an overpass at County 9? A straight access going east and west on County 9 rather than the proposed long curve is preferable to us and would better serve the residential traffic.

- *We encourage you to attend the next public meeting (June 28, 2012) to discuss these issues with MnDOT and Goodhue County right-of-way specialists.*

Thank you for your consideration.

Regards,

Larry L. Olson

9300 County 9 Blvd.

Cannon Falls, MN 55009

Appendix D: Public Meeting Summary (June 28, 2012)

Meeting Summary

US 52 Safety, Access, and Interchange Location Study

Public Open House
Urland Lutheran Church
5:00 – 6:30 p.m., June 28, 2012

Agency Representatives in Attendance:

Heather Lukes, MnDOT	John Paulson, MnDOT R/W	Greg Isakson, Goodhue County
Nelrae Succio, MnDOT	Mark Trogstad-Isaacson, MnDOT R/W	Jack Broz, HR Green
Kristin Kammueller, MnDOT	Julie Groetsch, MnDOT R/W	Dan Edgerton, HR Green
Mike Kempinger, MnDOT	Ken Bjornstad, Goodhue County	Ryan Allers, HR Green

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Meeting Overview

A public open house for the US 52 Safety, Access, and Interchange Location Study was held on June 28, 2012 from 5:00 – 6:30 pm, with a formal presentation from project staff at 5:30 pm. Meeting attendance included 12 agency representatives (see table above) and approximately 25 residents. The sign-in sheet from the meeting is included as Appendix A.

The purpose of this meeting was to inform stakeholders of recent study activities and to seek their input. In particular, participants were asked to comment on the alternatives and analysis completed by the study team for Subarea 1 (CSAH 14) and Subarea 4 (interchange location).

The following is a summary of the comments received, both verbal and written. Copies of the written comments submitted (including email) are included as Appendix B. In addition, the project team responded to a number of comments via email. Copies of these responses are included in Appendix C.

Subarea 1 (CSAH 14) Comments

Local Access Comments

- Generally, many residents were supportive of the preferred alternative (backage road) for this area.
- Concern was raised from a resident living west of US 52 regarding routing driveways through the rough terrain. It was suggested that a frontage road work better within the MnDOT right-of-way.

CSAH 1 Rerouting Comments:

- The additional analysis and evaluation of 90th Ave, 100th Ave, and CR 56 was well received by several attendees. Some felt that the ratings were not correct (i.e., 100th Ave should not have scored the highest).

- Some residents expressed support for the 100th Avenue alternative, while others expressed concern. Those in favor offered the following support:
    - Most direct route, least travel time
    - 100th Avenue should be paved anyway because of mining operations (heavy truck travel).
    - 100th Avenue should be paved to improve driving conditions in the winter.
- Those who did not support the 100th Avenue alternative offered the following:
    - Would have ranked 90th or CR 56 higher than 100th Ave.
    - Concerns were raised about the impacts to the streams with the redesign of 100th – it was noted there are less stream crossings of CR 56 and 90th
    - Concern over how much impact will occur to the property near a stream at the bottom of a hill along 100th Ave.
    - Concerned with the amount of trucks coming into and out of the mining site and the possibility of more trucks if the interchange is built and the need for material to build the interchange comes from the mine.
- A general comment regarding 90th Ave was provided. 90th Ave does impact farmland but the new alignment goes through a wetland as well.

Interchange Design Type Comments

- The additional interchange alternatives and analysis were generally well received.
- One resident expressed support for alternatives 4.E.2 (skewed diamond), and 4.E.3 (skewed PARCLO).
- Some were concerned with higher speeds along CSAH 9 since this will be free flowing once the interchange is built at US 52/9.
- Questions as to why consideration is not being given to removing the hill from the US 52 southbound alignment just south of CSAH 9. It was suggested that removal of the hill along with removal of the guardrail along US 52 near the US 52/CSAH 9 intersection would improve sight lines and reduce crashes.
- Questions as to the project timeline if funding was available.
- Questions over the need for the nearby Elk Run project given the limited funding.
- The public is interested in hearing about possible interim improvements at CSAH 9 and US 52, would like to see action taken now to improve safety at the intersection.

Appendix A: Meeting Sign-in Sheet

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
Robert ROHL	8202 Kenyon 4/0 ST	
JIM Edlund	111 WEST TRAIL CT. CF 55009	
Lori Ann Clark	38570 100th Ave CF 55009	lclarke danvillesignal.com
Al Clark	" "	aclark@danvillesignal.com
Bjorn Olson	9889 Co 9 Blvd CF	
Paul Melhouse	35860 75th Ave Way	
Kathy + Wally Jacobson	38080 70th Ave CF	kwjacobs@frontiernet.net
John Miller	31090 55Th Ave C.F	
Scott Goodman	Po Box 292 Wanamingo	goodmanscott59@yahoo.com
Anna Olson	9889 Co. 9 Blvd CF	
Joan Melhouse	37320 100th CF	Hj.melhouse@hotmail.com
Harry Melhouse	" " "	"

June 28, 2012

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
[illegible]	10819 360th St C.F.	
[illegible]	35871 Hwy 52	
[illegible]	10055 [illegible] CF.	
[illegible]	CF Beacon	
Jill Weber	30101 Hwy. 52 Blvd.	
Dan Johnson Johnson Logging	7557 360th St. Way	
Millie Ohnstad	900 Main St W #317 C F	
Jim Bryant		
Chris & Mitch Morey	33976 57th ave Cannon Falls	cwmorey@comcast.net
John R. McDonald	35253 Hwy 52 Blvd	
Dan Rechtzigel	1140 2nd St. E. Kenyon	

June 28, 2012

PUBLIC OPEN HOUSE

Highway 52 Safety, Access, and Interchange Location Study

Name	Address	Email
LARRY Olson	9300 Hy 9 Blvd CF	
RALPH HAGGSTROM	36989 90TH AVE CF	
Hank Shimanski	5561-387th. St C.F.	
Corey McDonald		Corey.McDonald.CMcD@gmail.com

June 28, 2012

Appendix B: Written Comments

Edgerton, Dan

From: Broz, Jack
Sent: Monday, July 09, 2012 1:53 PM
To: Edgerton, Dan; Allers, Ryan
Subject: FW: County 9 project

Follow Up Flag: Follow up
Flag Status: Completed

Jack Broz, P.E.
Project Director
HR GREEN, INC.

From: Bjorn Olson [bolsonfarms@gmail.com]
Sent: Friday, July 06, 2012 1:37 PM
To: heather.lukes@state.mn.us
Cc: greg.isaskson@co.goodhue.mn.us; Broz, Jack
Subject: County 9 project

Heather,
Thank you for your time and the fact some of the issues from the May meeting were addressed in the June meeting. That being said I feel like some of that was just lip service.
When dealing with the 100th Ave project I feel that the grading matrix was laughable. I seems like the scores were just thrown up there and made 100th Ave look like the only option.
Here are a couple faults that I find in your scores.
1. Safety- 100th scores the top yet it has the worst sight lines of all the options and would take the most money to fix them and most impact to residents. It also has the most truck traffic coming out of the gravel pit. It is a pit, it will never be able to have great access to a road higher than it, causing truck drivers to take more chances.
2. Mobility and connectivity- I know that you are funneling more traffic into truck traffic. Yet 100th scores highest again.
3. SEE- I asked a HR Green member what that stood for, he said environmental impact. I'm at a loss for how 100th scored high. You have to cross 3 waterways, widen the road, build up road/cut down some for sight lines, and you are building a new road that takes resources.
4. Cost- This is my favorite. How is 100th the highest with all its improvements and new upkeep and 56 the lowest. I was told that the shoulders would have to be widened on 56. That doesn't seem like much cost compared to 100th. And why does 56 need to be widened? For safety? There are plenty of county roads in Goodhue county that are the same width. It is not only up front costs but the county tax payers that will pay for upkeep. Mr. Isakson said it best that upkeep is killing our budget. Then why do we need two county roads a mile apart going to the same place? That is what it comes down to.....
Just because you put it up on a power point doesn't make it facts. What happens when you run into all these added costs on 100th that your group is not seeing? I think Mr. Broz summed it up best saying that you are looking at this from 30,000 feet not on the ground.

My big concern is the interchange design options for County 9 are going to be presented in the same light as 100th. False without any checks and balances.
As you guess I am a huge fan of either alt. 4.e.2 Diamond or alt. 4.e.3 PARCLO. Not only does it waste much less good farmland but it also takes the overpass away from the waterway and my parents farmstead.

I know you have said this will cost more. **What is cost?** I like to think of it as money/resources **WASTED**. How much more will a skewed bridge cost? To me it costs less great farm land lost, less people impacted, less right of way to buy. I know that they are not making any more farmland so once it's lost it's lost forever. Let's not waste resources that don't need to be wasted. That seems like a high cost.

I implore you to not have your mind made up on the interchange. You have a chance to not be wasteful. It might cost a little more money but it is less wasteful. Is it five dollars more or is it 5 million more? Is that going to stop you from getting funding or is it just a number? I have a feeling that asking for more money is not going to kill the funding, my guess is you are going to get it or you aren't. The government made me put tax dollars into the Elk Run project. I think this one is worth putting tax dollars into. It might come from a different fund but it's still our tax money.

I have to bring up two other things. 1. The meetings you have could not be at a worse time for people to make. As you could see retired people made up the crowd. I had to leave work early to go the meeting. If you really want people to show up and feel like you are listening maybe you should set the time for 6pm. Most people work till 5pm.
2. There was a member of the Right of Way team in a dark green shirt and used some inappropriate language in the back of the room. First its a church show some respect. Second act professional. Its ok to think it, just act like your age.

Thank you
Bjorn Olson

Highway 52 Safety, Access, and Interchange Location Study

COMMENTS

We need your input to guide decisions for addressing safety and access concerns along Highway 52 between Hader and the southern limits of Cannon Falls. Please write your comments below and leave in the "Comments" box on the table.

If you prefer, you may mail or e-mail your comments **by July 16, 2012** to:

Heather Lukes
MnDOT District 6
Project Manager
2900 48th Street Northwest
Rochester, MN 55901-5848
Heather.lukes@state.mn.us

It was brought up at the 6/28 meeting that the big push for this project is because something needs to be done for the safety of everyone although it may be done years down the road. It was mentioned interim projects may be discussed until the interchange can take place, but why aren't those meetings/suggestions being taken now? A great suggestion was recommended to simply change the sightlines of 52, mostly just on the south side of 9, both north & south lanes. The fill would be avail. to fill in the dip & decrease the hump on the north bound side making the sightlines visible for a much longer distance & wouldn't cost near the amount of $. Also, something that could be done & would probably drastically change the # of accidents. Which really are caused by human error rather than it being "a bad intersection". There really are no less accidents now than 20 years ago. The other recommendation, and I believe many in the area would agree, get rid of the automatic signs. They are confusing, it cost how much to do that & it hasn't made an impact on safety, and they only are set up for a car/passenger vehicle. Not a semi, or truck & trailer or bus. There are too many things to focus on & people are trying to follow that, use their own judgement & for those not from the area don't understand them. It's a waste of $.

Name (optional) Jill Weber

Address (optional) 31e101 Hwy. 52 Blvd.
CF

Telephone (optional)

E-mail (optional)

For information visit the project website:

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Monday, July 23, 2012 7:45 AM
To: greg.isakson@co.goodhue.mn.us; Ken.Bjornstad@co.goodhue.mn.us; Kempinger, Michael (DOT)
Cc: Edgerton, Dan; Broz, Jack
Subject: FW: County 9 and Highway 52 Open Meeting

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Anna Olson [mailto:annamholson@gmail.com]
Sent: Sunday, July 15, 2012 11:04 PM
To: Lukes, Heather A (DOT)
Subject: County 9 and Highway 52 Open Meeting

Dear Heather,

I attended the open meeting regarding the changes needed at Highway 52 and County Road 9. As I mentioned in a previous email, my family lives on the east side of 52 right on 9. Our property is also bordered by 100th Avenue. I was hopeful in attending the meeting that the comments made at the previous forum would result in more reasonable options for the interchange project. While it looks like an effort has been made to improve the placement of the actual interchange, I'm still very disappointed about the fact that 100th Avenue is still the preferred option for connecting County 9 to County 1. It seems like a decision has been made in terms of 100th and I still can't understand why this is the best option. The matrices displayed with the different map options gave 100th the best grade in terms of cost and safety. Is the data that was used to generate this study available to the public? I'd love to know how it is that County 56, which is already paved, crosses fewer waterways, and has better sight lines would be both a more expensive and less safe alternative for the increased traffic.

Obviously I live right on the corner of 100th and 9 and I have a vested interest in the safety of my young family and the value of my property. Very little has been said at these meetings about the impact that these changes will have on residents. Increased speed, noise, and risk of accidents will be a reality. We already have massive truck traffic through here due to the gravel pit and now the trucks will be able to travel at even greater speeds because they won't have to stop at 52. Can you assure us that the safety risk isn't just being moved off of 52 and to a county road?

I also mentioned in a previous email that I have yet to see and MnDot vehicles in our area despite being in what I would call a hot zone for this project. Where and how are they gathering their date? I commute. I'm on 52 and 9 every day and with the exception of the day of the open meeting I've never seen a single person surveying the traffic. Nor have they asked anyone around here about it. I work in project management. If this were my project the very first thing I would do would be to ask the people that live in the area what they think about the interchange. We know a lot more than you can learn from some study data or by looking at a map. I also wouldn't do it by hosting an open meeting that draws only a small segment of the local population. You should be talking to everyone that lives on or near the intersection and along 100th Avenue. Good information results

in a good plan which results in a prudent outcome. Unfortunately the Elk Run interchange is an excellent example of the inability to plan efficiently or cost effectively. Do you really want to make the same mistake twice?

It was mentioned that a new plan will be instituted in the fall to address the safety concerns of the 52/9 intersection. If road safety is the root of creating this interchange why isn't it being addressed more quickly? Instead we have to make it through yet another summer of busy, dangerous traffic. In a perfect scenario the interchange wouldn't even be completed for another three years. Are we just expected to continue to live with a well-documented deadly intersection for several more years? People vehemently complain about the signal boards, but personally I think they do help, however the primary problem with 52 and 9 is not the sight lines or the lack of an interchange. It's inattentive drivers that are going way too fast. If more patrols were dispatched to this area perhaps it would help. I also have to imagine it would be far less expensive than major road construction. I got the feeling though, that it isn't necessarily about safety. Instead it's about making 52 into an interstate.

I also have a few general comments about the open meetings. For one, I think having the meetings at 5:00 prevents a large number of the local residents from actually attending. I'm not sure if this is done on purpose so the numbers are down or if it's because your group doesn't want to work too late. In addition, the people that work and are thus unable to attend a meeting at 5:00 are the ones using 52 on a daily basis. Wouldn't their input in this 'planning' process be valuable? The meetings should either be moved to a later time or be held on a weekend when more people would be able to participate.

Second, while I appreciate the fact that not a lot can be done at this point in the process it would be nice to have a few more answers to the questions that are being asked. I get the feeling that these meetings are either being held as a requirement or in an effort to cover yourselves at a future date and not because you truly value the opinion of those in attendance. With most of the answers being, "we're not sure yet" or "we won't know until we have funding" the meetings are inefficient and unproductive. Wouldn't it make more sense to do these when we do have an idea of what's going to happen?

Finally, at the most recent meeting I had to step to the back of the room for a while. During the time that I was standing at the back I saw members of your team rolling their eyes and raising their eyebrows at questions that were being asked and one person called one of the speakers an expletive. I understand that everyone is entitled to their opinion, but when such blatant disrespect is displayed it's hard to feel as if we are really being considered in this process.

Respectfully,
Anna Olson

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Monday, July 23, 2012 7:42 AM
To: greg.isakson@co.goodhue.mn.us; Ken.Bjornstad@co.goodhue.mn.us; Kempinger, Michael (DOT)
Cc: Edgerton, Dan; Broz, Jack
Subject: FW: Highway 52 / County RD 9 Interchange

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Jim Hoffman [mailto:jimhoffman59@gmail.com]
Sent: Sunday, July 15, 2012 8:12 PM
To: Lukes, Heather A (DOT)
Subject: Highway 52 / County RD 9 Interchange

Dear Ms. Lukes,

After reviewing the design alternatives for the proposed interchange at 52/county road 9. I can't imagine how we would even consider Alt.4.E.1. To supposedly take advantage of an existing hill. Why would we add any curves to anything, if the main focus here is SAFETY. If the interchange has to be at county 9 why wouldn't you keep CR 9 as straight as possible. As far as considering 100th ave for anything but the township road that it is. Makes no sense to me, the cost to turn this into what ever it is we are looking for would be unbelievable. If limestone mining needs road improvements, have limestone miners pay for any road improvements. How much unnecessary cost would that add to the project? It seems to me the better alternative would be CR 56 it is already asphalt and a very good inexpensive alternative. We could use the savings to keep CR 9 straight. If we are truly looking to make this a safe and responsible project lets use the features that are at our disposal and not add a lot of needless cost.I don't feel we should be using our hard earned tax money and be irresponsible with this project.
The main concern here is safety, then traffic movement. I have served on the City of Cannon Falls Planning Commission. In the past we looked at what main arteries would feed the main corridor that is highway 52. I can't believe that CR 1 will ever be as important to this highway infer structure as MN highway 19 is.
In closing leave the hill, keep CR 9 straight, utilize CR 56 and leave any 100th ave improvement cost to the miners.

Sincerely,
Jim Hoffman
Minnesota and
Goodhue County
Tax payer

Appendix C: Project Team Response to Comments

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Thursday, August 09, 2012 1:22 PM
To: Jim Hoffman
Cc: greg.isakson@co.goodhue.mn.us
Subject: RE: Highway 52 / County RD 9 Interchange

Dear Mr. Hoffman,

On behalf of Goodhue County and MnDOT, thank you for taking time to provide comments on the US 52 Safety, Access and Interchange Location Study, we truly value your input. We would like to stress that at this time, we are conducting a planning study. When funding is received, many of these recommendations will be revisited through the project development process. Your continued involvement is welcomed in future phases of the project.

Regarding your concerns raised over the proposed interchange design options, the exact interchange design and configuration has not been determined yet. The interchange design options were presented to show possible configurations of an interchange located at US 52 and County Road (CR) 9. The final interchange design will be determined during the next phases of the project development process once construction funding has been identified.

For the comments regarding the re-routing of CR 1 along 90th Avenue (Ave), 100th Ave, or CR 56 the project team did conduct a thorough evaluation. This included preliminary engineering for each of the three alternatives considered. Vertical and horizontal alignment needs were calculated to understand relative costs and the magnitude of differences between the three alternatives.

It should be noted that County Roads (CR) 1 and 9 are part of the County State Aid Highways (CSAH) system. As CSAH routes, these roads are required to meet design standards that accommodate higher traffic volumes and more heavy commercial vehicles (trucks) than county or township roads. A connection between CR 1 and CR 9 will become a portion of CR 1 and therefore will need to be built to meet CSAH design standards. These include standards for pavement strength, lane width, shoulder width, clear-zone width, right of way width, and intersection site lines.

The county road connection matrix comparing the three potential routes included:

- Building a new road to CSAH standards on a new alignment (90th Ave)
- Rebuilding existing roads (100th Ave and CR 56) to meet current CSAH standards

Both 100th Ave and CR 56 would need to be realigned at their north termini with CR 1. The new alignments (through existing farmland) would be a 55 mph horizontal curve (south and east) of their existing connections with CR 1. CR 56 was built in 1973 as a county road. Used as the CSAH route connection from CR 1 and CR 9, would require it be rebuilt to current CSAH design standards. Any new road segment would be designed similarly as the recently rebuilt CSAH 1 starting just east of CR 56 to White Rock.

100th Ave was rated highest in safety because its horizontal alignment had the least amount of curves (it is a fairly straight roadway) when compared to 90th Ave and CR 56. 90th Avenue has two significant horizontal curves and CR 56 has several horizontal curves along its alignment. Run off the road accidents occur more at horizontal curves than along straight segments of rural highways.

For connectivity and mobility of traffic, 100th Ave route rated higher because it is the most direct route for regional through traffic (least travel time, backtracking, etc.). Both 90th Ave and CR 56 would require drivers to backtrack, are longer routes and take longer to travel when compared against 100th Ave. Additionally, in the future when US 52 is converted to a freeway facility, properties located along existing CR 1 and the east side of US 52 north of CR 1 will have their direct access to US 52 closed. Their access will be re-routed to an interchange. The re-routed traffic would follow along 90th Ave, 100th Ave or CR 56. The most direct route is desired for re-routed traffic. CR 56 is the least favorable route and 90th Ave or 100th Ave are more favorable routes based on this desire. If CR 56 were used as the connection between CR 1 and CR 9, it is very likely a large segment of the traveling population would use the unimproved 100th Ave (most direct route) to reach an interchange. This would result in an increase of traffic on the township road.

You point out the fact that the limestone quarry uses 100th Ave. The township is responsible for maintenance of this road. The truck traffic from the limestone quarry creates safety and mobility problems today. This supports the need to upgrade 100th Ave. Selecting and upgrading this alignment to CSAH design standards (including the improvement of sight lines and eliminating dust so cars and heavy trucks can better see each other along the route), would thereby improve safety and operations.

In regards to cost concerns raised for the three alternatives, 90th Ave has the highest total 'area impacted' driving up the cost (right of way to purchase and grading a new road through farmland and wetlands and re-grading the existing roadway to meet State Aid standards). CR 56 is the longest route and complete reconstruction of this route is required as stated previously. CR 56 would also require replacement of existing stream crossings structures. The existing CR 56 structures are old and mostly likely would not be able to be lengthened. 100th Ave would require re-grading but as a shorter route than CR 56 and 90th Ave, would impact less total property area resulting in a lower cost. 100th Ave does have stream crossing structures and that would require replacement. However the county (at the request of the township) will be replacing the large structure just south of the limestone mine next year. The 100th Ave alternative would not require a new structure at this location, only the widening of that structure.

Please let Goodhue County or MnDOT know if you have any further questions or concerns.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Jim Hoffman [mailto:jimhoffman59@gmail.com]
Sent: Sunday, July 15, 2012 8:12 PM
To: Lukes, Heather A (DOT)
Subject: Highway 52 / County RD 9 Interchange

Dear Ms. Lukes,

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are at our disposal and not add a lot of needless cost.I don't feel we should be using our hard earned tax money and be irresponsible with this project.
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In closing leave the hill, keep CR 9 straight, utilize CR 56 and leave any 100th ave improvement cost to the miners.

Sincerely,
Jim Hoffman
Minnesota and
Goodhue County
Tax payer

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Thursday, August 09, 2012 1:30 PM
To: Bjorn Olson
Cc: greg.isakson@co.goodhue.mn.us
Subject: RE: County 9 project

Dear Mr. Olson,

On behalf of Goodhue County and MnDOT, thank you for taking time to provide comments on the US 52 Safety, Access and Interchange Location Study, we truly value your input. We would like to stress that at this time, we are conducting a planning study. When funding is received, many of these recommendations will be revisited through the project development process. Your continued involvement is welcomed in future phases of the project.

It is always a challenge to determine what level of detail should be included in a public presentation. Most participants appeared to be satisfied with the level of detail used at the June 28th meeting. We do appreciate and respect that some attendants would like more detail. Hopefully the following information provides the detail you are seeking to explain the matrixes and conclusions presented at the meeting.

In regards to your concerns over the 100th Avenue (Ave) rating matrix, we would like to assure you that while this is a "30,000 foot analysis" the project team did conduct thorough "ground level" evaluation. This included preliminary engineering for each of the three alternatives considered. Vertical and horizontal alignment needs were calculated to understand relative costs and the magnitude of differences between the alternatives. While the ratings may be somewhat subjective, the data analysis behind it is quantifiable and based on standard practices for this type of effort.

It should be noted that County Roads (CR) 1 and 9 are part of the County State Aid Highways (CSAH) system. As CSAH routes, these roads are required to meet design standards that accommodate higher traffic volumes and more heavy commercial vehicles (trucks) than county or township roads. A connection between CR 1 and CR 9 will become a portion of CR 1 and therefore will need to be built to meet CSAH design standards. These include standards for pavement strength, lane width, shoulder width, clear-zone width, right of way width, and intersection site lines.

The county road connection matrix comparing the three potential routes included:

- Building a new road to CSAH standards on a new alignment (90th Ave)
- Rebuilding existing roads (100th Ave and CR 56) to meet current CSAH standards

Both 100th Ave and CR 56 would need to be realigned at their north termini with CR 1. The new alignments (through existing farmland) would be a 55 mph horizontal curve (south and east) of CR 1 intersection. CR 56 was built in 1973 as a county road. Used as the CSAH route connection from CR 1 and CR 9, would require it be rebuilt to current CSAH design standards. Any new road segment would be designed similarly as the recently rebuilt CSAH 1 starting just east of CR 56 to White Rock.

Regarding the safety goal, 100th Ave was rated highest because its horizontal alignment had the least amount of curves (it is a fairly straight roadway) when compared to 90th Ave and CR 56. 90th Avenue has two significant horizontal curves and CR 56 has several horizontal curves along its alignment. Run off the road accidents occur more at horizontal curves than along straight segments of rural highways.

For the access management goal, 90th Ave rated the highest because it has the least amount of access points along the route. 100th Ave and CR 56 had more access points resulting in a lower rating.

For the connectivity and mobility goal, 100th Ave route rated higher because it is the most direct route for regional through traffic (least travel time, backtracking, etc.). Both 90th Ave and CR 56 would require drivers to backtrack, are longer routes and take longer to travel when compared against 100th Ave. Additionally, in the future when US 52 is converted to a freeway facility, properties located along existing CR 1 and the east side of US 52 north of CR 1 will have their direct access to US 52 closed. Their access will be re-routed to an interchange. The re-routed traffic would follow along 90th Ave, 100th Ave or CR 56. The most direct route is desired for re-routed traffic. CR 56 is the least favorable route and 90th Ave or 100th Ave are more favorable routes based on this desire. If CR 56 were used as the connection between CR 1 and CR 9, it is very likely a large segment of the traveling population would use the unimproved 100th Ave (most direct route) to reach an interchange. This would result in an increase of traffic on the township road.

We acknowledge, routing CR 1 traffic onto 100th Ave would add to the existing mix of traffic on the road, which currently includes a number of heavy trucks. The fact that this additional traffic will have an impact on local property owners (including you) is not being downplayed. But the roadway would be designed (in accordance with State Aid standards) to accommodate these new traffic volumes for the foreseeable future. You point out that the limestone quarry using 100th Ave creates safety and mobility problems today. This supports the need to upgrade 100th Ave. Selecting and upgrading this alignment to State Aid standards (including the improvement of sight lines and eliminating dust so cars and heavy trucks can better see each other along the route), would improve safety and operations.

In regards to your environmental concerns, the "SEE" rating actually includes a combination of Social, Economic, and Environmental (SEE) impacts. Impacts to adjacent properties would occur along either of the selected routes. The 90th Ave alternative has the highest right of way impact as a portion of the roadway goes through farmland and wetland areas. 100th Ave and CR 56 have smaller right of way impacts because existing roadways alignments would be followed. 100th Ave rated neutral in-terms of environmental impacts as it crosses very similar features as the other two alternatives. It also scored neutral on social impacts as it would require minimal right-of-way acquisition. 100th Ave would expose fewer homes (seven) to increased traffic than CR 56 (with ten homes). It scored well under the economic impacts category as it would:

- provide a paved route for the mining operations
- eliminate a township maintenance problem
- reduce dust
- add another paved road to the road system in this segment of the County.

The overall roadway mileage in the county system and township system would remain relatively the same by selecting 100th Ave as the new CR 1. The existing CR 1 from US 52 to 100th Ave would be turned over to the township for their maintenance. If CR 56 is selected as the new CR1, the existing CR 1 from US 52 to CR 56 would be turned over to the township to maintain, resulting in more mileage of roadways going to the township and drive up their maintenance costs.

For the cost effectiveness project goal, concerns were raised over the rating of 100th Ave being the highest and CR 56 the lowest. 90th Ave has the highest total 'area impacted' driving up the cost (right of way to purchase and grading a new road through farmland and wetlands and re-grading the existing roadway to meet State Aid standards). CR 56 is the longest route and complete reconstruction of this route is required as stated previously. CR 56 would also require replacement of existing stream crossings structures. The existing CR 56 structures are old and mostly likely would not be

able to be lengthened. 100th Ave would require re-grading but as a shorter route than CR 56 and 90th Ave, would impact less total property area resulting in a lower cost. 100th Ave does have stream crossing structures and that would require replacement. However the county (at the request of the township) will be replacing the large structure just south of the limestone mine next year. The 100th Ave alternative would not require a new structure at this location, only the widening of that structure.

Regarding your concerns raised over the interchange design options, the exact interchange design and configuration has not been determined. The purpose of this planning study is to complete the initial groundwork determining an interchange location, but not the exact interchange design or configuration. The three interchange configuration alternatives presented at the most recent public meeting were developed based on public comments raised at previous public meetings. You have also relayed questions as to the planning level costs determined for the different interchange configurations presented. The planning level cost of a skewed bridge (4.E.2 and 4.E.3) is greater than a perpendicular bridge (4.E.1). The skewed bridge planning level cost can be offset by the reduction in land acquisition needed for construction for the perpendicular bridge alternative. This results in a fairly similar overall planning level cost for each interchange configuration. The final configuration of a future interchange will be determined during the project development phase once construction funds are identified.

We would also like to address your comments over the meeting time and behavior of right of way representative. As per the meeting time, we have experienced the time from 5:00 to 6:30 pm tends to draw a greater number of participants. We do appreciate you taking time to come to the meeting. Secondly, MnDOT does not condone the behavior as you describe. Your comments have been forwarded to the area supervisor for follow-up.

Please let Goodhue County or MnDOT know if you have any further questions or concerns. Thank-you again for taking the time to provide project comments.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Bjorn Olson [mailto:bolsonfarms@gmail.com]
Sent: Friday, July 06, 2012 1:37 PM
To: Lukes, Heather A (DOT)
Cc: greg.isaskson@co.goodhue.mn.us; jbroz@hrgreen.com
Subject: County 9 project

Heather,
Thank you for your time and the fact some of the issues from the May meeting were addressed in the June meeting. That being said I feel like some of that was just lip service.
When dealing with the 100th Ave project I feel that the grading matrix was laughable. I seems like the scores were just thrown up there and made 100th Ave look like the only option.
Here are a couple faults that I find in your scores.
1. Safety- 100th scores the top yet it has the worst sight lines of all the options and would take the most money to fix them and most impact to residents. It also has the most truck traffic coming out of the gravel pit. It is a pit, it will never be able to have great access to a road higher than it, causing truck drivers to take more chances.
2. Mobility and connectivity- I know that you are funneling more traffic into truck traffic. Yet 100th scores highest again.

3. SEE- I asked a HR Green member what that stood for, he said environmental impact. I'm at a loss for how 100th scored high. You have to cross 3 waterways, widen the road, build up road/cut down some for sight lines, and you are building a new road that takes resources.
4. Cost- This is my favorite. How is 100th the highest with all its improvements and new upkeep and 56 the lowest. I was told that the shoulders would have to be widened on 56. That doesn't seem like much cost compared to 100th. And why does 56 need to be widened? For safety? There are plenty of county roads in Goodhue county that are the same width. It is not only up front costs but the county tax payers that will pay for upkeep. Mr. Isakson said it best that upkeep is killing our budget. Then why do we need two county roads a mile apart going to the same place? That is what it comes down to.....
Just because you put it up on a power point doesn't make it facts. What happens when you run into all these added costs on 100th that your group is not seeing? I think Mr. Broz summed it up best saying that you are looking at this from 30,000 feet not on the ground.

My big concern is the interchange design options for County 9 are going to be presented in the same light as 100th. False without any checks and balances.
As you guess I am a huge fan of either alt. 4.e.2 Diamond or alt. 4.e.3 PARCLO. Not only does it waste much less good farmland but it also takes the overpass away from the waterway and my parents farmstead.
I know you have said this will cost more. **What is cost?** I like to think of it as money/resources **WASTED**. How much more will a skewed bridge cost? To me it costs less great farm land lost, less people impacted, less right of way to buy. I know that they are not making any more farmland so once it's lost it's lost forever. Let's not waste resources that don't need to be wasted. That seems like a high cost.

I implore you to not have your mind made up on the interchange. You have a chance to not be wasteful. It might cost a little more money but it is less wasteful. Is it five dollars more or is it 5 million more? Is that going to stop you from getting funding or is it just a number? I have a feeling that asking for more money is not going to kill the funding, my guess is you are going to get it or you aren't. The government made me put tax dollars into the Elk Run project. I think this one is worth putting tax dollars into. It might come from a different fund but it's still our tax money.

I have to bring up two other things. 1. The meetings you have could not be at a worse time for people to make. As you could see retired people made up the crowd. I had to leave work early to go the meeting. If you really want people to show up and feel like you are listening maybe you should set the time for 6pm. Most people work till 5pm.
2. There was a member of the Right of Way team in a dark green shirt and used some inappropriate language in the back of the room. First its a church show some respect. Second act professional. Its ok to think it, just act like your age.

Thank you
Bjorn Olson

Edgerton, Dan

From: Lukes, Heather A (DOT) <Heather.Lukes@state.mn.us>
Sent: Thursday, August 09, 2012 2:20 PM
To: Anna Olson
Cc: greg.isakson@co.goodhue.mn.us
Subject: RE: County 9 and Highway 52 Open Meeting

Dear Ms. Olson,

On behalf of Goodhue County and MnDOT, thank you for taking time to provide comments on the US 52 Safety, Access and Interchange Location Study, we truly value your input and the input of the public. We would like to stress that at this time, we are conducting a planning study. When funding is received, many of these recommendations will be revisited through the project development process. Additionally, once funding has been allocated more thorough and detail design will take place and public meetings held to answer specific questions. We welcome your continued involvement in future phases of the project.

Hopefully the following information on the 100th Avenue (Ave) rating matrix will deliver the level of detail you are seeking to explain the rating matrixes and conclusions presented at the meeting.

In regards to your concerns over the 100th Ave rating matrix, the project team conducted preliminary engineering (including site observation) for each of the three alternatives considered. A Technical Memorandum is being developed to document this analysis. It will be posted to the project website upon completion. Vertical and horizontal alignment needs were calculated to understand relative costs and the magnitude of differences between the three alternatives. While the ratings may be somewhat subjective, the data analysis behind it is quantifiable and based on standards practices for this type of effort.

It should be noted that County Roads (CR) 1 and 9 are part of the County State Aid Highways (CSAH) system. As CSAH routes, these roads are required to meet design standards that accommodate higher traffic volumes and more heavy commercial vehicles (trucks) than county or township roads. A connection between CR 1 and CR 9 will become a portion of CR 1 and therefore will need to be built to meet CSAH design standards. These include standards for pavement strength, lane width, shoulder width, clear-zone width, right of way width, and intersection site lines.

The county road connection matrix comparing the three potential routes included:

- Building a new road to CSAH standards on a new alignment (90th Ave)
- Rebuilding existing roads (100th Ave and CR 56) to meet current CSAH standards

Both 100th Ave and CR 56 would need to be realigned at their north termini with CR 1. The new alignments (through existing farmland) would be a 55 mph horizontal curve (south and east) of CR 1 intersection. CR 56 was built in 1973 as a county road. Used as the CSAH route connection from CR 1 and CR 9, would require it be rebuilt to current CSAH design standards. Any new road segment would be designed similarly as the recently rebuilt CSAH 1 starting just east of CR 56 to White Rock.

Regarding the safety goal, 100th Ave was rated highest because its horizontal alignment had the least amount of curves (it is a fairly straight roadway) when compared to 90th Ave and CR 56. 90th Avenue has two significant horizontal curves and CR 56 has several horizontal curves along its alignment. Run off the road accidents occur more at horizontal curves than along straight segments of rural highways.

For the access management goal, 90th Ave rated the highest because it has the least amount of access points along the route. 100th Ave and CR 56 had more access points resulting in a lower rating.

For the connectivity and mobility goal, 100th Ave route rated higher because it is the most direct route for regional through traffic (least travel time, backtracking, etc.). Both 90th Ave and CR 56 would require drivers to backtrack, are longer routes and take longer to travel when compared against 100th Ave. Additionally, in the future when US 52 is converted to a freeway facility, properties located along existing CR 1 and the east side of US 52 north of CR 1 will have their direct access to US 52 closed. Their access will be re-routed to an interchange. The re-routed traffic would follow along 90th Ave, 100th Ave or CR 56. The most direct route is desired for re-routed traffic. CR 56 is the least favorable route and 90th Ave or 100th Ave are more favorable routes based on this desire. If CR 56 were used as the connection between CR 1 and CR 9, it is very likely a large segment of the traveling population would use the unimproved 100th Ave (most direct route) to reach an interchange. This would result in an increase of traffic on the township road.

We acknowledge, routing CR 1 traffic onto 100th Ave would add to the existing mix of traffic on the road, which currently includes a number of heavy trucks. The fact that this additional traffic will have an impact on local property owners (including you) is not being downplayed. But the roadway would be designed (in accordance with State Aid standards) to accommodate these new traffic volumes for the foreseeable future. You point out that the limestone quarry using 100th Ave creates safety and mobility problems today. This supports the need to upgrade 100th Ave. Selecting and upgrading this alignment to State Aid standards (including the improvement of sight lines and eliminating dust so cars and heavy trucks can better see each other along the route), would improve safety and operations.

For the Social, Economic, and Environmental (SEE) goal, impacts to adjacent properties would occur along either of the selected routes. The 90th Ave alternative has the highest right of way impact as a portion of the roadway goes through farmland and wetland areas. 100th Ave and CR 56 have smaller right of way impacts because existing roadways alignments would be followed. 100th Ave rated neutral in-terms of environmental impacts as it crosses very similar features as the other two alternatives. It also scored neutral on social impacts as it would require minimal right-of-way acquisition. 100th Ave would expose fewer homes (seven) to increased traffic than CR 56 (with ten homes). It scored well under the economic impacts category as it would:

- provide a paved route for the mining operations
- eliminate a township maintenance problem
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- add another paved road to the road system in this segment of the County.

The overall roadway mileage in the county system and township system would remain relatively the same by selecting 100th Ave as the new CR 1. The existing CR 1 from US 52 to 100th Ave would be turned over to the township for their maintenance. If CR 56 is selected as the new CR1, the existing CR 1 from US 52 to CR 56 would be turned over to the township to maintain, resulting in more mileage of roadways going to the township and drive up their maintenance costs.

For the cost effectiveness project goal, concerns were raised over the rating of 100th Ave being the highest and CR 56 the lowest. 90th Ave has the highest total 'area impacted' driving up the cost (right of way to purchase and grading a new road through farmland and wetlands and re-grading the existing roadway to meet State Aid standards). CR 56 is the longest route and complete reconstruction of this route is required as stated previously. CR 56 would also require replacement of existing stream crossings structures. The existing CR 56 structures are old and mostly likely would not be able to be lengthened. 100th Ave would require re-grading but as a shorter route than CR 56 and 90th Ave, would impact less total property area resulting in a lower cost. 100th Ave does have stream crossing structures and that would

require replacement. However the county (at the request of the township) will be replacing the large structure just south of the limestone mine next year. The 100th Ave alternative would not require a new structure at this location, only the widening of that structure.

Project summary reports and public meeting documentation are provided on the project website.

http://www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html .

Traffic speeds are a concern and need to be regulated. Additional patrols in the area would help to mitigate this issue. You are correct in stating traffic along CR 9 that crosses US 52 will no longer be required to stop. The new constructed roadways that result from this project will be designed and constructed to the safest extent practicable.

Project staff have completed site visits, driven the routes and collected data in the study area. This includes staff from Goodhue County, MnDOT and their consultant. Traffic data has been collected with field observations and electronic equipment. Data collection for the next project development phase will continue when the project receives funding.

Interim improvements are being studied by MnDOT and Goodhue County for the US 52/CR 9 intersection to improve the safety. The public will be asked to comment on improvements when the agencies have viable safe options to present. We plan to present proposed interim safety improvements late this fall.

You had stated concerns with the time of the meeting. It has been our experience the time from 5:00 to 6:30 pm tends to draw a greater number of participants. We strive to provide meeting times where we can get the highest attendance from the public. We have had phone calls or written comments from some individuals who could not make the meeting. Staff using US52/CR9 as a commuter route have commented on the project as well.

While it may seem these meetings are inefficient and unproductive, the project management team has received valuable public feedback on the alternatives being considered. This has helped the project team focus on alternatives acceptable to the public. These project meetings are necessary to complete the preliminary to provide study parameters and establish planning level costs. Due to the public meeting comments, the project management team further analyzed different interchange design types for US 52 and CR 9 and additional corridors for the rerouting of CR 1.

At the end of your comments, you discussed behavior of certain team members. MnDOT does not condone the behavior as you describe. Your comments have been forwarded to the area supervisor for follow-up. Please be assured we value the public input.

Please let Goodhue County or MnDOT know if you have any further questions or concerns. Thank-you again for taking time to provide project comments.

Regards,

Heather A. Lukes

Project Manager
Mn/DOT District 6 - Design

From: Anna Olson [mailto:annamholson@gmail.com]
Sent: Sunday, July 15, 2012 11:04 PM
To: Lukes, Heather A (DOT)
Subject: County 9 and Highway 52 Open Meeting

Dear Heather,

I attended the open meeting regarding the changes needed at Highway 52 and County Road 9. As I mentioned in a previous email, my family lives on the east side of 52 right on 9. Our property is also bordered by 100th Avenue. I was hopeful in attending the meeting that the comments made at the previous forum would result in more reasonable options for the interchange project. While it looks like an effort has been made to improve the placement of the actual interchange, I'm still very disappointed about the fact that 100th Avenue is still the preferred option for connecting County 9 to County 1. It seems like a decision has been made in terms of 100th and I still can't understand why this is the best option. The matrices displayed with the different map options gave 100th the best grade in terms of cost and safety. Is the data that was used to generate this study available to the public? I'd love to know how it is that County 56, which is already paved, crosses fewer waterways, and has better sight lines would be both a more expensive and less safe alternative for the increased traffic.

Obviously I live right on the corner of 100th and 9 and I have a vested interest in the safety of my young family and the value of my property. Very little has been said at these meetings about the impact that these changes will have on residents. Increased speed, noise, and risk of accidents will be a reality. We already have massive truck traffic through here due to the gravel pit and now the trucks will be able to travel at even greater speeds because they won't have to stop at 52. Can you assure us that the safety risk isn't just being moved off of 52 and to a county road?

I also mentioned in a previous email that I have yet to see and MnDot vehicles in our area despite being in what I would call a hot zone for this project. Where and how are they gathering their date? I commute. I'm on 52 and 9 every day and with the exception of the day of the open meeting I've never seen a single person surveying the traffic. Nor have they asked anyone around here about it. I work in project management. If this were my project the very first thing I would do would be to ask the people that live in the area what they think about the interchange. We know a lot more than you can learn from some study data or by looking at a map. I also wouldn't do it by hosting an open meeting that draws only a small segment of the local population. You should be talking to everyone that lives on or near the intersection and along 100th Avenue. Good information results in a good plan which results in a prudent outcome. Unfortunately the Elk Run interchange is an excellent example of the inability to plan efficiently or cost effectively. Do you really want to make the same mistake twice?

It was mentioned that a new plan will be instituted in the fall to address the safety concerns of the 52/9 intersection. If road safety is the root of creating this interchange why isn't it being addressed more quickly? Instead we have to make it through yet another summer of busy, dangerous traffic. In a perfect scenario the interchange wouldn't even be completed for another three years. Are we just expected to continue to live with a well-documented deadly intersection for several more years? People vehemently complain about the signal boards, but personally I think they do help, however the primary problem with 52 and 9 is not the sight lines or the lack of an interchange. It's inattentive drivers that are going way too fast. If more patrols were dispatched to this area perhaps it would help. I also have to imagine it would be far less expensive than major road construction. I got the feeling though, that it isn't necessarily about safety. Instead it's about making 52 into an interstate.

I also have a few general comments about the open meetings. For one, I think having the meetings at 5:00 prevents a large number of the local residents from actually attending. I'm not sure if this is done on purpose so the numbers are down or if it's because your group doesn't want to work too late. In addition, the people that work and are thus unable to attend a meeting at 5:00 are the ones using 52 on a daily basis. Wouldn't their input in this 'planning' process be valuable? The meetings should either be moved to a later time or be held on a weekend when more people would be able to participate.

Second, while I appreciate the fact that not a lot can be done at this point in the process it would be nice to have a few more answers to the questions that are being asked. I get the feeling that these meetings are either being

held as a requirement or in an effort to cover yourselves at a future date and not because you truly value the opinion of those in attendance. With most of the answers being, "we're not sure yet" or "we won't know until we have funding" the meetings are inefficient and unproductive. Wouldn't it make more sense to do these when we do have an idea of what's going to happen?

Finally, at the most recent meeting I had to step to the back of the room for a while. During the time that I was standing at the back I saw members of your team rolling their eyes and raising their eyebrows at questions that were being asked and one person called one of the speakers an expletive. I understand that everyone is entitled to their opinion, but when such blatant disrespect is displayed it's hard to feel as if we are really being considered in this process.

Respectfully,
Anna Olson

Appendix F: Technical Memorandum 5: Access Management Overview

Technical Memorandum 5

US 52 Safety, Access, and Interchange Location Study
Access Management Overview

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

December 28, 2012

Prepared For:

Prepared By:

HRGreen

HRG: 832470J

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Introduction

The primary objective of the US 52 Safety, Access, and Interchange Location Study is to address the severe safety issues along US 52 within the project area and to implement the long-term vision for US 52, which includes conversion to a fully access-controlled freeway facility. The ultimate goal for the US 52 corridor is to remove all at-grade intersections and signals, which will include the construction of an interchange in the vicinity of County State Aid Highway (CSAH) 9 or CSAH 1.

As part of the alternative development and evaluation process for the US 52 Safety, Access, and Interchange Location Study, CSAH 9 was identified as the recommended location for a future interchange along US 52, as it will best accomplish the study goals. The closure of access to US 52 at CSAH 14 and extension of CSAH 14 to CSAH 24 on the north have also been identified as recommended improvements (refer to *Technical Memorandum 4: Evaluation of Alternatives*).

The purpose of this technical memorandum is to document the characteristics of the existing at-grade access points along the study segment of US 52, and to provide an overview of access management strategies which could be applied to move the corridor toward the ultimate vision of a fully access controlled freeway.

Study Area

The one-mile wide project area includes a 10-mile corridor along US 52, extending from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52, to south of County Road (CR) 50 (near Hader). The project area is shown Figure 1.

Access Management Principles

Access management is the planning, design and implementation of land use and transportation strategies in an effort to maintain a safe flow of traffic while accommodating the access needs of adjacent development.[1] In general, too many driveways, intersections, and closely spaced traffic signals along major roads cause safety, operational, and community problems, such as the following:

- Crashes increase as vehicles cross and turn along the road in an uncoordinated manner
- Stop and go conditions frustrate commuters and local residents
- Adjacent businesses suffer when customers have trouble turning into their sites
- Freight and delivery trucks lose time and money when stuck in traffic
- Pedestrians can't find a safe spot to cross the road
- Overall community livability suffers

Management of roadway access, both in terms of cross-street spacing and driveway placement, is a critical means of preserving and enhancing a roadway's intended function and its efficient operation. In addition, providing access management in some form, whether through grade-separated crossings, frontage and backage roads or right-in/right-out access, reduces the number of vehicle conflict points resulting in improved safety. A number of studies have demonstrated a direct relationship between the number of access points and the rate of crashes, showing a positive correlation between access density (access points per mile) and the frequency of crashes (crash rates).[2] Given this relationship, access management is an important roadway safety tool and can provide benefits to the roadway:

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[1] MnDOT *Access Management Strategies and Resource Guidance* webpage. Accessed September 17, 2012. http://www.dot.state.mn.us/accessmanagement/.
[2] *FHWA Access Research Report No. FHWA-RD-91-044*

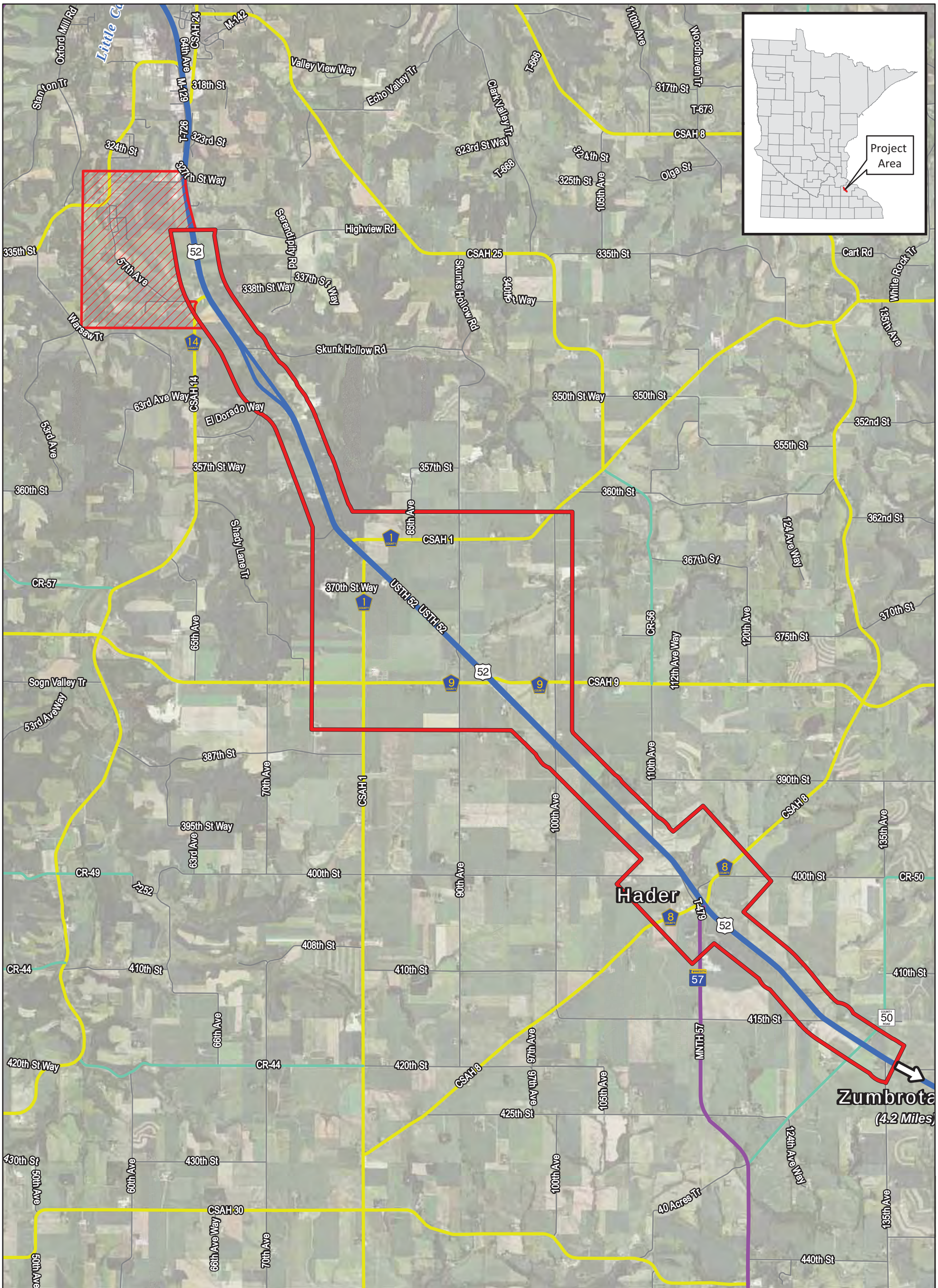


FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

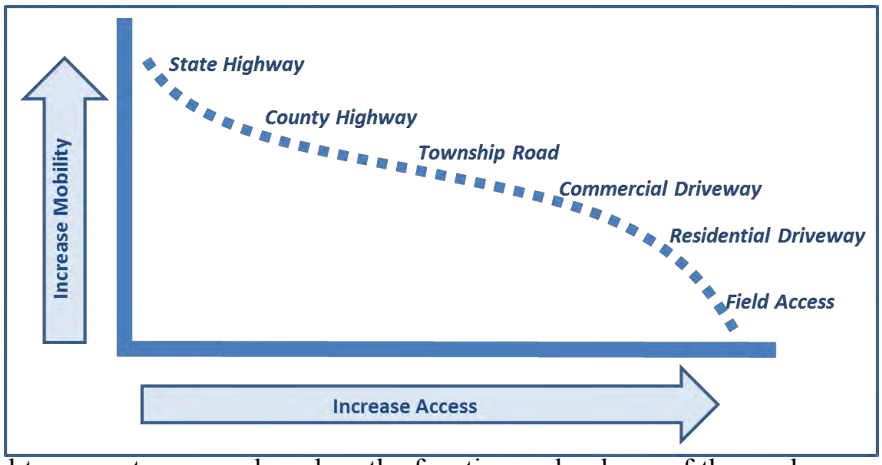
N W E S

MINNESOTA DEPARTMENT OF TRANSPORTATION

HRGreen

- Reduce crashes and congestion
- Preserve road capacity and postpone the need for roadway widening or other improvements
- Improve travel times for the delivery of goods and services
- Ease movement between destinations
- Support local economic development

Figure 2: Access/Mobility Relationship



Access management tools must balance the public interest (mobility) with the interests of property owners (access). Figure 2 shows the relationship between access and mobility and illustrates the hierarchy of facility types along the study segment of US 52. Moving up the hierarchy from residential driveways to state highway intersections, greater emphasis is placed on mobility as compared to property access, based on the function and volume of the roadway. For higher functioning roadways, such as state and county highways (i.e., CSAH 9), a greater degree of mobility is needed, requiring unrestricted access to US 52 (i.e., such as a grade separated interchange). For lower functioning routes such as township roads and private driveways (i.e., Skunk Hollow Road) a greater emphasis is placed on providing property access, with regional mobility served via connections to higher functioning roads (i.e., county highways). For these roads, direct access to US 52 can be limited (i.e., right-in/right-out only) or closed altogether if suitable replacement access is available.

A. Access Management Guidelines

As a state highway, MnDOT is the public agency with jurisdiction over US 52 and is responsible for ensuring sound access management. Access management policy for US 52 begins at the state level with MnDOT's Access Management Strategies and Resource Guidance (*MnDOT Access Management Manual. January 2, 2008.)*, which provides guidelines for access management on all state routes. Generally, access management guidelines are applied by category, with category assignments made based on a statewide classification network (i.e., interstate highway, interregional corridor, state highway, etc.). The access management guidelines identify recommended design criteria for intersection spacing based on a roadway's category, including primary intersections (i.e., full movement), secondary intersections (i.e., mid-way between primary intersections), and private driveways. The guidelines also include recommendations for traffic signal and interchange spacing (refer to Appendix A).

According to the MnDOT Access Management category map for District 6, the study segment of US 52 is classified as category 1AF for a non-interstate freeway facility (see Figure 3). As shown in Table 1, the access management guidelines for Category 1AF call for access by interchange only, with at-grade intersections permitted by only by exception and on an interim basis.

Table 1: Access Management Guidelines – Category 1AF (non-interstate freeway)

Facility Type	Design Guideline
Public Streets (primary and secondary intersection)	Interchange Access Only
Driveways	Permitted be exception only
Traffic Signals	Permitted be exception only

Source: MnDOT Access Management Manual. January 2, 2008

FIGURE 3
ACCESS MANAGEMENT CATEGORIES

US 52 Safety, Access, and Interchange Location Study

MnDOT District 6

HRGreen

Source: MnDOT Office of Investment Management 2004 TIS data and Access Management Database.

LEGEND

- F [Interstate Freeway]
- A-F [Full Grade Separation]
- A [Rural]
- B [Urban/Urbanizing]
- C [Urban Core]
- 7 [Specific Access Plan]

The MnDOT Access Management Manual also includes provisions for Category 1AF highways which are transitioning to a freeway, such as US 52. These provisions acknowledge that it is likely that both at-grade intersections and interchanges will be present on such facilities. According to the MnDOT guidelines, all existing at-grade intersections should be considered interim. The following guidelines apply to the interim intersections along US 52 within the project area:

- The desirable spacing between an existing interim at-grade intersection and the merge point of the closest interchange ramp should be a minimum of one-half mile. The spacing between two at-grade, full-movement intersection spacing should be at least one mile.
- Driveways should not be permitted if reasonably convenient and suitable alternative access is available. Where reasonably convenient and suitable alternative access is not available, an interim driveway may be permitted, and if possible, should be designed so that traffic can be redirected to another road when the facility becomes fully access-controlled.
- New traffic signals should not be considered unless no other economically feasible alternative is available. The new traffic signal should be considered interim, and a plan for its future removal should be developed. Wherever possible, the new traffic signal should be located where a future interchange is planned.

As many of the existing high volume intersections along the study segment of US 52 are county highways (i.e., CSAH 14, CSAH 1, CSAH 9, CSAH 8, etc.), Goodhue County has a shared responsibility on implementing access management within the study area. The supporting access management guidelines for Goodhue County are presented in the *Goodhue County Transportation Plan (2004),* which recognizes MnDOT's access management policy and guidelines for US 52 within the study area (refer to Appendix B).

These policies and guidelines support the previously established vision to convert US 52 to a fully access controlled (i.e., access by interchange only) freeway facility. As part of the *Highway 52 IRC Management Plan (2002)*, a long-term vision to convert US 52 to a fully access controlled freeway facility was approved. Under this vision, all access points along US 52 would be closed as safety and traffic needs dictate (see Appendix C).

B. Existing Access Inventory

The study segment of US 52 does not currently meet MnDOT's access spacing guidelines due to multiple at-grade intersections and direct access driveways. Currently, there are 47 at-grade access points along the project segment of US 52 for an average of 4.7 access points per mile. This includes both full-access and partial-access intersections (i.e., right-in/right-out only) with public roadways (state highways, county highways, township roads, etc.), commercial/industrial property entrances, residential/farm driveways, and field accesses. In addition, the off-set intersections of CSAH 1 do not meet intersection access spacing guidelines for a primary intersection (one-mile) as the north and south junctions are spaced at approximately 1,200 feet apart.

At nearly half (49%), the most common type of existing at-grade access along the study segment of US 52 is residential and/or farm driveways. The next most common access type is field/agricultural access (19%), followed by township and county roadway intersections. Figure 4 presents the number of access points by type and illustrates the relative frequency of each access type compared to the total number of access points within the corridor.

Most (85%) of the at-grade access points identified above have full access, allowing for a full range of vehicle movements, including crossing, left turns, and right turns. A total of seven intersections (i.e., six residential and one field) have partial access under which there is no opening in the center median along US 52. This limits vehicle movements at these locations to right turns only (i.e., no crossing movements and no left turns). Table 2 shows the number of full- and partial-access points for each type of access. Figures 5A and 5B present a graphical inventory of the existing access points along the study segment of US 52.

Figure 4: Study Area Access Points by Function

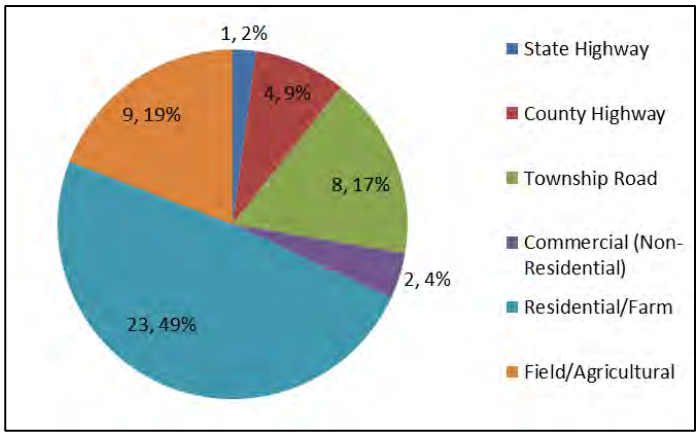


Table 2: US 52 Access Point Inventory

Function	Total Access Points	Number of Full Access	Number of Partial Access
State Highway	1	1	0
County Highway	4	4	0
Township Road	8	8	0
Commercial (Non-Residential)	2	2	0
Residential/Farm	23	17	6
Field/Agricultural	9	8	1
TOTAL	**47**	**40**	**7**

As discussed in the *Access Management Principles* section, research suggests that a high number of access points have a negative impact on safety on high volume roadways. The crash history along the study segment of US 52 is consistent with this trend, with one intersection and two segments identified as safety deficient and exhibiting a high crash frequency and a high crash severity rate (refer to Technical Memorandum 2: Project Background).

C. Interchange Influence Area

A key outcome of the US 52 Safety, Access, and Interchange Location Study is the recommendation of a future interchange on US 52 at CSAH 9. The construction of this interchange will have an immediate impact on the existing at-grade access points within close proximity. When entering or exiting an interchange, drivers must travel along an on- or off ramp, find acceptable gaps, change lanes and merge. To accommodate this merging and diverging traffic, a safe distance from the end of an on/off ramp to the first driveway, median opening, or intersection must be provided. The *MnDOT Access Management Manual* provides guidance for a 0.5 mile spacing between the end of an on/off ramp and the merge point for an intersecting access point (see Figure 6). This distance is known as the interchange influence area. The approximate interchange influence area for the proposed US 52 interchange at CSAH 9 is illustrated in Figure 5B, which represents a composite of the various interchange designs considered to date (*refer to Technical Memorandum 6: Interchange Design Evaluation*). As shown in Figure 5B, there are three at-grade access points within the interchange influence area, including two township roadways and one residential driveway. These access points would be closed upon construction of an interchange.

HIGHVIEW RD

US52

SERENDIPITY RD

SKUNK HOLLOW TRAIL

WAGNER HILL WAY

CSAH 14

SHADY LANE TRAIL

90TH AVE

CSAH 1

US52

90TH AVE

FIGURE 5A
ACCESS INVENTORY

US52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

HRGreen

SCALE IN FEET

0 500 1000 2000

LEGEND

FULL ACCESS	PARTIAL ACCESS	
●	○	State Highway
●	○	County Highway
●	○	Township Road
●	○	Commercial (Non-Residential)
●	○	Residential/Farm
●	○	Field/Agricultural
X		Proposed Access Closure at CSAH 14

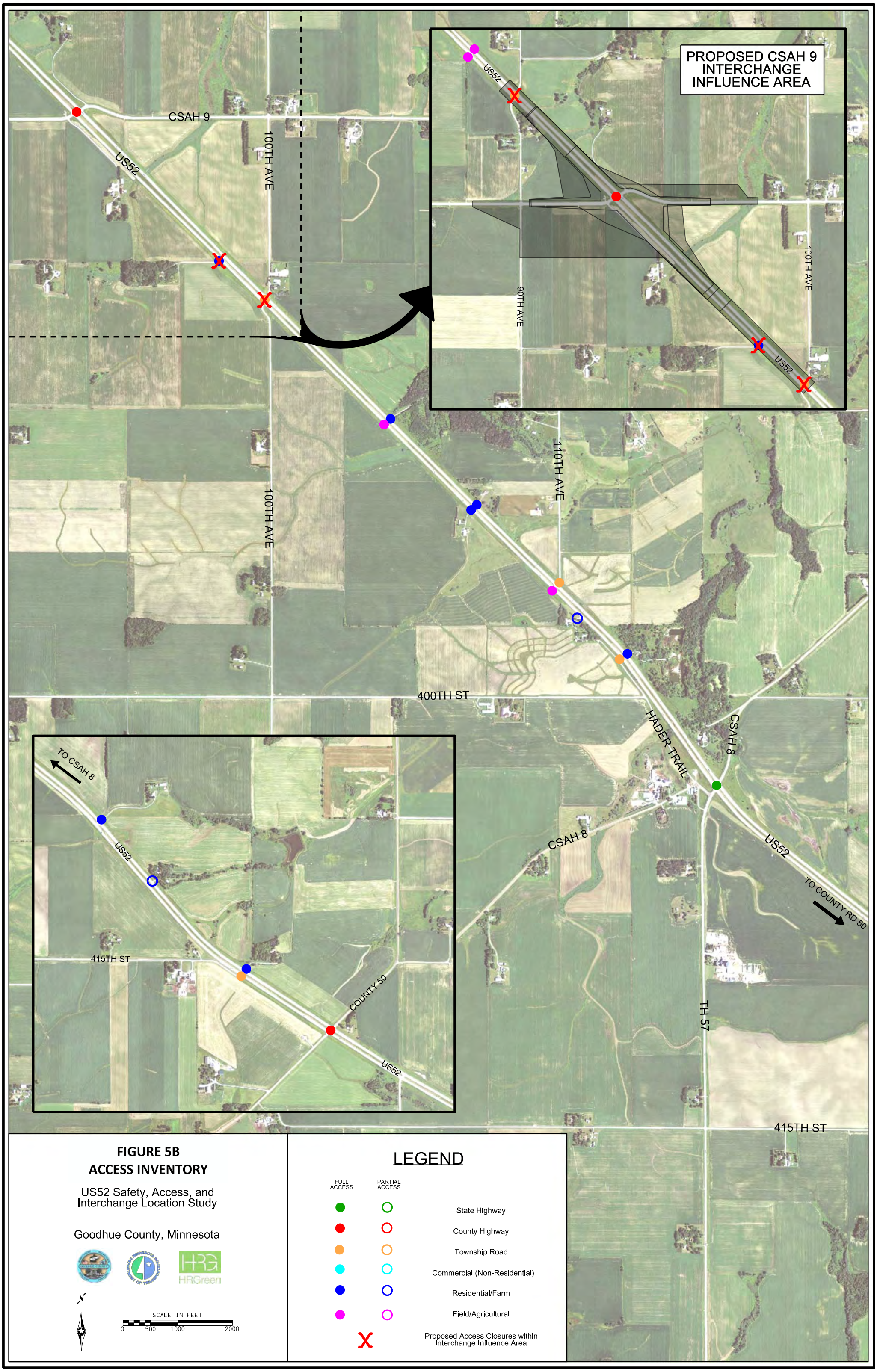


FIGURE 5B
ACCESS INVENTORY

US52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

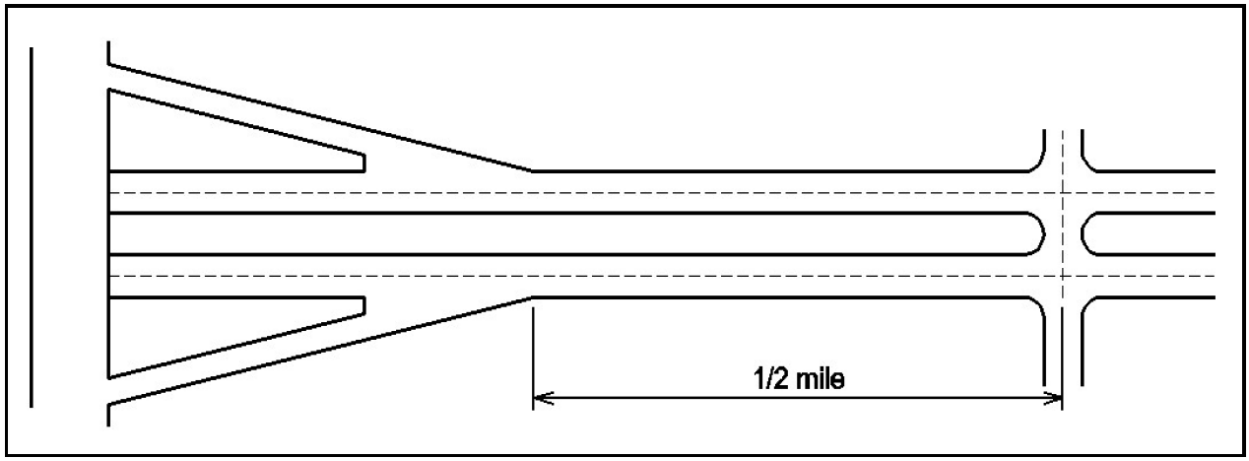
HRGreen

SCALE IN FEET
0 500 1000 2000

LEGEND

FULL ACCESS	PARTIAL ACCESS	
●	○	State Highway
●	○	County Highway
●	○	Township Road
●	○	Commercial (Non-Residential)
●	○	Residential/Farm
●	○	Field/Agricultural
X		Proposed Access Closures within Interchange Influence Area

Figure 6: Spacing from Interchange Merge Point



Source: MnDOT Access Management Manual. January 2, 2008

D. Access Management Toolbox

The high number of access points along the study segment of US 52 reduces safe and reliable mobility. In order to ensure safe and reliable operations, the ultimate vision is to convert US 52 to a fully access controlled freeway. This vision is supported by policy guidance from both MnDOT and Goodhue County, which promotes closure of existing at-grade accesses points within the project area.

Since funding is limited, US 52 access management improvements are being implemented over time on an "as needed" basis as safety problems require, operational issues arise, and funding becomes available. Access modifications along US 52 need to consider related improvements to the supporting regional and local roadway networks to ensure an adequate level of regional and local mobility. This includes providing adequate local roadway connections to replace any access points along US 52 which are closed. Key local destinations include the City of Cannon Falls, Hader (unincorporated community) and points to the south, as well as any existing and/or planned interchanges along US 52 within the study area.

The following section presents a range of general access management tools applicable to access closure and modification within the study area, including a description of each and a summary of its applicability to the different types of at-grade access types along US 52. This "access management toolbox" is intended to provide the basis for the identification of future access management improvements and assist in future planning efforts. A summary of the access management toolbox is included in Table 3 at the end of this section.

1. Interchange (grade-separation with on/off ramps)

A grade-separated interchange involves the replacement of at-grade roadway access with a bridge and on/off ramps to allow traffic to safely and efficiently cross or enter and exit a highway. Grade separated interchanges have been used at various locations throughout the US 52 corridor. The ultimate vision for the corridor is to allow access to US 52 by interchange only. Figure 7 illustrates an

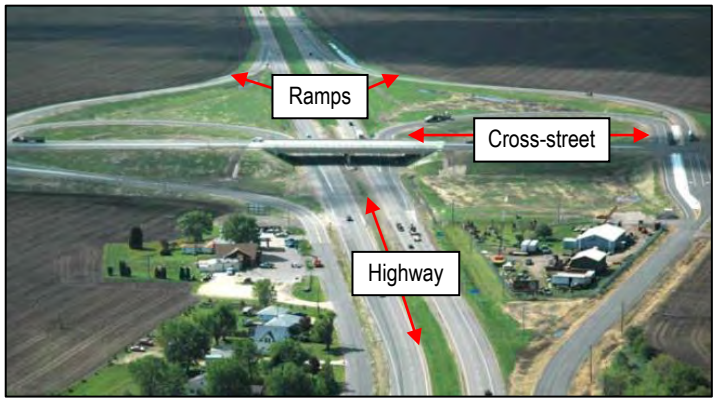


Figure 7: US 52 Interchange in Dakota County (source: US 52 Freeway Partnership)

interchange along US 52 in Dakota County.

Implementation

This tool provides the highest level of mobility, emphasizing roadway operations over local property access. An interchange is recommended to replace the existing at-grade intersection at US 52 and CSAH 9. This tool would be applicable to other high volume intersections such as TH 57 in Hader.

2. Overpass (grade-separation without interchange)

This strategy involves closing at-grade access on a highway and constructing a bridge to allow a continuous crossing of the side street. This would eliminate the at-grade access while allowing the cross-highway to remain open (see Figure 8).

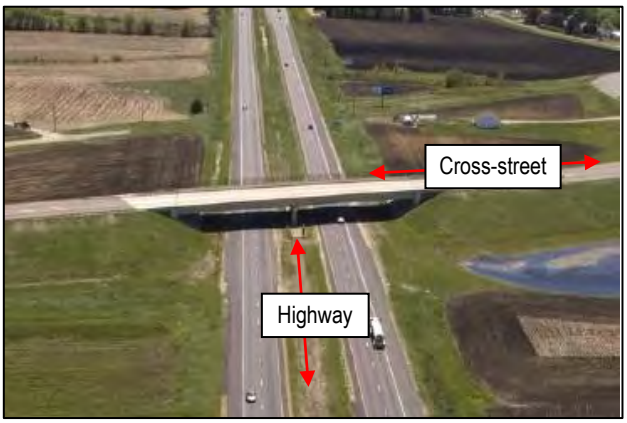


Figure 8: US 52 Overpass in Dakota County (source: US 52 Freeway Partnership)

Implementation

This approach is an effective tool to limit at-grade access while maintaining local and regional connectivity. This tool could be applicable to state highways and county routes within the project area; however, none are recommended within the study area at this time.

3. Closure with Frontage/Backage Road

Under this strategy the existing at-grade access to a highway can be closed and a frontage road constructed to provide access to an alternative road, such as a parallel county or township route (see Figure 9).

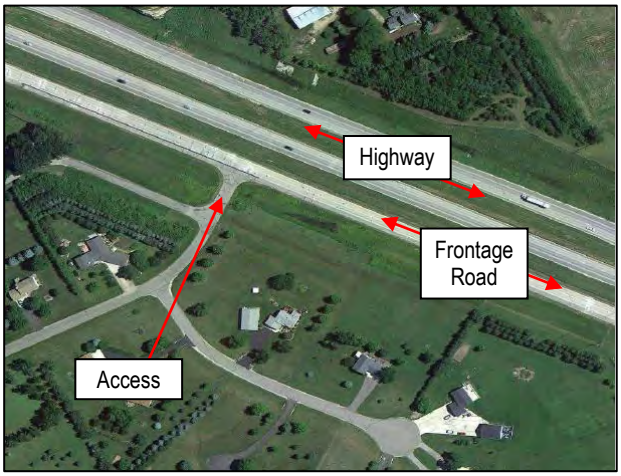


Figure 9: Typical Frontage Road System (source: Google Earth)

Implementation

This tool is applicable for roadways which emphasize serving local/county traffic over regional through traffic, such as county or local routes. Closure of access at US 52 and construction of a frontage road connecting to Cannon Falls on the north is a recommended treatment for CSAH 14.

4. Driveway Redirection

This tool is used to close driveway access to a highway and redirect the driveway to an existing county or township road to provide alternative access. This can include consolidation of driveways where there are multiple properties in close proximity (see Figure 10).

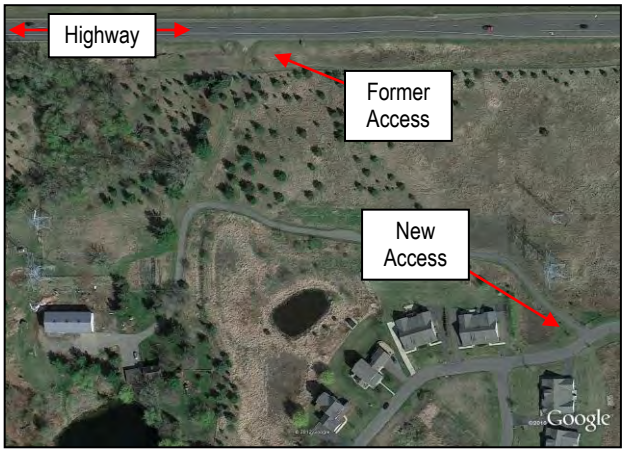


Figure 10: Example Driveway Redirection (source: Google Earth)

Implementation

This tool could be applicable to commercial/industrial, residential/farm, and field/agricultural driveways with at-grade access to US 52.

5. Interim Access Modifications

This tool can be used to address safety and operational issues along the corridor as they arise on an interim basis. At-grade access points can be modified to limit vehicle movements such as left-turns. Limiting turning and crossing movements will improve safety by reducing the number of intersection conflict points and thereby reducing crash exposure.

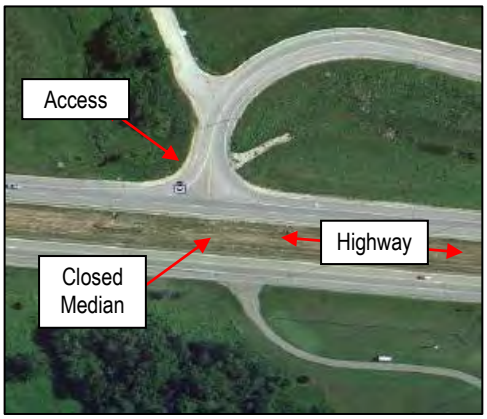


Figure 11: Typical Right-in/Right-Out (source: Google Earth)

Access modification options to consider include right-in/right-out and 3/4 access. Figures 11 and 12 show examples of these modifications. Right-in/Right-out access modifications typically entail closing the opening in the center median to eliminate all crossing movements and left turns. Under a 3/4 access, left turns and crossing movements from the side street onto the mainline roadway are prohibited via a combination of a raised concrete median islands or other channelization and signage. Figure 13 includes a diagram of typical full access intersections, as well as right-in/right-out and 3/4 access intersections, and shows the reduction in conflict points gained from access modifications.

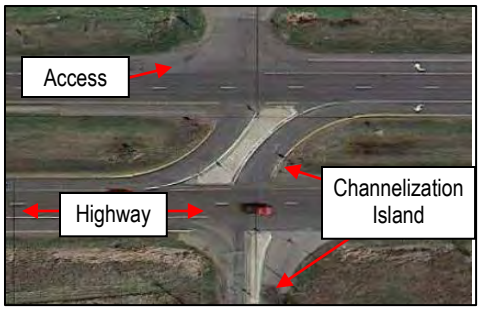


Figure 12: Typical 3/4 Access (source: Google Earth)

Implementation

This tool could be applicable for most access types along the corridor, including county highways, township roads, commercial/industrial entrances, residential/farm driveways, and field access points.

As the ultimate vision for US 52 is to close all at-grade access, options for full closure should be fully evaluated prior to implementation, and access modifications should be considered as interim improvements as the direct access to US 52 would remain in place.

6. Property Acquisition

In the rare circumstance when provision of alternate driveway access is not feasible from an economic or engineering perspective, property acquisition may be considered.

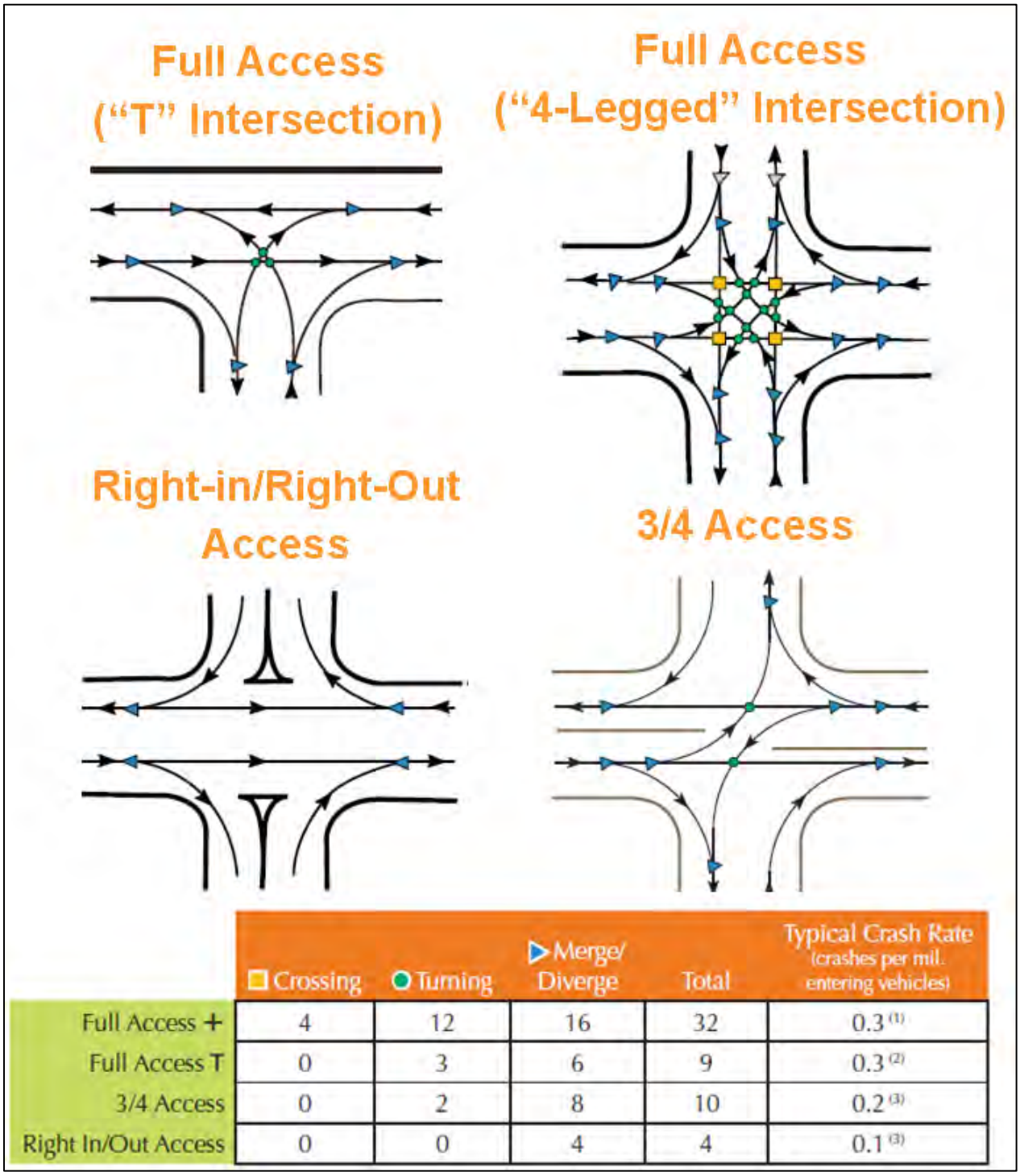
Implementation

This tool could be considered for any private property access points, including commercial/industrial, residential, and field/agricultural access, where the cost of alternative access is greater than the cost to acquire the property.

E. PMT Approval of Access Management Overview

Technical Memorandum No. 5 – Corridor Access Management Plan, was presented to the PMT on September 24, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued for PMT approval. Final approval of Technical Memorandum 5 was received on December 14, 2012.

Figure 13: Access Modification Diagram



	Crossing	Turning	Merge/ Diverge	Total	Typical Crash Rate (crashes per mil. entering vehicles)
Full Access +	4	12	16	32	0.3 (1)
Full Access T	0	3	6	9	0.3 (2)
3/4 Access	0	2	8	10	0.2 (3)
Right In/Out Access	0	0	4	4	0.1 (3)

Source: MnDOT Traffic Safety Fundamentals Handbook (2008)

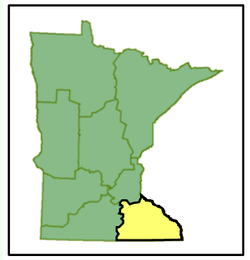
Table 3: US 52 Access Management Plan Toolbox Summary

Tool	Description	Implementation
1. Grade-separation with Interchange	Replace at-grade access with a bridge and interchange ramps.	• State Highways • County Highways
2. Grade-separation without Interchange	Close at-grade access and replace with a bridge.	• State Highways • County Highways
3. Closure with Frontage/Backage Road	Close at-grade access and construct a frontage/backage road for alternative access.	• County Highways • County Roads • Township Roads
4. Driveway Redirection	Close at-grade driveway and redirect to an existing county or township road for alternative access.	• Commercial/Industrial • Residential • Field/Agricultural
5. Interim Access Modifications - Right-in/right-out - 3/4 Access (no side street to mainline lefts or crossing movements)	Modify access to limit vehicle movement via a raised median or other channelization and signage.	• County Highways • Township Roads • Commercial/Industrial • Residential • Field/Agricultural
6. Property Acquisition	If alternate driveway access is not feasible from an economic or engineering perspective, property acquisition may be considered.	• Commercial/Industrial • Residential • Field/Agricultural

Appendix A: Appendix A: MnDOT Access Management Manual. January 2, 2008 (excerpt)

Access Management Sub-Categories

District 6 - Rochester



Sub-Catgories

- F [Interstate Freeway]
- A-F [Full Grade Separation]
- A [Rural]
- B [Urban/Urbanizing]
- C [Urban Core]
- 7 [Specific Access Plan]

Updated February 23, 2004

Miles

0 5 10 20 30

Mn/DOT Office of Investment Management.

Source: 2004 TIS data and Access Management Database.

Figure 3.1 – Summary of Recommended Street Spacing for IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
1	**High-Priority Interregional Corridors & Interstate System (IRCs)**				
1F	Interstate Freeway	Principal Arterials	Interchange Access Only		⊘
1AF	Non-Interstate Freeway		Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
1A	Rural		1 mile	1/2 mile	
1B	Urban/ Urbanizing		1/2 mile	1/4 mile	
1C	Urban Core		300-660 feet dependent upon block length		
2	**Medium-Priority Interregional Corridors**				
2AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
2A	Rural		1 mile	1/2 mile	
2B	Urban/ Urbanizing		1/2 mile	1/4 mile	
2C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
3	**Regional Corridors**				
3AF	Non-Interstate Freeway	Principal and Minor Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
3A	Rural		1 mile	1/2 mile	See Section 3.2.5
3B	Urban/ Urbanizing		1/2 mile	1/4 mile	1/2 mile
3C	Urban Core		300-660 feet, dependent upon block length		1/4 mile

Appendix B: Goodhue County Transportation Plan (2004), Access Management (excerpt)

- The requirements if a route are to revert to a township (i.e., the county must meet the requirements set forth in Minnesota Statutes, which require a public hearing, completion of repairs or improvements to meet standards for comparable roadways in the town and continued maintenance for a two-year period before date of revocation).
- Further limitations on establishment, alteration, vacation or revocation of county highways as described in Minnesota Statutes Section 163.11.

3. Planning and Programming Issues
   - Any allocation of funds that will be made available from the transferring agency to the receiving agency.

4. Project Development, Design and Construction Issues
   - The process for development of projects, studies, right-of-way acquisition, design and construction of transferred routes.
   - The design and construction standards to be used for projects.
   - The process and framework for cost-sharing agreements.

5. Operational and Maintenance Issues
   - The responsibilities for utility permits, driveway access permits, changes to traffic controls and signing, and level of routine regular maintenance.

For jurisdictional transfers that also affect designation, the comprehensive approach taken by the Goodhue County Transportation Plan will greatly assist county staff in preparing for State Aid Screening Board review.

5.3 ACCESS MANAGEMENT

Access guidelines are important because they define a starting point for balancing property access, safety and mobility concerns. Transportation agencies regularly receive requests for additional access (e.g., new public street, commercial driveways, residential and field access). Because of the number of individuals and agencies often involved in reviews, access policies are sometimes applied inconsistently. This can result in confusion between agencies, developers and property owners, and can create long-term safety and mobility problems. Standard access guidelines can be used to improve communication, enhance safety and maintain the capacity and mobility of important transportation corridors. In addition, access guidelines may be used to respond to access requests and to promote good access practices such as:

- Aligning access with other existing access points
- Providing adequate spacing to separate and reduce conflicts
- Encouraging indirect access rather than direct access on high-speed, high-volume arterial routes

Whether it is accomplished through grade-separated crossings, frontage roads or right-in/right-out access, access management reduces the number of conflicts and results in improved safety. Various studies have demonstrated a direct relationship between the number of full access points and crash rates, including FHWA's Access Research Report No. FHWA-RD-91-044. Figure 17 shows this relationship.

The Minnesota State Statutes direct public road authorities to provide "reasonable, convenient, and suitable" access to property unless these access rights have been purchased. Courts have interpreted this to allow:

- Restrictions of access to right-in/right-out
- Redirection of access to another public roadway if the roadway is reasonable, convenient and suitable

In special circumstances, broader authority (police power) has been given to public agencies if the situation is deemed to jeopardize public safety. However, this is a very high standard to meet and is seldom used by public agencies.

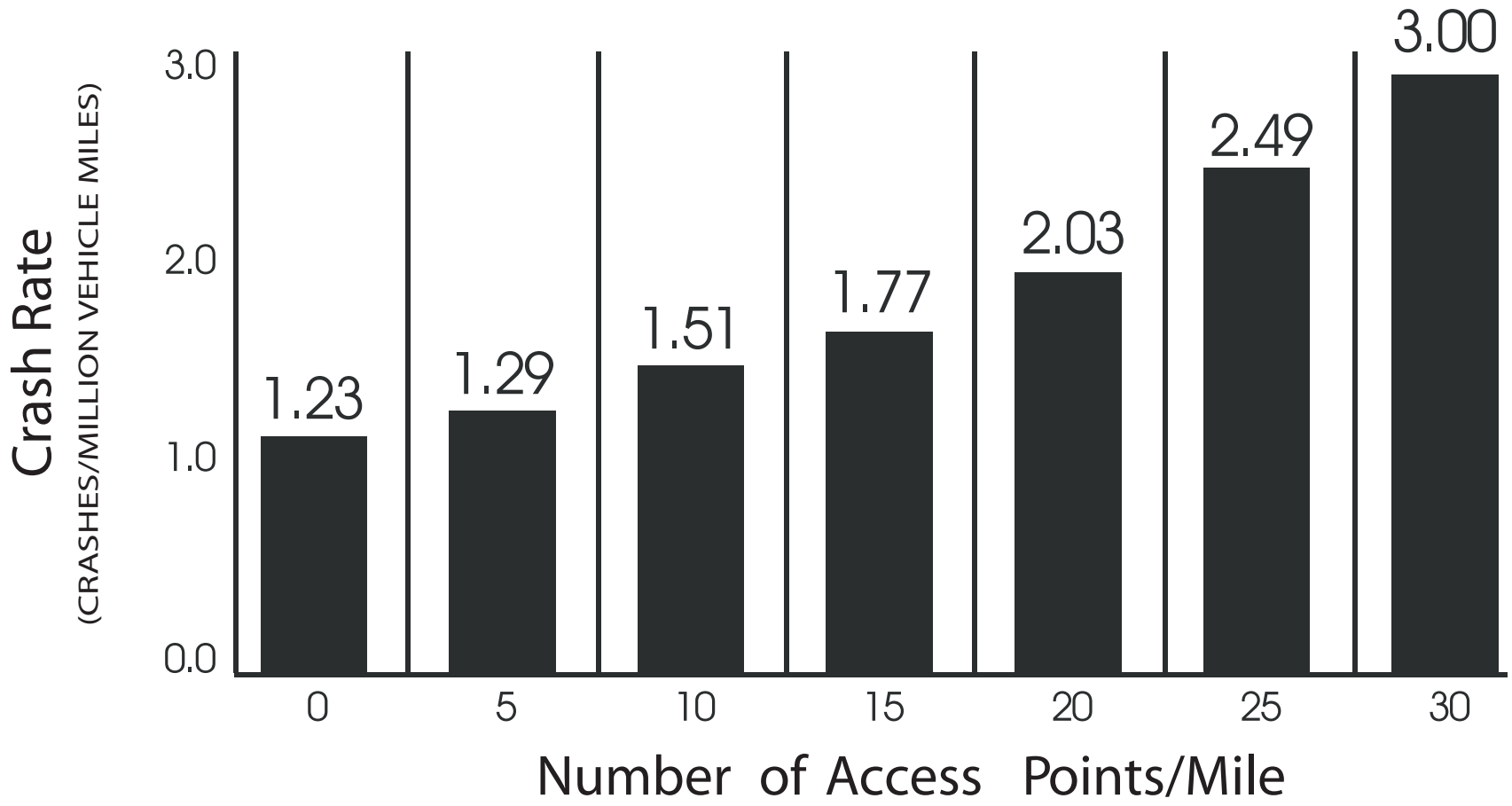
In addition to the above, land use authorities may exercise additional authority in limiting access through development rules and regulations. Land use authorities can require:

- Dedication of public rights-of-way
- Construction of public roadways
- Mitigation measures of traffic and/or other impacts
- Change in and/or development of new access points

These types of access controls are processed through local appointed and elected officials (e.g., planning commissions, town boards, City Councils and County Commissions).

Access guidelines and corridor management practices should be implemented at the county and city level because these units of government are usually involved at the planning stages of development proposals and because they have stronger land use and access controls. However, long-term benefits of access management require mutual support and effective communication at all governmental levels.

The rationale for managing access in rural areas differs from the rationale used in urban areas. Roadways in rural areas almost always serve low-density land uses and usually have volumes well below capacity thresholds. Managing rural access increases safety (e.g., sight distance, number of conflict areas, and severity of crashes when vehicles are run off the road) and minimizes operational/maintenance costs (e.g., snow removal, resurfacing and drainage).



Source : FHWA, Publication number FHWA-RD-91-044 (Nov. 1992)
Note: Study Data is from Two-Lane Highways in Minnesota

ACCESS-CRASH RELATIONSHIP

FIGURE 17

To address access in rural areas, Minnesota's Local Road Research Board (LRRB) developed the following best management practices:

- Establish an access policy – develop a formal policy that ensures that the agency has processes in place to determine the need for and evaluate the use, location, spacing and design characteristics of the requested access points.
- Encourage coordination during the zoning and platting process.
- Give access permits for specific use.
- Encourage adequate spacing of access points.
- Protect the functional area of intersections.
- Ensure adequate sight distance at entrances.
- Avoid offset or dogleg intersections and entrances.
- Encourage development of turn lanes and entrances.
- Consider consolidating access or relocating existing access.
- Encourage good driveway and intersection design characteristics such as:
  - Proper driveway width and turning radii
  - Proper corner clearance
  - Adequate approach grade
  - Alignment of intersections at right angles to maximize sight lines, minimize the time a vehicle is in the conflict area and facilitate turning movements
  - Proper grading of entrance inslopes and culvert openings
  - Keeping sight triangles and clear zones free of obstructions

These best practices should be considered and incorporated into any Goodhue County access management policy.

In addition to the LRRB's Best Practices for Rural Entrance Policy (2002), Mn/DOT completed a multi-year study in 2002 that developed access policies and access spacing guidelines for the Trunk Highway system. While Mn/DOT wrote the guidelines for the State Highway System, many of the recommendations can be applied to city and county systems. For example, access management guidelines promote coordination between land use and transportation strategies, and these issues affect decisions on the local city and county level. Establishing appropriate spacing between public streets and private driveways is an important step toward maintaining the safety and mobility of the traveling public without sacrificing the accessibility needs of local residents. Mn/DOT's Access Management Guidelines are shown in Table 9.

Based on a review of the LRRB and MnDOT access management guidelines, a set of comprehensive local access signal and private entrance standards were proposed by the Steering Committee. These are presented in Table 9.

TABLE 9
SUMMARY OF RECOMMENDED ACCESS SPACING

Category	Area or Facility Type	Typical Functional Class	Intersection Spacing		Signal Spacing	Private Entrances
			Primary Full Movement Intersection	Conditional Secondary Intersection		
1	**High Priority Interregional Corridors (e.g. US 52)**					
1F	Freeway	Principal Arterials	Interchange Access Only			
1A-F	Full Grade Separation		Interchange Access Only			
1A	Rural, Exurban & Bypass		1 mile	1/2 mile	INTERIM ONLY By Deviation Only[1]	By Deviation Only[1]
2	**Medium Priority Interregional Corridors (e.g. TH 50, US 61 to Red Wing)**					
2A-F	Full Grade Separation	Principal Arterials	Interchange Access Only			
2A	Rural, Exurban & Bypass		1 mile	1/2 mile	STRONGLY DISCOURAGED By Deviation Only[1]	By Exception or Deviation Only[1]
2B	Urban Urbanizing		1/2 mile	1/4 mile	STRONGLY DISCOURAGED By Deviation Only[1]	By Exception or Deviation Only[1]
2C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
3	**High Priority Regional Corridors (e.g. US 61 east of Red Wing)**					
3A-F	Full Grade Separation	Principal and Minor Arterials	Interchange Access Only			
3A	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	Permitted Subject to Conditions
3B	Urban Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only[1]
3C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
4	**Principal Arterials (see Functional Class Map)**					
4A-F	Full Grade Separation	Principal Arterials	Interchange Access Only			
4A	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	By Deviation Only[1]
4B	Urban Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only[1]
4C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
5	**Minor Arterials (see Functional Class Map)**					
5A	Rural, Exurban & Bypass	Minor Arterials	½ mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
5B	Urban Urbanizing		¼ mile	1/8 mile	1/4 mile	By Exception or Deviation Only[1]
5C	Urban Core		300 – 600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions

Category	Area or Facility Type	Typical Functional Class	Intersection Spacing		Signal Spacing	Private Entrances
			Primary Full Movement Intersection	Conditional Secondary Intersection		
6	**Collectors (see Functional Class Map)**					
6A	Rural, Exurban & Bypass	Collectors	½ mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
6B	Urban Urbanizing		1/8 mile	NA	1/4 mile	
6C	Urban Core		300 – 600 feet dependent upon block length		1/8 mile	
7	**Local Roads/Streets**	Township Roads, non-functionally classed City Streets	NA		NA	No closer than 200' with adequate site distance, per LRRB 2002 Study

[1] Mn/DOT allows temporary exceptions and deviations in an effort to accommodate existing access needs while transitioning to a future system of access spacing.

Goodhue County should adopt the Access Management Guidelines presented in Table 9 for the following reasons:

- The county does not currently have comprehensive access management policies. By establishing these policies, the county can plan, design and implement land use and transportation strategies that control the flow of traffic between roadways and surrounding land uses.
- Access management guidelines are based on functional classification and surrounding development; therefore, adopting guidelines will parallel the functional classification update of this plan and any future developments or land use changes resulting from the Comprehensive Land Use Plan update. Appropriate sections of the guidelines could be incorporated into county zoning and subdivision ordinances.
- The proposed Access Management Guidelines in Table 9 identify access spacing recommendations based on functional classification rather than traffic volumes. This method provides a long-term understanding of how each corridor will function and operate and enables the county to protect access on roadways before traffic volumes reach specific thresholds.

As noted above, access guidelines can be implemented using different methods (e.g., land use regulations, subdivision regulations, access permit processes and access/transportation advisory committees). Any processes should also deal with situations outside the guidelines, such as hardship cases. In existing corridors where significant development has occurred, the number of existing access points usually exceeds access guidelines. Unless these areas are undergoing redevelopment, access management must be approached differently. The access management strategy for such areas should entail aggressively minimizing new accesses, while consolidating/reducing existing access points as redevelopment occurs.

It is important to consider the following points when reviewing the guidelines and addressing access issues:

- The guidelines apply to routes with a functional classification of collector or above; however, the guidelines may occasionally be used on local streets.
- The guidelines are long-term goals, not absolute rules.
- Maintaining flexibility is important in promoting access consolidation.
- The approach to implementation is as important as the guidelines themselves.
- Existing physical barriers or constraints need to be considered.

The following access suggestions provide alternatives for minimizing access and for addressing access problems when the guidelines cannot be met:

- **Encourage shared driveways and internal circulation plans:** If indirect access cannot be achieved during plat reviews, promote internal site circulation using shared access points.
- **Restrict turning movements to reduce conflicts:** If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in or right-in/right-out only) through installation of raised medians or other channelization or signing. Eliminating a single turning movement can significantly reduce vehicle conflicts and crashes.
- **Develop good parallel street systems for carrying local traffic:** Make sure that important arterial routes have parallel street systems that provide local access and carry shorter local trips.
- **Develop proper setbacks for future frontage roads:** If frontage roads cannot be immediately justified (benefits do not outweigh costs), make sure that proper building and parking lot setbacks are established to minimize the impacts of future frontage roads.
- **Develop proper secondary street spacing:** Ensure that plats and new development proposals provide proper intersection spacing for future signals. Signalized intersections should be limited depending upon the type of street. Collector streets should provide continuity and connectivity with other street systems.
- **Encourage proper lot layout to minimize access points:** Promote direct residential access points onto local routes, instead of onto arterials or major collectors. Direct residential access onto arterial or collector routes slows traffic flow and can result in complaints when traffic levels increase. In rural areas, where farms have one access point per 40-acre entitlement and where lots are clustered in one portion of the farmstead, access points should be placed on local roads, not on high-speed, high-volume state or county roads.
- **Encourage connectivity between developments:** Streets in individual developments should be aligned to provide access to other developments, and right-of-way should be provided for future connections to adjacent developments. This promotes neighborhood connectivity, and provides quick and efficient routes for emergency vehicles, mail, garbage services and street maintenance activities.

- **Consider Official Mapping process for important corridors:** Important arterial corridors, or future interchange areas that are located in development-prone areas, can be protected through an official mapping process. Local agencies should revise zoning ordinances and subdivision regulations to dedicate officially mapped corridors at the time of platting.

5.4 PROJECT DEVELOPMENT AND ENVIRONMENTAL PROCESSES

Depending on the size and type of project, implementing improvements identified in the Transportation Plan may require additional public participation and environmental review. Because of Goodhue County's close proximity to the Mississippi River, cultural, historical, and archeological resources, as well as critical wildlife habitats (i.e., bald eagle nesting habitats, trout streams and other protected wildlife) exist in the county. Protected sites and/or species require attention so possible environmental impacts can be addressed early in the project development process. Federal environmental documents must be prepared if federal funding is involved in the project, with the type of document depending on the size of the project. If no federal funding is involved, state environmental review requirements and local ordinances or guidelines may apply. Additional requirements depend on the size of the project. Further, a variety of local, state and federal permits that regulate wetlands, water quality, air quality, noise and other environmental resources may be needed. Early coordination with environmental agencies and the State Historic Preservation Office (SHPO) can reduce delays in the project development process and in acquiring applicable permits.

5.5 RIGHT-OF-WAY PRESERVATION

When future expansion or realignment of a roadway is proposed, but not immediately programmed, agencies should consider right-of-way (ROW) preservation strategies to reduce costs and maintain the feasibility of the proposed improvement. Several different strategies can be used to preserve ROW for future construction, including advance purchase, zoning and subdivision techniques and official mapping. Before implementing ROW preservation strategies, local agencies should weigh the risks of proceeding with ROW preservation without environmental documentation. (Note: Mn/DOT policy requires environmental documentation prior to purchase.) If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

Direct Purchase

One of the best ways to preserve ROW is to purchase it. Unfortunately, agencies rarely have the necessary funds to purchase ROW, and the public benefit of purchasing ROW is not realized until a roadway or transportation facility is built. Many agencies use any advance funding to prepare the environmental documentation needed to proceed with larger projects.

Appendix C: Highway 52 IRC Management Plan (2002), Vision (excerpt)

Executive Summary

The purpose of the Highway 52 Interregional Corridor (IRC) Management Plan is to document the study process and key outcomes of the Highway 52 Interregional Corridor (IRC) Study.

This executive summary focuses on key elements of the study process including "Vision 52", the public involvement process, and the recommended Highway 52 IRC Management Plan, including the shared strategies needed to initiate the Implementation Plan.

The Highway 52 Interregional Corridor (IRC) Management Plan provides a vision for future improvements to the highway, known as "Vision 52", which will help protect and enhance the corridor to ensure that it provides for high speed, safe, and predictable travel conditions. It is only through the commitment of all responsible agencies that the recommendations and proposed improvements of this study can be realized.

The Highway 52 IRC Management Plan is one part of a broader statewide effort of identifying and assessing the needs of the most important highway corridors across the state. These critical Interregional Corridors (IRC) are the backbone of the statewide highway transportation network.

Interregional Corridors and the Moving Minnesota Plan

Moving Minnesota is a philosophy that recognizes that the key to meeting Minnesota's transportation needs is a long-term, statewide and multimodal strategy. Moving Minnesota further recognizes that transportation is key to healthy and vital communities. Moving Minnesota is a 10-year investment strategy that focuses on three basic initiatives: **A**dvantages for transit, **B**ottleneck removal, and **C**orridor connections. A key component of the Moving Minnesota Plan is the improvement and protection of important highway connections between Minnesota's regional trade centers (interregional corridors) to enhance competitiveness and the State's economic vitality. Highway 52 was selected as one of the interregional corridors (IRCs) for study in the Moving Minnesota plan.

Highway 52 Corridor

The segment of Highway 52 being studied begins at the interchange with I-494 in the Twin Cities and ends at the interchange with I-90 south of Rochester, a total of 80 miles. The 80-mile Highway 52 corridor encompasses 10 cities and many townships with land use ranging from primarily agricultural with pockets of urban communities (residential, commercial/industrial) to primarily urban land uses.

Highway 52 is currently a four-lane divided facility from the Twin Cities to the interchange with I-90. The extreme northern section of the corridor between I-494 and County Road 56 in Inver Grove Heights, as well as the southern section of the corridor from 55th Street NW to I-90 through Rochester is a fully grade-separated freeway facility. In addition, there are several other freeway interchanges at various key locations along the corridor.

Highway 52 Vision

The Highway 52 Corridor Study and Management Plan was completed in March 2000. The study found that Highway 52 is at risk for developing performance problems in the future based on increasing traffic volumes and the potential for signal proliferation at cross streets. Traffic volumes

on Highway 52 have increased steadily and are projected to reach between 29,125 and 86,775 vehicles per day by 2025, up from 17,550 to 46,800 in 2000. Traffic has also increased on the cross streets, which creates problems on Highway 52 as it becomes more difficult to merge onto the highway and signals are installed at these intersections. Due to the large number of access points along the corridor (approximately 4.5 per mile average), the potential for numerous signal installations are high.

Based on these issues, the following vision was developed for the Highway 52 corridor and provides the basis for "Vision 52":

- The ultimate vision for Highway 52 is to develop a fully access controlled, freeway facility. In this way, the corridor's function as a high-speed, high mobility corridor will be maintained.
- In the interim between realizing the ultimate vision, Highway 52 will be managed to ensure it continues to serve as the safest, most direct route, and highest mobility link for moving people and goods between Rochester and the Twin Cities.

To work toward the vision, seven strategies were identified for maintaining mobility on Highway 52 while transitioning to a freeway facility, as listed below.

- Strategy 1: Convert selected at-grade intersections to grade-separated interchanges.
- Strategy 2: Maintain existing levels of safety and mobility before the transition to a freeway is completed by building turn lanes, acceleration lanes and making other improvements as necessary.
- Strategy 3: Create a supporting local road network, where necessary, to serve new and existing interchanges.
- Strategy 4: Severely limit the installation of any additional traffic signals.
- Strategy 5: Close existing at-grade access and highway medians as needs arise.
- Strategy 6: Implement local planning and land development strategies that support the Highway 52 vision.
- Strategy 7: Establish a Highway 52 Internal Management Team (IMT).

Public Involvement Process

A comprehensive approach was taken to create participation opportunities for project stakeholders and interested persons. The IMT, Policy Advisory Committee (PAC), and Technical Advisory Committee (TAC) met regularly to provide guidance, recommendations, and key decisions for the development of the plan. Three Working Groups were formed as subgroups of the TAC, one for each of three key subareas including Hampton, Cannon Falls, and Hader, to focus on and recommend solutions for issues and concerns specific to these three areas. Two open house public meetings were held to show the progression of the study, present findings, receive feedback, and coordinate and gather comments and responses from the public. Press releases and local newspaper and electronic media coverage were provided during the development of the plan and a project web site was created (http://projects.dot.state.mn.us/seh/052).

Appendix G: Technical Memorandum 6: Interchange Design Evaluation

Technical Memorandum 6

US 52 Safety, Access, and Interchange Location Study
Interchange Design and Evaluation

South Limits of Cannon Falls to Hader
Goodhue County, Minnesota
S.P. 2506-66

September 24, 2012

Prepared For:

Prepared By:

HRGreen

HRG: 832470J

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Introduction

The primary objective of the US 52 Safety, Access, and Interchange Location Study is to address the severe safety issues along US 52 within the project area and to implement the long-term vision for US 52, which includes conversion to a fully access-controlled freeway facility. The ultimate goal for the US 52 corridor is to remove all at-grade intersections and signals, which will include the construction of an interchange in the vicinity of County State Aid Highway (CSAH) 9 or CSAH 1.

As part of the alternative development and evaluation process for the US 52 Safety, Access, and Interchange Location Study, CSAH 9 was identified as the recommended location for a future interchange along US 52, as it will best accomplish the study goals. The closure of access to US 52 at CSAH 14 and extension of CSAH 14 to CSAH 24 on the north have also been identified as recommended improvements (refer to *Technical Memorandum 4: Evaluation of Alternatives*).

The purpose of this technical memorandum is to present the analysis of alternative design concepts developed for the proposed interchange at US 52 and CSAH 9, as well as an evaluation of alternatives for the rerouting of CSAH 1, east of US 52.

Study Area

The one-mile wide project area for the study is a 10-mile corridor along US 52. It extends from the southern limits of Cannon Falls in Goodhue County at the junction of Highview Road and US 52, to south of County Road (CR) 50 (near Hader). The overall project study area is shown Figure 1. The focus of this technical memorandum is the area in the vicinity of the US 52 and CSAH 9 intersection and the north-south township and county roads to the east of the intersection (i.e., 90th Ave, 100th Ave, and County Road (CR) 56).

Planning Context and Vision

Several local and regional planning documents have been developed to guide the existing and future transportation system of the project area. These include the Statewide Inter-Regional Corridor (IRC) planning efforts, regional corridor studies, and the Goodhue County Transportation and Comprehensive Plans. These studies establish the long term vision to "Develop US 52 as a fully access-controlled, freeway facility, in order to maintain the corridor's function as a high-speed, high-mobility route." In addition, a common finding of these efforts is that there is an urgent need to address the critical safety and operational problems which currently exist along US 52 within the study area. A common recommendation of these studies is to close at-grade access along US 52 overtime, in order to improve safety and operations. This includes a recommendation to construct an interchange along US 52 within the vicinity of CSAH 1 and CSAH 9. For a full assessment of the planning context of the study area, refer to Technical Memorandum 2 – Project Background.

Purpose and Needs Summary

In order to identify and evaluate the range of improvements needed to accomplish the long term vision of the corridor (i.e., develop US 52 as a fully access-controlled freeway facility), a focused purpose and needs statement was developed.

The purpose of the project is to identify recommended locations for US 52 transportation system improvements that improve safety and access, enhance regional connectivity and mobility, and respect the environmental context of the area. As described above, this includes the selection of the a future interchange location along US 52 at CSAH 9, as well as related county road improvements east of US 52.

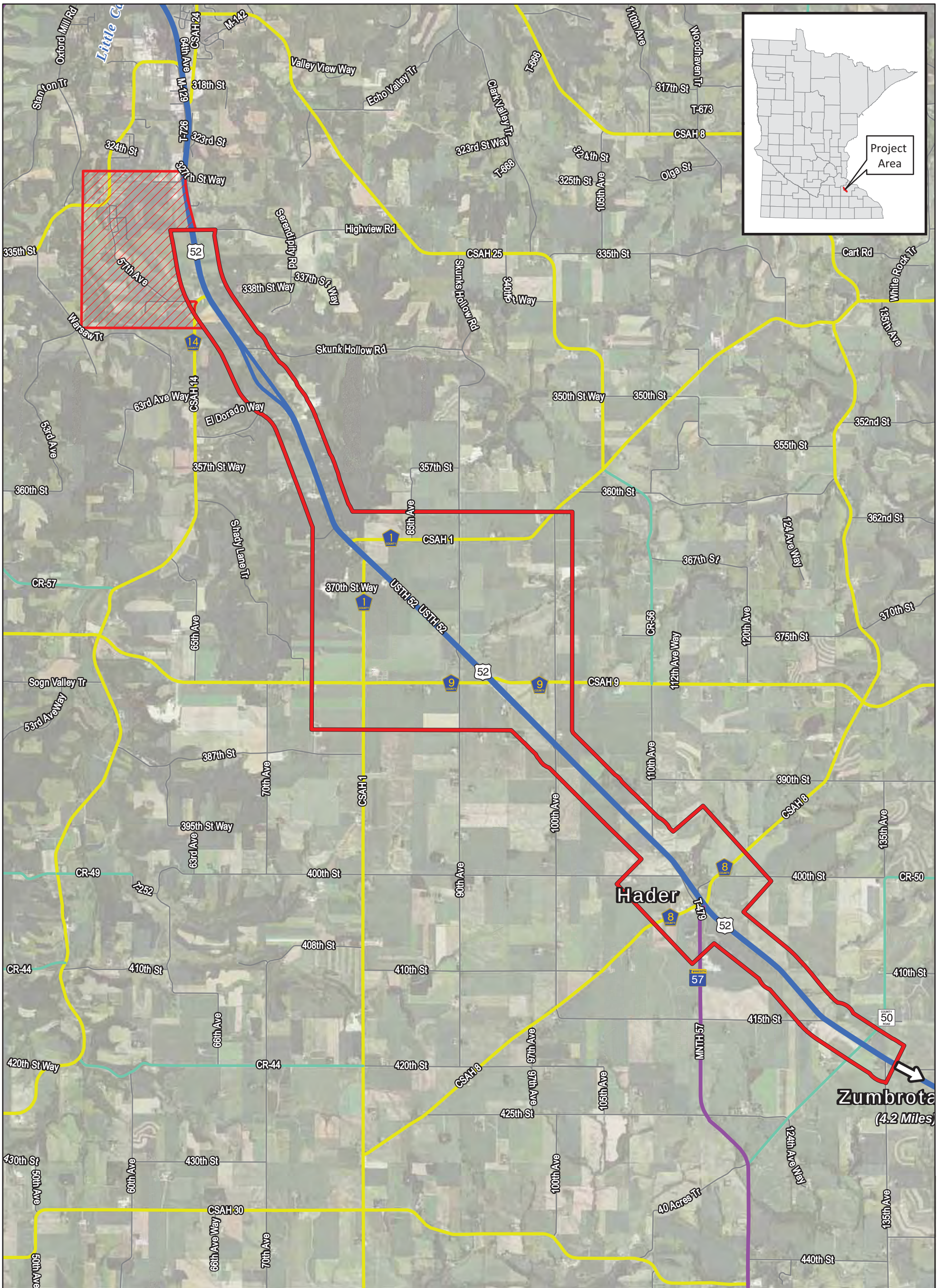


FIGURE 1
PROJECT AREA MAP

US 52 Safety, Access, and Interchange Location Study

Goodhue County, Minnesota

- US 52 Project Study Area
- CSAH 14 Subarea
- Corporate Boundaries
- US Highway
- Minnesota Highway
- County State Aid Highway
- County Road

0 0.5 1 Miles
0 2,500 5,000 Feet
1:60,000

N W E S

MINNESOTA DEPARTMENT OF TRANSPORTATION

HRGreen

The following is a summary of the need statements developed for this project. Refer to Technical Memorandum 3 – Project Issues and Needs, for a detailed explanation of the project's purpose and need.

1. Improve Safety:
   Safety improvement is the primary driving factor behind this project. Based on an analysis of the most recent crash data, the US 52 and CSAH 9 intersection was identified as safety deficient because it exhibits crash frequency and severity rates higher than the district averages. In fact, based on MnDOT rankings this intersection has the second highest crash cost in the state for non-signalized intersections.[1] An interchange at US 52 and CSAH 9 will improve safety at this dangerous intersection.
2. Improve Access Management:
   With the high amount of access points along US 52, safe and reliable mobility is difficult to achieve. An interchange at US 52 and CSAH 9 will consolidate access to US 52 and close access points within the interchange influence area.
3. Improve System Connectivity and Mobility:
   As access along US 52 is closed, the supporting regional roadway networks (i.e., CSAH 14, CSAH 1, CSAH 9, etc.) will need to be improved in order to accommodate the redirected traffic which currently has direct access to US 52 and now must use the regional network to access US 52. Likewise with improvements to the regional network, local access and local connections will need to be improved and in some cases created to provide necessary property access and connectivity.

   Upon construction of a US 52 interchange at CSAH 9, local connections will need to be provided for properties within the interchange influence area (i.e., two township roadways and one residential driveway) and new regional connections are required with the rerouting of CSAH 1 through the US 52/CSAH 9 interchange and along 90th Avenue, 100th Avenue, or CR 56. As described in *Technical Memorandum 5: Access Management Overview*, the interchange influence area is the distance between the end of an on/off ramp to the first driveway, median opening, or intersection, needed to accommodate merging and diverging traffic.
4. Respect Social, Economic, and Environmental Context:
   As roadway improvements are implemented to address the safety, access management, connectivity and mobility, the social, economic, and environmental context needs extensive consideration. Protection of the natural environment must be weighed equally as do the social impacts encountered by the public who use the new facilities and by those who live near the facilities. An interchange at US 52 and CSAH 9 will impact the surrounding social and environmental context. Analysis of interchange design configuration will seek to minimize impacts to the surrounding landscape and social contexts.
5. Provide a Cost Effective Solution:
   As improvements are developed and evaluated, cost is an important consideration. Being fiscally responsible in a time of limited resources is paramount and improvements should not only provide the most overall benefit, but also the greatest return on investment.

Interchange Design Evaluation

Moving forward in this Technical Memorandum, discussion will center on the summary of the interchange location determination (documented in Technical Memorandum 4 – Evaluation of Alternatives), the analysis completed for the three alternatives developed for the rerouting of CSAH 1

[1] Based on MnDOT crash data averages over the five year period of 2006 – 2010.

east of US 52, and the preliminary analysis completed for three interchange design configuration alternatives at US 52 and CSAH 9.

A. Preferred Location of Interchange

A range of analyses and evaluations were conducted, and public input was gathered to determine the location of an interchange along US 52 at CSAH 1, CSAH 9 or in between CSAH 1 and CSAH 9 (refer to *Technical Memorandum 4: Alternative Evaluation*). A total of seven different interchange location alternatives were developed with varying types of interchange design and frontage road configurations. These alternatives were presented and evaluated based on their ability to achieve the project goals of safety, access management, connectivity and mobility, social, economic, and environmental, and cost effectiveness (i.e., purpose and need). Each goal had set measures of effectiveness used to evaluate each alternative and rate the alternative using a color scheme of green (meets goal or positive impact), yellow (neutral or no impact), and red (does not meet the goal or negative impact).

Two interchange type alternatives at US 52 and CSAH 1(4.A - partial cloverleaf and 4.B - diamond) were evaluated and both were rated as neutral for all goals except for cost effectiveness where they were determined to not meet the goal.

For the two alternatives with an interchange located between CSAH 1 and CSAH 9 (4.C.1 – diamond and 4.C.2 - diamond with frontage road), the ratings were mostly neutral for both alternatives with one alternative receiving a negative score for access management while the other alternative received a positive score for safety.

A split diamond interchange with ramps at CSAH 1 and CSAH 9 was considered with one alternative having frontage roads along US 52 (4.D.2) while the other alternative (4.D.1) did not. These alternatives rated negatively for the cost effectiveness and social, economic, and environment goals but rated positively for the safety and connectivity and mobility goals. The alternative with frontage roads rated positively for access management while the alternative without frontage roads was rated neutral.

The remaining alternative evaluated (4.E) was a diamond interchange located at US 52 and CSAH 9. This alternative rated positively for all the goals with the exception of the mobility and connectivity goal which it rated neutral.

Based on the detailed alternatives analysis described above and the public input received, the locally supported interchange location selected was US 52 and CSAH 9. Therefore, further analysis of the US 52 and CSAH 9 interchange location was completed, including the development of preliminary design concepts and the evaluation of county road connectivity improvements east of US 52 (i.e., rerouting CSAH 1).

B. Interchange Concepts at CSAH 9

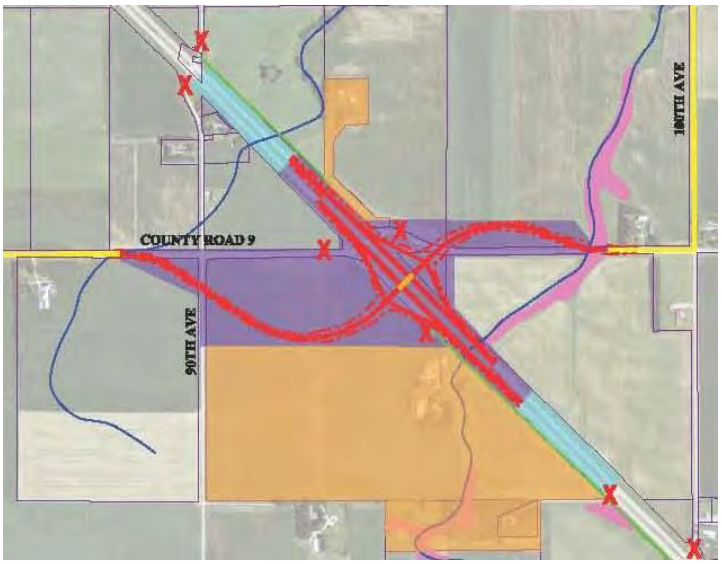
With the selection of US 52 and CSAH 9 as the locally supported interchange location, alternative interchange design concepts were developed in order to evaluate initial impacts to the surrounding area.

Interchange Concept Alternatives

Three different interchange design concepts were studied and brought to the public for comment: 4.E.1 - diamond interchange with perpendicular bridge, 4.E.2 - diamond interchange with skewed bridge, and 4.E.3 - partial cloverleaf (parclo) interchange with skewed bridge. Refer to Appendix A for full illustrations of each alternative.

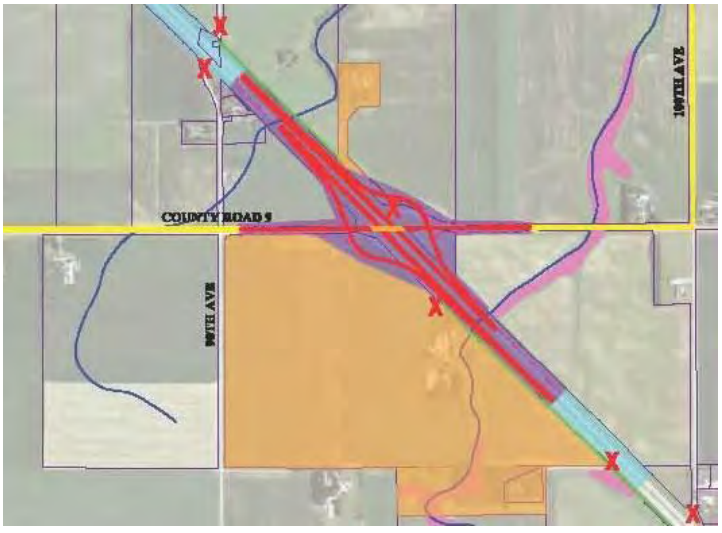
The diamond interchange with perpendicular bridge alternative (Figure 2) changes the horizontal alignment of CSAH 9 to provide a perpendicular crossing of US 52. CSAH 9 would travel over US 52 with connections between CSAH 9 and US 52 made via diagonal ramps. This route takes advantage of an existing hill along the west side of US 52 where the proposed CSAH 9 alignment crosses US 52. This alignment can be constructed with minimal impacts to existing CSAH 9.

Figure 2: Alternative 4.E.1 – Diamond Interchange with Perpendicular Bridge



The diamond interchange with skewed bridge alternative (Figure 3) maintains CSAH 9 on existing horizontal alignment and has the smallest right of way impact when compared to alternatives 4.E.1 and 4.E.3. CSAH 9 would travel over US 52 with connections between CSAH 9 and US 52 made via diagonal ramps.

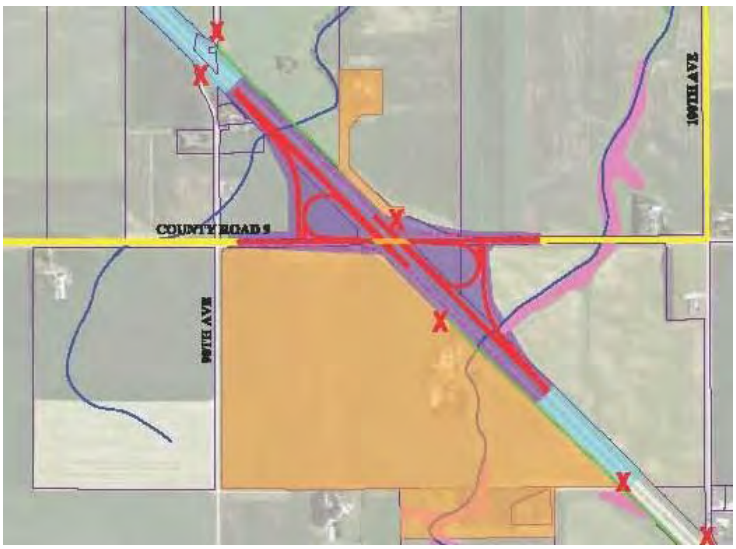
Figure 3: Alternative 4.E.2 – Diamond Interchange with Skewed Bridge



The parclo interchange with skewed bridge alternative (Figure 4) maintains CSAH 9 on existing horizontal alignment and minimizes the right of way and farmland impacts in the southwest and northeast quadrants. The right of way and farmland impacts in the southwest and northeast quadrants are minimized by the use of loop ramps in the northwest and southeast quadrants. All connections between US 52 and

CSAH 9 are made using diagonal ramps or loops either in the northwest or southeast quadrant. The parclo design provides loop ramps for CSAH 9 traffic entering US 52 and provides diagonal ramps for US 52 traffic exiting to CSAH 9. This alternative moves the left turn lanes from in between the southbound US 52 ramp/loop terminal and the northbound US 52 ramp/loop terminal (crossing over the bridge) and places left turn lanes at the CSAH 9 approaches prior to reaching the ramp/loop terminals. This design makes it such that the bridge width will not inhibit capacity of CSAH 9 as lengthening turn lanes on ground is easier then widening a bridge to accommodate longer turn lanes.

Figure 4: Alternative 4.E.3 – Parclo Interchange with Skewed Bridge



Evaluation of Interchange Concept Alternatives

Each of the three alternatives were analyzed to identify fatal flaws and to make an initial determination of how each alternative meets or doesn't meet the project goals listed below and defined in Technical Memorandum 4 – Evaluation of Alternatives.

Safety

Looking at the safety goal and the measures of effectiveness, each alternative reduces the crash rate, would improve roadway geometry and sight distance, as the interchange would be designed using current design standards. The parclo interchange with skewed bridge alternative scores lower in safety as the speed variation between the loop entrance and mainline US 52 is greater than the speed variation between the diagonal ramp and mainline US 52. Additionally, as the parclo interchange is a relatively unfamiliar type of interchange, there may be a greater learning curve as drivers become familiar with the nuances of the design.

Access Management

For the access management goal all of the alternatives close at-grade access points along US 52 and it appears there is no differentiation between the alternatives.

Connectivity and Mobility

Looking at the connectivity and mobility goal each alternative meets the goal and it appears there is no differentiation between the alternatives.

Social, Economic, and Environmental

Initial comparison of the social, economic, and environmental goal there is some differences between the alternatives. The diamond interchange with perpendicular bridge alternative (4.E.1) has the most right of

way impact and higher impacts to farmland whereas the diamond interchange with skewed bridge (4.E.2) and parclo interchange (4.E.3) with skewed bridge have less right of way impact, and less impacts to farmland especially in the southwest quadrant of the US 52 and CSAH 9 intersection.

Cost Effectiveness

A planning level cost estimate was developed for each of the alternatives and is based on earthwork (using proposed horizontal and vertical alignment), bridge length, bituminous pavement, and right of way acquired.

The planning level cost of a skewed bridge (4.E.2 and 4.E.3) is greater than a perpendicular bridge (4.E.1) but the skewed bridge cost is offset by the reduction in land acquisition needed for construction for the perpendicular bridge alternative resulting in fairly similar costs for each interchange configuration presented.

Looking at staging strategies for each of the alternatives the diamond interchange with skewed bridge and the parclo interchange with skewed bridge alternatives would be constructed on top of the existing CSAH 9 alignment requiring CSAH 9 to be detoured or construction of a temporary bypass. The diamond interchange with perpendicular bridge alternative would have little to no impact to existing CSAH 9 traffic while under construction as the alternative follows a new alignment.

Summary of Results

The final interchange design configuration will not be selected at this phase in the project development process. Once funding has been secured, the formal environmental assessment and design process for the project can begin, at which point a detailed evaluation of interchange design alternatives will occur and a final design will be selected. By combining the three interchange design configuration footprints together, a larger, composite interchange footprint has been identified and will be used to guide future planning and development within the area. Figure 5 shows the composite Interchange Footprint.

C. CSAH 1 Rerouting

In order to accomplish the safety, access management, mobility and connectivity goals of the project, the proposed interchange at US 52 and CSAH 9 would include closures of the at-grade access to US 52 within the interchange influence area (i.e., two township roadways and one residential driveway). Initially, it would also include access restrictions (i.e., right-in/righ-out only) at US 52 and CSAH 1 and eventually complete closure of the existing at-grade intersection.

To maintain adequate local and regional connectivity, supporting county and local road improvements will be needed. Local roadway improvements would provide access to properties no longer served by US 52 and redirect the access to the local or regional roadway network.

Regional improvements are would be required as well with the access restrictions and future closure of access at the CSAH 1 and US 52 intersections. The proposed rerouting of CSAH 1would begin at the existing CSAH 1 and CSAH 9 intersection. From this point CSAH 1 would follow along the CSAH 9 alignment over US 52 to one of the three alternatives identified: 90th Avenue, 100th Avenue or County Road 56 and then tie into existing CSAH 1. The existing portions of CSAH 1 from the intersection of CSAH 1 and CSAH 9 to US 52 and from US 52 to 90th Avenue, 100th Avenue or County Road 56 may be re-designated from a county road to a township road and would become the responsibility of the township.

FIGURE 5: COMBINED INTERCHANGE FOOTPRINT AREA FOR ALTERNATIVES 4E.1 – 4.E.3

COUNTY ROAD 1

COUNTY ROAD 1

90TH AVE

90TH AVE

100TH AVE

HIGHWAY 52

1200

SCALE IN FEET

PRELIMINARY (06/28/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

90TH AVE

100TH AVE

COUNTY ROAD 1

COMBINED INTERCHANGE FOOTPRINT AREA

CSAH 1 Rerouting Alternatives

Three CSAH 1 rerouting alternatives were studied by the project management team and brought to the public for comment: 90th Avenue, 100th Avenue, and County Road 56. Refer to Figure 6 for illustrations of each alternative. Detailed drawings of each alternative alignment are included in Appendix B.

- 90th Avenue: The 90th Avenue route is partially on new alignment and partially on an existing township road. Beginning at the southern terminus, the 90th Avenue route follows a new alignment running approximately parallel to US 52, before tying into existing 90th Avenue and continuing north to CSAH 1. It then follows the existing CSAH 1 alignment to the east to the northern terminus point.
- 100th Avenue: The 100th Avenue route is an existing township road and follows the existing horizontal alignment of 100th Avenue from the southern terminus at CSAH 9 to CSAH 1. It then follows CSAH 1 to the northern terminus.
- County Road 56: The County Road 56 route follows an existing county road from the southern terminus at CSAH 9 to CSAH 1 on the north, and then follows CSAH 1 to the northern terminus.

It should be noted that CSAH 1 and 9 are part of the County State Aid Highways system. As CSAH routes, these roads are required to meet design standards that accommodate higher traffic volumes and more heavy commercial vehicles (trucks) than County Roads or Township Roads. The connection between CSAH 1 and CSAH 9 will become a portion of CSAH 1 and therefore will need to be built to meet CSAH design standards; which include pavement strength, lane width, shoulder width, clear-zone width, and right of way width. Therefore, our analysis comparing the three potential routes includes the scenario of either building a new road on a new alignment (90th Avenue) or rebuilding the existing road to meet current CSAH standards on its current alignment (100th Avenue and County Road 56.).

Evaluation of CSAH 1 Rerouting Alternatives

Safety

Regarding the safety goal, 100th Avenue rated the highest because the horizontal alignment had the least amount of curves when compared to 90th Avenue and CR 56. 90th Avenue requires two significant horizontal curves and CR 56 also has several horizontal curves along its alignment. Additionally there is an existing limestone quarry along 100th Avenue with trucks traveling to and from the quarry daily, creating safety and mobility problems. Selecting and upgrading this alignment to CSAH design standards (including the improvement of sight lines and eliminating dust so cars and heavy trucks can better see each other along the route), would thereby improve safety and operations and is an additional benefit of selecting this route.

Access Management

County routes are expected to provide a higher degree of mobility then township roads and therefore at-grade access should be minimized based on the Goodhue Count y Access Management Guidelines. The 90th Avenue alternative rated the best in terms of access management as this route had the least amount of existing access points. 100th Avenue and CR 56 had more access points resulting in a lower rating.

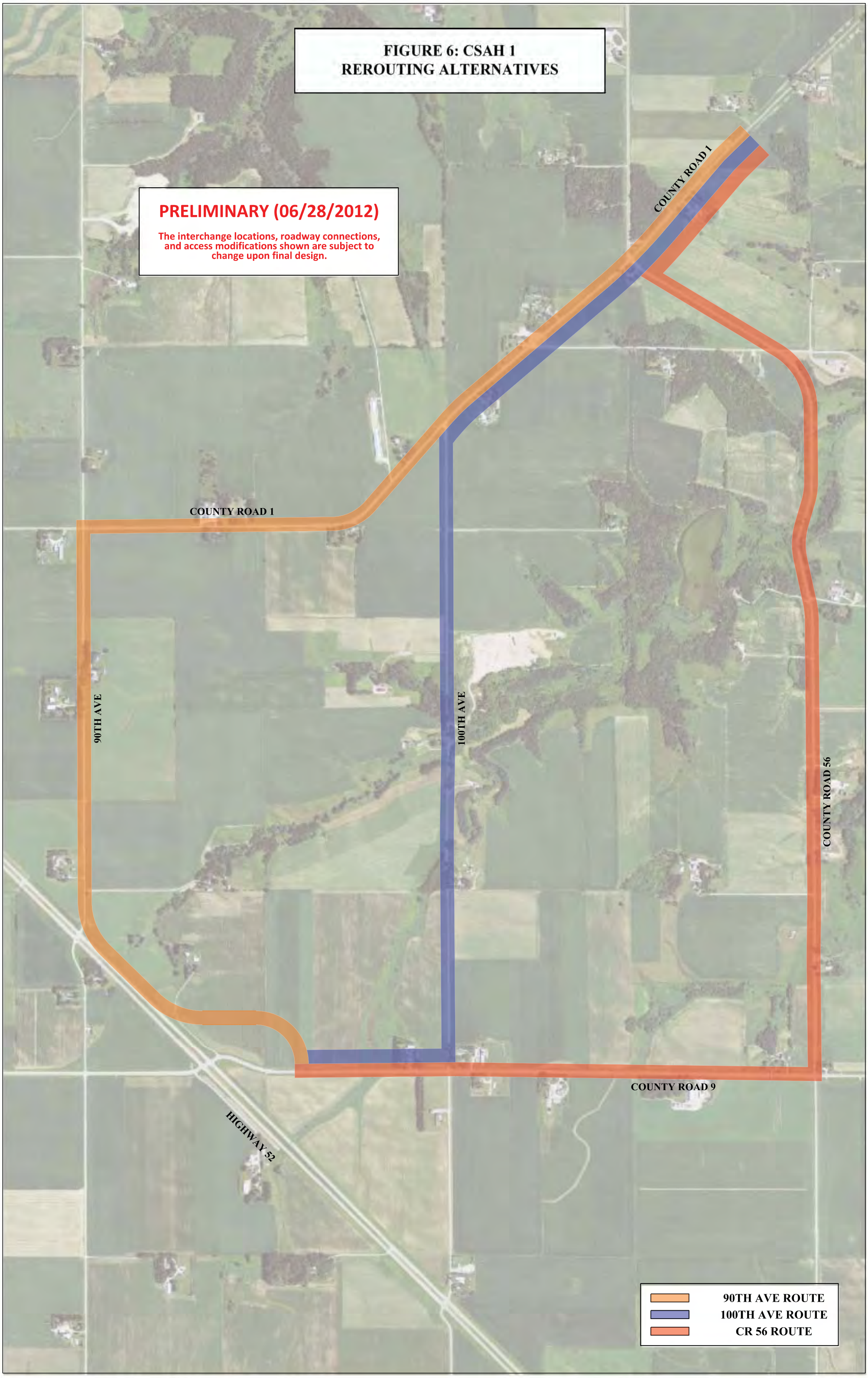
Connectivity and Mobility

For the connectivity and mobility goal, 100th Avenue route rated highly because it is the most direct route for regional through traffic, it had the lowest travel time and requires the least amount of backtracking. Both 90th Avenue and CR 56 would require drivers to backtrack, are longer routes and take longer to travel when compared against 100th Avenue. Additionally, in the future when US 52 is completely converted to a freeway facility, properties located along existing CSAH 1 and along the east side of US 52 north of CSAH 1 will have their direct access to US 52 closed. Their access will be re-routed to the interchange at CSAH 9. The rerouting of this traffic would follow along 90th Avenue, 100th Avenue or CR 56. The most direct route is desired for the rerouted traffic making CR 56 the least favorable route and 90th Avenue or 100th Avenue more favorable routes.

FIGURE 6: CSAH 1
REROUTING ALTERNATIVES

PRELIMINARY (06/28/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.



Social, Economic, and Environmental

Impacts to adjacent properties would occur along any of the selected routes. The 90th Avenue alternative has the highest right of way impact as a portion of the roadway goes through farmland and wetland areas, on a new alignment.

100th Avenue and CR 56 have smaller right of way impacts when compared to 90th Avenue as both follow existing roadways. 100th Avenue was rated as neutral in-terms of environmental impacts as it crosses very similar features as the other two alternatives. In addition, it would require very little right-of-way acquisition. 100th Avenue would also expose fewer homes (seven) to increased traffic than CR 56 (i.e., seven on 100th Avenue and 10 on CR 56).

The 100th Avenue alignment scored well under the economic impacts category as it would provide a paved route for the mining operations, would eliminate a township maintenance problem, would reduce dust, and add another paved road to the road system in this segment of the County. The township maintenance problem on 100th Avenue is due to the heavy truck traffic into and out of the limestone quarry damaging the roadway.

The overall roadway mileage in the county system and township system would remain relatively the same by selecting 100th Avenue as the new CSAH 1 since existing CSAH 1 from US 52 to 100th Avenue may be turned over to the township for their maintenance. If CR 56 is selected as the new CSAH 1 and the existing CSAH 1 from US 52 to CR 56 were turned over to the township to maintain, more mileage of roadways would go to the township, driving up township maintenance costs while county maintenance costs remain the same.

Cost Effectiveness

For the cost effectiveness project goal, 100th Avenue was rated the most cost effective when compared to 90th Avenue and CR 56. 90th Avenue has the highest total „area impacted" driving up the cost (right of way to purchase, grading a new road through farmland and wetlands and regrading the existing roadway to meet CSAH standards). CR 56 is the longest route and complete reconstruction of this route is required to covert from a county road to a CSAH. Additionally if CR 56 was selected, the existing structures where the streams cross CR 56 will require replacement. 100th Avenue would require regrading, however 100th Avenue is a shorter route than CR 56 and 90th Avenue, and impacts less total property area than CR 56 and 90th Avenue resulting in a lower cost. 100th Avenue does have stream crossing structures and these will require replacement. However the county (at the request of the township) will be replacing the large structure just south of the limestone mine next year. Therefore the 100th Avenue alternative would not require a new structure at this location, only the lengthening of that structure.

The staging strategies for the alternatives would all be similar as each road will be required to be closed and detoured during construction. Only 90th Avenue has a portion which can be constructed with no impacts to existing 90th avenue traffic.

A summary of the CSAH 1 rerouting alternative evaluation process is presented in Table 1.

Summary of Results

Based on the alternative evaluation process described above, the PMT recommended 100th Avenue to be the locally supported alternative for the rerouting of CSAH 1. This alternative will best achieve the project goals and has the potential to produce the greatest overall benefit, with the best return on investment.

Table 1: CSAH 1 Rerouting Evaluation Summary

	Safety	Access Management	Mobility and Connectivity	Social, Economic, and Environmental	Cost Effectiveness
90th Ave	0	+	-	-	0
100th Ave	+	0	+	+	+
County Road 56	-	0	0	0	-

D. PMT Approval of Interchange Design Evaluation

Technical Memorandum No. 6 – Interchange Design Evaluation, was presented to the PMT on August 7, 2012 for discussion and comments. After review and comment, the memorandum was amended and reissued. Final approval of Technical Memorandum 6 was received on September 24, 2012.

Appendix A: Interchange Design Alternatives

ALTERNATIVE 4E.1: DIAMOND INTERCHANGE AT CR 9

PRELIMINARY (06/28/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

N

1200

SCALE IN FEET

COUNTY ROAD 1

COUNTY ROAD 1

COUNTY ROAD 1

90TH AVE

100TH AVE

HIGHWAY 52

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

90TH AVE

90TH AVE

COUNTY ROAD 1

100TH AVE

COUNTY ROAD 1

- PROPOSED INTERCHANGE ALIGNMENT
- UPGRADED CR ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4E.2: DIAMOND INTERCHANGE WITH SKEWED BRIDGE AT CR 9

PRELIMINARY (06/28/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

N

1200

SCALE IN FEET

COUNTY ROAD 1

COUNTY ROAD 1

COUNTY ROAD 1

90TH AVE

90TH AVE

100TH AVE

100TH AVE

HIGHWAY 52

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 9

COUNTY ROAD 1

90TH AVE

X

X

X

X

X

- PROPOSED INTERCHANGE ALIGNMENT
- UPGRADED CR ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

ALTERNATIVE 4E.3:
PARCLO A - 2 QUADRANTS DIAGONALLY OPPOSITE INTERCHANGE AT CR 9

PRELIMINARY (06/28/2012)

The interchange locations, roadway connections, and access modifications shown are subject to change upon final design.

1200
SCALE IN FEET

COUNTY ROAD 1
COUNTY ROAD 1
COUNTY ROAD 1
COUNTY ROAD 1
90TH AVE
90TH AVE
90TH AVE
100TH AVE
100TH AVE
HIGHWAY 52
COUNTY ROAD 9
COUNTY ROAD 9
COUNTY ROAD 9

- PROPOSED INTERCHANGE ALIGNMENT
- UPGRADED CR ROUTE
- CLOSED MEDIAN ACCESS
- X CLOSED ACCESS
- PROPOSED DRIVEWAY REALIGNMENT
- PROPOSED PROJECT RIGHT OF WAY
- INTERCHANGE INFLUENCE AREA
- APPROX. CNST LIMITS
- AFFECTED PROPERTIES

Appendix B : CSAH 1 Rerouting Alternatives

US 52 SAFETEY, ACCESS, AND INTERCHANGE LOCATION STUDY

90TH ALTERNATIVE
ALIGNMENT AND CONSTRUCTION LIMITS

195
190
185
180
175
170
165
160
155
150
145
140
135
130
125
120
115
110
105
100

ALTERNATIVE 90TH AVE

LEGEND

CONSTRUCTION LIMITS

ADJUSTED SLOPE AREA
(4:1 to 2:1 or 3:1 to 1:1)

600

SCALE IN FEET

US 52 SAFETEY, ACCESS, AND INTERCHANGE LOCATION STUDY

100TH ALTERNATIVE
ALIGNMENT AND CONSTRUCTION LIMITS

ALTERNATIVE 100TH AVE

190
185
180
175
170
165
160
155
150
145
140
135
130
125
120
115
110
105
100

LEGEND

CONSTRUCTION LIMITS (100TH AVE)

ADJUSTED SLOPE AREA
(4:1 to 2:1 or 3:1 to 1:1)

CONSTRUCTION LIMITS (100TH AVE 2)

ADJUSTED SLOPE AREA
(4:1 to 2:1 or 3:1 to 1:1)

600

SCALE IN FEET

US 52 SAFETEY, ACCESS, AND INTERCHANGE LOCATION STUDY

CR-56 ALTERNATIVE
ALIGNMENT AND CONSTRUCTION LIMITS

ALTERNATIVE CR-56

LEGEND

CONSTRUCTION LIMITS

ADJUSTED SLOPE AREA
(4:1 to 2:1 or 3:1 to 1:1)

750

SCALE IN FEET

Appendix H: Planning and Environmental Linkages (PEL) Worksheet

US 52 Safety, Access, and Interchange Location Study
Planning and Environmental Linkages Questionnaire

Introduction

The following questionnaire follows the guidance and format set forth by the Federal Highway Administration (FHWA) for the Planning and Environmental Linkages process and questionnaire as described in *Guidance on Using Corridor and Subarea planning to Inform NEPA*.[1] This questionnaire is consistent with the 23 CFR 450 (planning regulations) and the FHWA policies on Planning and Environmental Linkage process. The term Planning and Environmental Linkages study (PEL Study) is used in this questionnaire as a generic term to mean any type of planning study conducted at the corridor or subarea level, such as the US 52 Safety, Access, and Interchange Location Study.

The intent of this questionnaire is to provide a concise summary of the planning process undertaken for the US 52 Safety, Access, and Interchange Location Study, in order to ease the transition from planning to a National Environmental Policy Act (NEPA) analysis once project funding is secured. Throughout the course of this study, the Project Management Team (PMT) shaped the scope of the effort with a focus on conducting a planning process and developing meaningful products which could be incorporated into subsequent NEPA efforts.

PEL Questionnaire

1. Background:

a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)

This study was cosponsored by MnDOT District 6 and the Goodhue County Public Works Department.

b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan, or transportation improvement program years)?

- Study Name: US 52 Safety, Access, and Interchange Location Study
- State Project Number (SP): 2506-66

Prior to the undertaking of this study, the State and Goodhue County identified a need for a new interchange on US Highway 52 (US 52) at the intersection of County State-Aid Highway (CSAH) 1 or CSAH 9 and a need for closure and modification of accesses for the roadway system along US 52 in the project area.

The at-grade intersections at CSAH 1 and CSAH 9 are located within the US 52 segment categorized by the State as a High Priority Interregional Corridor (IRC) connecting two regional trade centers (Twin Cities and Rochester). The State's goal is to remove all at-grade intersections and signals on the US 52 High Priority IRC and the *Highway 52 IRC Management Plan (2002)* established a long-term vision to convert this corridor into a freeway facility. Construction of this project will replace these at-grade

[1] Source: FHWA. Guidance on Using Corridor and Subarea Planning to Inform NEPA. April 5, 2011.

intersections. It will also provide connectivity of US 52 with other roadways in the area, and improve traffic safety.

c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?

The US 52 Safety, Access, and Interchange Location Study was guided by a Project Management Team (PMT) that included representatives from each of the public agencies with jurisdiction in the project area, as well as the project consultant team. The PMT membership is listed below:

- Greg Paulson, Assistant District Engineer, MnDOT District 6
- Heather Lukes, Project Manager, MnDOT District 6
- Mike Kempinger, Design-Plan Development Engineer, MnDOT D6
- Nancy Klema, District Traffic Operations Engineer, MnDOT District 6
- Kristin Kammueller, Information Officer, MnDOT District 6
- Greg Isakson, Director of Public Works, Goodhue County
- Ken Bjornstad, Deputy Director of Public Works, Goodhue County
- Richard Samuelson, Goodhue County Commissioner
- Dennis Benson, Leon Township Representative
- John Miller, Stanton Township Representative
- Ray Otto, Cannon Falls Township Representative
- Dan Edgerton, Transportation Planner, HR Green
- Ryan Allers, Traffic Engineer, HR Green
- Jack Broz, Principal in Charge, HR Green

d. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)

Study Limits:

The overall study area includes a 10-mile corridor in Goodhue County along US 52, extending from Highview Road at the southern limits of Cannon Falls to south of County Road (CR) 50, near Hader. In order to facilitate a meaningful evaluation of alternatives, the study area was divided into subareas based on the logical termini and independent utility of potential improvements. As the study progressed, the focus was narrowed to two subareas of the overall study area. These include:

- The general area surrounding the US 52/CSAH 1 and US 52/CSAH 9, including the mainline and the local and regional roadway systems; and
- The area extending north of the existing US 52/CSAH 14 intersection to the planned CSAH 24 interchange project.

Note that as the CSAH 14 project is not anticipated to include federal funds, it is not required to be considered in a future NEPA analysis. Therefore, the remainder of this PEL Questionnaire will focus on the proposed interchange and related county and local road improvements.

Existing Facilities:

The existing roadway network within the study area is served by US 52, as well as supporting regional and local roadway networks. US 52 is classified by MnDOT as a High Priority IRC and a Rural Principal Arterial Expressway (1A-F). Its intended function is to provide a high degree of mobility between the Rochester and Twin Cities Metropolitan Areas. US 52 is currently a high-speed, access controlled

expressway (four-lane divided) with several at-grade intersections and access points throughout the project area. The major at-grade intersections within the study area include CSAH 14, CSAH 1, CSAH 9, and TH 57, all of which are two-lane undivided, rural facilities with side-street stop traffic control. The CSAH 1 intersection is skewed and off-set, with the east junction approximately 1,140 feet north of the west junction, creating additional turning movements onto and off-of US 52 for through traffic. At the CSAH 9 intersection, there is a hill on southbound US 52, south of CSAH 9, which limits sight distance for through traffic on CSAH 9 and left-turns from US 52. The TH 57 intersection in Hader is skewed and the junction of TH 57 and CSAH 8 is in very close proximity (i.e., approximately 140 feet from US 52).

Access Inventory:

There are currently 47 at-grade access points along the project segment of US 52 for an average of 4.7 access points per mile. This includes both full-access and partial-access intersections (i.e., right-in/right-out only) with public roadways (state highways, county highways, township roads, etc.), commercial/industrial property entrances, residential/farm driveways, and field accesses. At nearly half (49%), the most common type of existing at-grade access along the study segment of US 52 is residential and/or farm driveways. The next most common access type is field/agricultural access (19%), followed by township and county roadway intersections.

Most (85%) of the at-grade access points identified above have full access, allowing for a full range of vehicle movements, including crossing, left turns, and right turns. A total of seven intersections (i.e., six residential and one field) have partial access under which there is no opening in the center median along US 52.

Surrounding Environment:

The majority of the land surrounding the study area is used for agriculture or remains undeveloped due to the physical constraints of the area (i.e., steep slopes, wetlands, etc.). There are some residential and commercial uses along US 52 dispersed throughout the study area.

According to the Goodhue County Comprehensive Plan (2004), the majority of the land surrounding the study area (approximately CSAH 1 to the south study limit) is zoned as agricultural use with the intent to encourage long-term agricultural uses and preserve prime agricultural farmland by restricting the location and density of non-farm dwellings and other non-farm uses. Based on PMT meeting discussions with Goodhue County, Cannon Falls Township, and Leon Township representatives, it was determined that there are currently no plans for the project area land use to change within the foreseeable future. Therefore, as a baseline for calculations such as traffic growth and future development, it was assumed that there are no land use changes within the study area.

Refer to *Technical Memorandum 2: Project Background* for additional information on the existing characteristics of the study area.

e. Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.

The need for this project has been identified in a series of studies and plans over the past two decades. These include the following:

- *Statewide IRC Study (1999)* – Identified the study segment of US 52 as a High Priority Interregional Corridor (IRC) connecting two regional trade centers (Twin Cities and Rochester). The State's goal is to remove all at-grade intersections and signals on the US 52 High Priority IRC.
- *Highway 52 Corridor Study and Management Plan (2000)* – Recommended corridor management plan included the identification of eight new interchange locations in order to

transition US 52 into a freeway facility, as well as two reconstructed/reconfigured interchanges. This includes a proposed interchange at Goodhue County CSAH 9 within the project area for the *US 52 Safety, Access, and Interchange Location Study*.

- *Highway 52 IRC Management Plan (2002)* – Established a vision for future improvements to the highway known as "Vision 52." The ultimate vision for US 52 is to develop a fully access controlled freeway facility. The study recommended construction of an interchange at either CSAH 1 or CSAH 9 and concluded that CSAH 9 would offer the better location as it better serves the interconnecting county and regional transportation systems.
- *Goodhue County Transportation Plan (2004)* – Identified the need for an interchange along US 52 within the vicinity of CSAH 1 or CSAH 9 and included recommendations for supporting county roadway improvements.
- *US 52 Safety, Access, and Interchange Location Study (2012)* – Current study resulted in the following recommendations:
    - Interchange location at CSAH 9.
    - Use of 100th Ave as an extension of CSAH 1 on the east side of the corridor when CSAH 1 access at US 52 is removed.
    - Closure of CSAH 14 at US 52 and extension into Cannon Falls via a backage road connection.
    - Development of a corridor-wide access management framework.

f. Are there recent, current, or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?

As part of the study process, a number of planned and potential future projects in the vicinity of the study area were identified and are described below:

Cannon Falls Interchange Project:

MnDOT has programmed funds for the construction of a grade-separated interchange along US 52 at Goodhue County CSAH 24, just north of the study area in Cannon Falls. This project will remove the last remaining traffic signal on US 52 from the Twin Cities to Rochester, improving safety and mobility within the area. A recommendation of the US 52 Safety, Access, and Interchange Location Study is to close CSAH 14 at US 52 and extend CSAH 14 to the north to connect to the planned interchange at US 52 and CSAH 24.

Interim Improvements on US 52:

Due to the urgent need to improve safety along US 52 within the vicinity of CSAH 1 and CSAH 9, MnDOT is planning to study interim improvement options for implementation in the near term. These interim improvements will be planned and designed in accordance with the long-term recommendations of the US 52 Safety, Access, and Interchange Location Study in order to provide the greatest return on investment while increasing safety.

CAPX2020:

A transmission line project known as CapX2020 has been proposed within the study area. This project would be built in phases and would be designed to meet the growth in electricity demand as well as to tap into vast wind energy resources in southern and western Minnesota and the Dakotas. The proposed CapX2020 project will include construction of three 345 kilovolt (kV) transmission lines, one 230 kV line, and associated substations. The Group 1 projects include a 150-mile, 345 kV line between Hampton and Rochester continuing to La Crosse, Wisconsin. The power lines need continuous maintenance access throughout the project area. The route of this power line along US 52 could provide the ability to create north-south mobility improvements for local traffic that is currently served by direct access on US 52. The power lines need continuous maintenance access throughout the project area. If the utility line is

constructed, a potential opportunity for MnDOT and Goodhue County exists to expand this access road, creating a township road for the low volume of local traffic to use and potentially eliminate several access points directly onto US 52. This opportunity should be further investigated and pursued as the CAPX2020 project development process continues.

Rochester Rail Link Feasibility Study (2003)

The City of Rochester, together with MnDOT, assessed the potential of the US 52 Corridor as a multi-modal corridor and a key connector for the future. The study examined the feasibility of rail service supporting interurban mobility and connections between the Twin Cities and Rochester at the regional level of the Midwest. The study evaluated the potential for the US 52 corridor as a high speed rail connection between the Twin Cities and Rochester international airports. The report identified two alternative routes, but no recommendations were made in the report. There are currently no plans or funding identified for rail service in the project corridor.

2. Methodology used:

a. What was the scope of the PEL study and the reason for completing it?

The purpose of the US 52 Safety, Access, and Interchange Location Study was to study options for transportation improvements to address the severe safety issues along US 52 within the project area and to implement the long term vision for US 52. The long-term vision is to convert US 52 to a fully access-controlled freeway facility between I-90 and I-494, a segment which MnDOT has identified as a High Priority IRC. It is MnDOT's goal to remove all at grade intersections and signals on the study segment of US 52. In addition, for over a decade various planning studies have been completed for the US 52 corridor, focusing on improving safety. The *US 52 Corridor Management and Safety Plan* in 2000, concluded with a recommendation that an interchange be constructed in the vicinity of CSAH 9 or CSAH 1.

The scope of the US 52 Safety, Access, and Interchange Location Study was to identify US 52 safety improvements between the City of Cannon Falls and Hader (an unincorporated community) and to determine a recommended location for an interchange along US 52 in the vicinity of CSAH 1 and/or CSAH 9. The study also included related roadway network and access management improvements, such as a potential realignment of CSAH 14 on the north end of the project area and new access roads to maintain system connectivity due to closed access points. Implementation of project recommendations will provide enhanced connectivity between US 52 and the supporting roadway network and vastly improve traffic safety.

b. Did you use NEPA-like language? Why or why not?

Throughout the course of this study the Project Management Team (PMT) shaped the scope of the effort with a focus on conducting a planning process and developing meaningful products which could later be incorporated into subsequent NEPA efforts. To that end, every effort was made to meet the standards established by NEPA regulations and guidance. This includes the incorporation of "NEPA-like" language into the study process in order to ease the transition from planning to NEPA analysis once project funding is secured.

c. What were the actual terms used and how did you define them? (Provide examples or list)

The following list provides an example of the NEPA style terms used throughout the study process including a brief description of how they were defined:

- Purpose and Need Statement: A statement of the transportation problem to be addressed and clearly articulated needs or factors contributing to the problem, including measurable variables where possible.
- General Travel Corridor Definition: The general travel corridor directs future study of improvements into one general area (i.e., study area).
- Project development: This study followed a project development process consistent with NEPA guidelines and practices, including consideration of the following when defining concept alternatives:
    - Logical Termini: Rational end points for a transportation improvement and environmental review which could cover a broader geographic area than the strict limits of the transportation improvements;
    - Independent Utility: Improvements should be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
    - Consideration of other Improvements: The proposed action should not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.
- Planning-Level Alternative Analysis: The purpose of the planning-level alternatives analysis was to serve local decision making by evaluating the relative impacts of each alternative. The alternatives analysis process was used to eliminate alternatives with fatal flaws and to identify alternatives to be carried forward into a future NEPA process.
- Locally Supported Alternative: The transportation improvement selected by decision makers as the solution to the transportation needs and problems in a corridor.

d. How do you see these terms being used in NEPA documents?

The "NEPA-like" terms used as part of this study should be referenced in the future NEPA document for the project as a way to tie the planning-level work to the project-level NEPA analysis.

e. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.

The key steps in the study process are listed below in described in more detail in the *US 52 Safety, Access, and Interchange Location Study Executive Summary*:

- Visioning and Goal Setting
- Identification of Issues and Opportunities
- Purpose and Need Statement Development
- Alternative Development and Evaluation
- Refinement and Evaluation of Interchange Alternatives to be Carried Forward
- Development of Corridor Access Management Overview
- Final Study Recommendations

Stakeholder coordination occurred on an ongoing basis throughout the study process. This coordination took the form of regular PMT meetings and four public meetings which were held at critical study milestones. The PMT meetings served as a way for the sponsoring agencies (i.e., MnDOT and Goodhue County), as well as the adjacent townships, to guide the study. The PMT was directly responsible for the development, evaluation, and approval of all study products, including the public engagement plan, purpose and need statement, alternative development and evaluation, and final study recommendations.

Study products were also presented at public meetings throughout the study process. Public input was collected and used to calibrate products to the expectations and viewpoints of the general public.

There was no official coordination with other resource/regulatory agencies such as FHWA, USACE, and USFWS as part of this study. As no funding for the potential improvements has been identified, the project has not been programmed by MnDOT or Goodhue County and there is no committed schedule for implementation. Because of the open ended timeframe for implementation, official project-level agency coordination was not conducted. The project team did however provide the draft purpose and need statement to the MnDOT Office of Environmental Stewardship for review and comment.

It is assumed that a more thorough agency coordination effort will be conducted as part of a future NEPA process for this project.

f. How should the PEL information be presented in NEPA?

At the outset of the study process, the final product of this effort was intended to be a project-level NEPA evaluation and related documentation. However, changes in FHWA policy which took effect after the study began limited the scope of this effort to a planning-level study as no funding for the potential improvements have been identified and the project has not been programmed by MnDOT or Goodhue County. As a result, the PMT re-shaped the project scope with a focus on conducting a planning process and developing meaningful products which could be incorporated into subsequent NEPA efforts.

The information developed as part of the US 52 Safety, Access, and Interchange Location Study should be incorporated into the future environmental evaluation and documentation in order to streamline the NEPA process. Specific examples of study products which should be carried forward into the NEPA process are described below. Note that this is not an all-inclusive list. Refer to the *US 52 Safety, Access, and Interchange Location Study: Executive Summary* for additional information on each of the study elements.

1. NOI: The study should be referenced in the Notice of Intent (NOI) at the outset of the official NEPA process, in order to establish a clear connection between the environmental analysis and the work completed as part of the study. The following is example NOI language for the proposed project:

   "Improvements to the US 52 corridor within the vicinity of CSAH 9 in Goodhue County are considered necessary to improve safety and to implement the State"svision to convert US 52 to a fully access controlled freeway. Alternatives under consideration include, but are not limited to: (1) taking no action and (2) construct a grade separated interchange on US 52 at CSAH 9. The EA will use data and findings from the planning study entitled ,,US 52 Safety, Access, and Interchange Location Study" dated November 2012. Copies of this study are available from MnDOT District 6.

2. NEPA Document Scoping: The study should set the stage for scoping of the NEPA process and should be referenced when defining the stakeholder coordination and public involvement efforts. Future stakeholder coordination should incorporate the PMT and public meeting mailing lists established as part of the study, building on previous efforts to present a continuous and cohesive process.

3. Purpose and Need Statement: A planning-level purpose and need statement (refer to *Technical Memorandum 3: Project Issues and Needs*) was developed to be consistent with the NEPA process. While it may not provide the level of detail needed to satisfy NEPA requirements, it is

expected that the planning-level purpose and need statement will serve as the first draft of the project-level purpose and need statement once the official NEPA process is underway.

4. Preliminary Environmental Screening: A preliminary environmental screening was completed as part of the study (refer to *Technical Memorandum 4: Alternative Development and Evaluation*). This screening should be used as a starting point in the evaluation of environmental impacts. While this screening may not include the level of detail required in a NEPA analysis, it can be used to identify potential issues for further study (i.e., wetlands, streams, sink hole locations, etc.).

5. Evaluation Criteria: The preliminary evaluation criteria (refer to *Technical Memorandum 4: Alternative Development and Evaluation*) used in the planning-level alternatives analysis should form the basis of the project-level Alternatives Evaluation. The evaluation criteria were developed and vetted through an inclusive process which was intended to capture the community, environmental, and technical values in order to ensure stakeholders ownership. The evaluation criteria are based on the transportation goals and objectives which form the basis of the preliminary purpose and need statement, creating a clear link between the planning process and the future NEPA evaluation.

6. Planning-Level Alternatives Analysis/Locally Supported Alternatives: As described above, the planning-level alternatives analysis was conducted with a future NEPA process in mind. The alternatives screening was the end result of a planning process which led to the identification of locally supported alternatives for the future interchange location and related county road connectivity improvements. The locally supported alternatives are described below (refer to *Technical Memorandum 4: Alternative Development and Evaluation*). This information should be used to establish a focused range of alternatives for study in the environmental analysis.

    - Interchange Location: CSAH 9 was identified as the locally supported location for a future interchange along US 52, as it will best accomplish the study goals. Several alternative interchange design concepts were developed in order to complete a preliminary evaluation of impacts; however a recommended alternative was not selected. It is anticipated that an evaluation of interchange design concepts will occur as part of the NEPA process.
    - With the construction of an interchange at US 52 and CSAH 9, access to US 52 at CSAH 1 would be closed or restricted to right-in/right-out only. To maintain adequate local and regional connectivity, a supporting county road connection will be needed on the east side of US 52 between CSAH 1 and CSAH 9 in order to serve redirected CSAH 1 traffic. Based on the Preliminary Alternatives Screening process described above, the 100th Avenue alignment was selected as the locally supported alternative for the rerouting of CSAH 1. Refer to *Technical Memorandum 6: Interchange Design Evaluation* for additional detail.

    Note that the Preliminary Alternatives Screening also considered potential access management improvements for CSAH 14 at US 52. As this project is not anticipated to include federal funds, it does not need to be considered in a future NEPA analysis.

3. Agency coordination:

a. Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.

As no funding for the proposed improvements has been identified, the project has not been programmed by MnDOT or Goodhue County and there is no committed schedule for implementation. Because of the open ended timeframe for implementation, detailed project-level environmental analysis and agency coordination was not conducted as part of this study. It is assumed that coordination with the relevant environmental, regulatory, and resource agencies will be included in the future NEPA process for this project.

b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?

The US 52 Safety, Access, and Interchange Location Study was guided by a Project Management Team (PMT) which included representatives from each of the transportation agencies with jurisdiction in or adjacent to the project area, as well as the project consultant team.

- MnDOT District 6
- Goodhue County Public Works
- Leon Township
- Stanton Township
- Cannon Falls Township

c. What steps will need to be taken with each agency during NEPA scoping?

Coordination with the relevant environmental, regulatory, and resource agencies will need to occur as part of a future NEPA process for this project. It is anticipated that this coordination will include early input letters, follow-up responses, and individual meetings (as needed) with the following:

- MnDOT Office of Environmental Services (MnDOT OES)
- State Historic Preservation Office (SHPO)
- Minnesota Department of Natural Resources (MnDNR) – Environmental Review Program
- Cannon River Watershed District (CRWP)
- Goodhue County Department of Land Use Management
- Minnesota Pollution Control Agency (MPCA)
- Army Corps of Engineers (ACE)
- USDA Natural Resource Conservation Service (NRCS)

4. Public coordination:

a. Provide a synopsis of your coordination efforts with the public and stakeholders.

A key emphasis of the study was to promote effective decision-making by fostering a cooperative spirit among state, regional and local partners, and corridor stakeholders. The following list identifies the key stakeholder groups and public involvement activities undertaken as part of this study.

- Public Open Houses: The PMT hosted three open house meetings at critical study milestones (i.e., early, middle, and end of study), to provide opportunities for corridor residents and the general public to participate in the study process. Public input was recorded and incorporated into the study. The following list provides a brief overview of each open house.
    - August 25, 2010 – The purpose of this meeting was to introduce the project (i.e., purpose, process, and schedule) and to present the initial data collection efforts and analysis such as safety and access evaluations, and to solicit public input on corridor issues and opportunities.

  - May 15, 2012 – The purpose of this meeting was to present the project goals and objectives, alternative development and evaluation, and to seek input on the preliminary recommendations for the interchange location and county road improvements. Meeting participants generally accepted the need for improvements to enhance safety and expressed support for the construction of an interchange in the vicinity of CSAH 1 or CSAH 9.
  - June 28, 2012 – The purpose of this meeting was to present the preliminary results of the planning-level alternatives analysis and the additional technical analysis conducted based on input received at the previous public meeting. The analysis conducted validated the preliminary recommendation for the interchange location at CSAH 9 (Subarea 1). Although there were some concerns, the public generally supported this recommendation. The biggest issue of public contention was the proposed re-routing of CSAH 1 along the 100th Avenue alignment as some area residents did not support this recommendation.
- Neighborhood Meeting: The PMT hosted a small group meeting with residents adjacent to the US 52 corridor on April 7, 2011. The purpose of this meeting was to seek input on the study evaluation criteria and to discuss alternate property access opportunities.
- Newsletters and Website Updates: A project website was developed and updated periodically throughout the study process. In addition, newsletters were mailed to area residents at four key study milestones in order to establish good communications with stakeholders and the general public. These were used to inform stakeholders on upcoming public meetings, provide project updates, and advise the public on key study analyses and recommendations.
- The Project Management Team (PMT): Composed of key technical staff from MnDOT and Goodhue County, as well as representation from the Goodhue County Board of Commissioners and each of the adjacent townships. The PMT met regularly during the study period in order to review technical analyses, guide the overall study process, review input generated by public engagement activities, evaluate alternatives and approve the overall study products and recommendations. A total of 13 PMT meetings were held throughout the study process.
- Policy-Making Body: The Goodhue County Board of Commissioners and MnDOT District 6 were the policy-making bodies overseeing this study. The policy-making responsibilities included considering PMT input and recommendations, approving study products, and implementing recommendations. The County Board and MnDOT District office were apprised of the study process, findings, and recommendations by their respective staff representatives on the PMT.

5. Purpose and Need for the PEL study:

a. What was the scope of the PEL study and the reason for completing it?

The purpose of the US 52 Safety, Access, and Interchange Location Study was to study options for transportation improvements to address the severe safety issues along US 52 within the project area and to implement the long term vision for US 52. The long-term vision is to convert US 52 to a fully access-controlled freeway facility between I-90 and I-494, a segment which MnDOT has identified as a High Priority IRC. Therefore, it is MnDOT's goal to remove all at grade intersections and signals on the study segment of US 52. In addition, for over a decade various planning studies have been completed for the US 52 corridor focusing on at improving safety. The *US 52 Corridor Management and Safety Plan (2000)*, concluded with a recommendation that an interchange be constructed in the vicinity of CSAH 9 or CSAH 1.

The scope of the US 52 Safety, Access, and Interchange Location Study was to identify safety improvements on US 52 between the City of Cannon Falls and Hader (an unincorporated community) and to determine a recommended location for an interchange on US 52 in the vicinity of CSAH 1 and/or CSAH 9. The study also included related roadway network and access management improvements, such as a potential realignment of CSAH 14 on the north and new access roads to maintain system connectivity

due to closed access points. Implementation of project recommendations will provide enhanced connectivity between US 52 and the supporting roadway network and vastly improve traffic safety.

b. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.

This study was guided by a set of transportation goals and objectives developed by the PMT early in study process, which form the basis for the draft purpose and need statement. These goals and objectives were supplemented with additional information collected throughout the data inventory, public engagement, and technical analysis processes to develop a purpose and need statement framework. The purpose and need framework was then further refined to include a set of measurable objectives which were used to guide the development and evaluation of improvement alternatives, ultimately leading to the identification of a series of locally supported actions.

This purpose and need statement was intended to be a "living document" and was continually reviewed, expanded, and revised as part of the study process. While it does not provide the level of detail needed to satisfy NEPA requirements, it is indented to be specific enough so that the range of alternatives developed will offer real potential for solutions to the transportation problem.

The following is a summary of the purpose and need framework. For additional detail including the rationale for each need and an explanation of the connection between the purpose and need statement, project goals and objectives, and the alternative evaluation criteria, refer to *Technical Memorandum 3: Project Issues and Needs*.

Purpose

The purpose of the study is to identify recommended locations for US 52 transportation system improvements that improve safety and access, enhance regional connectivity and mobility, and respect the environmental context of the area.

Needs/Goals

Safety

This goal acknowledges the need to correct the critical safety issues that currently exist along the project segment of US 52.

Measures of effectiveness:

- Reduce the crash rate/severity, particularly at high crash locations.
- Improve roadway geometry/sight distance.
- Reduce variations in traffic speed caused by merging/diverging traffic.

Access Management

This goal reflects the direct relationship between access management, safety, and mobility and seeks to implement MnDOT"s vision for US 52 as a High Priority IRC.

Measures of effectiveness:

- Close at-grade intersections and access points along US 52.
- Provide replacement access to affected properties and local roadways.

Mobility and Connectivity

This goal reflects the need to provide safe and efficient roadway connections between major activity centers along US 52 and within the local and regional transportation systems in accordance with the *US 52 Corridor Management and Safety Plan (2002)* and the *Goodhue County Transportation Plan (2004)*.

Measures of effectiveness:

- Maintain or improve mobility on US 52 in accordance with IRC goals and previous studies.
- Provide efficient regional roadway connections that ensure functionality, mobility, accessibility, and connectivity within the regional transportation system and to US 52.
- Provide efficient local and neighborhood mobility, accessibility, and connectivity to the regional transportation systems.
- Allow improvements at low volume/low speed intersections which will likely remain for many years.

Social, Economic, and Environmental (SEE)

This goal acknowledges that the proposed improvements should support and enhance the transportation system, while minimizing impacts to important social, economic, and environmental elements as well as consider regulatory requirements.

Measures of effectiveness:

- *Minimize social and economic impacts*
  - Number of residential relocations (number of units).
  - Number of residential properties impacted, but not relocated (number of units).
  - Number of properties where right-of-way acquisition is needed (number of units).
  - Right-of-way acquisition (acres).
  - Farmland impacted (acres).
- *Minimize Natural Environment Impacts*
  - Wetland impacts (acres).
  - Floodplain impacts (acres).
  - Woodland impacts (acres).
  - Stream impacts (number of crossings).
  - Sinkhole areas (number of parcels).

Cost Effectiveness

This goal reflects the limited overall financial resources that are available to fund transportation improvements. Improvements need to be cost effective and able to be staged over time within interim and long-term project development processes.

Measures of effectiveness:

- Provide a relatively cost effective solution (as compared with the other alternatives).
- Provide a beneficial return on investment.
- Allow interim improvements in accordance with the ultimate project.

c. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?

A key focus of this study was to conduct a planning process which would result in meaningful products that could be incorporated into future NEPA efforts. As such, it is expected that the full (i.e., presented

above is a summary) planning-level purpose and need statement included in *Technical Memorandum 3: Project Issues and Needs* will serve as the first draft purpose of the project level purpose and need statement. Once project level environmental analysis is underway, the planning level purpose and need statement should be updated and further refined to include the most recent data available, and then vetted through the stakeholder engagement process for further refinement and approval. This should include review from the appropriate state and federal agencies, as well as public input.

6. Range of alternatives: Planning teams need to be cautious during the alternative screen process; alternative screening should focus on purpose and need/corridor vision, fatal flaw analysis, and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the purpose and need/corridor vision will not be considered reasonable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria, and screening process, including:

a. What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)

The alternative development and evaluation process is documented in *Technical Memorandum 4: Evaluation of Alternatives*. Based on the preliminary purpose and need statement (see *Technical Memorandum 3: Issues and Opportunities*) and PMT direction, the primary purpose of the alternative development process was to identify a location for an interchange within the vicinity of CSAH 1 and/or CSAH 9, which would best accomplish the study goals. The following seven concept alternatives were identified (refer to *Technical Memorandum 4: Evaluation of Alternatives* for detailed drawings):

- Alternative 4.A: Partial cloverleaf interchange in the vicinity of the existing intersection of US 52 and CSAH 1.
- Alternative 4.B: Diamond interchange in the vicinity of the existing intersection of US 52 and CSAH 1.
- Alternative 4.C.1: Diamond interchange between CSAH 1 and CSAH 9.
- Alternative 4.C.2: Diamond interchange between CSAH 1 and CSAH 9 with a frontage road connection to CSAH 9 on the east side of US 52.
- Alternative 4.D.1: Split diamond interchange at CSAH 1 and CSAH 9 and use the existing roadway network.
- Alternative 4.D.2: Split diamond interchange at CSAH 1 and CSAH 9 with frontage roads in-between.
- Alternative 4.E: Diamond interchange in the vicinity of the existing intersection of US 52 and CSAH 9.

In addition, the study also considered concept alternatives for a CSAH 1 connection on the east side of US 52 in the area between CSAH 1 and CSAH 9. If the interchange were built at CSAH 1, access to US 52 at CSAH 9 would be closed or restricted to right-in/right-out only and if an interchange were built at CSAH 9, access at CSAH 1 would be closed or restricted. To provide alternative access for traffic on the closed route, a new north-south route connecting CSAH 1 and CSAH 9 is needed. The following three alternative alignment concepts were considered (refer to *Technical Memorandum 6: Interchange Design Evaluation* for additional detail):

- 90th Avenue: The 90th Avenue route is partially on new alignment and partially on an existing township road. Beginning at the southern terminus, the 90th Avenue route follows a new alignment running approximately parallel to US 52, before tying into existing 90th Avenue and

continuing north to CSAH 1. It then follows the existing CSAH 1 alignment to the east to the northern terminus point.

- 100th Avenue: The 100th Avenue route is an existing township road and follows the existing horizontal alignment of 100th Avenue from the southern terminus at CSAH 9 to CSAH 1. It then follows CSAH 1 to the northern terminus.
- County Road 56: The County Road 56 route follows an existing county road from the southern terminus at CSAH 9 to CSAH 1 on the north, and then follows CSAH 1 to the northern terminus.

Note that the planning-level alternatives screening also considered alternatives for potential access management and connectivity improvements for CSAH 14 at US 52. As this improvement is not anticipated to include federal funds, it does not need to be included in a future NEPA analysis for this project.

b. How did you select the screening criteria and screening process?

The preliminary evaluation criteria were developed and vetted through an inclusive stakeholder engagement program which was intended to capture the community, environmental, and technical values, and ensure stakeholder ownership. For additional detail, including an explanation of the connection between the purpose and need statement, project goals and objectives, and the alternative evaluation criteria refer to *Technical Memorandum 3: Project Issues and Needs*.

c. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s).

The following is a summary of the interchange concept alternatives eliminated from future consideration as a result of the preliminary alternative evaluation process. Refer to *Technical Memorandum 4: Alternative Evaluation* for a detailed explanation of the evaluation process.

- Alternative 4.A and 4.B:
  As these alternatives share a common location (interchange at CSAH 1), both received similar ratings. An interchange at CSAH 1 creates a circuitous route for local and regional traffic as a result of the need to reroute CSAH 9, thereby limiting connectivity and mobility. These alternatives also require the replacement of several access points in an area of challenging topography, affecting their ability to accomplish the access management and cost effectiveness goals. In addition, the realignment of CSAH 9 (additional left turns), and the partial access at CSAH 9 and US 52 (right-in/right-out), makes these alternatives less beneficial to safety than some of the alternative interchange locations. Because they do not achieve the study goals and because of the difficulty of replacing residential access was considered a fatal flaw, these alternatives are not recommended for future consideration.
- Alternative 4.C.1:
  While this alternative accomplishes the safety goal, it received a low score under the access management goal due to its inability to close high volume at-grade access points along US 52, which was considered a fatal flaw. It also has a relatively high farmland and right-of-way acquisition impacts. As a result, this alternative is not recommended for future consideration.
- Alternative 4.C.2:
  This alternative provides additional safety benefits as compared to Alternative 4.C.1 as the proposed frontage road eliminates the circuitous rerouting of CSAH 9 traffic. The frontage road also provides an efficient replacement for closed access points, thereby improving access management over Alternative 4.C.1. However, due to the high cost of this alternative, it is not recommended for further consideration.
- Alternative 4.D.1 and 4.D.2:

Both alternatives provide clear safety benefits by replacing the at-grade access at both CSAH 1 and CSAH 9 with grade separated interchange access. They also scored relatively high in mobility and connectivity as the split diamond would minimize adverse travel time impacts. However, both alternatives have relatively high right-of-way and farmland impacts and a high cost, which was considered a fatal flaw. Therefore, these alternatives are not recommended for further consideration.

In addition, the study also included a planning-level evaluation of concept alternatives for an alternative CSAH 1 connection on the east side of US 52, based on the study evaluation criteria. The following is a summary of the evaluation results. Addition detail is included in *Technical Memorandum 6: Interchange Design Evaluation*.

- 90th Avenue:
  This alternative is not recommended for further consideration as it has the highest total „area impacted" driving up the cost (right of way to purchase, grading a new road through farmland and wetlands and regrading the existing roadway to meet CSAH standards). The high cost of this alternative was considered a fatal flaw.
- CR 56 Alternative:
  This alternative is not recommended for further consideration as it has a high cost, would not achieve the access management goals of the study (i.e., impacts the highest amount of existing access points), and would require drivers to backtrack, creating a long and circuitous route (i.e., fatal flaw).

d. Which alternatives should be brought forward into NEPA and why?

A primary goal of the US 52 Safety, Access, and Interchange Location Study was to identify a suitable location for a future US 52 interchange in the vicinity of CSAH 1 or CSAH 9. Based on the results of the planning-level alternatives analysis described above, Alternative 4.E, interchange at CSAH 9 was selected as the locally supported interchange location and should be brought forward into NEPA for further analysis. The following is a summary of the evaluation results for Alterative 4.E.

- Alternative 4.E:
  This alternative achieves the study goals with clear benefits in safety, access management, SEE considerations, and cost effectiveness. The grade-separated interchange improves safety, the proposed access closures are easily replaced, and there is minimal impact to mobility and connectivity. This alternative also has the fewest SEE impacts and highest overall cost effectiveness.

As part of the study, three potential design concepts for a US 52 interchange at CSAH 9 were evaluated to understand potential impacts and to identify fatal flaws (refer to *Technical Memorandum 6: Interchange Design Evaluation*). This includes the following:

- 4.E.1: Diamond interchange with perpendicular bridge
- 4.E.2: Diamond interchange with skewed bridge
- 4.E.3: Partial cloverleaf (parclo) interchange with skewed bridge

The result of this effort was the identification and mapping of a composite interchange footprint which will be used to guide future planning and development within the area, prior to NEPA. The final interchange design configuration was not selected as part of this study. It is assumed that a detailed evaluation of interchange design alternatives will occur as part of the future NEPA process.

e. Did the public, stakeholders, and agencies have an opportunity to comment during this process?

As described above, the study included a thorough stakeholder engagement process. Stakeholders were informed and participated throughout the study process, resulting in the selection of a locally supported interchange location and related county road improvements.

The study"s stakeholder engagement program included participation from MnDOT, Goodhue County, Leon Township, property owners, and the general public. It is anticipated that official coordination with FHWA and the appropriate environmental resource agencies will occur as part of the future NEPA process.

f. Were there unresolved issues with the public, stakeholders, and/or agencies?

Based on the results of the planning-level alternatives analysis, most stakeholders generally accepted the recommended interchange location at CSAH 9 (Alternative 4.E) and related county road improvements.

There are continued objections over the proposed rerouting of CSAH 1 along the 100th Avenue alignment, and the potential loss of farmland from one family. This family owns property at the intersection of CSAH 9 and 100th Avenue and has expressed concern over the potential quality of life impacts related to the increase in traffic associated with this action.

7. Planning assumptions and analytical methods:

a. What is the forecast year used in the PEL study?

The US 52 Safety, Access, and Mobility Study used the traffic projections prepared as part of the approved *Goodhue County Transportation Plan (2004)*. The forecast year for these projections is 2025. Because there are no planned land use changes or changes to the assumptions for future growth, the study team did not update forecast traffic volumes for this project. In addition, the existing traffic forecasts indicate that future traffic volumes are anticipated to be well within the planning-level traffic capacity thresholds for the study segment of US 52 and the supporting county roadway network. Therefore, it was determined that project-level traffic analysis would not be required as part of this study as traffic capacity constraints do not appear to be an issue.

b. What method was used for forecasting traffic volumes?

As described above, this study used the traffic projections prepared as part of the approved *Goodhue County Transportation Plan (2004)*. The plan used a combination of forecasting methodology, including compounded growth rate, linear regression, 1 percent per year and 2.5 percent per year. Details of the methodology used to develop state highway traffic forecasts are found in *Appendix B of the Goodhue County Transportation Plan (2004)*.

c. Are the planning assumptions and the corridor vision/purpose and need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?

The planning assumptions and the corridor purpose and need statement were developed to maintain consistency with local long-range planning documents. The growth and land use assumptions included in the *Goodhue County Transportation Plan (2004)* were examined and validated as part of the study process.

d. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs, and network expansion?

Based on coordination with Goodhue County, the City of Cannon Falls, and the townships adjacent to the study area, it was determined that there would be no major land use changes, development or redevelopment within the study area. The study assumed only modest traffic growth resulting from natural population increases as presented in the *Goodhue County Transportation Plan (2004)*.

8. Environmental resources (wetlands, cultural, etc.) reviewed. For each resource or group of resources reviewed, provide the following:

a. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?

The US 52 Safety, Access, and Interchange Location Study included a planning-level review of environmental resources using GIS data collected from MnDOT, Goodhue County, and other readily available sources (refer to *Technical Memorandum 4: Alternatives Evaluation*). This review included the following:

- Farmlands
- Wetlands
- Flood plains
- Woodlands
- Sinkholes
- Streams

b. Is this resource present in the area and what is the existing environmental condition for this resource?

The planning-level review identified the resources listed above as being present within the study area. However, a detailed inventory of potential environmental resource was not completed as part of this study as no funding source has been identified and the project is not programmed. It is assumed that detailed environmental analysis will be conducted as part of the future NEPA process.

c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?

Based on the planning-level environmental review, the proposed project has the potential to impact farmlands, wetlands, and woodlands. It is assumed that detailed environmental analysis will be conducted as part of the future NEPA process.

d. How will the planning data provided need to be supplemented during NEPA?

It is assumed that detailed environmental analysis will be conducted as part of the future NEPA process.

9. List environmental resources you are aware of that were not reviewed in the PEL study and why. Indicate whether or not they will need to be reviewed in NEPA and explain why.

A detailed evaluation of potential environmental resource impacts was not completed as part of this study as no funding source has been identified and the project is not programmed. It is assumed that detailed environmental analysis will be conducted as part of the future NEPA process.

There were no environmental resources that were identified but not reviewed as part of the study.

10. Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where the analysis can be found.

Cumulative impacts were not considered as part of the US 52 Safety, Access, and Interchange Mobility Study. As no funding for the potential improvements has been identified, the project has not been programmed by MnDOT or Goodhue County and there is no committed schedule for implementation. Because of the open ended timeframe for implementation, detailed project-level environmental analysis (including consideration for cumulative impacts) was not conducted as part of this study. It is assumed that an evaluation of cumulative impacts will be included in the future NEPA process for this project.

11. Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.

As described above, detailed environmental analysis was not completed as part of this study as no funding source has been identified and the project is not programmed. It is assumed that detailed environmental analysis, including identification of potential mitigation strategies, will be conducted as part of the future NEPA process.

12. What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?

The final product of this study is the *US 52 Safety, Access, and Interchange Location Study: Executive Summary* which includes an overview of the study process and results, as well as all of the major study products attached as an appendix. The intent of this document is to make the information developed as part of the study available to all stakeholders as the project moves into the NEPA phase. This document should be shared with agencies and the public at the outset of the NEPA scoping process in order to provide the project background and a summary of the work completed to date. The document is available by request from MnDOT D6 or Goodhue County and is posted along with other study information on the project website at: www.dot.state.mn.us/d6/projects/hwy52accessstudy/index.html.

13. Are there any other issues a future project team should be aware of?

a. **Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.**

There are continued objections over the proposed rerouting of CSAH 1 along the 100th Avenue alignment, and the potential loss of farmland from one family. This family owns property at the intersection of CSAH 9 and 100th Avenue and has expressed concern over the potential quality of life impacts related to the increase in traffic associated with this action.