Highway 14 Eagle Lake Corridor Study

Final Report

October 15, 2025

MAPO
MANKATO/NORTH MANKATO
AREA PLANNING ORGANIZATION

DEPARTMENT OF
TRANSPORTATION

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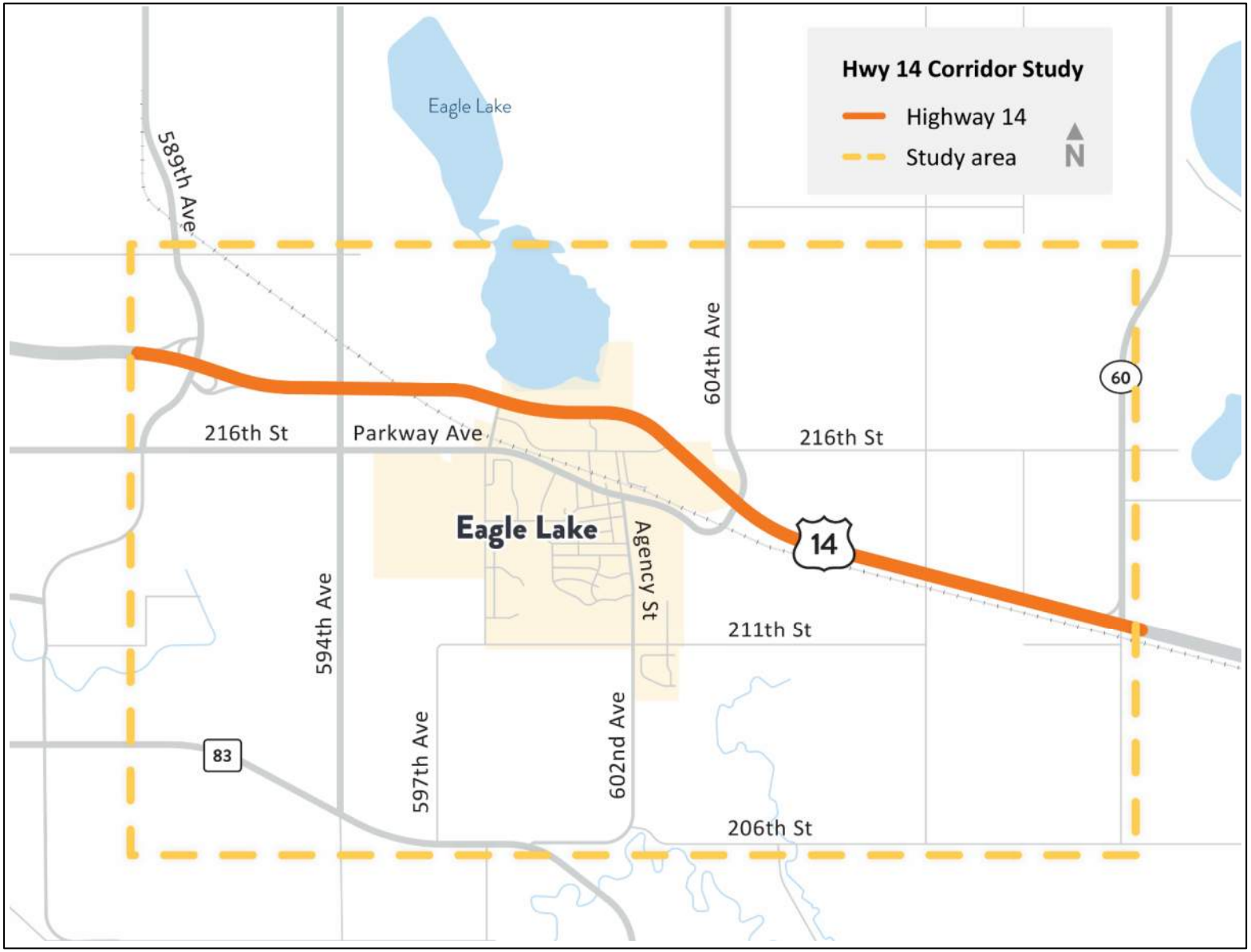
I. Introduction

The Mankato/North Mankato Area Planning Organization (MAPO), in collaboration with the Minnesota Department of Transportation (MnDOT) and local communities, is planning for the future of the Highway 14 (Hwy 14) Corridor in the Eagle Lake Area. The study corridor focuses on Highway 14 between County State Aid Highway (CSAH) 12 and Highway 60, as shown on **Figure 1**. The corridor has experienced various safety and mobility issues over the years. The study will evaluate opportunities to implement future improvements to address existing and future issues, while also being mindful of the community's needs and priorities. The goals of the study include:

- Define a long-term transportation system vision for Highway 14 that ensures safety, mobility, economic vitality, resiliency, and access for all modes of transportation.
- Secure public and agency support for the system vision where community input and needs are meaningfully incorporated into the recommended vision and the study recommendations are adopted by the applicable agencies.
- Develop a detailed, feasible implementation plan outlining future improvements, sequencing and triggers, timing, cost, and agency responsibility.

The purpose of this memorandum is to document the study process, findings, and recommendations which were identified through a detailed technical evaluation and incorporates community and agency partner input on their experiences with the corridor.

Figure 1. Study Area



II. Issues and Needs

An existing and future conditions assessment was conducted to understand issues and needs within the study area. This assessment process included a review of a wide variety of transportation characteristics, operations, and safety. The intent of this assessment was to identify and summarize key issues and needs, along with identifying an approximate timeline or metrics that would prompt infrastructure changes and/or considerations. The following information summarizes the issues and needs assessment process, assumptions, and overall findings, which will inform the purpose and need and alternative development and evaluation phase of the study.

Roadway Characteristics

The Highway 14 corridor, with limits from CSAH 22 to Highway 60, is generally a four-lane, divided rural expressway that transitions to/from a freeway facility at CSAH 12. There is a grassed median along the corridor that varies from approximately 40 to 90 feet wide and the corridor right-of-way varies from approximately 250 to 280 feet wide. The 5-mile study corridor includes an interchange at CSAH 12 and unsignalized at-grade intersections throughout the rest of the corridor, which includes a combination of right-in/right-out, Reduced Conflict U-Turn (commonly called "J-Turns"), and full-access intersections. Turn lanes are provided at each of the at-grade intersections along the study corridor. There are no multimodal facilities located directly along the corridor, although there is a trail facility that connects 594th Avenue (CSAH 86) and 598th Avenue (CSAH 56) that goes under the Highway 14 railroad bridge.

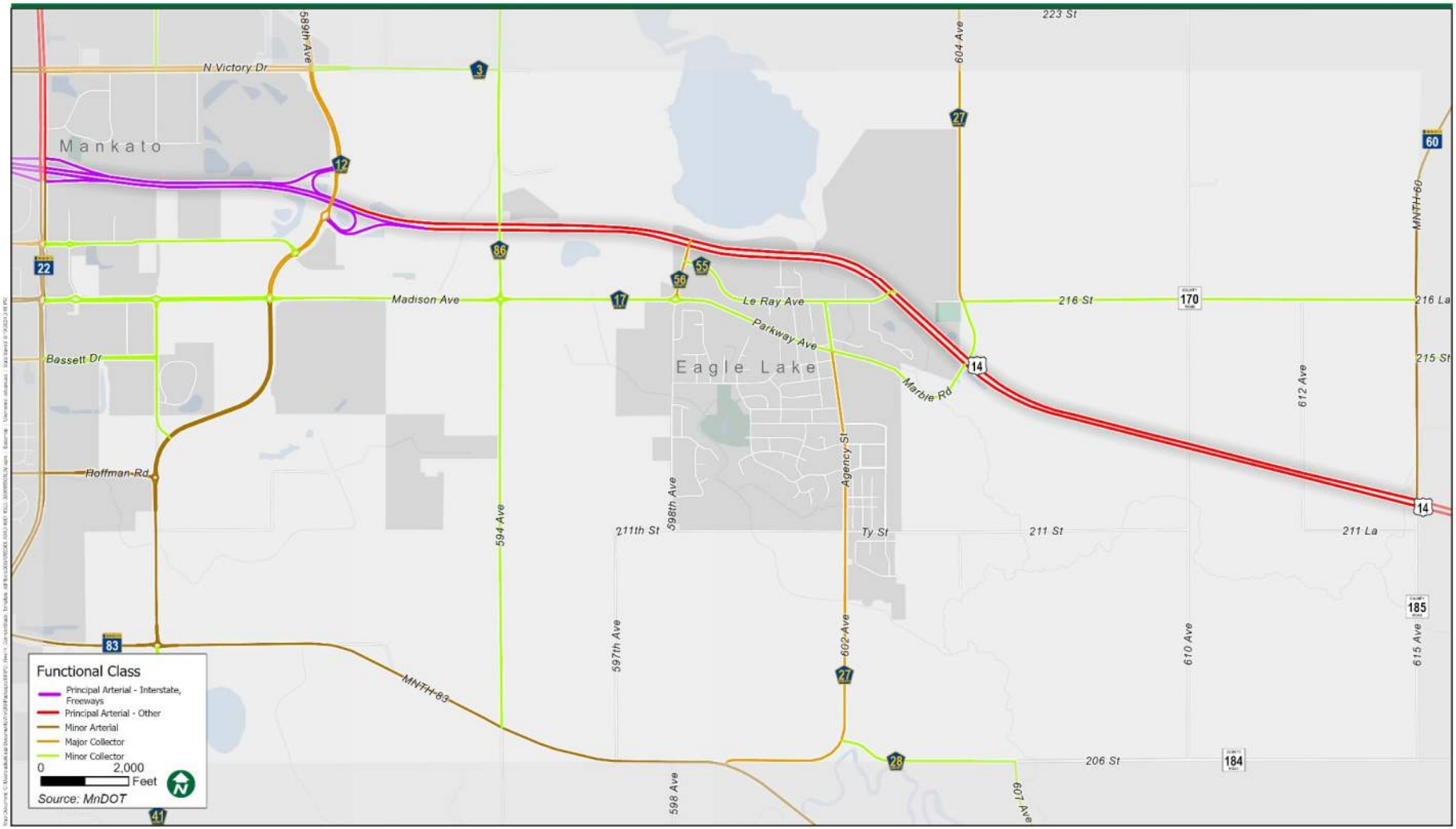
Functional Classification

The functional classification system is used to describe the hierarchy of roads that efficiently collect and distribute traffic from neighborhoods to the state highway system. A successful system coordinates and manages mobility, roadway design, and route alignment as well as seeks to match current and future land use and access needs with the adjacent roadway's purpose, speeds, and spacing. Functional classification defines the part that any particular road or street should play in serving the flow of trips through a highway network, and is comprised of principal arterials, minor arterials, major and minor collectors, and local roadways. **Figure 2** shows the functional classification of study area roadways.

Highway 14 within the study area is a Principal Arterial roadway, which primarily serves a mobility function. Other prominent Highway 14 cross-streets by functional classification include:

- Minor Arterial: CSAH 12 and Highway 60
- Major Collector: 598th Avenue (CSAH 56) and Marble Road (CSAH 27)
- Minor Collector: 594th Avenue (CSAH 86), LeRay Avenue (CSAH 55), and Parkway Avenue (CSAH 17)
- Local Streets: 610th Avenue, 612th Avenue, and 615th Avenue (CR 185)

Figure 2. Functional Classification



Access

The Highway 14 study corridor has eight (8) primary access locations / intersections, which are generally located at ½- to 1-mile spacing. The intersections include an interchange at CSAH 12 and unsignalized at-grade intersections throughout the rest of the corridor. The at-grade intersections include a combination of right-in/right-out, J-Turn, and full-access intersections, which are outlined below. Note that the Highway 60 intersection includes a southbound to westbound channelized right-turn lane.

- CSAH 12: Interchange
- 594th Avenue (CSAH 86): Right-in / Right-out
- 598th Avenue (CSAH 56): J-Turn
- LeRay Avenue (CSAH 55): 3/4 Access Intersection
- Parkway Avenue (CSAH 17) / Marble Road (CSAH 27): J-Turn
- 610th Avenue: Full-Access
- 612th Avenue: Full-Access
- Highway 60 / 615th Avenue (CR 185): Full-Access

Land Use

Existing land use within the study area, which is illustrated in **Figure 3**, includes commercial, residential, public / park, and agricultural uses. Industrial and commercial areas are primarily centered around CSAH 12 and 598th Avenue (CSAH 56) and transitions to commercial / residential areas near the City of Eagle Lake. East of Parkway Avenue (CSAH 17) and Marble Road (CSAH 27), the existing land use along Highway 14 becomes primarily agricultural.

Multimodal / Transit Networks

The existing multimodal (i.e., trail and sidewalk) networks within and adjacent the study area are illustrated in **Figure 4** and **Figure 5**, respectively. In general, there are no multimodal facilities located directly along the corridor, although there is a trail facility that connects 594th Avenue (CSAH 86) and 598th Avenue (CSAH 56) that goes under the Highway 14 railroad bridge. However, there are multimodal facilities within the study area, such as along Parkway Avenue (CSAH 17) connecting with the City of Mankato, the St. Clair Eagle Lake Loop, and the Sakatah Singing Hills State Trail.

From a transit perspective, there are no Mankato Transit System (MTS) fixed routes within the study area. Service from MTS is not provided in Eagle Lake because they are outside the Federally defined Mankato Urban Area. However, Both TRUE Transit and paratransit/mobility bus service

is provided within the study area. TRUE Transit provides demand response service to the area. Customers must call and schedule rides. Paratransit/mobility bus service is a shared ride, origin-to-destination complimentary service for eligible individuals with disabilities.

Figure 3. Existing Land Use

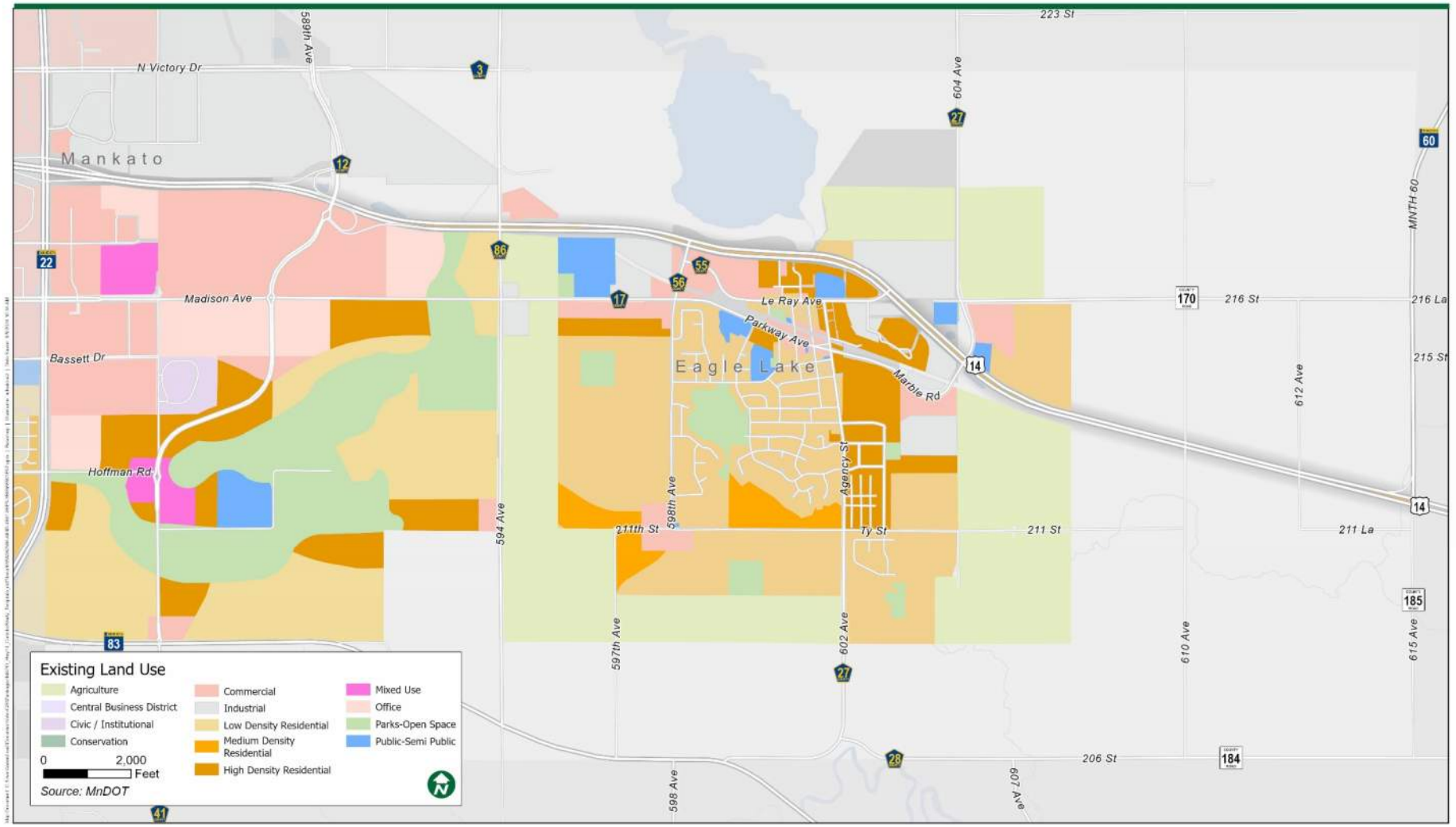


Figure 4. Multimodal Network

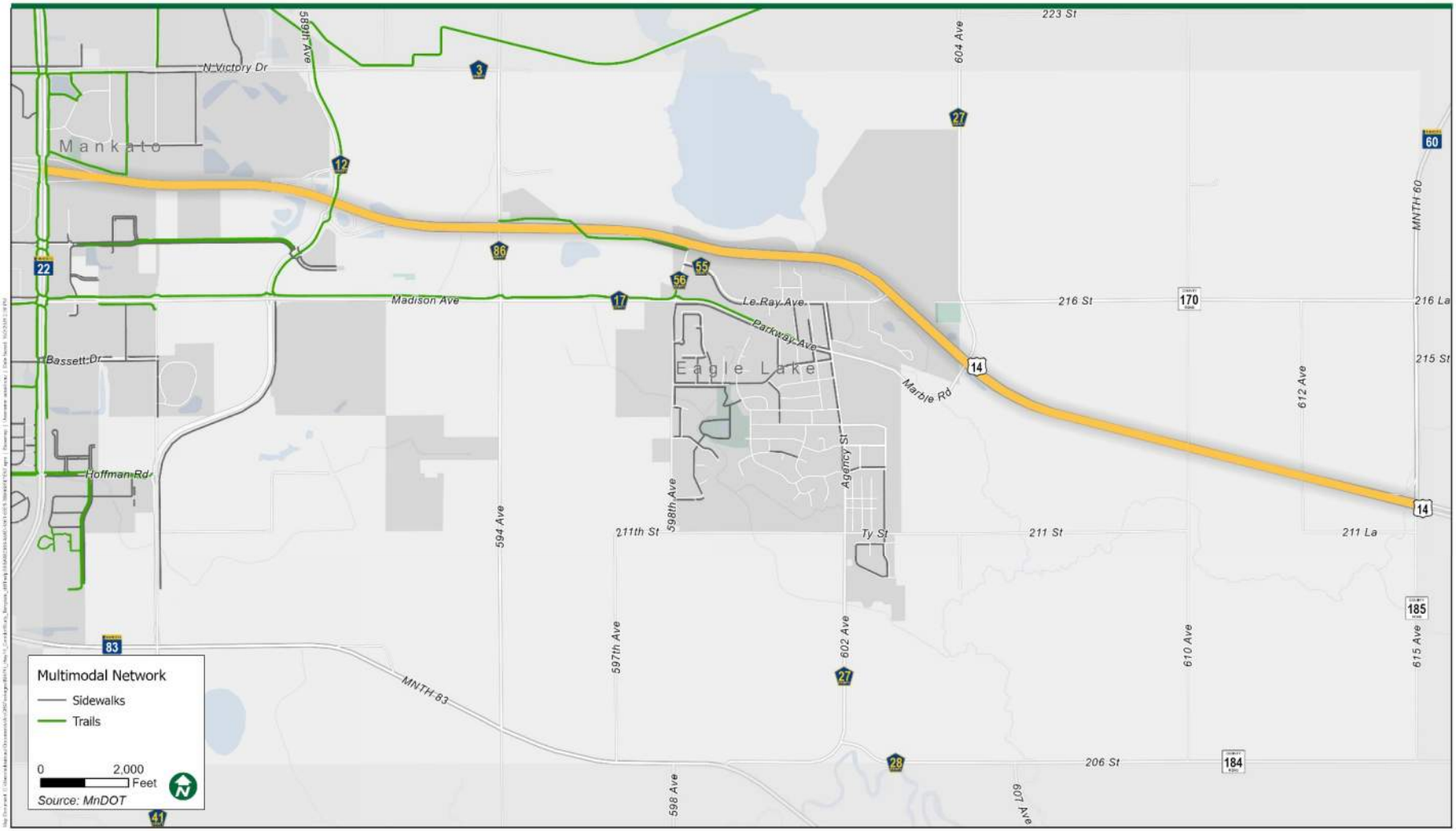
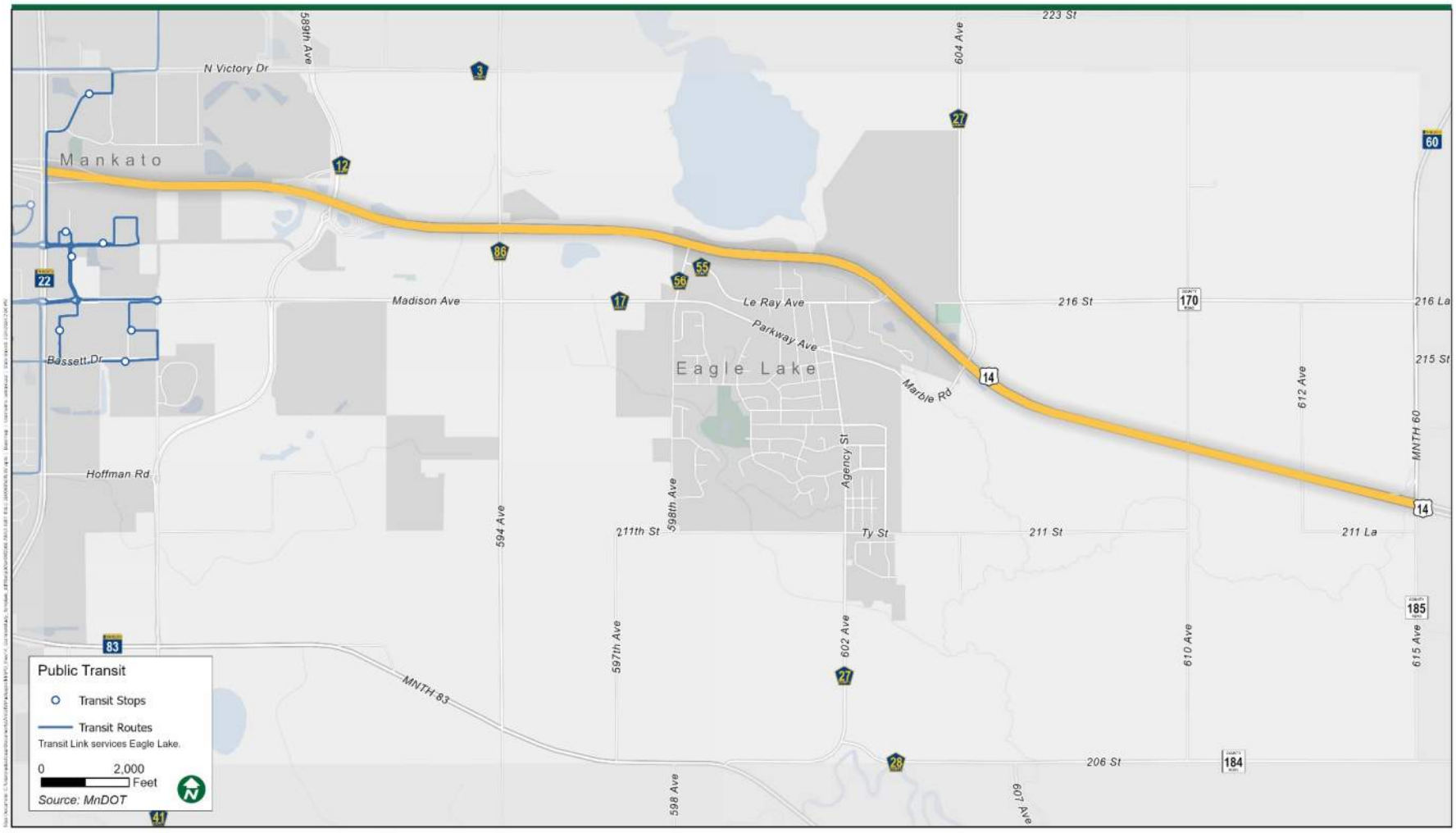


Figure 5. Transit Routes



Safety and Crash History

Five years of crash history were obtained using the Minnesota Department of Transportation Crash Mapping Analysis Tool (MnCMAT) along the Highway 14 study corridor. This included data from 2019 through 2023, which was used to identify existing crash and severity (i.e., Fatal / Serious Injury) rates for the study intersections and overall study corridor. **Table 1** provides a summary of the detailed crash and severity rate analysis, while **Figure 6** provides an overview of the corridor crash history. Detailed crash reports by intersection are provided in **Appendix A**.

The crash rates are presented as the number of crashes per one million entering vehicles (for intersections) or the number of crashes per one million vehicle miles traveled (for the corridor). The crash rates are then compared to the critical crash rate, which is statistical measure that is significantly above the state average rate. A crash rate above the critical crash rate often indicates a potential safety issue or concern. The critical index is the ratio of the actual crash rate to the critical rate, meaning any critical index above 1.00 indicates a potential safety issue or concern.

Based on the crash history analysis, the following safety trends were identified:

- A total of 171 crashes were reported along the Highway 14 corridor; 74 crashes were intersection and 97 were non-intersection related
- The study corridor has a crash rate significantly higher than corridors with similar characteristics, and is above the critical rate
- The study corridor has an above average fatal and serious injury crash rate compared to similar corridors, but is under the critical rate
- Three (3) study intersections have crash rates significantly higher than intersections with similar characteristics:
  - 598th Avenue (CSAH 56); Parkway Avenue (CSAH 17) / Marble Road (CSAH 27); and Highway 60
- Three (3) fatal crashes and two (2) serious injury crashes occurred along the study corridor within the last five years:
  - Fatal Crashes: 598th Avenue (CSAH 56) – July 2020; Marble Road (CSAH 27) – September 2022; 610th Avenue– October 2023
  - Serious Injury Crashes: 594th Avenue (CSAH 86) – September 2021; Highway 60 – November 2023

Note that several corridor improvements have been implemented over the years to address existing safety issues (**Figure 7**). The only improvements implemented within the five (5) year crash analysis period was the J-Turn at the 598th Avenue (CSAH 56) intersection (i.e., implemented May 2022) and the eastbound left-turn restriction at the Parkway Avenue (CSAH 17) / Marble Road (CSAH 27) intersection (i.e., implemented Spring 2024).

The crash analysis at the 598th Avenue (CSAH 56) intersection indicates that there were 15-crashes prior to the J-Turn implementation and 11-crashes post-implementation. Prior to implementation, the crash frequency was significantly higher than similar intersections, and the fatal and serious injury crash rate was above average but below the critical rate, putting the actual crash rate within the normal expected range. Post-implementation, the crash frequency remained elevated, but below the critical crash rate, and there were no fatal or serious injury crashes post-implementation.

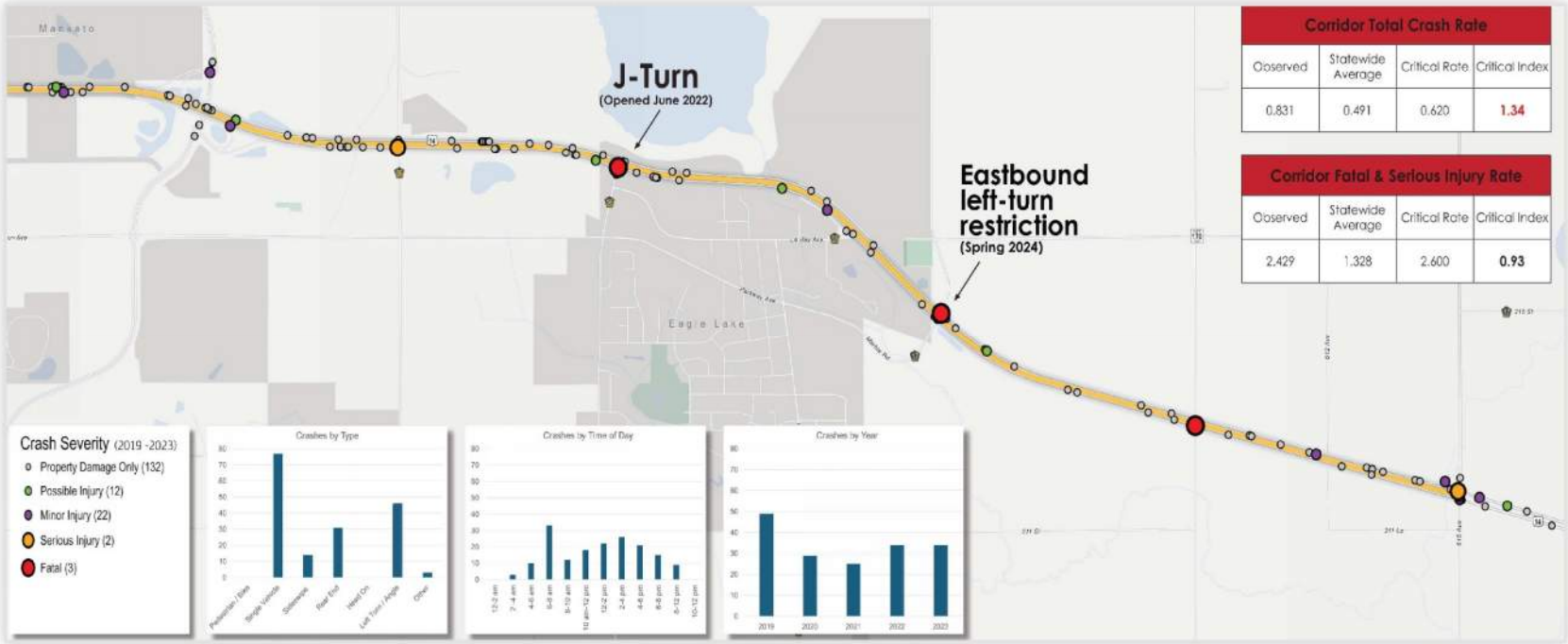
Since the eastbound left-turn restriction at the Parkway Avenue (CSAH 17) / Marble Road (CSAH 27) intersection was implemented Spring 2024, there is not sufficient data to determine the overall effectiveness of this change at this time. Therefore, from a crash history perspective, there are intersection and corridor safety issues that should be evaluated further as part of this study.

Table 1. Highway 14 Crash Rates

Highway 14 Intersection	Total Crashes	Total Crash Rate				Fatal & Serious Injury Crash Rate			
		Actual	State Average	Critical Rate	Critical Index	Actual	State Average	Critical Rate	Critical Index
CSAH 12 North Ramps	3	0.243	0.952	1.710	0.14	0.000	0.336	6.510	0.00
CSAH 12 South Ramps	2	0.140	0.952	1.650	0.08	0.000	0.336	5.820	0.00
594th Avenue (CSAH 86)	3	0.075	0.116	0.270	0.28	2.501	0.726	3.700	**0.68**
598th Avenue (CSAH 56)	26	0.611	0.116	0.260	**2.35**	2.350	0.726	3.580	**0.66**
LeRay Avenue (CSAH 55)	1	0.028	0.116	0.280	0.10	0.000	0.726	3.980	0.00
Parkway Ave (CSAH 17) / Marble Rd (CSAH 27)	16	0.426	0.116	0.270	**1.58**	2.665	0.726	3.840	**0.69**
610th Avenue	2	0.057	0.116	0.280	0.20	2.838	0.726	3.980	**0.71**
612th Avenue	0	0.000	0.116	0.280	0.00	0.000	0.726	3.970	0.00
Highway 60	21	0.587	0.116	0.280	**2.10**	2.794	0.726	3.950	**0.71**
Total Intersection Crash Count	74								
Segment	**Total Crashes**	**Total Crash Rate**				**Fatal & Serious Injury Crash Rate**			
Hwy 14 Study Corridor	171	0.831	0.491	0.620	**1.34**	2.429	1.328	2.600	**0.93**

Figure 6. Crash History Overview

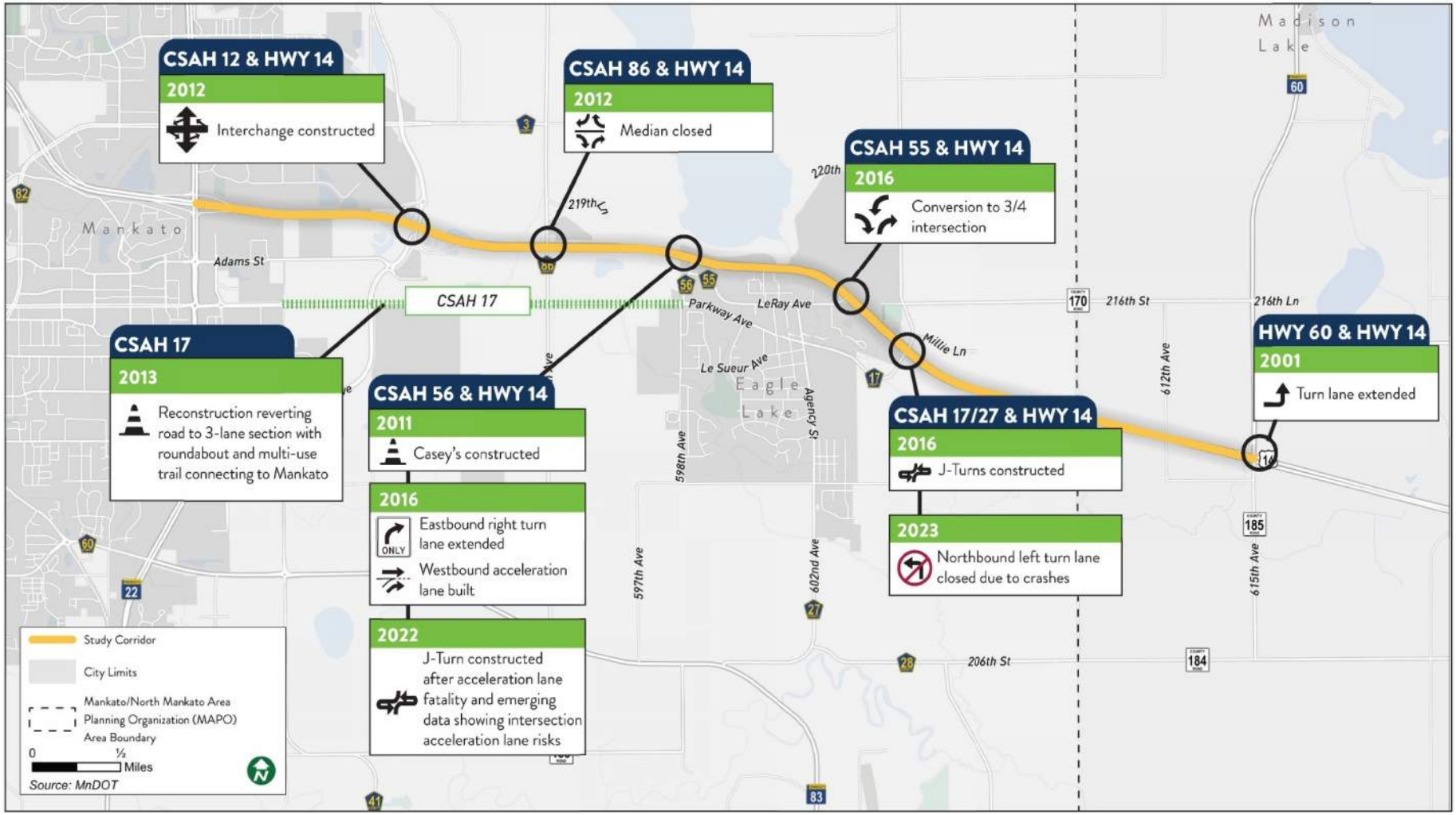
- Between 2019 and 2023, **171 crashes** were reported along Hwy 14
- 74 of the 171 reported crashes were **intersection related**
- **Three (3) intersections** have crash rates significantly higher than intersections with similar characteristics (@ 598th Avenue / CR 56, Parkway Avenue / CR 17, and Highway 60)
- The study corridor has a **crash rate significantly higher** than corridors with similar characteristics
- The study corridor has an **above average crash severity rate** when compared to corridors with similar characteristics, but is within the normal range
- 5 fatalities and 7 serious injury crashes have occurred within the last 10 years.
- Since the 2022 implementation of the J-Turn at CSAH 56, there have been no fatal or serious injury crashes at this location.
- The eastbound left-turn restriction at CSAH 17/27 was implemented in the Spring of 2024. There is not sufficient data to determine the overall effectiveness of this change at this time.



Corridor Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.831	0.491	0.620	1.34

Corridor Fatal & Serious Injury Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.429	1.328	2.600	0.93

Figure 7. Intersection Improvements Timeline



Vehicle Speeds

The posted speed limit along the Highway 14 study corridor is 65 miles per hour (mph). Existing vehicle speed data, which was obtained from Streetlight user data, identified that average vehicle speeds along the corridor ranged from 66 to 70 mph. The 85th percentile speeds, defined as the speed at which 85 percent of drivers are below and 15 percent of drivers are above, are often used as a factor when determining speed limits. The 85th percentile speed on Highway 14 was 73 mph. Note that while there were minor speed differences based on the time of day and year (i.e., seasonal variation), this data indicates that motorists are regularly exceeding the posted speed limit on the corridor.

Traffic Volumes

A combination of resources was utilized to identify existing traffic volumes within the study area, including a review of historical daily traffic counts, automated traffic recorder (ATR) data, Streetlight user data, and new 48-hour intersection turning movement counts at each study intersection. Hourly Traffic Volumes are shown in **Figure 8**, while existing daily traffic volumes are shown in **Figure 9**. The following information summarizes the traffic volume data reviewed as part of this study.

- Historical Annualized Average Daily Traffic (AADT) volumes were provided by MnDOT and utilized to help develop future traffic forecasts
- Existing Average Daily Traffic (ADT) volumes along the Highway 14 corridor range from approximately 13,000 to 22,000 vehicles per day (vpd)
    - ADT volumes along the cross-streets vary from approximately 100 to 7,000 vpd
- 48-Hour intersection turning movement were collected at the study intersections from Wednesday, April 24 and Thursday, April 25, 2024
    - The a.m. and p.m. peak hours along Highway 14 occur between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively
    - Highway 14 hourly traffic volume profiles by direction shown illustrate the commuter peaking characteristics
- Heavy Commercial Activity (i.e., freight / trucks) represents approximately 10 to 15% of overall traffic along Highway 14

Figure 8. Hourly Traffic Volumes

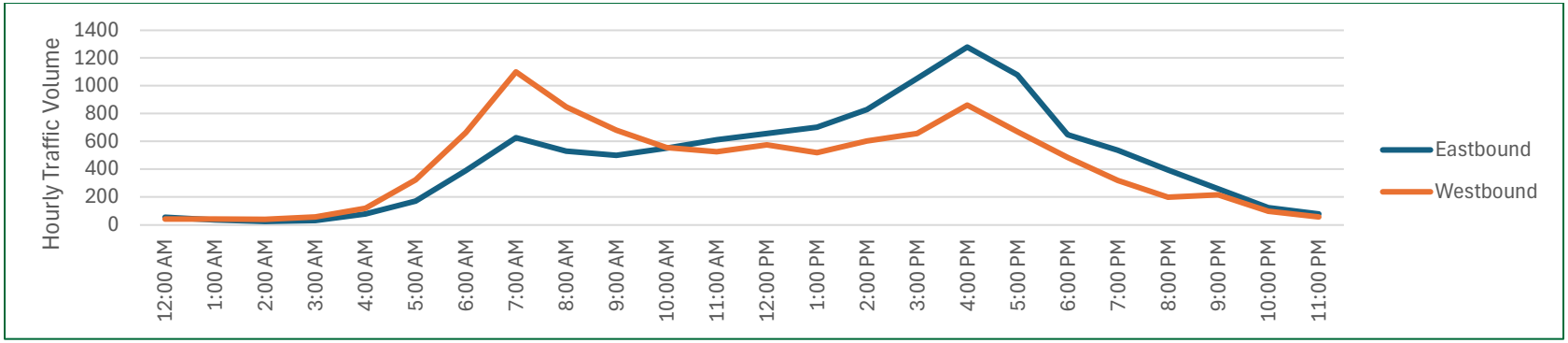
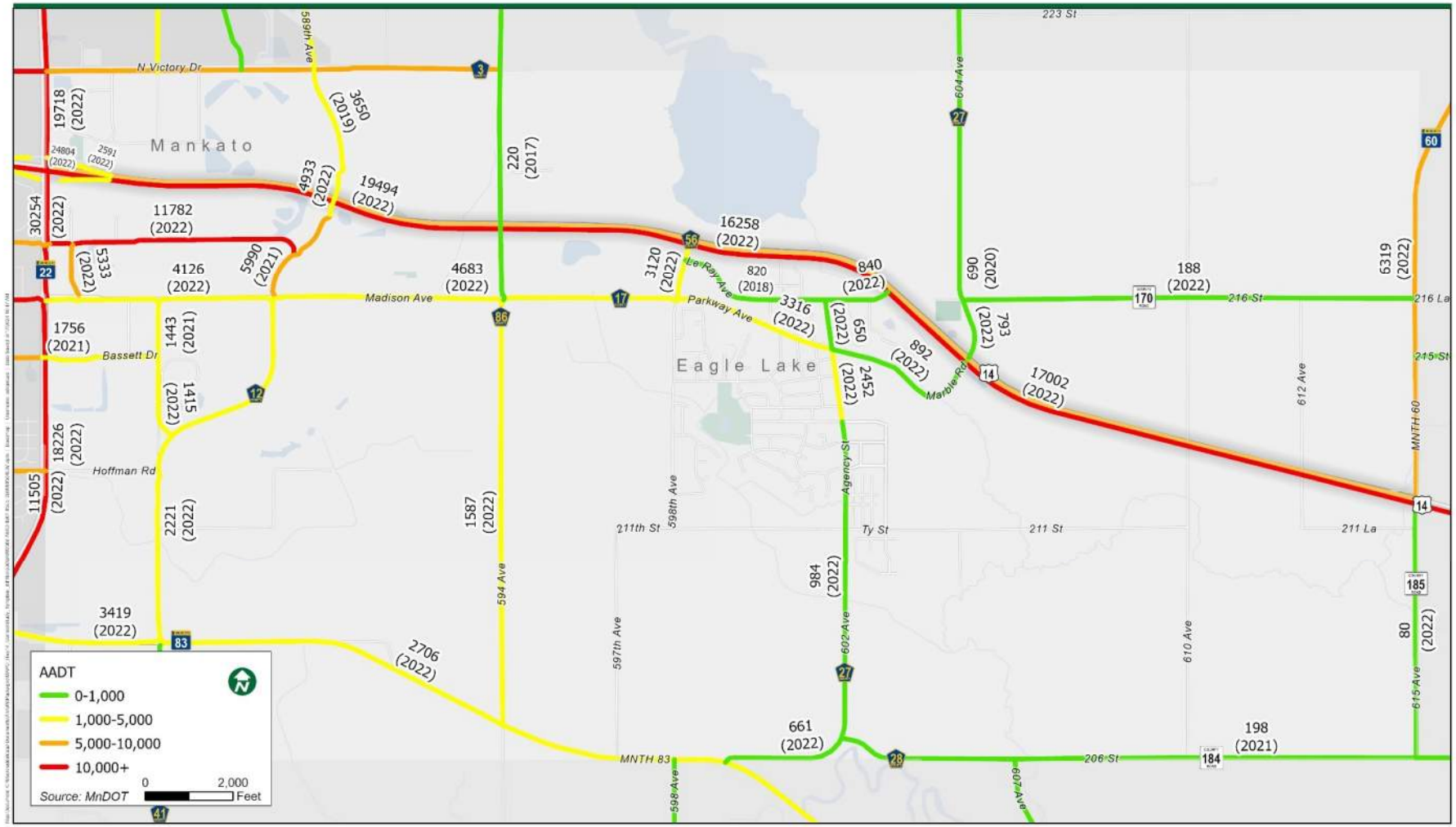


Figure 9. Average Annual Daily Traffic (AADT)



Travel Patterns

Existing travel patterns and user demographics were identified using a combination of StreetLight user data and traffic data collected as part of this study. The StreetLight data was obtained for three periods (April 2023, July 2023, and October 2023) to provide a more robust dataset for comparison purposes. This data was used to develop typical travel patterns, origins, and destinations for both westbound and eastbound Highway 14 motorists, which are illustrated in **Figure 10** and **Figure 11**, respectively. This data was also used to identify various Highway 14 user demographic data, such as average trip length, race, and ability. The following information summarizes the travel patterns and user demographics along the Highway 14 corridor:

Westbound Travel Patterns

- Approximately one-third (1/3) of westbound motorists enter the corridor via Highway 60; most others enter via Highway 14
- Approximately 75 percent of westbound motorists travel through the corridor without exiting at one of the cross-street
- Approximately 11 percent of westbound motorists exit the corridor at CSAH 12
- Approximately eight (8) percent of westbound motorists exit the corridor at Parkway Avenue (CSAH 17) / Marble Road (CSAH 27)

Eastbound Travel Patterns

- Approximately 18 percent of eastbound motorists enter the corridor via CSAH 12; most others enter via Highway 14
- Approximately 74 percent of eastbound motorists travel through the corridor and exit at Highway 60 (24 percent) or continue along Highway 14 (49 percent)
- Approximately 20 percent of eastbound motorists exit the corridor at CSAH 86 (5 percent) or CSAH 56 (15 percent)
- Approximately four (4) percent of eastbound motorists existing the corridor at Parkway Avenue (CSAH 17) / Marble Road (CSAH 27)

User Demographics

- Approximately 10 percent of corridor users are traveling less than 10-miles
- Approximately 45 percent of corridor users are traveling between 10- and 30-miles
- Approximately 35 percent are traveling between 30- and 100-miles
- Approximately 10 percent of corridor users are traveling over 100+ miles
- 10 percent of corridor users identify as having a disability
- Approximately 90 percent of corridor users identify as Caucasian, five (5) percent as African American, and 5 percent (5) as other

Figure 10. Westbound Highway 14 Travel Patterns

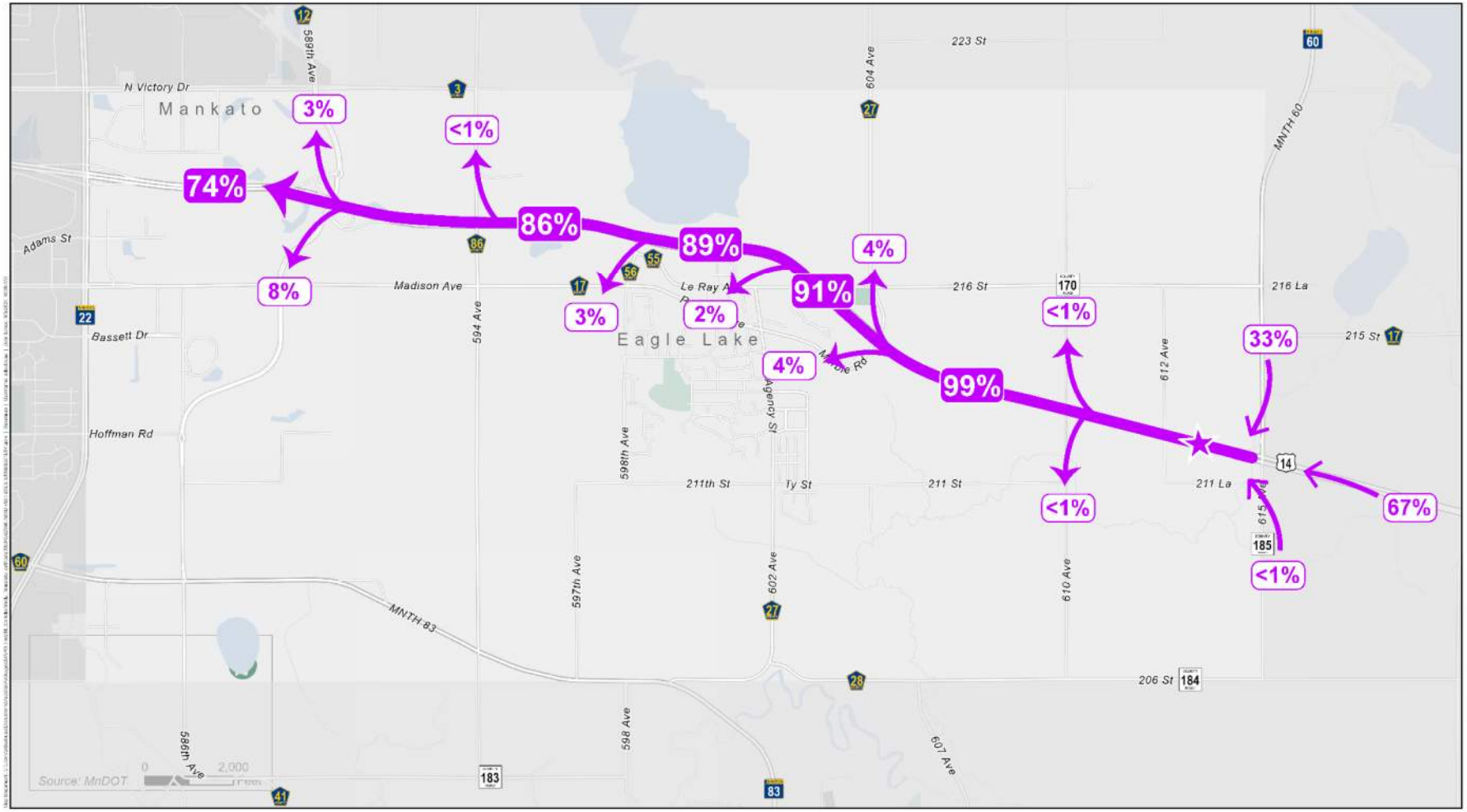
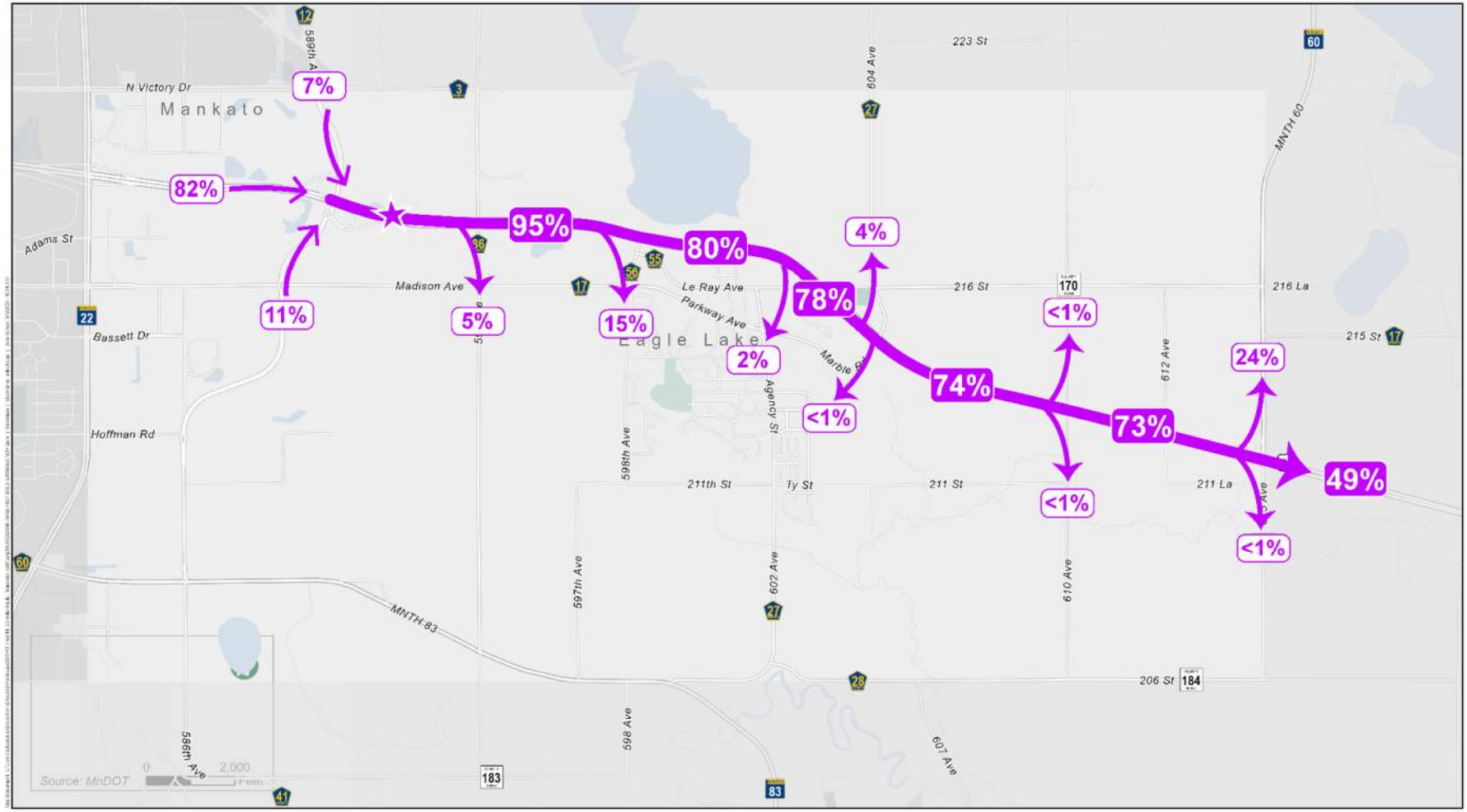


Figure 11. Eastbound Highway 14 Travel Patterns



Traffic Forecasts

Traffic forecasts were developed for year 2045 conditions in collaboration with the Project Technical Advisory Committee (PTAC). Since MAPO does not have a regional travel demand model, several approaches were reviewed to assist with the traffic forecast approach. The traffic forecast development process included a review of historical AADT volumes, use of MnDOT's MnESAL Traffic Forecast Spreadsheet (**Figure 12**), Blue Earth and MAPO's Long Range Transportation Plans, and land use / utility expansion information provided by the City of Eagle Lake. Results of the traffic forecast development process resulted in the following annual growth rates being used for the corridor and cross-streets as noted. Detailed traffic forecast summary documentation is provided in **Appendix B**.

The following annual growth rates are recommended for the study area roadways:

- Highway 14: 2%
- 589th Avenue / CSAH 12: 5%
- 594th Avenue / CSAH 86: 5%
- 598th Avenue / CSAH 56: 5%
- Le Ray Avenue / CSAH 55: 2%
- Marble Road / CSAH 27 (North of Hwy 14): 5%
- Parkway Avenue / CSAH 17 (South of Hwy 14): 5%
- 610th Avenue: 2%
- 612th Avenue: 2%
- Highway 60: 1%
- 615th Avenue / CR 185: 2%

Figure 12. Sample MnESAL Traffic Forecast Spreadsheet

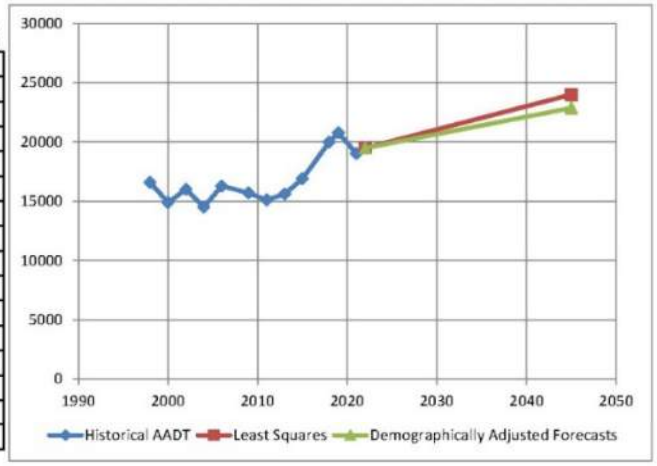
LEAST SQUARES WORKSHEET **SEGMENT B2** Corresponds : SEGMENT A1

ROUTE: MN 14 SP#: DATE : 07/09/24

LOCATION: Near CR 12 Seq # 60716

BASE YEAR: 2022 FORECAST YEAR: 2045 # of lanes 4

COUNTED YEAR	FLOW MAP AADT (SEG A)
1998	16600
2000	14900
2002	16000
2004	14500
2006	16300
2009	15700
2011	15100
2013	15600
2015	16900
2018	20000
2019	20800
2021	19030
2022	19494



LEAST SQUARES BASED FORECASTS:

Year	AADT	Calc	ADT Calc
2022	19223	271	19494
2022	19223		19494
2045	23725		23996

Statistics	AADT
R 2	0.58
SLOPE	195.74
INTERCEPT	-376569
N	13

Raw Least Squares Forecasts	
YEAR	AADT
2022	19490
2022	19490
2045	24000
Slope Over Base Year 1.00%	

Demographically Adjusted Forecasts	
YEAR	AADT
2022	19490
2022	19490
2045	22870
Slope Over Base Year 0.75%	

NOTE:
County Adjustment Factors were developed to Apply to Projected AADT. They are based on 1992-2007 VMT, Population, Labor Force, Household, and Employment Data.

COUNTY	COUNTY FACTOR	GROWTH PROFILE
BLUE EARTH	0.75	MEDIUM GROWTH AREA

Intersection Capacity Analysis

Table 2. Level Of Service Thresholds

Level of Service	Average Delay / Vehicles	
	Stop, Yield, and Roundabout Intersections	Signalized Intersections
A	< 10	< 10
B	10 to 15 seconds	10 to 20 seconds
C	15 to 25 seconds	20 to 35 seconds
D	25 to 35 seconds	35 to 55 seconds
E	35 to 50 seconds	55 to 80 seconds
F	> 50 seconds	> 80 seconds

Existing and year 2045 no build conditions were evaluated from an intersection capacity perspective using VISSIM software, which incorporates methods outlined in the *Highway Capacity Manual, 6th Edition*. The software is used to develop calibrated models that simulate observed traffic operations and identify key metrics such as intersection Level of Service (LOS) and queues. These models incorporate collected traffic, freight, pedestrian, and bicyclist volumes, traffic controls, and driver behavior factors. Level of Service (LOS) quantifies how an intersection is operating. Intersections, approaches, and movements are graded from LOS A through LOS F (**Table 2**), which corresponds to the average delay per vehicle values shown. An overall intersection LOS A through LOS D is generally considered acceptable in the study area. LOS A indicates the best traffic operation, while LOS F indicates a location where demand exceeds capacity.

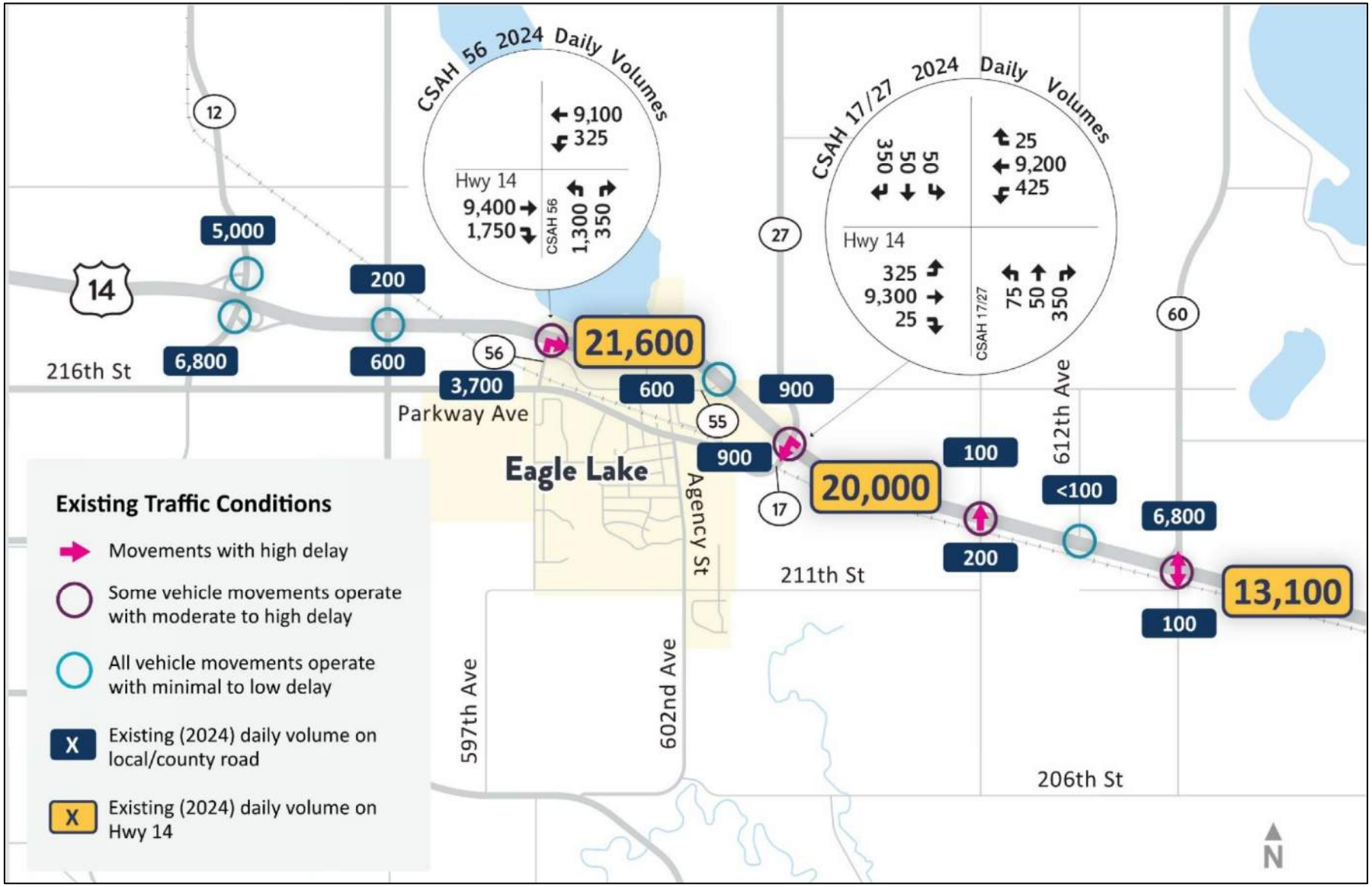
For side-street stop-controlled intersections, special emphasis is given to providing an estimate for the level of service of the side-street approach. Traffic operations at an unsignalized intersection with side-street stop control can be described in two ways. First, consideration is given to the overall intersection level of service, which accounts for the total number of vehicles entering the intersection and the capability of the intersection to support the volumes. Second, it is important to consider the delay on the minor approach. Since the mainline does not have to stop, most delay is attributed to the side-street approaches. It is typical of intersections with higher mainline traffic volumes to experience high levels of delay (i.e., poor levels of service) on the side-street approaches, but an acceptable overall intersection level of service during the peak hours.

Results of the existing traffic operations analysis are summarized **Table 3** and illustrated in **Figure 13**, which includes level of service, delay, and queue information for both the overall intersection, as well as the worst movement. The existing operations analysis indicates that all study intersections currently operate at an acceptable overall LOS B or better during the a.m. and p.m. peak hours. However, several movements operate at LOS F, which are primarily side-street motorists trying to access or cross Highway 14. Note that several of the poor side-street operations occur at relatively low-volume locations. From a queuing perspective, all peak hour queues are maintained within the existing turn lanes. That said, the eastbound left-turn movement queues from Highway 14 to northbound Highway 60 can extend up to approximately 500 feet during the p.m. peak periods, which equates to about 20 vehicles. No other existing significant queuing issues were identified. Detailed existing operational results for all movements are available in **Appendix C**.

Table 3. Existing Traffic Operations Analysis [1]												
Hwy 14 Intersection	**A.M. Peak Hour**						**P.M. Peak Hour**					
	Intersection		**Worst Movement**				**Intersection**		**Worst Movement**			
	Delay	LOS	Mvmt	Delay	LOS	Queue (feet)	Delay	LOS	Mvmt	Delay	LOS	Queue (feet)
CSAH 12 North Ramp (roundabout)	1	A	NBT	1	A	100	1	A	SBR	1	A	100
CSAH 12 South Ramp (roundabout)	1	A	WBL	2	A	50	1	A	SBT	1	A	75
594th Avenue / CSAH 86 (side street stop)	0	A	SBR	12	B	75	0	A	NBR	14	B	75
598th Avenue / CSAH 56 (side street stop)	3	A	NBR	28	D	250	4	A	NBR	51	F	225
598th Avenue / CSAH 56 *Eastbound U-Turn*	2	A	EBU	12	B	175	0	A	EBU	7	A	75
LeRay Avenue / CSAH 55 (side street stop)	0	A	NBR	8	A	125	0	A	WBL	14	B	50
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27) *Westbound U-Turn*	0	A	WBU	4	A	50	0	A	WBU	8	A	50
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27)	2	A	WBL	20	C	125	2	A	WBL	51	F	150
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27) *Eastbound U-Turn*	0	A	EBU	9	A	75	0	A	EBU	7	A	75
610th Avenue (side street stop)	0	A	NBL	22	C	100	0	A	NBT	50	F	75
612th Avenue (side street stop)	0	A	SBL	32	D	75	0	A	SBL	22	C	75
Highway 60 and 615th Avenue / CR 185 (side street stop)	3	A	NBT	>2min.	F	100	10	B	NBT	>2min.	F	50

[1] Abbreviations in the "Mvmt" columns indicate direction of travel and vehicular movement. For example, NBT means Northbound Through movement, EBU means Eastbound U-Turn, WBL means westbound left turn, SBR means southbound right-turn, etc.

Figure 13. Existing Traffic Conditions



Results of the year 2045 no build traffic operations analysis are summarized **Table 4** and illustrated in **Figure 14**, which again includes level of service, delay, and queue information for both the overall intersection, as well as the worst movement. The year 2045 no build operations analysis indicates that several study intersections along the Highway 14 corridor will operate poorly (i.e., overall intersection LOS F) under peak hour conditions. Although motorists along Highway 14 do not have to stop and incur less delay, the motorists that are attempting to access, cross, or turn left from Highway 14 will become more difficult as traffic volumes along the corridor increase.

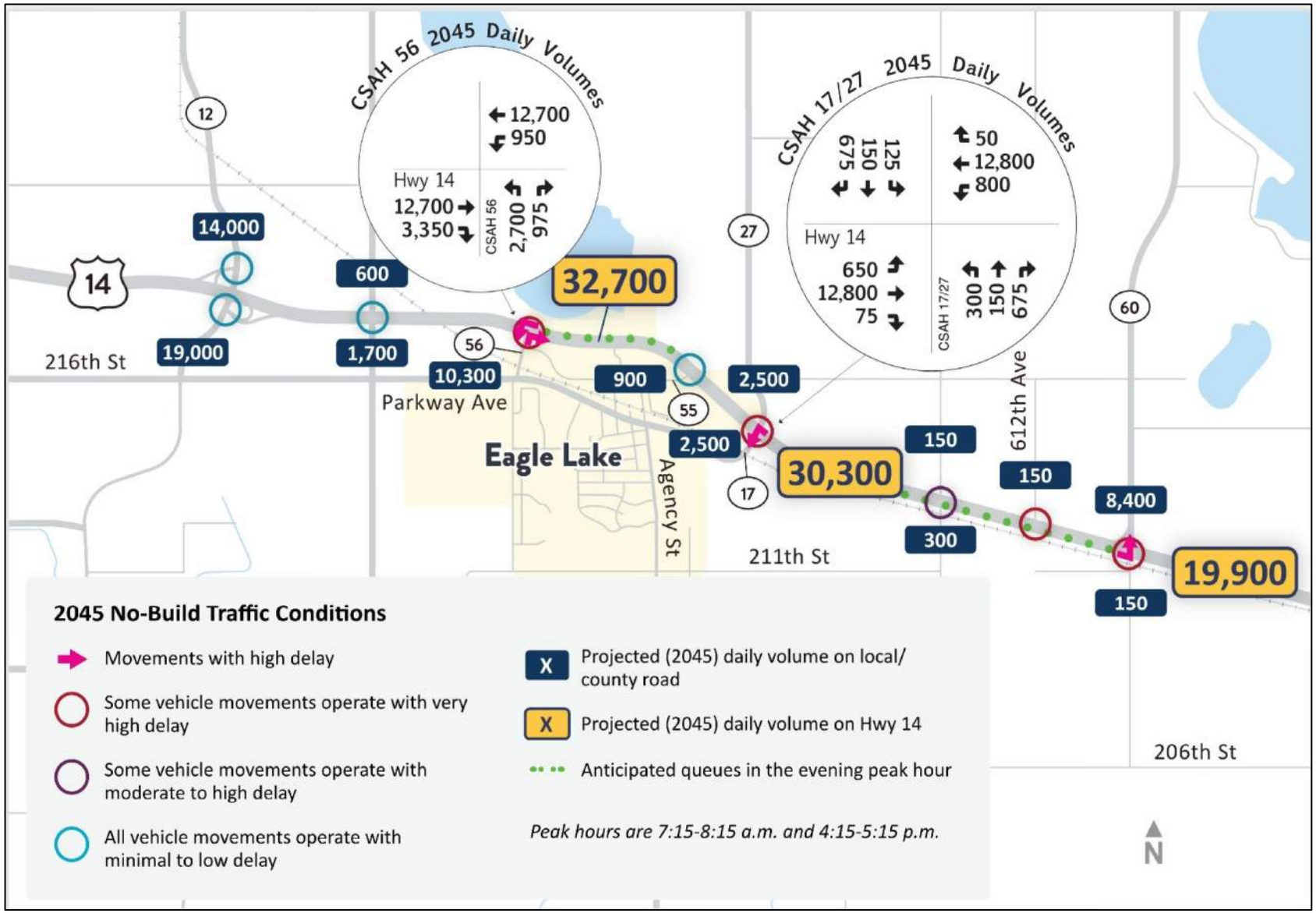
The poor operations will also result in significant queues along the corridor and cross-streets and extend beyond existing turn lanes. Of note, the eastbound left-turn movement from Highway 14 to northbound Highway 60 during the p.m. peak hour is expected to operate over capacity and result in queues extending beyond the existing turn lane and impact mainline Highway 14 operations and adjacent intersections to the west. It is important to note that these are modeled results and as access becomes more difficult for motorists, they tend to choose smaller gaps and make more aggressive behaviors, which influences overall corridor safety.

Detailed year 2045 no build operational results for all movements are available in **Appendix D**.

Table 4. Year 2045 No Build Traffic Operations Analysis [1]												
Hwy 14 Intersection	**A.M. Peak Hour**						**P.M. Peak Hour**					
	Intersection		**Worst Movement**				**Intersection**		**Worst Movement**			
	Delay	LOS	Mvmt	Delay	LOS	Queue (feet)	Delay	LOS	Mvmt	Delay	LOS	Queue (feet)
CSAH 12 North Ramp (roundabout)	2	A	NBL	3	A	200	3	A	SBT	3	A	325
CSAH 12 South Ramp (roundabout)	2	A	WBL	5	A	75	2	A	SBT	3	A	225
594th Avenue / CSAH 86 (side street stop)	1	A	SBR	17	C	75	1	A	NBR	26	D	125
598th Avenue / CSAH 56 (side street stop)	91	F	NBR	>2min.	F	1000+	81	F	WBL	>2min.	F	1000+
598th Avenue / CSAH 56 *Eastbound U-Turn*	4	A	EBU	33	D	325	169	F	EBU	>2min.	F	875
LeRay Avenue / CSAH 55 (side street stop)	0	A	NBR	10	B	125	18	C	WBL	45	E	75
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27) *Westbound U-Turn*	0	A	WBU	6	A	50	5	A	WBU	13	B	100
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27)	9	A	WBL	107	F	375	31	D	WBL	>2min.	F	1000+
Parkway Ave (CSAH 17) / Marble Ave (CSAH 27) *Eastbound U-Turn*	1	A	EBU	14	B	100	11	B	EBU	32	D	600
610th Avenue (side street stop)	1	A	EBL	36	E	25	98	F	EBT	>2min.	F	1000+
612th Avenue (side street stop)	1	A	SBL	46	E	75	184	F	SBL	>2min.	F	100
Highway 60 and 615th Avenue / CR 185 (side street stop)	25	D	NBT	>2min.	F	25	214	F	NBT	>2min.	F	150

[1] Abbreviations in the "Mvmt" columns indicate direction of travel and vehicular movement. For example, NBT means Northbound Through movement, EBU means Eastbound U-Turn, WBL means westbound left turn, SBR means southbound right-turn, etc.

Figure 14. Projected 2045 Traffic Volumes



Environmental Considerations

A social, environmental, and economic (SEE) scan was conducted to identify key considerations within the area, including areas such as:

- Wetlands
- Water Resources
- Floodplains
- Wildlife, Threatened, and Endangered Species
- Fisheries
- Utilities
- Farmland and Soils
- Erosion and Steep Slopes
- Contaminated Properties
- Parks and Recreation
- Section 6(f) Properties
- Community Facilities
- Cultural Resources
- Environmental Justice Populations

The following information summarizes the preliminary SEE scan, with detailed metrics and additional mapping provided in the **Appendix E**.

Wetlands

Considerations include wetlands that may be impacted by partial or complete filling, excavation or drainage, or severance of water supply. There are numerous wetlands directly adjacent to Highway 14, including freshwater ponds, freshwater emergent wetlands, freshwater forested wetlands, and freshwater shrub wetlands. Most of these wetlands are located between CSAH 12 and CSAH 17.

Water Resources

Considerations include effects to water resources. The closest water resources are Eagle Lake Creek, which runs directly under Highway 14, and Eagle Lake, located 0.02 miles north of the study corridor. The study area is also located within two Watersheds. The western segment is in the Minnesota River, Mankato watershed, while the central and east segments of the study area are located within the Le Sueur River watershed.

Floodplains

Considerations include development encroachment on the 100-year floodplain. The designated 100-year floodplain is near the south side of the Highway 14 corridor in the Le Sueur River Watershed along the Eagle Lake Creek crossing of Parkway Avenue (CSAH 55) and near 610th Avenue and Highway 60.

Wildlife, Threatened and Endangered Species

Considerations include unique habitats, widened section, and federal and state listed threatened and endangered species.

The USFWS Information for Planning and Consulting (IPaC) tool identified four Federally-listed or candidate species that may be affected by activities within the study area: Northern Long-eared Bat (Threatened), Western Regal Fritillary (Proposed Threatened), Salamander Mussel

(Proposed Endangered), and Monarch Butterfly (Candidate). There are no Critical Habitats identified within the study area. Additionally, eleven Minnesota Department of Natural Resources (MnDNR) defined endangered species were identified within Blue Earth County. These species are:

- A Lichen (Leptogium apalachense)
- Butternut (Juglans Cinera)
- Eared False Foxglove (Agalinis auriculata)
- Henslows's Sparrow (Centronyx henslowii)
- Loggerhead Shrike (Lanius ludovicianus)
- Pistolgrip (Tritogonia verrucosa)
- Rock Pocketbook (Arcidens confragosus)
- Salamander Mussel (Simpsonaias ambigua)
- Two Leaf Waterweed (Elodea bifoliata)
- Winged Mapleleaf (Quadrula fragosa)
- Yellow Sandshell (Lampsilis teres)

Fisheries

Considerations include:

- Trout Streams
- Fish Migrations
- Spawning runs
- Unique Habitats

There are no trout streams or other fisheries near the study corridor.

Utilities

Considerations include impacts to utilities may incur additional costs. Three pipelines cross under the study corridor, Including two hazardous liquid pipelines and one gas transmission pipeline. In addition, drainage structures, power lines and telephone lines cross Highway 14 on poles at various intersections.

Farmlands and Soils

Considerations include:

- Minimization of effects to agricultural land
- Properties of soils
- Suitability for roadway construction

The study area contains soils that are well drained and classified as Prime Farmland or Farmland of Statewide Importance. The study corridor travels through both rural and urban areas comprised of previously disturbed residential, commercial, and industrial land. There is agricultural land surrounding the Hwy 14 corridor.

Erosion and Steep Slopes

Considerations include:

- Erosion effects
- Water pollution

There are no steep slopes identified within the study area.

Contaminated Properties

Considerations include disturbance of contaminated properties may increase cost. The MPCA What's in My Neighborhood mapper identified numerous contaminated properties located within the study area, including 46 sites within 1/2 mile of the highway. Of these 46 sites, there are 17 multiple program sites, 3 feedlots, 16 hazardous waste sites, 4 investigation and cleanup sites, 2 subsurface sewage treatment systems (SSTS), and 4 Tanks.

Parks and Recreation

Considerations include minimization of negative effects to parks and recreational properties. The nearest park and recreational property is Lake Eagle Park, a City-owned park, located approximately 0.66 miles south of the study area.

Section 6(f)

Considerations include avoidance of impacts to properties purchased with Land and Water Conservation (LAWCON) funds. The nearest Section 6(f) property is Lake Eagle Park, a city-owned park, located approximately 0.66 miles south of the study area.

Community Facilities

Considerations include:

- Hospitals
- Schools
- Libraries
- Churches
- Government Buildings
- Post Offices

There are five community facilities within a half mile of Highway 14: Eagle Lake Elementary School, Eagle Lake City Hall, Eagle Lake Fire Station, Epiphany Lutheran Church, and a United States Post Office.

Cultural Resources

Considerations include:

- Buildings that exceed 50 years in age
- Archaeological sites
- Traditional Cultural Properties

There are 24 inventoried historical sites within the study area, including approximately 17 within a half mile of Highway 14. These inventoried sites can be seen in **Appendix E**.

Environmental Justice Populations

Considerations include disproportionate effects to low-income or minority populations. Within one mile of the study area, there is a population of 5,456. This population is 92% White, 2% Black, 2% Hispanic, and 3% Two or more races, is 24% low income, and has an average per capita income of $37,294. The minority population is lower than the state average (20%), while the percentage of the population considered low income is above the state average of approximately 10%. More details about the demographics of the study area can be found in **Appendix E**.

III. Phase 1 Community Engagement Summary

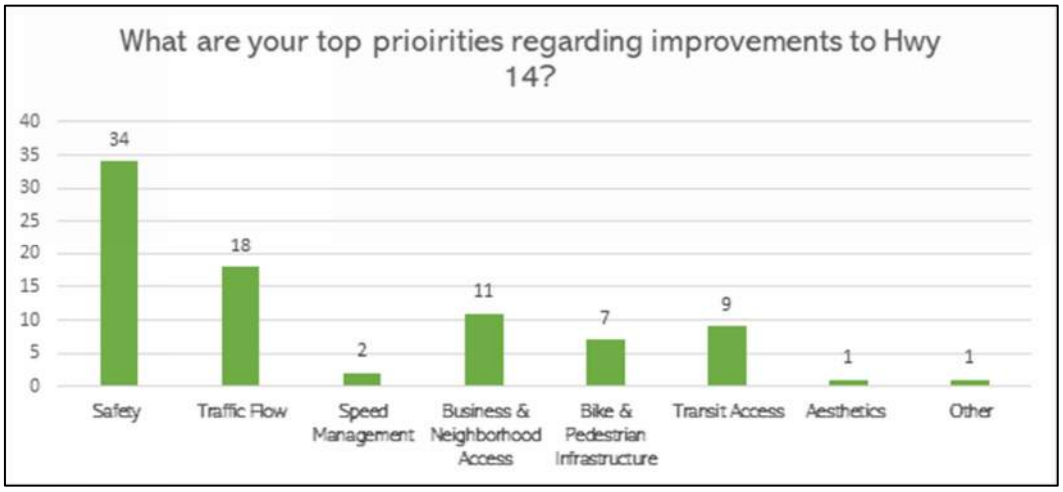
As part of the issues and needs assessment, the community was engaged in a variety of ways, including in person and online equivalents. Activities included selecting top corridor priorities, filling out comment cards, conducting surveys, identifying map comments, and providing demographic information. The communities' priorities for the corridor included:

- Improve Safety
- Traffic Flow
- Speed Management
- Business and Neighborhood Access
- Desire for Intersection Changes

Figure 15 shows an example of results from the community priorities' survey at the Tator Days Pancake Breakfast. Most participants reported traveling across or along the study area of Highway 14 daily or several times a week. The reasons for these trips included errands, medical appointments, visiting friends and family, and recreation or entertainment.

A detailed summary of the first phase of engagement is provided in **Appendix F**.

Figure 15. Priority Results Exercise – Tator Days Pop-Up Event



IV. Summary of Issues

Based on the technical evaluation and stakeholder input, the following issues and needs were identified. These issues and needs were used as the basis to develop and evaluate potential infrastructure concepts.

- **Capacity Needs:** The existing conditions analysis showed that overall, all intersections operate acceptably during the existing peak hours with the exception of the following movements experiencing high delay:
    - Northbound right turn at CSAH 56 (598th Ave)
    - Westbound left turn at CSAH 17 (Parkway Ave)
    - Northbound thru movement at 610th Ave
    - Northbound and southbound thru movements at Hwy 60

  Traffic volumes are projected to grow by approximately 5% due to anticipated growth in the region and in Eagle Lake. Existing movements with high delays are expected to worsen by 2045 without improvements, degrading intersection operations and mainline mobility.

- **Speed Management:** 85th percentile vehicle speeds exceed the posted limit of 65 mph causing unsafe conditions, especially for traffic entering the corridor.

- **Safety:** Intersection safety is a primary issue, in particular at the following Hwy 14 intersections exceeding the critical crash rate:
    - CSAH 56 (598th Ave)
    - CSAH 17/CSAH 27 (Parkway Ave / Marble Road)
    - Hwy 60

  In addition, the entire Highway 14 study corridor has a crash rate significantly higher than corridors with similar characteristics.

- **Local Connectivity & Accessibility:** Desire for safe and efficient access to and from Highway 14 for access to the City of Mankato, freight industrial areas along CSAH 12, City of Eagle Lake, agricultural areas north and south of the corridor, and other regional destinations via Highway 14 and 60.

- **Environmental Considerations:** Water resources, cultural resources, wildlife/threatened and endangered species, and prime farmland are the primary environmental considerations of the study area.

- **Freight and heavy commercial:** Heavy Commercial Activity (i.e., freight / trucks) represents approximately 10 to 15% of overall traffic along Highway 14.
- **Bike and Pedestrian Infrastructure:** Highway 14 is difficult and unsafe to cross as a pedestrian or bicyclist; Desire for safe connection to Sakatah Singing Hills State Trail.
- **Future Development:** Development is likely to continue to occur in and around Eagle Lake.

The technical analysis and stakeholder input leading to this summary of issues was used as the basis to develop the purpose and need framework for this corridor study.

V. Purpose and Need

The purpose of the Highway 14 Eagle Lake Corridor Study is to identify opportunities for future improvements on Highway 14 from CSAH 12 to Highway 60 to address vehicle safety and mobility while incorporating the goals and needs of the surrounding communities.

This purpose and need was developed for a corridor study, not a specific improvement; therefore, it quantifies corridor-wide needs that may be addressed with future improvements. Because those improvements are not yet identified, it is not possible to differentiate between primary and secondary needs. Future study area improvements will be able to utilize the corridor-wide needs documented here for study specific Purpose and Need statements and primary and secondary needs and additional considerations as appropriate.

Corridor-wide needs identified for the study corridor include:

- Vehicle mobility
- Vehicle safety
- Walkability/bikeability
- Social, Economic, and Environmental Considerations
- Right of way impacts
- Water resources
- Cost

Evaluation criteria were developed and used to evaluate improvement concepts' performance relative to purpose and need. The evaluation criteria can be viewed in **Appendix G**.

VI. Concept Development

Corridor concepts were developed based on the process outlined below.

1. Determine the range of access options
    a. MnDOT access management guidelines were referenced
    b. Existing and proposed changes to primary and secondary intersections were considered
2. Confirm access options to be considered
    a. The following access options were considered
        i. Option 1 – Primary accesses at CSAH 12, CSAH 56, CSAH 17, and Hwy 60; Secondary accesses at 594th Ave, CSAH 55 (Le Ray Ave), 610th Ave, and 612th Ave
        ii. Option 2 – Primary accesses at CSAH 12, CSAH 56, and Hwy 60; Secondary accesses at 594th Ave, CSAH 55 (Le Ray Ave), CSAH 17, 610th Ave, and 612th Ave
        iii. Option 3 – Primary accesses at CSAH 12, CSAH 17, and Hwy 60; Secondary accesses at 594th Ave, CSAH 56, CSAH 55 (Le Ray Ave), 610th Ave, and 612th Ave
        iv. Option 4 – Primary accesses at CSAH 12 and Hwy 60; Secondary accesses at 594th Ave, CSAH 56, CSAH 55 (Le Ray Ave), CSAH 17, 610th Ave, and 612th Ave
    b. Option 1 keeps primary and secondary intersections the same as the existing condition, Options 2 and 3 convert one primary intersection to a secondary intersection along the corridor, and Option 4 converts two primary intersections to secondary intersections
3. Review the range of intersection types at each access location, high level design impacts, and initial screening of traffic operations
    a. At the primary intersections along the corridor the following intersection types were considered as shown by location
        i. CSAH 56
            1. High T
                a. Northbound left movement is assumed to be stop controlled, westbound left is free, eastbound right is yield controlled. All movements operate with LOS D or better from initial screening
                b. Casey's entrance and Le Ray Ave are less than 350' from Hwy 14 and will need to be restricted
            2. Interchange
                a. Westbound ramp terminal would require signalization or a roundabout to accommodate heavy westbound left movement in conflict with heavy northbound movement (if no access at CSAH 17/27)
                b. Full take of Casey's and potentially another business to the south

c. CSAH 55(Le Ray Ave) would need to be realigned, closed, or incorporated into a 5 -Leg Roundabout with eastbound ramp terminal
d. Impacts to Eagle Lake on the north side of Hwy 14
e. Very costly and impactful option

3. Right-In/Right-Out
    a. Acceleration lanes could be designed like ramps for proper acceleration/deceleration in entering/exiting lane and limit impact to mainline Highway 14 lanes
    b. May still want to consider restricted access at Casey's and CSAH 55 (Le Ray Ave) due to proximity

ii. CSAH 17/27

1. High T
    a. Southbound left movement is assumed to be stop controlled, eastbound left is free, westbound right is yield controlled. All movements operate with LOS A from initial screening
    b. Could have eastbound Hwy 14 access to and from south leg or could close the south leg.
    c. Closure would eliminate an at grade railroad crossing.
    d. Church entrance and Millie Ln are 400' from Hwy 14 and will need to be restricted
2. Interchange
    a. Westbound ramp terminal would require signalization or a roundabout to accommodate heavy westbound left movement in conflict with heavy northbound movement if there is no access at CSAH 56.
    b. If access remains at CSAH 56 all movements operate with LOS B or better with stop control.
    c. Hwy 14 would go over CSAH 17 (Parkway Ave) to accommodate access at railroad crossing
    d. Limitations with:
        i. Wetland in southwest quadrant
        ii. Cemetery in northwest quadrant
        iii. Church in northeast quadrant
        iv. Railroad in southeast quadrant
3. Right-In/Right-Out
    a. Acceleration lanes could be designed like ramps for proper acceleration/deceleration in entering/exiting lanes and limit impact to mainline Highway 14 lanes
    b. May still want to consider restricted access at Millie Ln due to proximity

iii. Realigned CSAH 27
    1. High T at realigned roadway paired with High T at CSAH 56 and right-in/right-out at CSAH 17
        a. Soil issues were noted around CSAH 27/17
        b. This option could lessen property impacts at CSAH 17
iv. Hwy 60
    1. High T
        a. Southbound left movement is assumed to be stop controlled, eastbound left is free, westbound right is yield controlled. All movements operate with LOS B or better from initial screening
        b. This option closes the south leg. Closure would eliminate an at grade railroad crossing.
    2. Interchange
        a. All movements operate with LOS B or better with stop control from initial screening
        b. To avoid railroad, Hwy 14 needs to be realigned to the north
        c. Hwy 14 can be over or under depending on the desire for the at grade railroad crossing to the south

4. Pair viable intersection types with corridor concepts
    a. **Table 5** below shows the initial list of concepts

Table 5. Level 1 Concepts or "Options"

Option	CR 86	CSAH 56	Le Ray (CSAH 55)	CSAH 17	610th Ave	612th Ave	MN 60
Hybrid Option 1A	Full Closure	High T	Full Closure	Interchange	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1B	Full Closure	High T	Full Closure	Overpass	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1C	Full Closure	High T	Full Closure	RIRO	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1D	Full Closure	Full Closure	Full Closure	Interchange	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1E	Full Closure	High T	Full Closure	High T	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1F	Full Closure	High T	High T (North)	RIRO (South)	Full Closure	Full Closure	High T or Interchange
Hybrid Option 1G	Full Closure	RIRO	Full Closure	Interchange	Full Closure	Full Closure	High T or Interchange
Freeway Option 2B	Full Closure	High T	Full Closure	Full Closure	Full Closure	Full Closure	Interchange
Freeway Option 2C	Full Closure	Full Closure	Full Closure	Overpass	Full Closure	Full Closure	Interchange

VII. Concept Evaluation

Level 1 Screening

An initial screening of the nine corridor concepts was completed to help narrow the list of concepts. This was referred to as the Level 1 screening. The evaluation criteria analyzed and methodology for the Level 1 screening are described below.

Evaluation Criteria

The evaluation criteria analyzed for the Level 1 screening are listed below and sorted by the corridor need of improving vehicle safety, vehicle mobility, and the social, economic, and environmental impacts to consider.

- Vehicle Safety
  - Anticipated number of crashes reduced
  - Conflict points
  - Crash reduction – frequency
  - Crash reduction – severity
- Vehicle Mobility
  - Mainline delay
  - Side street delay
  - Overall intersection delay
  - Queue analysis
  - County Rd 90 expansion compatibility
  - Rerouted volume
  - Accessibility to Eagle Lake
- Social, Economic, and Environmental Impacts
  - Property impacts
  - Relocations (residential)
  - Relocations (business)
  - Wetland/floodplain impacts
  - High level cost estimate

Each evaluation criteria category is listed below along with details on the methodology applied and key findings. The evaluation matrix for the Level 1 screening is included in **Appendix G** and shows how the concepts compare to one another.

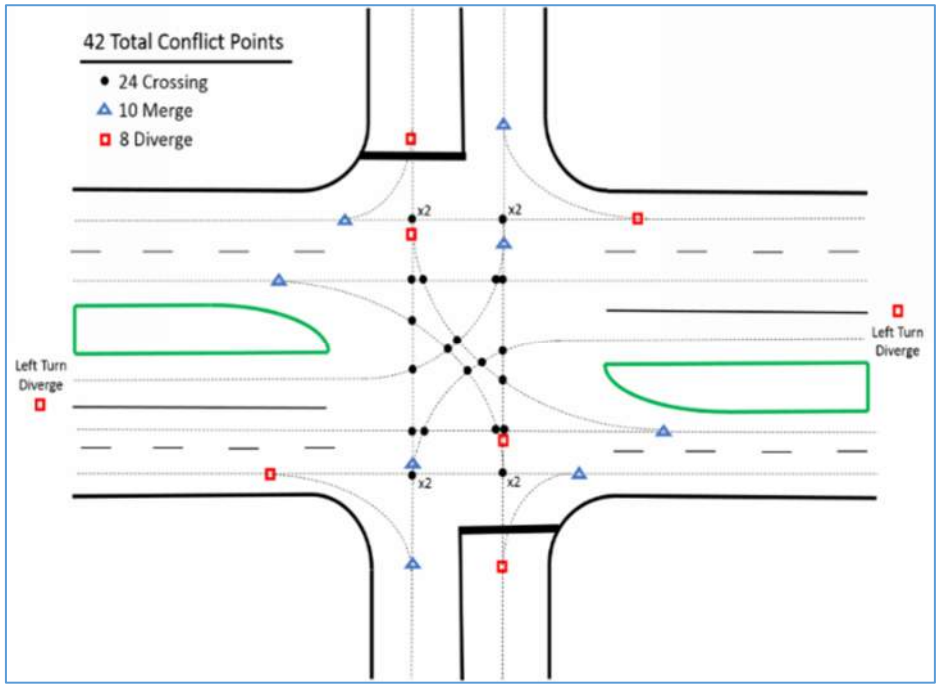
Vehicle Safety Analysis

A preliminary safety evaluation was completed to compare and screen each concept. This analysis focused on the total number of vehicle conflict points (i.e., crossing, diverge, and converge conflicts) for each concept. The number of conflict points were quantified for each intersection location based on the concept alternative's geometric configuration / traffic control, and then aggregated into a total number of conflict points by concept. **Figure 16** shows an example of an intersection conflict point diagram. **Table 6** shows the conflict point convention that was utilized for the 4-lane divided highway configuration.

Table 6. Conflict Point Convention for 4-Lane Divided Highway

Conflict Points at a 4-lane Divided Highway				
Intersection Configuration	**Total**	**Crossing**	**Diverge**	**Converge**
Full Access - 4 Approaches	**42**	24	10	8
Full Access - 3 Approaches	**11**	5	3	3
Three-Quarter - 4 Approaches	**12**	4	4	4
Three-Quarter - 3 Approaches	**6**	2	2	2
Right-in / Right-Out - 4 Approaches	**4**	0	2	2
Right-in / Right-Out - 3 Approaches	**2**	0	1	1
J Turn - 4 Approaches	**24**	4	10	10
J Turn - 3 Approaches	**10**	2	4	4
Interchange	**4**	0	2	2
High-T	**7**	1	3	3
Overpass	**0**	0	0	0

Figure 16. Conflict Point Diagram



Results of the preliminary safety evaluation indicated that each of the preliminary concept would significantly reduce the number of vehicle conflict points along the study corridor. **Table 7** shows that based on the preliminary concepts, there would be a range from four (4) to 23 vehicle conflict points depending on the concept. The freeway concepts would provide the lowest number of total conflict points. How the reduction in vehicle conflict points is expected to translate to a reduction in vehicle crashes and / or crash severity is outlined later in this report. Note that for reference, there is currently 139 vehicle conflict points within the study corridor.

In addition to the conflict point analysis, **Table 8** shows crash modification factors (CMF's) from FHWA's CMF Clearinghouse that were utilized to help understand the percent reduction in the frequency and severity of intersection crashes based on the various concept geometric

configurations. The average CMFs for various geometric changes shown were applied to the existing crashes at each intersection based on the concept. The totals were then aggregated for each concept, which are shown in the evaluation matrix. This analysis found that the concepts are expected to reduce crash frequency by 24 to 40% and crash severity by 53% to 68%, depending on the concept.

Table 7. Alternative Conflict Point Analysis

Alternative	Total Conflict Points
Hybrid Option 1A	18
Hybrid Option 1B	14
Hybrid Option 1B with RIRO	18
Hybrid Option 1C	18
Hybrid Option 1D	11
Hybrid Option 1E	21
Hybrid Option 1F	23
Hybrid Option 1G	13
Freeway Option 2B	11
Freeway Option 2C	4

Table 8. Intersection Crash Modification Factor Analysis

Geometric Change	Crash Modifcation Factors	
	By Crashes	By Severity
At-grade to Interchange	34%	42%
At-grade to partial interchange (High T)	17%	21%
Full-intersection to a right-in / right-out	35%	50%
Any Access to closure	100%	100%
Overpass	75%	75%

Vehicle Mobility Analysis

Mainline delay, side street delay, overall intersection delay, and the queue analysis were evaluated based on the 2045 AM and PM peak hour operations in Synchro. Only the worst operations were shown in the evaluation matrix. All options were found to operate well with minimal delay anticipated except Option 2C which shows failing LOS for the westbound left movement at the CSAH 12 interchange (south roundabout). This option reroutes a significant amount of traffic to CSAH 12 with no access to Hwy 14 between Hwy 60 and CSAH 12. With the westbound left movement anticipated to fail at CSAH 12, the intersection overall operates with LOS D during both peak hours. All other options show LOS A for all intersections during both peak hours. Maximum traffic queues are anticipated to be 225 ft or less at all intersections and for all options except Option 2C. Option 2C shows a maximum queue of around 500 ft at the south roundabout of the CSAH 12 interchange.

County Rd 90 expansion compatibility – Each alternative was also analyzed based on the compatibility the concept has with a future County Rd 90 expansion which would potentially connect to Hwy 60 at Hwy 14. The options that consider a High T at Hwy 60 and Hwy 14 would prohibit a connection to the south where the options that consider an interchange at Hwy 60 and Hwy 14 retain connectivity to the south of Hwy 14.

Rerouted volumes – the amount of 2045 daily traffic that has to reroute to CSAH 17 with each alternative was determined. Options 1D and 2C require the most amount of traffic to reroute with access closures and restrictions. Option 1A adds no traffic to CSAH 17 with all movements accommodated CSAH 56 and CSAH 17. All other options have some traffic added to CSAH 17 with access closures and restrictions. There are no capacity concerns with traffic added to CSAH 17.

Accessibility to Eagle Lake – the concepts were rated good, fair, or poor based on how much access is retained for vehicles going to and from Eagle Lake. Options with no or only one access to Eagle Lake were rated poor, options with one full access and one partial access were rated fair, and options with two full accesses were rated good.

Social, Economic, and Environmental Impacts

Property impacts – the number of properties impacted by each option were quantified. All options impact four properties except options 1C and 1E which impact two and three properties, respectively.

Relocations (residential and business) – none of the concepts would require relocation of residential homes or businesses.

Wetland/floodplain impacts – the total acreage of wetland and floodplain impacts were quantified with each option. Options 1A, 1D, 1E, and 1G have the largest impact to wetland and floodplains with 1.79 acres impacted. Options 1B, 2B, and 2C impact between 0.21 – 0.23 acres and Options 1C and 1F have no wetland or floodplain impacts.

Cost – High level cost estimates were determined for each alternative to show the magnitude is cost difference anticipated between options. An interchange was assumed to cost ~$30 M, a High T was assumed to cost ~25 M and an overpass was assumed to cost ~25 M. Other factors such

as property impacts and access closures were considered as well and ultimately a range in cost was shown. Options 1A and 1F were found to have the highest cost, Options 1D, 1G, 2B, and 2C were found to have the lowest cost, and Options 1B, 1C, and 1E were found to have moderate cost.

PTAC Decision on Concepts

Based on discussion with the PTAC the decision on which concepts to dismiss based on the Level 1 screening and which to carry forward for a more detailed analysis are as follows:

- Hybrid Option 1A – This option was dismissed based on the high cost, and since other concepts provide adequate access
- Hybrid Option 1B – This option was kept for further evaluation with a right-in/right-out added to provide better access at CSAH 17
- Hybrid Option 1C – This option was kept for further evaluation with and overpass added at CSAH 55 (Le Ray Ave) to improved connectivity
- Hybrid Option 1D – This option was dismissed since it only has one access to Eagle Lake and no access at CSAH 56
- Hybrid Option 1E – This option was kept for further evaluation
- Hybrid Option 1F – This option was dismissed based on the high cost and substantial realignment needed
- Hybrid Option 1G – This option was kept for further evaluation
- Freeway Option 2B – This option was dismissed since it only has one access to Eagle Lake
- Freeway Option 2C – This option was dismissed since it has no direct access to Eagle Lake

Level 2 Screening

A more detailed analysis was completed for the four concepts that were carried forward with additional evaluation measures added. The options were renamed as follows:

- Concept A = Hybrid Option 1B
- Concept B = Hybrid Option 1C
- Concept C = Hybrid Option 1E
- Concept D = Hybrid Option 1G
- Concept D2 = High-T at CSAH 56 with Interchange at CSAH 17/27

Evaluation Criteria

The Level 2 screening added the following measures to the evaluation matrix:

- Vehicle Safety
    - Risk factor analysis
- Vehicle Mobility
    - Mainline delay (Vissim)
    - Side street delay (Vissim)
    - Overall intersection delay (Vissim)
    - Queue analysis (Vissim)
    - Travel time
- Social, Economic, and Environmental Impacts
- Walkability/bikeability
- Preliminary cost estimate (2025 dollars)
- Benefit-cost ratio

Each new or modified evaluation criteria category is listed below along with details on the methodology applied and key findings. The evaluation matrix for the Level 2 screening is included in **Appendix G** and shows how the concepts compare to one another.

Vehicle Safety Analysis

To further evaluate safety associated with the remaining concepts, a risk factor analysis was conducted utilizing FHWA's Surrogate Safety Assessment Model (SSAM). SSAM is an FHWA-sponsored computer program that quantifies vehicle conflicts using vehicle trajectory information derived from the outputs of Vissim traffic simulation models. SSAM quantifies conflict totals for rear-end, crossing, and lane change conflicts. It is important to understand that SSAM-tabulated conflicts reflect both modeled vehicle collisions and near-misses. As such, SSAM results should not be interpreted as the number of crashes, rather the number of situations that have a high potential for collisions to occur. This approach leverages the VISSIM traffic model to simulate vehicle movements under various traffic conditions and analyzes vehicle trajectory data to identify conflict events. These conflicts serve as surrogate measures of safety, offering insights into potential risks before actual crashes occur. Results of the risk factor analysis, which are illustrated in the evaluation matrix, indicate that each alternative will provide a significant improvement from the no build condition.

Vehicle Mobility Analysis

Mainline delay, side street delay, overall intersection delay, and the queue analysis were evaluated based on the 2045 AM and PM peak hour operations in Vissim. The operational results are highlighted for each option below.

- **Concept A**: The more detailed Vissim analysis indicated that at the CSAH 56 High T the eastbound right needs to be yield controlled instead of stop controlled to operate acceptably. With the eastbound right stop controlled, the movement operates with LOS F during the PM peak hour with 90 seconds of delay per vehicle. With the eastbound right yield controlled, the movement operates with LOS A during the PM peak hour.
- **Concept B:** The more detailed Vissim analysis indicated that at the CSAH 56 High the eastbound right needs to be yield controlled instead of stop controlled to operate acceptably. With the eastbound right stop controlled, the movement operates with LOS F during the PM peak hour with 303 seconds of delay per vehicle. With the eastbound right yield controlled, the movement operates with LOS B during the PM peak hour.
- **Concept C**: The more detailed Vissim analysis indicated that at the CSAH 56 High the eastbound right needs to be yield controlled and both the northbound left and westbound left need to be stop controlled to operate acceptably. With the eastbound right stop controlled, the movement operates with LOS F during the PM peak hour with 473 seconds of delay per vehicle and queues are anticipated to extend onto mainline Hwy 14. Also, with the northbound left stop controlled and the westbound left a free movement, the northbound left movement also fails with 219 seconds of delay per vehicle during the AM peak hour. With the eastbound right yield controlled the movement operates with LOS A during the PM peak hour. With the westbound left stop controlled, the northbound left movement operations are improved to LOS C during the AM peak hour.
- **Concept D:** The more detailed Vissim analysis shows no operational concerns with this option. All movements operate with LOS D or better and all queues are less than 300 ft in length.

For more detailed operational results see **Appendix H**.

Access / Travel Time Changes: Access to / from Hwy 14 was reviewed for each alternative to understand how the potential changes would impact local travel patterns. This evaluation quantified the total change for all users of an alternative, while recognizing some users would have longer travel times, while others would experience shorter travel times depending on their origin / destination. In general, Concepts A, B, and D would all result in a similar level of access / travel times for area users, while Option C would be expected to increase travel times for several users, particularly CSAH 17 / CSAH 27 users.

Social, Economic, and Environmental Impacts

Walkability / Bikeability: Since there are no existing or planned multimodal facilities along Hwy 14 given the context of the corridor, the multimodal analysis focused on the ability for pedestrians / bicyclists to maneuver across (north-south) the Hwy 14 corridor. In general, each alternative except for Option C would provide a similar level of north-south connectivity. However, the complexity of the High T configuration at CSAH 17 would be challenging for pedestrians / bicyclists to maneuver safely across Hwy 14. With future development opportunities expected along the north side of Hwy 14 in this area, ensuring good multimodal connectivity to / from this area is important.

Cost: Preliminary cost estimates were determined for each alternative based construction costs, right-of-way costs, and engineering costs combined. Actual quantities from the concept drawings were used to determine the costs rather than high level overall costs as completed for the level 1 screening.

Benefit Cost Analysis (BCA): MnDOT's benefit-cost analysis approach was utilized to compare each of the remaining concepts. This analysis was conducted in two parts, which accounts for delay (VHT - vehicle hours of travel) and safety (i.e., crash reduction) savings. For the safety BCA, MnDOT's Traffic Safety Benefit-Cost Calculation worksheet was used, which identifies the 20-year cost savings, while the delays savings are calculated based on the traffic operations analysis results. Results of the BCA analysis shown in **Table 9** indicate that each alternative will provide a positive BCA ratio of 3.0 or higher, which indicates the safety / delay benefits outweigh the project costs by approximately three (3) times. Note that Concept D, which is the lowest cost alternative, provided the highest BCA ratio. Option D2 was only considered for the benefit cost analysis. This concept assumed a High T at CSAH 56 and an interchange at CSAH 17/27.

Table 9. Benefit-Cost Analysis

Alternative	Concept	Project Cost	2035-2054 Aggregate Present Value of Savings			Benefit-Cost Ratio (20 years analyzed)		
		High Estimate	From Delay Saved	From Crash Reduction	Combined Benefit Amount	From Delay Saved	From Crash Reduction	Combined Benefit Amount
Hybrid Option 1B with RIRO	Concept A	$75,000,000	$ 128,166,782	$ 108,000,686	$ 236,167,468	1.71	1.45	3.15
Hybrid Option 1C	Concept B	$67,000,000	$ 127,833,550	$ 98,072,854	$ 225,906,404	1.91	1.47	3.38
Hybrid Option 1E	Concept C	$65,000,000	$ 128,347,707	$ 87,981,442	$ 216,329,149	1.98	1.36	3.33
Hybrid Option 1G	Concept D	$45,000,000	$ 128,671,363	$ 106,295,687	$ 234,967,050	2.86	2.37	5.23
Hybrid Option 1G alt	Concept D2	$72,500,000	$ 128,671,363	$ 95,527,554	$ 224,198,917	1.78	1.32	3.10

VIII. Phase 2 Engagement Summary

The second public engagement phase focused on gathering feedback from the public on potential future concepts and how well each concept meets their needs. The community was engaged at:

- Totcho Night Tator Days Fundraiser on March 28, 2025
- Mankato Hy-Vee on April 6, 2025
- Mankato Travel Center on April 14, 2025
- Public meeting at the Eagle Lake American Legion on April 8, 2025
- Online survey through the project's Social Pinpoint site

Figures 17 and **18** below summarize the key themes and public input collected during Phase 2. **Appendix F** includes the full Phase 2 Engagement Summary.

In addition, an update was shared with the Blue Earth County Board on April 8, 2025. The purpose of meeting was to share the range of concepts under consideration and the preliminary evaluation results that would be shared with the public at the open house later that evening.

Figure 17. Key Themes from Phase 2 Engagement – Public Meetings and Pop-Up Events

Key Themes from Phase 2 Engagement

CSAH 56

Support for High-T (Concepts A, B, and C)
- Some concern for safety accelerating into high-speed traffic

Concern for limited access with right-in, right-out (Concept D)

CSAH 55

Little support for overpass due to additional traffic through Eagle Lake (Concept B)

CSAH 17/27

Support for interchange (Concept D)
Support for overpass with right-in/right-out option (Concept A)
Little support for right-in/right-out (Concept B)
Little support for High-T (Concept C)

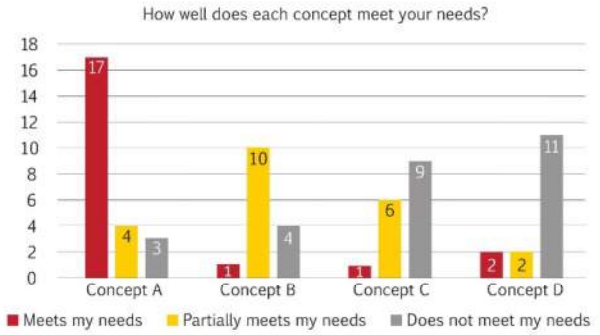
Hwy 60

Majority support interchange
Concern with lack of township access without interchange
Concern with precluding future south route

Public Input: Public Meeting

April 8, 2025

In-Person Open House
120 people attended



Public Input: Pop Up Events

25 people, Totcho Night *(3/28/25)*

57 people, HyVee Mankato *(4/6/25)*

10 people, Mankato Travel Center *(4/14/25)*

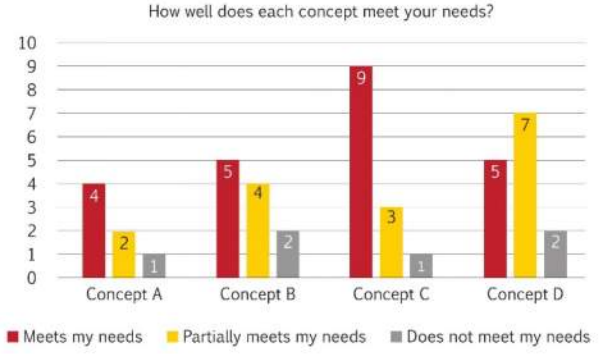
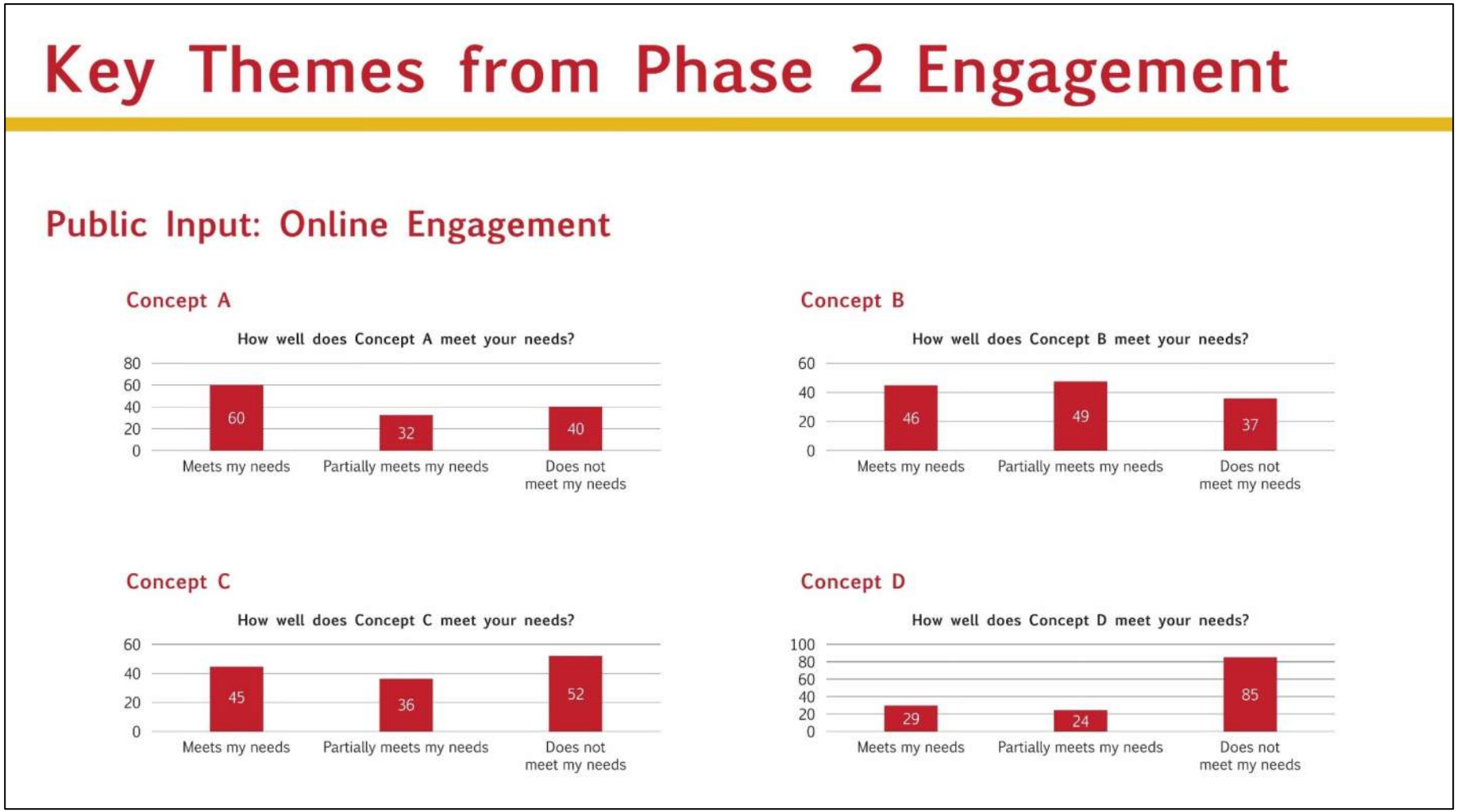


Figure 18. Key Themes from Phase 2 Engagement – Online Engagement



IX. Study Recommendation and Outcome

Concepts Recommended to Dismiss

A preliminary study recommendation, based on the concept evaluation findings, was presented to the PMT and PTAC. **Figures 19-23** show a history of all concepts considered and the project team recommendations of concepts to dismiss.

Figure 19. Summary of all Concepts Considered

	CSAH 56	CSAH 55	CSAH 17/27	Recommendation	Reason
1	High T	Full Closure	Interchange	Initially Dismissed **Reconsidered as Concept D2**	Dismissed in early screening as other concepts provide adequate access at less cost. Reconsidered based on public input following the March/April public engagement events.
2	Hight T	Full Closure	Overpass	**Carry Forward as Concept A**	Concept considered in detailed evaluation and shared at March/April public engagement events.
3	High T	Full Closure	RIRO	**Carry Forward as Concept B**	Concept considered in detailed evaluation and shared at March/April public engagement events.
4	Full Closure	Full Closure	Interchange	Dismiss	No access at CSAH 56 not acceptable for Eagle Lake.
5	High T	Full Closure	High T	**Carry Forward as Concept C**	Concept considered in detailed evaluation and shared at March/April public engagement events.
6	High T	High T (North)	RIRO (South)	Dismiss	Requires substantial realignment; High Cost; Limited county road network continuity
7	RIRO	Full Closure	Interchange	**Carry Forward as Concept D**	Concept considered in detailed evaluation and shared at March/April public engagement events.
8	High T	Full Closure	Full Closure	Dismiss	Only one access point to Eagle Lake; No county road network continuity
9	Full Closure	Full Closure	Overpass	Dismiss	No access to Eagle Lake; Limited county road network continuity

RIRO = Right-in/Right-out

Figure 20. Concep A Recommendation to Dismiss

Project Team Recommendation: Dismiss

Reason for Dismissal:

Traditional interchange design preferred at CSAH 17/27 (Concept D)

High T at CSAH 56 may be pursued by Eagle Lake after completion of Concept D.

Safety	Moderate Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Minimal Traffic Rerouting
Accessibility	One Full Access & One Partial Access to Eagle Lake, Parkway Ave (CSAH 17) Underpass
Fiscal Considerations	Highest Cost ($51M)
Property Impacts	4 Partially Impacted Properties

Figure 21. Concept B. Recommendation to Dismiss

Figure 22. Concept C Recommendation to Dismiss

Project Team Recommendation: Dismiss

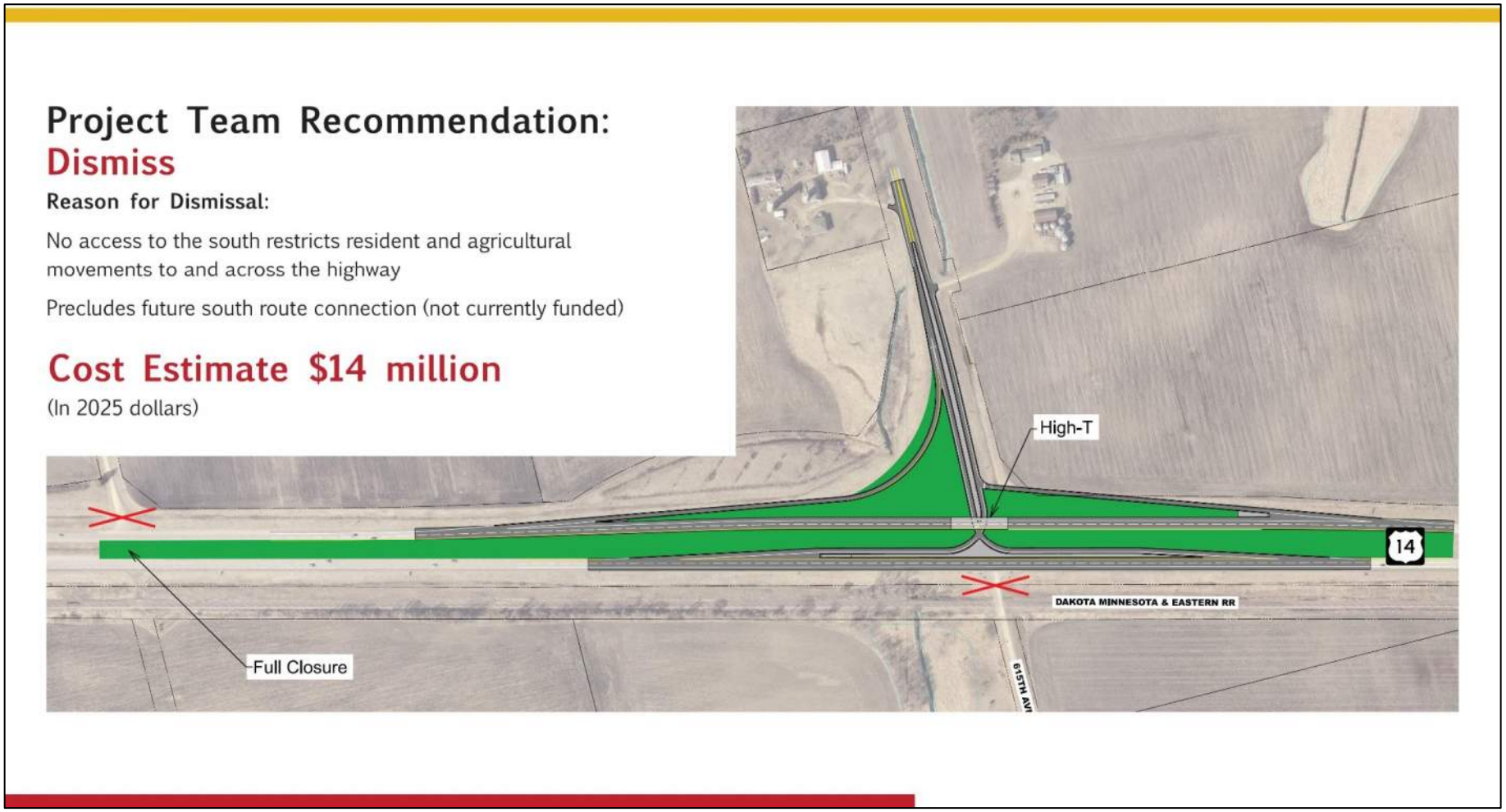
Reason for Dismissal:

No access from south side of Hwy 14 at CSAH 55 or CSAH 17/27

High cost · Moderate crash reduction

Safety	Moderate Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Some Traffic Rerouting Required, Increased Volume along 598th Ave (CSAH 56)
Accessibility	Two Full Accesses to Eagle Lake (Includes land north of Hwy 14)
Fiscal Considerations	High Cost ($43M)
Property Impacts	3 Partially Impacted Properties

Figure 23. Highway 60 High T Recommendation to Dismiss



Recommended Concepts

Appendix I includes a layout showing the recommended concept for the full corridor.

The PMT recommended an Interchange at the Hwy 60/Hwy 14 intersection as shown in **Figure 24**.

Figure 24. Highway 60 Recommendation

The PMT, except for the City of Eagle Lake, recommended Concept D, which included a right-in, right-out at CSAH 56, an interchange at CSAH 17/27 and an interchange Hwy 60. This preliminary recommendation was also presented and discussed at Eagle Lake City Council Meetings and an Agency Meeting as summarized below. Based on feedback from these meetings, a phased approach to implementation was included with the Concept D recommendation as shown in **Figure 25 and 26** and described below:

- **Initial Build Out Phase** – Concept D with a right-in, right-out at CSAH 56 and an interchange at CSAH 17/27 to be developed concurrently. The Hwy 60 interchange would be an independent project with timing to be determined based on need.
- **Long-Range Vision** – High T at CSAH 56. The City of Eagle Lake may pursue funding for design and construction of a High T at CSAH 56 after the initial build out of Concept D is complete.

Figure 25. Eagle Lake Area Recommendation – Initial Build Out (Concept D)

Reason for Recommendation:

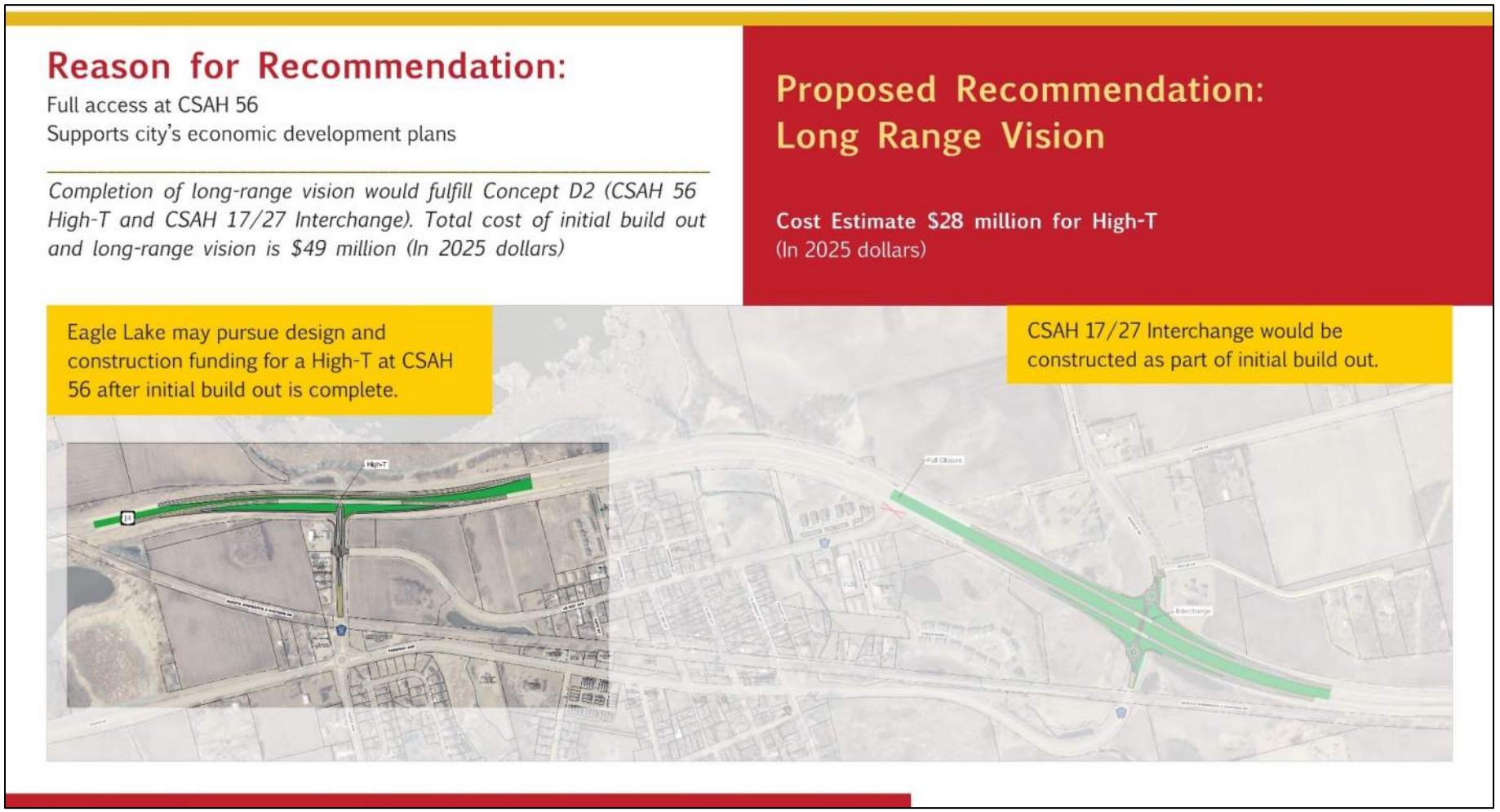
Highest crash reduction
Interchange at CSAH 17/27
- supports county network connectivity
- supports city development east/north

Maintains some access at CSAH 56
Least new infrastructure, lowest cost
Highest Benefit Cost; Likely to score well on competitive funding requests

Proposed Recommendation: Initial Build Out

Cost Estimate $21 million
(In 2025 dollars)

Figure 26. Eagle Lake Area Long Range Vision – High T



Phase 3 Engagement Summary

The final phase of engagement included a series of updates to the Eagle Lake City Council, a joint agency meeting with Eagle Lake, Blue Earth County, MAPO, and MnDOT, and a public open house and public hearing at an Eagle Lake Council meeting. Each of these meetings are detailed below.

- **Eagle Lake City Council Meeting – June 2, 2025**
    - A study update was presented to the council to review each corridor alternative, the evaluation results, and public input. The Council expressed support for a High T at CSAH 56 and said it would be difficult to support concepts that do not show full access at that location. They also showed interest in full access at CSAH 17/27 either through an overpass with right-in/right-out design like Concept A or an interchange like Concept D. The Council was briefed that an Agency Meeting was scheduled for June 4, 2025, to bring staff and elected officials from the city, county, MnDOT, and MAPO together to further discussion study concepts and recommendations since Blue Earth County and MnDOT had concerns about the likelihood of securing funding for a High T at CSAH 56 and an interchange at CSAH 17/27.

- **Agency Meeting – June 4, 2025**
    - Staff and elected official representatives from the City of Eagle Lake, Blue Earth County, MAPO, and MnDOT met on June 4, 2025, to discuss study recommendations following the June 2, 2025, Eagle Lake city council input that suggested they could not support the loss of full access at CSAH 56. Below is a summary of that meeting:
        - The CSAH 17/27 interchange is important to Eagle Lake for east side development and access north of Highway 14
        - The CSAH 17/27 interchange is important to Blue Earth County for county road network connectivity
        - Previous investments in CSAH 17 and CSAH 12 roadway network provide safe and reliable access to the west and to Highway 14, approximately 1.5 miles from CSAH 56
        - Concept A is unlikely to score well for competitive funds compared to Concept D.
        - Blue Earth County would be unlikely to support Concept A due to required investment levels, given recent investments in surrounding county road network.
        - Although Eagle Lake would also prefer a High T at CSAH 56, Concept D is better than a do-nothing alternative. Concept D would require future planning on east side of Eagle Lake. City would want to be proactive with a future land use and transportation network plan.

        - Concept D is recommended, it should include a recommendation to solicit MAPO planning dollars to study additional traffic control and pedestrian/bicycle crossing safety needs on local roadways such as CSAH 17/Parkway Ave, 598th and CSAH 27/Agency Street due to the shift in traffic patterns that would come with Concept D.

- **MAPO Policy Board Meeting – June 5, 2025**
    - A study update was presented to the MAPO Policy Board to review each corridor alternative, the evaluation results, and public input. A summary of the June 4, 2025, agency meeting was shared with the Policy Board as well indicating the preliminary study recommendation was likely Concept D. The study team noted additional meetings with the Eagle Lake City Council and a final public meeting are planned for later summer 2025. The Policy Board was not requested to take formal action on the study at this point but expressed an understanding of the need to provide a safe corridor and balance mobility, access, and the realities funding availability for large infrastructure investments that is leading towards a Concept D recommendation.

- **Eagle Lake City Council Meeting – July 14, 2025**
    - Discussion from the June 4, 2025 agency meeting was shared with the Council for consideration. Additional details on how projects like this are typically funded was shared with the council as well as further details on the proposed Concept D recommendation.
    - Blue Earth County and MnDOT shared their concerns about securing funding for both a High T at CSAH 56 and an interchange at CSAH 17/27. Blue Earth County also expressed concern about staff resources required to develop the CSAH 56 High T, given the County's other priorities and limited capacity.
    - The Eagle Lake City Council directed staff to schedule a special council meeting and public hearing to gather resident input on Concept D on August 12, 2025.

After the meetings above were completed, study engagement focused on sharing the Highway 60 recommendation and the phased Concept D recommendation with the Eagle Lake City Council and the public as summarized below.

- **Public Open House – August 12, 2025**
    - The meeting was open to the public and advertised through social media, press release, website, and email blasts to encourage wide participation by the public, commuters, and interested stakeholders. The meeting was held prior to the Eagle Lake special council meeting and public hearing on the proposed study recommendations. The following summarizes verbal input collected by project staff at the open house regarding the proposed study recommendation:
    - The majority of Eagle Lake residents in attendance did not support a right-in, right-out at CSAH 56 and preferred a High T be implemented as part of the initial build-out phase.

- There was support for full access at CSAH 17/27 with many supporting an interchange at that location. Several asked questions about why Highway 14 was shown over CSAH 17/27 instead of the county road going over the highway. Staff explained the planning-level nature of these concepts and that a preliminary constructability analysis was completed and found it was more cost-effective to take Highway 14 over the local road. However, this will be further evaluated in future design phases when survey and additional design information is available.
- Township residents had many questions about the timing of potential access closures to Highway 14. Staff shared MnDOT will continue to monitor township access to Highway 14 and address safety issues as needs dictate. Access is not anticipated to be modified unless needed prior to interchange construction.
- Attendees supported the recommendation for an interchange at the Highway 60/Highway 14 intersection.

- **Eagle Lake City Council – August 12, 2025**
  - A special Eagle Lake City Council Meeting was held to discuss the Concept D recommendation with the initial build out and long-range vision approach. A public hearing was held during the meeting to collect resident input on the recommendation. The Council did not recommend support of Concept D and instead passed a motion by a 3-2 vote in support of Concept A. This concept includes a High T at CSAH 56 and an overpass with right-in, right-out at CSAH 17/27.

Study Outcome

The Highway 14 Eagle Lake Corridor Study did not conclude with full consensus by all partners on a corridor vision. The following summarizes where agencies did agree and where disagreement remained.

- **Agencies agreed on:**
  - Recommendation for an interchange at the Highway 14/Highway 60 intersection. This recommendation was supported by the PMT and PTAC.
  - Full access at CSAH 17/27. As noted below in the section below, the design of the full access was not agreed upon. Blue Earth County and MnDOT supported an interchange design (Concept D). The City of Eagle Lake supported an overpass with right-in/right-out design (Concept A).
- **Agencies did not agree on:**
  - The design of full access at CSAH 17/27
    - The Eagle Lake City Council passed a motion by a 3-2 vote on August 12, 2025, in support of Concept A. This concept includes an overpass with right-in/right-out design at CSAH 17/27. The council stated this design was best for the City of Eagle Lake. No further details were shared.

        - The PMT (except the City of Eagle Lake), Blue Earth County, and MnDOT recommended Concept D with a traditional interchange design at CSAH 17/27. This design did not require construction of new roadway and provided full access at the existing county road intersection with Hwy 14, providing continuity of the county network north and south of Highway 14.
    - Access at CSAH 56
        - The Eagle Lake City Council passed a motion by a 3-2 vote on August 12, 2025, in support of Concept A. This concept includes full access with a High T design at CSAH 56 with the initial build out phase.
        - The PMT (except the City of Eagle Lake), Blue Earth County, and MnDOT recommended Concept D with a right-in/right-out at CSAH 56 in the Initial Build Out phase and a High T at CSAH 56 in the Long-Range Vision if Eagle Lake pursued and secured design and construction funding for the improvement.

Next Steps

The PMT met for a final time on August 28, 2025, to agree on the following documentation of next steps:

- Eagle Lake Area (CSAH 12 to CSAH 17/27)
    - There is no funding for improvements beyond pavement project in MnDOT's current 10-year plan.
    - There are no current plans to seek state or federal funding for Hwy 14 improvements in the Eagle Lake Area due to lack of consensus by project partners.
    - If the City of Eagle Lake can secure complete external funding for both projects, project partners are willing to revisit project support and next steps.
    - MnDOT will continue to monitor access to Hwy 14 and address safety and operational issues as needs dictate. It is anticipated that individual movements and/or access points will be modified or closed as needs dictate.
- Hwy 60 Area (CSAH 17/27 to Hwy 60)
    - MnDOT will continue to monitor township access to Hwy 14 and address safety issues as needs dictate. Access is not anticipated to be modified unless needed prior to interchange construction.
    - The Hwy 60 interchange timing will be driven by future traffic volumes, safety issues, and local road connections.

Appendix A – Detailed Crash Summaries

MAPO
MANKATO/NORTH MANKATO
AREA PLANNING ORGANIZATION

DEPARTMENT OF
TRANSPORTATION

Intersection: CR 86 (594th Ave) & US 14

Crash Type

- Sideswipe (0)
- Rear End (1)
- Angle (1)
- Left Turn (0)
- Single Vehicle (1)
- Other (0)

Crash Severity

- Fatal (0)
- Serious Injury (1)
- Minor Injury (0)
- Possible Injury (0)
- PDO (2)

Total Intersection Related Crashes

3

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.075	0.116	0.270	**0.280**

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.501	0.726	3.700	**0.680**

Intersection: CR 56 (598th Ave) & US 14

Crash Type

- Sideswipe (2)
- Rear End (7)
- Angle (14)
- Left Turn (0)
- Single Vehicle (3)
- Other (0)

Crash Severity

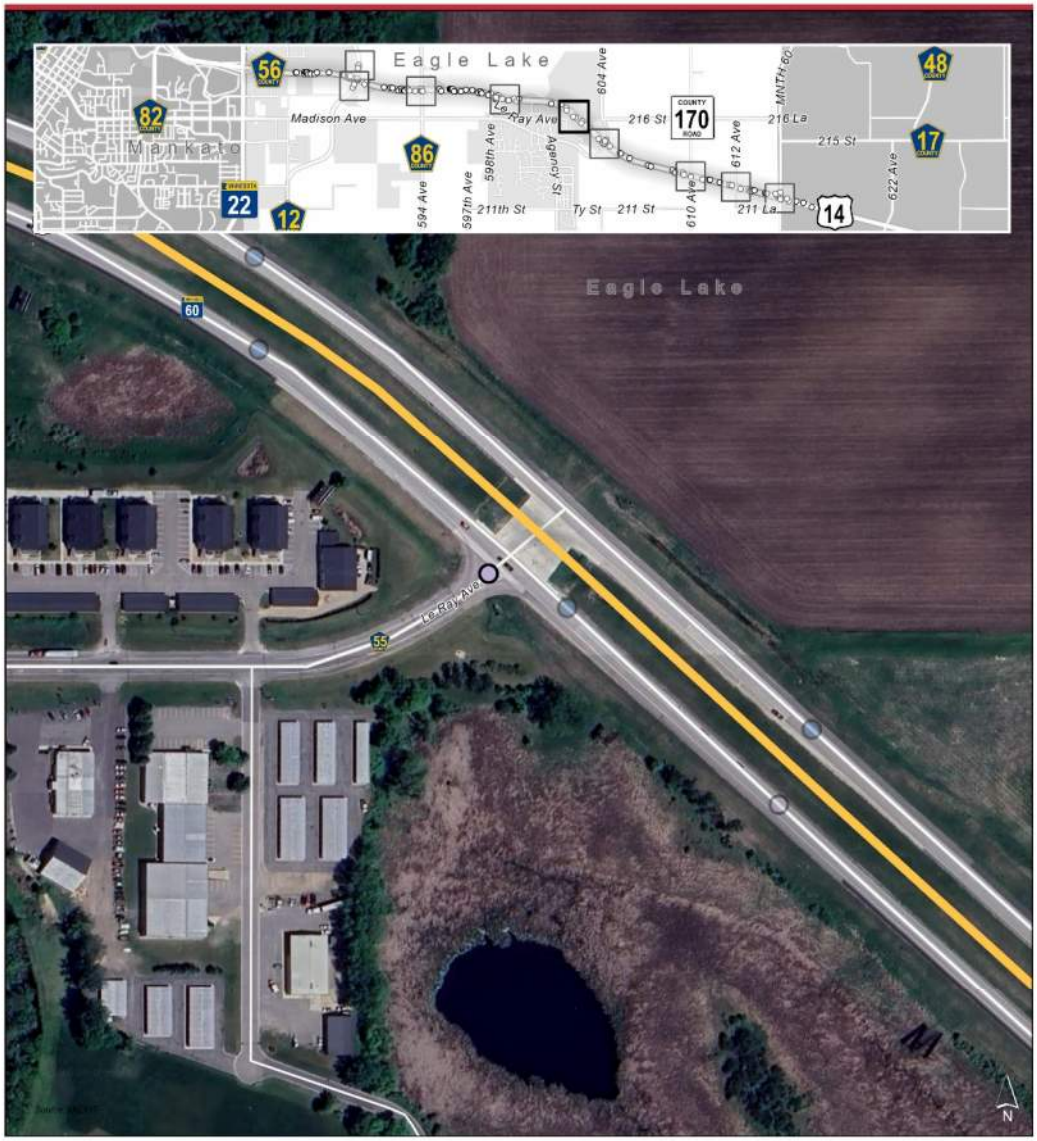
- Fatal (1)
- Serious Injury (0)
- Minor Injury (6)
- Possible Injury (2)
- PDO (17)

Total Intersection Related Crashes

26

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.611	0.116	0.260	2.350

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.350	0.726	3.580	0.660



Intersection: CR 55 (Le Ray Ave) & US 14 (MN 60)

Crash Type

- Sideswipe (0)
- Rear End (1)
- Angle (0)
- Left Turn (0)
- Single Vehicle (0)
- Other (0)

Crash Severity

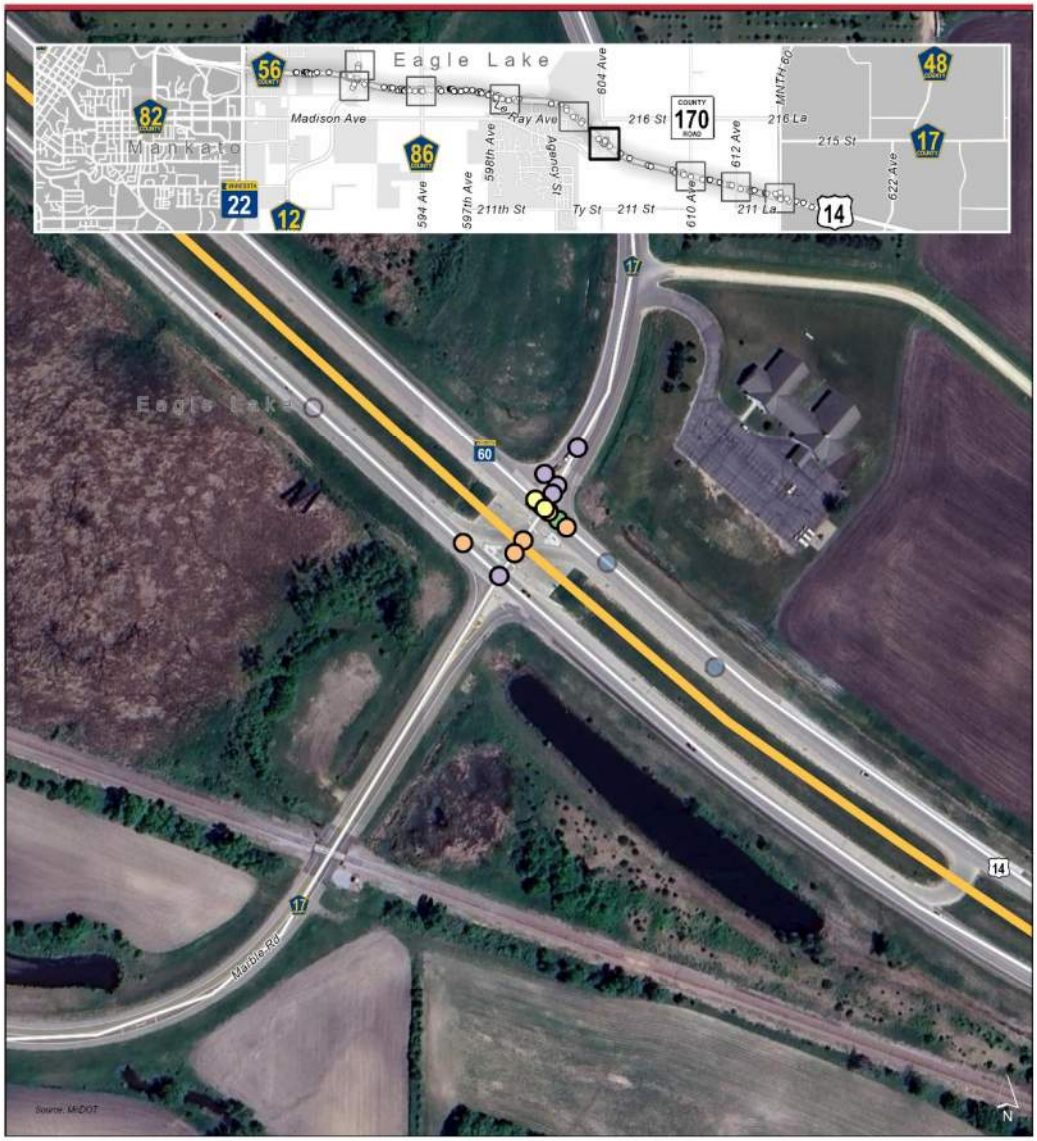
- Fatal (0)
- Serious Injury (0)
- Minor Injury (0)
- Possible Injury (0)
- PDO (1)

Total Intersection Related Crashes

1

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.028	0.116	0.280	**0.100**

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.000	0.726	3.980	**0.000**



Intersection: CR 17 (Parkway Ave / Marble Road) & US 14 (MN 60)

Crash Type

- Sideswipe (1)
- Rear End (6)
- Angle (7)
- Left Turn (2)
- Single Vehicle (0)
- Other (0)

Crash Severity

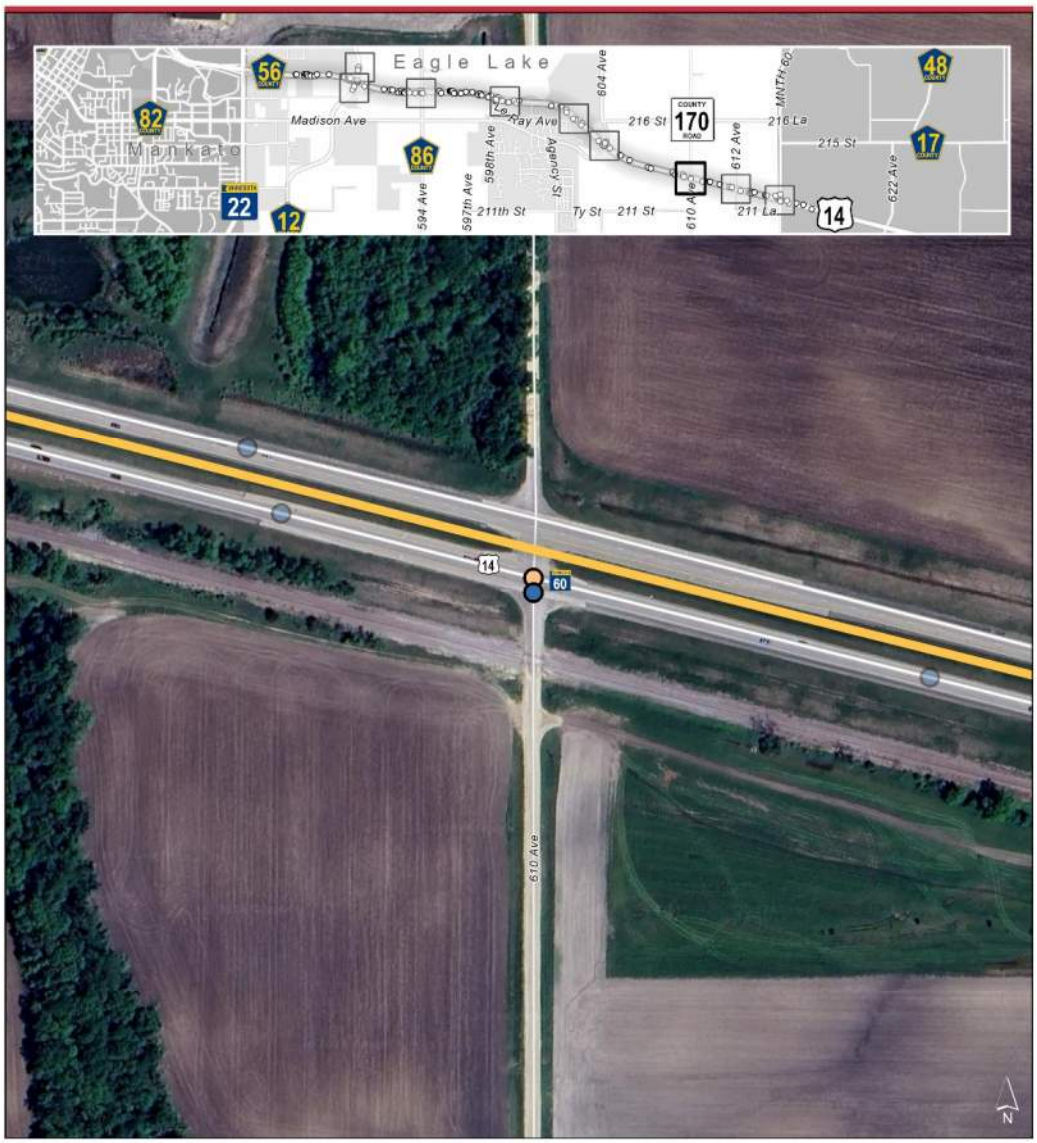
- Fatal (1)
- Serious Injury (0)
- Minor Injury (3)
- Possible Injury (1)
- PDO (11)

Total Intersection Related Crashes

16

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.426	0.116	0.270	1.580

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.665	0.726	3.840	0.690



Intersection: Twp Rd 332 (610th Ave) & US 14 (MN 60)

Crash Type

- Sideswipe (0)
- Rear End (0)
- Angle (1)
- Left Turn (0)
- Single Vehicle (1)
- Other (0)

Crash Severity

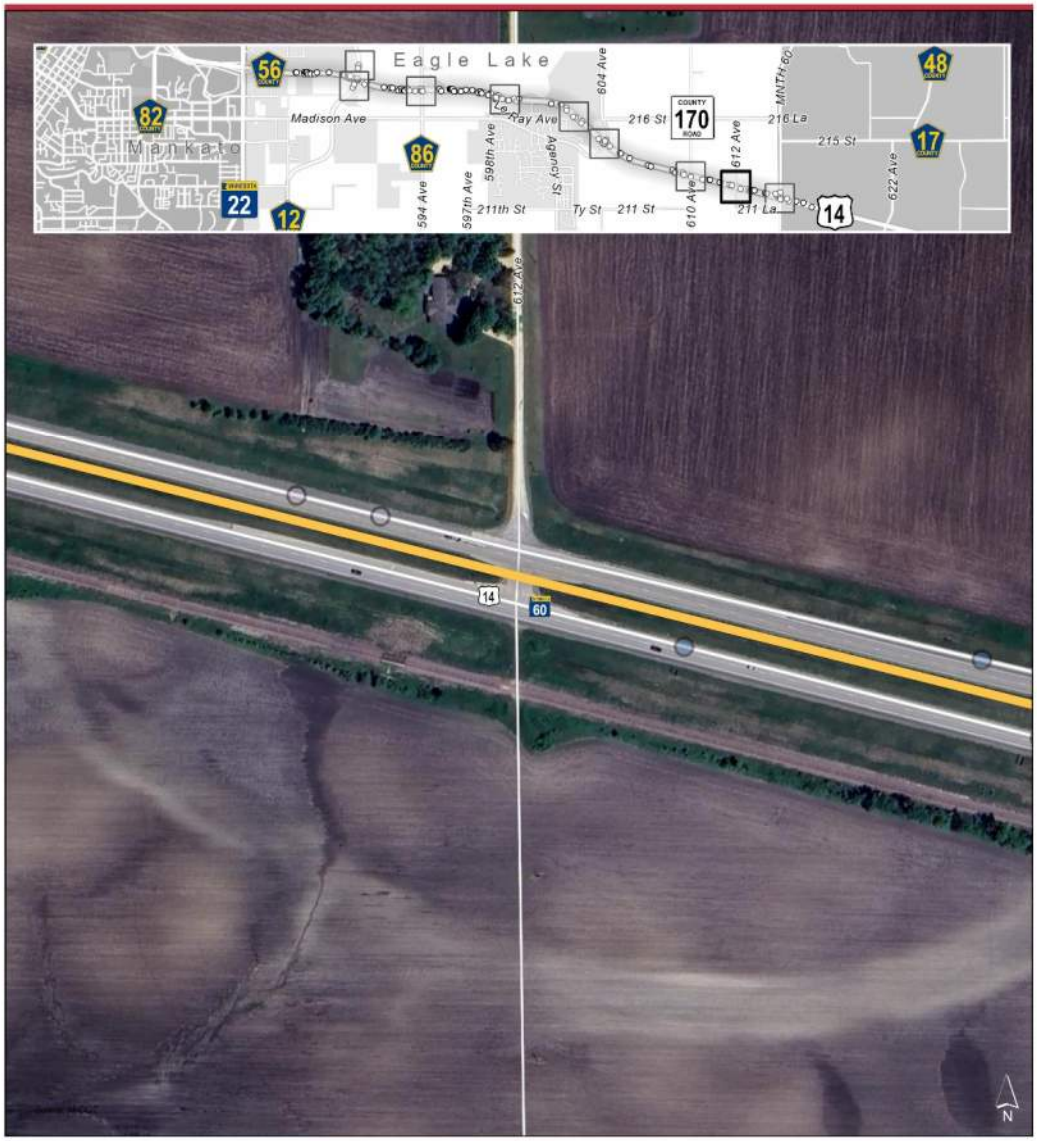
- Fatal (1)
- Serious Injury (0)
- Minor Injury (0)
- Possible Injury (0)
- PDO (1)

Total Intersection Related Crashes

2

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.057	0.116	0.280	**0.200**

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.838	0.726	3.980	**0.710**



Intersection: T-281 (612th Ave) & US 14 (MN 60)

Crash Type

- Sideswipe (0)
- Rear End (0)
- Angle (0)
- Left Turn (0)
- Single Vehicle (0)
- Other (0)

Crash Severity

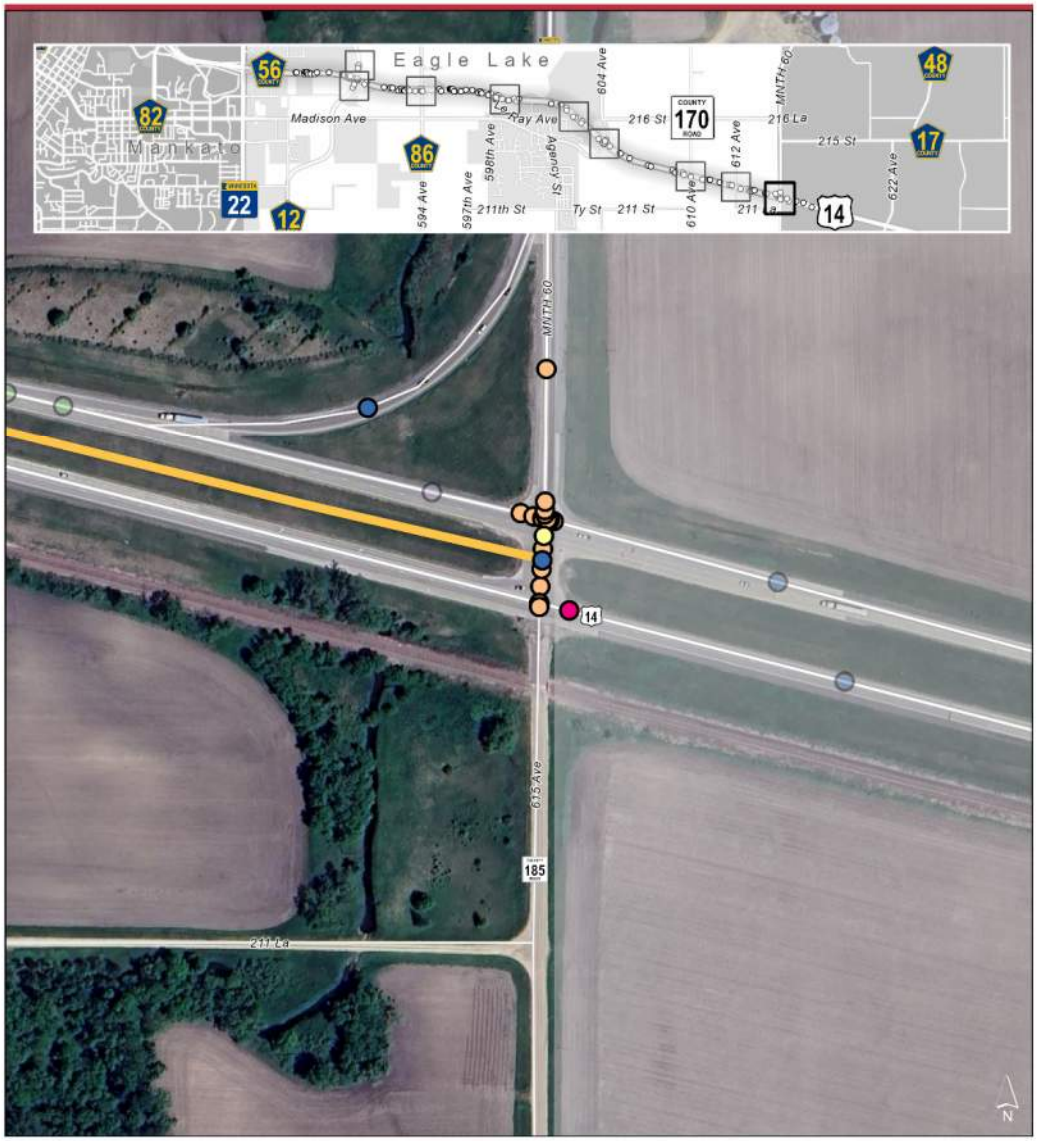
- Fatal (0)
- Serious Injury (0)
- Minor Injury (0)
- Possible Injury (0)
- PDO (0)

Total Intersection Related Crashes

0

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.000	0.116	0.280	**0.000**

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.000	0.726	3.970	**0.000**



Intersection: CR 17 (MN 60) & US 14

Crash Type

- Sideswipe (0)
- Rear End (0)
- Angle (17)
- Left Turn (1)
- Single Vehicle (2)
- Other (1)

Crash Severity

- Fatal (0)
- Serious Injury (1)
- Minor Injury (7)
- Possible Injury (3)
- PDO (10)

Total Intersection Related Crashes

21

Total Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
0.587	0.116	0.280	2.100

Fatal & Serious Injury Crash Rate			
Observed	Statewide Average	Critical Rate	Critical Index
2.794	0.726	3.950	0.710

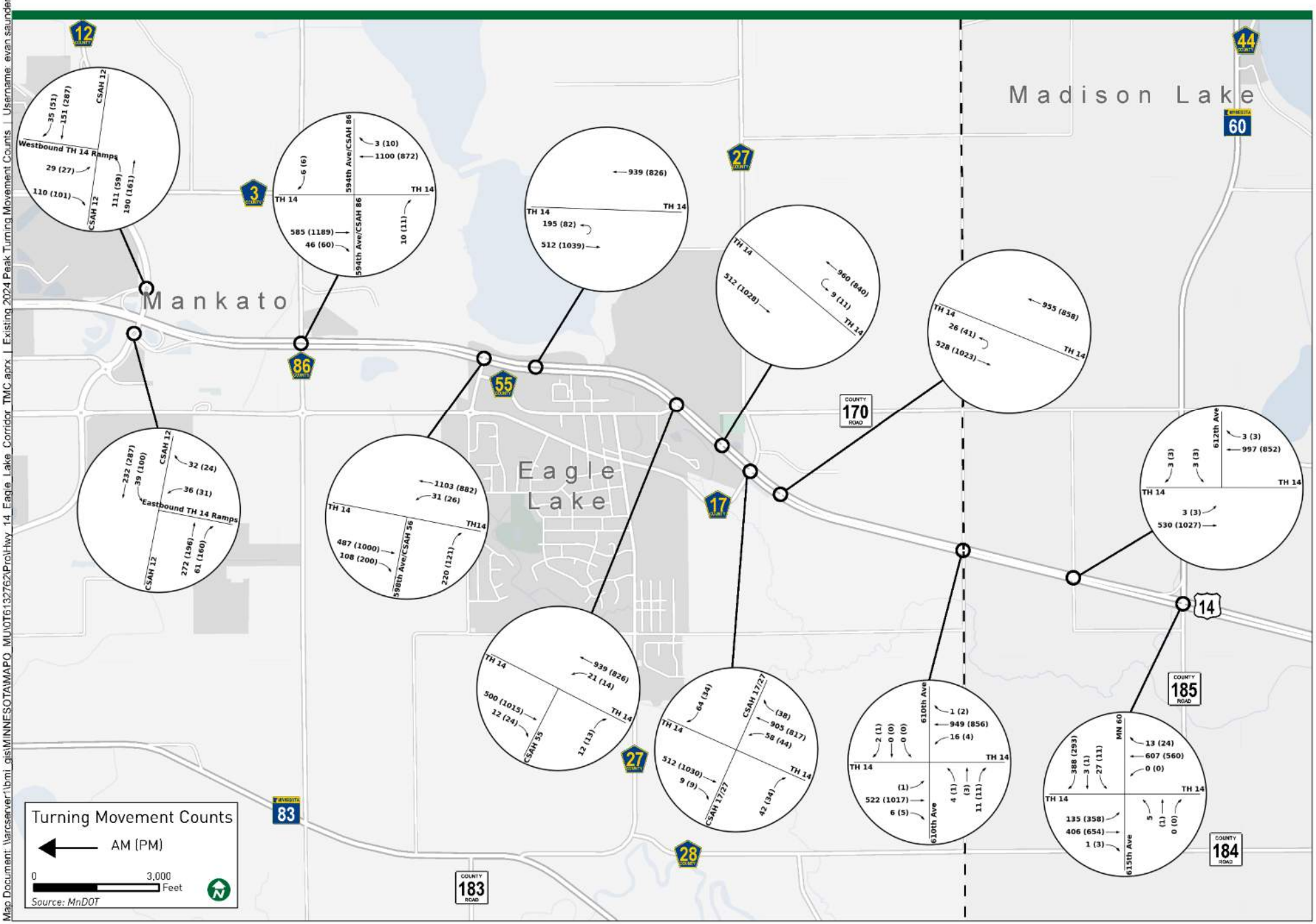
Appendix B – Traffic Forecast Summary

Highway 14 Corridor Study Turning Movement Counts

Mankato/North Mankato Area Planning Organization

Existing 2024 Peak Turning Movement Counts

September 2024



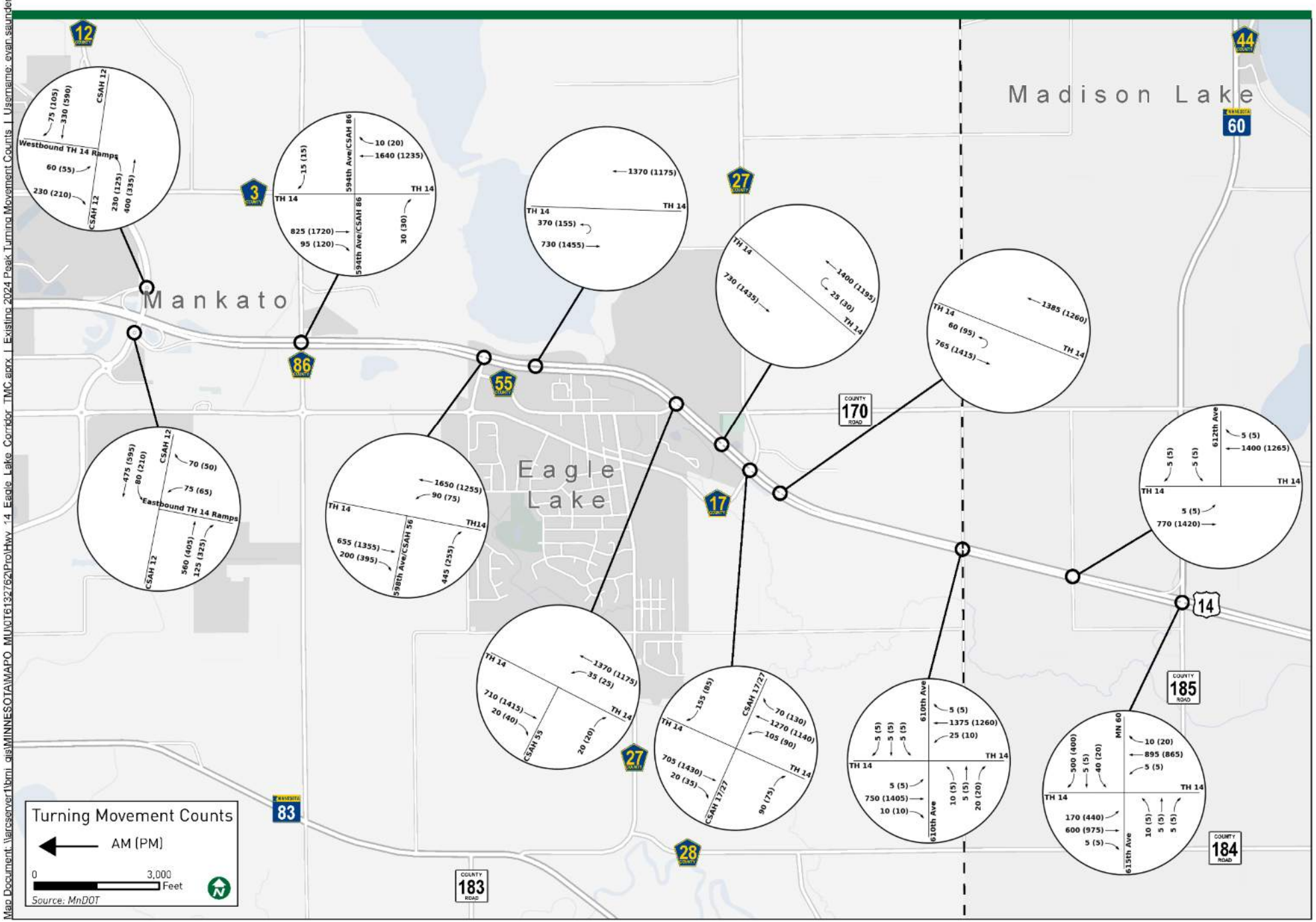
Map Document: \\arcserver\ibmi_gis\MINNESOTA\MAPO_MU\0T6132762\Proj\Hwy_14_Eagle_Lake_Corridor_TMC.aprx | Existing 2024 Peak Turning Movement Counts | Username: evan.saunderspearce | Date Saved

Highway 14 Corridor Study Turning Movement Counts

Mankato/North Mankato Area Planning Organization

2045 No-Build Turning Movement Counts

September 2024



Appendix C – Existing Detailed Operational Results

Project: Highway 14 Corridor Study
Scenario: Existing Condition

		Existing AM Peak Hour																					
		Traffic Volumes (veh)					Traffic Delay (sec/veh)						Traffic Queuing (feet)										
Intersection	Approach	Demand Volumes					Movement (Delay - LOS)				Approach (Delay - LOS)	Intersection (Delay - LOS)	U Turn			Left Turn			Through			Right Turn		
		U	L	T	R	Total	U	L	T	R			Storage	Avg	Max	Storage	Avg	Max	Link Length	Avg	Max	Storage	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	-	29	-	110	139	-	1 - A	-	0 - A	1 - A	1 - A	-	-	-	-	0	50	-	-	-	-	0	0
	NB	-	111	190	-	301	-	1 - A	1 - A	-	1 - A		-	-	-	-	0	100	975	0	100	-	-	-
	SB	-	-	151	35	186	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	2300	0	75	-	0	25
CSAH 12 at TH 14 South Ramp *Roundabout*	WB	-	36	-	32	68	-	2 - A	-	1 - A	2 - A	1 - A	-	-	-	-	0	50	-	-	-	-	0	0
	NB	-	0	272	61	333	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	950	0	50	-	0	25
	SB	-	39	232	-	271	-	1 - A	1 - A	-	1 - A		-	-	-	-	0	50	975	0	100	-	-	-
594th Ave/CSAH 86 at TH 14 *Stop Control*	EB	-	-	585	46	631	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	-	1100	3	1103	-	-	0 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	NB	-	-	-	10	10	-	-	-	9 - A	9 - A		-	-	-	-	-	-	-	-	-	-	25	75
	SB	-	-	-	6	6	-	-	-	12 - B	12 - B		-	-	-	-	-	-	-	-	-	-	25	75
598th Ave/CSAH 56 at TH 14 *Stop Control*	EB	-	-	487	108	595	-	-	0 - A	1 - A	1 - A	3 - A	-	-	-	-	-	-	-	0	0	550	0	0
	WB	-	31	1103	-	1134	-	11 - B	0 - A	-	1 - A		-	-	-	700	25	75	-	0	0	-	-	-
	NB	-	-	-	220	220	-	-	-	28 - D	28 - D		-	-	-	-	-	-	-	-	-	-	50	250
598th Ave/CSAH 56 *EB U-Turn*	EB	195	-	512	-	707	12 - B	-	0 - A	-	4 - A	2 - A	800	25	175	-	-	-	-	0	0	-	-	-
	WB	-	-	939	-	939	-	-	0 - A	-	0 - A		-	-	-	-	-	-	-	0	0	-	-	-
CSAH 55 at TH 14 *Stop Control*	EB	-	-	500	12	512	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	21	939	-	960	-	6 - A	0 - A	-	1 - A		-	-	-	550	25	75	-	0	0	-	-	-
	NB	-	-	-	12	12	-	-	-	8 - A	8 - A		-	-	-	-	-	-	-	-	-	-	0	125
CSAH 17/27 at TH 14 *WB U-Turn*	EB	-	-	512	-	512	-	-	0 - A	-	0 - A	0 - A	-	-	-	-	-	-	-	0	0	-	-	-
	WB	9	-	960	-	969	4 - A	-	0 - A	-	1 - A		850	0	50	-	-	-	-	0	0	-	-	-
CSAH 17/27 at TH 14 *Stop Control*	EB	-	-	512	9	521	-	-	0 - A	0 - A	0 - A	2 - A	-	-	-	-	-	-	-	0	0	800	0	0
	WB	-	58	905	18	981	-	20 - C	0 - A	1 - A	2 - A		-	-	-	650	25	125	-	0	0	800	0	0
	NB	-	-	-	42	42	-	-	-	16 - C	16 - C		-	-	-	-	-	-	-	-	-	-	25	125
	SB	-	-	-	64	64	-	-	-	19 - C	19 - C		-	-	-	-	-	-	-	-	-	-	25	150
CSAH 17/27 at TH 14 *EB U-Turn*	EB	26	-	528	-	554	9 - A	-	0 - A	-	1 - A	0 - A	850	25	75	-	-	-	-	0	0	-	-	-
	WB	-	-	955	-	955	-	-	0 - A	-	0 - A		-	-	-	-	-	-	-	0	0	-	-	-
610th Ave at TH 14 *Stop Control*	EB	-	-	522	6	528	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	275	-	-	-	0	0	300	0	0
	WB	-	16	949	1	966	-	7 - A	0 - A	0 - A	1 - A		-	-	-	325	0	50	-	0	0	325	0	0
	NB	-	4	-	11	15	-	22 - C	-	8 - A	12 - B		-	-	-	-	25	100	-	-	-	-	0	75
	SB	-	-	-	2	2	-	-	-	17 - C	17 - C		-	-	-	-	-	-	-	-	-	-	0	50
612th Ave at TH 14 *Stop Control*	EB	-	3	530	-	533	-	15 - C	0 - A	-	1 - A	0 - A	-	-	-	300	0	25	-	0	0	-	-	-
	WB	-	-	997	3	1000	-	-	0 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	SB	-	3	-	3	6	-	32 - D	-	16 - C	22 - C		-	-	-	-	25	75	-	-	-	-	0	50
MN 60/CR 185 at TH 14 *Stop Control*	EB	-	135	406	1	542	-	28 - D	0 - A	0 - A	8 - A	3 - A	-	-	-	900	50	275	-	0	0	275	0	0
	WB	-	0	607	13	620	-	-	0 - A	1 - A	1 - A		-	-	-	300	-	-	-	0	0	300	0	0
	NB	-	5	0	0	5	-	36 - E	135 - F	-	36 - E		-	-	-	-	25	100	-	25	100	-	-	-
	SB	-	27	3	388	418	-	17 - C	35 - E	0 - A	2 - A		-	-	-	-	25	125	-	25	100	-	0	0

Project: Highway 14 Corridor Study
Scenario: Existing Condition

		Existing PM Peak Hour																					
		Traffic Volumes (veh)					Traffic Delay (sec/veh)						Traffic Queuing (feet)										
Intersection	Approach	Demand Volumes					Movement (Delay - LOS)				Approach (Delay - LOS)	Intersection (Delay - LOS)	U Turn			Left Turn			Through			Right Turn		
		U	L	T	R	Total	U	L	T	R			Storage	Avg	Max	Storage	Avg	Max	Link Length	Avg	Max	Storage	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	-	27	-	101	128	-	1 - A	-	0 - A	1 - A	1 - A	-	-	-	-	0	50	-	-	-	-	0	0
	NB	-	59	161	-	220	-	1 - A	1 - A	-	1 - A		-	-	-	-	0	75	975	0	75	-	-	-
	SB	-	-	287	51	338	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	2300	0	100	-	0	25
CSAH 12 at TH 14 South Ramp *Roundabout*	WB	-	31	-	24	55	-	1 - A	-	1 - A	1 - A	1 - A	-	-	-	-	0	25	-	-	-	-	0	0
	NB	-	-	196	160	356	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	950	0	75	-	0	50
	SB	-	100	287	-	387	-	1 - A	1 - A	-	1 - A		-	-	-	-	0	50	975	0	75	-	-	-
594th Ave/CSAH 86 at TH 14 *Stop Control*	EB	-	-	1189	60	1249	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	-	872	10	882	-	-	0 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	NB	-	-	-	11	11	-	-	-	14 - B	14 - B		-	-	-	-	-	-	-	-	-	-	25	75
	SB	-	-	-	6	6	-	-	-	10 - B	10 - B		-	-	-	-	-	-	-	-	-	-	0	100
598th Ave/CSAH 56 at TH 14 *Stop Control*	EB	-	-	1000	200	1200	-	-	0 - A	1 - A	1 - A	4 - A	-	-	-	-	-	-	-	0	0	550	0	0
	WB	-	26	882	-	908	-	42 - E	0 - A	-	2 - A		-	-	-	700	25	100	-	0	0	-	-	-
	NB	-	-	-	121	121	-	-	-	51 - F	51 - F		-	-	-	-	-	-	-	-	-	-	50	225
598th Ave/CSAH 56 *EB U-Turn*	EB	82	-	1039	-	1121	7 - A	-	0 - A	-	1 - A	0 - A	800	25	75	-	-	-	-	0	0	-	-	-
	WB	-	-	826	-	826	-	-	0 - A	-	0 - A		-	-	-	-	-	-	-	0	0	-	-	-
CSAH 55 at TH 14 *Stop Control*	EB	-	-	1015	24	1039	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	14	826	-	840	-	14 - B	0 - A	-	1 - A		-	-	-	550	25	50	-	0	0	-	-	-
	NB	-	-	-	13	13	-	-	-	12 - B	12 - B		-	-	-	-	-	-	-	-	-	-	0	100
CSAH 17/27 at TH 14 *WB U-Turn*	EB	-	-	1028	-	1028	-	-	0 - A	-	0 - A	0 - A	-	-	-	-	-	-	-	0	0	-	-	-
	WB	11	-	840	-	851	8 - A	-	0 - A	-	1 - A		850	0	50	-	-	-	-	0	0	-	-	-
CSAH 17/27 at TH 14 *Stop Control*	EB	-	-	1030	9	1039	-	-	0 - A	1 - A	1 - A	2 - A	-	-	-	-	-	-	-	0	0	800	0	0
	WB	-	44	817	38	899	-	51 - F	0 - A	1 - A	3 - A		-	-	-	650	25	150	-	0	0	800	0	0
	NB	-	-	-	34	34	-	-	-	29 - D	29 - D		-	-	-	-	-	-	-	-	-	-	25	100
	SB	-	-	-	34	34	-	-	-	16 - C	16 - C		-	-	-	-	-	-	-	-	-	-	25	100
CSAH 17/27 at TH 14 *EB U-Turn*	EB	41	-	1023	-	1064	7 - A	-	0 - A	-	1 - A	0 - A	850	25	75	-	-	-	-	0	0	-	-	-
	WB	-	-	858	-	858	-	-	0 - A	-	0 - A		-	-	-	-	-	-	-	0	0	-	-	-
610th Ave at TH 14 *Stop Control*	EB	-	1	1017	5	1023	-	9 - A	0 - A	1 - A	1 - A	0 - A	-	-	-	275	0	25	-	0	0	300	0	0
	WB	-	4	856	2	862	-	12 - B	0 - A	1 - A	1 - A		-	-	-	325	0	50	-	0	0	325	0	0
	NB	-	1	3	11	15	-	26 - D	50 - F	11 - B	20 - C		-	-	-	-	25	50	-	25	75	-	0	50
	SB	-	-	0	1	1	-	-	-	14 - B	14 - B		-	-	-	-	-	-	-	-	-	-	0	50
612th Ave at TH 14 *Stop Control*	EB	-	3	1027	-	1030	-	14 - B	0 - A	-	1 - A	0 - A	-	-	-	300	0	50	-	0	0	-	-	-
	WB	-	-	852	3	855	-	-	0 - A	0 - A	0 - A		-	-	-	-	-	-	-	0	0	300	0	0
	SB	-	3	-	3	6	-	22 - C	-	11 - B	15 - C		-	-	-	-	0	75	-	-	-	-	0	50
MN 60/CSAH 185 at TH 14 *Stop Control*	EB	-	358	654	3	1015	-	48 - E	0 - A	1 - A	18 - C	10 - B	-	-	-	900	175	575	-	0	0	275	0	0
	WB	-	0	560	24	584	-	-	0 - A	1 - A	1 - A		-	-	-	300	-	-	-	0	0	300	0	0
	NB	-	0	1	0	1	-	-	583 - F	-	583 - F		-	-	-	-	-	-	-	25	50	-	-	-
	SB	-	11	1	293	305	-	35 - E	57 - F	0 - A	2 - A		-	-	-	-	25	75	-	25	100	-	0	0

Highway 14 Eagle Lake Corridor Study
Concept Alternative Cost Estimates (2025 Dollars)

Concept	594th	CSAH 56		CSAH 55		CSAH 17		TWP RD 332	612th*	TH 60 - Interchange	TH 60 - High T	Total Corridor Cost with TH 60 High-T	Total Corridor Cost with TH 60 Interchange	Cost Ranges Used in Evaluation Matrix (Includes contingencies due to Planning Level stage of work)
A	$80,000.00	High T	$28,717,000.00	Closed		RIRO Overpass	$21,700,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$64,500,000.00**	**$71,800,000.00**	**$64-$75M**
B	$80,000.00	High T	$28,717,000.00	Overpass	$11,500,000.00	RIRO	$3,000,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$57,300,000.00**	**$64,600,000.00**	**$56-$67M**
C	$80,000.00	High T	$28,717,000.00	Closed		High T	$13,643,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$56,500,000.00**	**$63,700,000.00**	**$57-$65M**
D	$80,000.00	RIRO	$1,450,000.00	Closed		Interchange	$19,745,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$35,300,000.00**	**$42,600,000.00**	**$36-$45M**
D2	$80,000.00	High T	$28,717,000.00	Closed		Interchange	$19,745,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$62,600,000.00**	**$70,000,000.00**	**$63-$75M**

**Removal Costs included in the TH 60 Interchange and High-T*

Appendix D – Year 2045 No Build Detailed Operational Results

Project: Highway 14 Corridor Study
Scenario: 2045 No Build

Intersection	Approach	2045 No Build AM Peak Hour																					
		Traffic Volumes (veh)					Traffic Delay (sec/veh)						Traffic Queuing (feet)										
		Demand Volumes					Movement (Delay - LOS)				Approach (Delay - LOS)	Intersection (Delay - LOS)	U Turn			Left Turn			Through			Right Turn		
		U	L	T	R	Total	U	L	T	R			Storage	Avg	Max	Storage	Avg	Max	Link Length	Avg	Max	Storage	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	-	59	-	226	285	-	2 - A	-	1 - A	2 - A	2 - A	-	-	-	-	0	75	-	-	-	-	0	0
	NB	-	228	396	-	624	-	3 - A	2 - A	-	3 - A		-	-	-	-	25	200	975	25	200	-	-	-
	SB	-	-	329	71	400	-	-	3 - A	1 - A	3 - A		-	-	-	-	-	-	2300	25	150	-	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	WB	-	74	-	66	140	-	5 - A	-	1 - A	4 - A	2 - A	-	-	-	-	25	75	-	-	-	-	0	0
	NB	-	0	558	125	683	-	-	2 - A	1 - A	2 - A		-	-	-	-	-	-	950	25	200	-	0	50
	SB	-	80	475	-	555	-	2 - A	3 - A	-	3 - A		-	-	-	-	0	75	975	25	175	-	-	-
594th Ave/CSAH 86 at TH 14 *Stop Control*	EB	-	-	824	92	916	-	-	1 - A	1 - A	1 - A	1 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	-	1640	6	1646	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	NB	-	-	-	30	30	-	-	-	10 - B	10 - B		-	-	-	-	-	-	-	-	-	-	25	100
	SB	-	-	-	11	11	-	-	-	17 - C	17 - C		-	-	-	-	-	-	-	-	-	-	25	75
598th Ave/CSAH 56 at TH 14 *Stop Control*	EB	-	-	655	199	854	-	-	0 - A	1 - A	1 - A	91 - F	-	-	-	-	-	-	-	0	0	550	0	0
	WB	-	87	1649	-	1736	-	30 - D	0 - A	-	2 - A		-	-	-	700	25	200	-	0	0	-	-	-
	NB	-	-	-	442	442	-	-	-	872 - F	872 - F		-	-	-	-	-	-	-	-	-	325	3025	5125
598th Ave/CSAH 56 *EB U-Turn*	EB	369	-	728	-	1097	33 - D	-	0 - A	-	9 - A	4 - A	800	75	325	-	-	-	-	0	0	-	-	-
	WB	-	-	1367	-	1367	-	-	1 - A	-	1 - A		-	-	-	-	-	-	-	0	0	-	-	-
CSAH 55 at TH 14 *Stop Control*	EB	-	-	710	18	728	-	-	0 - A	1 - A	1 - A	0 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	32	1367	-	1399	-	10 - B	0 - A	-	1 - A		-	-	-	550	25	75	-	0	0	-	-	-
	NB	-	-	-	17	17	-	-	-	10 - B	10 - B		-	-	-	-	-	-	-	-	-	-	25	125
CSAH 17/27 at TH 14 *WB U-Turn*	EB	-	-	727	-	727	-	-	0 - A	-	0 - A	0 - A	-	-	-	-	-	-	-	0	0	-	-	-
	WB	24	-	1399	-	1423	6 - A	-	0 - A	-	1 - A		850	25	50	-	-	-	-	0	0	-	-	-
CSAH 17/27 at TH 14 *Stop Control*	EB	-	-	703	18	721	-	-	0 - A	0 - A	0 - A	9 - A	-	-	-	-	-	-	-	0	0	800	0	0
	WB	-	105	1270	66	1441	-	107 - F	0 - A	1 - A	9 - A		-	-	-	650	100	375	-	0	0	800	0	0
	NB	-	-	-	90	90	-	-	-	29 - D	29 - D		-	-	-	-	-	-	-	-	-	-	25	175
	SB	-	-	-	153	153	-	-	-	76 - F	76 - F		-	-	-	-	-	-	-	-	-	-	75	375
CSAH 17/27 at TH 14 *EB U-Turn*	EB	57	-	761	-	818	14 - B	-	0 - A	-	1 - A	1 - A	850	25	100	-	-	-	-	0	0	-	-	-
	WB	-	-	1384	-	1384	-	-	1 - A	-	1 - A		-	-	-	-	-	-	-	0	0	-	-	-
610th Ave at TH 14 *Stop Control*	EB	-	2	750	9	761	-	36 - E	0 - A	1 - A	1 - A	1 - A	-	-	-	275	0	25	-	0	0	300	0	0
	WB	-	23	1375	2	1400	-	8 - A	0 - A	1 - A	1 - A		-	-	-	325	25	75	-	0	0	325	0	0
	NB	-	6	2	16	24	-	30 - D	-	11 - B	18 - C		-	-	-	-	25	100	-	-	-	-	25	75
	SB	-	2	2	3	7	-	-	-	24 - C	24 - C		-	-	-	-	-	-	-	-	-	-	0	50
612th Ave at TH 14 *Stop Control*	EB	-	2	766	-	768	-	27 - D	0 - A	-	1 - A	1 - A	-	-	-	300	0	50	-	0	0	-	-	-
	WB	-	-	1398	2	1400	-	-	1 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	SB	-	2	-	2	4	-	46 - E	-	18 - C	28 - D		-	-	-	-	25	75	-	-	-	-	0	50
MN 60/CR 185 at TH 14 *Stop Control*	EB	-	168	598	2	768	-	299 - F	0 - A	1 - A	67 - F	25 - D	-	-	-	900	450	825	-	0	0	275	0	0
	WB	-	2	895	10	907	-	-	0 - A	1 - A	1 - A		-	-	-	300	-	-	-	0	0	300	0	0
	NB	-	7	2	2	11	-	-	1410 - F	-	1410 - F		-	-	-	-	-	-	-	25	25	-	-	-
	SB	-	38	5	498	541	-	30 - D	63 - F	0 - A	3 - A		-	-	-	-	25	150	-	25	125	-	0	0

Project: Highway 14 Corridor Study
Scenario: 2045 No Build

Intersection	Approach	2045 No-Build PM Peak Hour																					
		Traffic Volumes (veh)					Traffic Delay (sec/veh)						Traffic Queuing (feet)										
		Demand Volumes					Movement (Delay - LOS)				Approach (Delay - LOS)	Intersection (Delay - LOS)	U Turn			Left Turn			Through			Right Turn		
		U	L	T	R	Total	U	L	T	R			Storage	Avg	Max	Storage	Avg	Max	Link Length	Avg	Max	Storage	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	-	55	-	208	263	-	3 - A	-	1 - A	2 - A	3 - A	-	-	-	-	25	75	-	-	-	-	0	0
	NB	-	121	331	-	452	-	2 - A	2 - A	-	2 - A		-	-	-	-	25	175	975	25	175	-	-	-
	SB	-	-	590	104	694	-	-	3 - A	1 - A	3 - A		-	-	-	-	-	-	2300	25	325	-	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	WB	-	64	-	49	113	-	3 - A	-	1 - A	3 - A	2 - A	-	-	-	-	0	75	-	-	-	-	0	0
	NB	-	0	403	325	728	-	-	2 - A	2 - A	2 - A		-	-	-	-	-	-	950	25	175	-	25	100
	SB	-	206	592	-	798	-	2 - A	3 - A	-	3 - A		-	-	-	-	0	75	975	25	225	-	-	-
594th Ave/CSAH 86 at TH 14 *Stop Control*	EB	-	-	1716	120	1836	-	-	1 - A	1 - A	1 - A	1 - A	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	-	1235	20	1255	-	-	1 - A	2 - A	2 - A		-	-	-	-	-	-	-	0	0	300	0	0
	NB	-	-	-	30	30	-	-	-	26 - D	26 - D		-	-	-	-	-	-	-	-	-	-	25	125
	SB	-	-	-	11	11	-	-	-	11 - B	11 - B		-	-	-	-	-	-	-	-	-	-	25	100
598th Ave/CSAH 56 at TH 14 *Stop Control*	EB	-	-	1352	394	1746	-	-	1 - A	2 - A	2 - A	81 - F	-	-	-	-	-	-	-	0	0	550	0	0
	WB	-	71	1255	-	1326	-	1932 - F	13 - B	-	109 - F		-	-	-	700	4500	6525	-	0	0	-	-	-
	NB	-	-	-	253	253	-	-	-	1926 - F	1926 - F		-	-	-	-	-	-	-	-	-	325	4700	5550
598th Ave/CSAH 56 *EB U-Turn*	EB	154	-	1451	-	1605	736 - F	-	0 - A	-	15 - C	169 - F	800	625	875	-	-	-	-	0	0	-	-	-
	WB	-	-	1172	-	1172	-	-	407 - F	-	407 - F		-	-	-	-	-	-	-	1925	3175	-	-	-
CSAH 55 at TH 14 *Stop Control*	EB	-	-	1415	36	1451	-	-	1 - A	1 - A	1 - A	18 - C	-	-	-	-	-	-	-	0	0	300	0	0
	WB	-	21	1172	-	1193	-	45 - E	42 - E	-	43 - E		-	-	-	550	25	75	-	200	800	-	-	-
	NB	-	-	-	19	19	-	-	-	15 - C	15 - C		-	-	-	-	-	-	-	-	-	-	25	125
CSAH 17/27 at TH 14 *WB U-Turn*	EB	-	-	1434	-	1434	-	-	0 - A	-	0 - A	5 - A	-	-	-	-	-	-	-	0	25	-	-	-
	WB	27	-	1193	-	1220	13 - B	-	11 - B	-	12 - B		850	25	100	-	-	-	-	75	150	-	-	-
CSAH 17/27 at TH 14 *Stop Control*	EB	-	-	1430	31	1461	-	-	3 - A	2 - A	3 - A	31 - D	-	-	-	-	-	-	-	25	275	800	0	0
	WB	-	87	1138	126	1351	-	1061 - F	10 - B	3 - A	57 - F		-	-	-	650	725	1000	-	50	100	800	0	0
	NB	-	-	-	72	72	-	-	-	91 - F	91 - F		-	-	-	-	-	-	-	-	-	-	75	375
	SB	-	-	-	82	82	-	-	-	75 - F	75 - F		-	-	-	-	-	-	-	-	-	-	50	275
CSAH 17/27 at TH 14 *EB U-Turn*	EB	91	-	1411	-	1502	32 - D	-	8 - A	-	10 - B	11 - B	850	175	600	-	-	-	-	75	500	-	-	-
	WB	-	-	1260	-	1260	-	-	14 - B	-	14 - B		-	-	-	-	-	-	-	100	650	-	-	-
610th Ave at TH 14 *Stop Control*	EB	-	2	1402	7	1411	-	30 - D	223 - F	35 - E	222 - F	98 - F	-	-	-	275	0	25	-	1500	4225	300	0	0
	WB	-	6	1256	3	1265	-	21 - C	0 - A	0 - A	1 - A		-	-	-	325	50	150	-	0	0	325	0	0
	NB	-	2	5	16	23	-	38 - E	102 - F	34 - D	45 - E		-	-	-	-	125	275	-	100	250	-	100	275
	SB	-	2	2	2	6	-	-	-	33 - D	33 - D		-	-	-	-	-	-	-	-	-	-	25	75
612th Ave at TH 14 *Stop Control*	EB	-	2	1418	-	1420	-	629 - F	455 - F	-	456 - F	184 - F	-	-	-	300	0	25	-	2000	2800	-	-	-
	WB	-	-	1263	2	1265	-	-	0 - A	1 - A	1 - A		-	-	-	-	-	-	-	0	0	300	0	0
	SB	-	2	-	2	4	-	1195 - F	-	23 - C	23 - C		-	-	-	-	25	100	-	-	-	-	25	50
MN 60/CR 185 at TH 14 *Stop Control*	EB	-	440	975	5	1420	-	954 - F	374 - F	325 - F	561 - F	214 - F	-	-	-	900	6225	10250	-	0	0	275	0	0
	WB	-	2	863	19	884	-	-	0 - A	1 - A	1 - A		-	-	-	300	-	-	-	0	0	300	0	0
	NB	-	2	2	2	6	-	-	3519 - F	-	-		-	-	-	-	-	-	-	75	150	-	-	-
	SB	-	16	2	400	418	-	41 - E	49 - E	0 - A	2 - A		-	-	-	-	25	100	-	25	100	-	0	0

Appendix E – Social, Environmental, and Economic (SEE)

Analysis


Mankato
Eagle Lake
N Victory Dr
Madison Ave
Bassett Dr
Hoffman Rd
Le Ray Ave
Parkway Ave
Marble Rd
211th St
MNTH 83
MNTH 60
223 St
216 St
215 St
211 St
206 St
589th Ave
594 Ave
597th Ave
598th Ave
598 Ave
602 Ave
607 Ave
612 Ave
615 Ave
Agency St
W St
Median Income
Under $40,727
Under $65,227
Under $81,250
Under $98,333
Under $125,259
0
2,000
Feet
Source: MnDOT, ACS Census 5 year estimate, 2022

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

Highway 14 Eagle Lake Corridor Study

Mankato/North Mankato Area Planning Organization

Median Age
August 2024

BOLTON & MENK

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

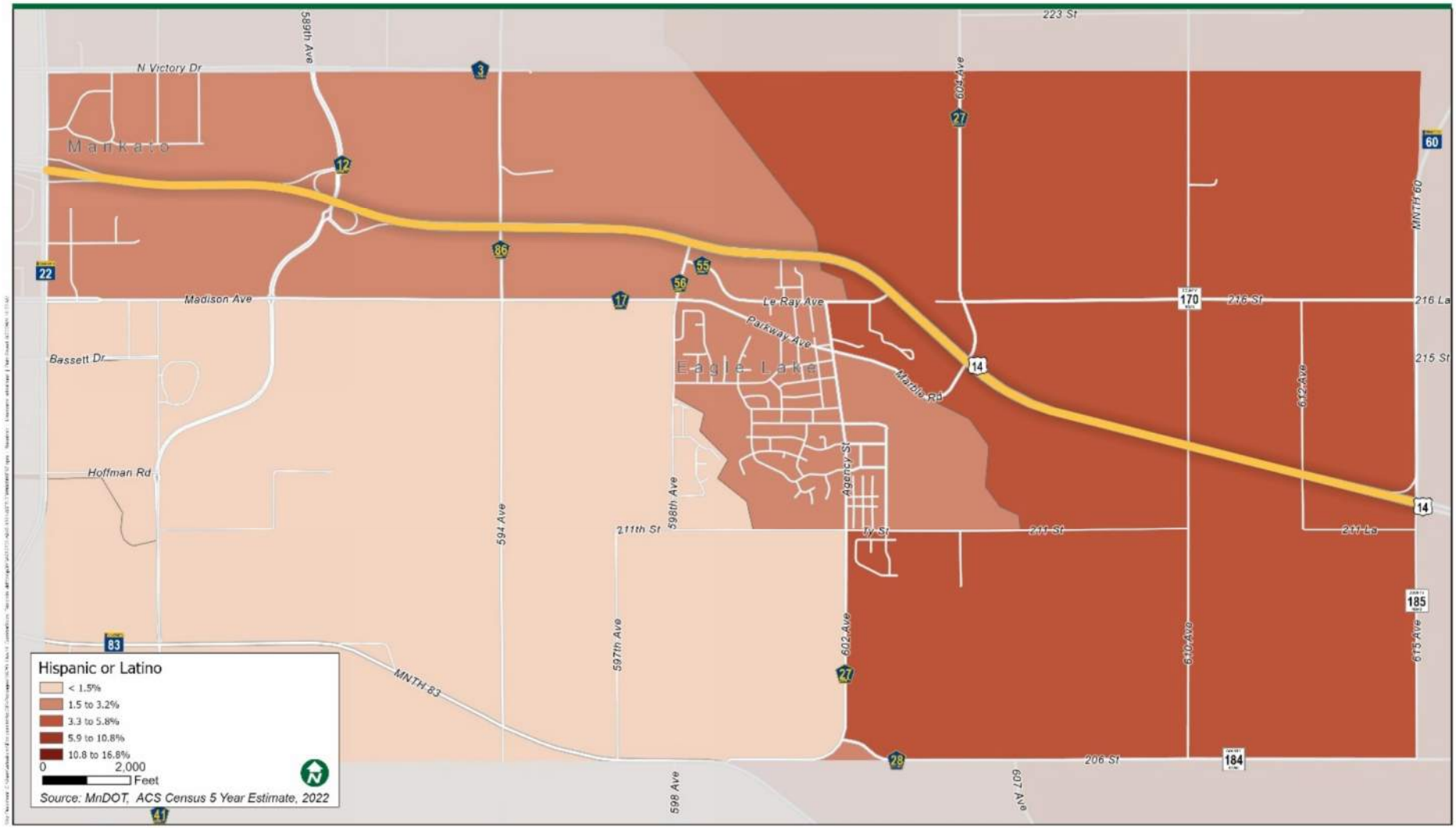
Highway 14 Eagle Lake Corridor Study

Mankato/North Mankato Area Planning Organization

Percent Hispanic or Latino

August 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

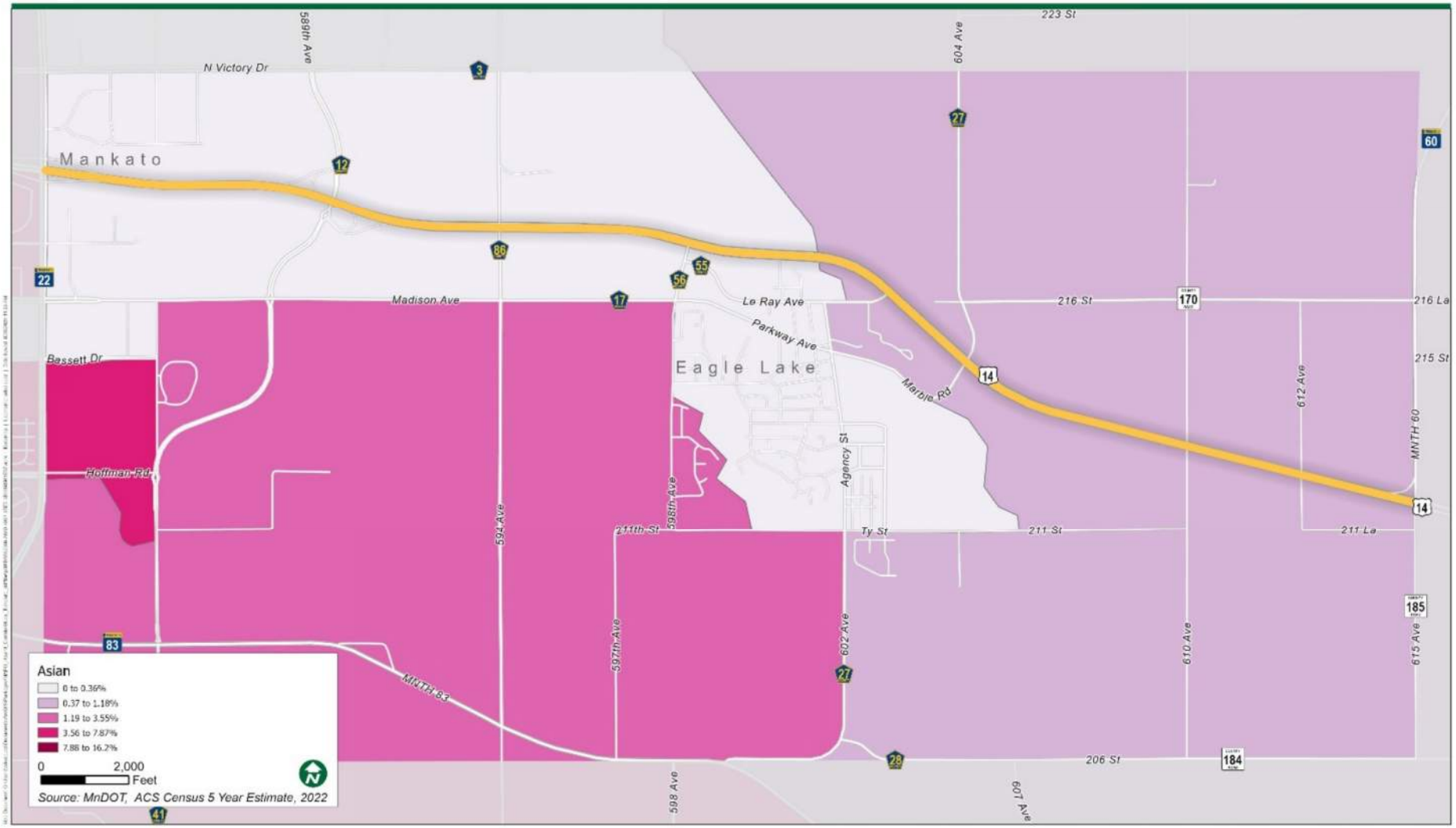
DEPARTMENT OF TRANSPORTATION

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

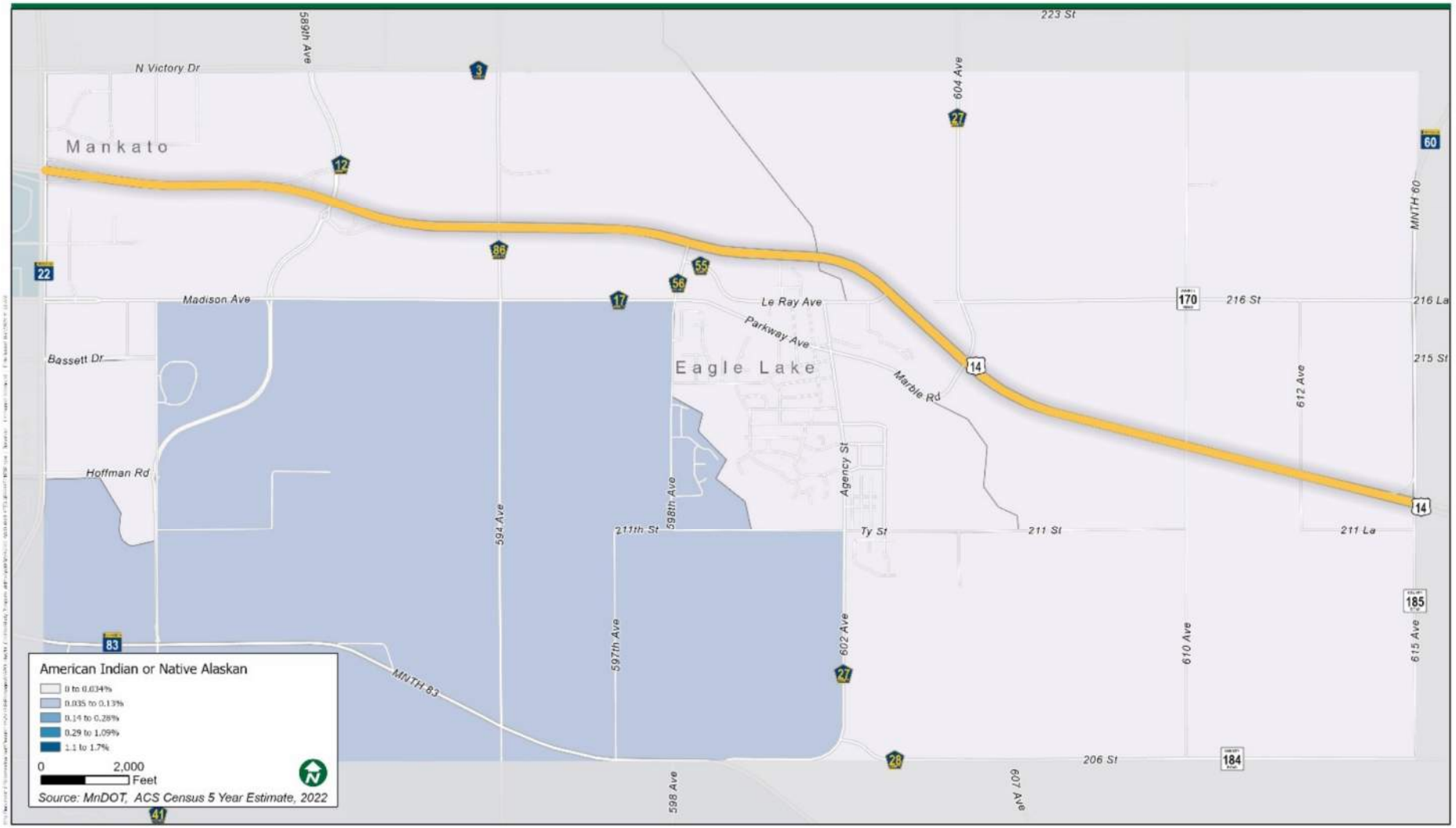
Highway 14 Eagle Lake Corridor Study
Mankato/North Mankato Area Planning Organization

Percent Asian
August 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION


Mankato
Eagle Lake
N Victory Dr
Madison Ave
Bassett Dr
Hoffman Rd
Le Ray Ave
Parkway Ave
Marble Rd
Agency St
211th St
Ty St
211 St
211 La
216 St
216 La
215 St
206 St
589th Ave
594 Ave
597th Ave
598th Ave
598 Ave
602 Ave
604 Ave
607 Ave
610 Ave
612 Ave
615 Ave
MNTH 60
MNTH 83
223 St
American Indian or Native Alaskan
0 to 0.034%
0.035 to 0.13%
0.14 to 0.28%
0.29 to 1.09%
1.1 to 1.7%
0
2,000
Feet
Source: MnDOT, ACS Census 5 Year Estimate, 2022

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

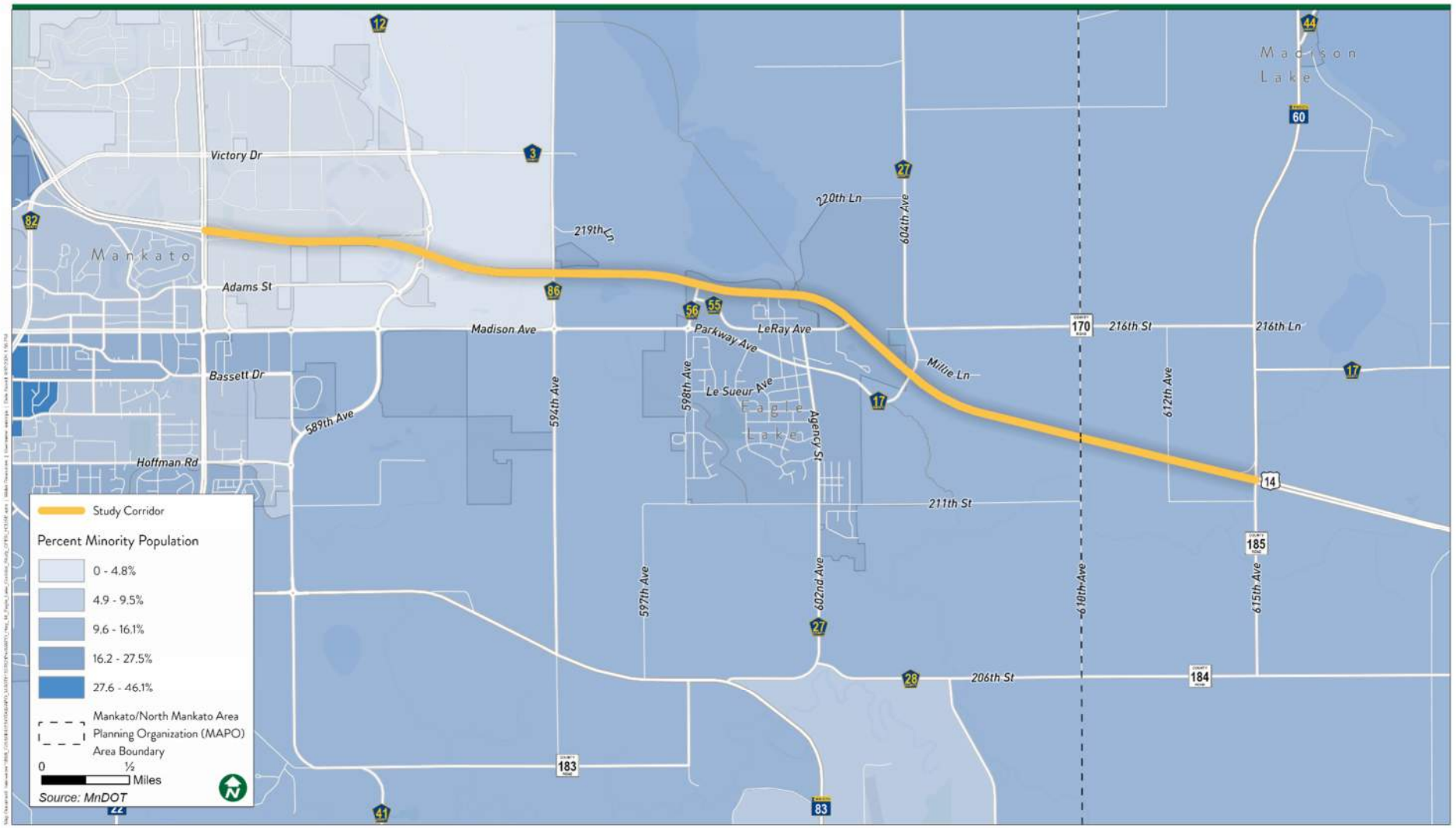
Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Percent Minority Population

September 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

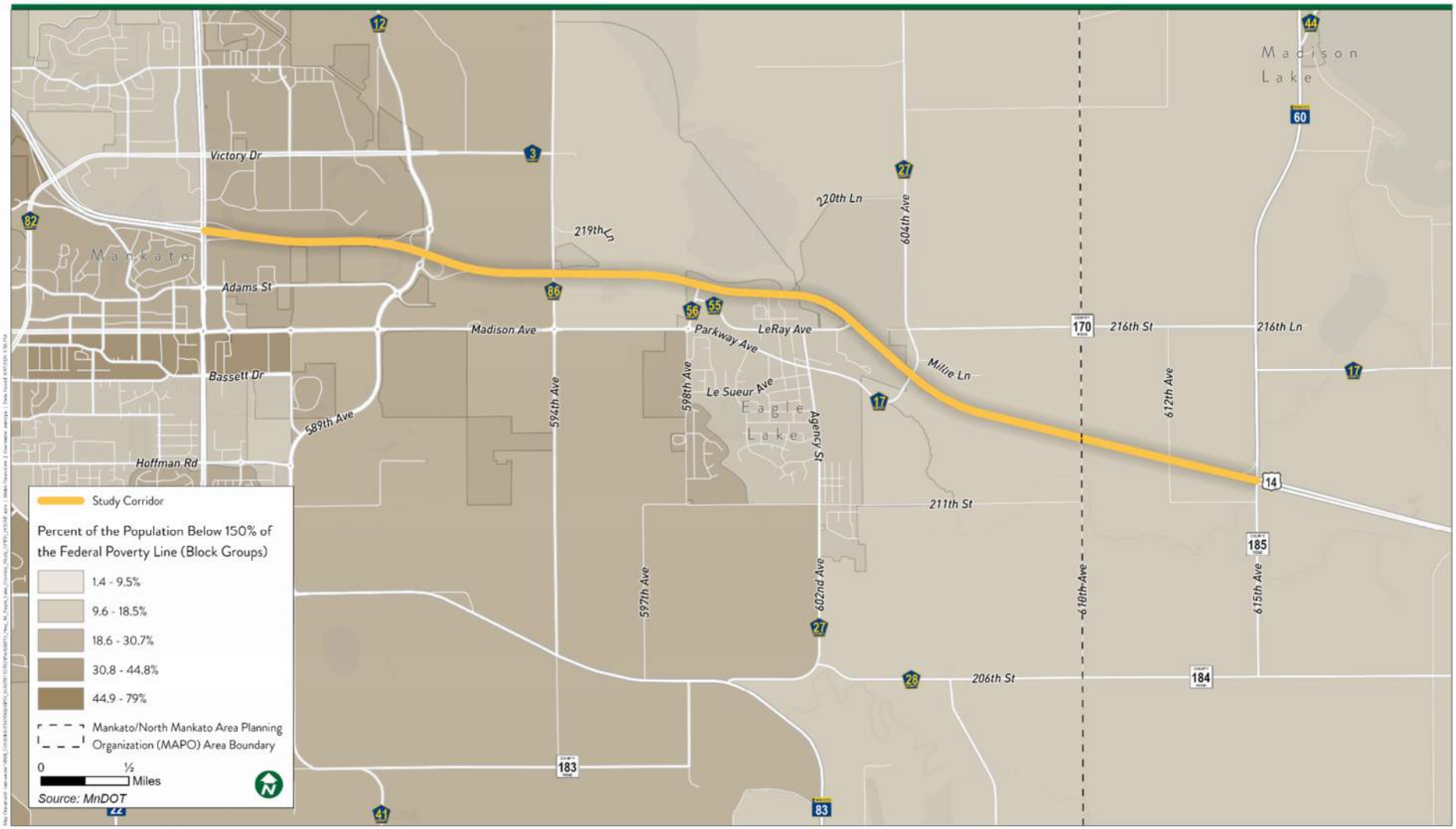
Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Percent of Population Below 150% Federal Poverty Line

September 2024

BOLTON & MENK



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DEPARTMENT OF TRANSPORTATION

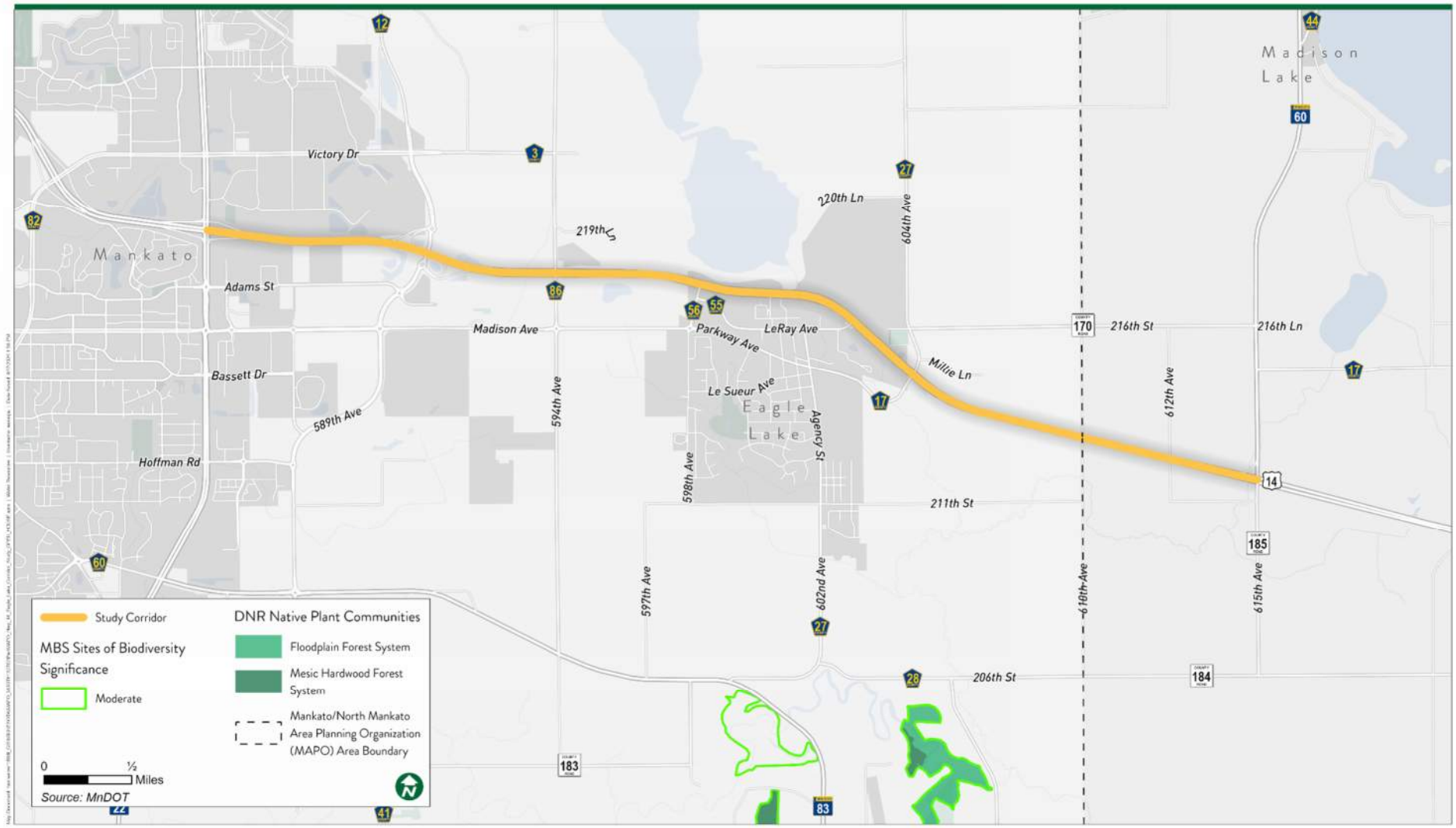
MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Biotic Resources
September 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

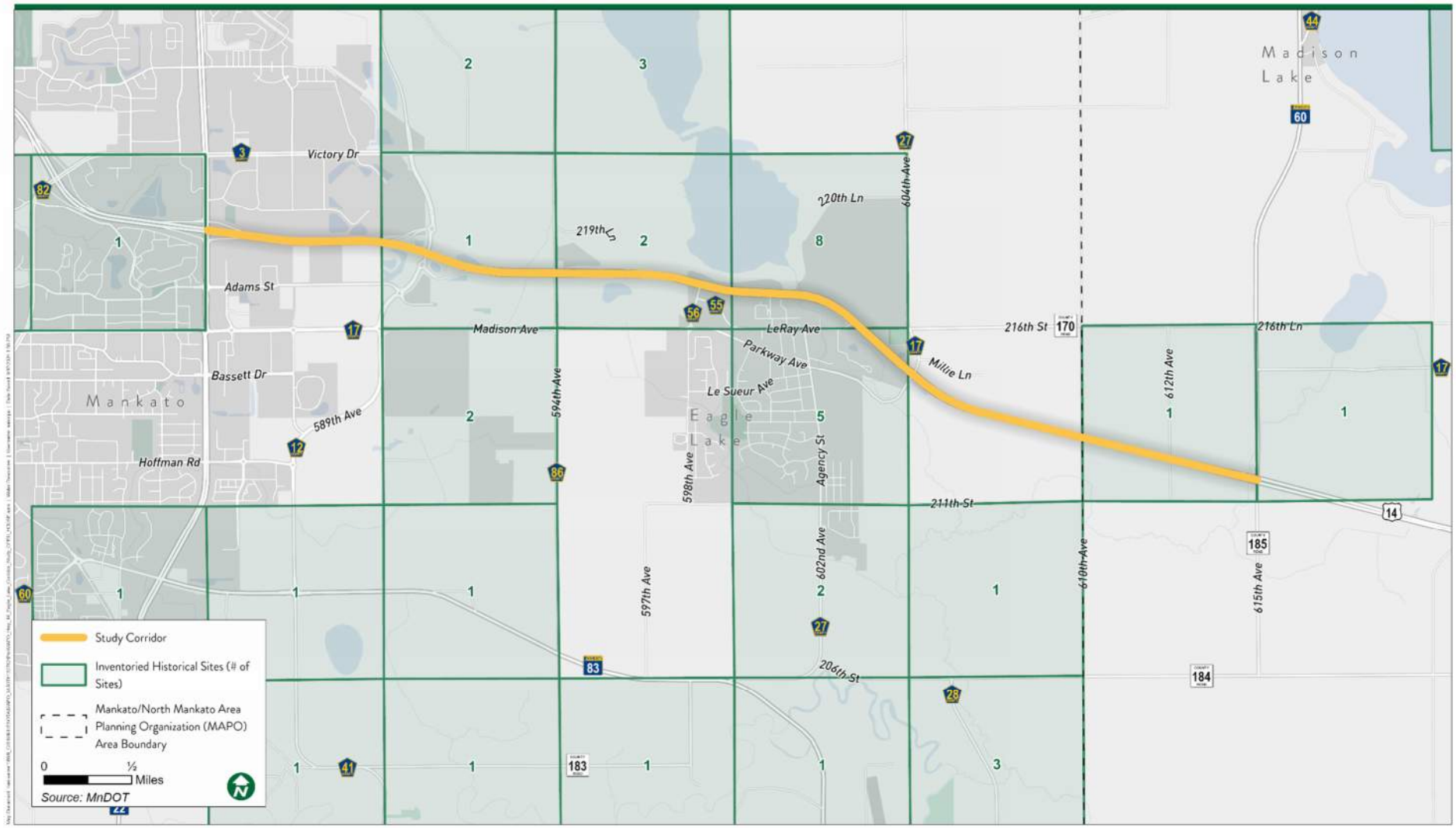
MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Cultural and Historical Resources
September 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

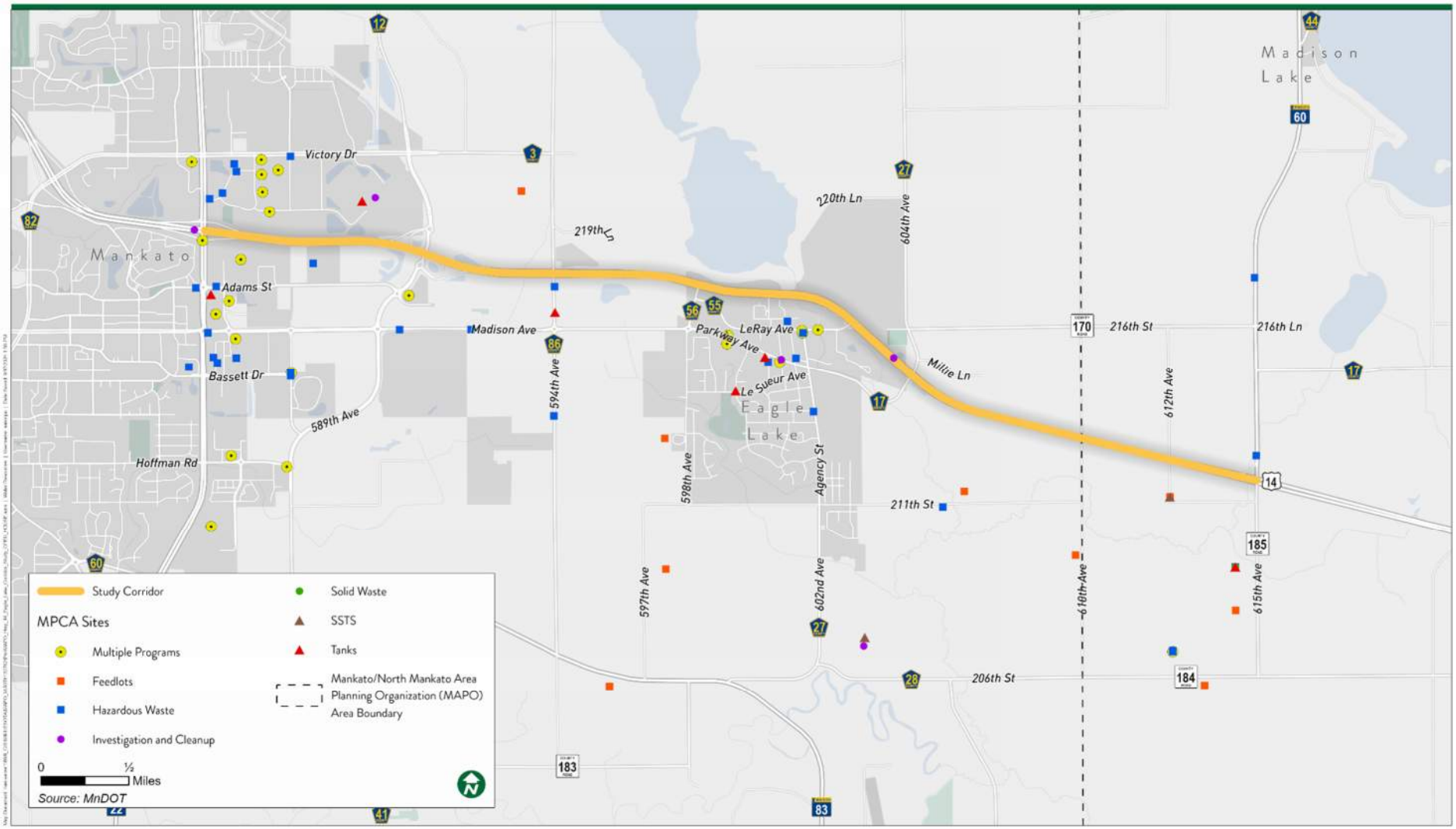
Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Potentially Contaminated Properties

September 2024

BOLTON & MENK



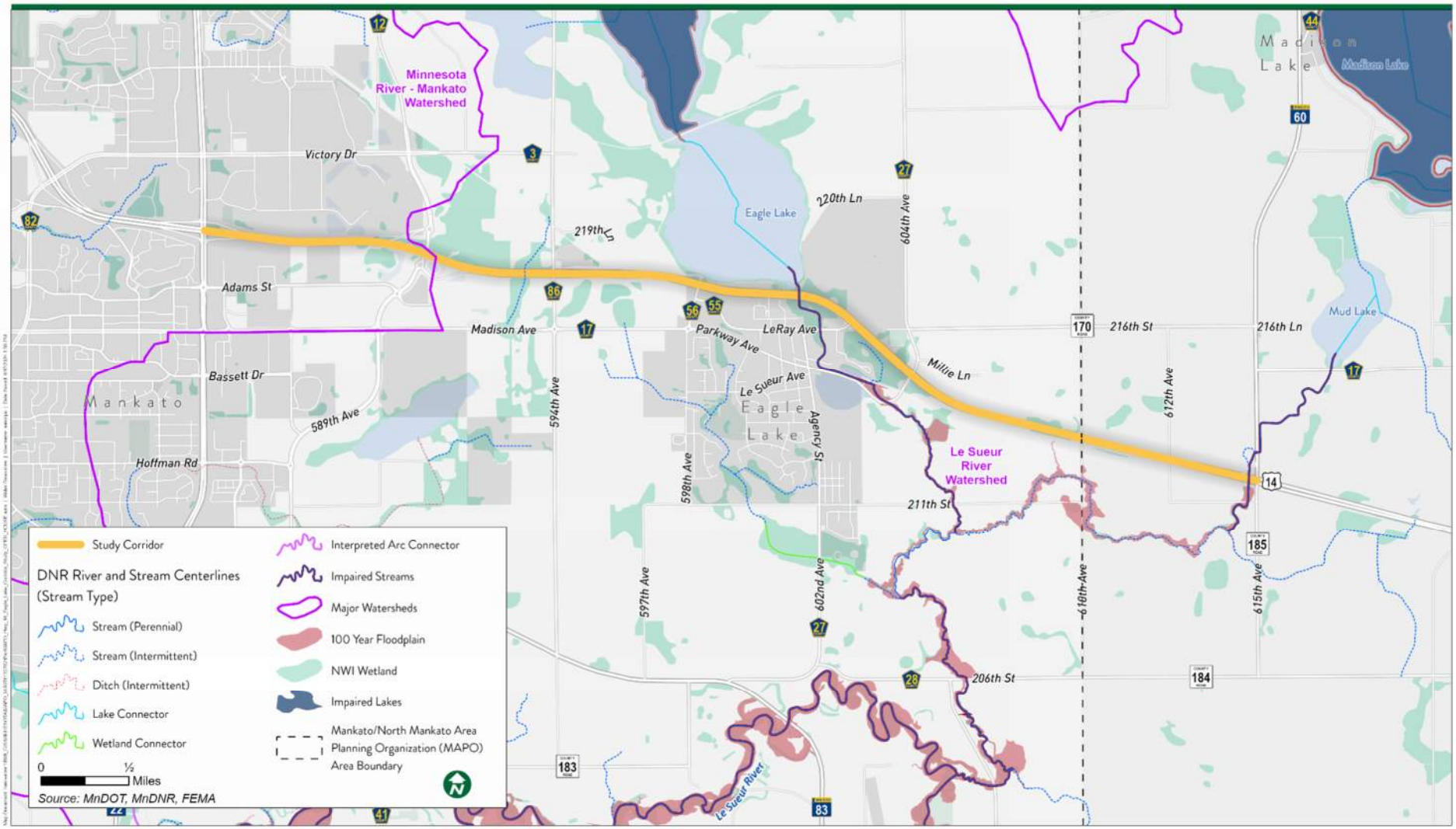
MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

Highway 14 Corridor Study

Mankato/North Mankato Area Planning Organization

Water Resources
September 2024

BOLTON & MENK



MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION
DEPARTMENT OF TRANSPORTATION

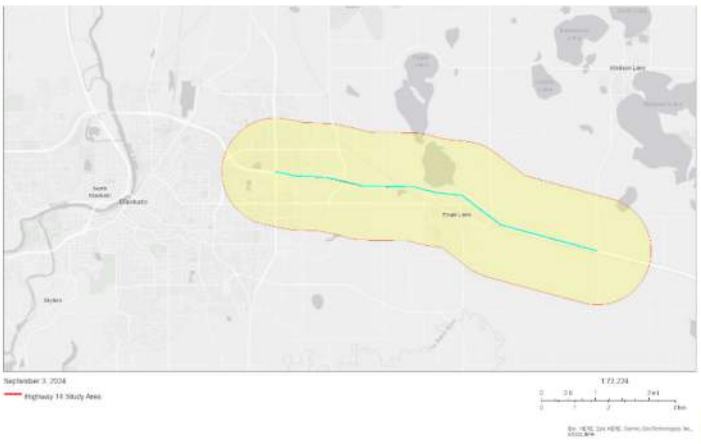
EPA

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Highway 14 Study Area

1 mile Ring around the Corridor
Population: 5,456
Area in square miles: 15.71



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	96%
Spanish	1%
Other and Unspecified	2%
Total Non-English	4%

COMMUNITY INFORMATION

Low income: 24 percent	People of color: 8 percent	Less than high school education: 3 percent	Limited English households: 1 percent
Unemployment: 4 percent	Persons with disabilities: 8 percent	Male: 51 percent	Female: 49 percent
82 years Average life expectancy	$37,294 Per capita income	Number of households: 2,175	Owner occupied: 60 percent

BREAKDOWN BY RACE

White: 92%	Black: 2%	American Indian: 0%	Asian: 0%
Hawaiian/Pacific Islander: 0%	Other race: 0%	Two or more races: 3%	Hispanic: 2%

BREAKDOWN BY AGE

From Ages 1 to 4	7%
From Ages 1 to 18	24%
From Ages 18 and up	76%
From Ages 65 and up	14%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	7%
Speak Other Indo-European Languages	4%
Speak Asian-Pacific Island Languages	0%
Speak Other Languages	89%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

Report for 1 mile Ring around the Corridor
Report produced September 3, 2024 using EJScreen Version 2.3

MAPO MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

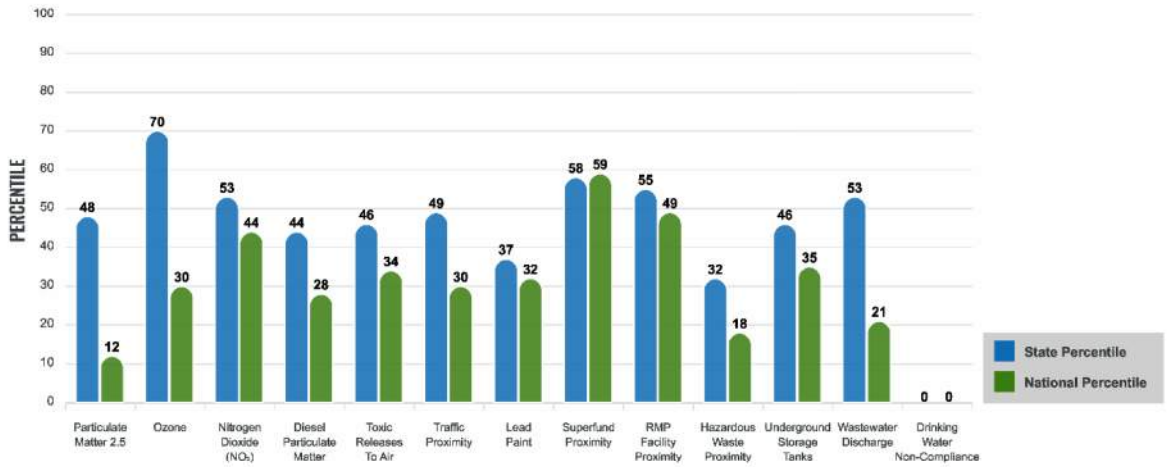
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

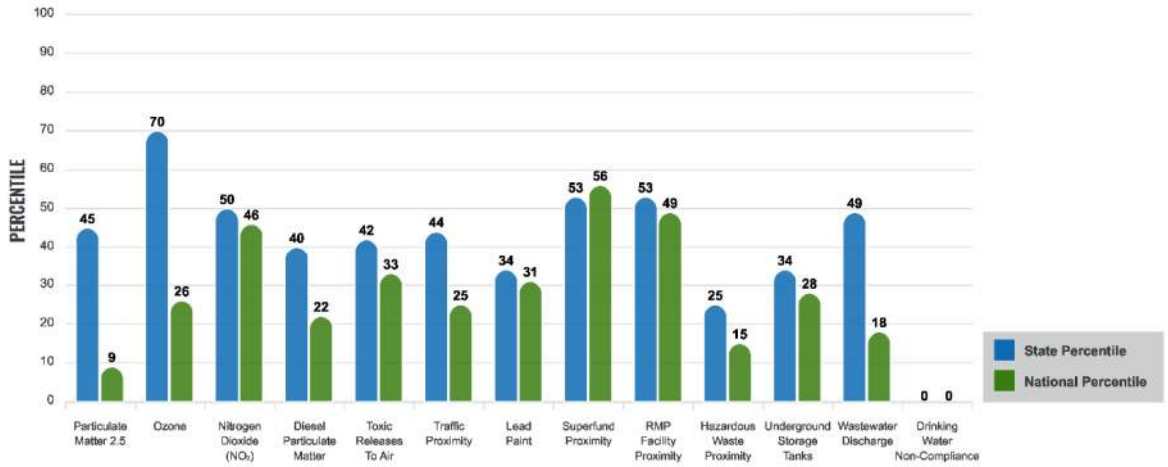
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for 1 mile Ring around the Corridor

Report produced September 3, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 ($\mu g/m^3$)	6.56	6.63	38	8.45	11
Ozone (ppb)	57.1	55.8	73	61.8	33
Nitrogen Dioxide (NO_2) (ppbv)	8	8.4	41	7.8	54
Diesel Particulate Matter ($\mu g/m^3$)	0.0971	0.168	33	0.191	27
Toxic Releases to Air (toxicity-weighted concentration)	360	1,500	35	4,600	41
Traffic Proximity (daily traffic count/distance to road)	310,000	1,300,000	41	1,700,000	31
Lead Paint (% Pre-1960 Housing)	0.13	0.32	33	0.3	39
Superfund Proximity (site count/km distance)	0.072	0.54	51	0.39	56
RMP Facility Proximity (facility count/km distance)	0.46	0.66	49	0.57	61
Hazardous Waste Proximity (facility count/km distance)	0.074	2.5	25	3.5	16
Underground Storage Tanks (count/km^2)	0.27	1.8	45	3.6	39
Wastewater Discharge (toxicity-weighted concentration/m distance)	1.2	730	49	700000	23
Drinking Water Non-Compliance (points)	0	0.81	0	2.2	0
SOCIOECONOMIC INDICATORS					
Demographic Index USA	0.7	N/A	N/A	1.34	26
Supplemental Demographic Index USA	1.11	N/A	N/A	1.64	22
Demographic Index State	0.9	1.17	48	N/A	N/A
Supplemental Demographic Index State	1.13	1.37	42	N/A	N/A
People of Color	8%	21%	33	40%	18
Low Income	24%	23%	61	30%	45
Unemployment Rate	4%	4%	61	6%	51
Limited English Speaking Households	1%	2%	70	5%	58
Less Than High School Education	3%	6%	41	11%	28
Under Age 5	7%	6%	70	5%	71
Over Age 64	14%	17%	40	18%	42

*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	1
Air Pollution	9
Brownfields	0
Toxic Release Inventory	3

Other community features within defined area:

Schools	2
Hospitals	2
Places of Worship	3

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	No
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 1 mile Ring around the Corridor

Report produced September 3, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	18%	17%	53	20%	33
Heart Disease	4.8	5.2	46	5.8	32
Asthma	9.2	9.5	38	10.3	22
Cancer	6.3	6.7	42	6.4	47
Persons with Disabilities	8.4%	11.6%	24	13.7%	19

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	9%	8%	61	12%	60
Wildfire Risk	0%	4%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	9%	11%	49	13%	46
Lack of Health Insurance	3%	5%	34	9%	20
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	No	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Report for 1 mile Ring around the Corridor

Report produced September 3, 2024 using EJScreen Version 2.3

Appendix F – Phase 1 and 2 Engagement Summaries

Highway 14 Corridor Study Eagle Lake

Phase 1 Engagement Summary

The first public engagement phase focused on gathering user experiences along and across Highway 14 in Eagle Lake. The community was engaged at the Tator Days Pancake Breakfast on July 20, 2024, at a public meeting at the Eagle Lake City Hall on July 29, 2024, and through continued online engagement through the project's Social Pinpoint site.

Key Themes

Usage

- Most participants live near and drive on or across Hwy 14
- Top destinations along Hwy 14 include work, running errands, medical appointments, visiting family and friends, recreation or entertainment, and traveling to destinations beyond the study area
- Most participants travel on or across Hwy 14 daily or several times a week
- Seeking access to Sakatah Trail and CSAH 17 trail (from Eagle Lake to Mankato)

Priorities

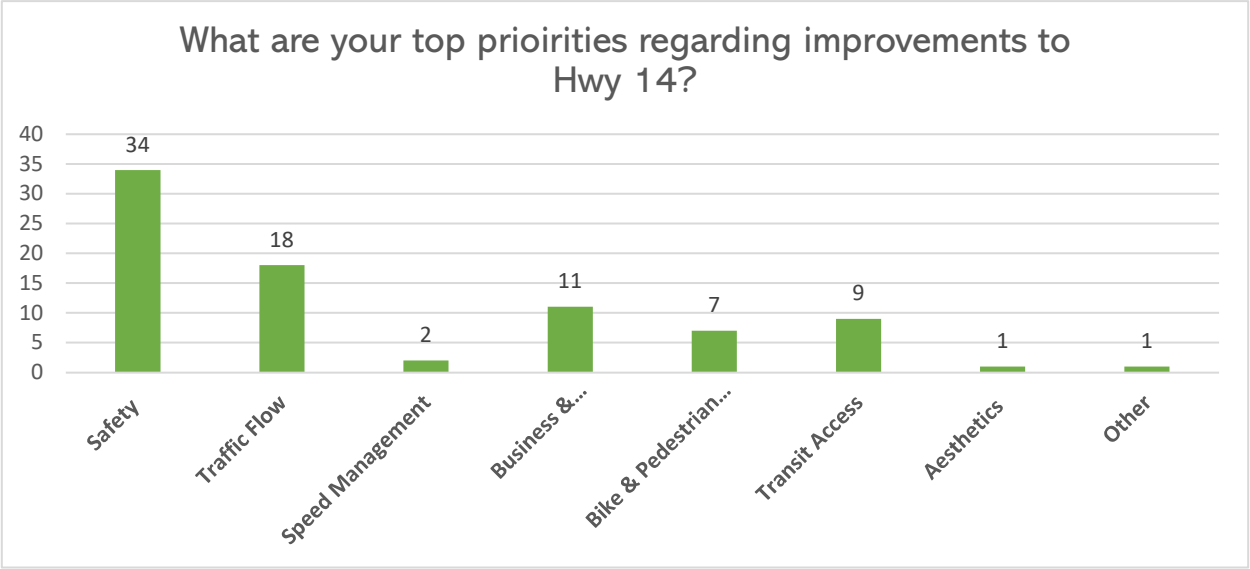
- Improve safety
    - Concern about safely using J-turns.
    - Visibility at some intersections is limited making it difficult to enter and exit Hwy 14
    - Challenging to cross multiple lanes of traffic after entering Hwy 14 from J-turns
    - Residents actively avoid driving on Hwy 14
- Traffic flow
    - J-turns need acceleration and deceleration lanes to allow drivers to more easily enter and exit Hwy 14
    - Extended queuing in the morning and evening on side roads.
- Speed management
    - Challenging to enter Hwy 14 due to high speeds
- Business and neighborhood access
    - Frustration with access being reduced to local businesses and surrounding neighborhood
    - Desire to explore acceleration and deceleration lanes to better interact with traffic flow
- Desire for intersection changes
    - People would like to see full grade-separated interchange, overpass/underpass, or High T at J-turn intersections

Engagement Activities

Tator Days Pancake Breakfast

Staff interacted and distributed project information to approximately 66 people at the Pancake Breakfast. Engagement consisted of having people identify their top three priorities for improvements to Hwy 14 by placing a plastic potato into a jar. Participants also filled out information on how they interact with Hwy 14.

Key Findings



Themes	
Safety	• Many dislike the J-turns on Hwy 14 due to them being difficult to enter and exit Hwy 14 without an acceleration lane • The J-turn at Casey's intersection specifically feels the most dangerous • A few mentioned their vision is limited due to foliage making it a dangerous turn onto Hwy 14 • Parents don't feel comfortable allowing their children to drive on Hwy 14 due to the dangerous intersections

	• Feels unsafe due to high speeds and unclear speed limit signage
Traffic Flow	• Emphasis on adding acceleration lanes and lengthening deceleration lanes to make it easier to enter and exit Hwy 14
Business Access	• Residents are frustrated that access to local businesses has been reduced • J-turns limit access to Casey's and the surrounding neighborhood
Transit Access	• Some mentioned that the community has a lot of retirement aged folks that would like to see better transit and mobility services
Bike & Pedestrian Infrastructure	• Some people mentioned that the latest updates to Hwy 14 have made it more difficult to walk and bike across the highway

Quotes

"The intersections are scary every time. I can't see incoming traffic!"

"I'm glad we reduced the number of lanes – there was no need for a four-lane highway going through Eagle Lake."

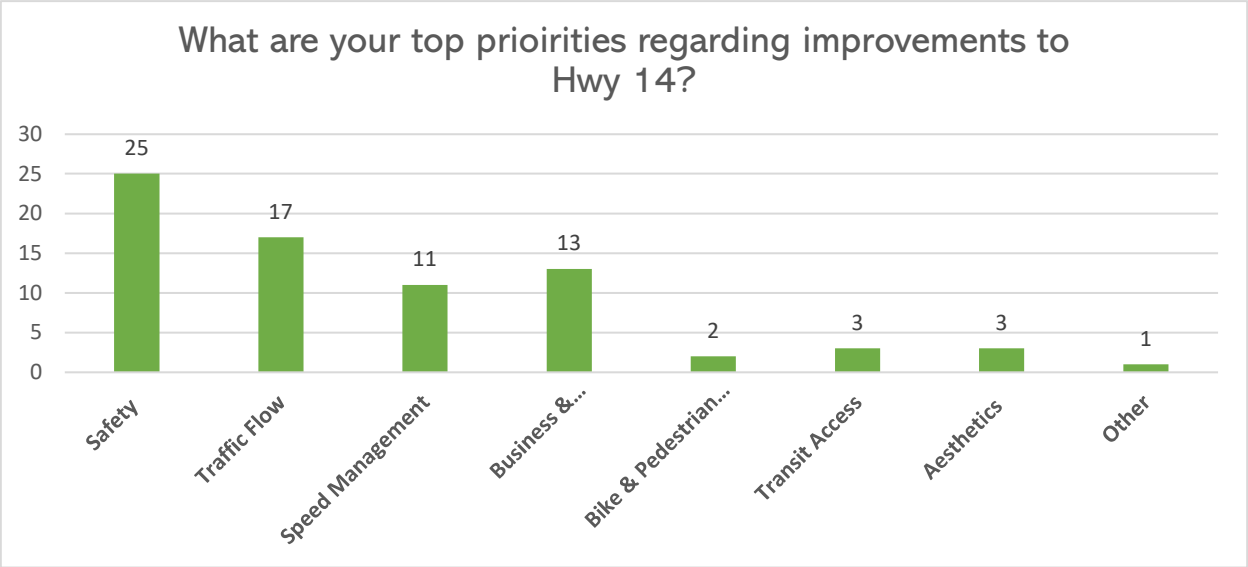
"We used to use highway 14 all the time. Now I only use it when I have to, and I will never let my kids use it."

"My kids aren't allowed to use highway 14 when they get their licenses."

Public Meeting

A public meeting was held on July 29, 2024, at Eagle Lake City Hall. The meeting was advertised on MnDOT's social media and website, a postcard mailer, GovDelivery, and a news release. 35 attendees signed into the meeting and talked with project staff. The meeting included display boards, a priority activity, and a map of the project area to add comments to.

Key Themes



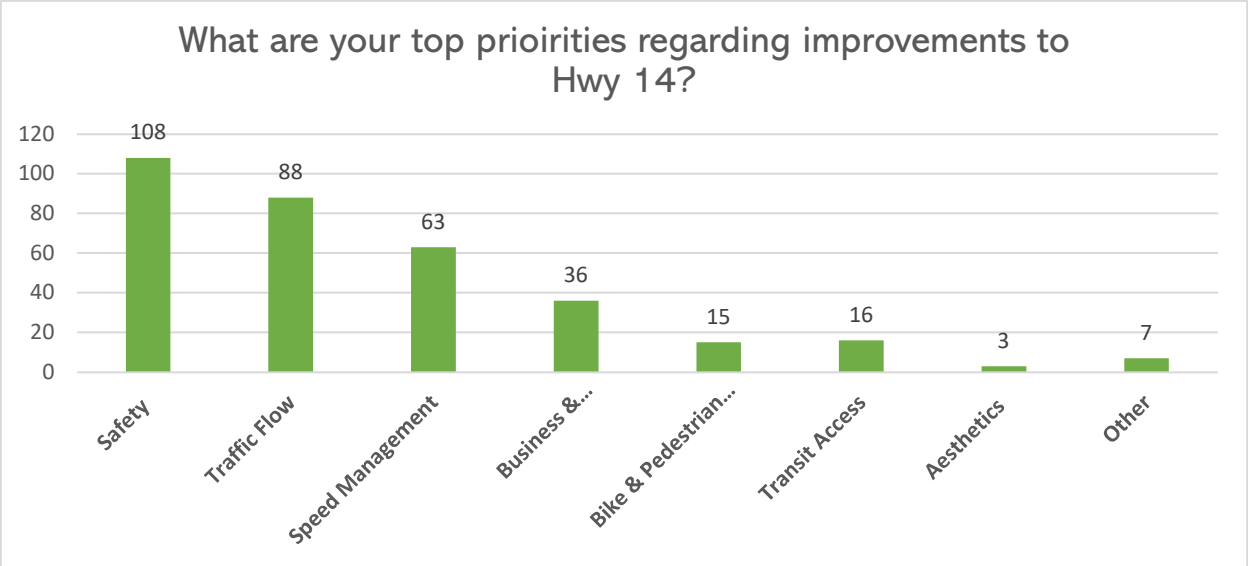
Themes	
Safety	• People feel unsafe at Hwy 60 intersection due to drivers getting frustrated with delays and making bad decisions like taking risky gaps and using eastbound left turn lane as a dual-left turn lane • Strong desire for acceleration lanes at J-turn locations and currently feel vulnerable entering the highway due to high speeds • Speeds on Hwy 14 are a problem • Sight lines are an issue due to the curve of Hwy 14 • Some farmers (with their equipment) would rather enter at one intersection, travel along the Hwy 14 shoulder, and exit at the next intersection than try to fit within the median to cross directly.
Business & Neighborhood Access	• Concern about impacts to Casey's • Some said that J-turns are working much better than previous intersection control. • Suggestion to add a widened outside shoulder pavement area that allows larger vehicles to more easily complete a U-turn at the CSAH 56 for those accessing westbound Hwy 14.
Traffic Flow	• Hwy 60 intersection is difficult to navigate • Movements trying to cross Hwy 14 have long delays in the morning/evening due to drivers taking left turns • Traffic trying to access Casey's can cause back ups • Drivers on Hwy 14 do not move over for those waiting to enter mainline traffic • West bound traffic using the left lane travels slower than typical passing speeds as they prepare to use the J-turn. • Some questions about whether a new SE Bypass would pull traffic off the corridor

Online Engagement

The community was invited to participate online on the project's Social Pinpoint site through an interactive map and survey. Between July 18, 2024, and August 12, 2024, when the online survey was closed, the site had:

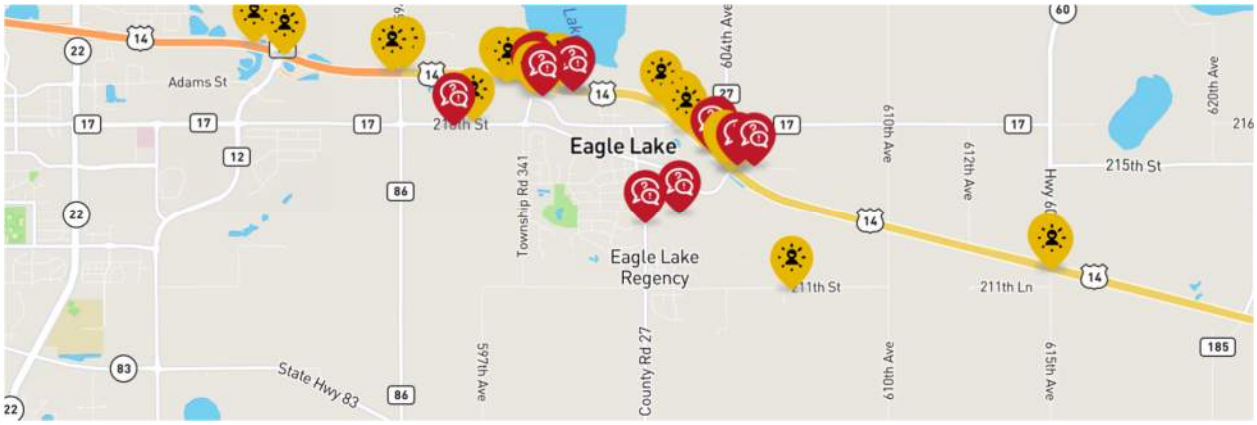
- Over 500 visits
  - 196 from social media links
- 106 surveys completed
- 40 contributions to the interactive map

Survey



Question	Theme
If you could change one thing about Hwy 14, what would it be?	• Remove J-turns • Add acceleration and deceleration lanes at J-turn locations • The J-turn at Casey's • Don't want to cross two lanes of traffic to turn • Reduce traffic speeds • Add an overpass instead of a J-turn • Make entering and exiting Hwy 14 safer
Is there anything else you think the study team should know?	• It is difficult and unsafe to cross two lanes of traffic after j-turns • Visibility issues • The Casey's intersection is particularly difficult to navigate and unsafe • J-turns need acceleration and deceleration lanes • Add signage to indicate Hwy 14 drivers should move over for traffic entering the highway • Traffic during rush hour coming from Mankato makes it challenging to cross into Eagle Lake • Residents currently avoid driving on Hwy 14 • Make safety a priority • Reduce Hwy 14 speed limits

Interactive Map



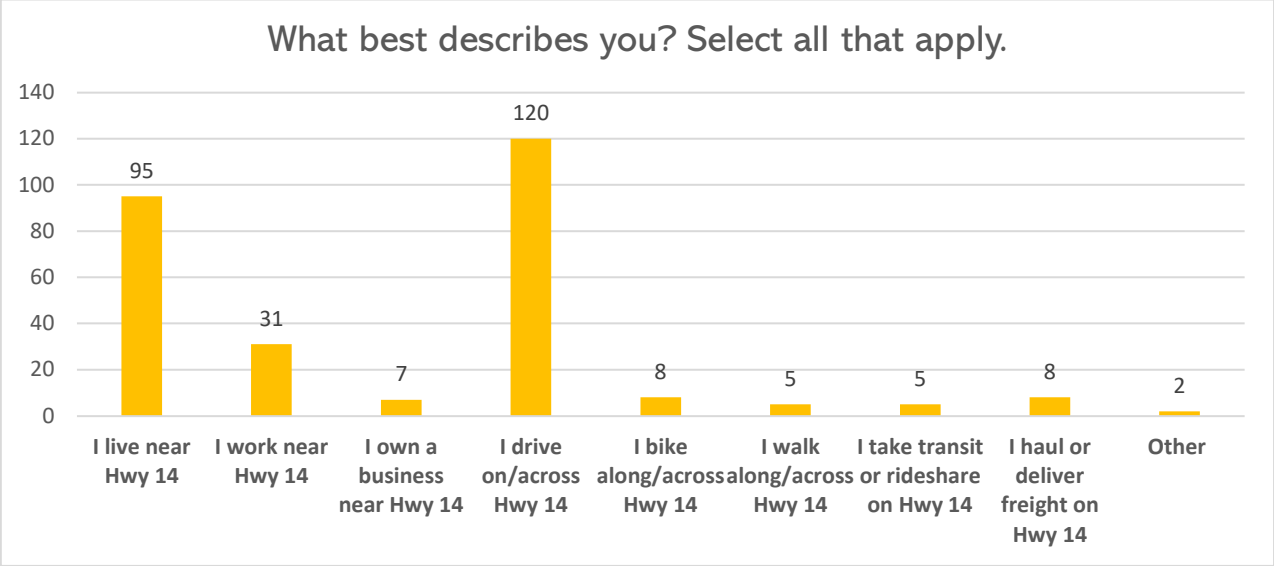
Location	Themes
Hwy 14 & CR 12	• Vegetation by the onramp to westbound Hwy 14 causes a visibility issue • Lengthen the acceleration lane • Add signs to use this exit for Walmart access
Hwy 14 & CR 86/594th Ave	• Add an acceleration lane for people turning on Hwy 14 due to high speeds • Some want access to CR 86/594th Ave closed off and some do not
Hwy 14 & CSAH 56/598th Ave (Caseys J-turn)	• Reduce speed limits • Add a full grade-separated interchange, overpass, underpass, or High T intersection instead of J-turn • Visibility issues due to curve and elevation of Hwy 14 • Dangerous and busy intersection • Difficult to enter and exit Hwy 14
Hwy 14 & CR 55	• Needs a grade separated interchange or stoplight for safe access • Need full interchange • Safety concerns, need an overpass
Hwy 14 & CSAH 17/CSAH 27	• J-turn is dangerous and needs acceleration lanes • Drivers feel unsafe entering Hwy 14 • Replace with a grade-separated interchange or overpass • Keep northbound left turn lane closed
Hwy 14 & Hwy 60	• Replace with a grade-separated interchange or overpass • This intersection has high traffic and is dangerous

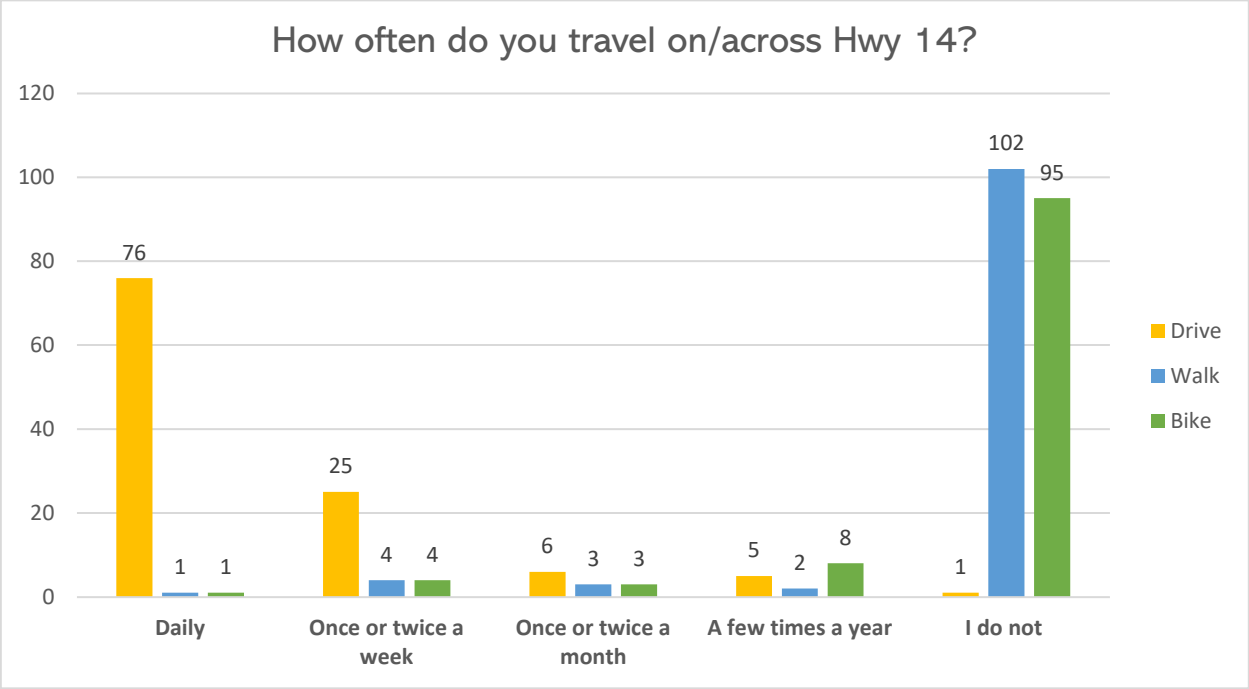
Phase I Engagement Summary Appendix

Engagement Data

Note: Responses below are recorded verbatim; no edits to spelling or grammar.

Combined Usage Data





Combined Optional Demographic Data

Filling out demographic data was optional for participants at the public meeting, pop-up, and online survey.

Question	Results
Gender	Out of 130 responses: • 59% identified as female and 41% identified as male
Age	Out of 130 responses: • 17% were between the age of 22 and 34 • 38% were between the age of 35 and 44 • 15% were between the age of 45 and 54 • 17% were between the age of 55 and 64 • 13% were 65 and older
Disability	Out of 107 responses: • 99% identified as not having a disability
Race	Out of 138 responses: • 98% identified as white
Language	Out of 111 responses: • 100% identified English as their main language
Education level	Out of 109 responses: • 7% High school or less • 15% Technical school • 11% Some college • 47% College grad • 20% Post grad
City	Out of 100 responses: • 62% Eagle Lake • 16% Mankato/North Mankato

	• 10% Madison Lake • 3% Saint Peter • 2% Janesville • Other cities included: Saint Clair, Duluth, Waseca, Richfield, New Ulm, Winthrop, and Minneapolis
How you heard about the study	Out of 110 responses: • 54% social media • 15% internet • 10% other • 8% newsletter • 6% word of mouth • 5% newspaper • 1% TV

Public Meeting

Map Comments

Map Comments (From West to East)
• Left turns across and on Hwy 14 are hard to judge at Hwy 60 • Merge/diverge still influences CSAH 56 intersection • Cut off all access except for 60 and 12 • Grade difference at J-turn gets icy and hard to navigate • Bring CSAH 17 and TH 60 into one interchange? • Better mowing • Traffic not stopping at U-turn, prefer traditional intersection • Make 17/27 a 2-lane overpass • Like EB LTL closure at CSAH 17/27 **(x2)** • Offset WB RTL would help SB traffic • Hard to find gap, due to people in J-turn • Better mowing **(x2)** • Interchange at CSAH 56 or to east • Review loon for CSAH 56 median u-turn • Move CSAH 56 U-turn to east, add acceleration lane • Hard to see with curves and sun • Need acceleration lanes westbound • Mix of entering traffic and slowing traffic = safety concern • Remove J-turn, go back to full access (comment at CSAH 56) • Explore bridge with underpass (or overpass) and tear-drops. Speed reduction and law enforcement on Hwy 14 (comment at CSAH 56) • Prefer acceleration lanes (EW+WB), education for proper use • Won't use Casey's intersection, too dangerous • Miss acceleration lane • Cannot identify lane at W J-turn • Cannot see traffic coming at E j-turn

Comment Cards

Comment Card Answer

J-turns are too dangerous along Eagle Lake. Consider older or younger drivers and trucks and trailers trying to merge. Eagle Lake needs a grade-separated interchange. Hwy 60 also needs one. Half of Hwy 14 traffic crosses or merges there. The longer they are delayed, the more people will die and more it will cost. If Hwy 14 through Eagle Lake were being built, there would be an interchange at Hwy 60 and 1 or 2 at Eagle Lake. Add them to comply with design standards for safety rather than waiting for deaths to rise to crisis level.

In-person Survey

Question	Answer
If you could change one thing about Hwy 14, what would it be and why?	Slow the traffic to a reasonable speed
	Grade-separated interchange by Casey's (by church or east) and at Hwy 60. (3 total)
	Remove J-turns it is difficult to determine which lane oncoming traffic is in. Install clover leafs
	It is difficult to accelerate at the industrial park access to Hwy 14. It's at a turn on Hwy 14 so it's kind of blind
Is there anything else you think the team should know?	Interchanges can connect Sakatah Trail to Eagle Lake.
	Merging into traffic from the left lane is not well received by other drivers and not safe due to speed differences

Online Engagement

Online Survey Comments

Question	Answer
If you could change one thing about Hwy 14, what would it be and why?	Go back to the old days where people could drive.
	An acceleration lane when entering the westbound traffic after the J turn. There used to be an acceleration lane beforehand, why was it ever taken out!!
	Get rid of J turns. They gave caused more accidents
	No idea
	safe crossing with an overpass
	Not having to cross both lanes of traffic to head into Mankato. There needs to an acceleration lane or something
	Acceleration lanes on the j-turns. Grass cut in a more timely manner - hard to see to get on if in a lower profile (sedan) vehicle. Reduced speeds and also enforced!!
	One interchange at the church, close Casey's intersection
	The flipping J-turn by Casey's. Crossing 2 lanes of traffic to get to a turn point that is VERY hard to judge which lane cars heading west are in with an immediate turn lane into Eagle Lake. Whoever designed that had to have been smoking meth.
	There should be some kind of safer on/off ramp in Eagle Lake. I understand it can't go by Casey's, but there a multiple other placed it could go.
	Not having to turn right to turn left.
	Putting an acceleration lane coming out of the j-hook to westbound 14
	slow the traffic down starting at the eagle lake (Parkway exit coming from the east all the way to County RD 12). 65 mph is too fast, 55 mph would alow for better reaction time and help eliminate some of the accidents
	Lower speed limit in study area to 55 and enforce it
	Speed. There is no acceleration lane making the uturn to go went into Mankato.
	Acceleration lanes. Not for semis but being a semi driver I've seen too many car act like the left lane is their acceleration lane and expect traffic to move for them
	Go back to acceleration lane to westbound 14
	I would prefer controlled access throughout the entire corridor.

	I would figure out a way to have an on ramp going towards mankato.
	Get rid of J turns
	Add acceleration lane going east from hwy 17 towards janesville
	Get rid of the J-turn. Visibility is horrible. Dangerous pulling out in front of traffic going 70+ miles per hour.
	Going eastbound and turning back westbound is scary to drive by the Casey's gas station
	The j turns. It's to hard to cross 2 lanes of traffic
	Better on/off traffic.
	ir i very hard to go west on hwy 14 from caseys corner or go into Eagle Lake and do the J turn. We did that once and felt it was VERY unsafe. We go to the hwy 12 interchange to go West on Hwy 14. (We just moved here to Eagle Lake last fall.)
	People not stopping, having to cross multiple lanes of traffic to turn
	I would enter Hwy 14 westbound without a J turn. I feel less safe entering from the j turn than I did with just crossing eastbound traffic and entering westbound across from Casey's. Have accidents and fatalities been reduced by having the j turn?
	Hard to pick one thing, lately it has been everyone speeding and weaving in/out of traffic
	Turns by Eagle Lake are dangerous
	Add acceration lanes to 'j' turns. Especially on hwy 56 west bound entrance & hwy 60.
	Get rid of the J Turn and bring back an acceleration lane for our residents to safely enter HWY 14.
	An oasis between Mankato and Rochester
	The speed limit ! Lower the speed limit to 50 MPH & ENFORCE it. Police presence rarely see in this area It is really not necessary to change the entire roadway ~ just make drivers accountable for their actions ! Stop them & give out hefty fines
	Reduced US 14 access to Eagle Lake; residents should utilize the CR 12 interchange and CSAH 17
	J-ramps - they need an acceleration lane
	There just needs to be an on and off ramp. It's expensive but worth the price of many lives. At this point if they had made this change right away it would have been just as expensive as the 5 redesigns.I mean I am not a civil engineer but exits seem to
	Eagle Lake needs 2 full interchanges, and another one is needed at highway 60 intersection.
	Have an overpass to control traffic instead of everyone pulling out in front of each other.
	Place acceleration lanes on J Turns, enable turning traffic to safely merge into traffic
	EITHER EXTENDING THE J TURN OR GET RID OF IT. WHEN BUSY WAY TO DANGEROUS CROSS 2 LANES TO GET TO j-TURN
	Nothing, it's finally perfect since the Nicollet to new Ulm four-lane got done.
	Safer westbound access because the current j-turn solutions don't allow clear visibility or proper acceleration.
	Get rid of u and j turns . Get rid of round a bouts
	An East Bound merge lane for Eagle Lake. Sometimes the only way to get on 14 from Eagle Lake is to pull out in front of on coming cars, because they do not move over to the fast lane.
	Acceleration lanes
	Safety - reduce speeds

	It should have went south of Eagle Lake
	Aggressive Driving
	Should be an acceleration lane after EVERY J-TURN,and a speed reduction lane that is long enough to reduce your speed, most often the traffic is going around 70mph and its very hard to merge in that traffic, and during the winter is a gamble at best.
	Better impass at 60/14
	Highway 60 exit heading West to East (from Mankato / Eagle Lake to Madison Lake)
	The super scary J Hooks leaving and getting into Eagle Lake
	Make safety improvements to intersection at Hwy 14 & 60. Add auxiliary lane on Hwy 14 westbound between Victory Dr and Riverfront Dr.
	separated grade interchanges, eliminate at-grade access
	Safe access. High volume of accidents at intersections.
	How hard it is to get on hwy 14 in eagle lake
	Safer access to highway from Eagle lake or crossing by Eagle Lake
	Access getting onto and off of the highway from side roads. It is extremely dangerous. Accidents, and unfortunately fatalities, seem to be common now.
	Slow traffic down between this area to 50mph, both east and westbound directions. This will allow for easier access to crossing at Casey's to get in the lane to go westbound and not feeling like you are in danger when getting in the lane to head west
	Get rid of the J turn !!!!! Have you ever been behind A dump truck that's loaded with dirt trying to make a left-hand turn onto 14 W. it's almost impossible and sometimes the back up lane to turn on the J turn is backed up
	Put back in the acceleration lane.
	Eagle Lake deserves easy and most especially safe access from Highway 14. A proper intersection at the Casey's location would improve safety and likely drive additional economic development.
	Adding an acceleration lane near caseys in Eagle lake on both sides by j-turn
	An overpass or on and off ramps where hwy 14 intersecs with county Rd 27 for safer access for vehicles and pedestrians
	Interchange at Highway 60 with a southern bypass to connect with County Road 90.
	People pulling onto hwy 14 out of eagle lake. I see near accidents almost daily become of people not estimate traffic speed correctly or cars not stopping before entering the highway
	The turn coming in from 14 to Casey's… it's too dangerous to cross too many accidents
	Add entrance and exit ramps with overpasses.
	Add highway exits/overpasses so crossing highway is safer and getting on/off highway is safer
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	Add highway exits/overpasses so crossing highway is safer and getting on/off highway is safer
	Add an interchange at CR56 and Highway 14
	over pass
	Get stupid drivers off the road
	J Turn, need accelerating lane.
	No turning lanes
	Move the Casey's intersection further to the east so line of site is better.
	The J turns. They are ridiculous in states with snow and ice.
	The J turn near Casey's is very hard to enter/exit due to high traffic and speeds. Very dangerous!
	No more J turns, better plan for going westbound, maybe an overpass
	An exceleration lane for westbound traffic leaving Eagle lake
	acceleration lanes when using the j turns or turning onto the highway
	There needs to be an overpass bridge to allow traffic to enter/exit Eagle Lake safely. The u-turns are dangerous
	Somehow, there needs to be safe access on and off of HWY 14 near Eagle Lake. The current solutions seem temporary at best. There needs to be an option that doesn't require crossing two lanes of traffic or turning into a passing lane to gain access.
	Slower speed and/or better enforcement for violations. The majority of the problems the result of human behavior: Pulling out in front of others, ignoring the STOP signs, not moving over to allow traffic to enter, etc.
	Move where Parkway meets 14 coming from Eagle Lake further East in order to create a new overpass for Eagle Lake access
	Make it safer to enter Hwy 14 westbound from Eagle Lake at Casey's gas station. The new "J-turn" feels even less safe than the previous solution. There needs to be some sort of acceleration lane like before where you have time to speed up before merging.
	Slow down traffic by J turns
	I don't care for the u-turn strategy for left turns.
	The fact that people are turning onto a highway with speeds at 70+, without a window or assuming others will move for their vehicle is a very unsafe practice. Why are we changing this for a 3rd time? Waste of resources! Do it right this time!
	Move J turn- 598th to west 14 further East, add acceleration lane, less overlap of cars exiting west14 onto 598th w/ the traffic merging onto 14 from 598th. This will eliminate the low visibility of the current J turn
	Put in bridge(s) and ramps, especially by Casey's. Get rid of the j-turns.
	I would add an overpass at the Casey's Convenience Store exit.
	consolidate side road access/crossings - there are a lot of intersections along this stretch and many that connect to the same/similar direction or destination; feeling of unsafe has to do primarily with intersections more than anything else
Is there anything else you think the study team should know?	The J turn seems to not be the most thought out option as crossing 2 lanes of fast moving traffic is nerve wracking and often very unsafe. Hopefully the team can come up with a better solution. Maybe raise the highway there for ramps or lower the speed
	Not much to do, unless Blue Earth county will actually provide justice
	It is difficult to see oncoming cars at the Casey's intersection looking west and then east to merge into traffic.
	Above listed
	Caseys was informed when the established at that intersection by MN DOT there was NO guarantee that that would be an intersection forever
	I'm sure whatever ya'll decide to do won't fix the problem...

	Please do not close intersections to get from eagle lake to Mankato. There needs to be more safe infrastructure built by Casey's and even the church to make it safe for everyone.
	signage could be placed for through traffic to move to the left lane giving entering traffic a safer chance to enter
	The J turn is as dangerous as any option that there has ever been.
	Most of the accidents and near accidents are the result of the intersections in the corridor.
	Shutting down entrances to and from eagle lake should not be an option. This will cause businesses to shy away from a town that needs this.
	No
	Make sure grass is cut for visibility
	Need an over pass without round abouts.
	No
	It's not safe.
	With the j-turns, why isn't there acceleration lanes?!?
	Involves in cat accident near here and have seen plenty of near misses!
	Would it work to have the same sort of setup as the Hwy 13 split in Savage? (Where 13 goes east thru Savage/Burnsville and south thru Savage to Prior Lake)?
	I think there are several improvements that needs to be made, safety, better not so stressful access on/off the highway in the study area.
	We need and deserve an acceleration lane.
	No
	We could save thousands of dollars by positioning a Highway Patrol at the Hwy 12 point & again at the "Casey's corner" & another at the 14 & 60 exit. Stop speeders & tailgaters!!!
	The eagle lake intersection have been redone so many times and never seem to improve.
	Don't wait to ask for money for full interchanges after a bus gets in a crash and 50 children die. Design safe access to 14 for the people who live in Eagle Lake, and all of the people that drive through it. Make it a priority - leadership needs apply $$.
	Reduce speed limits between from Eagle Lake to TH 60 to 55, more enforcement.
	This is a waste of money, the responsibility for the accident should be put on the people not the road.
	No, except that I greatly appreciate the time and attention to keeping Eagle Lake safe. Thank you!
	It's a little late to be asking for advice now that you've screwed with it for multiple years.
	Going East Bound from Eagle Lake while towing a trailer is really difficult, some people drive all the way to County HWY 12 just to go East.
	I really hate the stop sign that makes you stop before crossing 14 at the most east eagle lake intersection. Sometimes I feel that it would be safer to yield bc you don't have to quickly accelerate across the highway, especially when towing
	From county rd12 it should go south and avoid Eagle Lake and hook back up east of Eagle Lake
	Love Roundabouts that keep traffic flowing smoothly. Drivers do not stop at stop signs and run red lights constantly
	The cut across from 60 onto 14 toward Janesville and 14 onto 60 is dangerous. Please do not do what you did at Eagle lake with a u turn lane.
	The U turn lanes often have people crossing both lanes after leaving Eagle Lake to get to the lane to do a turn back to Mankato. Drivers do not signal and move into oncoming traffic that has no idea they are going to use the lane, this is dangerous.

	It is a super scary section of the highway and maybe come up with a better way to access Eagle Lake like Elysian has
	No
	Something needs to change before more people die
	The J turns aren't well thought out, still need to get across traffic
	We don't care if you reduce speed on the highway near Eagle Lake! Make it safer for goodness sake!!
	J turns suck!!!!
	Build a bridge with exit ramps at the church just east of eagle lake. Shutdown the crossing at Casey's
	Check the sales figures at Caseys in EL and see if they are among the top stores. There would likely be additional business development if the intersection were safe and guaranteed to remain open.
	Utilize this plan to help reduce traffic on US 14 and TH 22: https://www.aaroads.com/forum/index.php?topic=33911.0
	The police officer at this intersection agrees with me.
	Something must change. I see daily near accidents
	Just that that area needs to change. Maybe have lights there instead
	Reduce speed limit near the intersection of CR56 and Highway 14.
	Rather than the intersections we need to improve driving skills for people
	Traffic is coming at a fast pace. Sometimes it's difficult to get across the highway.
	Build a bridge entrance by Casey's and take away all other entrances to Eagle Lake town.
	I try to avoid taking hwy 14 because getting on it is a hassle
	We eventually need an overpass to get on 14 to go west from Eagle Lake
	The study team should share the accident rate, including injuries and fatalities, in comparison to other stretches of HWY in the state with the community. This is data which needs to be mined, not generated and should be shared with local residents.
	While some at MNDOT think slowing the speed to 55mph wouldn't work, I see it happen in Byron. Maybe they don't go all the way to 55mph, but people DO slow down.
	It feels very unsafe turning onto Hwy 14 westbound from the "J-turn" right into high-speed traffic coming up the hill from the east. The last solution with the acceleration lane helped with this issue.
	I live on county rd 86. Every day, I see an almost accident caused by someone turning onto 14 from 56. It is a very big problem, and the increased semi traffic to Walmart soon will not help. Just yesterday a gentleman 80+ yrs old pulled in front of 3 cars
	Thanks for all your work!
	The traffic flow coming out of Mankato especially around 5 pm on weekdays is heavy and can make it difficult to cross into Eagle Lake. We don't have a huge rush hour, but you can definitely tell the increased traffic between 7-8 am & 4:30-5:30pm
	I believe J-turns in this area are especially dangerous as the congested traffic on Highway 14 is moving so quickly; I believe overpasses would be much safer.
	personal experience of 3 near misses at the Casey's intersection going eastbound on 14 with someone turning left/southbound; fail to yield or gauge spacing and on 14 i've had to pump the brakes - near misses; hill/curve causing misjudgment?

Map Comments

Location	Comment

Hwy 14 & CR 12	• **IDEA:** Clear vegetation along onramp to WB TH 14 from Cty Rd 12, difficult to see WB traffic until about to merge onto highway. Perhaps lengthen acceleration lane to allow vehicles to merge safely. (*2 upvotes*) • **IDEA:** Add signs to use this exit for Walmart access, with the soon to be increasing traffic. Too many semis use 22 and 86 for access which is the opposite of the reasoning behind building 12. (*2 upvotes*)
Hwy 14 & CR 86/594th Ave	• **IDEA:** An acceleration lane for people turning off of cty rd 86, it is hard to turn onto 14 during busy times and people do not know how fast cars are moving. (*1 upvote, 2 downvotes*) • **IDEA:** Close access to county road 86 north, semis sit and use this road, when you specifically built 12 for their traffic. (*1 upvote, 1 downvote*)

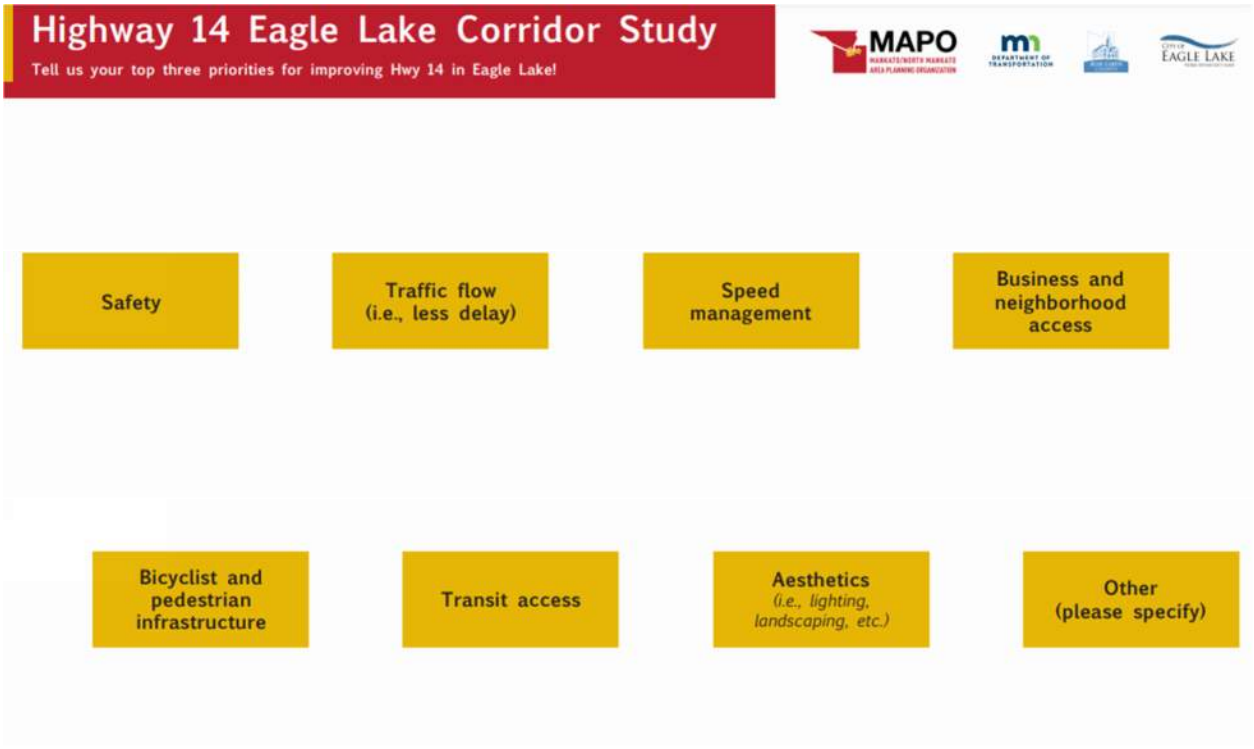
Hwy 14 & CSAH 56/598th Ave (Caseys J-turn)	• **IDEA:** Drop the speed to 50 MPH from here to the Cemetery RD. Put yellow warning lights on Hi-way 14 to let traffic Know someone is in the intersection. Just these two moves and you can get rid of the JTurn< *(2 downvotes)* • **IDEA:** Lower the speed limit to 50 mph from 700 feet west of the intersection on 598th carry that speed limit past the last entrance to the east. If anyone does the numbers this would slow down your trip to Rochester or Mankato by 30 seconds. • **IDEA:** Full grade-separated interchange here. Bridge can be angled like hwy 169 interchange north of Belle Plaine (2 *upvotes, 1 downvote*) • **IDEA:** Full grade-separated interchange here. Bridge can be angled like hwy 169 interchange north of Belle Plaine (2 *upvotes, 1 downvote*) • **IDEA:** I believe that a "High T" intersection much like the one at the intersection on Highway 13 in Savage is the best solution to this particular intersection. It looks like it would fit within the current road configuration and eliminate at grade crossing (*1 upvote, 1 downvote*) • **IDEA:** I believe that a "High T" intersection much list the intersection on Highway 13 in Savage (*1 upvote, 1 downvote*) • **IDEA:** Atleast a sign that indicates the risks of pulling out in front of a vehicle, IE: #1. Warning! Speed limit is 65. #2. Injuries or even death can occur if you are not confident in your spacing. #3. Oncoming traffic shouldnt have to move lanes to avoid you. *(2 upvotes)* • **IDEA:** would ease wariness of turning when traffic is present • **CONCERN:** Dangerous and very busy intersection *(4 upvotes, 2 downvotes)* • **CONCERN:** There are several times of day when both lanes tend to be filled and visioin over and around the bridge can make seeing oncoming traffic difficult. The Change to a forced right hand turn seems to have provided little if any relief at this intersection. *(2 upvotes, 2 downvotes)* • **CONCERN:** the combo of the curve and hill that eastbound 14 traffic is coming on makes it difficult for people turning onto the highway (sight lines? easy to miss seeing a car with the curve and the hill?) *(4 upvotes, 1 downvote)* • **CONCERN:** Just as dangerous as before, still having to move through 2 lanes of 60+mph cars • **CONCERN:** People unfamiliar, old or not an advanced driver pull out without a window, or so slow that traffic has to react. (*1 upvote*) • **CONCERN:** When looking east for oncoming traffic it is difficult to distingush traffic between lanes. Currently forces drivers to enter the passing lane with traffic travelling at high speeds. Especially dangerous during heavy traffic periods of the day. *(3 upvotes, 2 downvotes)* • **CONCERN:** It is very hard to see the oncoming westbound traffic from this J-turn *(4 upvotes, 3 downvotes)* • **CONCERN:** The sightlines here to the east are not great. Additionally, too many people pull into the far lane (in front of people who moved over to let them enter!) instead of the near lane like they should. *(5 upvotes, 1 downvote)*

	• **CONCERN:** Dangerous to merge *(1 upvote, 1 downvote)* • **CONCERN:** When trying to merge on, it's difficult to see what lane oncoming traffic is in. No acceleration lane has vehicles pulling out when someone is trying to exit and has them pulling out not up to speed. *(4 upvotes, 2 downvotes)* • **CONCERN:** Need a better way to go onto incoming traffic
Hwy 14 & CR 55	• **IDEA:** Eagel Lake needs safe access to HWY 14 in both directions. This likely means either a grade separated interchange or a stop light. Meriden and Nicollet smaller populations, but each have grade separated interchanges to make HWY access safe *(7 upvotes, 1 downvote)* • **IDEA:** Possible grade-separated full interchange here. *(2 upvotes, 1 downvote)* • **IDEA:** If they truely cared about safety money wouldn't be a concern. The only reason they didn't build overpasses here was because they don't care about safety.
Hwy 14 & CSAH 17/CSAH 27	• **IDEA:** J turns are dangerous, there needs to be acceleration lanes, it's difficult to enter into traffic lane from a stop to gain traffic speed. Reduce speed limits between Eagle Lk & Hwy 60 would greatly improve using J Turns. Sign - "Accident Reduction Zone" *(1 upvote, 1 downvote)* • **IDEA:** Possible grade-separated full interchange here. *(2 upvotes)* • **IDEA:** Keep the northbound left turn lane closed. Every since it's been closed that intersection feels much safer! It does need a sign for westbound travelers to move over when they can to allow traffic to enter. • **IDEA:** I really don't like dodging into traffic on these J turns, especially 2x in order to get into Eagle Lake lake. Would an overpass be out of the question? I often need to merge onto the highway with a large truck or truck and trailer. It is very challenging *(7 upvotes, 1 downvote)* • **IDEA:** It would be safer to have an acceleration lane when turning right onto HWY 14. It's difficult to see the traffic traveling East coming at you around the curve. The other idea is to have an overpass bridge with an on/off ramp system *(6 upvotes, 2 downvotes)* • **IDEA:** there should be one or perhaps two (one east and one west) overpasses' with on & off ramps to access Eagle Lake & HWY14 *(5 upvotes, 2 downvotes)* • **IDEA:** Integrated intersection Parkway/Marble, block 598th Ave & 594th Ave Accesses, use Frontage Roads 17 and Parkway Ave. • **CONCERN:** MNDOT leadership needs to know that there are many drivers that are extremely anxious with using J-turns onto a 65 MPH highway. Especially when there is added pressure of cars waiting behind them or trying to get them to just go when they don't feel safe *(1 upvote)* • **CONCERN:** as a CMV w/HazMat driver I find this intersection dangerous and forget about trying to go 14 east as its very rare that I can get the truck going fast enough to merge left safely in that short distance. *(2 upvotes)* • **CONCERN:** The oncoming traffic stays in the left lane and there is no sign telling them that there is traffic entering. Will the hill it is hard to see if traffic is coming. We need stop lights. *(1 downvote)*

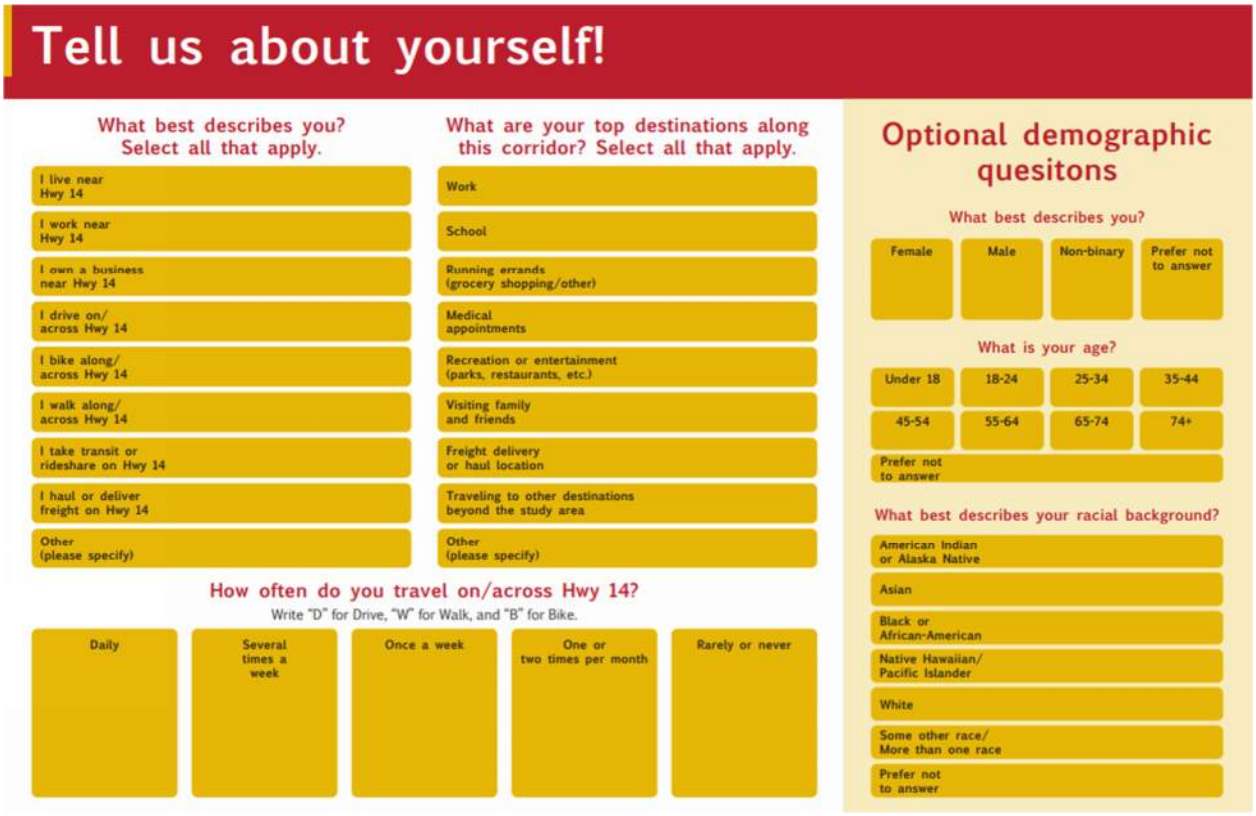
Hwy 14 & Hwy 60	• **IDEA**: Place an overpass on this intersection with on/off ramps from Highway 14 to Highway 60, 615th Ave and railroad tracks. Too many blind spots, high speed, obstructions causing increase of serious injuries and fatalities over the years with increase traffic. *(5 upvotes)* • **IDEA:** Grade-Separated Full Interchange here - also extending over railroad tracks. This is a major intersection with traffic crossing highway 14 at full 65 mph. It's probably the most high traffic and most dangerous intersection of state highways along hwy 14 *(2 upvotes)*
216th St	• **CONCERN:** Add more speed limit signs on this road as everyone drives 45 mph instead of 55 mph. *(2 upvotes)*
211th St	• **CONCERN:** Reduce speeds to 50 mph. Start 700 ft before 5 *(2 downvote)*

Engagement Materials

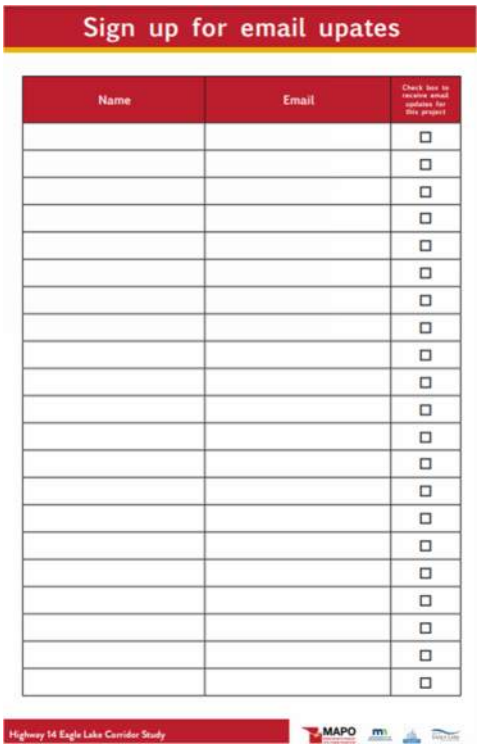
Table Plot Activity



Demographic Board



Email Sign Up



Fact Sheet

Highway 14 Eagle Lake Corridor Study

About this study

The Mankato Area Planning Organization (MAPO) is partnering with MnDOT and local communities to study and plan for the future of Hwy 14 in the Eagle Lake area.

The portion of the highway between County Road 12 and Hwy 60 currently experiences various safety and mobility issues. This study will look at opportunities for future improvements to address these issues, while also incorporating the community's goals and needs.

Timeline

Jul. – Sept. 2024

Gather input on project area issues and community priorities

Jan. – Mar. 2025

Develop alternatives and present for public feedback

May – Jun. 2025

Create implementation plan for potential short-term and long-term improvements along the corridor

Study goals

Define a long-term transportation system vision for Hwy 14 that ensures safety, mobility, economic vitality, resiliency, and access for all modes of travel.

Secure public and agency support for the system vision where community input and needs are meaningfully incorporated into the recommended vision and the study recommendations are adopted by applicable agencies.

Develop a detailed, feasible implementation plan outlining future improvements, sequencing and triggers, timing, cost, and agency responsibility.

Opportunities for public input

Public input is an integral part of the Hwy 14 Eagle Lake study. From Summer 2024 through Summer 2025, the public will have opportunities to provide feedback on the study area, community priorities, and roadway concepts.

Sign up for study updates

mndot.gov/d7/projects/hwy14eaglelakestudy/index.html

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Comment Card

Highway 14 Eagle Lake Corridor Study

Comment card

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

CITY OF EAGLE LAKE

Name: _____ Email: _____

Share your thoughts and feedback on Hwy 14.

If you could change one thing about Hwy 14, what would it be and why? Is there anything else you think the study team should know?

_____

_____

_____

_____

_____

_____

_____

Visit the project website at:

mndot.gov/d7/projects/hwy14eaglelakestudy/index.html

Zan Associates, Hwy 14 Study Consultant
105 Fifth Avenue S., Suite 130
Minneapolis, MN 55401

Paper Survey

Highway 14 Corridor Study

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

Survey

Questions

1. **What best describes you? Select all that apply.**
   - ☐ I live near Hwy 14
   - ☐ I work near Hwy 14
   - ☐ I own a business near Hwy 14
   - ☐ I drive on/across Hwy 14
   - ☐ I bike along/across Hwy 14
   - ☐ I walk along/across Hwy 14
   - ☐ I take transit or rideshare on Hwy 14
   - ☐ I haul or deliver freight on Hwy 14
   - ☐ Other (please specify): _____

2. **What are your top destinations along this corridor? Select all that apply.**
   - ☐ Work
   - ☐ School
   - ☐ Running errands (grocery shopping, other shopping)
   - ☐ Medical appointments
   - ☐ Recreation or entertainment (parks, restaurants, etc.)
   - ☐ Visiting family and friends
   - ☐ Freight delivery or haul location
   - ☐ Traveling to other destinations beyond the study area
   - ☐ Other (please specify): _____

3. **How often do you drive on/across Hwy 14?**
   - ☐ Daily
   - ☐ Once or twice a week
   - ☐ Once or twice a month
   - ☐ A few times a year
   - ☐ I do not drive on/across Hwy 14

4. **How often do you walk along/across Hwy 14?**
   - ☐ Daily
   - ☐ Once or twice a week
   - ☐ Once or twice a month
   - ☐ A few times a year
   - ☐ I do not walk along/across Hwy 14

5. **How often do you bike along/across Hwy 14?**
   - ☐ Daily
   - ☐ Once or twice a week
   - ☐ Once or twice a month
   - ☐ A few times a year
   - ☐ I do not walk along/across Hwy 14

6. **What are your top three priorities for improvements on Hwy 14 in the study area? (select 3)**
   - ☐ Safety
   - ☐ Traffic flow (i.e., less delay)
   - ☐ Speed management
   - ☐ Bicyclist and pedestrian infrastructure
   - ☐ Transit access
   - ☐ Aesthetics (i.e., lighting, landscaping, etc.)
   - ☐ Business and neighborhood access
   - ☐ Other (please specify) _____

7. **If you could change one thing about Hwy 14, what would it be and why?**

   _____

   _____

   _____

   _____

8. **Is there anything else you think the study team should know?**

   _____

   _____

   _____

   _____

Optional demographic questions

1. **Gender:**
   - ☐ Female
   - ☐ Male
   - ☐ Non-binary
   - ☐ Prefer not to answer

2. **Age:**
   - ☐ 22-34
   - ☐ 35-44
   - ☐ 45-54
   - ☐ 55-64
   - ☐ 65 and older
   - ☐ Prefer not to answer

3. **Disability:**
   - ☐ Yes
   - ☐ No
   - ☐ Prefer not to answer

4. **Race: (biological, an indication of the heritage with which you were born)**
   - ☐ Indigenous
   - ☐ Asian
   - ☐ Black
   - ☐ Hispanic
   - ☐ Native Hawaiian/Pacific Islander
   - ☐ White
   - ☐ Other (please specify) _____

5. **Ethnicity (learned cultural behaviors celebrated throughout regions around the world)**
   - ☐ Indigenous
   - ☐ Asian
   - ☐ Black
   - ☐ Hispanic
   - ☐ Native Hawaiian/Pacific Islander
   - ☐ White
   - ☐ Other (please specify) _____

6. **Language**
   - ☐ English
   - ☐ Spanish
   - ☐ Somali
   - ☐ Hmong
   - ☐ Amharic
   - ☐ Oromo
   - ☐ Karen
   - ☐ Russian
   - ☐ Vietnamese
   - ☐ Chinese
   - ☐ Arabic
   - ☐ Other (please specify)
   - ☐ Prefer not to answer

7. **What county do you live in?**

   _____

8. **Education Level**
   - ☐ High school or less
   - ☐ Technical or Vocational College
   - ☐ Some college
   - ☐ College graduate
   - ☐ Post graduate work or advanced degree
   - ☐ Prefer not to answer

9. **How you heard about the study:**
   - ☐ Newspaper
   - ☐ Television
   - ☐ Radio
   - ☐ Social media
   - ☐ Internet
   - ☐ Newsletter
   - ☐ Word of mouth
   - ☐ Other (please specify) _____

Thank you!

Public Meeting Boards

Study Overview

About this study

The Mankato/North Mankato Area Planning Organization (MAPO) is partnering with MnDOT and local communities to study and plan for the future of Hwy 14 in the Eagle Lake area.

The portion of the highway between County Road 12 and Hwy 60 currently experiences various safety and mobility issues. This study will look at opportunities for future improvements to address these issues, while also incorporating the community's goals and needs.

The study will consider both at-grade and grade-separated intersection improvements, lane needs, traffic control, and pedestrian and bicycle crossing enhancements.

Timeline

- **Jul. – Sept. 2024**
  Gather input on project area issues and community priorities
- **Jan. – Mar. 2025**
  Develop alternatives and present for public feedback
- **May – Jun. 2025**
  Create implementation plan for potential short-term and long-term improvements along the corridor

Study goals

Define a long-term transportation system vision for Hwy 14 that ensures safety, mobility, economic vitality, resiliency, and access for all modes of travel.

Secure public and agency support for the system vision where community input and needs are meaningfully incorporated into the recommended vision and the study recommendations are adopted by applicable agencies.

Develop a detailed, feasible implementation plan outlining future improvements, sequencing and triggers, timing, cost, and agency responsibility.

Highway 14 Eagle Lake Corridor Study

MAPO · Eagle Lake

Typical Project Development Process

Road improvement projects move through multiple phases over many years. We are in the Study phase defining the vision of the future of Hwy 14. The Hwy 14 study will consider both at-grade and grade-separated intersection improvements, lane needs, traffic control, and pedestrian and bicycle crossing enhancements.

We are here

These phases will be a separate process for each project defined in the plan vision.

Study	Identify Funding	Preliminary Design	Final Design & Right of Way	Construction
THE VISION		WHAT TO BUILD	HOW TO BUILD	BUILD THE PROJECT
Public Input and Agency Coordination		Public Input and Agency Coordination	Public Input and Agency Coordination	
• *Study justification* • *Concepts* • *Evaluation* • *Result:* **The Vision**		• *Vision refinement* • *Funding* • *Result:* **Preliminary Design**	• *Draft design* • *Right of way* • *Construction staging* • *Result:* **Final Design**	

Highway 14 Eagle Lake Corridor Study

MAPO · Eagle Lake

Existing Traffic

Intersections operate within the engineering standard, even though some single movements experience longer delays.

Crash History

- Between 2019 and 2023, **171 crashes** were reported along Hwy 14
- 74 of the 171 reported crashes were **intersection related**
- **Three (3) intersections** have crash rates significantly higher than intersections with similar characteristics (@ 598th Avenue / CR 56, Parkway Avenue / CR 17, and Highway 60)
- The study corridor has a **crash rate significantly higher** than corridors with similar characteristics
- The study corridor has an **above average crash severity rate** when compared to corridors with similar characteristics, but is within the normal range
- 5 fatalities and 7 serious injury crashes have occurred within the last 10 years.

Highway 14 Eagle Lake Corridor Study

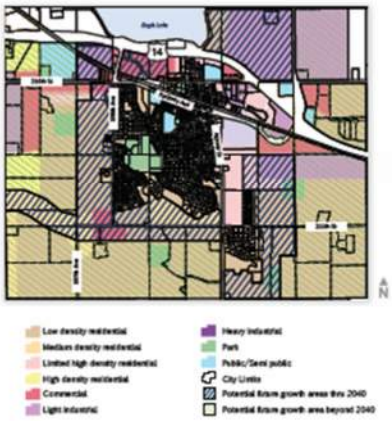
Environmental – Water Resources

Sensitive environmental resources, including public waters and wetlands, exist in close proximity to Highway 14.

Land Use

Existing land use

Forecasted development timing



The study area is anticipated to continue to grow. This results in higher growth potential along cross-streets.

Highway 14 Eagle Lake Corridor Study

Future No-Build Traffic

Existing movements with delays worsen by 2045 without improvements, degrading intersection operations and mainline mobility.

Alternative Transportation

Pedestrian and Bicycle

Grade-separated trails exist at County Hwy 12 and along the railroad underpass to Hwy 14. No additional trail crossings exist in the study area.

Transit

Limited transit routes and stops exist in the study area. The remainder of the area is served by True Transit, dial-a-ride service.

Communications Materials

MnDOT Website

Hwy 14 Corridor Study

Eagle Lake

Project Home | Meetings | ADA | Contacts

About this study

The Mankato Area Planning Organization (MAPO) is partnering with MnDOT and local communities to study and plan for the future of Hwy 14 in the Eagle Lake area.

The portion of the highway between County Road 12 and Hwy 60 currently experiences various safety and mobility issues. This study will look at opportunities for future improvements to address these issues, while also incorporating the community's goals and needs.

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

Hwy 14 Eagle Lake Corridor Study area. View full-size map.

Study goals

Define a long-term transportation system vision for Hwy 14 that ensures safety, mobility, economic vitality, resiliency, and access for all modes of travel.

Secure public and agency support for the system vision where community input and needs are meaningfully incorporated into the recommended vision and the study recommendations are adopted by applicable agencies.

Develop a detailed, feasible implementation plan outlining future improvements, sequencing and triggers, timing, cost, and agency responsibility.

Opportunities for public input

Public input is an integral part of the Hwy 14 Eagle Lake study. From Summer 2024 through Summer 2025, the public will have opportunities to provide feedback on the study area, community priorities, and roadway concepts.

Language

Select Language

Google Powered by Translate

Schedule

- July - September 2024:
  Gather input on project area issues and community priorities
- January - March 2025:
  Develop alternatives and present for public feedback
- May - June 2025:
  Create implementation plan for potential short-term and long-term improvements along the corridor

Location

- Hwy 14 from Blue Earth County Road 12 to Hwy 60

Connect with us

Sign up for project email updates

Follow us on Facebook

Follow us on Twitter

Social Pinpoint Website

Provide your input on Hwy 14 in the Eagle Lake area!

Share your experiences traveling along and across Hwy 14 in the Eagle Lake area, between County Road 12 and Hwy 60. What is working well and what can be improved?

Ways to provide your input

Interactive Map

Leave a pin on the map to share ideas and issues for specific locations.

See Project Map >

Survey

Take a short survey about study area issues, needs, and opportunities.

Take the Survey >

Project Overview

The Mankato/North Mankato Area Planning Organization (MAPO), MnDOT and the local communities are studying the Highway 14 corridor between County Road 12 and Highway 60. This study is evaluating the existing conditions and identifying issues throughout the corridor. Then will examine a range of alternatives to address these issues.

Study goals:

- Develop long-term vision
- Enhance safety
- Improve access
- Support growth
- Meet user and community needs

Timeline

Jul. - Sept. 2024
Gather input on project area issues and community priorities

Jan. - Mar. 2025
Develop alternatives and present for public feedback

May - Jun. 2025
Create implementation plan for potential short-term and long-term improvements along the corridor

See less

Contact us

If you have any questions about the project, please contact the following:

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anne.wolff@state.mn.us

Chris Talamentez
ctalamantez@mankatomn.gov

Angie Bersaw
angie.bersaw@bolton-menk.com

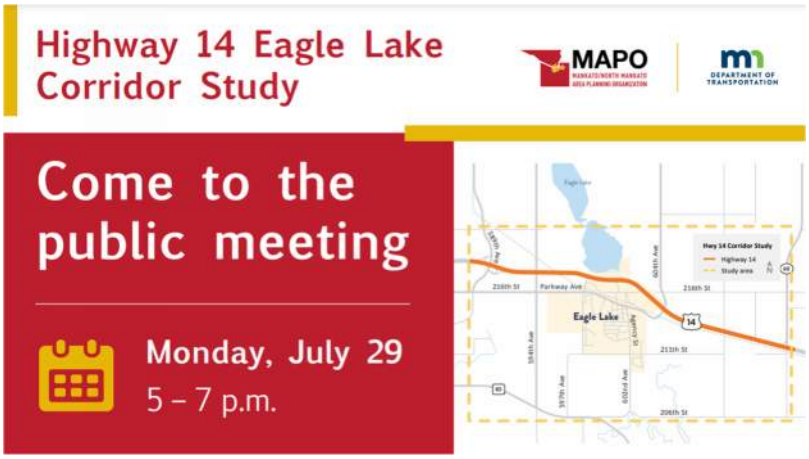
Presented by

MAPO

DEPARTMENT OF TRANSPORTATION

EAGLE LAKE

Social Media Graphic



Mailer

Hwy 14 Corridor Study Eagle Lake

Phase 2 Engagement Summary

The second public engagement phase focused on gathering feedback from the public on potential future concepts and how well each concept meets their needs. The community was engaged at:

- Totcho Night Tator Days Fundraiser on March 28, 2025
- Mankato HyVee on April 6, 2025
- Mankato Travel Center on April 14, 2025
- Public meeting at the Eagle Lake American Legion on April 8, 2025
- Online survey through the project's Social Pinpoint site

Key Findings

Safety continues to be a top priority

- Many people's support or lack of support for a concept focused on if they felt it improved overall safety
- Some want to see more speed limit reduction on Hwy 14

Desire for a full interchange at Hwy 60

- People strongly prefer a full interchange at Hwy 60 to accommodate township residents, farmers, and possible future connection to CR 90.

Support for a High-T at CR 56

- Many people feel the high-T design at CR 56 provides them sufficient access to head east or west while improving safety, visibility, and ease of entering Hwy 14.

Closing of township roads

- Residents have a variety of concerns about the impact closing township roads will have to rural residents, farming operations, and increase of traffic onto other local roads.

Future growth

- People continue to emphasize that the future design needs to accommodate for future growth of Eagle Lake and an increase in traffic.

Desire for improvements to happen soon

- Residents are hopeful to see the changes sooner than later and are ready for a change.

Concept A met the most people's needs

- People liked Concept A's improvements to safety, the High-T at CR 56, and the overpass at CR 27/17.
- Some had concerns for the higher cost, lack of access for rural residents and farmers, and increased traffic being diverted to the CR 56 entrance.

Concept B

- People liked Concept B for its cost effectiveness without too many closures, the High-T at CR 56, and feel it will improve traffic flow.
- Some feel the overpass at Le Ray Avenue would not work as well as an overpass at CR 27/17, and do not like the potential for increased traffic on Le Ray Ave.
- The Right-In Right-Out design does not address the visibility concern and difficulty entering Hwy 14 at CR 27/17.

Concept C

- People like concept C for its safety improvements and cost effectiveness.
- People like the idea of having two full accesses from Eagle Lake to Hwy 14, but don't feel this concept provides that since the High-T is on the north side of Hwy 14 and CR 27/17.
- There are concerns about the increased traffic to CR 56 since it is already a busy intersection.
- People find it more difficult to head north on CR 27/17 with this concept.

Concept D met the least of people's needs

- People like the full interchange at CR 27/17 but feel it would better serve the community if it was paired with a High-T at CR 56.
- The Right-In Right-Out does not feel as safe as the High-T option and eliminates necessary access to head west on Hwy 14 from this intersection.
- There is concern for impact to local businesses, specifically Casey's.

Engagement Activities

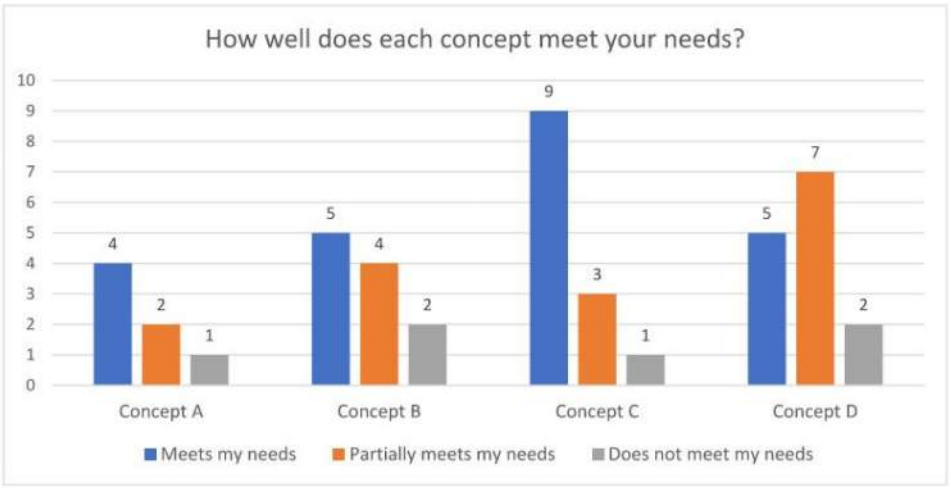
Pop-Ups

Staff gathered feedback and distributed project information at three pop-ups in the Eagle Lake area. Engagement consisted of asking people to identify whether each concept met their needs, partially met their needs, or did not meet their needs. The engagement team then followed up with questions on why they answered that way.

The project team talked to approximately:

- 25 people at the Totcho Night Fundraiser at the American Legion on March 28, 2025
- 57 people at the HyVee in Mankato on April 6, 2025
- 10 people at the Mankato Travel Center on April 14, 2025

Key Findings

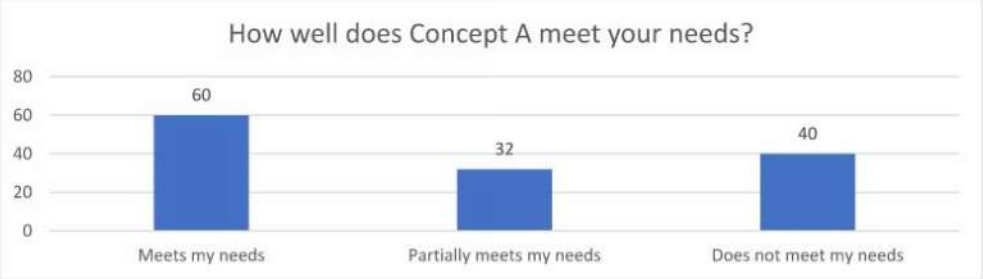


Themes	
Safety is a top priority	There was a strong emphasis from most participants that improving safety is their top priority. Many shared that they understand the need to reduce access to Hwy 14 to improve safety and traffic flow even if it may affect their personal travel routes. Some shared that they want to see reduced right angle crashes on Hwy 14, specifically at Hwy 60.
Full interchange at Hwy 60	Some of the community shared a strong preference for a full interchange at Hwy 60 vs. a High-T which would remove access from the south side of Hwy 14. Specifically, people who live south of the intersection expressed concern about how long it would take them to reach Hwy 14 if this access was removed. Some people at the travel center favored the roundabouts in the full interchange compared to the High-T, but both options met their needs for traveling through Eagle Lake.
Satisfaction with the High T at CR 56	Multiple people shared the difficulty of entering Hwy 14 at CR 56. People were generally comfortable with the concepts that added a High-T at this location. People did not care for Concept D as it did not offer access going west towards Mankato at this intersection.
Satisfaction with the removal of J-turns	People shared frustration with the current J-turn design due to feeling unsafe entering Hwy 14 and a lack of acceleration lanes. People were pleased to see all four concepts would replace the J-turns with intersection styles that are easier and safer to use.
Desire for multiple access points	Several people want to see two full accesses from the north and south of Hwy 14 to account for future growth in the Eagle Lake area. Some preferred Concept C due to this reason.
Concern about traffic on Le Ray Avenue	A couple of people shared concerns about traffic on Le Ray Avenue already being an inconvenience. They were less comfortable with Concept B due to this.
Improving access north of Hwy 14	One person shared that it is challenging to travel north of Hwy 14, specifically on CR 27/17 due to the J-turns. They would like to see better access and ease when crossing Hwy 14 to travel north.

Online Engagement

The community was invited to participate online on the project's Social Pinpoint site through a survey. 148 surveys were completed between April 1, 2025 and April 21, 2025, when the online survey was closed.

Concept A

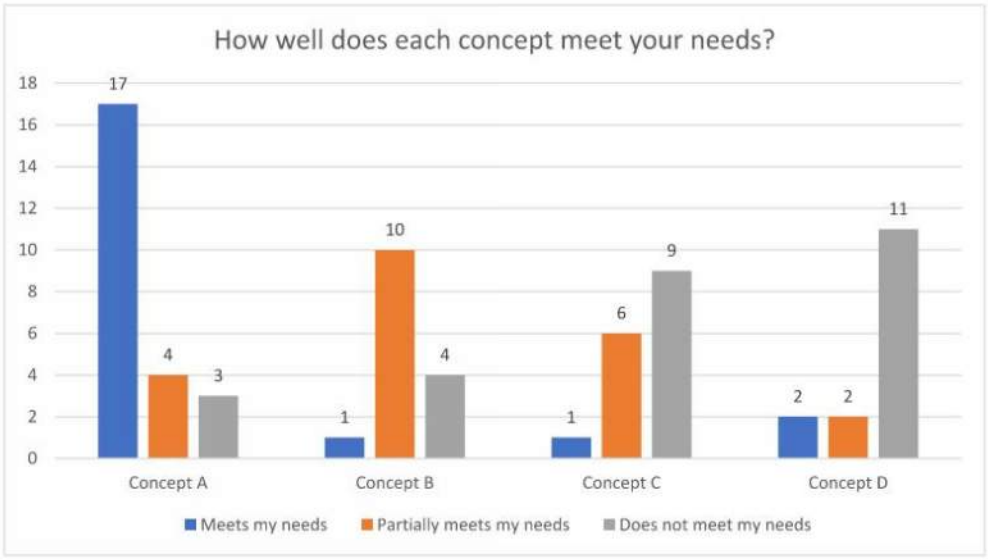


Themes	
Improves safety	The intersections that are most frequently used feel much safer with this design due to improving visibility and ease of entering and exiting Hwy 14. Some people would like to see reduced speed limits to further safety improvements.
Satisfaction with the High-T at CR 56	People like the design of the High-T due to maintaining access east and west of Eagle Lake.
Full interchange at Hwy 60	Many people emphasized that the community needs a full interchange at Hwy 60 to accommodate farmers and township residents.
Access north of Hwy 14	People prefer the overpass at CR 27/17 to ensure they can easily head north of Hwy 14.
Future growth	People feel that this option will accommodate future Eagle Lake growth and increased traffic.
Concerns for high cost	Some people had concerns about this concept having the highest cost and that the safety improvements are not impactful enough to warrant the high cost.
Increased traffic into town	Concern for traffic being pushed towards CR 56 to access Hwy 14. Larger traffic including semis and farm equipment would be diverted into town.
Closing of township roads	There are concerns about the impact on Eagle Lake if township roads are closed and traffic is rerouted into town. Residents who live in rural areas have concerns about emergency vehicle response times and increased commute on gravel roads. Some also feel they are being cut off from accessing the north side of Hwy 14.

Public Meeting

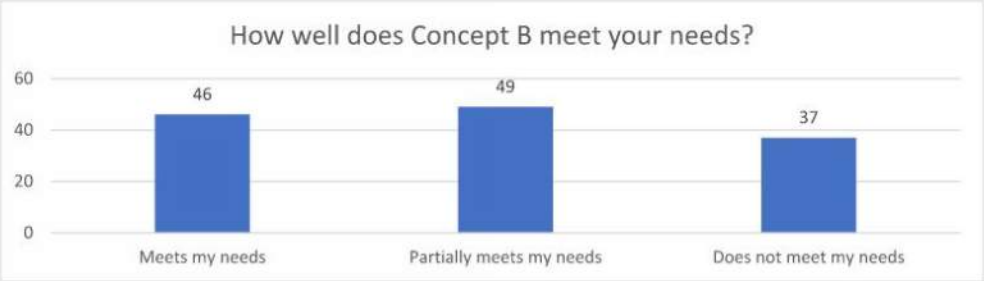
A public meeting was held on April 8, 2025, at the Eagle Lake American Legion. The meeting was advertised on MnDOT's social media and website, a postcard mailer, GovDelivery, and a news release. Approximately 120 people attended the meeting and talked with project staff. The meeting included display boards, an activity to share how well each concept met personal needs, and a map of each concept to add comments to.

Key Findings



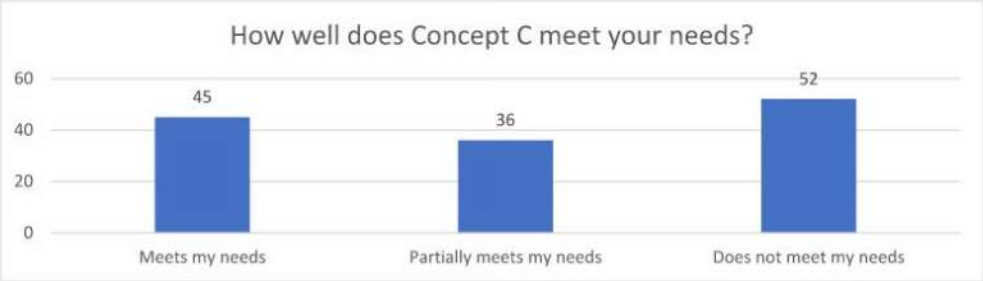
Themes	
Closing of township roads	Many people shared concerns about the impacts closing township roads will have on the local traffic system, their ability to access homes and businesses, school bus coverage, and emergency services. The increased traffic caused by the closing of these roads will cause longer travel times for residents and negatively affect the response times of emergency vehicles. Attendees were also concerned that the closure of these roads would push farming equipment to travel through town, further amplifying the issue.
Impacts to farmers	Closing the township roads also causes difficulty for farmers who have property on both sides of Hwy 14 and frequently use the roads for farm equipment and trucks. CR 27/17 specifically, is a corridor that is used by farmers and people prefer that road be kept open. Not being able to do the southbound left turn from 27/17 would cause trucks and equipment to turn left on 216 instead, and that road is not designed for those large vehicles.
Full interchange at Hwy 60	Attendees strongly preferred a full interchange at Hwy 60 over a High-T, as it preserves south-side access to Hwy 14 and better allows for future growth. Landowners on the south side of Hwy 14 were particularly concerned with the additional travel time on gravel roads if all township road accesses were removed and there was not a full interchange at Hwy 60. Some also mentioned needing a full interchange to allow for traffic movements for the future extension of CR 90 that would connect to Hwy 60.
Satisfaction with the High T at CR 56	People generally appreciated the High-T design at CR 56, finding it less stressful to enter Hwy 14 while maintaining access in both directions. People did not care for Concept D's Right-In Right-Out at CR 56 because it limits westbound access and would require extra trips through town to get to Mankato. Some asked for a longer acceleration lane or an option that would allow for an acceleration lane that would merge into the right-lane instead of the faster moving left lane.
Concern about traffic on Le Ray Avenue	Some said that there are already existing traffic back-ups on Le Ray Avenue and are hesitant of options that would cause further increase. Specifically, in Concept B that adds an overpass across Hwy 14 connecting to Le Ray Avenue.
Full interchange design	Some people felt that there are enough roundabouts in the Eagle Lake area and would prefer a different style interchange that would not require roundabouts when entering and exiting Hwy 14.
Desire for improvements to happen soon	Many people were wondering about the timeline of the study and when improvements could be implemented. Residents are hopeful to see the changes sooner than later and are ready for a change.

Concept B



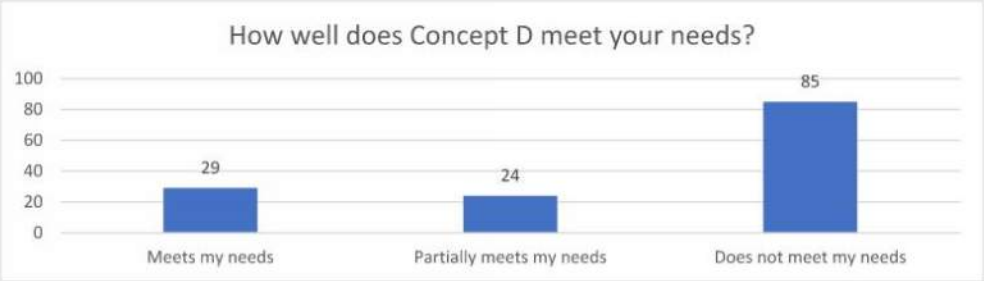
Themes	
Cost effective	Those who said Concept B meets their needs cited that this option was cost effective without too many closures.
Full interchange at 60	This option meets people's needs if Hwy 60 is a full interchange to accommodate farm use and township residents.
Satisfaction with the High T at CR 56	Most people are satisfied with the High-T at CR 56 because of the safety improvements and addressing visibility concerns.
Improves traffic flow on Hwy 14	Some feel these options will improve traffic flow on Hwy 14.
Future growth	Some feel this option adequately addresses future growth, while others want to see two full accesses in Eagle Lake. Specifically, a full interchange at 27/17 paired with a High-T at CR 56.
Overpass location	A few people like the addition of an overpass, but more people felt that an overpass would better serve the community at CR 27/17 compared to Le Ray Avenue.
Concerns at CR 27 intersection	Adding a Right-In Right-Out at CR 27/17 does not address visibility concerns and the challenge of entering Hwy 14 due to high speeds and driving uphill. Some said that these challenges feel unsafe and stressful to enter Hwy 14.
Closing of township roads	The closures of township roads feel unnecessary since they are not intersections that have had as many crashes. People have concerns about their property value decreasing and increased commute to get to their homes.
Traffic onto Le Ray Ave	People do not want to see increased traffic diverted onto Le Ray Ave, especially if it pushes large farming or semi vehicles through town.
Reduce speeds	A few people want to see further speed reduction on Hwy 14 to improve safety.

Concept C



Themes	
Satisfaction with the High T at CR 56	Most people feel a High-T at CR 56 will address current issues at that intersection. One person has concerns about High-T still being unsafe.
Full interchange at 60	Most people want to see a full interchange at Hwy 60 compared to a High-T.
Improves safety and cost effective	Some said that this option improves safety at problematic intersections while still being cost effective.
Two full accesses	People want to see two full accesses in Eagle Lake to account for future growth. Some people don't think this option actually provides two full accesses to Eagle Lake since most of Eagle Lake is located south of Hwy 14 and this option cuts off access at CR 27/17 from the south side.
Want for more access at CR 27/17	Many people want more access at CR 27/17 than the High-T provides. Specifically wanting to be able to head north on CR 27/17 from the south side of Hwy 14 by either a full interchange or overpass.
Concern for the increase in traffic on CR 56	People do not want to see an increase in traffic on CR 56 since it is already busy during rush hour times. There is also concern that pushing more traffic to this intersection will cause further safety issues entering and exiting Hwy 14.
Township closures	There is concern for the township road closures and the impact it will have on farmers and rural residents. Some also said that the closure of these roads will cause an increase in traffic on CR 27/17 which is an already busy road. Overall, there are too many closures that would interfere with local travel.
Reduce speed limits	Some want to see a reduction of speed limits to address safety issues.
Challenging to head north of Hwy 14	Closing off access at Le Ray Ave and CR 27/17 makes it challenging to head north on CR 27.

Concept D



Themes	
Full interchange at CR 27/17	Most people like the idea of a full interchange at CR 27/17 to provide better access on the east side of Eagle Lake and can also help with farm traffic needing to cross the Hwy. Many people also mentioned that the full interchange at CR 17/27 would be more appealing if it was paired with a High-T at CR 56.
Safe and cost effective	Those who felt the concept met their needs cited safety improvements, cost effectiveness, and ability to handle future growth and increased traffic.
Full interchange at Hwy 60	People emphasized that the concept needs to have a full interchange at Hwy 60 to be effective for nearby residents and farmers.
Lack of support for RIRO at CR 56	Many people felt that a Right-In Right-Out was not the best design for CR 56. The intersection is a popular entrance onto Hwy 14 to head to Mankato and eliminating that option is too restrictive for local use. People also shared concerns about the negative impact on local businesses, particularly Casey's. Some said that entering Hwy 14 is already difficult due to high speeds and visibility issues with the sun, and the Right-In Right-Out would not sufficiently address those concerns.
Reduced speeds	There is a desire for speed limit reduction to make the corridor safer overall.
Overall access	People do not feel they have enough access with this concept since they would be required to go to CR 27/17 to head west on Hwy 14.

Appendix

Engagement Data

Note: Responses below are recorded verbatim; no edits to spelling or grammar.

Optional Demographic Data

Filling out demographic data was optional for survey participants.

Question	Results
Gender	Out of 146 responses: • 32.8% identified as female and 61% identified as male
Age	Out of 146 responses: • 1.4% were Under 21 • 24% were between the age of 22 and 34 • 28% were between the age of 35 and 44 • 19% were between the age of 45 and 54 • 10% were between the age of 55 and 64 • 14% were 65 and older
Disability	Out of 145 responses: • 92.4% identified as not having a disability • 3.45% identified as having a disability
Race	Out of 137 responses: • 96% identified as white
Language	Out of 141 responses: • 98.5% identified English as their main language
Education level	Out of 109 responses: • 8% High school or less • 12% Technical school • 9% Some college • 52% College grad • 14% Post grad
County	Out of 112 responses: • Most respondents were from Blue Earth County. With some from Steele, Watonwan, Waseca, Nicollet, and Le Suer counties.
How you heard about the study	Out of 144 responses: • 44% social media • 13% internet • 15% word of mouth • 11% other • 11% newsletter • 5% newspaper • 1% TV • 1% Radio

Public Meeting

Map Comments

Map Comments
• 594th Ave – Closing 594th and railroad traffic limits emergency response • 594th Ave – Eagle Lake Fire response in this area and train impacts • 594th Ave – Closure will slow emergency response • 594th Ave – EMS response time issues • 594th Ave – Closure slows emergency vehicles • CR 56 – Unable to access Hwy 14 from Casey's. Sending to round about, but will be locked if train on tracks • CR 56 – Roundabout under the Hi-T • CR 56 – unable to leave Caseys to go west on 14. If train, then will be locked in. • CR 56 – add trail along 598th on Caseys side to Hwy 14 • CR 56 roundabout – Trains gridlock parkway/598th RAB. Don't add more traffic here. • CR 56 RIRO – NO • CR 56 RIRO – full bridge both lanes already have height from railroad bridge and eastbound comes to stop one decel lane. Eastbound from caseys acceleration lane. • RIRO by Marble Road – Cemetery • RIRO by Marble Road – concerns about this intersection operations • Twp Road 332 – Emergency access concerns to township residents and farms. School buses too. • Twp Road 332 – Consider some access @ 610th 612th and 615th • Twp Road 332 – Farm traffic force through Eagle Lake • Twp Road 332 – Overpass would help the farmers • Hwy 60 – Need interchange to accommodate farmers traveling across 14 currently using 332 and 612 • CR 17 RIRO – No access from East to Eagle Lake until Caseys/56 • CR 55 Overpass – Need signage if traffic pattern changes • CR 17 High-T – No access into Eagle Lake from East until Hwy 56 @ Casey's. Don't like. • CR 17 High-T – Don't close both these intersections • CR 60 full interchange – can interchange not have RAB • CR 60 – connection with 90 would help traffic flow • CR 60 High-T – If you have farm equipment how do you cross 14 from N to S? How far do you need to go down east or west to cross? Go into Eagle Lake? • CR 60 – Be forward thinking. Don't limit future growth by having a High-T. Do the interchange right away to allow growth south.

Online Engagement

Online Survey Comments

Concept A	
Rating	**Answer**
Meets my needs	I believe the structural build of this plan to be the safest option for the multiple intersections involved.
	This gives the best option for access at 598th and hwy 60. I think the closures at access points should be reviewed. Can they be right it right out? For access at 594th especially north bound can it be a one way exit off of 14 with a median to prevent entrance onto 14?I think access to 14 south of hwy 60 needs to remain.
	It maintains two access points to Eagle Lake.
	I have worked in the twin cities for 34 years and personally have built these interchanges and I think these would be the safest and would handle future traffic counts. I was the main supervisor on these jobs and also did design build jobs also.
	This is the main entrance to Eagle Lake from Mankato outside of using old hwy 17. I use this going to and from work everyday, as does my spouse.
	Overpass
	MN 60 needs full access
	I live in St. Clair and travel to Madison Lake daily. A full interchange at 14 and 60/615 would be helpful and a lot safer for my family and me. I also regularly need to travel north on 27, so an overpass there would be great. I believe A high-T at 598 & 14 would be beneficial to everybody. I purposely avoid Eagle Lake because I believe j-turns are unsafe.
	Should have done this years ago instead off all the wasted money on the last couple ideations.
	High T at Casey's and overpass at the church is huge. I've seen many crashes and a couple of deaths on these intersections that easily could have been avoided with the improvements.
	I don't use the roads that you are closing. The fix you are proposing would make it safer for the road I use.
	As Eagle Lake continues to grow, this long-term option makes the most sense. With increasing traffic, including a higher volume of trucks, money spent sooner than later will go further.
	The major highways that are adjacent to hwy 14 have great options. These are busy highways.
	Seems a lot safer than what we have right now.
	Better than B. Can south bound 27 still get on to 14 west?
	High Tee south of Hw60 should not be an option as it will push farmers through town or the next east intersection in which will just cause more problems down the road. The over pass for 27&17 seem to be a better option to keep traffic flowing north and south instead of concept B where they will have to top at a tee coming from town, either way there is a over pass. Eagle Lake is a town that thrives off of Hw14 for the citizens and businesses. With the changes that have already been made in the recent years are not the best option. Eagle lake will always need Hw14 and that is why I think if we propose any Concept it be the one where it is the safest and that will last the longest or we will be back in the near future to discuss this option again.
	Like the high t and overpass ideas
	I believe this concept is forward thinking, will save lives, will accommodate future traffic increases and population growth in the area.
	Easier access in the morning, when the sun is shining in our eyes is what I find important.
	Maintains access on 598th and partial access at 17.
	+ Accessibility on W and E sides of town. + Accessibility to firefighters and farmers as long as able to cross 14 safely at 60 going southbound onto the gravel road.

	+ Accessible to most businesses. + Safe access across highway 14 at the church and at 60/14 intersections (as long as able to go south from 60 to gravel road.) + Doesn't negatively affect pedestrian safety through town. I don't think a high T at 60 is appropriate due to limiting access for emergency personnel and farmers.
	Please do not close the parkway/14 access. There are so many new houses showing up on the east side of EL. Having that exit point is very helpful for us.
	The two most used intersections have higher safety qualities and are best for traffic flow.
	Overpass on 27 straight over to 17 would work best for people (older people, and or people trying to head south to 83) who don't like the highway on high traffic hours (can go to Mankato through eagle lake) safely in and out as well onto 14 from the cemetery road would make absolute sense. This seems the best option for everyone's safety
	Prefer the overpass at 17/27 vs the current j-turns especially when slick in winter and would rather the higher traffic stay there instead of being spread over to Le Ray Ave with an overpass. Would prefer full interchange at Highway 60.
	Fixes major intersection issues.
	This is the safest and most practical solution to ensure safety for the residents of Eagle Lake, as well as those traveling on Hwy 14.
	I use 586 and 14 every day and like this option best!
	overpass at 17/27. interchange at 60 needs to be the first improvement
	Travel on Hwy 14 moves right along. Traffic entering Hwy 14 tends to impede that flow
Partially meets my needs	I believe this is a good option for Eagle Lake Residents. With Eagle Lake growing it allows a couple of options for residents to exit and enter Eagle Lake allowing them to easily go west to Mankato. However, I don't feel you did enough study on the township and County roads you are closing access to 14. Why didn't those residents receive the Open House postcard. They are affected too, along with residents of Eagle Lake. These rural residents will now need to drive through Eagle Lake or go East to 620th Ave to gain access to 14. If you haven't driven those roads out there they are not paved. So now 620th may be the accident prone intersection....just moves it...why not fix the issue and put a full interchange at 14 and 60/615th Ave. Since us residents out in that area did not receive the open house card, I am sure the residents of St. Clair and Madison Lake also did not receive it. Residents of both those towns travel Cty Rd 185/615th Ave to travel back and forth between the 2 cities. I think more study needs to go into the 14/60 intersection. Also the residents of Eagle Lake should have been told at the Open house what the impact would be on Eagle Lake streets if those rural intersections are cut off. They need to know the tractors/semi's would now be driving through their town on their city streets. I vote for a full interchange at 14 and 60 and then this would be the best option for the full study area.
	seemsme like overkill
	don't like highest cost.
	Buy Casey's property and build a true interchange!
	Still pulling into westbound traffic from the church area. I'd be cautious of an overpass by hwy 60/14, as if you remember the nine mile corner bridge back in the day, was a death trap for ice and snow and many accidents. Partially due to it being in the open and high wind areas. This entire section should be 50 mph just like it is thru Byron, MN
	I think this option will create traffic issues at the corner of 17 and 27 by the cemetery.
	Don't close 610th.
	I want to be able to turn north onto 594th when traveling west on Hwy 14. And I don't like the right in/right out options.
	I believe this is a great option for Eagle Lake. The part that I do not like is closing off all township roads east of Eagle Lake. I would like to see the full interchange at 14 and

	60/Cty Road 185/615th Ave. There are many individuals who drive these township/county roads and to close all of them off would force more traffic into Eagle Lake or East to Township road(620th Ave.) or the County Line Road at Smith Mill. This would then move the problematic issue to the intersections east of Hwy 60/14. Farmers who live on one side of 14 and farm on the opposite side of 14 would need to drive their big machinery through Eagle Lake or Township 620th Ave. There are several farmers in this area who have land on the opposite side of Hwy 14 than their resident. There are many people on the south side of 14 that do business or go to church in Madison Lake. Vice Versa there are several on the North side that work at MEI, St Clair School, Palmer Bus and LawnCrafters that would need to find an alternate route. It feels like us rural folk are being cut off from the towns on the other side of Hwy 14. Also if you look at the residents on 211th Lane who are in the Eagle Lake Fire Dept jurisdiction. If we should have an emergency and/or fire it would take an extra at least 15 minutes for the emergency vehicles to arrive at 211th Lane. I believe the project engineers/designers need to drive out to some of the rural residents affected and check what their new alternate route may be. For me it would add 10-15 minutes to my work commute and an extra 5-6 miles every day and on gravel, instead of paved Hwy 14. The postcard announcing the open house was sent to residents of Eagle Lake, but us rural individuals did not receive it. Was it sent to St. Clair and Madison Lake residents?
	This option makes it easier and safer to get to 14 but I would prefer an intersection on 17 because I live right off of agency.
	If I'm understanding this correctly, the connection at CSAH 56 will be exactly what I personally need, but access to Eagle Lake from the east will be more difficult.
	I dont understand the right in right out option if the intersection is going to be full closure at LeRay Avenue and Highway 14
	I work in Waseca. Going to work would be fine. But getting home would be a pain.
	Despite the amount of accidents that we see at 598th and 14, an option needs to remain open here. The High T and Overpass options fit the need if there is a space. But living with the Eagle Lake round about in my back yard, I worry about the huge increase of traffic then using Parkway to get to 598th to enter 14. We already see SO MANY near misses in that round about. The additional traffic of the entire town of Eagle Lake would very likely turn that into crashes. We also travel to 211th Lane frequently and want to make sure that the 14 and 60 intersection remains open there to return to Eagle Lake. The only other options add on at least 5 minutes of drive time exclusively on gravel.
	The overpass - right-in/right-out doesn't seem to make any sense if south access on CR 17 remains. Who gets the right-in/right-out? Additionally, putting an overpass at this intersection will force those who live down that road - CR17/CR27 (so semi-trucks, tractors, etc. along with other vehicles) to drive THROUGH Eagle Lake to access their only way home. How does the current cemetery and railway affect this plan? Closing off local gravel roads to residents in mostly rural areas doesn't make a lot of sense. So those people north of Hwy 14 between CR17/CR27 and Hwy 60 are suppose to drive all the way through Eagle Lake to use the over pass to turn right and access their homes? Sounds like unnecessary traffic through Eagle Lake when there is a 4-lane highway right next to it. As with all of the concepts, a full interchange makes sense at Hwy 60. Sometime in the future the desire to move south with 60 and connect with 90 will likely present itself. Plan for it.
Does not meet my needs	Lower the speed limit
	Cash 17 needs interchange to save money when eagle lake grows east. We need to look at future no just now. Do it now so we are not changing it again in 5 years
	Keep everything as is and just put in acceleration lanes
	Not needed

	High cost when option B is available
	No right in and out. Overpass should be located at 598th not on 17!!
	For me, I would have to go almost into Mankato to get to Hwy 83 towards St Clair. I do like the high T for CSAH 56. I'm assuming the traffic from 56 would be merging onto Hwy 14 instead of a stop sign. I drive Hwy 14 daily. I can't tell you how many pull out in front of me when THEY have a stop sign. They assume I can just slam on brakes, move over or go into the ditch. Love the HighT at Hwy 60. That's been needed for years.
	I live at 21304 612th Ave. One of the reasons we bought this house was easy access to Hwy 14 as we both have commutes to work every day. A down side to living here has been noise from the Hwy. I do not agree with closing off Hwy access to all the roads between Casey's in Eagle Lake and Hwy 60. I believe it will bring mine and MANY others house values down a large amount as you are taking away easy access to the Hwy, but we still have all of the noise from the Hwy. Many farmers in the area also use these side roads as it is safer than going down Hwy 14. This will put farmers at risk as it will be unsafe for them and create farming accidents on Hwy 14. Also, this will add about 20 minutes to our work commute per day as we will have to go around as well as the traffic this is going to cause from the other road closures from Hwy 14 and others having to go around as well. I believe the roads at 594th and 612th have not had accidents. I believe that Hwy 60 and Casey's in Eagle Lake are where the accidents happen so why close off all roads in between?
	We need a full interchange in Eagle Lake. You should be able to get on the highway and go both east and west at at least one of the entrances in Eagle Lake. Sorry I can't tell from these maps if any of these off this.
	Longer drive coming back to town from east
	From Anderegg Farms/Anderegg Trucking 610th ave residents- losing access to 14 from 610th ave is going to be extremely inconvenient to us as well as all our neighbors that will be forced to have increased semi traffic, 3 semis leave and return daily from 14, plus 2 feed trucks every other to every two days, plus livestock trucks (28-30 loads, 3 times per year) plus 150 loads of corn and 35-40 loads of beans to AND from the farm. 90% of this traffic comes and goes from 14, will we be forced to come through eagle lake with all that traffic? What about road postings for feed and livestock trucks? Our farm and trucking company has no intentions of getting smaller so daily trucks and amount of grain will increase.
	Too expensive
	For me it will involve more driving and a more difficult access to my house. Plus it is only moderate in crash reduction. Highest cost!!! I also don't think you want grain semis and farm tractors driving on city streets.
	For me, it will involve more driving and delay returning from Mankato to my home on east Hwy 14.
	How does this affect the value of properties on the roads that are shut of? All of this has already been redone multiple times. I hope we are looking at getting new "engineeers" if we can even call them that. Will owners of the land be compensated for the lesser valuations? Will this lead up to residents having accidents on highway 60 waiting to turn? Sure hope the government can get this right. Prefect example of how government operates. Do the same thing multiple times and waste money. Why are we shutting off things at different intersections when Casey's and hwy 60 are the real problem. Another example of a poor decision of the city council idiots of eagle lake to let Casey's move in there.
	Cost / benefit is less than ideal when weighing safety improvement & the number of impacted properties
	Eagle Lake can't head east out of the east end. A west and east entrance/exit would be best.
	High T still has high crash rate

Concept B	
Rating	Answer
Meets my needs	Most cost effective without so many closures
	Lower cost and doesn't close a good majority of intersections
	I mainly choose this because it seems the most reasonable option of the 4, and impacts the least amount of properties.
	All my points from option A can be applied to this option as well. I would hate to see access to 615 from 60 to be cut off though, so a full interchange is necessary for me.
	Same explanation as other option.
	Keeping traffic on 14 moving is important and this does that in both areas.
	This is the best option for both sides of town.
	Best of the options but I want to be able to turn north onto 594th when traveling west on Hwy 14.
	I believe this concept is forward thinking, will save lives, will accommodate future traffic increases, and population growth in the area.
	Easier access in the morning, when the sun is shining in our eyes is what I find important.
	Same as Concept A - Maintains access on 598th and partial access at 17.
	High-T at 598th is great. East end of Eagle Lake has access to and from TH 14, which is preferred. Suggestion at 14/60 as interchange is probably a ways out. The WB to NB right turn lane is way too short coming down the hill, very dangerous and can't brake quickly enough, especially in winter.
	Please do not close the parkway/14 access. There are so many new houses showing up on the east side of EL. Having that exit point is very helpful for us.
	The interchange between Hwy 14 and Hwy 60 is dangerous I've seen too many accidents there. Speed is a problem.
Partially meets my needs	I like the overpass idea
	Similar comments as concept A. There needs to be easy & safe access to 27 from either direction off of 14 if access to north bound 610 & 612 are being eliminated.
	I believe this is a good option for Eagle Lake Residents. With Eagle Lake growing it allows a couple of options for residents to exit and enter Eagle Lake allowing them to easily go west to Mankato. However, I don't feel you did enough study on the township and County roads you are closing access to 14. Why didn't those residents receive the Open House postcard. They are affected too, along with residents of Eagle Lake. These rural residents will now need to drive through Eagle Lake or go East to 620th Ave to gain access to 14. If you haven't driven those roads out there they are not paved. So now 620th may be the accident prone intersection....just moves it...why not fix the issue and put a full interchange at 14 and 60/615th Ave. Since us residents out in that area did not receive the open house card, I am sure the residents of St. Clair and Madison Lake also did not receive it. Residents of both those towns travel Cty Rd 185/615th Ave to travel back and forth between the 2 cities. I think more study needs to go into the 14/60 intersection. Also the residents of Eagle Lake should have been told at the Open house what the impact would be on Eagle Lake streets if those rural intersections are cut off. They need to know the tractors/semi's would now be driving through their town on their city streets. I vote for a full interchange at 14 and 60. This is a great option too, as long as there is a full interchange at 14 and 60.
	Not as good as option A, 598th needs full access, as does the east side of Eagle Lake.
	Idiotic to take CR 27 traffic through residential parts of town
	A high T along with an overpass and another intersection seems like overkill
	No right in and outs! Overpass should be at 598th and night at 17.
	People will still be pulling into west bound traffic from the Church area. This is a blind spot corner that is hard to see. Love the overpass idea on Leray. Could utilize the old

	hwy 60 footprint to hook back up with cty rd 27. This entire section should be 50 mph just like it is thru Byron, MN
	High T at Casey's is good. The right in right out st the church is bad. The grade at the church also is a bit uphill initially and it makes the tires squeal and you sometimes can't gain momentum quick enough.
	Longer drive coming back to town from east
	Can west bound 14 traffic exit onto north 27?
	High Tee south of Hw60 should not be an option as it will push farmers through town or the next east intersection in which will just cause more problems.
	I believe this is a great option for Eagle Lake. The part that I do not like is closing off all township roads east of Eagle Lake. I would like to see the full interchange at 14 and 60/Cty Road 185/615th Ave. There are many individuals who drive these township/county roads and to close all of them off would force more traffic into Eagle Lake or East to Township road(620th Ave.). This would then move the problematic issue to the intersection of Hwy 14 and 620th Ave. Farmers who live on one side of 14 and farm on the opposite side of 14 would need to drive their big machinery through Eagle Lake or Township 620th Ave. There are many people on the south side of 14 that do business or go to church in Madison Lake. Vice Versa there are several on the North side that work at MEI, St Clair School, Palmer Bus and LawnCrafters that would need to find an alternate route. It feels like us rural folk are being cut off from the towns on the other side of Hwy 14. Also if you look at the residents on 211th Lane who are in the Eagle Lake Fire Dept jurisdiction. If we should have an emergency and/or fire it would take an extra at least 15 minutes for the emergency vehicles to arrive at 211th Lane. I believe the project engineers/designers need to drive out to some of the rural residents affected and check what their new alternate route may be. For me it would add 10-15 minutes to my work commute and an extra 5-6 miles every day and on gravel, instead of paved Hwy 14.
	Having to only go right on 14 to 27 is easier said than done
	This option makes it easier and safer to get to 14 but I would prefer an intersection on 17 because I live right off of agency.
	If I'm understanding this correctly, the connection at CSAH 56 will be exactly what I personally need, but access to Eagle Lake from the east will be more difficult. And the Overpass location seems strange.
	I think the right in right out option needs to be switched to full intersection at the intersection of Co. 17 and Highway 14. Dont need an overpass at LeRay
	Cost / benefit is less than desired, no full access interchange
	I don't think a high T at 60 is appropriate due to limiting access for emergency personnel and farmers. I ask don't think a RIRO is appropriate between 17 and the church for the same reasons. Would ideally have an overpass at the church. If the overpass is at LeRay but the intersection at 17 is RIRO, traffic to St Clair will go through a highly residential area (North Agency) which may need review.
	I do not see a need for an overpass in that location.
	Seems flipped from option A and high volume to le ray may not be the best option but I think this is the 2nd runner up
	Prefer option A of a 17/27 overpass instead of the increased traffic on Le Ray but prefer over options C and D. Would prefer full interchange at Highway 60
	This still leaves 17 with no overpass and visibility issues from the east would persist.
	I live in eagle lake and work in Waseca. Getting to work would be fine. Getting home would take longer.
	Same as above
	Is the overpass at CR 55 an error? It's not included in the description above the photo and doesn't make any sense. Is the "old 14" that goes along the cemetery going to be

	rebuilt to provide residents of the area access to their homes? Does the right-in/right-out apply to the north side and the south side at CR17/604th Ave? And again, how will this concept consider the existing cemetery and railroad? As with all of the concepts, a full interchange makes sense at Hwy 60. Sometime in the future the desire to move south with 60 and connect with 90 will likely present itself. Plan for it.
	High T still has high fatal crash rate
	Although this provides one full access to our town, future growth would most likely dictate that multiple full access points are necessary. This will work at the current time, however future planning might show otherwise.
	I don't think anything needs to chang. The accidents are due to crappy drivers and that's it. The road is fine and the people who think it's hard to enter well they are the same people who don't understand the entrance lane is for accelerating not putting along which happens All the time. Maybe just a refresher in drivers training is what's needed not road change.
	prefer another overpass at 17/27
	Yes - but move the overpass to 594th street as the official Eagle Lake Exit. There is the space to do so. Or have the overpass at the main on off for eagle lake 598th
Does not meet my needs	Lower the speed limit
	No overpass
	This option will send northbound CR27 traffic THROUGH Eagle Lake down Le Ray Ave - a residential area. Tractors, delivery trucks (UPS, seed deliveries, etc), plow trucks, etc. Additionally, any option opening up the CR 17 and CR 27/Marble Rd/604th Lane to a 4-way stop vs. the 3-way (with 1 stop) it is right now is just asking for trouble. Especially if you are going to close gravel road access between CR 27 and Hwy 60 - those people will have to find a way home as well if they are coming from the west. This will also increase traffic at the CR 17-CR27 intersection. Please don't create more issues while trying to "fix" others.
	Same as comment from A
	Realignment on the east end of town seems excessive when the road is already in its current location. I see this option also forcing more traffic through the north end of Eagle lake where it is mostly residential areas. Keep the traffic on 17 where it belongs in a more light commercial/retail area. General note for all options. CSAH 86 having an adt of 700+ maybe makes some sense to close access. Township roads with minimal traffic seems a little un needed. Maybe right in/right out to eliminate the traffic shooting straight across.
	See response above.
	This option drives all the traffic from County Road 27 through the city of Eagle Lake.
	Hwy 27 should have a bridge or alternative option. No right in, right out.
	too out of the way to take the overpass from Leray to get to hwy 14. People wont do that so I fear it will be a waste of money.
	Needs to out for access both ends of town
	Same answers as A
	More difficult to access my home when driving east on Hwy 14. More drive time for us.
	How does this affect the value of properties on the roads that are shut of? All of this has already been redone multiple times. I hope we are looking at getting new "engineeers" if we can even call them that. Will owners of the land be compensated for the lesser valuations? Will this lead up to residents having accidents on highway 60 waiting to turn? Sure hope the government can get this right. Prefect example of how government operates. Do the same thing multiple times and waste money. Why are we shutting off things at different intersections when Casey's and hwy 60 are the real problem. Another example of a poor decision of the city council idiots of eagle lake to let Casey's move in there.
	Right in / right out designs are part of the overall problem.

Concept C	
Rating	Answer
Meets my needs	Best option. It keeps 2 main entrances into Eagle Lake open for when I come from the east AND the west, which my job requires quite frequently.
	Not sure why two High Ts would be needed in this in this stretch. Seems like one placed on the west end of Eagle Lake would suffice.
	This makes the most sense for the people who actually live in this area and to allow those passing by to actually pass by. Those who live in Eagle Lake have an option, as well as the opportunity to utilize CR 17 west of Eagle Lake to access Mankato AND another way to access westbound Hwy 14. Those of us north of Hwy 14 need an entrance and an exit that takes us directly off of/on 14 vs. taking us through a residential area and over an overpass. But AGAIN, sending any additional traffic down CR27 will cause issues at outlying intersections (such as CR27 and CR26). Closing CR 55 would stop the people driving backwards through the left turn lane, and closing southbound CR17 would also close a railroad crossing and eliminate at least 1 whistle stop at 4am!
	Safer way for traffic to travel
	This option would have the best sight lines to reduce major impacts, while still allowing businesses to operate and receive traffic flow for easy exits. This entire section should be 50 mph just like it is thru Byron, MN
	This option seems the best to me. It will help with all the semi traffic on County Road 27 and the congestion at the Casey's intersection.
	Yes to both high Ts. Also yes to closures. Limit the possibilities for crashes by limiting the amount of risk factors. Good call
	This is the best of the 3 options, offering town access on both east and west sides.
	2 crazy intersections which I think it would help
	This Option provides a High T on the east side where I live.
	I believe that all traffic coming into and out of Eagle Lake needs to be controlled with either full interchange or high-t accesses.
	It provides easy access to my home going both east and west on Hwy 14.
	I like this option as it doesn't require anything to be done at the lesser used entrance. At the higher access spots, high Ts will be efficient, effective, and safe to get onto 14.
	Fixes all major intersection issues.
	This option addresses the safety issues, provides access, and is more cost effective.
	This seems like the most user-friendly to those unfamiliar with the area and passing through, without making the transitions to local areas more confusing or difficult.
	I live south of 14 and 60 intersection and although this will affect my commute if it saves a life, we need to change this intersection. On a weekly basis I hear horns honking, tires screeching, and have witnessed many accidents here. Second to this highest area of concern is intersection @ 604th Ave. This needs to be top priority! High T or overpass. I drive this section of 14 twice a day and cannot count the number of times I have seen confusion and near misses in this section. If you're not a defensive driver in this section you're going to get in an accident. Thinking about the future for my family and safety of others along this section of 14.
Partially meets my needs	Like full exit I 2 place but stops short of interchange at cash 17 to access other side as I expect future developments there
	I don't recall how you would access 27 north from east bound 14. If this is a possibility the this could be an option along with my comments from concept A.
	Not as good as A, but as long as 598th has full access both East and west.
	Should have full interchange at 598th!!
	While access to 60 would be great, traffic to and from 27 would be forced to drive the long way through town, or just avoid Eagle Lake all together.
	CSAH 17 should remain open in some form.

	This option would work as well but don't like the idea of increased traffic on 598th avenue since it can already be very busy at rush hour times.
	There should be access to LeRay fir the businesses and apartments.
	No access to 27 north
	Interchange at 17 instead of a high t
	Not my favorite but not the worst of the options presented. And I still want to be able to turn north onto 594th when traveling west on Hwy 14.
	If I'm understanding this correctly, the connection at CSAH 56 will be exactly what I personally need, but I do not understand how eliminating the southern access at CSAH 17 leaves us with Two Full Accesses. I only see one and a partial.
	The High Tee is a must at 598th intersection. The second access is confusing at Co a7 and Hwy 14 because it continues to say Full closure and High T
	Best of 4 options. Must have full access at both main interchanges. Would rather see speed reduction used if safety is the concern. With the curves, hills, and bad sun at high traffic times. No good way to make safe when allowing left turns. If there were acceleration lanes for people turning west out of Eagle Lake, it would help. The lanes would have to prevent merging for a considerable distance or I don't think they would work. Too many people now go straight to the right lane from a stop into 70 mph plus traffic.
	Same as above with additional worry about the round about traffic with even less options to enter 14. I also wanted to note that if a train is going through, I have seen traffic back up onto the right turn lane of 14 to 598th and then from the opposite direction back to the business entrance (daycare, gym) on parkway.
	This option is okay, but it also seems like traffic would be drawn to other problem areas. Not every 2-lane highway needs to be a thoroughfare. With CR12 and Hwy 60 both providing sufficient paths to areas north east of Mankato (namely the lakes area), why can't some of the rural roads be left alone to provide access for farmers with slow equipment and who LIVE in these areas? Providing easy access to CR 27 will just create yet another northbound road overrun with traffic that CAN use another road meant for access further destinations. I don't understand why this intersection needs to be messed with anyway? Since the left turn lane has been closed and the J-turn has been added it has felt a LOT safer. The sight lines are better and you are only dealing with 2 lanes of traffic vs. 2 lanes of traffic, a right turn lane slowing a vehicle down and a left turn lane (going south) that would block the view. The ONLY issue that still stands is that westbound drivers could use a reminder to "MOVE OVER if they are able" to allow CR17/27 vehicles to access Hwy 14 in a timely manner. I will often see up to 8 vehicles sit in the right lane when the left lane is wide open. Otherwise as a resident of the area who uses that intersection almost daily, it's 1,000% better than it use to be. As with all of the concepts, a full interchange makes sense at Hwy 60. Sometime in the future the desire to move south with 60 and connect with 90 will likely present itself. Plan for it.
Does not meet my needs	Limit the speed limit
	Over pass or keep everything the same add acceleration lanes
	Only has the 1 intersection to allow residents to go west to Mankato. That would put a lot of traffic at the 598th intersection. With the train tracks I can see delays and backups. The High T at 27 seems like a waste of money....give them a Right In Right out instead. Eagle Lake needs 2 intersections that allow residents to travel West to Mankato. Eagle Lake is only on the south side of 14 so a High T at 17 seems ridiculous/waste of money for traffic from the North side. There are way too many roundabouts on route to County Rd 12 and on 12. I've been in the area all my life and after going around so many you lose track of where you are. Also a full interchange at 14 and 60 is needed. Think about Farmers and trying to get their equipment to fields on the other side of 14.
	A lot of closures

	Closure of to many access points
	No overpass
	High T restricts farm needs too much
	don't like eliminating an access road to eagle lake.
	Same as comment from A.
	See response above.
	High Tee south of Hw60 should not be an option as it will push farmers through town or the next east intersection in which will just cause more problems. No access north on 27 from Eagle Lake is very pointless. If this is a serious option it should have been brought up before the freshly redone Hw27 as a lot less traffic would use it. By far the worst concept.
	I believe this is not a good option for Eagle Lake. Eagle Lake is a growing town and would need 2 intersections that allow the left turn onto Hwy 14 to head West to Mankato. Another part that I do not like is closing off all township roads east of Eagle Lake. I would like to see the full interchange at 14 and 60/Cty Road 185/615th Ave. There are many individuals who drive these township/county roads and to close all of them off would force more traffic into Eagle Lake or East to Township road(620th Ave.). This would then move the problematic issue to the intersection of Hwy 14 and 620th Ave. Farmers who live on one side of 14 and farm on the opposite side of 14 would need to drive their big machinery through Eagle Lake or Township 620th Ave. There are many people on the south side of 14 that do business or go to church in Madison Lake. Vice Versa there are several on the North side that work at MEI, St Clair School, Palmer Bus and LawnCrafters that would need to find an alternate route. It feels like us rural folk are being cut off from the towns on the other side of Hwy 14. Also if you look at the residents on 211th Lane who are in the Eagle Lake Fire Dept jurisdiction. If we should have an emergency and/or fire it would take an extra at least 15 minutes for the emergency vehicles to arrive at 211th Lane. I believe the project engineers/designers need to drive out to some of the rural residents affected and check what their new alternate route may be. For me it would add 10-15 minutes to my work commute and an extra 5-6 miles every day and on gravel, instead of paved Hwy 14. The postcard announcing the open house was sent to residents of Eagle Lake, but us rural individuals did not receive it. Was it sent to St. Clair and Madison Lake residents?
	I believe this concept would just be another temporary fix and waste of money, just like the fixes that MnDOT spent $3.3 million dollars on over the past 5 years.
	Best option of the four but still don't like it. Need protected third lane or acceleration lane for traffic turning west out of Eagle Lake at both locations. That would prevent emerging over too fast and you wouldn't have to navigate oncoming traffic from both directions.
	How does this affect the value of properties on the roads that are shut of? All of this has already been redone multiple times. I hope we are looking at getting new "engineeers" if we can even call them that. Will owners of the land be compensated for the lesser valuations? Will this lead up to residents having accidents on highway 60 waiting to turn? Sure hope the government can get this right. Prefect example of how government operates. Do the same thing multiple times and waste money. Why are we shutting off things at different intersections when Casey's and hwy 60 are the real problem. Another example of a poor decision of the city council idiots of eagle lake to let Casey's move in there.
	Closing Leray and CH17 on the south side makes no sense for Eagle Lake, I actually like both intersections the way they currently are and enjoy using both, they offer flexibility from both E and W. Loray actually has better sight lines and can be accessed from either way, please don't close it. My bottom line opinion would be put a high-T at 598th and 60, and leave the rest alone, including 594th access, they are safe and also give some flexibility to travel to lakes, Eagle Lake,etc. also consider simply LOWERING THE SPEED LIMIT through the entire corridor, EX: 35E north by 494, full divided highway with all full interchanges yet it goes to 55 mph, it can be done…..thanks for your consideration and hard work on this.

	Minimal benefit, based on projected population & traffic growth in this area another "update" or "expanded" model would need to considered within 5 years when costs would likely be as much or more to do the type of update necessary. Versus building out the necessary interchanges now at a known cost today with only maintenance costs going forward.
	Closing 17 would reduce Eagle Lake access to TH 14 to only one access on the far west side. Not a great idea. High-T at 27 also seems unnecessary.
	I don't think a high T at 60 is appropriate due to limiting access for emergency personnel and farmers. Other road closures are concerning for the same reasons. Same for D. Only one access in and out of Eagle Lake is concerning. Accessibility for bike paths (and pedestrian safety) would also be concerning.
	Do not like the possibility of having to go to either Csah 56 or possibility Highway 60 to try and go to the north side of 14 from the south side. Would create a large gap especially of the township roads lose access and assume it would effect response times in emergency situations and farm equipment crossing the highway. Would be an even bigger issue if Highway 60 is a High-T instead of a full interchange.
	High T still has high fatal crash rate
	to many closures and no full interchanges/overpasses
	Too much interference with local travel. Perhaps a reduced speed limit between CSAH 17 and Hwy 60 would reduce accidents.

Concept D	
Rating	**Answer**
Meets my needs	This is the best option. People going to Mankato should use CR 12, build a full interchange at CR 27 instead
	This meets my needs to best. Still not the greatest. Why not a high T at 56 and full interchange intersection at 27/17. And yes to High T for Hwy 60.
	This option meets all requirements, provides the most safety at the least cost.
	Best option for safety in and out of Eagle Lake but also having access to 27. I heard comments from Guentzels about farming equipment, but that property in that corner is now part of Eagle Lake and ease of access to that property is critical for that property to be developed. Traffic on that road is not unlike other rural roads that have reasonably heavy traffic during peak farming times. Its not year around so please do not stop this project and whats the best long term because of one farmer.
	This option provides an interchange on the east side which is closer to me but I would still like to go west from the west side as well and have at least a high T there
	Easier access in the morning, when the sun is shining in our eyes is what I find important.
	In my opinion this seems to be the best option. It will handle farm equipment without incident. It has the highest crash reduction. It has the lowest expense.
	Good access to my home going both east and west on Hwy 14. For Concept D.
	Incorporates some future proofing, best safety solution, best traffic flow option, best overall accessibility, at a moderate cost ... adds up to the best available option
	Full interchange at 17/27 and High-T at 598th feels like the best option possible.
	This one is best for safety I feel with having a full interchange at 27.
	I like this option but concerned about the intersection @ 56. The merging traffic along with the exiting traffic just after the overpass to the west is not ideal. In the winter this overpass is bad enough.
	Safest option
	My preferred option.
	We need full access into Eagle Lake at CR#17 and we need a full interchange on Hwy#60 to travel south on gravel 615th Ave. because we are farming; we have ground on both sides of #14. Looks as if you are closing 610th Ave., which is our current preferred choice

	to get to our farm ground, on all four options. Not having the option to go south on 615th Ave. would cause great inconvenience and restrictions of moving big machinery going through Eagle Lake, going south.
	Adequate accessibility at a reasonable cost. Will be a definitely needed improvement at Hwy. 60 intersection.
Partially meets my needs	Csah 17 needs interchange to save money when eagle lake grows east. We need to look at future no just now. Do it now so we are not changing it again in 5 years
	I think this option would kill caseys.
	The interchange is nice. I want the side traffic to be 100 % overpasses to avoid collisions broadside.
	Inconvenient access to Casey's from 14
	This answer is for concept D, the survey says "How well does concept C meet your needs? High t at 598th instead of right in/right out
	High Tee south of Hw60 should not be an option as it will push farmers through town or the next east intersection in which will just cause more problems. I think the right in and right out on Hw56 would be a terrible option for businesses of Eagle Lake. Change this to a High Tee and it would look a lot better.
	Limits my most used access on 598th.
	I don't think a high T at 60 is appropriate due to limiting access for emergency personnel and farmer. Same concern for closing access east of Eagle Lake. RIRO is not a great solution for 598th.
	Need exit turning left across east bound 14 when going west as per what there now.
	I assume that this plan would include leaving the current RCUT and removing the turn into the city from HWY 14. Again, this is not ideal in my opinion.
	full interchange at 17/27 is nice, consider j turnes at 598th ave
	This one also tends to be restrictive for local traffic. .
Does not meet my needs	Lower the speed limit.
	Pointless on this one
	I feel there needs to be full access to 598th from both directions on hwy 14.
	More driving when going to Mankato if using 56. Not convenient at all.
	I just don't feel a full interchange at 17 is a good idea. The train tracks are much closer in that area unless you plan to move 14 north some at that intersection.
	Not in favor of right in right out at Casey's
	In favor of High T by Casey's
	I need to go west into Mankato from 598th, don't want to backtrack to Hwy 27 interchange
	This is by far the worst option.
	No overpass
	This option is unappealing as eagle lake residents will be forced to go East while most trips are heading west towards Mankato. I could be mistaken though.
	do not feel the intersection by casey's is safe.
	Aside from disturbing wetlands and encroaching on a cemetery, having a full interchange at CR27 will be asking for problems outside of the study area. Travelers have other options to access local lakes and get to their destinations without taking yet ANOTHER decent rural road and making it ridiculously busy with unnecessary traffic. The area around Eagle Lake is agricultural and that comes with slow moving tractors, combines, etc. and loaded semi-trucks hauling grain. We see the upticks in traffic when roads like CR22 are closed or when there are other construction detours. We also see the DECREASE in a normal year and it's gotten so much better since the northbound left turn lane to CR17/27 (from Hwy 14) was closed. With a recreational trail crossing CR27 and NO changes to make that safer, sending more traffic down CR27 will create more problems. A full interchange should be at Hwy 60 and that should make a full interchange at CR27

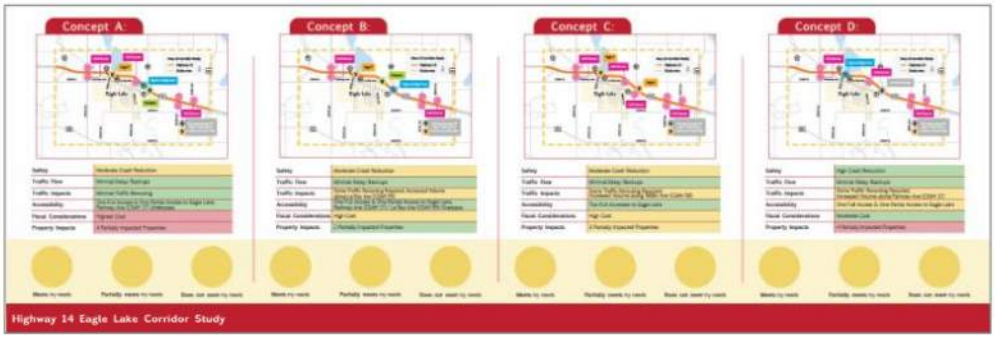
	unnecessary and not worth tearing up wetlands, disturbing a church, and encroaching on a cemetery. Not be forgotten is a holdup if a train is coming through. If you're going to funnel traffic off a busy highway to a crossing train, there will be issues. At least by Casey's there is another road (Le Ray) to alleviate buildup. Additionally, past legal fights to protect the designated wildlife lake and return annexed property to the township should be noted when "future development" is considered with traffic flow. There is no sewer and water to the north side of Hwy 14 in that area and an attempt to have the church annexed failed. Hwy 14 was meant to be a BY-PASS and Eagle Lake won't help it's problems trying to put it back in the middle of town.
	I don't believe that this is the safest option with the right in right out at CSAH56. In a few years you will be redoing the 56 interchange for the I think the 4th time. To put it bluntly; "stop picking around". It should have been done right the first time.
	There is a time during the day wear the sun is going down(5pm ish) that you are completely blinded while looking left when entering 14. This option would require being able to see what is coming from your left to turn right. Also with the deceleration lane, when trucks are coming in town they block what is coming in the lane next to it.
	No RIRO on 598th
	No west bound turning movements from CSAH 56 to west bound US 14 makes zero sense. Large majority of residents from Eagle Lake commute this route. With the county and City of Mankato getting a little roundabout happy on 17 and 12 making that route not very time effective.
	The speed coming from top of the bridge is not being reduced, will still cause people to pull into East bound traffic from the 598th stop sign. This entire section should be 50 mph just like it is thru Byron, MN
	See response above.
	This interchange is on the wrong side of the city. The majority of the traffic from Eagle Lake tends to go towards Mankato. This interchange will effectively kill Casey's.
	This wouldn't really fix the problem at 598th ave. and 14 access.
	598th should have access to heading west on hwy14.
	West bound 14 traffic entering into Eagle Lake must always drive through town. Certainly not preferred and will add more traffic in town.
	Concept D is the worst of each option. 598th Ave needs to be fully accessible in all directions. This would make leaving on the West side of town very inconvenient as well as having to drive to the other side of town after fueling up to leave! Access to fuel seems to have been made in this town to enter/exit Hwy 14 from 598th Ave.
	I absolutely hate it.
	I believe this is not a good option for Eagle Lake. Eagle Lake is a growing town and would need 2 intersections that allow the left turn onto Hwy 14 to head West to Mankato. Having the full Interchange at 17 with the train tracks on the West side could cause some backup on both sides, but main concern would be those residents exiting from Hwy 14 to Eagle Lake. Another part that I do not like is closing off all township roads east of Eagle Lake. I would like to see the full interchange at 14 and 60/Cty Road 185/615th Ave. There are many individuals who drive these township/county roads and to close all of them off would force more traffic into Eagle Lake or East to Township road(620th Ave.). This would then move the problematic issue to the intersection of Hwy 14 and 620th Ave. Farmers who live on one side of 14 and farm on the opposite side of 14 would need to drive their big machinery through Eagle Lake or Township 620th Ave. There are many people on the south side of 14 that do business or go to church in Madison Lake. Vice Versa there are several on the North side that work at MEI, St Clair School, Palmer Bus and LawnCrafters that would need to find an alternate route. It feels like us rural folk are being cut off from the towns on the other side of Hwy 14. Also if you look at the residents on 211th Lane who are in the Eagle Lake Fire Dept jurisdiction. If we should have an emergency and/or fire it would take an extra at least 15 minutes for the emergency vehicles to arrive at 211th Lane. I believe the project engineers/designers need to drive

	out to some of the rural residents affected and check what their new alternate route may be. For me it would add 10-15 minutes to my work commute and an extra 5-6 miles every day and on gravel, instead of paved Hwy 14. The postcard announcing the open house was sent to residents of Eagle Lake, but us rural individuals did not receive it. Was it sent to St. Clair and Madison Lake residents?
	Don't like the only rights
	I believe this concept would be just another temporary fix and waste of money, just like the fixes that MnDOT spent $3.3 million dollars on over the past 5 years.
	Reduces my access significantly.
	Right in right out at 598 doesn't make any sense at 598 where a substantial amount of the traffic wants to go West on Hwy 14. This has to allow better access to 14 west in order to be an improvement. High T is the obvious answer for that intersection.
	Needs to be full access in and out. Don't care for any of the options.
	How does this affect the value of properties on the roads that are shut of? All of this has already been redone multiple times. I hope we are looking at getting new "engineeers" if we can even call them that. Will owners of the land be compensated for the lesser valuations? Will this lead up to residents having accidents on highway 60 waiting to turn? Sure hope the government can get this right. Prefect example of how government operates. Do the same thing multiple times and waste money. Why are we shutting off things at different intersections when Casey's and hwy 60 are the real problem. Another example of a poor decision of the city council idiots of eagle lake to let Casey's move in there.
	If there is no High T at 598th, then any other scenario is just wasted money upon the last two wasted money improvement projects that have attempted to resolve this. A High T makes sense, works to provide access to the city and fits into the land available. It would probably also promote business development at the intersection of 598th and Hwy 14 that has been vacant for 30 + years!
	Right turn only at 598th is a ridiculous option.
	Minimal access to town. Large level of relocation and effort for minimal results.
	Would effect the businesses at Csah56 and don't see how theres enough adequate room at 17/27 for full interchange.
	Must have full access to go east west leaving Eagle Lake at both me and access points. Do not want overpasses. Would rather it go back to the way it was years ago. The J turn is the most dangerous option. Do not support funding overpasses for this. Would consider speed reduction. Need protected acceleration lanes for traffic entering 14 heading West.
	Casey's intersection still not good enough.
	The right in right out at 56 still presents numerous safety issues.
	This would close almost all Eagle Lake access points and make the Caseys intersection right turn only. This won't suffice with the amount of extra traffic from nearly the whole town on Eagle Lake....
	With the additional amount of traffic I don't believe a right only turn at Casey's would work.
	We do NOT want to see a full interchange at the intersection of County Road 17 (604th Avenue). We already see high speed traffic that uses that road to access local lakes when other options (like Hwy 22, CR 12 and Hwy 60) are available. Having lived on this road (CR 27/604th LN) for 20 years, we see a big increase of traffic in the summer with hauling boats, pontoons, etc. and excessive speed from motorcycles and other vehicles that pass the Sakatah Trail and hammer down. There are local farmers who use this road and need a safe way to access their fields and homes without dealing with excessive traffic that isn't necessary. Ever since the northbound left turn lane was closed there have been no major accidents and traffic down CR17/27/604th Ave has been more reasonable. This option would be overkill. Those who want to head east will just come to the current intersection and turn right. Those who want to head towards Mankato will go east, ignoring this interchange altogether. As a rural resident who come from Eagle Lake sometimes, I will change up which way I go. Coming from CR55 can be tricky as the trees can block traffic when making a plan to cross over and access the turn lane for CR17/27. When crossing at

	CR17 it is easy to simply cross into the existing turn lane and proceed to the J-turn. Additionally, there is a cemetery located right next to that very intersection. Putting a full interchange there would be extremely disruptive. As with all of the concepts, a full interchange makes sense at Hwy 60. Sometime in the future the desire to move south with 60 and connect with 90 will likely present itself. Plan for it.
	Typical design interchange. People know how to use it.

Engagement Materials

Pop-Up Table Plot Activity



Intersection Treatments Pop -Up Board

Intersection Treatments

High-T

In a High-T intersection, Highway 14 traffic proceeds straight through without stopping. Traffic to and from the cross road can enter and exit on one side of Highway 14.

Full Access Interchange

Interchange maintains full access for traffic entering and exiting Highway 14.

Right-In/Right-Out (RIRO)

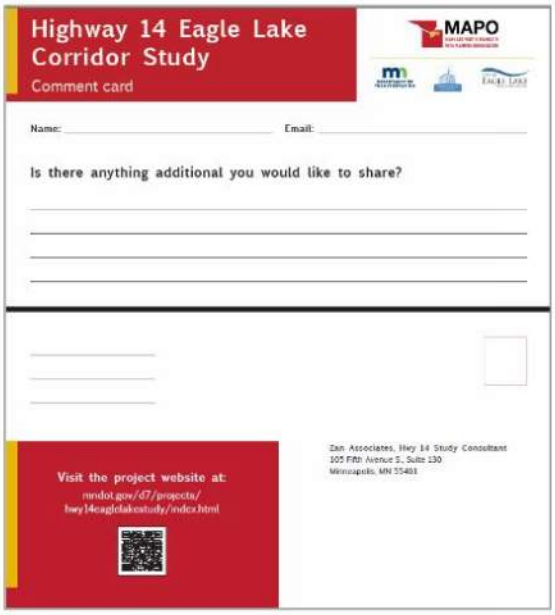
Only right turns are permitted while entering and exiting Highway 14. Left turns are not permitted.

Overpass

A bridge separates Highway 14 and cross street traffic.

Highway 14 Eagle Lake Corridor Study

Comment Card



Highway 14 Eagle Lake Corridor Study

Comment card

Name: _____ Email: _____

Is there anything additional you would like to share?

Visit the project website at:
mndot.gov/d7/projects/hwy14eaglelakestudy/index.html

Dan Associates, Hwy 14 Study Consultant
105 Fifth Avenue S., Suite 130
Minneapolis, MN 55401

Open House Boards

Study Overview

About this study

The Mankato/North Mankato Area Planning Organization (MAPO) is partnering with MnDOT and local communities to study and plan for the future of Hwy 14 in the Eagle Lake area.

The portion of the highway between County Road 12 and Hwy 60 currently experiences various safety and mobility issues. This study will look at opportunities for future improvements to address these issues, while also incorporating the community's goals and needs.

The study will consider both at-grade and grade-separated intersection improvements, lane needs, traffic control, and pedestrian and bicycle crossing enhancements.

Timeline

Jul. – Sept. 2024
Gather input on project area issues and community priorities

Jan. – Apr. 2025
Develop alternatives and present for public feedback

May – Jun. 2025
Create implementation plan for potential short term and long term improvements along the corridor

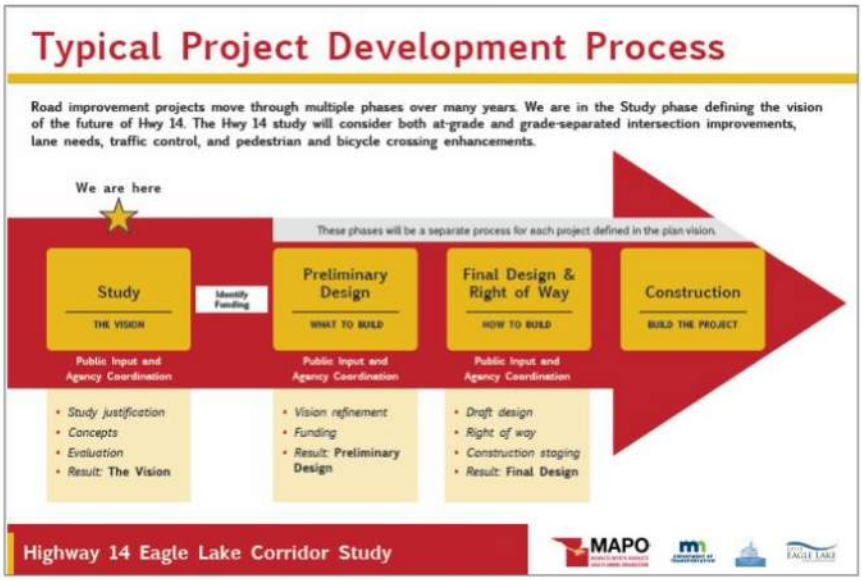
Study goals

Define a long-term transportation system vision for Hwy 14 that ensures safety, mobility, economic vitality, resiliency, and access for all modes of travel.

Secure public and agency support for the system vision where community input and needs are meaningfully incorporated into the recommended vision and the study recommendations are adopted by applicable agencies.

Develop a detailed, feasible implementation plan outlining future improvements, sequencing and triggers, timing, cost, and agency responsibility.

Highway 14 Eagle Lake Corridor Study


Typical Project Development Process
Road improvement projects move through multiple phases over many years. We are in the Study phase defining the vision of the future of Hwy 14. The Hwy 14 study will consider both at-grade and grade-separated intersection improvements, lane needs, traffic control, and pedestrian and bicycle crossing enhancements.
We are here
These phases will be a separate process for each project defined in the plan vision.
Study
THE VISION
Identify Funding
Preliminary Design
WHAT TO BUILD
Final Design & Right of Way
HOW TO BUILD
Construction
BUILD THE PROJECT
Public Input and Agency Coordination
Public Input and Agency Coordination
Public Input and Agency Coordination
• Study justification
• Concepts
• Evaluation
• Result: The Vision
• Vision refinement
• Funding
• Result: Preliminary Design
• Draft design
• Right of way
• Construction staging
• Result: Final Design
Highway 14 Eagle Lake Corridor Study
MAPO


Existing Traffic
Eagle Lake
216th St
Parkway Ave
Eagle Lake
211th St
206th St
610th Ave
613th Ave
597th Ave
602nd Ave
5,000
200
6,800
600
3,700
21,600
600
900
900
100
20,000
220
<100
6,800
13,100
100
Existing Traffic Conditions
Movements with high delay
Some vehicle movements operate with moderate to high delay
All vehicle movements operate with minimal to low delay
Existing (2024) daily volume on local/county road
Existing (2024) daily volume on Hwy 14
Intersections operate within the engineering standard, even though some single movements experience longer delays.
Highway 14 Eagle Lake Corridor Study
MAPO

Crash History

- Between 2019 and 2023, **171 crashes** were reported along Hwy 14
- 74 of the 171 reported crashes were **intersection related**
- **Three (3) intersections** have crash rates significantly higher than intersections with similar characteristics (@ 598th Avenue / CR 56, Parkway Avenue / CR 17, and Highway 60)
- The study corridor has a **crash rate significantly higher** than corridors with similar characteristics
- The study corridor has an **above average crash severity rate** when compared to corridors with similar characteristics, but is within the normal range
- 5 fatalities and 7 serious injury crashes have occurred within the last 10 years.

Highway 14 Eagle Lake Corridor Study

Environmental – Water Resources

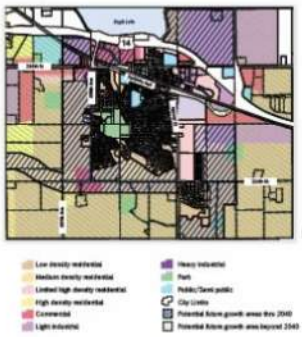
Sensitive environmental resources, including public waters and wetlands, exist in close proximity to Highway 14.

Highway 14 Eagle Lake Corridor Study

Land Use

Existing land use

Forecasted development timing



The study area is anticipated to continue to grow. This results in higher growth potential along cross-streets.

Highway 14 Eagle Lake Corridor Study

Future No-Build Traffic

Existing movements with delays worsen by 2045 without improvements, degrading intersection operations and mainline mobility.

Highway 14 Eagle Lake Corridor Study

Alternative Transportation

Pedestrian and Bicycle

Grade-separated trails exist at County Hwy 12 and along the railroad underpass to Hwy 14. No additional trail crossings exist in the study area.

Transit

Limited transit routes and stops exist in the study area. The remainder of the area is served by True Transit, dial-a-ride service.

Highway 14 Eagle Lake Corridor Study

Concept A

Safety	Moderate Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Minimal Traffic Rerouting
Accessibility	One Full Access & One Partial Access to Eagle Lake, Parkway Ave (CSAH 17) Underpass
Fiscal Considerations	Highest Cost
Property Impacts	4 Partially Impacted Properties

How well does Concept A meet your needs?

This option **meets** my needs

This option only **partially meets** my needs

This option does **not meet** my needs

Concept B

Safety	Moderate Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Some Traffic Rerouting Required, Increased Volume along Le Ray Ave (CSAH 55)
Accessibility	One Full Access & One Partial Access to Eagle Lake, Parkway Ave (CSAH 17)/ Le Ray Ave (CSAH 55) Overpass
Fiscal Considerations	High Cost
Property Impacts	2 Partially Impacted Properties

How well does Concept B meet your needs?

This option **meets** my needs

This option only **partially meets** my needs

This option does **not meet** my needs

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Concept C

Safety	Moderate Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Some Traffic Rerouting Required, Increased Volume along 598th Ave (CSAH 56)
Accessibility	Two Full Accesses to Eagle Lake
Fiscal Considerations	High Cost
Property Impacts	3 Partially Impacted Properties

How well does Concept C meet your needs?

This option **meets** my needs

This option only **partially meets** my needs

This option does **not meet** my needs

Concept D

Safety	High Crash Reduction
Traffic Flow	Minimal Delay/Backups
Traffic Impacts	Some Traffic Rerouting Required, Increased Volume along Parkway Ave (CSAH 17)
Accessibility	One Full Access & One Partial Access to Eagle Lake
Fiscal Considerations	Moderate Cost
Property Impacts	4 Partially Impacted Properties

How well does Concept D meet your needs?

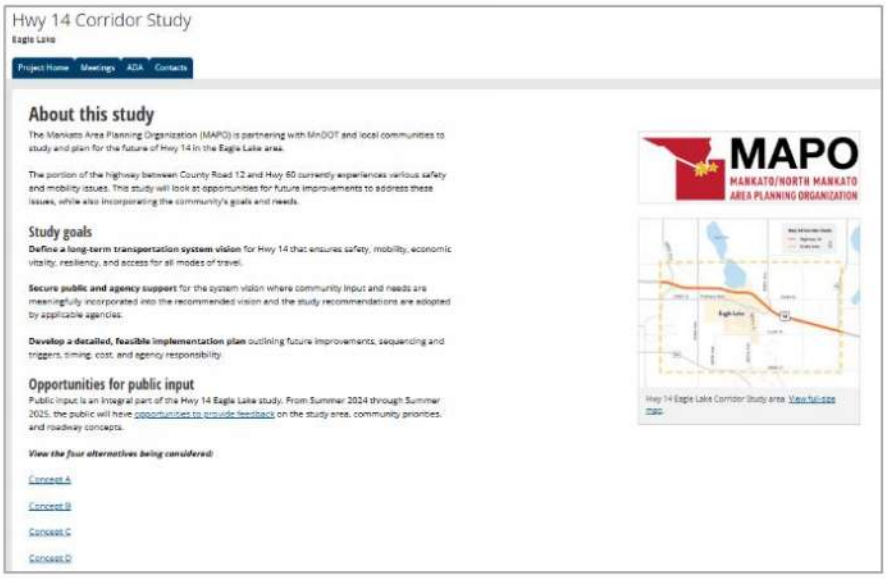
This option **meets** my needs

This option only **partially meets** my needs

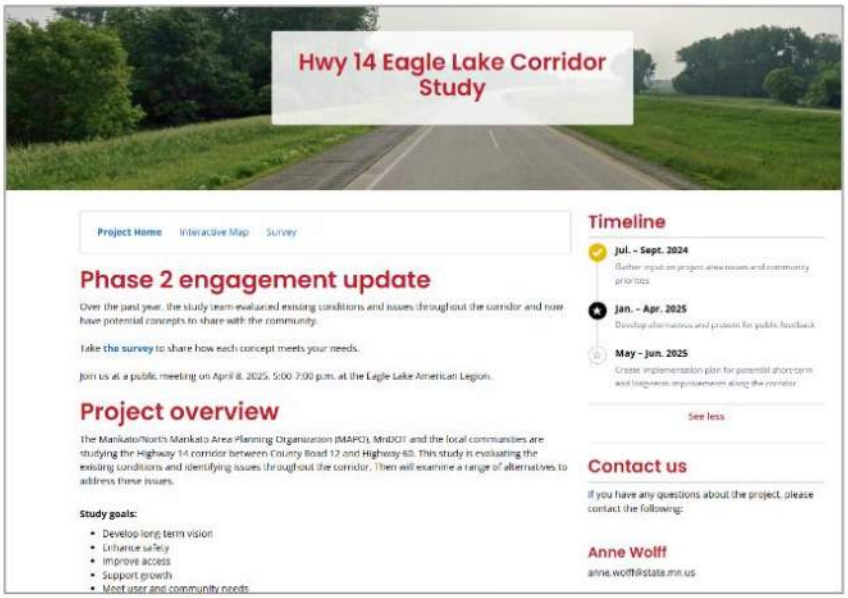
This option does **not meet** my needs

Communications Materials

MnDOT Website



Social Pinpoint Website



Social Media Graphic and Mailer

Appendix G – Level 1 and Level 2 Screening

Evaluation Matrices and Cost Estimate

Summary

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Level 1 Screening Evaluation Matix

					High T or Interchange at MN 60							Interchange at MN 60	
Corridor Needs	**Detailed Need**	**Evaluation Criteria**	**Methodology**	**No-Build**	**Hybrid Option 1A High T at CSAH 56 Interchange at CSAH 17**	**Hybrid Option 1B High T at CSAH 56 Overpass at CSAH 17**	**Hybrid Option 1C High T at CSAH 56 RIRO at CSAH 17**	**Hybrid Option 1D Interchange at CSAH 17**	**Hybrid Option 1E High T at CSAH 56 High T at CSAH 17**	**Hybrid Option 1F High T at CSAH 56 High T at shifted CSAH 27 RIRO at CSAH 17**	**Hybrid Option 1G RIRO at CSAH 56 Interchange at CSAH 17**	**Freeway Option 2B High T at CSAH 56**	**Freeway Option 2C Overpass at CSAH 17**
Vehicle Safety	Intersection Crashes Segment Crashes	Anticipated Number of Crashes Reduced	Crash Reduction (# Crashes)	0	19	26	19	41	17	19	24	34	51
		Confict Points	Conflict Points (Crossing /Merge / Diverge)	139	18	14	18	11	21	23	13	**11**	4
		Crash Reduction - Frequency	# Intersection Crashes	69	28%	38%	28%	59%	24%	27%	35%	49%	74%
		Crash Reduction - Severity	# K-A Intersection Crashes	5	57%	63%	58%	73%	53%	58%	63%	73%	83%
Vehicle Mobility	Delay	Mainline Delay	Synchro (LOS) [AM/PM]	F/F	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A
		Sidestreet Delay	Synchro (LOS) [AM/PM]	F/F	B/A	B/D	C/C	A/B	B/C	B/C	B/C	B/C	F/F
		Overall Intersection Delay	Synchro (LOS) [AM/PM]	F/F	A/A	A/A	A/A	A/A	A/A	A/A	A/A	A/A	D/D
		Queue Analysis	Evaluation of queue lengths	1+ mile	100 ft or less	225 ft or less	100 ft or less	125 ft or less	175 ft or less	150 ft or less	50 ft or less	175 ft or less	475 NBT/525 WBL
	Accessibility	Allows for Future County 90 Extension	Design Constraints	Yes	No - High T	No - High T	No - High T	No - High T	No - High T	No - High T	No - High T	Yes	Yes
					Yes - Interchange	Yes - Interchange	Yes - Interchange	Yes - Interchange	Yes - Interchange	Yes - Interchange	Yes - Interchange		
		Rerouted Volume	Daily Traffic added to CSAH 17 (Parkway Ave)	None	None	3,600 (2045)	1,700 (2045)	7,600 (2045)	1,800 (2045)	1,200 (2045)	3,600 (2045)	1,800 (2045)	3,600 (2045) / 11,200 Total Rerouted
		Accessibility to Eagle Lake	Qualitiative analysis (Good/Fair/Poor)	Good	Good	Fair	Fair	Poor	Good	Good	Fair	Poor	Poor
Additional Considerations	Social, Economic, and Environmental	Property Impacts	Number	0	4	4	2	4	3	4	4	4	4
		Relocations (Residential)	Number	0	0	0	0	0	0	0	0	0	0
		Relocations (Business)	Number	0	0	0	0	0	0	0	0	0	0
		Wetland/Floodplain Impacts	Acres	0	1.79	0.23	0	1.79	1.79	0	1.79	0.21	0.23
		Cost	High Level Cost Estimate	0	$80-95 M	$70-85 M	$75-90 M	$50-65 M	$75-90 M	$80-95 M	$55-70 M	$50-60M	$50-60M

Level 2 Screening Evaluation Matix

Corridor Needs	Detailed Need	Evaluation Criteria	Methodology	No-Build	Option A Hybrid Option 1B High T at CSAH 56 Underpass and RIRO at CSAH 17	Option B Hybrid Option 1C High T at CSAH 56 RIRO at CSAH 17 Overpass at CSAH 55	Option C Hybrid Option 1E High T at CSAH 56 High T at CSAH 17	Option D Hybrid Option 1G RIRO at CSAH 56 Interchange at CSAH 17
Vehicle Safety	Intersection Crashes Segment Crashes	Anticipated Number of	Crash Reduction (# Crashes)	0	25-29	19-24	16-20	24-28
		Confict Points	Conflict Points (Crossing /Merge / Diverge)	139	15-18	15-18	18-21	10-13
		Crash Reduction - Frequency	# Intersection Crashes	69	37-42%	28-34%	24-29%	35-40%
		Crash Reduction - Severity	# K-A Intersection Crashes	5	63-68%	58-63%	53-57%	63-67%
		Risk Factor Analysis	Corridor assessment (Risk Conflict Graph Analysis; Surrogate Safety)	16,900	CSAH 56 with EBR Yield: 400	CSAH 56 with EBR Yield: 500	CSAH 56 w/ AWS & EBR Yield 400	200
Vehicle Mobility	Delay	Mainline Delay	Vissim (LOS) [AM/PM]	F/F	A/A	CSAH 56 with EBR Stop: A/F (Queue extends onto mainline) CSAH 56 with EBR Yield: A/A	CSAH 56 with EBR Stop: A/F (Queue extends onto mainline) CSAH 56 w/ AWS & EBR Yield or Stop: A/A	A/A
		Sidestreet Delay	Vissim (LOS) [AM/PM]	F/F	CSAH 56 with EBR Stop: NBL LOS E (36 sec/veh)/ EBR LOS F (90 sec/veh) CSAH 56 with EBR Yield: NBL LOS E (36 sec/veh)/ EBR LOS A (9 sec/veh)	CSAH 56 with EBR Stop: NBL LOS E (49 sec/veh)/ EBR LOS F (303 sec/veh) CSAH 56 with EBR Yield: NBL LOS E (49 sec/veh)/ EBR LOS B (10 sec/veh)	CSAH 56 with EBR Stop: NBL LOS F (219 sec/veh)/ EBR LOS F (473 sec/veh) CSAH 56 w/ AWS & EBR Yield: NBL LOS C (24 sec/veh)/ EBR LOS A (9 sec/veh)	C/D
		Overall Intersection Delay	Vissim (LOS) [AM/PM]	F/F	A/B	CSAH 56 with EBR Stop: A/E CSAH 56 with EBR Yield: A/A	CSAH 56 with EBR Stop: E/F CSAH 56 w/ AWS & EBR Yield A/A	A/A
		Queue Analysis	Evaluation of queue lengths	1+ mile	CSAH 56 with EBR Stop: NBL 400 ft / EBR 825 ft CSAH 56 with EBR Yield: NBL 400 ft / EBR 300 ft	CSAH 56 with EBR Stop: NBL 500 ft / EBR 1,900 ft CSAH 56 with EBR Yield: NBL 500 ft / EBR 325 ft	CSAH 56 with EBR Stop: NBL 2,250 ft / EBR 2,550 ft CSAH 56 w/ AWS & EBR Yield NBL 125 ft / EBR 275 ft	All Queues < 300 ft
	Accessibility	Travel Time (on/off Hwy 14 and north/south connectivity)	Additional Trip Length	Miles	0.00	-0.75	2.50	0.00
		Allows for Future County 90	Design Constraints	Yes	No - High T Yes - Interchange	No - High T Yes - Interchange	No - High T Yes - Interchange	No - High T Yes - Interchange
		Rerouted Volume	Daily Traffic Rerouted	None	None	1,800 (2045)	2,000 (2045)	3,600 (2045)
		Accessibility to Eagle Lake	Qualitiative analysis (Good/Fair/Poor)	Good	Good (1 Full Access, 1 Partial Access, Underpass)	Good (1 Full Access, 1 Partial Access, Overpass)	Good (2 Full Accesses)	Fair (1 Full Access, 1 Partial Access)
Additional Considerations	Walkability/ Bikeability	Ability for pedestrians and bicylists to move safely across Hwy 14	Vehicle to ped/bike conflict points Ped/bike comfort level (qualitiative based vehicle speeds, crossing distance, proximity to next crossing)		Yes - 1 location	Yes - 1 location	No Multimodal Crossing Ability, would need a pedestrain overpass / underpass	Yes - 1 location
	Social, Economic, and Environmental	Property Impacts	Number	0	4	2	3	4
		Relocations (Residential)	Number	0	0	0	0	0
		Relocations (Business)	Number	0	0	0	0	0
		Wetland/ Floodplain Impacts	Acres	0	0.34	0.17	1.79	1.79
		Cost	Planning level estimate (2025 dollars)	0	$64-75M	$56-67M	$57-65M	$36-45M
		Benefit-Cost	Planning level estimate, crash reduction, vissim operational analysis	0	3.15	3.38	3.33	5.23

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Highway 14 Eagle Lake Corridor Study
Concept Alternative Cost Estimates (2025 Dollars)

Concept	594th	CSAH 56		CSAH 55		CSAH 17		TWP RD 332	612th*	TH 60 - Interchange	TH 60 - High T	Total Corridor Cost with TH 60 High-T	Total Corridor Cost with TH 60 Interchange	Cost Ranges Used in Evaluation Matrix (Includes contingencies due to Planning Level stage of work)
A	$80,000.00	High T	$28,717,000.00	Closed		RIRO Overpass	$21,700,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$64,500,000.00**	**$71,800,000.00**	**$64-$75M**
B	$80,000.00	High T	$28,717,000.00	Overpass	$11,500,000.00	RIRO	$3,000,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$57,300,000.00**	**$64,600,000.00**	**$56-$67M**
C	$80,000.00	High T	$28,717,000.00	Closed		High T	$13,643,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$56,500,000.00**	**$63,700,000.00**	**$57-$65M**
D	$80,000.00	RIRO	$1,450,000.00	Closed		Interchange	$19,745,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$35,300,000.00**	**$42,600,000.00**	**$36-$45M**
D2	$80,000.00	High T	$28,717,000.00	Closed		Interchange	$19,745,000.00	$80,000.00		$21,151,000.00	$13,902,000.00	**$62,600,000.00**	**$70,000,000.00**	**$63-$75M**

**Removal Costs included in the TH 60 Interchange and High-T*

Appendix H – 2045 Build Vissim Operational Results

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Option A/Hybrid Option 1B with EBR Stop – 2045 AM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	68	-	226	294	6 - A	-	5 - A	6 - A	4 - A	0	50	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	228	396	-	624	3 - A	3 - A	-	3 - A		25	225	25	225	-	-
	SB	-	329	82	411	-	4 - A	2 - A	4 - A		-	-	25	225	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	166	-	66	232	5 - A	-	2 - A	5 - A		25	100	-	-	0	0
	NB	-	558	125	683	-	2 - A	1 - A	2 - A		-	-	25	150	0	50
	SB	80	475	-	555	2 - A	4 - A	-	4 - A		0	100	25	200	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	607	217	824	-	0 - A	13 - B	4 - A	6 - A	-	-	0	0	25	200
	WB	119	1272	-	1391	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	369	-	103	472	36 - E	-	1 - A	29 - D		100	400	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at WB TH 14 *Right-In/Right-Out*	EB	-	693	-	693	-	0 - A	-	0 - A	3 - A	-	-	0	0	-	-
	WB	-	1274	110	1384	-	2 - A	4 - A	3 - A		-	-	0	0	0	0
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	-	-	117	117	-	-	18 - C	18 - C		-	-	-	-	25	175
CSAH 17/27 at 216th St *Stop Control*	EB	5	-	105	110	10 - B	-	8 - A	9 - A	4 - A	25	125	-	-	25	150
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	27	25	-	52	2 - A	0 - A	-	2 - A		0	50	0	0	-	-
	SB	-	40	90	130	-	1 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at EB TH 14 *Right-In/Right-Out*	EB	20	-	5	25	10 - B	-	7 - A	10 - B	1 - A	25	100	-	-	25	100
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	32	75	107	-	1 - A	1 - A	1 - A		-	-	0	0	0	0
	SB	15	130	-	145	2 - A	0 - A	-	1 - A		0	25	0	0	-	-
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	175	-	11	186	3 - A	-	4 - A	4 - A	2 - A	0	100	-	-	0	100
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	17	18	35	-	2 - A	2 - A	2 - A		-	-	0	75	0	75
	SB	45	32	-	77	0 - A	0 - A	-	0 - A		0	25	0	25	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	25	-	23	48	3 - A	-	2 - A	3 - A		0	50	-	-	0	50
	NB	13	179	-	192	1 - A	1 - A	-	1 - A		0	0	0	0	-	-
	SB	-	52	506	558	-	2 - A	2 - A	2 - A		-	-	25	175	25	175

MAPO MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

Option A/Hybrid Option 1B with EBR Stop – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	81	-	209	290	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	124	328	-	452	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
	SB	-	594	111	705	-	3 - A	1 - A	3 - A		-	-	25	250	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	176	-	51	227	4 - A	-	2 - A	4 - A		25	75	-	-	0	0
	NB	-	400	328	728	-	2 - A	2 - A	2 - A		-	-	25	175	25	100
	SB	208	594	-	802	2 - A	4 - A	-	4 - A		25	125	25	275	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	1292	424	1716	-	1 - A	90 - F	23 - C	14 - B	-	-	0	0	350	825
	WB	96	1063	-	1159	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	154	-	127	281	12 - B	-	1 - A	8 - A		25	125	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at WB TH 14 *Right-In/Right-Out*	EB	-	1413	-	1413	-	1 - A	-	1 - A	2 - A	-	-	0	0	-	-
	WB	-	1099	168	1267	-	2 - A	4 - A	3 - A		-	-	0	0	0	0
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	-	-	61	61	-	-	11 - B	11 - B		-	-	-	-	25	75
CSAH 17/27 at 216th St *Stop Control*	EB	71	-	98	169	16 - C	-	11 - B	14 - B	7 - A	25	200	-	-	25	225
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	6	62	-	68	1 - A	0 - A	-	1 - A		0	25	0	0	-	-
	SB	-	18	55	73	-	0 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at EB TH 14 *Right-In/Right-Out*	EB	53	-	14	67	10 - B	-	7 - A	10 - B	3 - A	25	125	-	-	25	125
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	15	73	88	-	1 - A	1 - A	1 - A		-	-	0	0	0	0
	SB	9	107	-	116	1 - A	0 - A	-	1 - A		0	25	0	0	-	-
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	454	-	15	469	5 - A	-	4 - A	5 - A	5 - A	25	150	-	-	25	150
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	12	19	31	-	3 - A	3 - A	3 - A		-	-	0	50	0	50
	SB	26	12	-	38	1 - A	1 - A	-	1 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	10	-	38	48	4 - A	-	5 - A	5 - A		25	50	-	-	25	50
	NB	4	462	-	466	1 - A	2 - A	-	2 - A		0	25	0	25	-	-
	SB	-	28	410	438	-	3 - A	2 - A	3 - A		-	-	25	175	25	175

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Option A/Hybrid Option 1B with EBR Yield – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	81	-	209	290	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	124	328	-	452	2 - A	2 - A	-	2 - A		25	175	25	175	-	-
	SB	-	594	111	705	-	3 - A	1 - A	3 - A		-	-	25	275	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	176	-	51	227	4 - A	-	2 - A	4 - A		25	100	-	-	0	0
	NB	-	400	328	728	-	2 - A	2 - A	2 - A		-	-	25	150	25	125
	SB	208	594	-	802	2 - A	4 - A	-	4 - A		25	125	25	275	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	1292	424	1716	-	1 - A	9 - A	3 - A	3 - A	-	-	0	0	25	300
	WB	96	1063	-	1159	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	154	-	127	281	12 - B	-	1 - A	8 - A		25	125	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at WB TH 14 *Right-In/Right-Out*	EB	-	1413	-	1413	-	1 - A	-	1 - A	2 - A	-	-	0	0	-	-
	WB	-	1099	168	1267	-	2 - A	4 - A	3 - A		-	-	0	0	0	0
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	-	-	61	61	-	-	11 - B	11 - B		-	-	-	-	25	75
CSAH 17/27 at 216th St *Stop Control*	EB	71	-	98	169	17 - C	-	11 - B	14 - B	7 - A	25	200	-	-	25	225
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	6	62	-	68	1 - A	0 - A	-	1 - A		0	25	0	0	-	-
	SB	-	18	55	73	-	0 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at EB TH 14 *Right-In/Right-Out*	EB	53	-	14	67	10 - B	-	7 - A	10 - B	3 - A	25	100	-	-	25	100
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	15	73	88	-	1 - A	1 - A	1 - A		-	-	0	0	0	0
	SB	9	107	-	116	1 - A	0 - A	-	1 - A		0	25	0	25	-	-
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	454	-	15	469	6 - A	-	4 - A	6 - A	5 - A	25	175	-	-	25	175
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	12	19	31	-	3 - A	3 - A	3 - A		-	-	0	50	0	50
	SB	26	12	-	38	1 - A	1 - A	-	1 - A		0	75	0	75	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	10	-	38	48	4 - A	-	5 - A	5 - A		25	50	-	-	25	50
	NB	4	462	-	466	1 - A	2 - A	-	2 - A		0	0	0	0	-	-
	SB	-	28	410	438	-	3 - A	2 - A	3 - A		-	-	25	175	25	175

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MANKATO/NORTH MANKATO
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Option B/Hybrid Option 1C with EBR Stop – 2045 AM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	68	-	226	294	6 - A	-	5 - A	6 - A	4 - A	0	50	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	228	396	-	624	3 - A	3 - A	-	3 - A		25	275	25	275	-	-
	SB	-	329	82	411	-	4 - A	2 - A	4 - A		-	-	25	250	25	100
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	166	-	66	232	5 - A	-	2 - A	5 - A		25	100	-	-	0	0
	NB	-	558	125	683	-	2 - A	1 - A	2 - A		-	-	25	125	0	50
	SB	80	475	-	555	2 - A	3 - A	-	3 - A		0	75	25	200	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	587	237	824	-	0 - A	15 - C	5 - A	9 - A	-	-	0	0	50	225
	WB	119	1245	-	1364	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	396	-	118	514	49 - E	-	4 - A	39 - E		150	500	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at 216th St *Stop Control*	EB	25	-	-	25	12 - B	-	-	12 - B	2 - A	25	75	-	-	-	-
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	105	5	-	110	2 - A	2 - A	-	2 - A		0	75	0	25	-	-
	SB	-	90	40	130	-	0 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at TH 14 *Right-In/Right-Out*	EB	-	700	5	705	-	0 - A	2 - A	1 - A	2 - A	-	-	0	0	0	0
	WB	-	1274	110	1384	-	2 - A	5 - A	3 - A		-	-	0	0	0	0
	NB	-	-	75	75	-	-	10 - B	10 - B		-	-	-	-	25	125
	SB	-	-	90	90	-	-	16 - C	16 - C		-	-	-	-	25	150
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	175	-	11	186	4 - A	-	3 - A	4 - A	3 - A	0	75	-	-	0	75
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	17	18	35	-	2 - A	2 - A	2 - A		-	-	0	75	0	75
	SB	45	32	-	77	0 - A	0 - A	-	0 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	25	-	23	48	3 - A	-	2 - A	3 - A		0	50	-	-	0	50
	NB	13	179	-	192	1 - A	1 - A	-	1 - A		0	25	0	25	-	-
	SB	-	52	506	558	-	2 - A	2 - A	2 - A		-	-	25	175	25	175

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Option B/Hybrid Option 1C with EBR Stop – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	75	-	208	283	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	121	331	-	452	2 - A	2 - A	-	2 - A		25	175	25	175	-	-
	SB	-	590	115	705	-	4 - A	1 - A	4 - A		-	-	25	325	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	184	-	49	233	4 - A	-	2 - A	4 - A		25	100	-	-	0	0
	NB	-	403	325	728	-	3 - A	2 - A	3 - A		-	-	25	150	25	125
	SB	206	592	-	798	3 - A	4 - A	-	4 - A		25	125	25	300	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	1231	485	1716	-	3 - A	303 - F	83 - F	45 - E	-	-	0	0	1200	1900
	WB	92	1058	-	1150	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	159	-	139	298	12 - B	-	1 - A	7 - A		25	125	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at 216th St *Stop Control*	EB	65	-	-	65	14 - B	-	-	14 - B	4 - A	25	100	-	-	-	-
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	90	75	-	165	1 - A	1 - A	-	1 - A		0	75	0	25	-	-
	SB	-	55	15	70	-	0 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at TH 14 *Right-In/Right-Out*	EB	-	1355	15	1370	-	1 - A	2 - A	2 - A	2 - A	-	-	0	0	0	0
	WB	-	1095	165	1260	-	2 - A	5 - A	3 - A		-	-	0	0	0	0
	NB	-	-	74	74	-	-	16 - C	16 - C		-	-	-	-	25	150
	SB	-	-	55	55	-	-	14 - B	14 - B		-	-	-	-	25	150
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	447	-	12	459	6 - A	-	5 - A	6 - A	5 - A	25	150	-	-	25	150
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	11	18	29	-	5 - A	4 - A	5 - A		-	-	25	75	25	75
	SB	24	12	-	36	1 - A	1 - A	-	1 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	8	-	38	46	5 - A	-	5 - A	5 - A		25	50	-	-	25	50
	NB	4	454	-	458	1 - A	2 - A	-	2 - A		0	25	0	25	-	-
	SB	-	28	407	435	-	3 - A	2 - A	3 - A		-	-	25	175	25	175

Option B/Hybrid Option 1C with EBR Yield – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	75	-	208	283	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	121	331	-	452	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
	SB	-	590	115	705	-	4 - A	1 - A	4 - A		-	-	25	325	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	184	-	49	233	4 - A	-	2 - A	4 - A		25	100	-	-	0	0
	NB	-	403	325	728	-	3 - A	2 - A	3 - A		-	-	25	150	25	125
	SB	206	592	-	798	3 - A	4 - A	-	4 - A		25	125	25	300	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	1231	485	1716	-	1 - A	10 - B	4 - A	3 - A	-	-	0	0	25	325
	WB	92	1058	-	1150	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	159	-	139	298	12 - B	-	1 - A	7 - A		25	125	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at 216th St *Stop Control*	EB	65	-	-	65	14 - B	-	-	14 - B	4 - A	25	100	-	-	-	-
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	90	75	-	165	1 - A	1 - A	-	1 - A		0	50	0	25	-	-
	SB	-	55	15	70	-	0 - A	1 - A	1 - A		-	-	0	0	0	0
CSAH 17/27 at TH 14 *Right-In/Right-Out*	EB	-	1355	15	1370	-	1 - A	2 - A	2 - A	2 - A	-	-	0	0	0	0
	WB	-	1095	165	1260	-	2 - A	5 - A	3 - A		-	-	0	0	0	0
	NB	-	-	74	74	-	-	17 - C	17 - C		-	-	-	-	25	150
	SB	-	-	55	55	-	-	14 - B	14 - B		-	-	-	-	25	150
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	447	-	12	459	6 - A	-	5 - A	6 - A	6 - A	25	175	-	-	25	175
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	11	18	29	-	5 - A	4 - A	5 - A		-	-	25	75	25	75
	SB	24	12	-	36	1 - A	1 - A	-	1 - A		0	25	0	25	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	8	-	38	46	5 - A	-	5 - A	5 - A		25	50	-	-	25	50
	NB	4	454	-	458	2 - A	2 - A	-	2 - A		0	25	0	25	-	-
	SB	-	28	407	435	-	3 - A	2 - A	3 - A		-	-	25	175	25	175

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MANKATO/NORTH MANKATO
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Option C/Hybrid Option 1E with EBR Stop – 2045 AM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	68	-	226	294	6 - A	-	5 - A	6 - A	4 - A	0	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	228	396	-	624	3 - A	3 - A	-	3 - A		25	200	25	200	-	-
	SB	-	329	82	411	-	4 - A	2 - A	4 - A		-	-	25	225	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	166	-	66	232	5 - A	-	2 - A	5 - A		25	100	-	-	0	0
	NB	-	558	125	683	-	2 - A	1 - A	2 - A		-	-	25	150	0	50
	SB	80	475	-	555	2 - A	4 - A	-	4 - A		0	75	25	250	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	613	222	835	-	0 - A	21 - C	6 - A	36 - E	-	-	0	0	50	225
	WB	249	1245	-	1494	3 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	396	-	183	579	219 - F	-	98 - F	180 - F		900	2250	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 *High-T*	EB	25	771	-	796	2 - A	1 - A	-	2 - A	2 - A	0	0	0	0	-	-
	WB	-	1379	5	1384	-	2 - A	8 - A	3 - A		-	-	0	0	0	75
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	15	-	115	130	8 - A	-	1 - A	2 - A		25	75	-	-	0	0
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	175	-	11	186	3 - A	-	3 - A	3 - A	2 - A	0	100	-	-	0	100
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	17	18	35	-	2 - A	2 - A	2 - A		-	-	0	75	0	75
	SB	45	32	-	77	0 - A	0 - A	-	0 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	25	-	23	48	2 - A	-	3 - A	3 - A		0	50	-	-	0	50
	NB	13	179	-	192	1 - A	1 - A	-	1 - A		0	0	0	0	-	-
	SB	-	52	506	558	-	2 - A	3 - A	3 - A		-	-	25	200	25	200

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

Option C/Hybrid Option 1E with EBR Stop – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	75	-	208	283	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	121	331	-	452	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
	SB	-	590	115	705	-	3 - A	1 - A	3 - A		-	-	25	275	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	184	-	49	233	4 - A	-	2 - A	4 - A		25	75	-	-	0	0
	NB	-	403	325	728	-	2 - A	2 - A	2 - A		-	-	25	175	25	125
	SB	206	592	-	798	2 - A	4 - A	-	4 - A		25	100	25	250	-	-
598th Ave/CSAH 56 at TH 14 *High-T*	EB	-	1271	445	1716	-	7 - A	473 - F	116 - F	60 - F	-	-	0	0	1625	2550
	WB	187	1058	-	1245	2 - A	1 - A	-	2 - A		0	0	0	0	-	-
	NB	159	-	213	372	16 - C	-	1 - A	8 - A		25	150	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 *High-T*	EB	65	1419	-	1484	2 - A	1 - A	-	2 - A	2 - A	0	0	0	0	-	-
	WB	-	1185	75	1260	-	2 - A	9 - A	3 - A		-	-	0	0	25	125
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	10	-	60	70	8 - A	-	1 - A	3 - A		0	50	-	-	0	0
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	447	-	12	459	6 - A	-	5 - A	6 - A	5 - A	25	150	-	-	25	150
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	11	18	29	-	4 - A	4 - A	4 - A		-	-	0	50	0	50
	SB	24	12	-	36	1 - A	1 - A	-	1 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	8	-	38	46	5 - A	-	6 - A	6 - A		25	50	-	-	25	50
	NB	4	454	-	458	1 - A	2 - A	-	2 - A		0	0	0	0	-	-
	SB	-	28	407	435	-	3 - A	2 - A	3 - A		-	-	25	175	25	175

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

DEPARTMENT OF TRANSPORTATION

Option C/Hybrid Option 1E with EBR Yield and WBL/NBL Stop – 2045 AM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	68	-	226	294	6 - A	-	5 - A	6 - A	4 - A	0	50	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	228	396	-	624	3 - A	3 - A	-	3 - A		25	225	25	225	-	-
	SB	-	329	82	411	-	4 - A	2 - A	4 - A		-	-	25	225	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	166	-	66	232	5 - A	-	2 - A	5 - A		25	100	-	-	0	0
	NB	-	558	125	683	-	2 - A	1 - A	2 - A		-	-	25	125	0	50
	SB	80	475	-	555	2 - A	3 - A	-	3 - A		0	75	25	225	-	-
598th Ave/CSAH 56 at TH 14 *High-T (All Way Stop, EBR Yield)*	EB	-	613	222	835	-	0 - A	5 - A	2 - A	6 - A	-	-	0	0	25	125
	WB	249	1245	-	1494	16 - C	1 - A	-	4 - A		0	25	0	0	-	-
	NB	396	-	183	579	24 - C	-	2 - A	17 - C		25	125	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 *High-T*	EB	25	771	-	796	2 - A	1 - A	-	2 - A	2 - A	0	0	0	0	-	-
	WB	-	1379	5	1384	-	2 - A	8 - A	3 - A		-	-	0	0	0	75
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	15	-	115	130	8 - A	-	1 - A	2 - A		25	75	-	-	0	0
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	175	-	11	186	3 - A	-	3 - A	3 - A	2 - A	0	100	-	-	0	100
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	17	18	35	-	2 - A	2 - A	2 - A		-	-	0	75	0	75
	SB	45	32	-	77	0 - A	0 - A	-	0 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	25	-	23	48	3 - A	-	2 - A	3 - A		0	50	-	-	0	50
	NB	13	179	-	192	1 - A	1 - A	-	1 - A		0	0	0	0	-	-
	SB	-	52	506	558	-	3 - A	3 - A	3 - A		-	-	25	200	25	200

Option C/Hybrid Option 1E with EBR Yield and WBL/NBL Stop – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	75	-	208	283	7 - A	-	4 - A	5 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	121	331	-	452	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
	SB	-	590	115	705	-	3 - A	1 - A	3 - A		-	-	25	275	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	184	-	49	233	4 - A	-	2 - A	4 - A		25	75	-	-	0	0
	NB	-	403	325	728	-	2 - A	2 - A	2 - A		-	-	25	150	25	125
	SB	206	592	-	798	2 - A	4 - A	-	4 - A		25	100	25	275	-	-
598th Ave/CSAH 56 at TH 14 *High-T (All Way Stop, EBR Yield)*	EB	-	1271	445	1716	-	1 - A	9 - A	4 - A	3 - A	-	-	0	0	25	275
	WB	187	1058	-	1245	14 - B	1 - A	-	4 - A		0	25	0	0	-	-
	NB	159	-	213	372	11 - B	-	1 - A	6 - A		0	0	-	-	0	0
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 *High-T*	EB	65	1419	-	1484	2 - A	1 - A	-	2 - A	2 - A	0	0	0	0	-	-
	WB	-	1185	75	1260	-	2 - A	9 - A	3 - A		-	-	0	0	25	125
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	10	-	60	70	8 - A	-	1 - A	3 - A		0	50	-	-	0	0
MN 60/CR 185 at TH 14 South Ramp *Roundabout*	EB	447	-	12	459	6 - A	-	5 - A	6 - A	5 - A	25	175	-	-	25	175
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	11	18	29	-	4 - A	4 - A	4 - A		-	-	0	50	0	50
	SB	24	12	-	36	1 - A	1 - A	-	1 - A		0	50	0	50	-	-
MN 60/CR 185 at TH 14 North Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	2 - A	-	-	-	-	-	-
	WB	8	-	38	46	5 - A	-	6 - A	6 - A		25	75	-	-	25	75
	NB	4	454	-	458	1 - A	2 - A	-	2 - A		0	25	0	25	-	-
	SB	-	28	407	435	-	2 - A	2 - A	2 - A		-	-	25	150	25	150

Option D/Hybrid Option 1G – 2045 AM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	68	-	226	294	7 - A	-	6 - A	7 - A	4 - A	0	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	228	396	-	624	3 - A	3 - A	-	3 - A		25	250	25	250	-	-
	SB	-	329	82	411	-	4 - A	2 - A	4 - A		-	-	25	200	0	75
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	166	-	66	232	5 - A	-	2 - A	5 - A		25	100	-	-	0	0
	NB	-	558	125	683	-	2 - A	1 - A	2 - A		-	-	25	150	0	75
	SB	80	475	-	555	2 - A	4 - A	-	4 - A		0	75	25	250	-	-
598th Ave/CSAH 56 at TH 14 *Right-In/Right-Out*	EB	-	618	217	835	-	0 - A	3 - A	1 - A	2 - A	-	-	0	0	0	0
	WB	-	1641	-	1641	-	2 - A	-	2 - A		-	-	0	0	-	-
	NB	-	-	103	103	-	-	9 - A	9 - A		-	-	-	-	25	125
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 North Ramp *Roundabout Interchange*	EB	-	-	-	0	-	-	-	-	9 - A	-	-	-	-	-	-
	WB	256	-	5	261	15 - C	-	10 - B	15 - C		25	300	-	-	25	300
	NB	409	29	-	438	2 - A	2 - A	-	2 - A		25	175	25	175	-	-
	SB	-	40	90	130	-	21 - C	18 - C	19 - C		-	-	25	200	25	200
CSAH 17/27 at TH 14 South Ramp *Roundabout Interchange*	EB	20	-	16	36	3 - A	-	4 - A	4 - A	3 - A	0	50	-	-	0	50
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	418	93	511	-	3 - A	3 - A	3 - A		-	-	25	225	25	225
	SB	15	281	-	296	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
MN 60/CR 185 at TH 14 *High T*	EB	175	629	-	804	2 - A	1 - A	-	2 - A	2 - A	0	0	0	0	-	-
	WB	-	890	23	913	-	0 - A	7 - A	1 - A		-	-	0	0	25	75
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	45	-	513	558	20 - C	-	3 - A	5 - A		25	100	-	-	0	0

Option D/Hybrid Option 1G – 2045 PM Peak Hour Operations

Intersection	Approach	Traffic Volumes (veh)				Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Demand Volumes				Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R	Total	L	T	R			Avg	Max	Avg	Max	Avg	Max
CSAH 12 at TH 14 North Ramp *Roundabout*	EB	75	-	208	283	7 - A	-	6 - A	7 - A	3 - A	25	75	-	-	0	0
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	121	331	-	452	2 - A	2 - A	-	2 - A		25	150	25	150	-	-
	SB	-	590	115	705	-	3 - A	1 - A	3 - A		-	-	25	225	0	50
CSAH 12 at TH 14 South Ramp *Roundabout*	EB	-	-	-	0	-	-	-	-	3 - A	-	-	-	-	-	-
	WB	184	-	49	233	3 - A	-	2 - A	3 - A		25	75	-	-	0	0
	NB	-	403	325	728	-	3 - A	2 - A	3 - A		-	-	25	200	25	125
	SB	206	592	-	798	2 - A	4 - A	-	4 - A		25	125	25	250	-	-
598th Ave/CSAH 56 at TH 14 *Right-In/Right-Out*	EB	-	1286	430	1716	-	1 - A	4 - A	2 - A	2 - A	-	-	0	0	0	0
	WB	-	1217	-	1217	-	1 - A	-	1 - A		-	-	0	0	-	-
	NB	-	-	129	129	-	-	17 - C	17 - C		-	-	-	-	25	150
	SB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
CSAH 17/27 at TH 14 North Ramp *Roundabout Interchange*	EB	-	-	-	0	-	-	-	-	4 - A	-	-	-	-	-	-
	WB	194	-	75	269	8 - A	-	8 - A	8 - A		25	200	-	-	25	200
	NB	163	72	-	235	1 - A	1 - A	-	1 - A		0	50	0	50	-	-
	SB	-	15	55	70	-	4 - A	4 - A	4 - A		-	-	25	75	25	75
CSAH 17/27 at TH 14 South Ramp *Roundabout Interchange*	EB	55	-	27	82	3 - A	-	3 - A	3 - A	1 - A	0	75	-	-	0	75
	WB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	NB	-	180	92	272	-	2 - A	1 - A	2 - A		-	-	25	100	25	100
	SB	15	199	-	214	1 - A	1 - A	-	1 - A		0	100	0	100	-	-
MN 60/CR 185 at TH 14 *High T*	EB	447	1000	-	1447	4 - A	2 - A	-	3 - A	2 - A	0	0	0	0	-	-
	WB	-	857	38	895	-	0 - A	10 - B	1 - A		-	-	0	0	25	100
	NB	-	-	-	0	-	-	-	-		-	-	-	-	-	-
	SB	24	-	411	435	27 - D	-	2 - A	4 - A		25	100	-	-	0	0

Appendix I – Recommended Concept D Layout

MAPO
MANKATO/NORTH MANKATO
AREA PLANNING ORGANIZATION

DEPARTMENT OF
TRANSPORTATION