
Steele County 2040
TRANSPORTATION PLAN

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EXECUTIVE SUMMARY

In coordination with local municipalities, Steele County prepared this Transportation Plan to understand the status and efficiency of the current transportation system and ensure transportation needs will continue to be met over the next 20 years. The Plan includes an analysis of existing conditions, establishment of long-term goals, objectives, and performance measures, and recommendations for future roadway management and maintenance. Below is a high-level summary of the Plan elements and key takeaways from each section:

PLAN ELEMENT	KEY TAKEAWAYS
Introduction: An overview of the planning process, framework, and stakeholder involvement.	Work on this Plan occurred from May 2020 through June 2021. Input from the community was gathered through open houses, surveys, and office hours with staff.
Existing Conditions: Studies trends and identifies opportunities in demographics, roadway function and management, traffic volumes, safety, freight movement, and multimodal transportation.	Steele County's population will stay relatively stable until 2030 and will then see a slight decline by 2060. The county's functional and jurisdictional allocation of roadways falls within FHWA guidelines. Only two roadways are currently approaching capacity, both within the City of Owatonna. Several intersections, mostly within Owatonna, experience higher than expected crash rates.
Goals, Objectives, and Performance Measures: Specifically identifies actionable goals and measures by which to meet these goals.	Vision Statement: The transportation vision for Steele County is to provide a safe, efficient, coordinated transportation system that is responsive to community values and meets the needs of all users within resource limitations.
Traffic Forecasts and Operational Needs: Forecasts expected traffic volumes for the year 2040 and potential operational needs based on these volumes.	Generally, roadways which currently experience high traffic volumes will continue to do so. Higher volumes are also anticipated on roadways that originate in the center of Owatonna and radiate outwards, such as Mineral Springs Road, Main Street, and Hoffman Drive. There are also significant volume increases on the western side of I-35, near the retail cluster along CSAH 2.
Future System Analysis: Details proposed roadway, safety, multimodal, and freight system improvements.	The county plans to update numerous functional and jurisdictional roadway changes, but the overall allotment of roadway types will remain consistent. Major projects for the next twenty years include construction of 29th Avenue and the Beltline. These new roadways will ensure future growth in traffic volumes is accommodated.
Implementation Plan: Offers strategies to assist county representatives in the implementation of recommended improvements.	Following Plan adoption, Steel County will work collaboratively to implement projects utilizing policies, processes, and funding opportunities.

INTRODUCTION

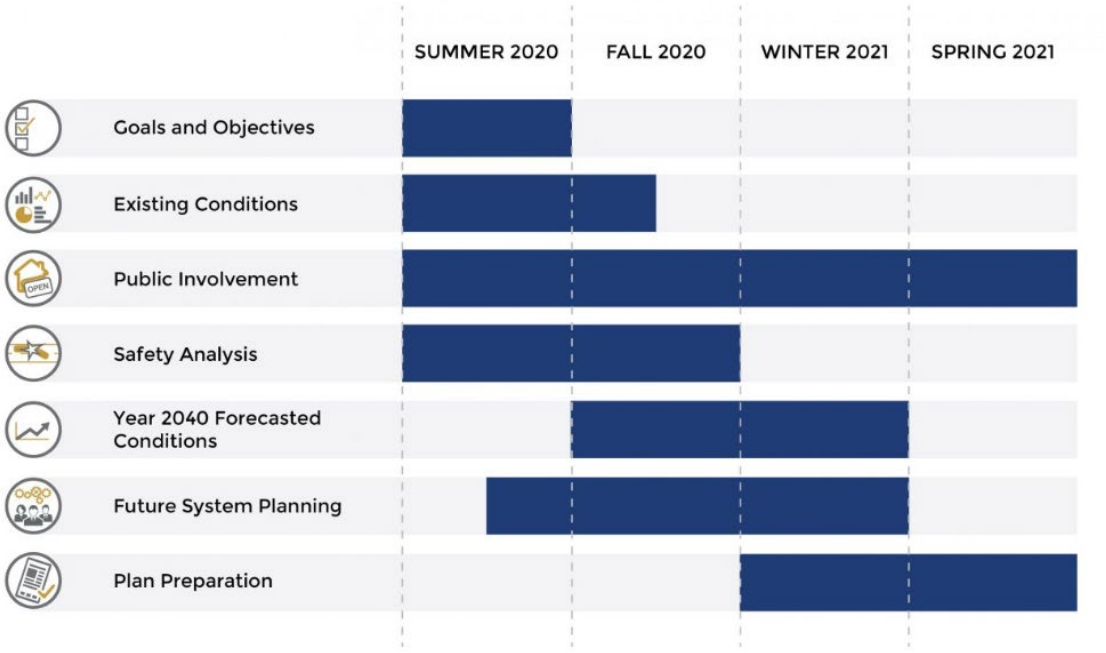
The Steele County 2040 Transportation Plan translates identified issues into specific, actionable initiatives and strategies. The Plan elements were created in coordination with other county efforts and those of other key study partners, cities, townships, and the Minnesota Department of Transportation (MnDOT). Important Plan elements include:

- Assessment of existing conditions and identification of issues and opportunities
- Establishment of long-term goals, objectives, and performance measures
- Preparation of 20-year traffic forecasts
- Completion of a future system planning analysis that proposes roadway improvements, classification changes, and multimodal improvements as part of a 20+ year multimodal transportation system
- Preparation of Plan implementation strategies and funding opportunities to advance recommended system improvements

PLAN APPROACH AND PROCESS

To create this Plan, the project team completed a series of tasks, facilitated stakeholder outreach, and organized public meetings to gather community feedback (see **Figure 1**). As each Plan element was completed, it formed a foundation upon which to begin the next element. Within each task, a series of activities were identified and completed. These activities included data collection, technical analysis, stakeholder coordination, financial planning, and implementation planning. The results of this work guided the creation of improvements for Steele County to complete. This Transportation Plan informs policymakers on transportation infrastructure assets and needed investments, while presenting findings in a comprehensive format to allow cooperation with city and county stakeholders.

FIGURE 1. SCHEDULE



PLAN FRAMEWORK

The county intends to use this Plan as an outline for decision-making and prioritizing investments. The Plan will inform decisions by elected leaders, residents, businesses, and other stakeholders throughout the county to achieve a goal of preservation and movement towards the county's goals for the next twenty years. The Plan is focused on five key elements, as listed below.

1 EXISTING CONDITIONS

The existing conditions section provides a view of the current transportation system. This includes demographics, roadway function and jurisdiction, traffic volumes and congestion, safety, and multimodal operations. Future infrastructure and policy improvements are made based on a review of this data.

2 GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

To be effective for the greater community, the Plan needs to have stated goals, objectives, and performance measures. These goals reflect the county's vision, while objectives provide guidance to achieve the goals. Performance measures serve as a benchmark to continuously evaluate progress over time. These goals, objectives, and performance measures were developed early in the creation of the Plan based on stakeholder feedback and technical analysis. The goals, objectives, and performance measures provide an outline for the Plan's development and a rubric for monitoring its success in the future.

3 TRAFFIC FORECASTS

With population shifts and land use changes in the next twenty years, traffic patterns will shift. It is important to recognize these shifts and their impacts on the overall transportation system. Traffic volumes for the year 2040 were prepared based on historic trends and understanding the future development for the county. This data can be used to identify potential deficiencies in the network; to assist delegating ownership over the roadways; determining the use of roadways; and guide the decision-making process for state, county, and local officials along with residents and business owners.

4 FUTURE SYSTEM ANALYSIS

Future system analysis utilizes past plans, existing conditions, stakeholder input, current needs, and goals/objectives/performance measures to produce a coordinated set of recommendations regarding the future roadway network and potential projects. Included in this analysis is a review of the county road system's pavement and maintenance needs. This review includes documentation of current county pavement management practices, how money is being spent, and where there are opportunities for more efficient application of county funds. All aspects of these considerations will set the stage for potential projects to implement over the next twenty years.

This section also offers policies and tools that can be used to supplement the current multimodal transportation system. This includes freight accommodations for trucking, rail, and air; pedestrian and bicycle infrastructure; access management; right-of-way preservation; etc. The tools and recommendations identified in this section should be used with specific project recommendations contained in the implementation plan.

5 IMPLEMENTATION PLAN

This section describes potential roadway improvement projects, summarizes funding gaps for implementation and funding options, identifies opportunities for maintaining the system, and outlines anticipated timelines for implementation. These implementation measures were derived from stakeholder input and technical analysis and align with the goals and objectives of this Plan.

STAKEHOLDER INVOLVEMENT PROCESS

Public participation and agency coordination were essential in identifying issues and needs for the community. The project team sought input on potential system improvements, existing gaps, and needs for the future network. Below is a summary of the key stakeholder groups and their role in the Plan's development. The county-wide plan coincided with the creation of the City of Owatonna 2040 Transportation Plan, and due to their many overlaps, public engagement was combined to reach a broad audience.

PROJECT MANAGEMENT TEAM

A Project Management Team (PMT) was utilized to actively guide the development of the Plan. The team included county, city and SRF staff. PMT meetings were held on a biweekly basis throughout the planning process to review technical analyses and provide input on the Plan elements.

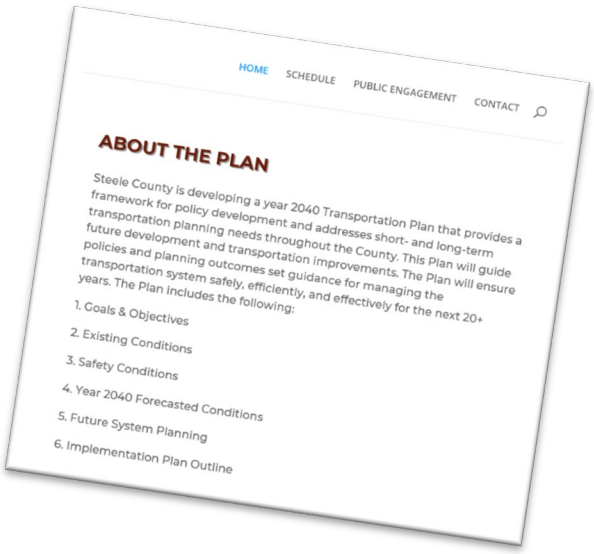
COUNTY STAKEHOLDER LISTENING SESSIONS

Steele County conducted listening sessions with interested cities and townships from across the county. Eight listening sessions were held virtually (due to COVID-19) with city and township representatives attending a meeting with county representatives and project staff. The county provided an overview of the planning process and gave each an opportunity to share their thoughts regarding county infrastructure issues and opportunities in their area.

OPEN HOUSE & OFFICE HOURS

Due to COVID-19, in-person events were not permissible during the project timeframe. Instead, two virtual public open house meetings were held during the planning process. These meetings were conducted to provide the public information on the Transportation Plan and to seek input on planning and programming concepts. Pre-recorded videos, uploaded onto the project website, outlined the planning process, existing conditions, and recommendations up to that point in the planning process. Virtual office hours were created to allow those that viewed the videos to ask questions and provide further feedback. A project survey was also available for those that did not need to speak with project staff directly. This virtual open house format offered an informal venue for citizens, agency staff, and community leaders to ask questions and give their thoughts on the Plan findings and recommendations. The first virtual open house occurred in August 2020.

The second open house was hosted in June and July of 2021, which included a recorded presentation, survey, and office hours.



PLAN WEBSITE

A Plan website (www.SteeleCo2040TranPlan.com) was established to communicate the schedule, convey opportunities for public involvement, provide meeting materials, highlight milestones, and provide Plan materials. This website was the main contact with stakeholders as in-person engagement was not permissible due to COVID-19. All public materials were uploaded to this website. The website provided an additional resource for citizens, agency staff, and community leaders so they could monitor ongoing progress throughout the planning process. A summary of public feedback can be found in **Appendix A**.

EXISTING CONDITIONS

An analysis of existing conditions within Steele County was conducted to understand travel patterns and identify opportunities for improvement. This chapter of the Plan summarizes the county's existing demographics, roadway conditions and management, safety conditions, freight routes, and multimodal system.

LOCATION

Steele County is located in southern Minnesota, approximately sixty miles south of the Twin Cities metropolitan area (see **Figure 5**). To the north, the county is bordered by Rice County, to the east, Dodge County, to the south, Freeborn County, and to the west, Waseca County. The county is approximately 430 square miles, with a population of around 36,000 (according to the 2010 census). The City of Owatonna, the county seat, is designated as a Micropolitan Statistical Area with a population of approximately 25,500. Approximately two thirds of the county population reside in the City of Owatonna, followed by the City Blooming Prairie (5 percent) and the City of Medford (4 percent). The remaining townships and cities make up one to two percent each of the total county population (see **Table 1**). The primary roadways within Steele County include Interstate 35 (I-35), US Highway (US) 218, and US 14. These provide connections for residents both within county borders, as well as to the Twin Cities and state borders of Iowa and Wisconsin.

TABLE 1. POPULATION DISTRIBUTION

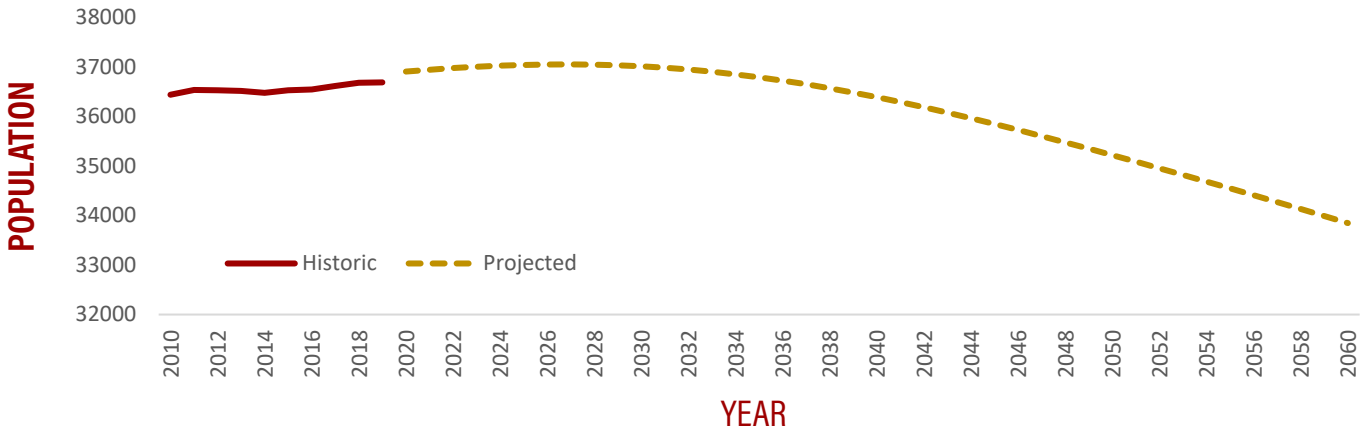
COUNTY SUBDIVISION	TOTAL POPULATION	PERCENTAGE OF COUNTY POPULATION
AURORA TOWNSHIP	499	1%
BERLIN TOWNSHIP	432	1%
BLOOMING PRAIRIE CITY	1,916	5%
BLOOMING PRAIRIE TOWNSHIP	387	1%
CLINTON FALLS TOWNSHIP	426	1%
DEERFIELD TOWNSHIP	502	1%
ELLENDALE CITY	739	2%
HAVANA TOWNSHIP	581	2%
LEMOND TOWNSHIP	558	2%
MEDFORD CITY	1,404	4%
MEDFORD TOWNSHIP	785	2%
MERIDEN TOWNSHIP	562	2%
MERTON TOWNSHIP	393	1%
OWATONNA CITY	25,685	70%
OWATONNA TOWNSHIP	592	2%
SOMERSET TOWNSHIP	798	2%
SUMMIT TOWNSHIP	424	1%

Source: American Community Survey and US Census

DEMOGRAPHICS

Traffic demand and travel patterns within Steele County are greatly impacted by population trends and land use patterns. To understand the potential impacts of population shifts within the county, historic and projected population trends were examined. Over the past ten years, the Steele County population has remained relatively consistent, with a slight increase in the last five years. The Minnesota State Demographic Center projects this growth will occur until approximately 2030 and will then start to decline (see **Figure 2**). According to these projections, the Steele County population will decline to about 34,000 residents by 2060. The Minnesota State Demographics Center anticipates birth rates will remain consistent, but the aging population will significantly increase the death rate. As a result, the population will transition to a state of natural decrease around 2040. Although important to the county, this relatively small change (about 7 percent decrease from 2020 to 2060) does not significantly impact transportation system needs.

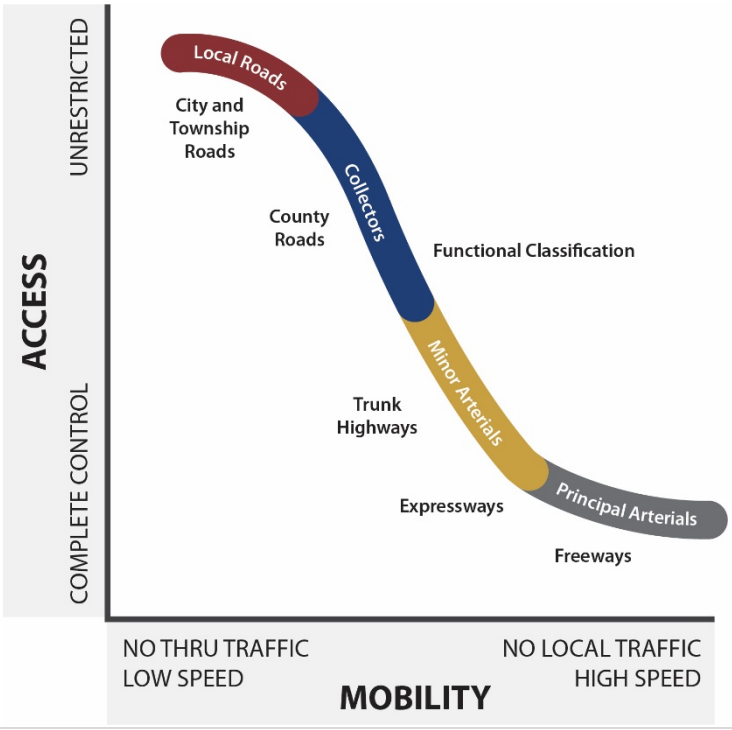
FIGURE 2. POPULATION TRENDS IN STEELE COUNTY



Source: Minnesota State Demographics Center

FUNCTIONAL CLASSIFICATION

FIGURE 3. FUNCTIONAL CLASSIFICATION RELATIONSHIPS



The functional classification system defines both the function and role of a roadway within the hierarchy of an overall roadway system. This system is used to create a roadway network that collects and distributes traffic from neighborhoods and ultimately to the state or interstate highway system. Functional classification planning works to manage mobility, access, and alignment of routes. Functional classification also seeks to align designations that match current and future land use with the roadway's purpose. **Figure 3** illustrates the relationship between functional classification, access, and mobility.

Determining a roadway's functional classification is based on many factors, including:

- Trip characteristics: length of route, type and size of activity centers, and route continuity
- Access to regional population centers, activity centers, and major traffic generators

- Proportional balance of access, ease of approaching or entering a location
- Proportional balance of mobility and ability to move without restrictions
- Continuity between travel destinations
- Relationship with neighboring land uses
- Eligibility for state and federal funding

The county's current functional classification system is divided into four major categories: principal arterials, minor arterials, collectors, and local roadways (see **Figures 4 and 6**).

FIGURE 4. FUNCTIONAL CLASSIFICATION SYSTEM

PRINCIPAL ARTERIALS

- Connect major activity centers
- Provide significant continuity at a regional level
- Serve long distance trips
- Provide limited access and high speeds
- Serve regional or statewide travelsheds

MINOR ARTERIALS

- Connect key activity centers
- Provide continuity on a sub-regional level
- Serve medium to long distance trips
- Provide limited access and high speeds
- Serve regional travelsheds

COLLECTORS

- Connect local activity centers to arterials
- Provide increased continuity at a local level
- Serve short to medium length trips
- Balance emphasis of access and mobility
- Provide access to localized areas

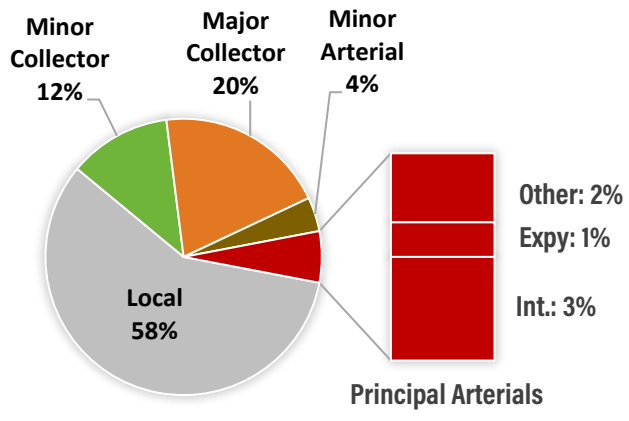
LOCAL ROUTES

- Connect neighborhoods, businesses, and schools
- Provide access to higher-order roadways
- Provide lowest degree of continuity
- Allow closely spaced access points
- Provide direct access to property
- Serve limited travelsheds

The roadways within Steele County are mostly consistent with the guidelines set by the FHWA (see **Table 2**). The current roadway system consists of mostly local roads (58 percent), with major (20 percent) and minor collectors (12 percent) a distant second and third. Local roadways are slightly under the FHWA's guidelines (by 4 percent), and major collectors are slightly over (by 1 percent) The remainder of the functional classifications are within acceptable ranges and allow for flexibility for new roadways and classification transfers. These changes are discussed in further detail in the **Future System Analysis** portion of the Plan.

TABLE 2. CURRENT FUNCTIONAL CLASSIFICATION MILEAGE (CENTERLINE MILES, ALL ROADWAYS WITHIN STEELE COUNTY)

Functional Class	Mileage	Percentage	FHWA Guidelines
Local	579.3	58%	62 to 74%
Minor Collector	122.4	12%	3 to 15%
Major Collector	195.1	20%	8 to 19%
Minor Arterial	38.1	4%	2 to 6%
Principal Arterial: Expressway	15.8	1%	0 to 2%
Principal Arterial: Interstate	34.1	3%	1 to 3%
Principal Arterial: Other	19.6	2%	2 to 6%
TOTAL	1,004.4		



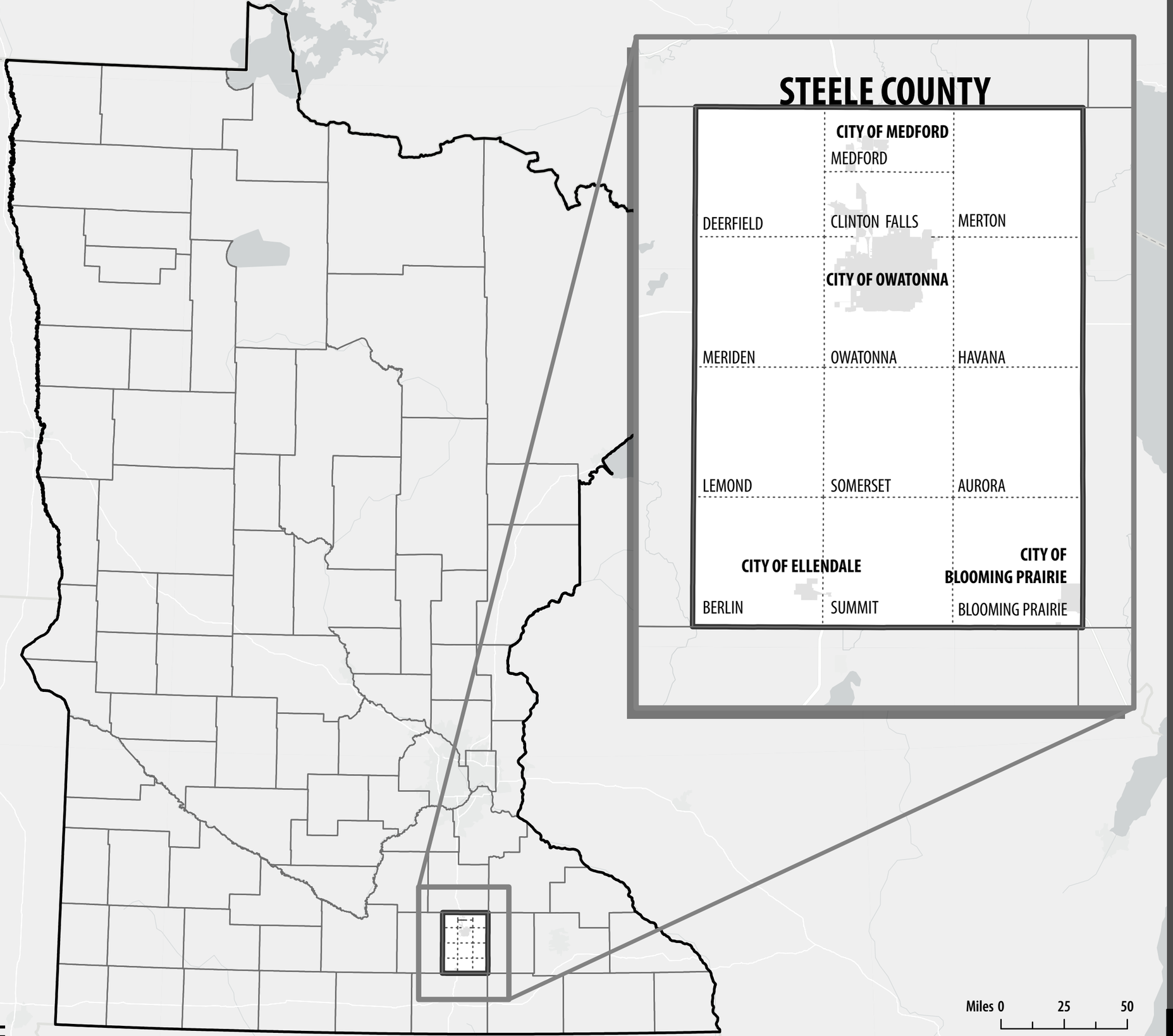


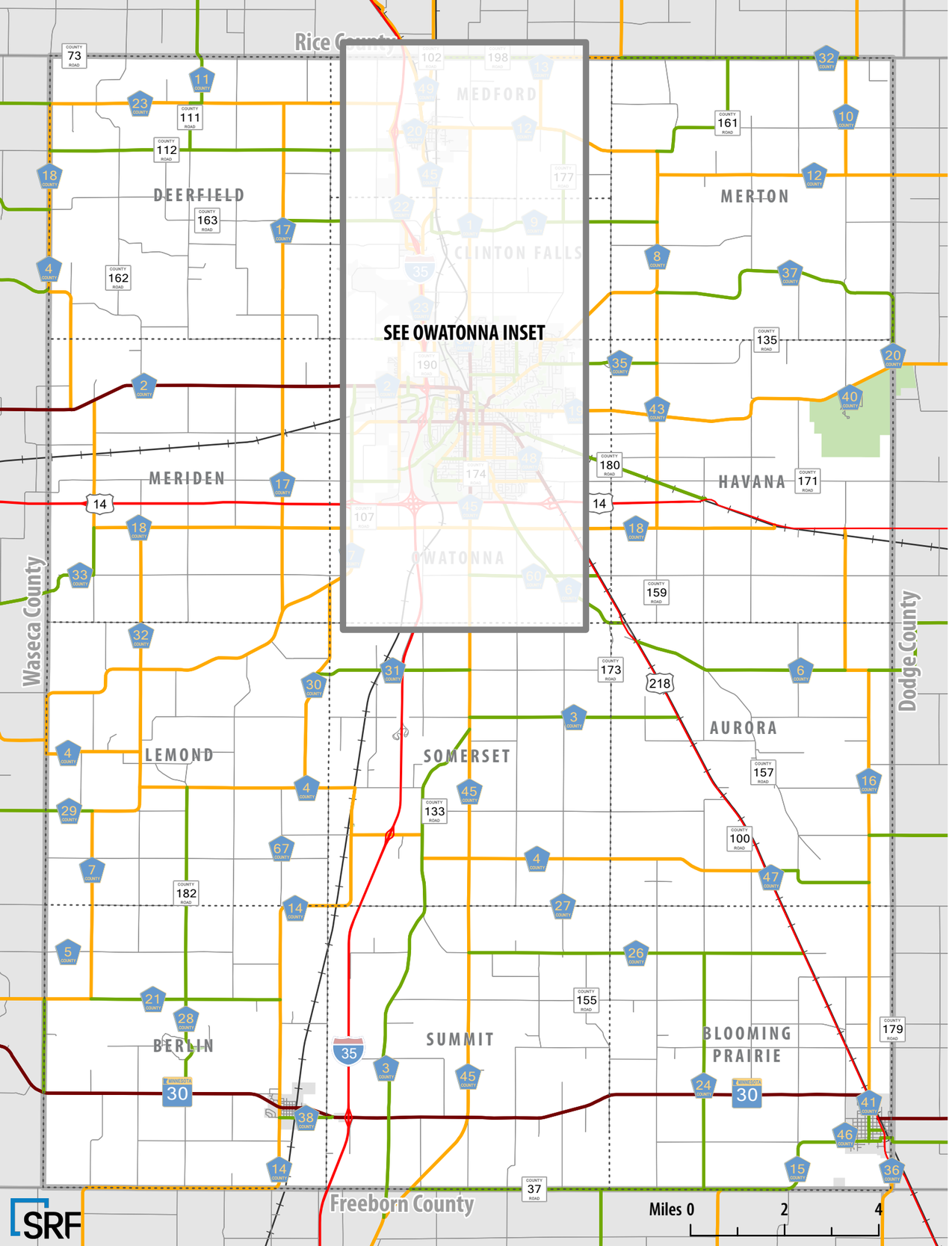
Figure 5
Location
Steele County 2040 Transportation Plan

- Minnesota Counties
- Steele County Townships
- Steele County Cities

SRF

Steele County 2040 TRANSPORTATION PLAN

Steele County



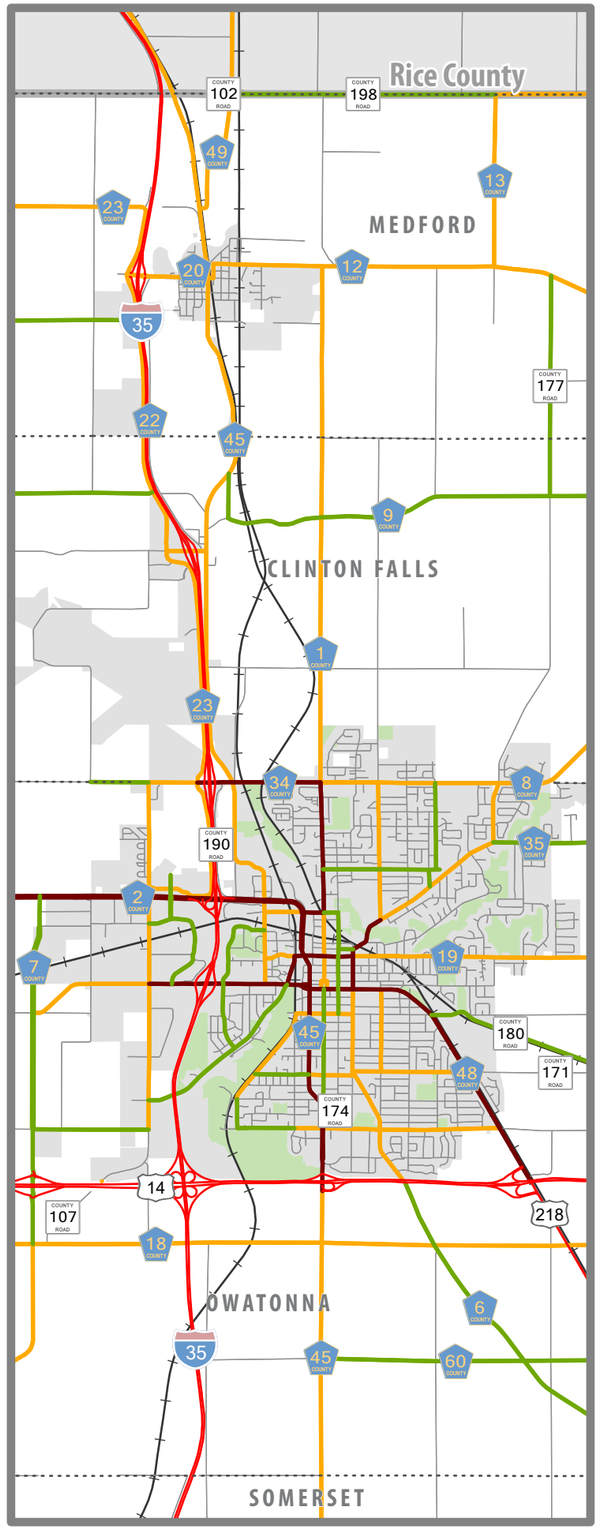


Figure 6
Existing Functional Classification
Steele County 2040 Transportation Plan

- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- Township
- City Boundary

Steele County 2040 TRANSPORTATION PLAN

Steele County

JURISDICTIONAL & DESIGNATION CLASSIFICATION

Ensuring the management of each roadway is closely aligned with the function and jurisdiction best suited to maintain it is the primary goal of jurisdictional planning. These jurisdictional designations define the regulatory, maintenance, construction, and financial obligations of each governmental unit. It also establishes roadway responsibilities among state, county, municipal, and township agencies.

Typically, jurisdictional classifications establish responsibility among state, county, municipal and township agencies. Higher volume regional corridors carrying inter-county traffic, such as Interstate and State Trunk Highways, are usually maintained by MnDOT. Intermediate volume roadways with a more limited travelshed, such as County State Aid Highways and County Roads, are usually managed by the county. The cities and townships then maintain the remaining roadways serving local traffic, such as Municipal State Aid Streets, city streets, and township roads (see **Figure 7).**

FIGURE 7. JURISDICTIONAL CLASSIFICATION SYSTEM

STATE SYSTEM

- Statewide function
- Multi-county facilities
- Regional connectivity
- Higher traffic volumes and travel speeds

COUNTY SYSTEM

- Regional connectivity
- Moderate/High traffic volumes
- Connect urban and outlying areas
- Paved

CITY SYSTEM

- Short segments with small travelsheds
- Serve local land access needs
- Moderate traffic volumes
- Limited continuity with rural areas

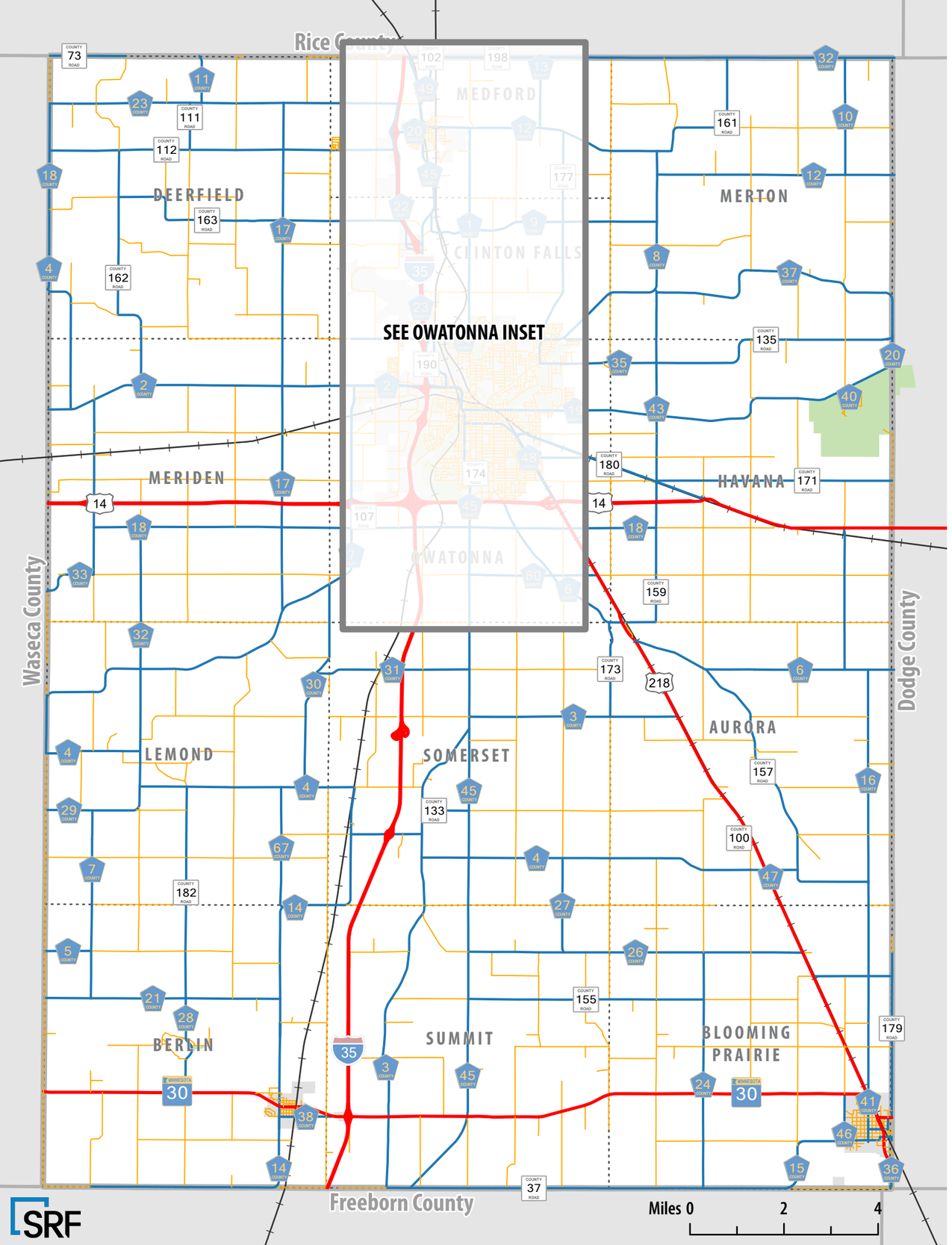
TOWNSHIP SYSTEM

- Limited travelsheds
- Lack of continuity
- Low traffic volumes

TABLE 3. JURISDICTIONAL & DESIGNATION CLASSIFICATION CENTERLINE MILEAGE

Jurisdictional Classification System		Total Mileage	Individual %	Total %
State System	Interstate Highway	24.0	2%	7%
	US Highway	33.4	3%	
	State Highway	17.9	2%	
County System	County State-Aid Highway	314.0	31%	38%
	County Road	71.4	7%	
City System	City Street	167.3	17%	17%
Township System	Township Road	376.4	38%	38%
TOTAL		1,004.4		

Roadway designation is assigned based upon a set of guidelines and determines funding eligibility. Within Steele County, roadways are designated as State Trunk Highway (TH), County State Aid Highway (CSAH), County Road, Municipal State Aid (MSA) Street, Township Road, or Private Road. Roadways designated as CSAHs or MSAs typically are eligible for additional funding. The majority of roadways within Steele County are Township Roads (38 percent), County State Aid Highways (31 percent) and City Streets (17 percent). With I-35, US 14, US 218, and TH 30 traversing the county, a significant portion (7 percent) of the county system is comprised of roadways under the state's jurisdiction. Steele County is responsible for the maintenance of CSAHs and County Roads, which totals to approximately 38 percent of the total system (see **Table 3**).



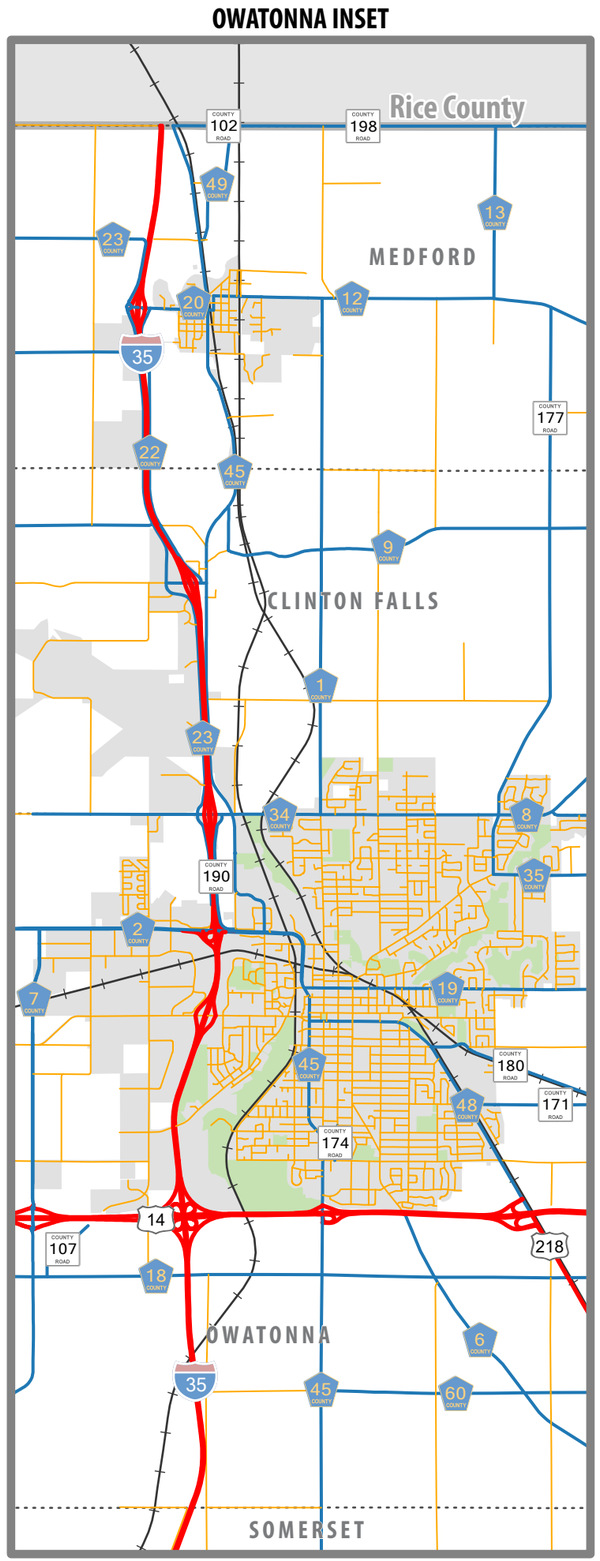


Figure 8
Existing Jurisdiction
Steele County 2040 Transportation Plan

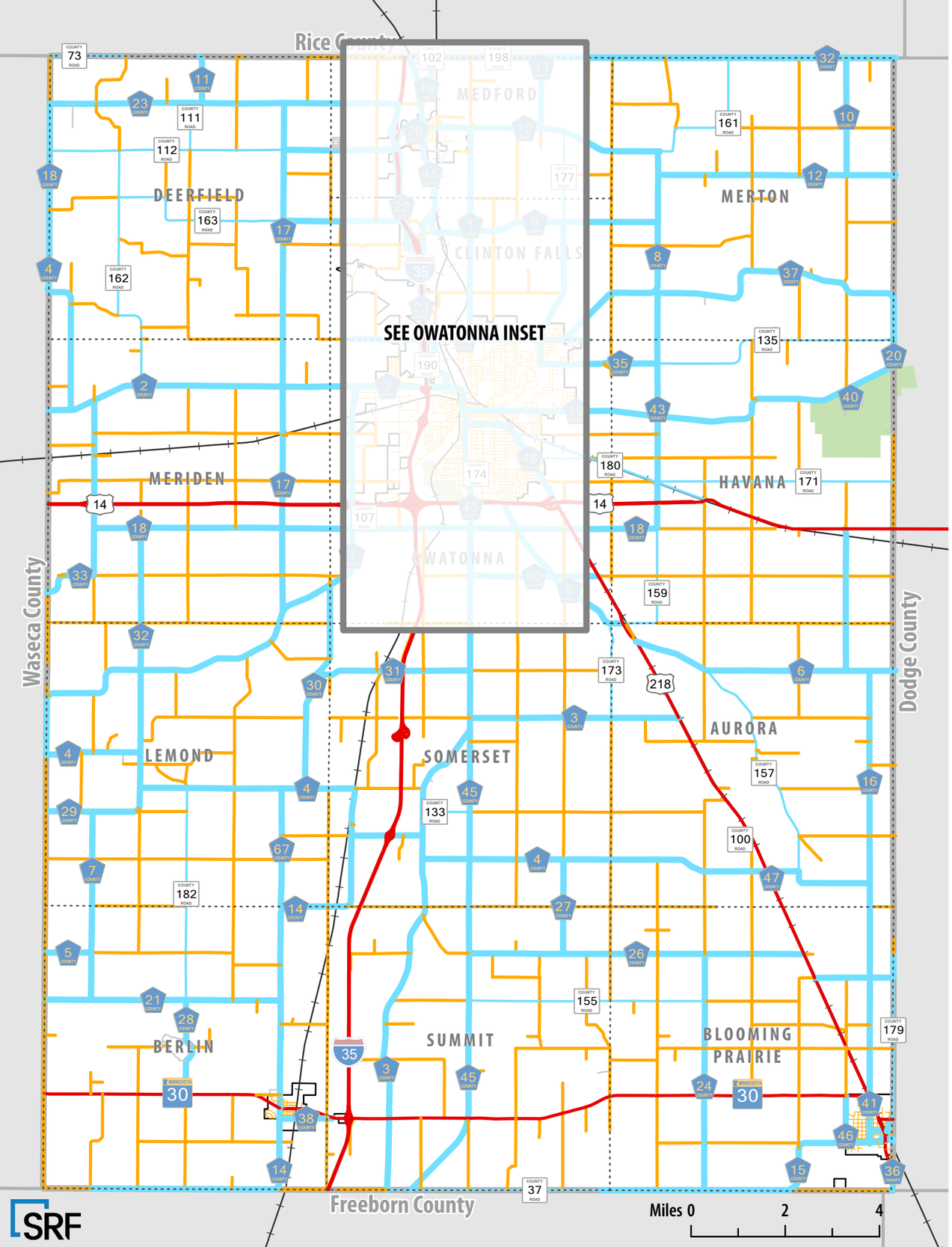
Existing Jurisdiction
- City/Township
- County
- State

- County Road
- County State Aid Highway
- Township
- City Boundary

Steele County 2040 TRANSPORTATION PLAN

Steele County

SRF



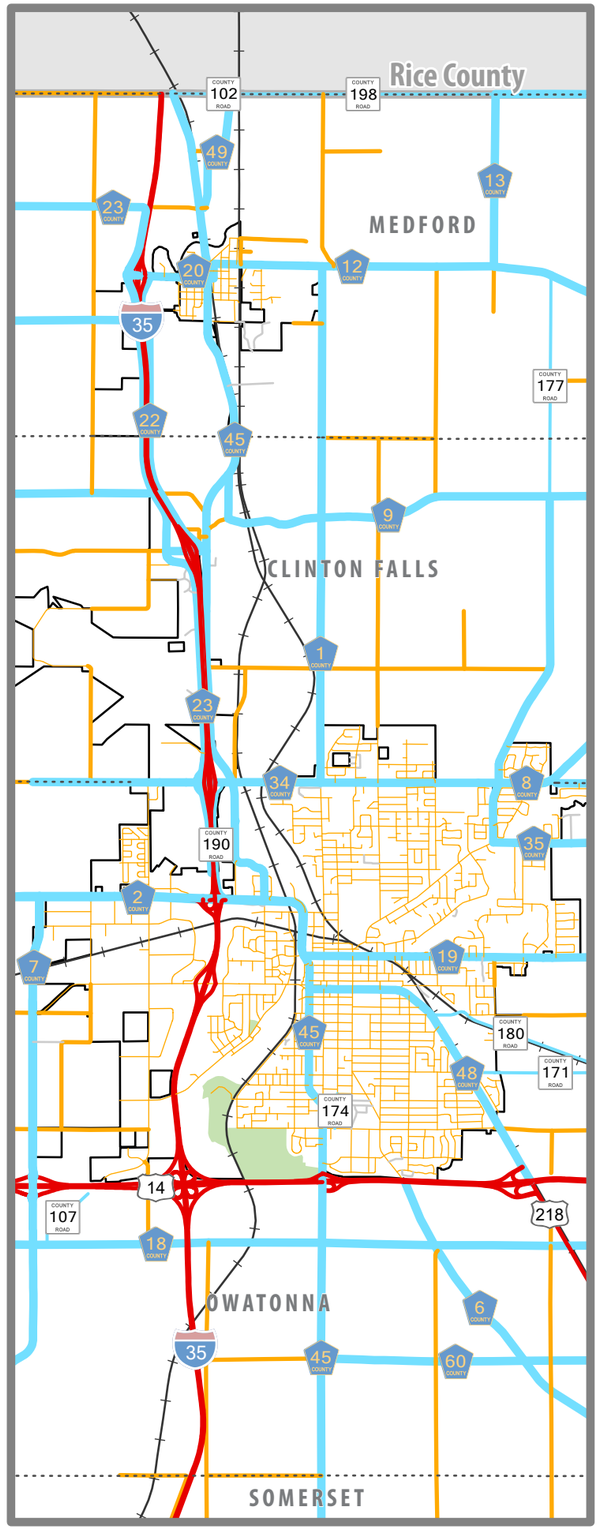


Figure 9
Existing Designation
Steele County 2040 Transportation Plan

Designation
- MnDOT
- County State Aid Highway (CSAH)
- County Road
- Township Road
- Local Road
- Private Road

- County Road
- County State Aid Highway
- Township
- City Boundary

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SRF

HIGHWAY SYSTEM PRESERVATION

Pavement preservation is a key component of system management. It includes roadway maintenance activities that extend the life of pavement while optimizing available funding. Factors that affect a roadway's pavement quality include traffic loading, weather conditions, heavy (commercial) vehicle traffic, and soil conditions to name a few. Well timed maintenance activities can extend the useful life of pavement. Maintenance has its limits and eventually all roads will need to be replaced.

The implementation of a pavement preservation program is good practice, as it focuses on maximizing the condition and life of a network of pavements while minimizing the network's lifecycle cost. The following are the priorities established for the county's pavement preservation program:

- Prevent "fair condition" roads from falling into "poor condition"; avoid worst first approach
- Prioritize preservation strategies over more expensive reconstruction fixes
- Identify appropriate life-cycle timeframe for county's roadway system

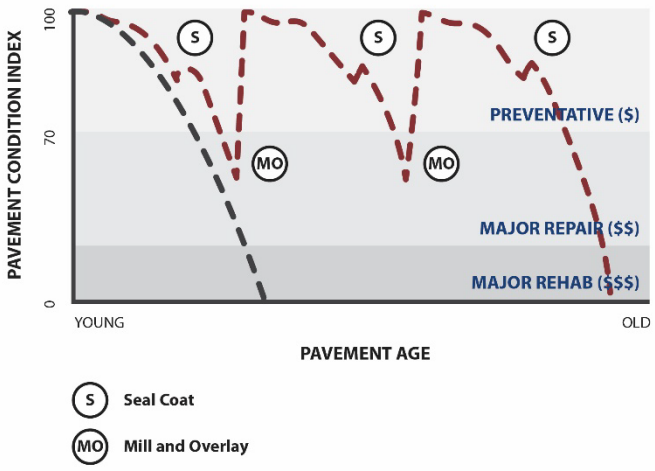
It may seem counter-intuitive, but when it comes to maintaining the county's system, roadways that should receive attention are the ones that are in good condition. The primary goal of a pavement preservation plan is to be proactive by keeping good condition roadways in good condition, when repairs for these roadways are less costly. With a worst-first reactive approach, repairs occur when roadways are in poor condition and repairs are costly, often four to five times the cost of those performed when the roadway is in good condition.

The grey curve in **Figure 10** depicts deterioration over a pavement's design life if maintenance is not performed. The red curve depicts how pavement life can be extended through the timely application of various maintenance activities. Performing the right type of maintenance on the right roadway at the right time will slow the rate of deterioration.

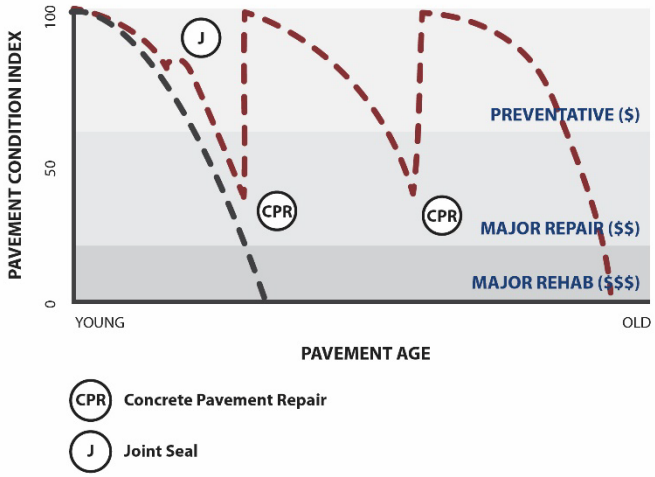
Performing lower-cost preventative maintenance activities such as crack sealing or sealcoating to bituminous pavements or joint sealing to concrete pavements in generally good condition (Pavement Condition Index [PCI] of 70 and above for bituminous 50 and above for concrete), provides some life extension at a relatively low cost. These types of treatments can typically be performed two to three times before conditions deteriorate beyond the point at which these types of repairs are beneficial. At that point, more extensive repairs must be performed at a higher cost. Although these repairs are costlier, they provide a longer life extension than preventive repairs while improving pavement conditions significantly. At some point, as previously noted, roadways must be replaced. Once replaced, the life cycle starts over again.

FIGURE 10. TYPICAL PAVEMENT LIFE-CYCLE CURVES

BITUMINOUS PAVEMENT



CONCRETE PAVEMENT



Pavement Condition Index

MnDOT State Aid collects pavement condition data for the county's roadways which provides information related to existing pavement conditions and can be used to project future conditions and to identify maintenance needs. That data collected includes a Ride Quality Index (RQI) and a Surface Rating (SR). RQI measures a pavement roughness and ranges from 0.0 to 5.0. Surface Rating (SR) measures pavement distresses such as cracking, patches, and ruts and ranges from 0.0-4.0. Those indices are combined into the Pavement Quality Index (PQI) and range from 0.0-4.5.

Steele County modifies the PQI ratings into Pavement Condition Index (PCI) values to put the values into a range between 0 and 100.

Pavement Quality Index	Pavement Condition Index
$PQI = ((RQI)(SR))^{0.5}$	**$PCI = PQI \times 100 / (20)^{0.5}$**

The higher the number, the better the condition of the roadway. Using this numerical rating, 0 represents a failed roadway and 100 represents a newly surfaced roadway with no distress. Scores are divided into five categories:

Very Poor (0-20)	Poor (21-40)	Fair (41-60)	Good (61-80)	Very Good (81-100)

Note: These ranges may be adjusted over time if data is not reflecting field conditions.

MnDOT collected condition data for Steele County in the fall of 2020. That condition data is presented in **Figure 11**.

Bridge Condition

Bridge condition is monitored using the Local (Bridge) Planning Index (LPI). This value ranges from 1 through 100, with bridges ranked at value 1 are the highest priority, and 100 as the lowest priority.

Local Planning Index

LPI = 100 – (Probability of Service Interruption x Consequence of Interruption)

Many factors contribute to the probability of service interruption, including:

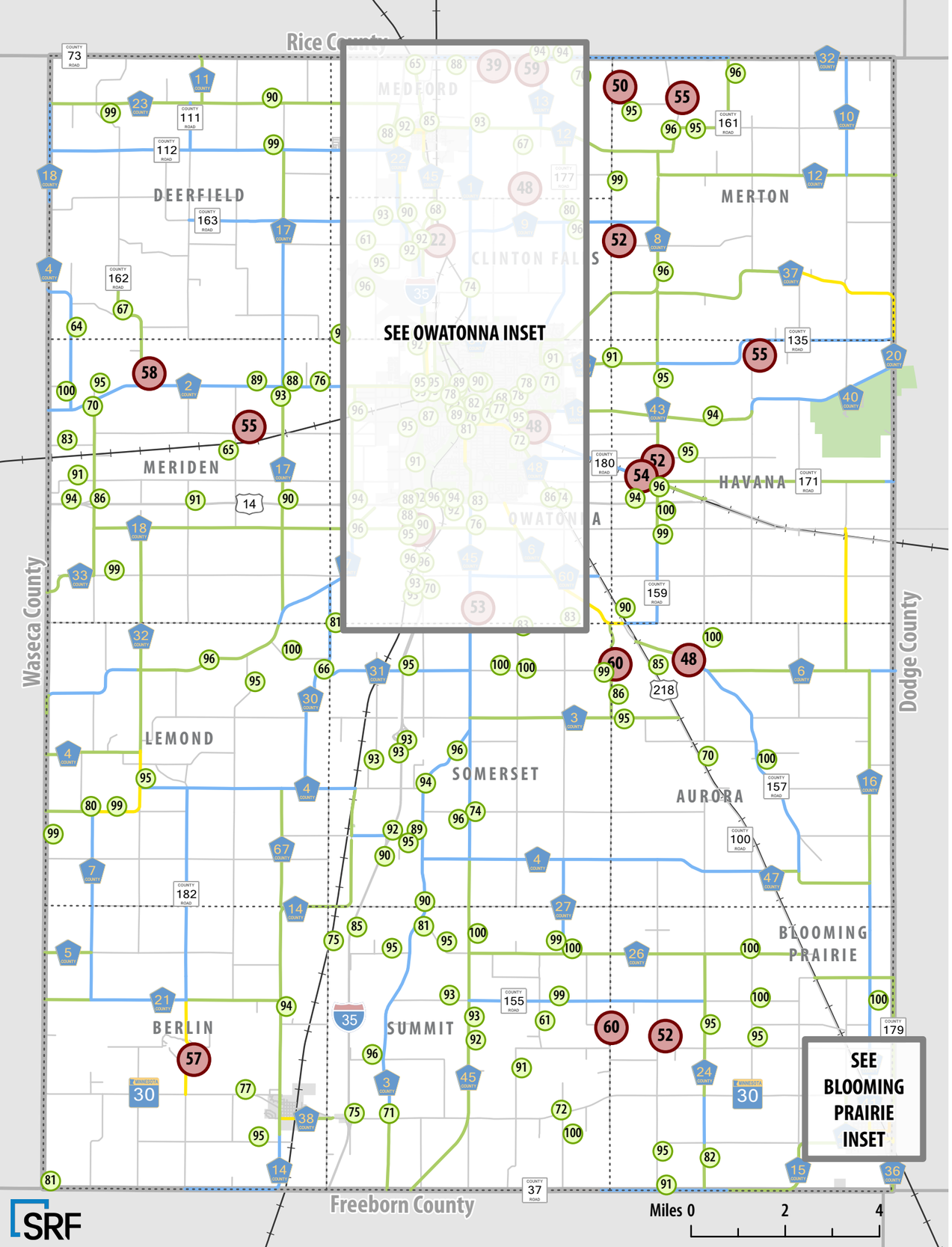
- Bridge condition
- Vertical clearance
- Scour
- Load rating
- Fatigue,
- Fracture critical status

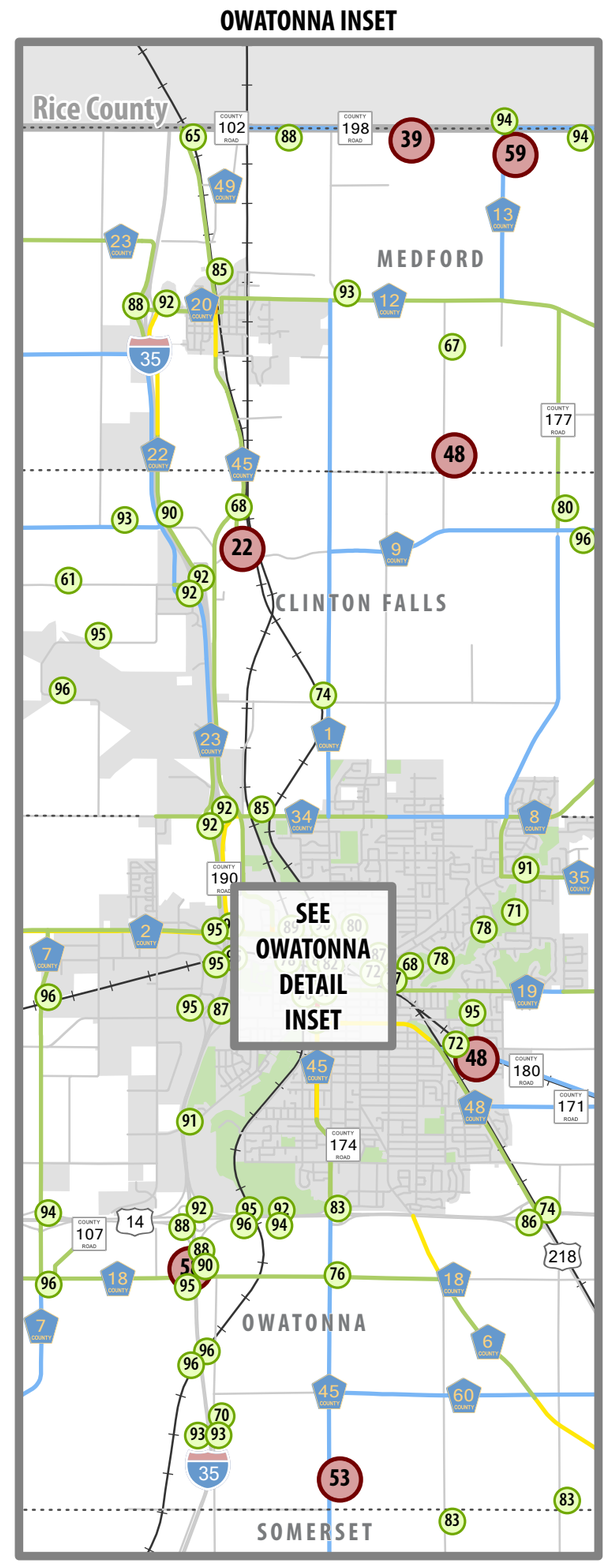
To estimate the consequence of interruption, the formula considers the following:

- Traffic volume (ADT)
- Detour length
- Bridge length
- Local industry, trade, and agricultural considerations

The LPI of bridges directly relates to that bridge's funding eligibility. Those with an LPI below 60 are typically eligible for federal or state aid funding, while those with a rating above 60 are not. Bridges with LPI below 60 could be eligible for Federal Bridge (FBF), State Bridge Bonding (SBB), State-Aid (SA), or Town Bridge (TB) funds. The current condition of Steele County bridges is shown on **Figure 11.** This shows all bridges, including those outside county jurisdiction. The City of Owatonna and MnDOT inspect and maintain their bridges. In addition to bridges on county roads, Steele County is responsible for overseeing and inspecting the local bridge program for township bridges.

Figure 11
2020 Pavement Condition
Steele County 2040 Transportation Plan

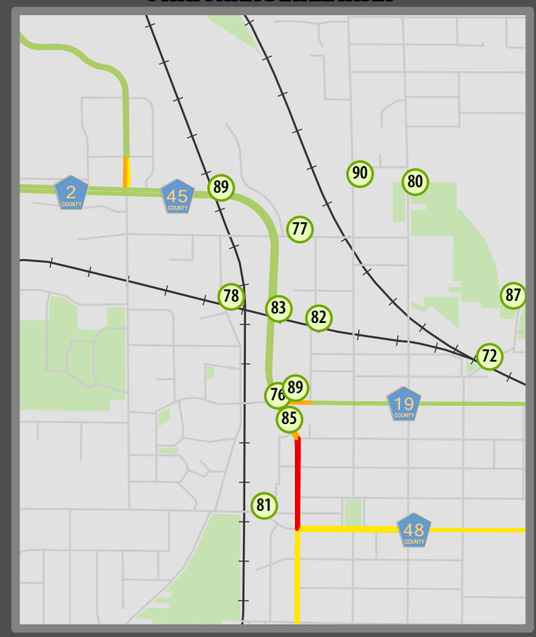




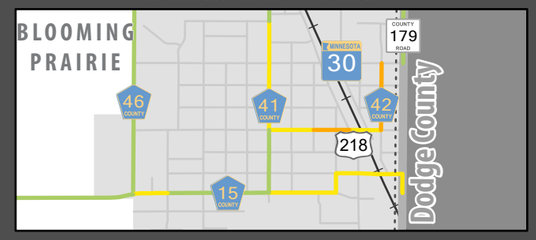
Pavement Quality
- Very Poor (0-20)
- Poor (21-40)
- Fair (41-60)
- Good (61-80)
- Very Good (81-100)

Bridge Local Planning Index
- # Poor Condition (0-60)
- # Good Condition (61-100)
- Township
- City Boundary

OWATONNA DETAIL INSET



BLOOMING PRAIRIE INSET



Steele County 2040 TRANSPORTATION PLAN

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Steele County

TRAFFIC VOLUMES, ROADWAY CAPACITY, AND CONGESTION

In order to identify areas of congestion and county travel patterns, existing roadway operations were analyzed. This involved an analysis of traffic volumes, capacity thresholds, and congestion indexes.

TRAFFIC VOLUMES

One of the most important methods to evaluate traffic operations is the understanding of current traffic volumes. The Average Annual Daily Traffic (AADT) on county roadways are available from MnDOT, with the most updated values from 2019. According to this data, the majority of high-volume roadways are found along I-35 or within the City of Owatonna. A few outlying roadways within the county experience relatively high traffic volumes, including US 14, CSAH 45, and CSAH 2 (with approximately 10,000-15,000 AADT) (see **Figure 12**).

ROADWAY CAPACITY ANALYSIS

Typical planning-level capacity thresholds were used to evaluate current roadway capacities for varying roadway types (see **Table 4**). These capacity thresholds are used to determine which roadways are "approaching capacity" (85 percent of threshold) and "at capacity" (100 percent or greater). These ranges are based on guidance from the Highway Capacity Manual, city and county input, and professional engineering judgment. This technique utilizes AADT to estimate the maximum capacity of roadways. A roadway's capacity is also impacted by functional classification, peak traffic flows, access spacing and speed. These thresholds correspond to those utilized by the City of Owatonna, to ensure continuity throughout the transportation system.

TABLE 4. CAPACITY THRESHOLDS

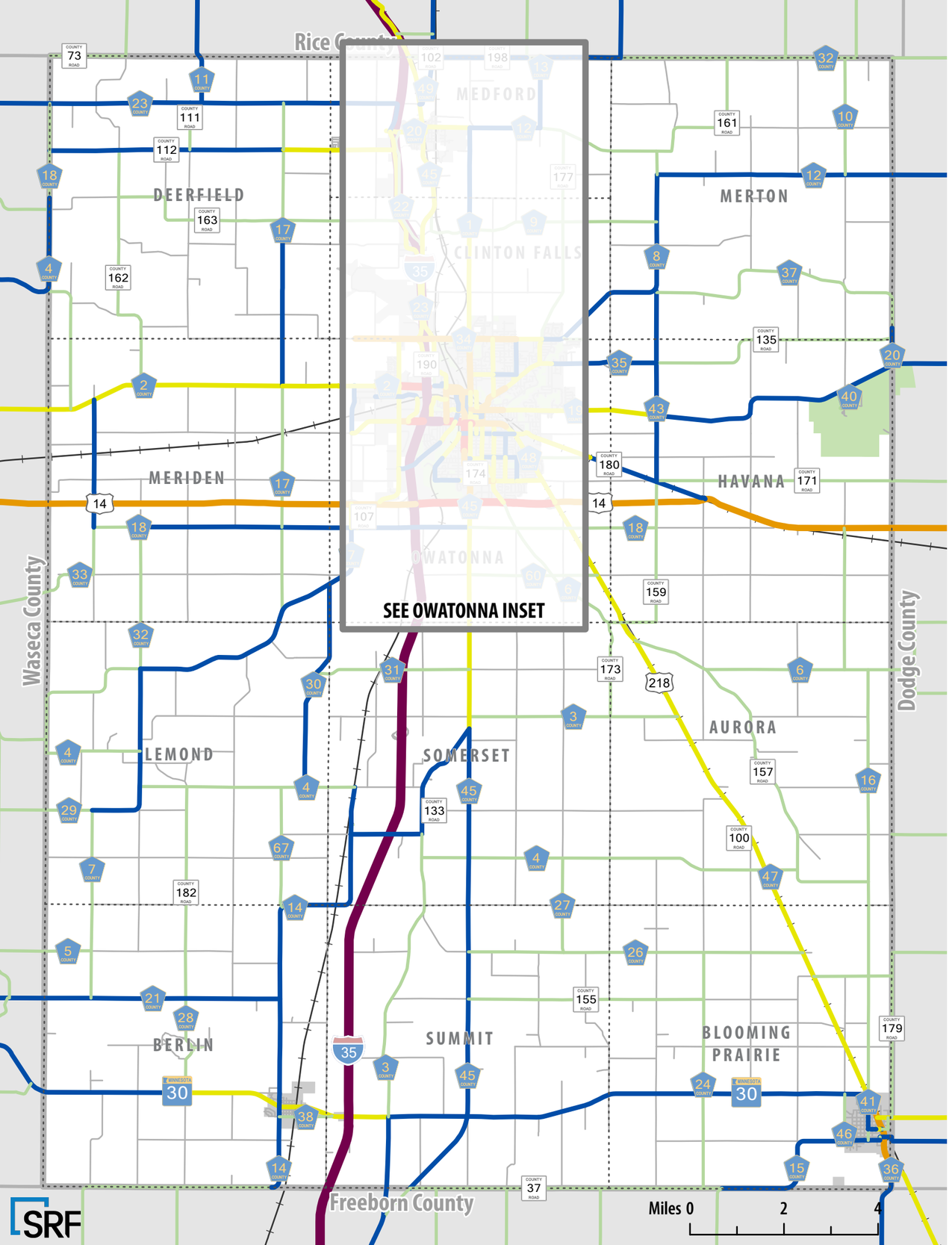
Facility Type	Capacity (Vehicles per day)
TWO-LANE LOCAL STREET	10,000
TWO-LANE ONE-WAY LOCAL URBAN STREET	14,000
TWO-LANE RURAL HIGHWAY	15,000
THREE-LANE URBAN STREET	17,000
FOUR-LANE URBAN STREET	22,000
FOUR-LANE/FIVE-LANE URBAN STREET	32,000
FOUR-LANE GRADE-SEPARATED FREEWAY	80,000

ROADWAY CONGESTION

Using the methodology described above, Steele County roadways are given a capacity rating between 0 – 2. Identifying roadways approaching and exceeding capacity. This is determined using a Volume to Capacity (V/C) Ratio. The current volume of the roadway is divided by the anticipated capacity. A V/C between 0.85 and 1 is considered to be approaching capacity, and a V/C over 1 is considered over capacity. Within Steele County, there are only two roadways exhibiting existing congestion levels over 0.85 (see **Table 5**) both of which are City of Owatonna streets and not county highways.

TABLE 5. ROADWAYS APPROACHING AND EXCEEDING CAPACITY

Roadway	Road Authority	Extents		AADT (Vehicles/day)	Capacity (Vehicles/day)	V/C
North St. East	City of Owatonna	County Road 45	Cedar Ave. North	8,900	10,000	0.89
Mineral Springs Rd.	City of Owatonna	Cherry Street	St. Paul Rd.	9,300	10,000	0.93



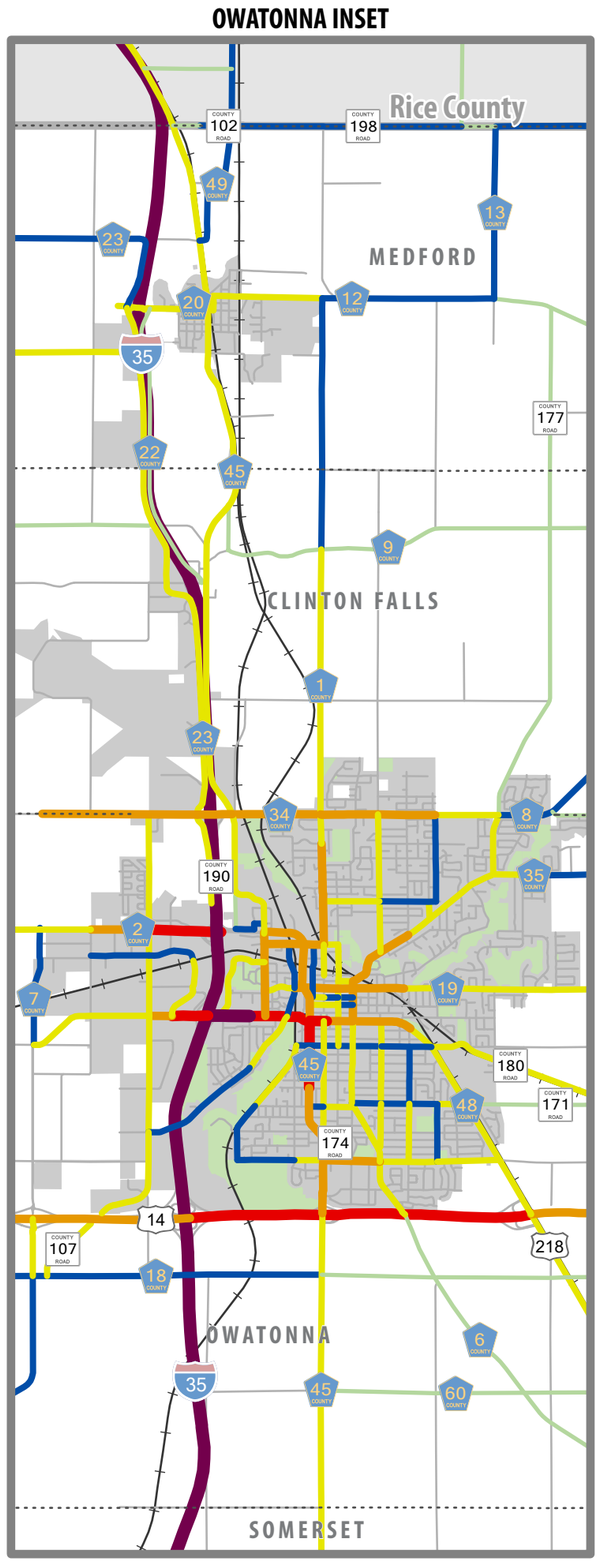


Figure 12
Existing Traffic Volumes
Steele County 2040 Transportation Plan

Current AADT Volume (2019)

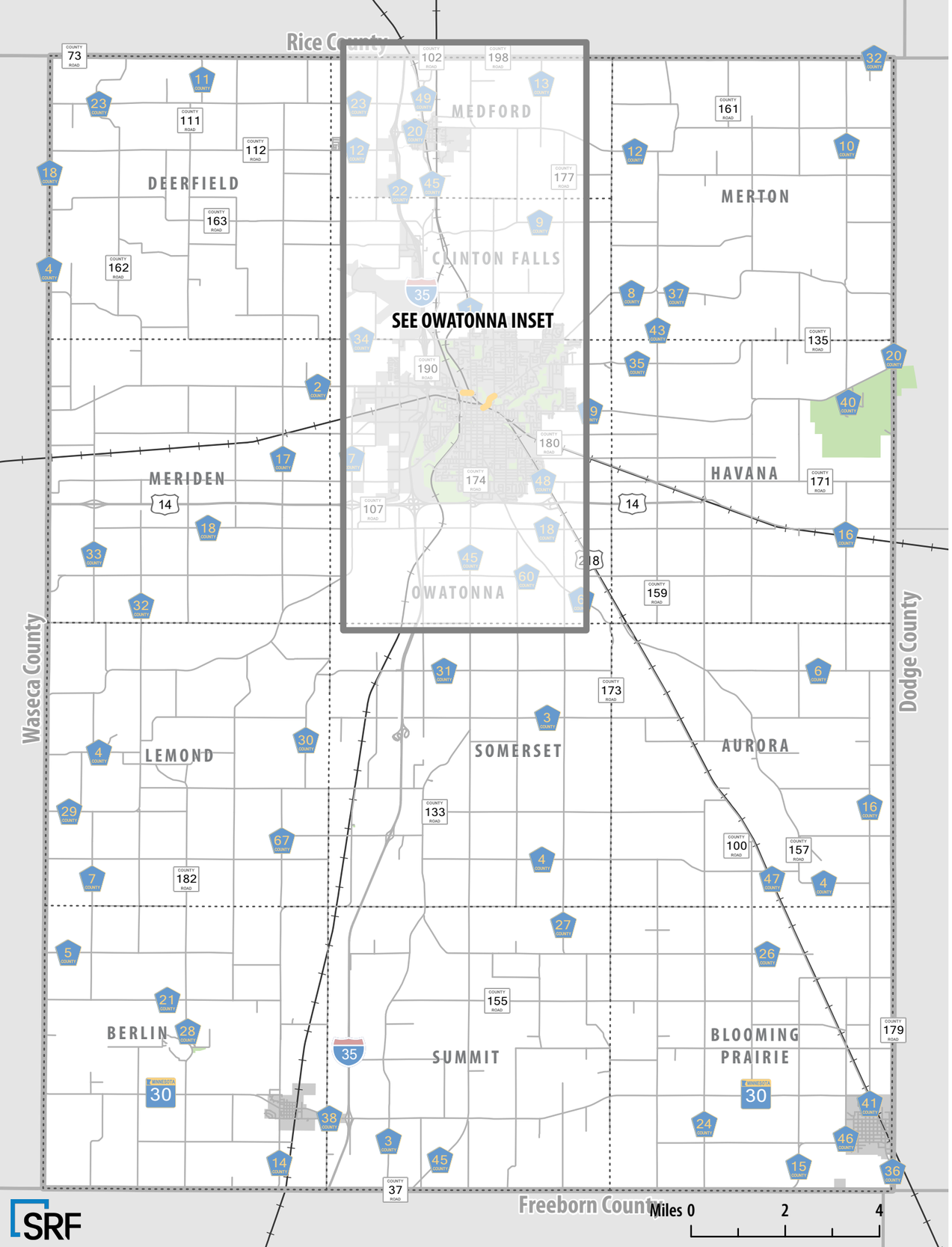
- 0 - 500
- 501 - 1,500
- 1,501 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 or above

Township

City Boundary

Steele County 2040 TRANSPORTATION PLAN

Steele County



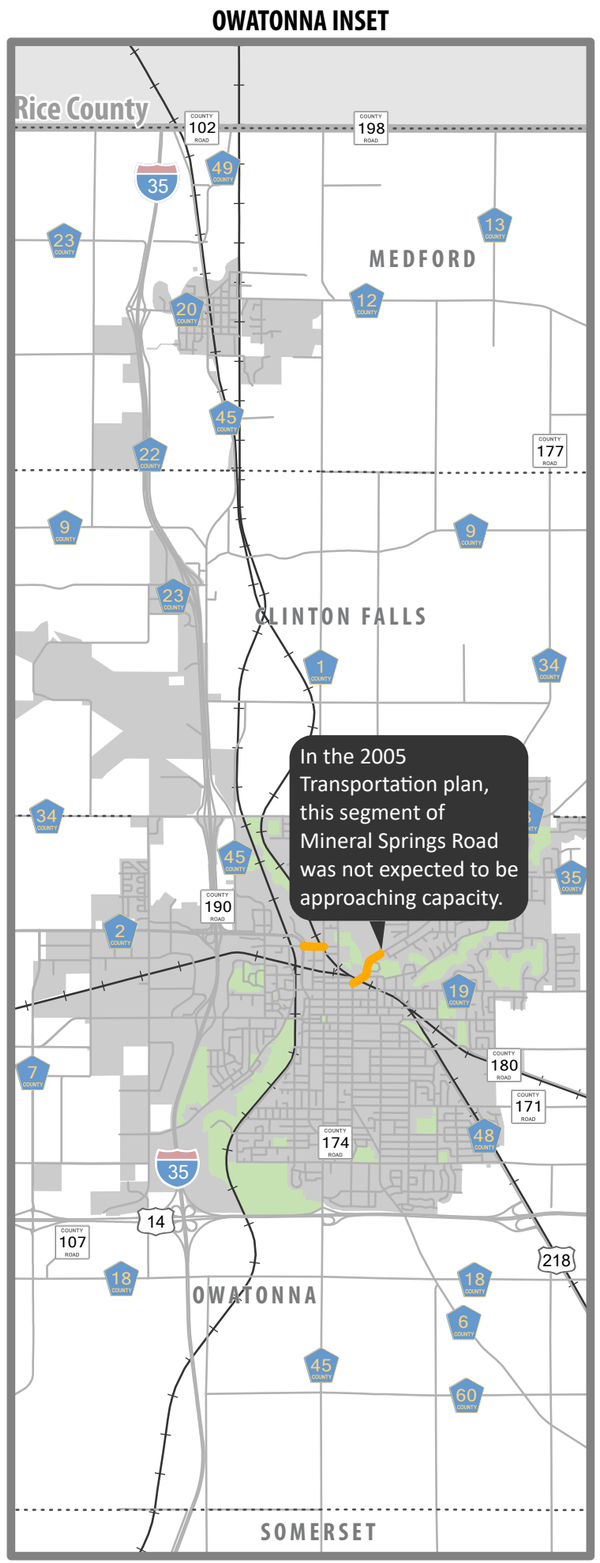


Figure 13
Existing Capacity
Steele County 2040 Transportation Plan

- Approaching Capacity
  V/C between 0.85 - 1.00
- Over Capacity
  V/C above 1.00
- Township
- City Boundary

Almost all roadway segments predicted to be congested in the 2005 plan have been effectively managed. They are not approaching or over capacity.

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SAFETY ANALYSIS

Roadway safety is an important issue for county officials and a high priority for MnDOT, local agencies, and the public. As a part of MnDOT's statewide highway safety planning process, a County Road Safety Plan (CRSP) was prepared for Steele County in 2012. This plan sought to reduce severe crashes by documenting at-risk locations and identifying cost-effective safety improvement strategies that Steele County can complete once funding becomes available. For a complete summary of the recommendations, findings, and project rankings, refer to the Steele County Road Safety Plan. This plan is expected to be updated within the next few years.

TABLE 6. CRASHES WITHIN STEELE COUNTY

Year	Fatalities	Injuries	Total
2016	4	100	567
2017	1	118	657
2018	2	127	739
2019	3	103	725
2020	4	89	548

Source: MnDOT, 2016 - 2020

Supplemental to the CRSP, a crash frequency and severity map was completed using the Minnesota Crash Mapping Analysis Tool (MnCMAT) for the time period of January 2016 through December 2020. This dataset identified a total of 3,236 crashes recorded for all roadways within the county; these did not include animal-related crashes (see **Table 6**). Out of these crashes, a total of 604 occurred on the county's highway system (CSAH and CR), of which two percent were identified as severe crashes (fatal and incapacitating injury). **Tables 6 and 7** provide an overview of the fatal crashes reported during the five-year period under review. Based on the results, the majority of fatal crashes occurred during clear weather conditions with a single vehicle involved.

Using this data, an analysis of the top twenty crash locations was conducted. The traffic volume, speed limit, crash rate and crash severity were used to compile the top locations with persistent and severe crashes (see **Table 8**). MnDOT uses a comparison of the crash rate and the critical rate when determining whether there is a safety issue at an intersection. The crash rate for an intersection is the number of crashes per million entering vehicles (MEV). The critical crash rate is a statistical comparison based on similar intersections or segments statewide. An observed crash rate greater than the critical crash rate indicates that the intersection or segment operates outside of the expected, normal range. The critical index reports the magnitude of this difference. Crash rates highlighted in yellow are higher than the average crash rate expected for that intersection type, and those in red are higher than the critical crash rate. Crash locations are sorted in order of the critical index for all crashes (with #1 exhibiting the highest critical index).

TABLE 7. FATAL CRASHES IN STEELE COUNTY

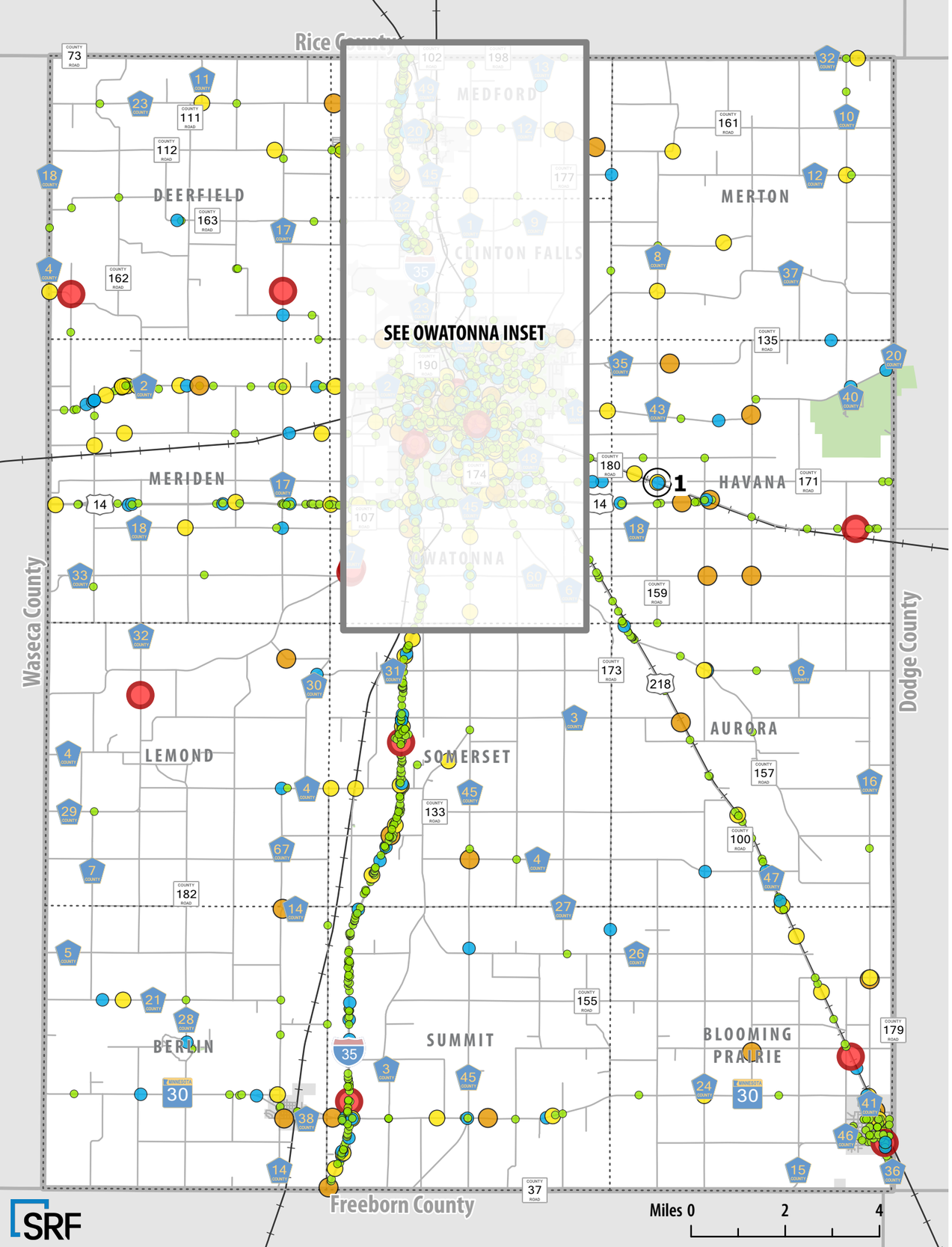
Fatal ID	Route	Road Authority	Crash Type	Collision Type	Year	Fatalities	Vehicles	Weather Conditions	Contributing Factors
A	97th Ave.	Deerfield Township	Collision Fixed Object	Run Off Road	2017	1	1	Clear	Intoxication and excessive speeding
B	I-35 Ramp	MnDOT	Collision Fixed Object	Ran Off Road	2019	2	1	Clear	Impairment and excessive speeding
C	W North St.	City of Owatonna	Collision with Pedestrian	Pedestrian	2016	1	1	Clear	No clear contributing factor
D	US 14	MnDOT	Motor Vehicle in Transport	Head On	2019	1	2	Fog / Smoke / Smog	Reckless driving
E	CSAH 7	Steele County	Non-Collision Harmful Event	Single Vehicle	2018	1	1	Clear	Medical issue
F	CSAH 7	Steele County	Collision Fixed Object	Run Off Road	2018	1	1	Cloudy	Intoxication
G	I-35	MnDOT	Collision Fixed Object	Run Off Road	2019	1	1	Clear	Failure to keep in proper lane
H	I-35	MnDOT	Motor Vehicle in Transport	Angle	2016	1	5	Clear	Tire failure which caused vehicle to lose control
I	US 218	MnDOT	Motor Vehicle in Transport	Head On	2016	2	2	Clear	Wrong way in opposing traffic
J	3rd St. SE	City of Blooming Prairie	Coll Fixed Object	Run Off Road	2016	1	1	Cloudy	Medical issue and reckless driving
K	I-35	MnDOT	Ran Off Road Right	Unknown	2020	1	1	Cloudy	Failed to keep in proper lane
L	CSAH 7	Steele County	Motor Vehicle in Transport	Head On	2020	1	2	Clear	Failed to keep in proper lane, navigating a curve
M	CSAH 17	Steele County	Motor Vehicle in Transport	Rear End	2020	1	2	Clear	Inattentive driver
N	CSAH 48	Steele County	Pedestrian	Unknown	2020	1	1	Clear	Failure to yield to pedestrian in crosswalk

Source: MnDOT, 2016-2020

TABLE 8. TOP 20 CRASH LOCATIONS

Rank	Intersection	All Crashes				Fatal and Serious Injury Crashes			
		Crash Rate	Average Crash Rate	Critical Crash Rate	Critical Index	Crash Rate	Average Crash Rate	Critical Crash Rate	Critical Index
1	CSAH 43 & CR 180	2.58	0.25	1.15	2.24	0	1.05	24.61	0
2	CSAH 34 (26th St.) & CSAH 8 (Kenyon Rd.) & CSAH 34	1.42	0.25	0.89	1.6	0	1.05	15.46	0
3	CSAH 19 (Rose St.) & Pine Ave. & Spruce St.	0.68	0.18	0.55	1.24	0	0.33	6.7	0
4	CSAH 48 (Main St.) & Grove Ave.	0.98	0.52	0.92	1.07	0	0.42	4.27	0
5	CSAH 2 & 21st Ave. NW	0.89	0.52	0.88	1.01	0	0.42	3.78	0
6	CSAH 45 (State Ave.) & CSAH 34 (26th St.)	0.91	0.52	0.92	0.99	4.31	0.42	4.31	1
7	CSAH 19 (Rose St.) & CSAH 45 (Oak Ave.)	0.82	0.52	0.88	0.93	0	0.42	3.78	0
8	CSAH 45 (Hoffman Ave.) & North St.	0.78	0.52	0.86	0.91	0	0.42	3.54	0
9	CSAH 34 (26th St.) & CSAH 23 (W. Frontage Rd.)	0.64	0.35	0.71	0.9	0	0.57	5.18	0
10	CSAH 45 (Cedar Ave.) & 18th St. SE	0.78	0.52	0.9	0.87	7.77	0.42	4.01	1.94
11	CSAH 45 & CSAH 48 (Oak Ave. & Main St.)	0.68	0.52	0.82	0.83	0	0.42	2.99	0
12	CSAH 19 (Rose St.) & Cedar Ave.	0.76	0.52	0.99	0.77	0	0.42	5.35	0
13	CSAH 2 & CSAH 45 (Hoffman Dr.) & State Ave.	0.64	0.52	0.86	0.74	0	0.42	3.5	0
14	CSAH 19 (Rose St.) & Elm Ave.	0.51	0.35	0.77	0.66	0	0.57	6.21	0
15	CSAH 45 (Oak Ave.) & School St.	0.57	0.52	0.93	0.61	4.4	0.42	4.37	1.01
16	CSAH 48 (Main St.) & Lincoln Ave.	0.53	0.52	0.97	0.55	0	0.42	4.96	0
17	CSAH 2 (Hoffman Dr.) & 24th Ave. NW	0.44	0.52	0.87	0.51	0	0.42	3.66	0
18	CSAH 45 (Oak Ave.) & McKinley St.	0.44	0.52	0.95	0.46	0	0.42	4.73	0
19	CSAH 48 (Main St.) & Park Square W.	0.44	0.52	0.98	0.45	0	0.42	5.13	0
20	CSAH 48 (Main St.) & Elm Ave.	0.36	0.52	0.93	0.39	4.47	0.42	4.42	1.01

Source: MnDOT, 2016-2020



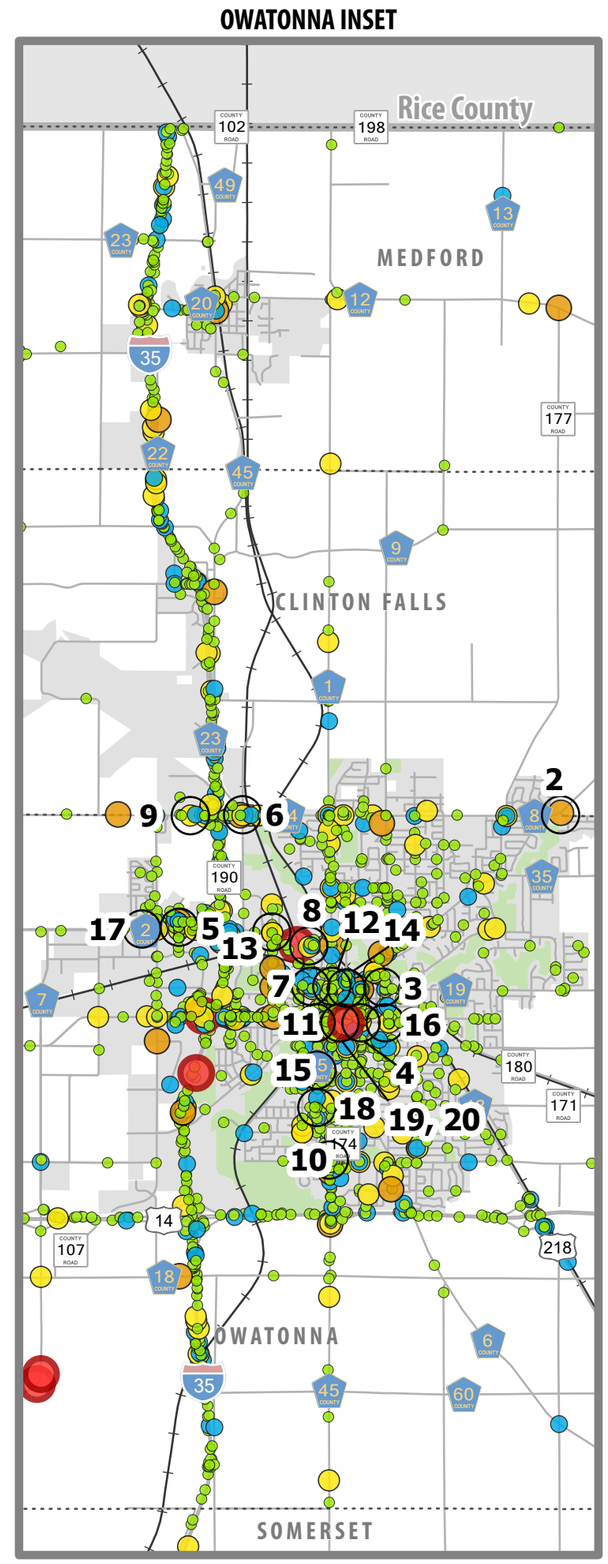


Figure 14
Safety
Steele County 2040 Transportation Plan

Crash Severity

- Fatal
- Serious Injury
- Minor Injury
- Possible Injury
- Property Damage Only
- Township
- City Boundary

Top 20 Crash Locations

1. CSAH 43 & CR 180
2. CSAH 34 (26TH ST.) & CSAH 8 (KENYON RD.) & CSAH 34
3. CSAH 19 (ROSE ST.) & PINE AVE. & SPRUCE ST.
4. CSAH 48 (MAIN ST.) & GROVE AVE.
5. CSAH 2 & 21ST AVE. NW
6. CSAH 45 (STATE AVE.) & CSAH 34 (26TH ST.)
7. CSAH 19 (ROSE ST.) & CSAH 45 (OAK AVE.)
8. CSAH 45 (HOFFMAN AVE.) & NORTH ST.
9. CSAH 34 (26TH ST.) & CSAH 23 (W. FRONTAGE RD.)
10. CSAH 45 (CEDAR AVE.) & 18TH ST. SE
11. CSAH 45 & CSAH 48 (OAK AVE. & MAIN ST.)
12. CSAH 19 (ROSE ST.) & CEDAR AVE.
13. CSAH 2 & CSAH 45 (HOFFMAN DR.) & STATE AVE.
14. CSAH 19 (ROSE ST.) & ELM AVE.
15. CSAH 45 (OAK AVE.) & SCHOOL ST.
16. CSAH 48 (MAIN ST.) & LINCOLN AVE.
17. CSAH 2 (HOFFMAN DR.) & 24TH AVE. NW
18. CSAH 45 (OAK AVE.) & MCKINLEY ST.
19. CSAH 48 (MAIN ST.) & PARK SQUARE W.
20. CSAH 48 (MAIN ST.) & ELM AVE.

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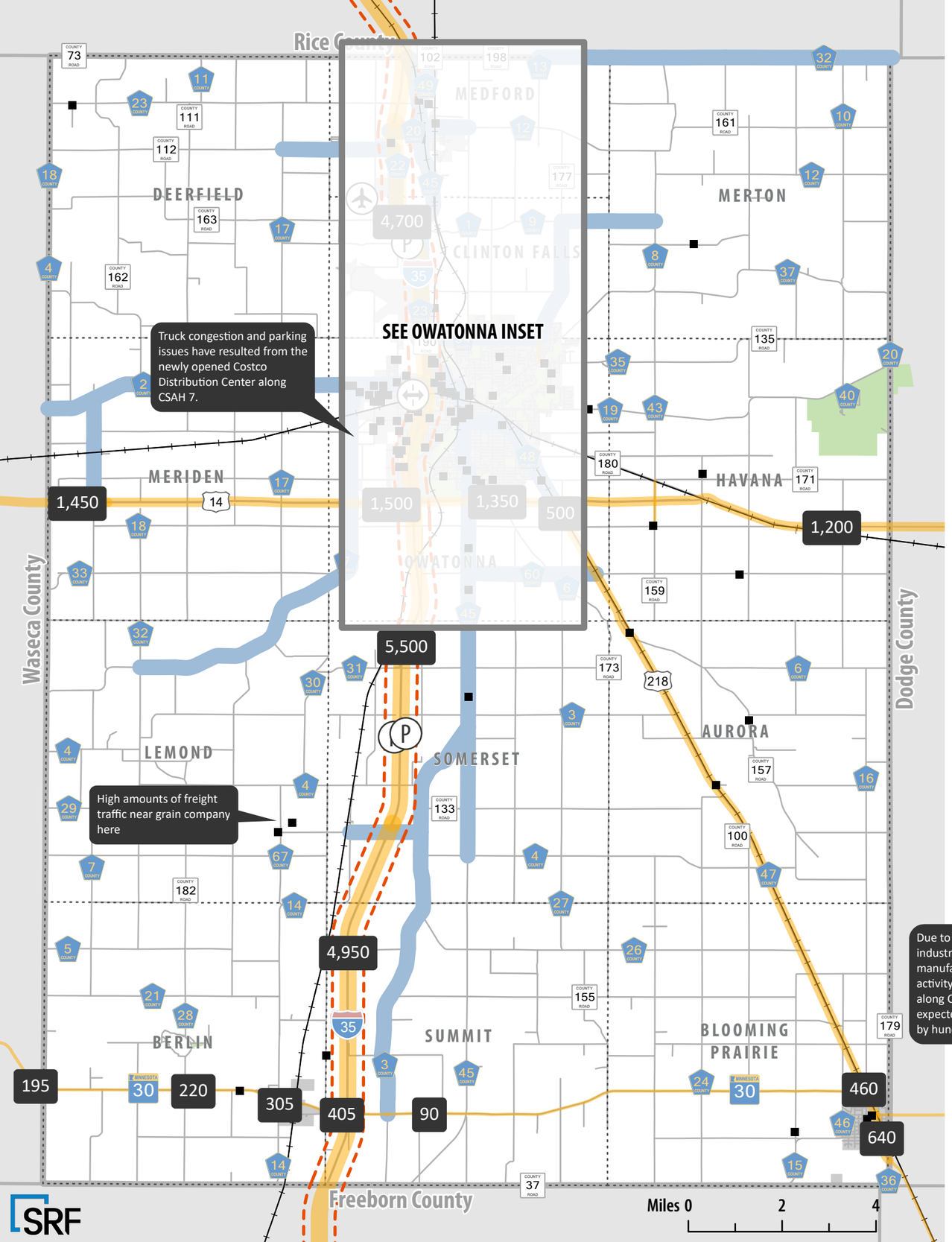
FREIGHT FACILITIES

Major freight in and around Steele County consists of networks including highways (state and county), railroads, and airports. The ability to transport goods provides both local and regional benefits and plays a key role in the county's economic vitality. It is imperative that the county have functional and accessible freight routes making connections between agricultural production, manufacturers, and markets.

MnDOT has an existing state-wide freight network to support the movement of goods within Steele County. This creates a safe, timely, and efficient connection from Steele County to the Twin Cities, other communities in Minnesota, and national destinations. The freight network provides access to regional generators in Owatonna, Medford, Blooming Prairie, and Ellendale for distribution along highways in Minnesota and neighboring states (see **Figure 15**).

At the local level, the county does sign and enforce spring weight restrictions to reduce impacts to the roadways, bridges, and other facilities. While not all highways are signed as ten-ton routes, current county road performance standards require a ten-ton design for new or reconstructed highways. Currently, approximately 21 percent of CSAH and CR are designated as 10-ton roadways. The county intends on increasing routes to 10-ton during any reconstruction project if reasonable and feasible, and during rehabilitation/reclaim/resurfacing projects. **Figure 15** documents current freight infrastructure for the county, as well as key freight generators and known heavy commercial traffic volumes for certain highways.

Currently there is one airport, Owatonna Degner Regional Airport (OWA), in Steele County about three miles northwest of Owatonna. This airport is used for general aviation and is open to the public. In 2016, the OWA completed a Master Plan, outlining the needs of existing and future users for the next 20 years. This was a joint effort between the City of Owatonna, the Federal Aviation Administration (FAA) and Minnesota Department of Transportation's Office of Aeronautics. Improvements suggested in the plan include extension of the runway and additional hanger space. These improvements will result in a more efficient freight system for both Steele County and surrounding communities.



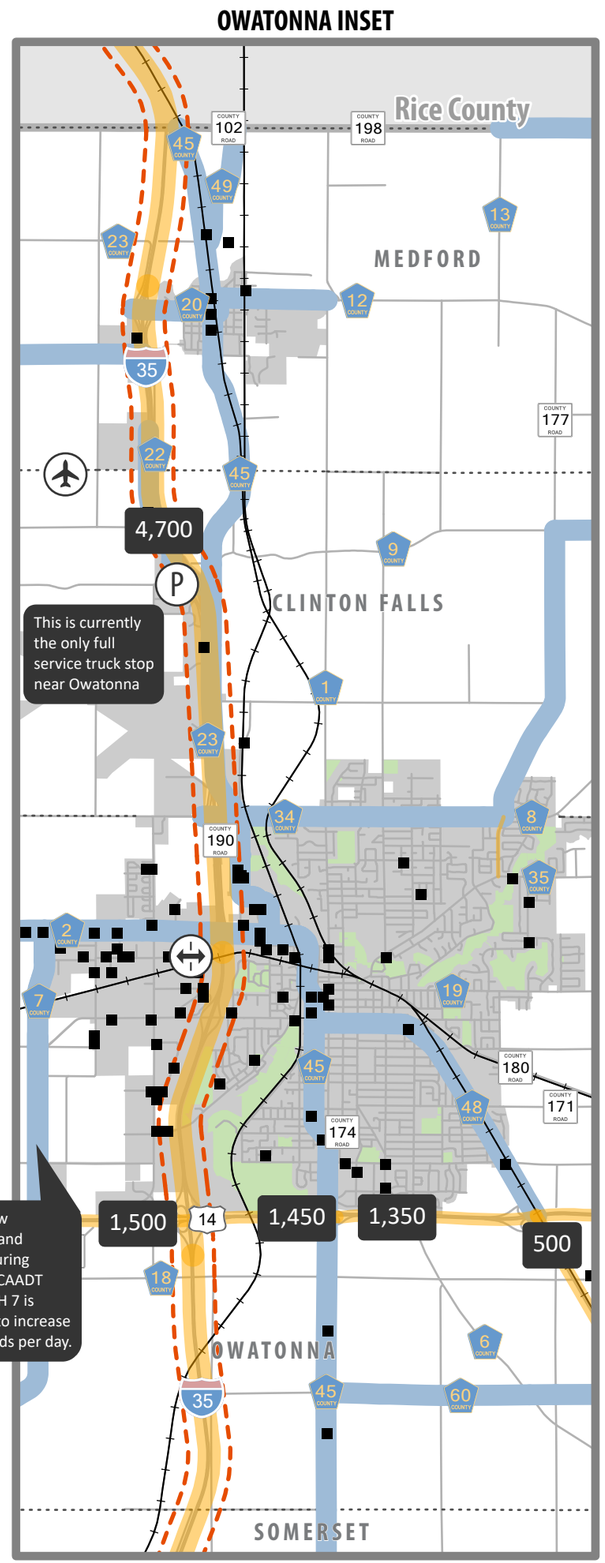


Figure 15
Freight
Steele County 2040 Transportation Plan

Current HCAADT Volume (2019)

- 0 - 500
- 501 - 2,000
- 2,001 or above
- Intermodal Freight Facility
- Truck Parking
- Airport
- Freight Destination
- Primary Highway Freight System
- Steele County 10-Ton Roadways

MULTIMODAL TRANSPORTATION SYSTEM

Steele County is a growing community, progressing toward a safe and accessible multimodal transportation system with opportunities to bike and walk as well as incorporate existing transit. Improving the multimodal system within the county will go beyond transportation and improve quality of life for everyone in the community. This will become more important as the community and economy continue to grow.

A multimodal network can improve the physical, economic, and environmental health of the county. Currently, only Owatonna has a Sidewalk and Trail Plan. This plan outlines current multimodal connections as well as possible future connections to help close gaps.

EXISTING BIKE AND PEDESTRIAN CONDITIONS

Bicycle and walking conditions within Steele County are sufficient in some areas including parks and some cities, but opportunity for improvement remains throughout the county (see **Figure 16**). Steele County is developing its system to provide similar multimodal amenities to its residents as in adjacent counties and create system continuity with adjacent communities.

ON ROAD FACILITIES

Due to distances involved and high average speed limits on most county roadways, biking and walking are currently not viable options for most people outside of the developed cities. The presence of wide paved shoulders on some roadways such as CSAH 2, 7, 12, 35, etc. are exceptions. These wide paved shoulders, while not designated bike lines, are highly valued and used by some county residents for bicycling and walking. However, due to the high traffic speeds (50-55 MPH) many people are not comfortable riding or walking on those roadways.

REGIONAL TRAILS

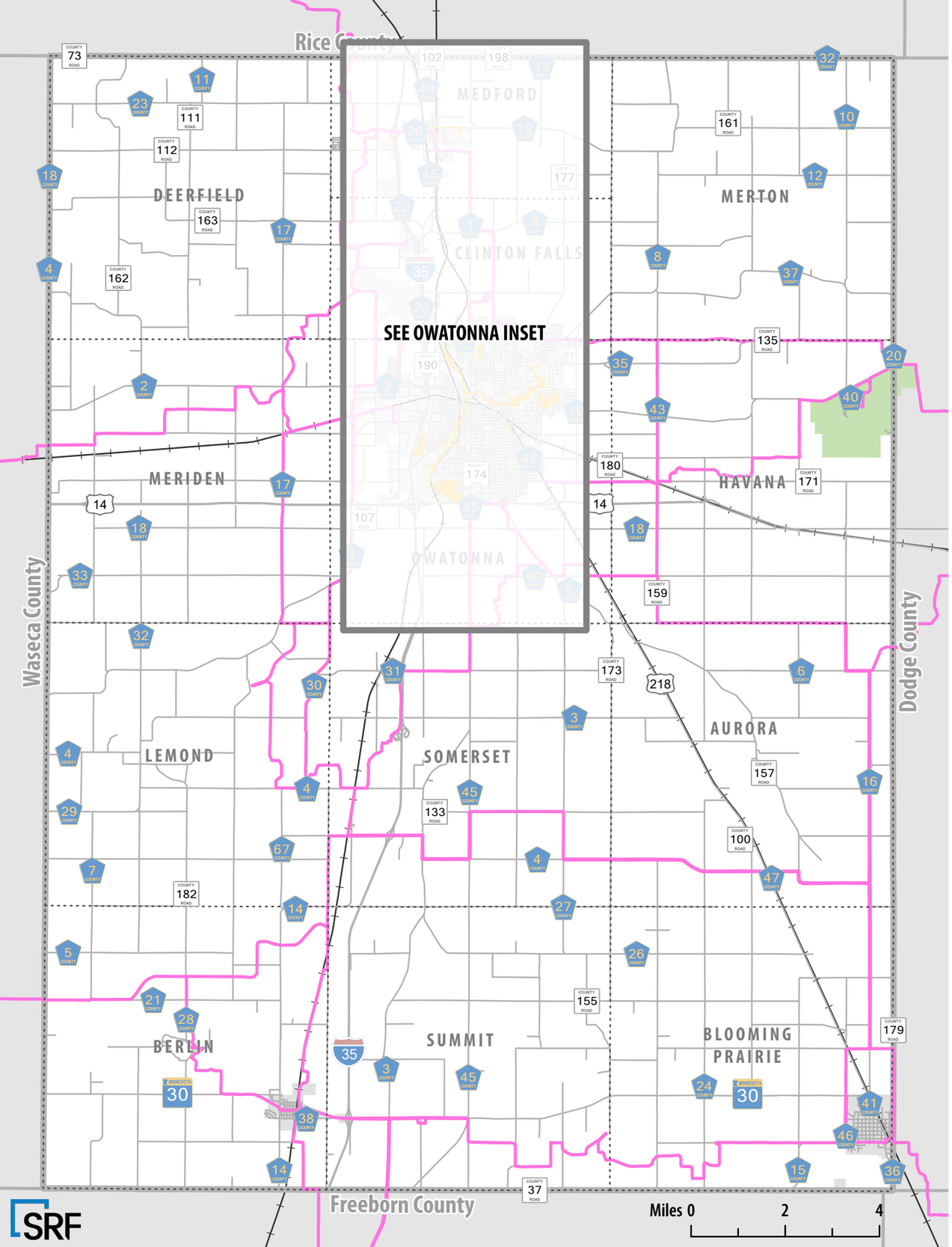
Currently, there are no regional trails in Steele County. The Minnesota Statewide Bicycle System Plan, aligned with the Minnesota GO plan, identifies US 14 as a medium-priority route and US 218 as a low-priority route. This plan prioritizes funding and implementation for regional trails. Currently, there are no high-priority routes planned in Steele County.

LOCAL TRAILS

The county does not currently have any policies about building or designing trails on or adjacent to county roadways. Trails are considered on a case-by-case basis with any construction project and if it fits the location and need. The county has formed a Regional Rail Authority in working with adjacent counties to form a partnership in order to potentially acquire abandoned rail lines as future trail facilities.

Most of the trails within Steele County are Department of Natural Resource (DNR) snowmobile trails. These trails are generally used for recreational purposes during winter months. The location of the trails can change as they require permission from property owners. The majority of non-snowmobile trails are concentrated in Owatonna. These trails primarily serve a recreational purpose or a connection to local civic locations such as schools. Local trail improvements can benefit by having the grading completed as part of the county reconstruction project work (as a county contribution) when incorporating separated trails into the county's projects (in accordance with the county's cost participation policy). The city would then then be responsible for paving these trails, if desired, and maintaining them going forward.

The opportunities for future trail connections that may serve both a transportation and recreational purpose are discussed in the **Future Systems Analysis** section of this Plan.



OWATONNA INSET

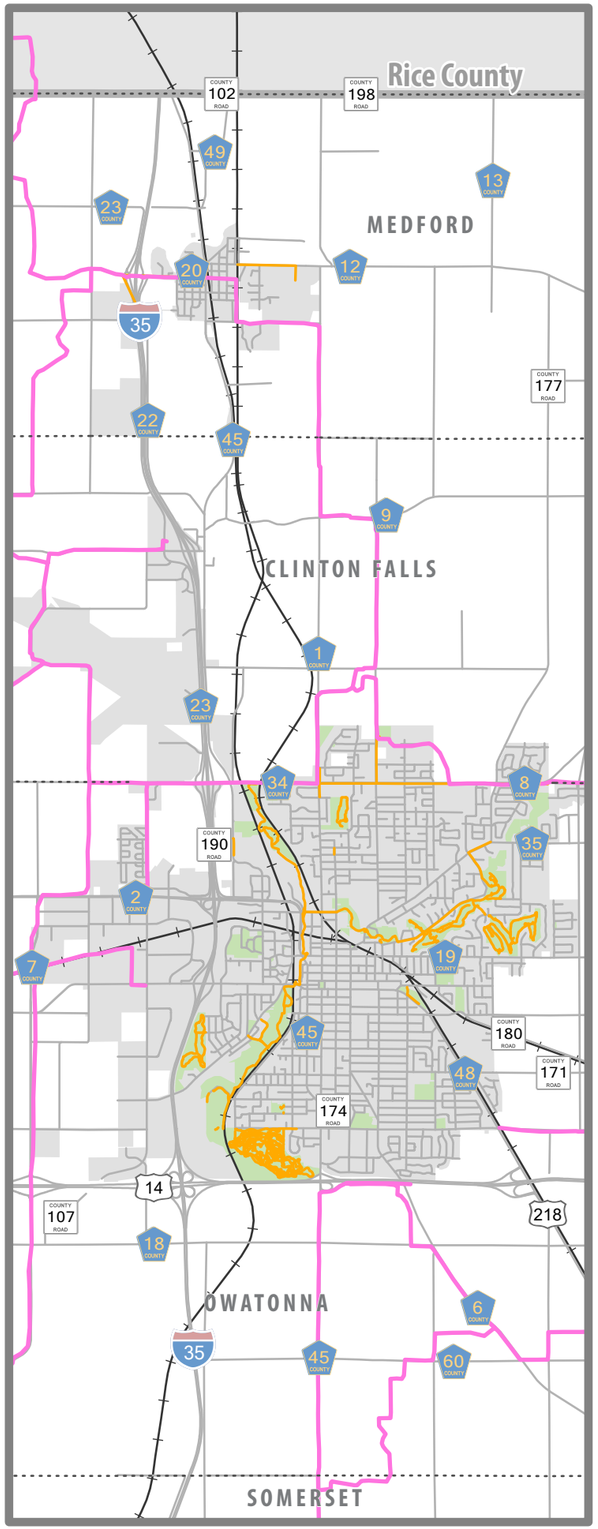


Figure 16
Existing Multimodal System
Steele County 2040 Transportation Plan

- Snowmobile Trails
- Trails
- Township
- City Boundary

Steele County 2040 TRANSPORTATION PLAN

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AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA) enacted on July 26, 1990 is a civil rights law prohibiting discrimination against individuals based on disability. As a provider of public transportation services and programs, the Steele County Highway Department must comply with requirements of the ADA as it applies to public service agencies. The Steele County Highway Department is required to perform a self-evaluation of its current transportation infrastructure policies, practices, and programs.

To summarize work towards achieving ADA requirements, the county produced an ADA Transition Plan in 2020. This plan outlines county ADA requirements, self-evaluation, policies and practices, planned improvements and schedule, public outreach, grievance process, and how the county will continue to monitor its progress.

TRANSIT

Transit service within Steele County currently consists of a dial-a-ride service. Southern Minnesota Area Regional Transit (SMART) operates buses that provide transportation for workers, residents, and visitors throughout Steele, Mower and Freeborn Counties. The majority of demand for SMART services are within the City of Owatonna, and typically near retail centers. During the public engagement phase of this project, SMART met with the Project Management Team and provided details on their services as well as feedback on the existing transportation system. Feedback was received from Transit Managers, Operations Managers, and SMART drivers. The entirety of this discussion is available in **Appendix A**, with some of the main points summarized below:

- Many SMART riders work at Cedar Valley Services and request transport
- Perceived delays are often experienced at roundabouts due to uncertainty about use
- Poor pavement directly impacts riders as they are often jostled when seated in the rear of the bus
- Multiple requests to connect 20th Street NE
- Requests for an eastern road that connects North/South

These concerns are addressed in the **Future System Analysis** section of the Plan.

GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

A key component of Steele County's Transportation Plan development was establishing goals, objectives, and performance measures. These elements provide direction and guidance that aid in achieving a shared transportation vision among elected officials, county staff, local communities, and citizens. These elements strive for a safe, efficient, and accessible transportation system that meets the preservation and mobility needs of the county.

TRANSPORTATION VISION STATEMENT

The transportation vision for Steele County is to provide a safe, efficient, coordinated transportation system that is responsive to community values and meets the needs of all users within resource limitations.

GOALS

Goals are defined as broad statements of desired accomplishment or direction, representing ideas and visions for the county. The Steele County transportation system consists of multiple modes of transportation (e.g., roads, trails, rail, freight, and transit) and facility types. To encompass the scope of the transportation system, four transportation goal areas and statements were established regarding safety, accessibility and mobility, economic development, and system preservation to achieve the county's long-term vision.

OBJECTIVES

Objectives are specific statements of action that help accomplish the goals and can often be measured (quantitatively and/or qualitatively) over time. All stakeholders worked together to identify objectives to guide policies, investments, and decisions related to fulfilling the county's goals.

PERFORMANCE MEASURES

The purpose of creating and implementing performance measures is to improve the transportation system by establishing standards, then monitoring and assessing the effectiveness of various transportation investments, while measuring progress towards the Plan's goals. Performance measures are designed to serve as a benchmark to evaluate and quantify progress over time. A performance-based approach is valuable in evaluating asset management risks and can be very useful in increasing decision-making transparency to the public. The county has chosen to initiate a performance-based approach for the four performance focus goal areas. Over time, other performance measures may be added, as staff become comfortable with data collection methods, the setting of measures, and the reporting process.

GOAL	OBJECTIVES	PERFORMANCE MEASURES
Safety: Develop and maintain a transportation network that promotes the safety of all users.	• Enhance safety by reducing the number of fatalities and the severity of crashes throughout the County under the guidance of the County's Road Safety Plan. • Emphasize transportation improvements that address safety and operational needs. • Enforce speeds limits.	• Reduce the number of fatal and serious injury crashes systemwide. • Reduce the number of fatal and severe pedestrian and bicycle injury crashes systemwide.
Access and Mobility: Develop a transportation system that increases the accessibility and mobility options of all users.	• Provide sufficient capacity in the transportation system to accommodate existing and future travel demand. • Provide quality transportation infrastructure that supports freight and farm-to-market routes throughout the County. • Provide a roadway system that accommodates access and mobility needs appropriately. • Consider multimodal aspects as they fit the need and location within County Road projects.	• Miles of roadway within the county system exceeding a volume to capacity (V/C) ratio over 1.00 for existing and future conditions (In urban and urbanizing areas)
Economic Development: Maintain a transportation system that supports and promotes economic development appropriately for the County context.	• Promote economic development by enhancing the movement of goods and services from economic generators to the regional transportation system. • Provide quality transportation infrastructure that supports freight and farm-to-market routes throughout the County. • Identify and preserve potential transportation corridors by utilizing such tools as official mapping, foot printing and new subdivision requirements. • Steele County Highway Department to provide input on land use, zoning and subdivision proposals during the development review process.	• Percent of county road system on the ten-ton network.
System Preservation: Develop a transportation system that maintains a state of good repair and explores low-cost/high-benefit solutions to satisfy transportation priorities.	• Implement preservation strategies such as new pavement management techniques, right-of-way preservation, access management, and land use considerations to maintain the functionality of the transportation system. • Apply innovative preservation and maintenance strategies that increase the useful life of roads, bridges, and other transportation assets. • Identify and secure sufficient funding sources (e.g., local, state and federal) to meet existing and future system preservation needs.	• Limit bridge and pavement in poor condition and maintain a percentage of the pavement mileage in good and very good condition.

TRAFFIC FORECASTS AND OPERATIONAL NEEDS

FORECAST METHODOLOGY

Year 2040 daily traffic volumes were developed by considering the historical traffic growth rates throughout the county, Land use and pockets of growth were considered as well where information was available; growth impacts were classified by intensity to characterize the potential influence on future traffic volume growth. Growth rates were reviewed to identify outliers or anomalies within the historical volume dataset. Irregular growth trends, outliers, and anomalies were removed in an effort to produce a more representative historical growth rate. During this review, volumes that may have been impacted by construction or recent developments were flagged to indicate changes in historical growth patterns. The year 2040 traffic forecasts were used to analyze roadway capacity deficiencies and roadway operational needs on a corridor basis. Performance of the system under this future horizon can be compared to the existing system conditions, from which improvement projects are developed.

FORECAST 2040 TRAFFIC VOLUMES

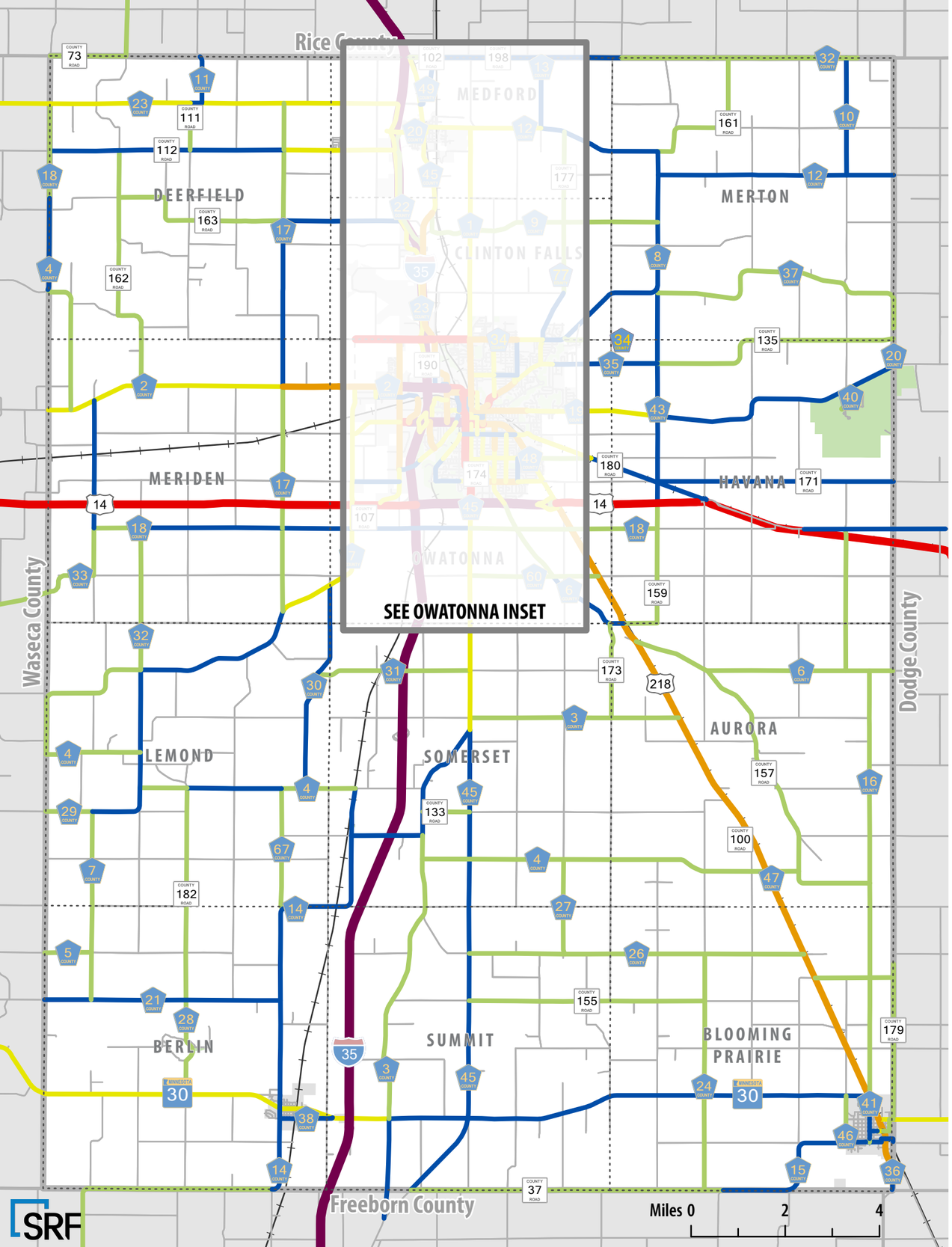
Estimated 2040 traffic forecasts for Steele County were prepared using the two methodologies outlined above. These forecasts are an essential analytical tool to determine the adequacy of the roadway system to handle future development, as anticipated by the county, cities, and townships. Generally, roadways which currently experience high traffic volumes will continue to do so (see **Table 9**). Higher volumes are also anticipated on roadways that originate in the center of Owatonna and radiate outwards, such as Mineral Springs Road, Main Street, and Hoffman Drive. There are also significant volume increases on the western side of I-35, near the retail cluster along CSAH 2.

OPERATIONAL NEEDS

To evaluate roadways with potential for congestion, the future traffic volumes were compared to expected thresholds of each roadway. Similar to the congestion analysis in **Existing Conditions** section of this Plan, the projected 2040 traffic volume was compared to the expected capacity (see **Table 4**) of the roadway to produce a V/C index. Using these thresholds, future transportation system deficiencies were identified. It is important to note that the V/C congestion metric does not consider special traffic conditions or roadway characteristics (such as rail crossings, access controls, etc.). Roadways with V/C values between 0.85 and 1.0 are considered "Approaching Capacity", and roadways with values above 1.0 are considered "Over Capacity". There are projected to be four roadways approaching capacity, and two over capacity by 2040 (see **Table 9**). All of the roadways noted in **Table 9** are located on roadways that are not under county jurisdiction, however, they are still important to note as they may have impacts to the adjacent county system. Additionally, as the county considers potential construction of new roadways, jurisdictional transfers, or changes to roadway designation in the future it will be important to consider the information in **Table 9**.

TABLE 9. ROADWAYS APPROACHING OR EXCEEDING CAPACITY

Roadway	Road Authority	Extents		AADT (Vehicles/day)	Capacity (Vehicles/day)	V/C
Bridge St. West	City of Owatonna	Park Dr. NW	Selby Ave. SW	20,500	22,000	0.93
18th St. SW	City of Owatonna	CR 45	Hartle Ave. SE	9,500	10,000	0.95
North St. West	City of Owatonna	CR 45	Cedar Ave. N	11,300	10,000	1.13
Cedar Ave. North	City of Owatonna	North St. W	16th St. NE	9,200	10,000	0.92
Mineral Springs Rd.	City of Owatonna	Fremont St. E	Cherry St. NE	9,300	10,000	0.93
Mineral Springs Rd.	City of Owatonna	Cherry St. NE	St. Paul Rd. NE	10,100	10,000	1.01



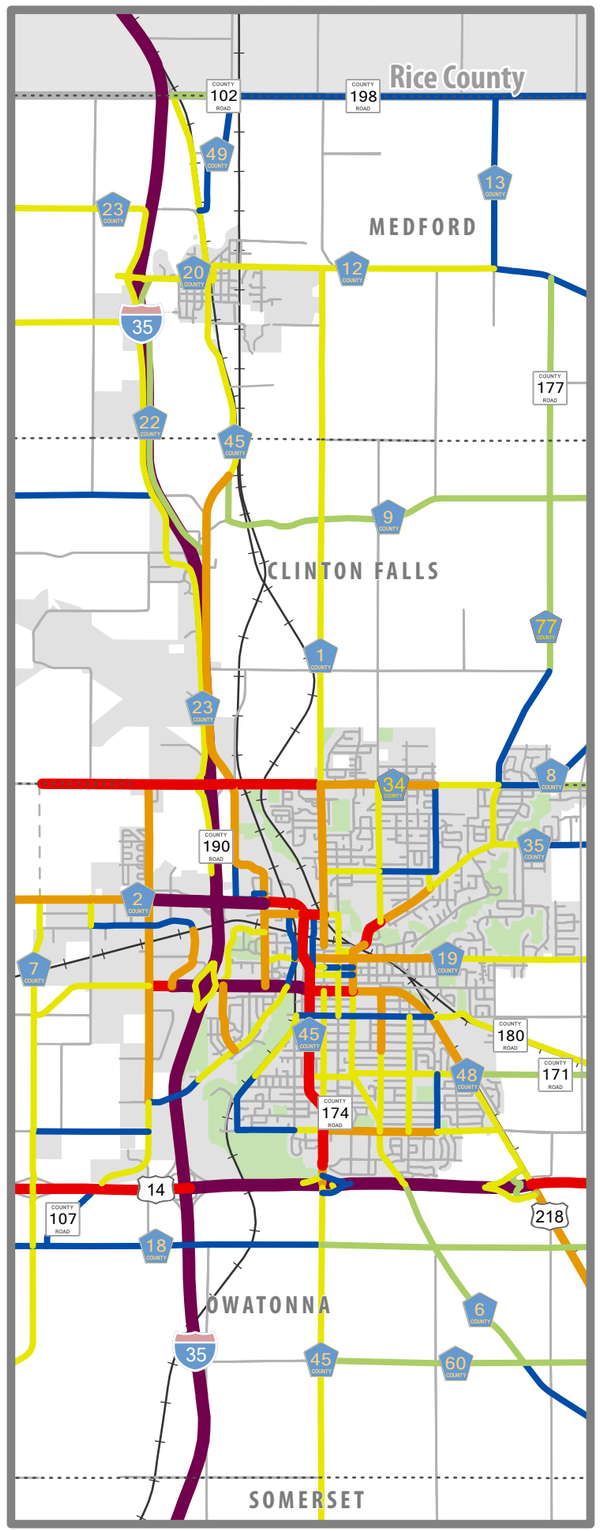


Figure 17
Future Roadway Volume
Steele County 2040 Transportation Plan

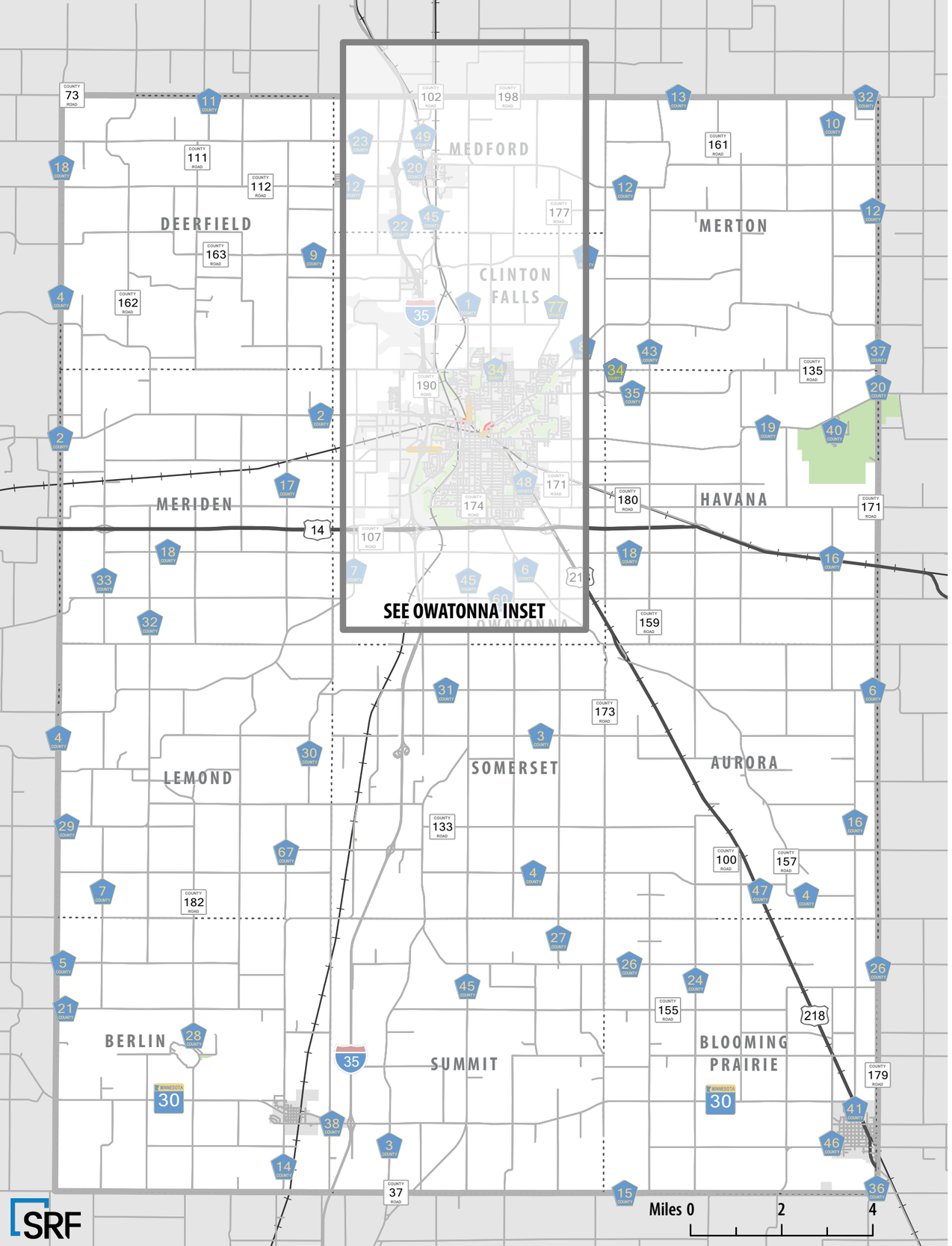
Future AADT Volume (2040)

- 0 - 500
- 501 - 1,500
- 1,501 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 or above

Steele County 2040 TRANSPORTATION PLAN

Steele County

SRF



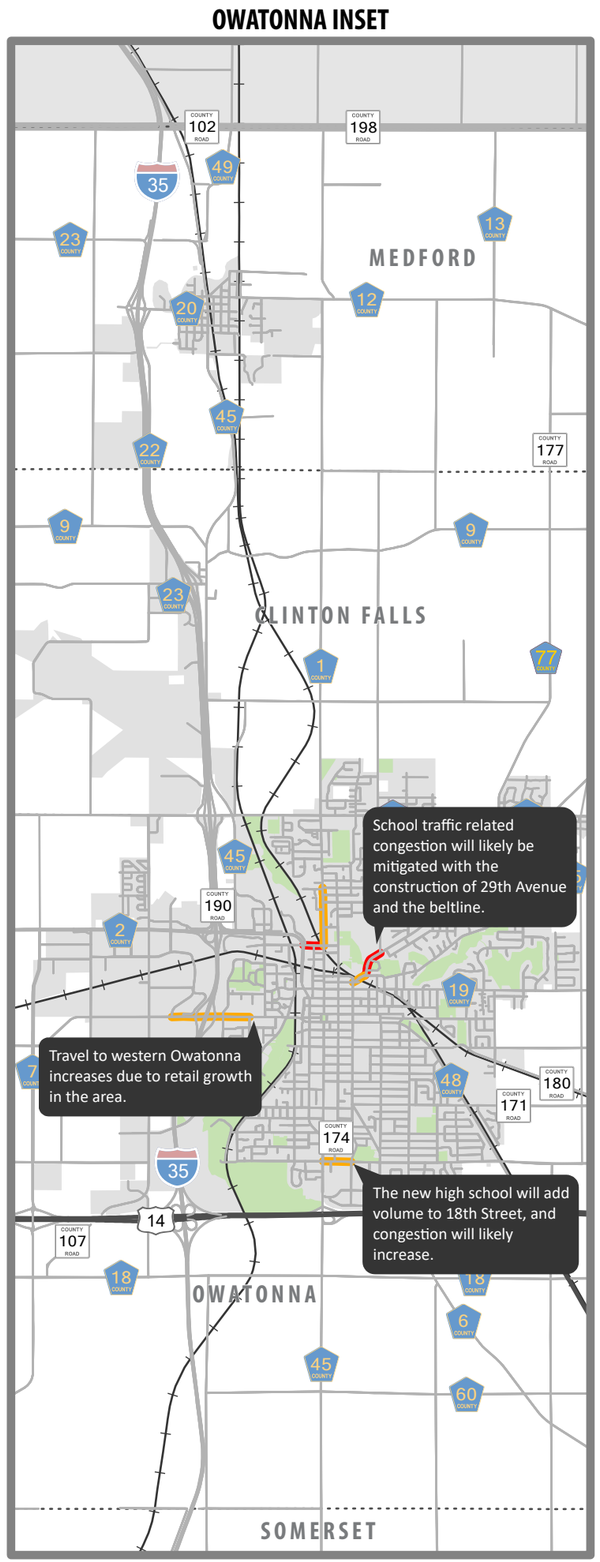


Figure 18
Future Roadway Capacity
Steele County 2040 Transportation Plan

- Approaching Capacity
  V/C between 0.85 - 1.00
- Over Capacity
  V/C above 1.00

Roadways projected to be approaching or over capacity are within the boundaries of the City of Owatonna.

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Steele County 2040 TRANSPORTATION PLAN

Steele County

FUTURE SYSTEM ANALYSIS

This portion of the Plan includes Steele County's proposed future functional classification, jurisdictional transfers, safety improvements, multimodal system enhancements, and freight system advancements. The suggestions within the Plan are intended to be acted upon, with specific actionable measures presented in the **Implementation Plan** section.

FUTURE FUNCTIONAL CLASSIFICATION

Updating the functional classification of Steele County roadways ensures the function and role of all roadways are best aligned with their current use. Changing the classification also enables state, county and local planning officials to better manage access and design of roadways. By evaluating the current functional class, volumes, changes in land use, access management, route alignment, and established guidelines, new functional classifications have been proposed for the county (see **Table 10** and **Figure 19**). The primary objectives of functional classification changes include:

- Define the roadway hierarchy to match function
- Designate function of roadways by using a logical, systematic analysis process
- Follow the established process and mileage guidance outlined by FHWA, as identified in **Existing Conditions**
- Coordinate with local jurisdiction's future system plan and the future functional planning efforts

The specific factors considered in functional classification changes included:

- Past plan updates
- Comments from stakeholders
- Future land use plans and development patterns
- Anticipated future system changes
- Typical trip length
- Typical size of traffic generators served
- Ability to serve regional activity
- Ability to provide continuity between travelsheds
- Spacing of routes to serve different functions
- Role in providing mobility and access
- Relationship to adjacent land uses
- Consistency with the future functional classification systems of adjacent counties

It should be noted that emphasis was put on transitions between major and minor collectors, as the county has direct authority to change these designations. Roadways with clear transitions to arterial classifications are also included but were suggested with moderation.

Following the recommendations for functional classification changes, the county needed to ensure roadways would meet FHWA guidelines. These guidelines were established to determine the appropriate distribution of functional classification mileage by category. As shown on the following pages, the proposed functional classification changes will continue to meet federal classification guidelines, with the exception of local and major collector roadways which vary within ten percent of recommended volumes (see **Table 11**).

TABLE 10. PROPOSED FUNCTIONAL CLASSIFICATION CHANGES

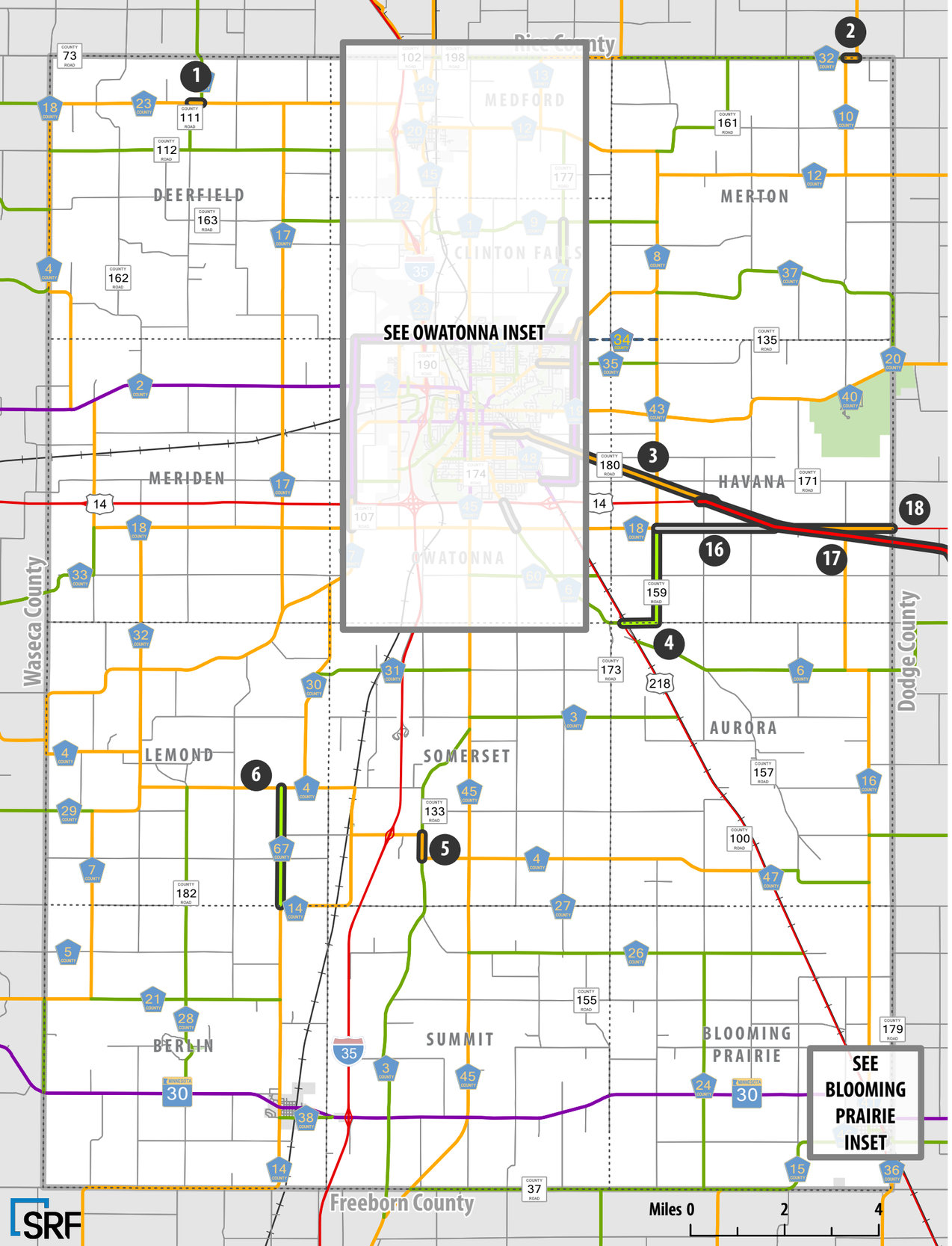
Change ID*	Roadway	Length (Miles)	Existing Functional Class	Future Functional Class
PROPOSED CHANGES				
1	CSAH 23	0.25	MINOR COLLECTOR	MAJOR COLLECTOR
2	CSAH 32	0.23	MINOR COLLECTOR	MAJOR COLLECTOR
3	CR 180	4.69	MINOR COLLECTOR	MAJOR COLLECTOR
4	CR 159	6.84	LOCAL	MINOR COLLECTOR
5	CSAH 3	0.50	MINOR COLLECTOR	MAJOR COLLECTOR
6	CSAH 67	2.49	LOCAL	MINOR COLLECTOR
7	NEW CSAH 77 (CURRENTLY MARKED AS CSAH 34)	2.57	LOCAL	MINOR COLLECTOR
8	CSAH 34	7.24	LOCAL, MINOR COLLECTOR, MAJOR COLLECTOR	MINOR ARTERIAL
9	CSAH 7	4.03	MINOR COLLECTOR	MAJOR COLLECTOR AND MINOR ARTERIAL
10	CSAH 35	0.73	MINOR COLLECTOR	MAJOR COLLECTOR
11	18TH ST. SE	0.68	LOCAL	MINOR ARTERIAL
12	CSAH 6	0.63	MINOR COLLECTOR	LOCAL
13	CSAH 15	0.16	MINOR COLLECTOR	LOCAL
14	3RD ST. SE	0.09	LOCAL	MINOR COLLECTOR
15	CSAH 7	0.63	MINOR COLLECTOR	MAJOR COLLECTOR
16	28TH ST.	2.50	MAJOR COLLECTOR	LOCAL
NEW ROADWAY ALIGNMENTS				
17	NEW US 14	4.23	ROADWAY DOES NOT EXIST	PRINCIPAL ARTERIAL
18	OLD US 14 (NEW CSAH 2)	4.10	PRINCIPAL ARTERIAL	MAJOR COLLECTOR
NEW ROADWAYS				
19	29TH AVE.	3.02	ROADWAY DOES NOT EXIST	MINOR ARTERIAL

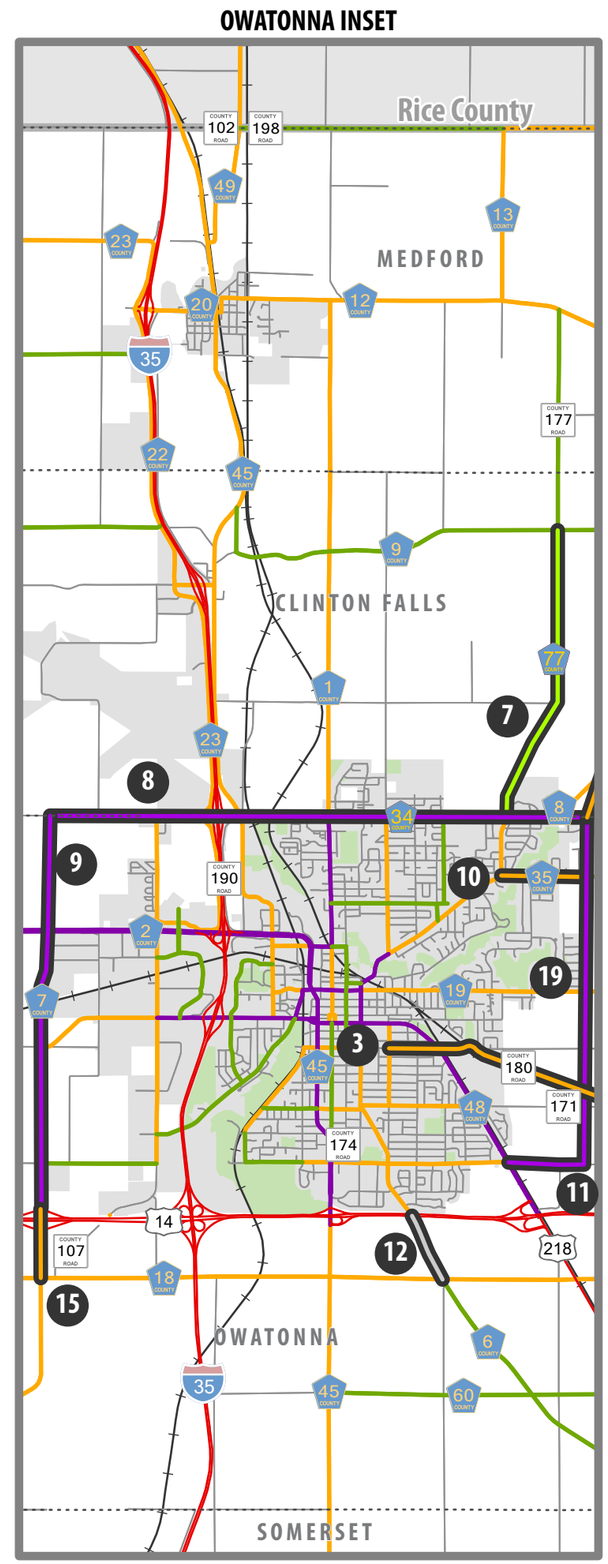
**Change IDs correlate with the IDs shown on Figure 19*

TABLE 11. FHWA FUNCTIONAL CLASSIFICATION GUIDELINES

Functional Class	Existing Mileage	Existing Percentage	Miles Gained	Miles Lost	Future Mileage	Future Percentage	FHWA Percentage Guidelines	Meeting FHWA Guidelines?
Local	579.3	58%	3.3	26.8	555.8	55%	62 to 74	7 percent below
Minor Collector	122.4	12%	23.6	16.9	128.8	13%	3 to 15	✓
Major Collector	195.1	20%	13.1	2.2	205.9	20%	8 to 19	1 percent above
Minor Arterial	38.1	4%	12.9	0	50.9	5%	2 to 6	✓
Principal Arterial	69.5	6%	4.2	4.1	68.1	7%	0 to 10	✓
TOTAL	**1,004.4**	-	**58.1**	**51.0**	**1,011.5**	-	-	-

Figure 19
Functional Classification Changes
Steele County 2040 Transportation Plan





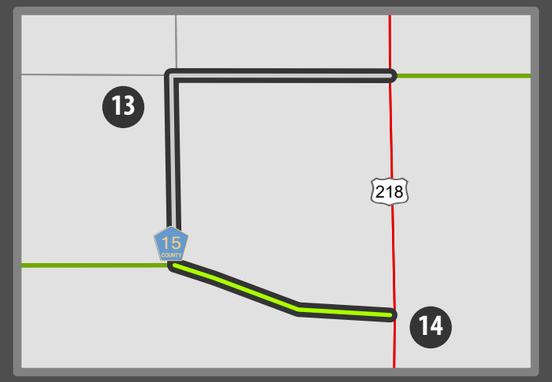
Existing Functional Class
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local

- Township
- City Boundary

Future Functional Classification
- Future Principal Arterial
- Future Minor Arterial
- Future Major Collector
- Future Minor Collector
- Future Local

\# Change ID (Steele County Roadways)

BLOOMING PRAIRIE INSET



Steele County 2040 TRANSPORTATION PLAN

Steele County

SRF

FUTURE ROADWAY JURISDICTION AND DESIGNATION

The jurisdiction and designation of roads is an important element of the future system plan as it affects many organizational functions and obligations (e.g., regulatory, maintenance, construction, and financial). The goal of any realignment is to match the management of roadways with their intended function and with the jurisdiction best suited to maintain them. The result is an efficient and economical use of citizen tax dollars and an appropriately aligned county road system. Jurisdictional and designation transfers, when planned and coordinated properly, can be successfully implemented. This goal was initiated by establishing and addressing a set of system analysis objectives.

The guidelines presented for roadway jurisdictions and designations in the **Existing Conditions** portion of this Plan, along with a set of guiding criteria, were used to identify the appropriate designation for each roadway. These criteria included:

- Corridor length
- Existing functional classification as "local"
- Future functional classification as 'local"
- Current designation
- Existing AADT
- Shoulder width
- Weight limit

Using this criterion, a detailed analysis was used to identify future jurisdictional and designation transfer candidates. This list was discussed with the PMT and refined based on local input. The final list of proposed changes is presented in **Tables 12 and 13** and **Figures 20 and 21**, which are proposed to be achieved by 2040. Jurisdictional changes will take place by mutual agreement of the agencies, as future opportunities present themselves, and in accordance with Minnesota statute 163.11.

TABLE 12. FUTURE JURISDICTIONAL CHANGES

Change ID*	Roadway	Mileage	Existing Jurisdiction	Future Jurisdiction
PROPOSED TRANSFERS				
1	CR 133	1.00	County	Township
2	CSAH 47	0.30	County	Township
3	CSAH 8	0.56	County	City
4	CSAH 35	0.76	County	City
5	CSAH 19	2.41	County	City
6	CR 171	0.24	County	City
7	CR 171	1.02	County	Township
8	18th St. SE	0.69	Township	County
9	CSAH 6	0.61	County	Township
10	CR 107	0.67	County	Township
11	CSAH 15	0.16	County	City
12	3rd St. SE	0.09	City	County
NEW ROADWAY ALIGNMENTS				
13	New Highway 14	4.23	Roadway does not exist	MnDOT
14	Old Highway 14 (New CSAH 2)	4.10	MnDOT	County
NEW ROADWAYS				
15	29th Ave.	3.02	Roadway does not exist	County

Change IDs correspond to those shown on **Figure 20.*

Changes highlighted in blue accommodate construction of the 29th Avenue corridor.

TABLE 13. FUTURE DESIGNATION CHANGES

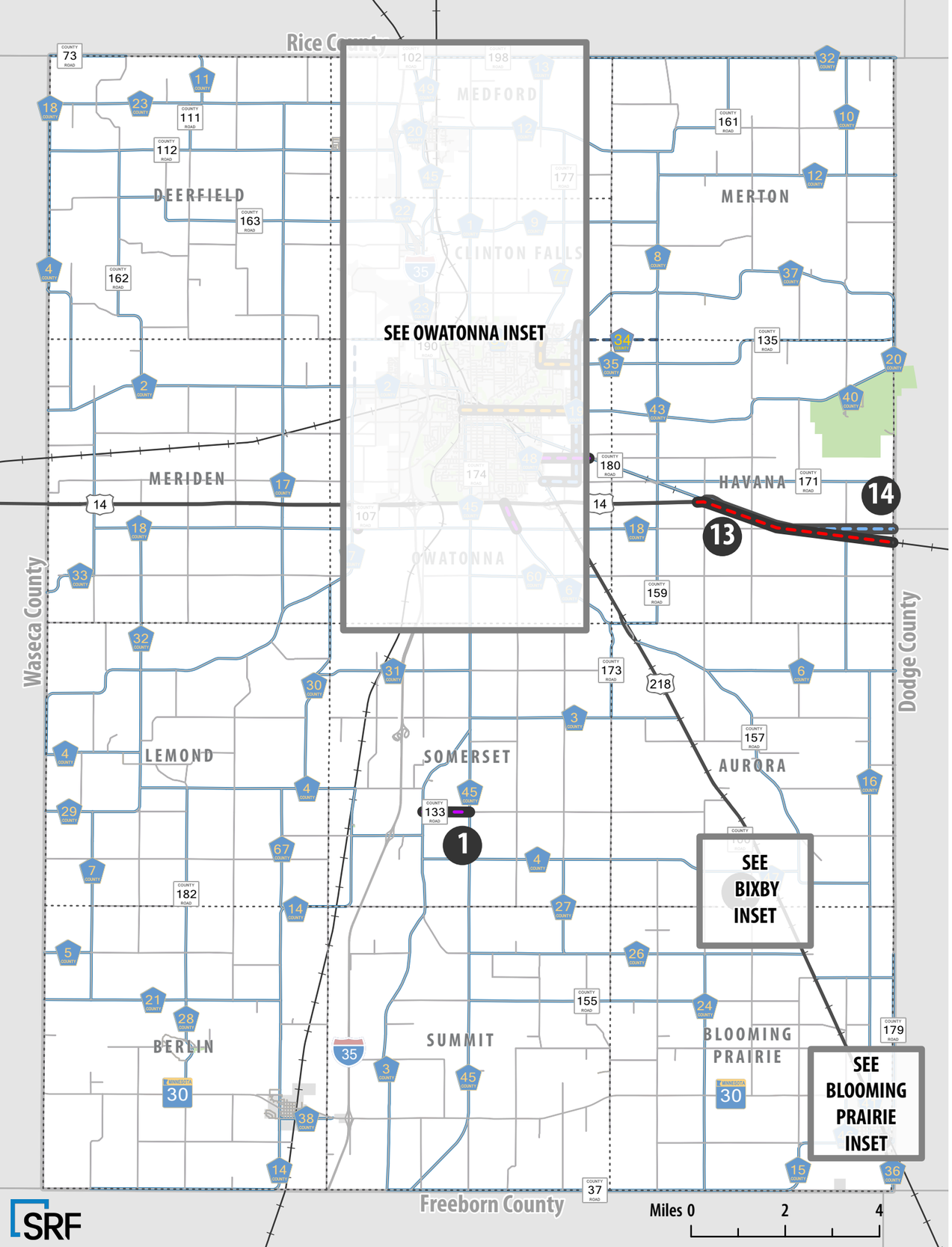
Change ID*	Roadway	Mileage	Existing Designation	Future Designation
PROPOSED CHANGES				
1	CR 180	4.34	CR	CSAH
2	CR 4	2.01	CSAH	CR
3	CSAH 5	0.99	CSAH	CR
4	CSAH 47	0.30	CSAH	Local
5	CSAH 8	0.53	CSAH	Local
6	CSAH 35	0.77	CSAH	Local
7	CR 171	0.29	CR	Local
8	18th St. SE	.71	MSA	CSAH
9	CR 6	0.61	CSAH	Local
10	CSAH 60	2.73	CSAH	CR
11	CSAH 15	0.16	CSAH	Local
12	3rd St. SE	0.09	Local	CSAH
NEW ROADWAY ALIGNMENTS				
13	New Highway 14	4.23	Roadway does not exist	State Highway
14	Old Highway 14	4.10	State Highway	CR
NEW ROADWAYS				
15	29th Ave.	3.02	Roadway does not exist	CSAH

Change IDs correspond to those shown on **Figure 21.*

Although specific roadways will be transferring jurisdictions, the overall Steele County jurisdictional distribution will remain consistent. The trades between new roadways and jurisdictional transfers result in a balanced system that appoints approximately 38 percent of the overall system to Steele County, with an increase of about five miles to the county system (see **Table 14**).

TABLE 14. FUTURE JURISDICTIONAL DISTRIBUTION

Jurisdictional Classification System		Existing Mileage	Existing Percentage	Future Mileage	Future Percentage
State System	Interstate Highway	75.3	7%	75.4	7%
	US Highway				
	State Highway				
County System	County State-Aid Highway	385.4	38%	390.7	38%
	County Road				
Municipal Street		167.3	17%	167.5	17%
Township Road		376.4	38%	376.4	38%



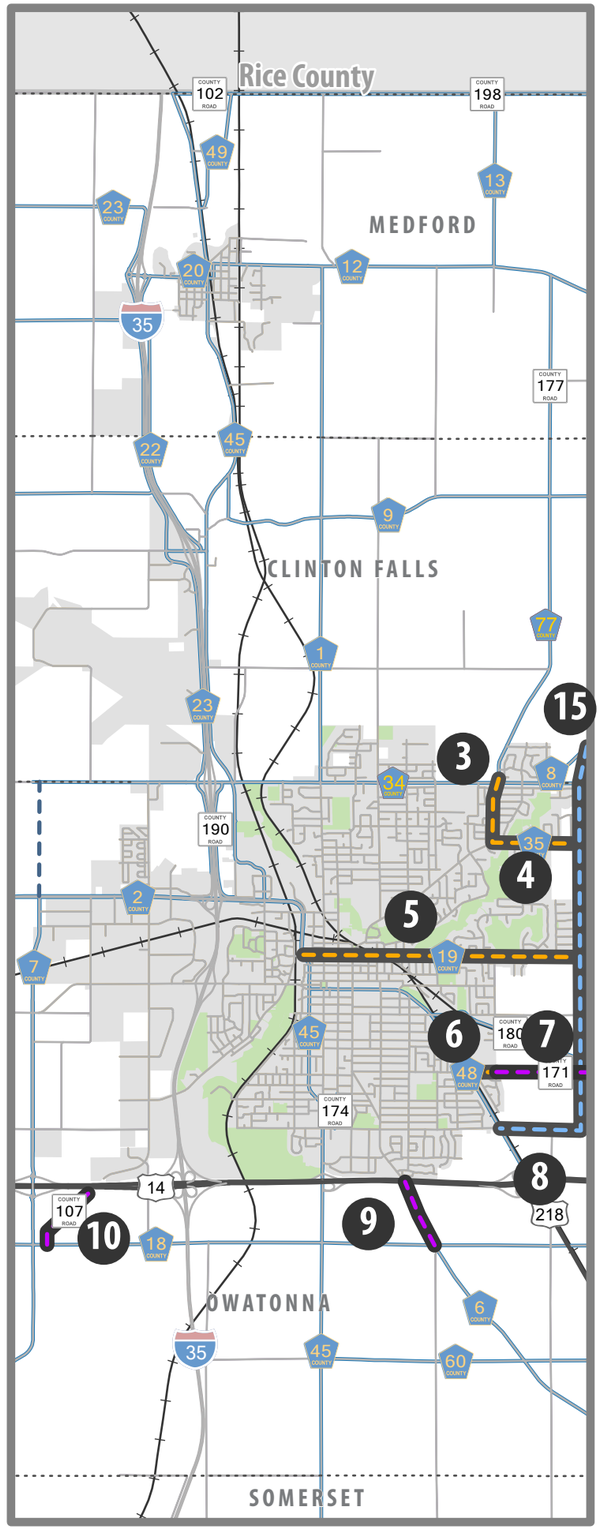


Figure 20
Jurisdictional Transfers
Steele County 2040 Transportation Plan

Future Jurisdiction
- Transfer to City
- Transfer to County
- Transfer to Township
- Transfer to MnDOT

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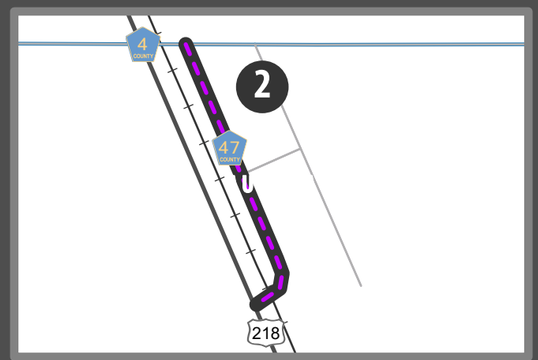

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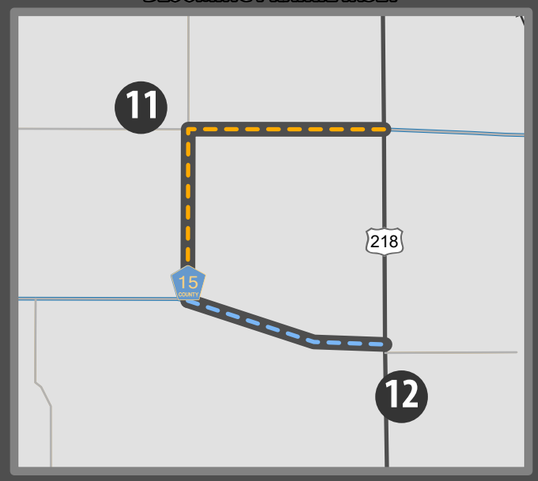
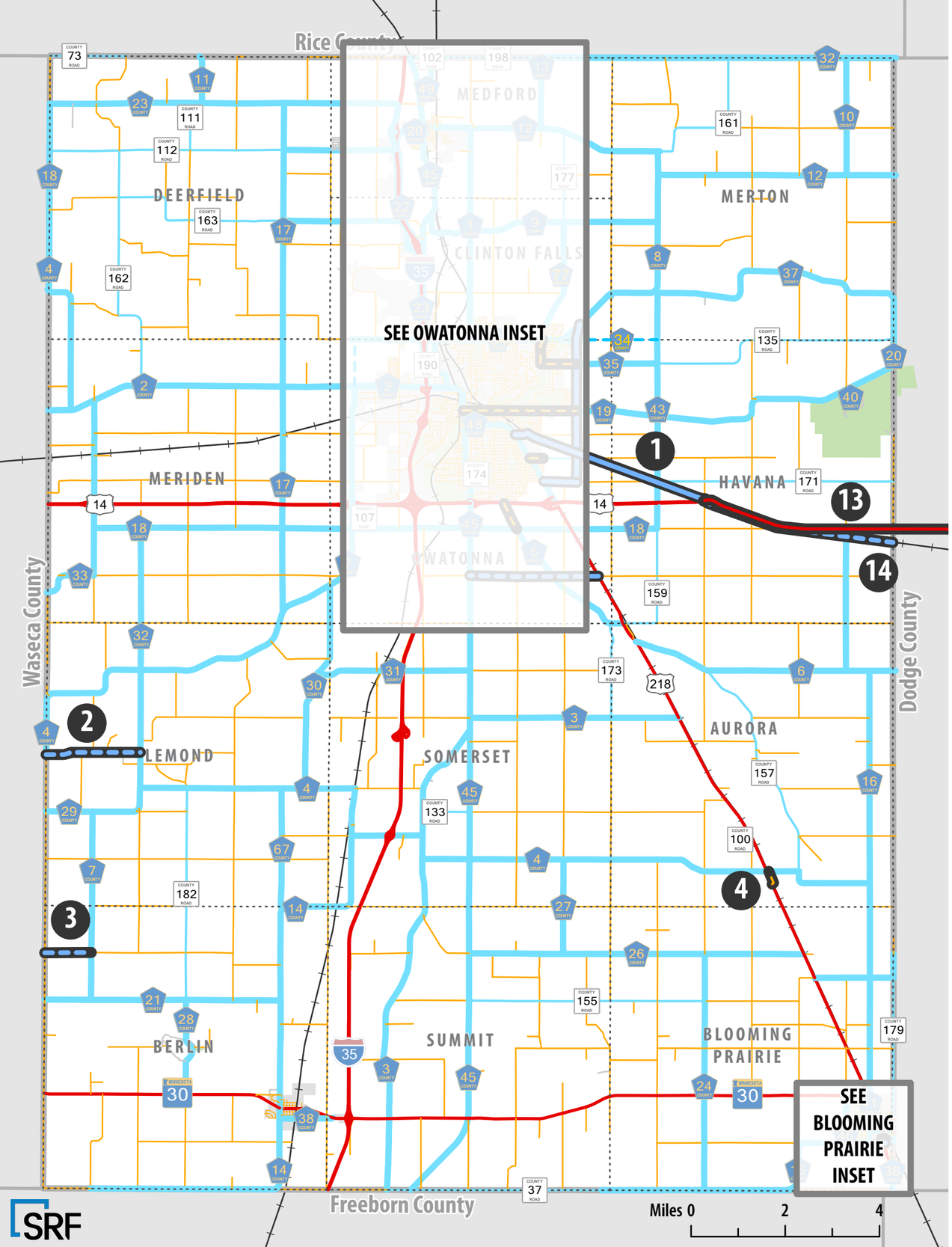




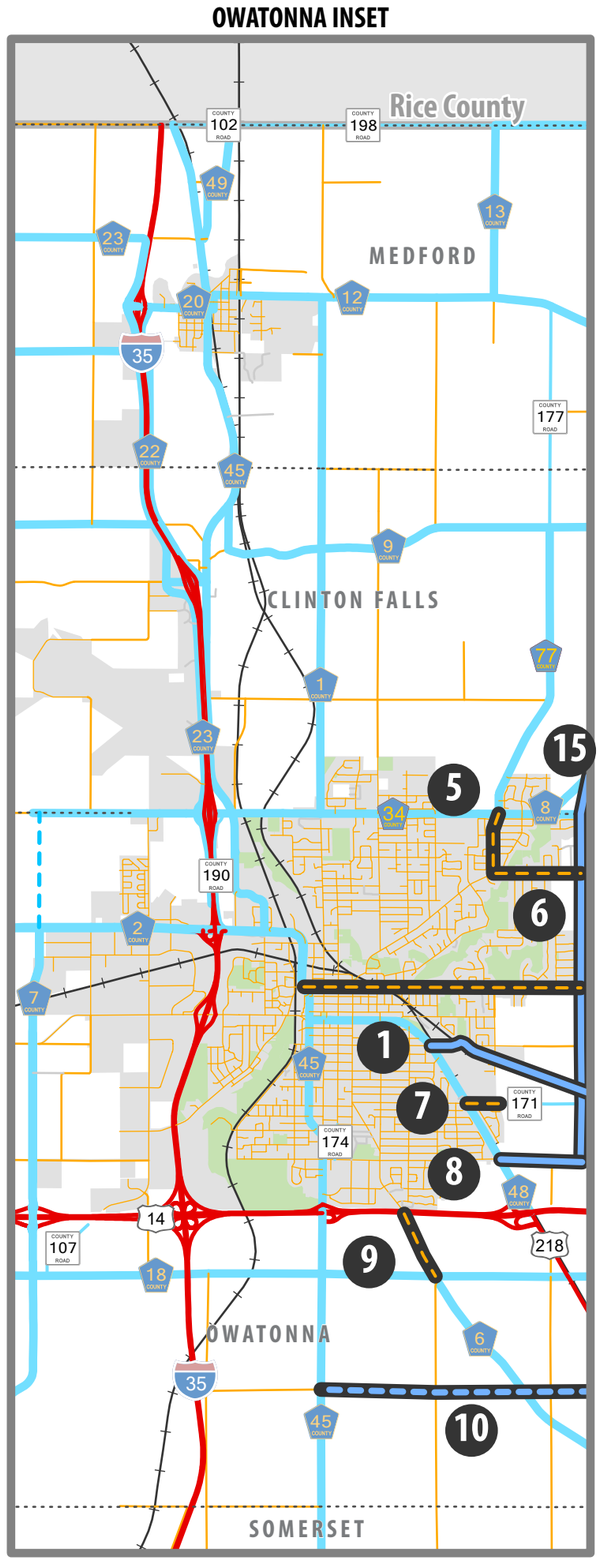


Figure 21
Designation Changes
Steele County 2040 Transportation Plan

Existing Designation

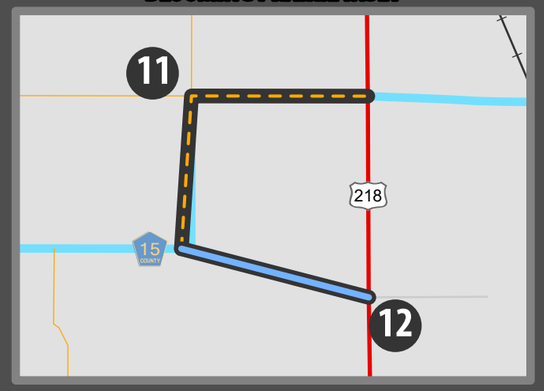
- State Highway
- County State Aid Highway (CSAH)
- County Road
- MSA
- Local Road
- Private Road

Designation Change

- State Highway
- County State Aid Highway (CSAH)
- County Road
- MSA
- Local Road
- Private Road

- # Change ID (Steele County Roadways)
- Township
- City Boundary

BLOOMING PRAIRIE INSET



Steele County 2040 TRANSPORTATION PLAN

Steele County

CONSTRUCTION OF 29TH AVENUE CORRIDOR

PURPOSE

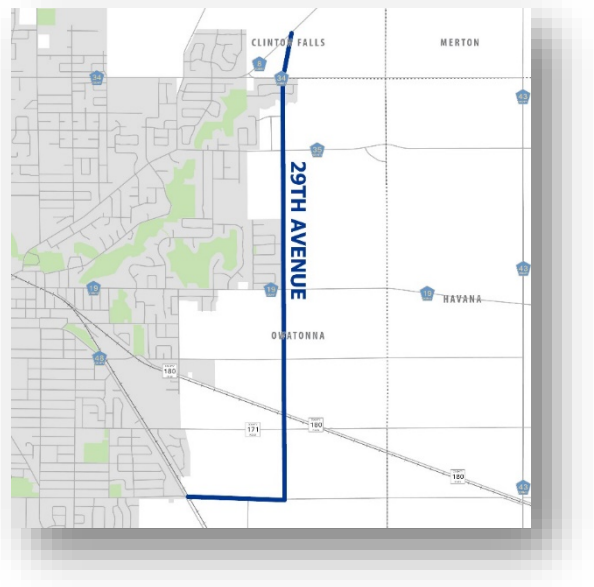
The development of the 29th Avenue corridor is needed in the near term to ensure Steele County and the City of Owatonna are meeting current and future travel needs. This new roadway will provide relief for existing county and city roads that are not intended to carry through traffic, simplify travel patterns for residents, and reduce travel times. This project is a collaboration between the City of Owatonna and Steele County, who both understand the need and potential benefits of constructing the north/south roadway. The need for and planning of this corridor has been in progress for decades and has evolved over time. It should be noted that CSAH 43 has been identified as the North/South Beltline along the eastern edge of the county. Although parallel routes, 29th Avenue will serve immediate needs for the City of Owatonna and county residents traveling north/south. CSAH 43 – the new beltline – will serve larger county needs and provide the next allowable connection to US 14. Discussion of the 29th Avenue corridor and placement of the beltline can be found in the following documents:

- Owatonna East Side Corridor Study (1993)
- Steele County Transportation Plan (2005)
- Owatonna Beltline Study (2004)
- Owatonna N-E Beltline Corridor Study (2011)

As the city grows, the 29th Avenue corridor will be important as it will provide relief and prevent future congestion on existing heavily traveled routes in downtown. Both the City of Owatonna and Steele County agree that the 29th Avenue corridor is needed to ensure the transportation network efficiently and effectively supports future growth.

LOCATION

The location of the 29th Avenue corridor was strategically chosen to provide connection to the existing roadway network, current travel and development patterns, and anticipated growth along the eastern boundary of the City of Owatonna. The new road will eliminate the need to traverse downtown when connecting from the northeast to southwest portions of the city in order to connect to north/south roadways or the interstate. Placement near the eastern municipal boundary was intentional, as it is convenient for both existing and new development occurring in the area.



Not including the transfer of US 14, which is an almost equal transfer, 29th Avenue will be the most impactful change to the Steele County system (in terms of mileage). This decision was made in coordination with the PMT, elected officials, Steele County Staff, local city staff, and based on community input. A high-level summary of the decision-making process is outlined below, with further details in **Appendix A.**

- 29th Avenue will collect traffic from many of the collecting roads leading into Owatonna. This level of traffic and connectivity is best suited to be managed by County systems. The community has expressed support for County ownership of the new 29th Avenue during public meetings, listening sessions, open houses and survey response.
- 29th Avenue will alleviate traffic, especially on CSAH 45 and Mineral Springs Road through the downtown area. This is supported by multiple studies previously done on the beltline and east side corridors.
- The existing roadway system in the City of Owatonna and eastern portion of the county has an inadequate amount of collector roads.
- 29th Avenue will accommodate shifting traffic patterns due to the relocation of the high school, especially higher traffic anticipated on CSAH 45, CSAH 48 and other city routes.
- 29th Avenue will provide a north-south corridor that serves not only Owatonna city traffic, but the entire east side of the County. The closest county road which serves north-south traffic is almost two miles away.
- In exchange for taking ownership of 29th Avenue, the City of Owatonna is willing to accept ownership of multiple County roads (CSAH 19, CR 171, CSAH 8, and CSAH 35).

SAFETY AND CRASH ANALYSIS

COUNTY ROAD SAFETY PLAN

The 2012 County Road Safety Plan (CRSP) was created with the goal to reduce severe crashes by documenting at-risk locations and effective, low-cost systemic safety improvement strategies. The analysis conducted in the plan resulted in identification of intersections, curves, and roadway segments that would benefit from safety improvements.

The analysis found that Steele County's CSAH and CR system averages four severe crashes per year, 71 percent of which occur in rural areas. Detailed analysis found that one intersection and two segments in the county had multiple severe crashes. The Bridge Street & 8th Street intersection (just outside of Owatonna city limits) had three severe crashes within the study period, but no identifiable pattern could be determined. Therefore, a review of traffic control and visibility was suggested to improve safety. The roadway segment of 18th Street between Linn Avenue and Elm Avenue also experienced multiple severe crashes, however the majority of crashes involved driver behavior factors (young driver, speed and alcohol related). No roadway improvements were recommended at this location. St. Paul Road between 15th Street and 20th Street experienced two severe crashes. Due to proximity to the local school and involvement of pedestrians, the plan recommended narrowing of the roadway at a key school crossing and reduced traffic speeds.

To provide a list of county-specific safety projects, the analysis then focused on rural paved highways within the county. As 67 percent of rural non-intersection crashes and 68 percent of severe rural non-intersection crashes involved vehicles running off the road, safety improvements to address this specific type of crash were prioritized. Roadways were then prioritized based on traffic volumes, access density, road departure density, critical radius curve density, and edge risk assessment. A total of 24 rural highway roadway segments and 24 intersections were identified as High Priority to receive safety improvements due to existence of risk factors. Specific safety improvements, such as shoulder pavement, rumble strips, 6-inch edge line and reflective edge lines, were recommended for each high priority area. For a complete list of high priority segments, risk factors, and proposed safety improvements, please see the County Road Safety Plan.

The analysis conducted in the County Road Safety Plan, along with the specific safety improvements, served as a foundation for this Plan's safety recommendations.

FUTURE MULTIMODAL SYSTEM ANALYSIS

BICYCLE AND PEDESTRIAN SYSTEM

The county will accommodate bicycles and pedestrians on a project-by-project basis, incorporating paved shoulders or working with municipal partners to build multiuse trails along roadways. Potential improvements to the regional system were developed in the Minnesota Statewide Bicycle System Plan. These improvements will help to provide residents and visitors a complete transportation system that is accessible and reliable for all users. Some key recommendations from the plan have already been built or are planned to be built in the future. The proposed multimodal improvements are displayed in **Figure 22.**

Utilizing the Minnesota Statewide Bicycle System Plan, the Owatonna Sidewalk and Trail Plan, guidance from the PMT, and community feedback a list of guiding multimodal goals were created:

1. Identify opportunities to utilize paved shoulders for shared roadways
2. Improve pedestrian access from Beaver Lake Park parking lot to the lake
3. Explore opportunities to create a trail between Ellendale and Beaver Lake
4. Explore opportunities to create a trail between Owatonna and Medford

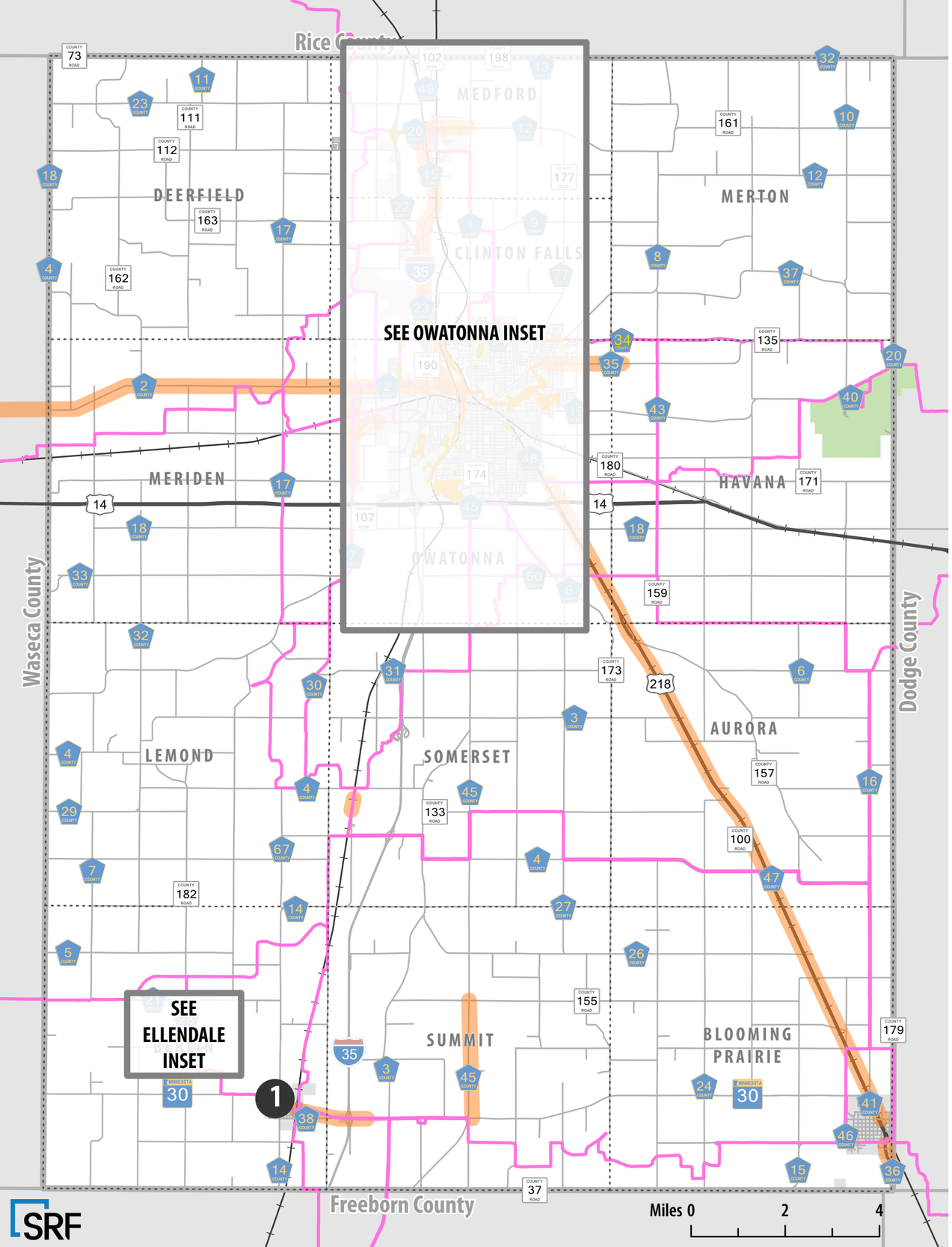
TRANSIT SYSTEM

Future transit needs in Steele County will continue to be served by Southern Minnesota Area Rural Transit (SMART). Those with the biggest need for transit (older adults, people with disabilities, people without consistent access to vehicles, etc.) are well served, but there are some gaps and unmet needs. The majority of these gaps exist within the City of Owatonna and are detailed further in the City of Owatonna 2040 Transportation Plan. A summary of requested updates is as follows:

- Ensure signals are properly timed to reduce passenger delays
- Coordinate on the construction of new bus shelters at high volume stop locations
- Work towards high quality pavement to reduce injury and/or discomfort for riders
- Improve railroad crossings
- Address specific safety concerns

2017 Greater Minnesota Transit Investment Plan

The 2017 Greater Minnesota Transit Investment Plan (GMTIP) is an investment and strategic plan. As an investment plan, this document calculates the investments required to reach the target of meeting 90 percent of transit need by 2025. As a strategic plan, this document lays out the policy direction for transit in Greater Minnesota over the next 20 years. The plan's objective is to improve mobility for the general public with emphasis on seniors, youth, low-income populations, homeless populations, individuals with disabilities, veterans, new Americans and commuters.



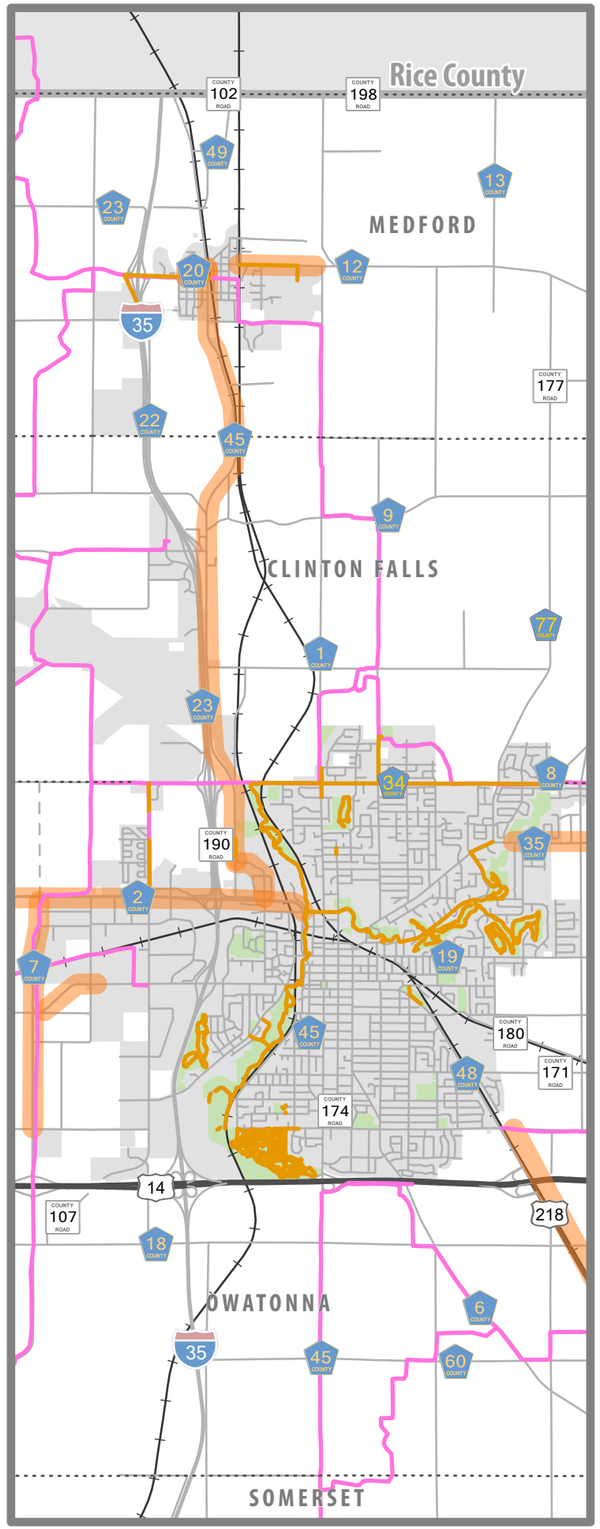
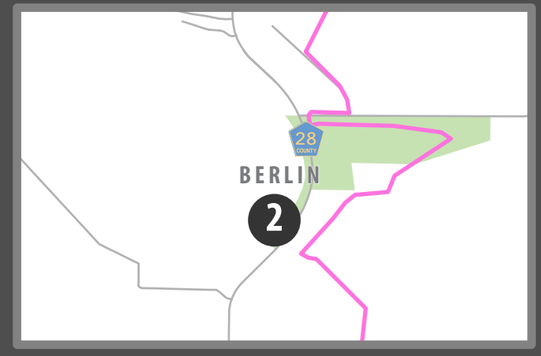


Figure 22
Future Multimodal System
Steele County 2040 Transportation Plan

- Snowmobile Trails
- Trails
- Potential Multiuse Trail (Paved Shoulder > 6 ft.)

ELLENDALE INSET



1. Pedestrian access from Beaver Lake Park parking lot to lake needs improvement
2. Ellendale residents request trail to Beaver Lake

Steele County 2040 TRANSPORTATION PLAN

Steele County

SRF

FUTURE FREIGHT SYSTEM ANALYSIS

Freight movement, by its nature and due to economics, requires a statewide system approach when planning a freight network. As noted in the **Existing Conditions** portion of this Plan, the USDOT has designated I-35, US 218, and US 14 as part of the National Truck Route Network. Additionally, although MnDOT's interregional corridor system has been retired, they had previously recognized I-35 and US 14 in this network.

Through previous planning efforts and coordination with county engineers, MnDOT established a conceptual county-based 10-ton route network throughout the entire state, which was intended to accommodate additional seasonal freight movement. This long-range conceptual system identified roadway segments that, if improved, would establish a permanent 10-ton highway network. Currently, all freight roadways within the county, including those within the city limits, are at least 9-ton roadways. It is also important to note that some county roads are less than 9-ton but still serve an important freight function for farm to market routes. A more robust freight network will provide predictable and safe routes, while allowing the freight community to plan and coordinate freight movements more efficiently.

As the largest city in the county, Owatonna will likely continue to drive freight volumes upwards. As Owatonna continues to develop, the availability of truck parking and weight-accommodating roadways will need to be monitored. Recent development of a distribution center on the western side of I-35 has already put a strain on the existing truck parking within Owatonna, adding pressure for increased facilities. As these types of development grow within Owatonna, the county will coordinate with the city to ensure adequate freight facilities and maintenance are available.

COUNTY ROAD SYSTEM FUNDING NEEDS ANALYSIS

The County Road System Funding Needs Analysis represents a summation of the investigative, technical, and educational activities completed as part of Steele County's highway preservation analysis in the **Existing Conditions**. It included the following phases:

1. Investigative Phase – a survey of the county's current maintenance strategies, county policies/goals, and current levels of investment.
2. Technical Phase – review of recent revenue and expenditures, preparation of "buying power" forecasts (both short-term (2021-2025) and long-term (2021-2040), evaluation of the possible financial gap, and discussion of their magnitude.

Investigative Phase

The investigative phase examined current policies and system characteristics, management, and maintenance activities. Much of this information was gathered as part of a detailed survey by county staff regarding critical preservation needs/issues.

The survey was used to gain insight on:

- County infrastructure quantities (miles of roads, functional classification, etc.).
- County infrastructure conditions (primarily focused on pavement and/or surface condition information).
- County maintenance methods including the schedule of maintenance procedures by roadway type.
- Level of service desired and a feasible implementation approach.
- Current prioritization processes.
- County policies/goals/objectives used to determine local design standards.
- Recent and upcoming regulatory mandates and institutional policy changes affecting the highway system, implementation requirements, and anticipated costs.
- Any existing performance measures used to evaluate condition, life cycle, and acceptability of infrastructure.

System Maintenance

The combined effects of traffic loading and the environment will cause every pavement, no matter how well-designed or constructed, to deteriorate over time – pavements have a finite lifespan. Ongoing maintenance efforts and rehabilitation are used to extend the serviceable life of pavement. **Figure 23** and **Figure 24** show typical preservation schedule for Steele County's asphalt and concrete roadways, respectively.

To maximize the annual budget available for pavement preservation, the county has taken a proactive approach to better understand the state of the system to formulate a plan that will allow the county to maintain the system in a state of good repair. This is discussed in further detail in the following sections.

FIGURE 23. STEELE COUNTY TYPICAL 50-YEAR LIFE CYCLE (ASPHALT PAVEMENT)

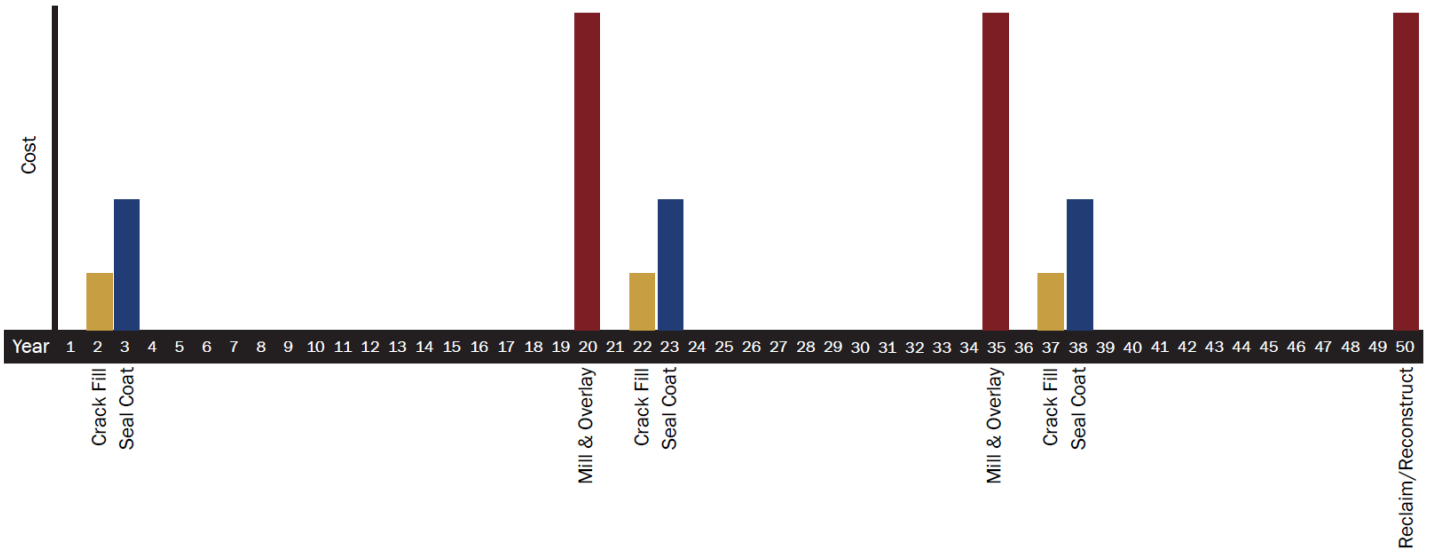
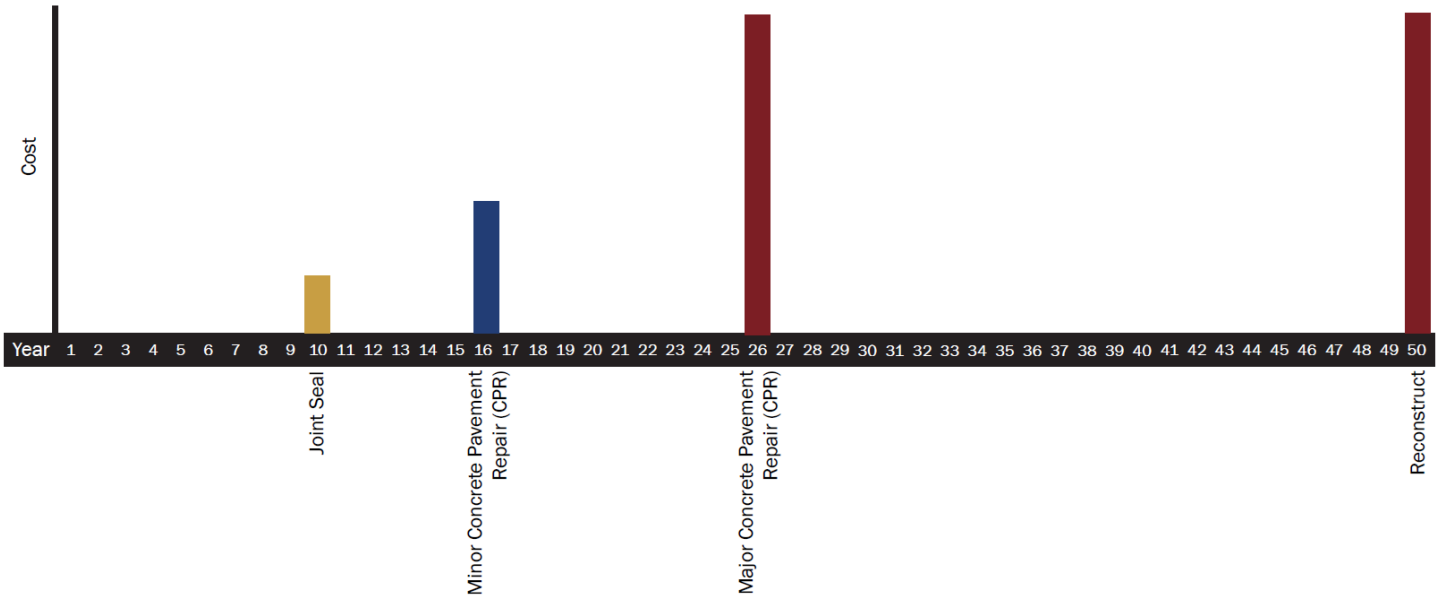


FIGURE 24. STEELE COUNTY TYPICAL 50-YEAR LIFE CYCLE (CONCRETE PAVEMENT)



Technical Phase

The technical analysis process included a review of the following elements:

- Current county fiscal resources for infrastructure (e.g., sources of funds, splits between capital and maintenance, past investment levels and allocations within infrastructure categories).
- Known or perceived county performance shortfalls that impact maintenance or capital infrastructure needs.
- Possible financial or performance gaps in system maintenance objectives.
- Potential transportation system impacts if gaps are not addressed.

To accomplish this analysis, revenue data for the years 2015 through 2019 was obtained from Steele County. Projected revenue from the years 2021 through 2025 as identified in the county's Highway Capital Improvement Plan was also utilized. Using these inputs, a comparison between the county's revenue and roadway needs was completed. The following is a discussion of the data inputs that were utilized for the technical analysis.

Transportation Funding

Transportation funding for Steele County comes from three major sources including federal, state and local.

Federal Highway Funding

Federal-aid funding for eligible Steele County projects is primarily available through Federal Highway Administration (FHWA) programs for roadways. Distributed by Congress, the Federal Highway Trust Fund (HTF) provides project funding opportunities with federal contributions up to 80 percent, and a 20 percent minimum local funding share for federal-aid projects. Exceptions include Highway Safety Improvement Program (HSIP), which contribute up to 90 percent and a minimum of a 10 percent local funding share. The HTF is supported by an 18.4 cent tax per gallon of gasoline and 24.4 cent tax per gallon on diesel fuel. Other special federal grant programs (i.e., ARRA, BUILD) or congressionally designated projects, or assistance from other federal programs (i.e., EDA, FEMA) periodically may assist in transportation infrastructure improvements.

State and County State Aid Highway Funding

To ensure a statewide safe, effective, and coordinated highway system, the State works closely with local levels of government. Monies from the Highway Users Tax Distribution Fund (HUTDF), which sources include state fuel tax, state license fees and state motor vehicle sales tax, are used to help support the local transportation system. Based on a predetermined formula, County State Aid Highway funding is distributed to counties (and cities over 5,000 population) for the construction and maintenance of specific routes. The State also distributes funding to local governments through State bonding programs and State grant programs (CIMS, TED, Corridors of Commerce, etc.).

Local Highway Funding

Various local taxing and bonding mechanisms constitute potential sources of local transportation funding for Steele County. Local revenue sources include levies and local option sales tax. These funds may be used to meet the local match required for federal funds or to fully fund transportation projects. The county has implemented the Local Option Sales Tax for Transportation and a county wheelage tax. These local funding sources are utilized for reconstruction, pavement maintenance, and repairs each year.

Revenue Forecasts

To provide a reasonable forecast of anticipated future revenue streams for Steele County, past revenue and anticipated revenue was reviewed. It was determined that the county has approximately $10 million to spend each year on their capital improvement program. Projects included in the capital improvement program include roadway reconstruction, roadway rehabilitation, roadway expansion, bridge replacement, roadway maintenance (seal coat and mill & overlay), and safety and operational projects and includes design, right-of-way and construction costs for these projects. For the purposes of this analysis it was assumed that approximately $7.1 million of the total budget was allocated annually for roadway reconstruction, rehabilitation, and maintenance projects. This was based on average budgeted amounted as identified in the county's Highway Capital Improvement Program 2021-2025. The remaining $2.9 million of the total $10 million budget was allocated for safety and operational improvement and expansion projects. To establish projected revenue for 20-year planning period (2021-2040) growth factors for Local (3 percent), State (1.9 percent) and Federal (1.9 percent) revenue sources were utilized. The projected revenue for Steele County is shown in **Table 15.**

TABLE 15. STEELE COUNTY TRANSPORTATION REVENUE SUMMARY*

Revenue Forecast Summary	2021	Short-Term (2021-2025) 5 years	Long-Term (2021-2040) 20 Years
Forecasted Revenue	$7,098,000	$36,190,000	$164,800,000

**Revenue for reconstruction, rehabilitation and maintenance projects only.*

Transportation Expenditures

Planning-level estimates were used to evaluate future improvement strategies for the county's transportation system. Cost per mile for each maintenance strategy were based on typical industry costs. Feedback was then obtained from county staff to refine the cost per mile. **Table 16** provides a summary of these costs.

TABLE 16. UNIT COSTS PER MILE FOR IMPROVEMENT STRATEGIES

Improvement Strategy	Cost Per Mile
Concrete Joint Sealing	$10,000
Concrete Pavement Repair (Minor)	$60,000
Concrete Pavement Repair (Major)	$150,000
Concrete Reconstruction	$500,000
Asphalt Crack Fill	$6,000
Asphalt Seal Coating	$20,000
Asphalt Mill and Overlay	$150,000
Asphalt Reclaim/Reconstruction	$400,000

Utilizing the above strategies and the maintenance schedules shown in **Figure 23** and **Figure 24**, transportation expenditure forecasts were generated. An inflation rate of 3.5 percent was assumed for all improvement strategies. Steele County can reasonably anticipate spending 167 million on improvement strategies over the next 20 years. **Table 17** provides a summary of these needs.

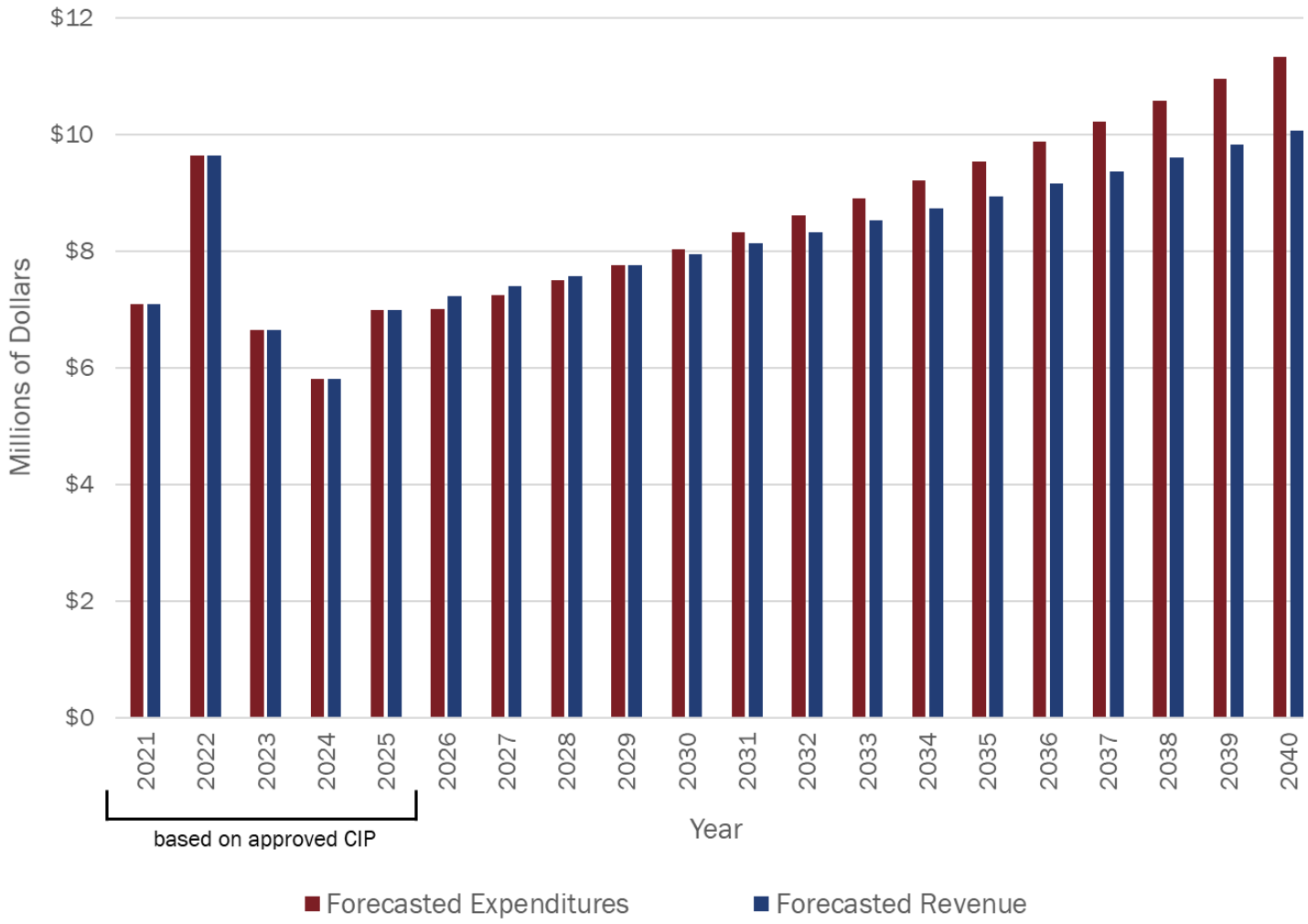
TABLE 17. STEELE COUNTY TRANSPORTATION NEED FORECAST SUMMARY

Expenditure Forecast Summary (Pavement)	2021	Short-Term (2021-2025) 5 years	Long-Term (2021-2040) 20 Years
Concrete Joint Sealing	$9,000	$48,000	$252,000
Concrete Pavement Repair (Minor)	$53,000	$285,000	$1,508,000
Concrete Pavement Repair (Major)	$133,000	$715,000	$3,770,000
Concrete Reconstruction	$444,000	$2,383,000	$12,562,000
Asphalt Crack Fill	$122,000	$653,000	$3,443,000
Asphalt Seal Coating	$405,000	$2,174,000	$11,465,000
Asphalt Mill and Overlay	$2,027,000	$10,869,000	$57,322,000
Asphalt Reclaim/Reconstruction	$2,703,000	$14,492,000	$76,429,000
Predicted Expenditures	**$5,896,000**	**$31,619,000**	**$166,751,000**

Financial & Performance Analysis (Revenue Allocated for Preservation)

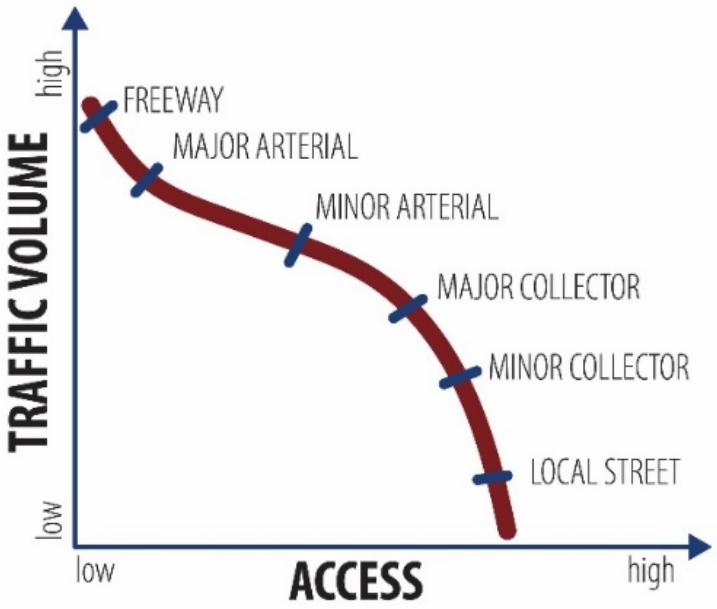
The main objective of this analysis was to determine how the county's improvement strategies and current level of funding would affect the condition of the system over time. To evaluate potential performance shortfalls, an analysis of the current and future roadway and revenue needs was performed. This analysis considered the county's current and future revenue sources, the transportation system characteristics, and the current maintenance practices as described above. **Figure 25** shows the results of this analysis.

FIGURE 25. STEELE COUNTY FINANCIAL SUMMARY (2021-2040)



As shown in **Figure 25**, the county's current funding amount available for improvements will result in the system remaining in a state of good repair in the short- to mid-term. Eventually the county will start to see a gap in revenue versus expenditures. This means that the county will likely need to spend more of their capital improvement budget on the maintenance of their pavements. As noted earlier the county has approximately $10 million available so in the future the county will need to allot more of their budget to pavement preservation therefore leaving less available for other projects such as bridge construction, safety, or expansion projects. The county could also consider modifying their program (i.e., increasing revenue, modifying maintenance schedule, reducing system mileage, etc.). This gap in funding is based on multiple assumptions and is not cause for immediate concern. This analysis will be updated when and if these assumptions change.

FIGURE 26. ACCESS MANAGEMENT



At the county level, the organization of access features – such as driveways and intersections – is best accomplished through county or municipal land use policies, zoning and subdivision ordinances, site plan review processes and access spacing guidelines. At the state level, the Minnesota Department of Transportation (MnDOT) regulates access using its Access Management Manual, developed in 2002. MnDOT's guidelines address the spacing of public street connections, traffic signals, and the allowance of driveways to the state trunk highway system. Access management is best accomplished through intergovernmental coordination on an area-wide basis, rather than trying to create solutions on a site-by-site or roadway jurisdictional basis (see **Figure 26**).

Table 18 identifies the basic access management guidelines that would be applied to county roadways. The guidelines are broken into different categories by functional classification and then by area or facility type. For each category, the recommended full-movement intersection spacing is given along with the spacing for a conditional secondary intersection. This secondary intersection typically has restricted movements (e.g., right-in/right-out). In addition, each category identifies the treatment of private access. It should be noted that the guidelines are more restrictive (exception/deviation) of private access in urbanizing areas than in rural and/or urban core areas (subject to conditions). This is because planning should be able to limit private access in these developing areas versus areas that have already been developed (core urban area) and/or areas where there is no other supporting street system (rural). These guidelines work in unison with the guidelines set forth by the City of Owatonna.

Best access management practices in urban and developing areas include the following:

- Encourage shared driveways and internal circulation plans: If indirect access cannot be achieved during plat reviews, promote internal site circulation using shared access points.
- Restrict turning movements to reduce conflicts: If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in only or right-in/right-out only) through the installation of raised median or other channelization or signing.
- Develop good parallel street systems for carrying local traffic: Make sure that important arterial routes have connecting parallel street system to provide the local access function and to carry shorter local trips.
- Develop proper setbacks for future frontage roads: If frontage roads cannot be justified (benefits do not outweigh costs), make sure that proper building and parking lot setbacks are established so that future frontage roads can be installed with minimal impacts.
- Develop proper secondary street spacing: When reviewing plats and new development proposals, be sure that they provide proper intersection spacing for future signals. As a guideline, signalized intersections should be limited depending upon the type of street. Collector streets should provide some continuity and connectivity with other street systems.
- Encourage proper lot layout to minimize access points: Promote direct residential access points onto local routes, not arterials or major collectors.

TABLE 18. ACCESS SPACING GUIDELINES

Area Type	Functional Class	Facility Type	Intersection Spacing		Signal Spacing	Private Access
			Full Median Opening	Right-In/Right-Out		
Rural	Minor Arterial	Divided	.5 mile	.25 mile	.5 mile	Permitted, subject to conditions
		Undivided	.5 mile	.25 mile if part of local street network		
Developing Urban	Minor Arterial	Divided	.5 mile	.25 mile	.25 mile	Only if there are no other alternatives; side-street access preferred
		Undivided	.25 mile	NA		
Fully Developed Urban	Minor Arterial	All	300-660 ft. dependent on block length		.125 mile	Only if there are no other alternatives; side-street access preferred
Rural	Collectors and Local	All	.25 mile		.5 mile	Permitted based on minimum spacing table
Developing Urban	Collectors	All	.25 mile		.25 mile	Permitted based on minimum spacing table
Fully Developed Urban	Collectors	All	300-660 ft. dependent on block length		.125 mile	Permitted based on minimum spacing table
All	Urban Local	All	300-660 ft. dependent on block length		As warranted	More than 150 ft. from arterial or collector intersection. More than 60 ft. from local road intersection

All stated measurements are approximate and measured from the center of the access.

TABLE 19. MINIMUM SPACING FOR UNSIGNALIZED PRIVATE ACCESS POINTS

SPEED LIMIT (MPH)	30	35	40	45	50	55
MINIMUM SEPARATION (FEET)	200	250	300	375	425	500

RIGHT-OF-WAY

Due to right-of-way's value as a public asset, it must be preserved and managed to ensure it meets intended function, while serving the greatest public good. As the county restructures roadways or intersections to meet travel demands, they abide by a set of guidelines presented below in **Table 20**. Applicable zoning regulations and ordinances from the applicable municipalities will also need to be considered. The county will coordinate with MnDOT and local jurisdictions for right-of-way acquisition.

TABLE 20. RIGHT-OF-WAY GUIDELINES

Facility Type	ROW Width (Feet)*
High density minor arterial	150
Low density minor arterial	150
Major Collector	120
Minor Collector	120
Local Residential	66
Local Commercial/Industrial	100

**Includes sidewalk, curb & gutter and storm sewer.*

IMPLEMENTATION PLAN

This portion of the Plan offers strategies to assist county representatives in the implementation of recommended improvements. These strategies include policies and processes, future project recommendations, and an overview of potential funding opportunities.

POLICIES, PROCESSES, AND TOOLS

TRANSPORTATION PLAN ADOPTION

Adoption of this Transportation Plan is the first step in implementation. Adoption of this Plan establishes priorities, guidelines, and policies on which future transportation decisions can be based. To ensure this Plan supports local and regional goals, copies of this Plan should be made available to county residents, cities and townships, neighboring counties, and posted on the county's website.

This Plan should be routinely reviewed and updated to ensure the highest efficacy. Updated traffic forecasts, future developments, population trends, financial changes, and local input should all be regularly integrated into this Plan and goals appropriately adjusted. It is recommended that this Plan be reviewed at least every five years.

JURISDICTIONAL REALIGNMENT PROCESS AND MOU

Many jurisdictional transfers are recommended in this Plan, which will require coordination between the city, county, townships, and state. Prior to addressing specific roadway transfers, it is recommended that a Memorandum of Understanding (MOU) is established that outlines the process for negotiating potential jurisdictional transfers. This memorandum could address:

- Schedule or Time Frame of Proposed Transfers: A non-binding schedule for the transfer of identified routes before 2040.
- System Issues and Legal Requirements: Ability to transfer mileage between the State-Aid and local road system, receiving agency's ability to use turnback account funding for maintenance and improvements, procedures to transfer a county highway to a township, and any further limitations on establishment, alteration, vacation, or revocation of county highways as described in Minnesota Statutes Section 163.11.
- Planning and Programming: Any allocation of funds or incentives that will be made available from the transferring agency to receiving.
- Project Development, Design, and Construction Issues: The process for development, right-of-way acquisition, design, and construction of transferred routes, design and construction standards to be used for projects, and the process/framework for cost-sharing agreements.
- Operational and Maintenance Issues: Responsibilities for utility permits, driveway access permits, changes to traffic controls and signals, and current level of regular maintenance.

RIGHT OF WAY PRESERVATION TOOLS

When future expansion or realignment of a roadway is proposed, but not immediately programmed, agencies should consider right-of-way preservation actions to reduce costs and protect the feasibility of the proposed improvement. Several different methods can be used to preserve right-of-way for future construction, including advanced purchase, zoning and subdivision techniques, and official mapping.

Before implementing any right-of-way preservation programs, local agencies should weigh the risks of proceeding with right-of-way preservation without environmental documentation (note: MnDOT policy requires environmental documentation prior to purchase). If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

DIRECT PURCHASE

One of the most efficient right-of-way preservation methods is direct purchase. Unfortunately, agencies rarely have the necessary funds to purchase right-of-way in advance, and the public benefit of purchasing right-of-way is not realized until a roadway or transportation facility is built. Most typically, local jurisdictions utilize various corridor preservation methods prior to roadway construction and then purchase the right-of-way if it has not already been previously dedicated, at the time of design and construction.

PLANNING AND ZONING AUTHORITY

Local agencies have the authority to regulate existing and future land use. Under this authority, agencies have several tools for preserving right-of-way for transportation projects. These tools include:

- **Zoning** If the property is in a very low-density area (e.g., agricultural district), the county should maintain the existing zoning classification. A low zoning classification limits the risk for significant development and can help preserve land for potential right-of-way until funding becomes available for roadway construction.
- **Platting and Subdivision Regulations** Jurisdictions can require right-of-way dedication as part of the platting and subdivision process. Platting and subdivision regulations provide authority to consider future roadway alignments during the platting process because most land must be platted before it is developed. Steele County can use this authority to regulate land development to influence plat configuration and the location of proposed roadways. Planning and engineering staff work with developers to formulate a plat that meets development objectives and that conforms to a long-term community vision and/or plans.
- **Official Mapping** A final strategy to preserve right-of-way is to adopt an Official Map. An Official Map is developed by the local governmental unit and identifies the centerline and right-of-way needed for a future roadway. The local agency then holds a public hearing showing the location of the future roadway and incorporates the official map into its thoroughfare or community facilities plan. The official mapping process allows agencies to control proposed development within an identified area, and to influence development on adjacent parcels. However, if a directly affected property owner requests to develop his/her property, agencies have six months to initiate acquisition and purchase of the property to prevent its development. If the property is not purchased, the owner can develop it in conformance with current zoning and subdivision regulations. As a result, the official mapping process should only be used for preserving key corridors in areas with significant growth pressures. Current recorded official maps include:
    - East Side Corridor (29th Avenue)
    - Owatonna Beltline (including extensions or widening of CSAH 7, 18, 34, and 43, also includes option for 34th Avenue corridor that, while not needed for county system, should still be preserved for a future city/township collector route)

PROJECT DEVELOPMENT AND THE ENVIRONMENTAL PROCESS

Depending on the size and type of project, implementing improvements identified in the Transportation Plan may require additional public participation and environmental review. Environmental documents must be prepared if state or federal funding is involved in the project, with the type of document depending on the size of the project. For example, projects that construct more than two-lane roadways and have alignments of more than two miles require more in-depth analysis than projects that convert an existing at-grade intersection into an interchange or overpass according to state rules. Even if no federal or state funding is involved, state environmental review requirements and local ordinances or guidelines may apply. Specific rules on the level of environmental documentation can be found in the Highway Project Development Process Handbook at www.dot.state.mn.us.

In addition to state and federal rules regarding environmental documentation, there are local, state, and federal permits that regulate wetlands, water quality, air quality, noise, and other environmental and cultural resources. Early coordination with appropriate environmental agencies and the State Historic Preservation Office (SHPO) can reduce delays in the project development process and in acquiring applicable permits.

PROJECT DEVELOPMENT AND WETLAND PROTECTION

Wetlands are an important component of the landscape. Wetlands provide valuable ecological functions (e.g., water quality protection, surface water storage, wildlife habitat, groundwater recharge, and aesthetic/ recreational value). There are federal and state regulations that protect these valuable resources. Since Minnesota's rules are stricter than federal regulations, most city and county agencies do not have wetland protection

requirements that go beyond the state rules. A full copy of the regulations is available in State Statute Chapter 8420. The details of Minnesota's regulations regarding wetlands are rather complicated. In general, the regulations are intended to protect existing wetlands and to increase the quality of those wetlands by increasing their quantity, quality, and biological diversity. The law states:

"This chapter shall be interpreted to implement the purpose of the Wetland Conservation Act, which is to:

- Achieve no net loss in the quantity, quality and biological diversity of Minnesota's existing wetlands;
- Increase the quantity, quality and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands;
- Avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality and biological diversity of wetlands; and
- Replace wetland values where avoidance of activity is not feasible and prudent."

The Wetland Conservation Act achieves its purpose by requiring persons proposing to impact a wetland by draining, excavating, or filling to first, attempt to avoid the impact; second, attempt to minimize the impact; and finally, replace any impacted area with another wetland of at least equal function and value.

As a local road authority, the county will be in situations where it wishes to widen or construct new roadways. When looking at options for conducting these types of activities, they must first look at alternatives that do not impact wetlands. If there are no reasonable or prudent alternatives, they must work to minimize the impacts to the wetlands. If this is not feasible, the county will be required to construct a new wetland or add on to an existing wetland. The size of the new or expanded wetland must be at least the same size and same quality as the wetland that it is impacting with its project.

FUTURE PROJECTS

This section documents the process by which Steele County prioritizes and selects future projects, both within the approved Capital Improvement Plan (CIP) and outside the 5-year CIP timeframe. This methodology will guide the creation of future CIP documents and project lists and is meant to be updated and reevaluated as new data becomes available. Projects are separated into short-term and long-term timeframes, where short-term includes all projects currently planned in the CIP (at the time of plan adoption), and long-term includes all potential projects identified by safety, congestion, or pavement analysis. Flowcharts provided in **Appendix B** guide project selection and scope.

SHORT-TERM PROJECTS

The Steele County Highway Department prepares a five-year CIP to effectively maintain and improve the infrastructure for which the department is responsible. The plan is developed by the County Engineer and highway department staff to aid with budgeting, planning, programming, project development, design and construction of highway and bridge improvement projects. This plan lists the projects the Department intends on completing in the next five years. The Department annually reviews and updates the five-year CIP which allows the staff, board and public the opportunity to reassess the plan and make adjustments due to changes in budget constraints, highway conditions, public input, goals and priorities. A map of the current CIP Projects can be found in **Appendix C**.

In preparing this plan, the department considers four major objectives of highway improvement projects: Highway Safety, Preservation and Maintenance, Rehabilitation, and Operational/Capacity improvements. Overall, the department's strategy is to combine as much as possible, the four planning objectives into every project to maximize benefits and minimize costs. As various projects are considered, their scope of work and schedule are determined and prioritized by several factors including but not limited to:

- Crash history and safety
- Preservation of existing infrastructure
- Funding availability
- Traffic volume and highway functional classification
- Cost participation by others
- Maintenance costs
- Municipal input
- Public input
- Economic opportunity
- Pavement Condition Index ratings

TABLE 21. SHORT-TERM PROJECTS*

PROJECT NAME	PROJECT TYPE	COST
2021		
CSAH 2 (CL-CSAH 7)/WASECA CSAH 14 (CSAH 4-CL)	OPERATIONAL/SAFETY	$1,200,000
CSAH 7 (CSAH 29 TO CSAH 32)	REHABILITATION	$1,700,000
CSAH 29 (COUNTY LINE TO CSAH 7)	REHABILITATION	$400,000
CSAH 34 AT CSAH 45 INTERSECTION IMPROVEMENT	OPERATIONAL/SAFETY	$2,000,000
CSAH 34 (STRAIGHT RIVER TO CSAH 8)	OPERATIONAL/SAFETY	$350,000
CSAH 43 (CSAH 18 TO US 14)	REHABILITATION	$200,000
CSAH 45/STATE AVE. (CSAH 2 TO CSAH 34)	OPERATIONAL/SAFETY	$50,000
CSAH 45 (MEDFORD 5TH AVE. SE TO 2ND AVE. NW)	URBAN RECONSTRUCTION	$1,525,000
BRIDGE 92779 – CSAH 6 OVER UNNAMED DITCH	BRIDGE REPLACEMENT	$175,000
BRIDGE 89080 – CSAH 28 OVER UNNAMED DITCH	BRIDGE REPLACEMENT	$175,000
BRIDGE 74J25 – CR 198 OVER RUSH CREEK	BRIDGE REPLACEMENT	$530,300
SIGNAL UPGRADES	OPERATIONAL/SAFETY	$200,000
COUNTY-WIDE SEAL COAT	MAINTENANCE	$638,000
COUNTY-WIDE MAINTENANCE OVERLAYS	MAINTENANCE	$1,834,512
CSAH 12 (UNION PACIFIC RAILROAD TO CSAH 8)	REHABILITATION	$550,000
CSAH 18 (CSAH 33 TO CSAH 17)	REHABILITATION	$250,000
CSAH 45 (STATE AVE.) & CSAH 34 (26TH ST.)	SAFETY	$2,000,000
2022		
CSAH 2 (CSAH 7 TO I-35)	MAINTENANCE	$400,000
CSAH 12 (UNION PACIFIC RAILROAD TO CSAH 8)	REHABILITATION	$2,215,000
CSAH 18 (CSAH 33 TO CSAH 17)	REHABILITATION	$1,540,000
CSAH 48 AT 18TH ST. SE ROUNDABOUT	OPERATIONAL/SAFETY	$2,000,000
CSAH 49 (CSAH 45 TO CR 198)	RURAL RECONSTRUCTION	$3,600,000
CURVE DELINEATION	SAFETY	$204,600
BRIDGE L3951 – NE 34TH AVE. OVER MEDFORD CR.	BRIDGE REPLACEMENT	$180,000
BRIDGE 95786 – SE 18TH ST. OVER DITCH	BRIDGE REPLACEMENT	$115,000
34TH AVE. SE BRIDGE	BRIDGE REPLACEMENT	$200,000
COUNTY-WIDE SEAL COAT	MAINTENANCE	$390,000
COUNTY-WIDE MAINTENANCE OVERLAYS	MAINTENANCE	$1,300,000
CSAH 37 (CSAH 9 TO CSAH 19)	REHABILITATION	$200,000
2023		
SIGNAL UPGRADES	OPERATIONAL/SAFETY	$400,000

PROJECT NAME	PROJECT TYPE	COST
CSAH 23 (CSAH 12 WEST TO CSAH 12 EAST)	REHABILITATION	$300,000
CSAH 37 (CSAH 8 TO CSAH 19)	REHABILITATION	$2,800,000
CSAH 47 (BIXBY LANE)	RECONSTRUCTION	$1,000,000
CSAH 48 -MAIN ST. (CSAH 45 TO CHAMBERS AVE.)	REHABILITATION/SAFETY	$2,000,000
CR 174 ELM AVE. (18TH ST. SE TO PARK ST.)	URBAN RECONSTRUCTION	$540,000
BRIDGE 6743 – CSAH 45 OVER TURTLE CREEK	BRIDGE REPLACEMENT	$535,000
BRIDGE L5798 – NE 76TH ST. OVER RUSH CREEK	BRIDGE REPLACEMENT	$115,000
CSAH 48 (MAIN ST.) & GROVE AVE.	SAFETY	$2,000,000
CSAH 48 (MAIN ST.) & ELM AVE.	SAFETY	
COUNTY-WIDE SEAL COAT	MAINTENANCE	$390,000
COUNTY-WIDE MAINTENANCE OVERLAYS	MAINTENANCE	$1,300,000
2024		
CSAH 8 KENYON RD. (CSAH 35 TO CSAH 34)	URBAN RECONSTRUCTION/SAFETY	$2,400,000
CSAH 28 (CSAH 21 TO TH 30)	RURAL RECONSTRUCTION	$1,500,000
BRIDGE 4686 – CR 180 OVER IZAAK WALTON CR.	BRIDGE REPLACEMENT	$3,300,000
BRIDGE L5573 – TWP. 95 OVER STRAIGHT RIVER	BRIDGE REMOVAL	$100,000
COUNTY-WIDE SEAL COAT	MAINTENANCE	$390,000
COUNTY-WIDE MAINTENANCE OVERLAYS	MAINTENANCE	$1,300,000
CSAH 16 (CSAH 4 TO CSAH 6)	REHABILITATION	$144,000
CSAH 16 (CSAH 6 TO TH 14)	REHABILITATION	$75,000
CSAH 34 (26TH ST.) & CSAH 8 (KENYON RD.) & CSAH 34	SAFETY	$2,400,000
2025		
CSAH 16 (CSAH 4 TO CSAH 6)	REHABILITATION	$1,440,000
CSAH 16 (CSAH 6 TO TH 14)	REHABILITATION	$1,155,000
CSAH 23 (CSAH 34 TO NORTH) REALIGNMENT	RECONSTRUCTION	$2,750,000
CSAH 43/CR 171/CR 180	OPERATIONAL/SAFETY	$1,875,000
CSAH 43 & CR 180	SAFETY	$1,875,000
COUNTY-WIDE SEAL COAT	MAINTENANCE	$352,000
COUNTY-WIDE MAINTENANCE OVERLAYS	MAINTENANCE	$1,300,000

**This table includes construction expenditures only. Design engineering, preliminary engineering, right of way, and utility projects can be found in the Steele County CIP.*

LONG-TERM PROJECTS

Projects listed in this section are currently unscheduled, and do not have funds identified or assigned. This list includes unscheduled projects in the county's CIP, long term expansion, realignment, and connectivity projects, and projects identified by analysis of this plan. Intersections with a critical index over 1 (as defined in the **Safety** portion of this plan) are included in this list as potential future projects, if they are not already incorporated into the current capital improvement plan. As roadways are considered for projects, the county will evaluate the existing physical

safety conditions of the roadway. This includes steep slopes, substandard clear zones, and narrow shoulders. As appropriate, the county will incorporate upgrades in their CIP development. These upgrades are consistent with Steele County's commitment to proactively address systemic safety concerns.

TABLE 22. LONG-TERM PROJECTS

PROJECT NAME	PROJECT TYPE	ESTIMATED COST
EAST SIDE CORRIDOR/29TH AVE.	EXPANSION	$9,850,000
CSAH 4 (CSAH 14 TO 32ND AVE.)	RECONSTRUCTION	$4,280,000
CSAH 7 (CSAH 32 TO CSAH 18)	REHABILITATION	$900,000
CSAH 9 (CSAH 45 TO CSAH 1)	RURAL RECONSTRUCTION	$1,500,000
CSAH 14 (2,300 FT. EAST OF CSAH 67 TO CSAH 4)	RECONSTRUCTION	$1,900,000
CSAH 17 (CSAH 12 TO CSAH 23)	RURAL RECONSTRUCTION	$4,275,000
CSAH 18 (CSAH 6 TO CSAH 43)	EXPANSION	$1,500,000
CSAH 20 (1ST AVE. NW)	REHABILITATION	$6,725,000
CSAH 34 (FUTURE CSAH 7 TO 24TH AVE. NW)	EXPANSION	$100,000
CSAH 34 (24TH AVE. TO I-35)	RECONSTRUCTION	$1,500,000
CSAH 34 AT I-35	RECONSTRUCTION	$4,280,000
CSAH 34 AT ST. PAUL RD.	OPERATIONAL/SAFETY	$1,650,000
FUTURE CSAH 34 (CSAH 8 TO CSAH 43)	EXPANSION	$9,080,000
CSAH 45 (TH 14 TO STATE AVE.)	URBAN RECONSTRUCTION	$12,500,000
CSAH 48 (US 218 TO CHAMBERS AVE.)	OPERATIONAL/SAFETY/RESURFACE	$1,700,000
CR 162	RECONSTRUCTION	$4,700,000
SUBSTANDARD SHOULDER EXPANSION	SAFETY	UNKNOWN
BELTLINE CORRIDORS	EXPANSION/RECONSTRUCTION	UNKNOWN
CSAH 19 (ROSE ST.) & PINE AVE. & SPRUCE ST.	SAFETY	UNKNOWN
CSAH 2 & 21ST AVE. NW	SAFETY	UNKNOWN
CSAH 45 (CEDAR AVE.) & 18TH ST. SE	SAFETY	UNKNOWN
CSAH 45 (OAK AVE.) & SCHOOL ST.	SAFETY	UNKNOWN
SAFETY UPGRADES (SUBSTANDARD SHOULDER WIDTH, SLOPE, OR CLEAR ZONE)	SAFETY	UNKNOWN

COUNTY SAFETY PROJECTS

The Steele County Road Safety Plan was completed in 2012. The county should consider updating this plan in the near-term to include a more detailed safety analysis and identified safety strategies and projects to reduce the number of crashes that occur on county roadways. Should a County Road Safety Plan update occur, the recommendations of the updated plan should be incorporated into the county's short- and long-term project lists.

PROJECT FUNDING

County staff are well versed in state and federal funding programs and actively seek a variety of funding sources to supplement local funds. It is understood that the funding picture will likely fluctuate many times over the next 20+ years. Therefore, county leaders must employ several funding and implementation strategies to meet identified system needs. In general, this means:

- Local leaders should continue to aggressively seek new and innovative forms of non-local assistance and support legislation that will generate additional transportation funding assistance.
- Public-private partnerships should be considered to equitably distribute the costs of roadway construction or reconstruction resulting from development.
- Steele County may need to partner, pool resources, and jointly lobby for outside funding assistance for major projects that could provide significant long-term benefits to the county.
- State Aid transportation needs should continue to be adjusted/updated as the system changes to increase annual funding allotments.
- Non-traditional funding methods for major projects should be investigated (i.e., bonding, congressional appropriations, fees, and third-party cooperative agreements).

FUNDING STRATEGIES

To address existing and future needs and prevent deterioration of its transportation system, Steele County should consider increasing ongoing capital and maintenance funding to align investment levels with the performance targets currently in place and developed with this Plan. To accomplish this Plan's goals, Steele County will need to achieve a balance of internal and external funding sources. To secure external funding, the county will need to continue to investigate and pursue the range of funding programs available as well as any new programs that may arise over time. In addition to external funding sources, county staff should continue to pursue internal revenue sources. This could take the form of a large one-time investment (i.e., bonding) or a series of periodic infusions over an extended period. As the county's highway network changes over time, it is probable that some of the programs noted above may become more or less applicable. Therefore, the county should also consider the following general strategies to maximize their available revenue for projects:

- Leverage funds and private sector partnerships, continue to actively pursue appropriate external assistance, including applicable federal and state programs.
- Adapt county policy to changing conditions, continue to maximize all internal funding sources within the county's control, and evaluate the effectiveness of current external funding sources on an ongoing basis.
- Triage the network and reduce assets as feasible and necessary (i.e., eliminating unwarranted signals, closure of bridges, jurisdictional turnbacks of certain roadways, etc.).

A review of available funding sources was conducted; the funding programs identified were classified as either external (federal and state programs) or internal (locally enacted programs). External sources are generally grants and other programs that require a competitive application and allocation is outside of the county's control. The internal sources represent funding mechanisms that the county may implement at any time, based on local decisions.

Table 23 summarizes these strategies and indicates whether they can be used for capital, reconstruction, or maintenance investments; require repayment (bond or loan); and whether they require a local match (grant). The table also summarizes each programs' applicability and probability for use in addressing county transportation needs.

Based on this analysis, nine funding sources have been identified as the most suitable and sustainable for an ongoing Steele County enhanced preservation or safety program. Some of these will require legislative action (state aid funds), some will require external funding (a request to the District 6 ATP for STP or HSIP funds), but all others (taxes and bonding) can be implemented by the County Commission, at their discretion.

TABLE 23. SUMMARY OF POTENTIAL FUNDING SOURCES

Funding Source	Construction or Expansion	Reconstruction	Rehabilitation or Maintenance	Repayment Required	Match Required	Applicability to Preservation or Construction Needs	Probably of Securing
External Sources							
RAISE	✓	✓	✓	✗	✓	Very Low	Very Low
HSIP	✗	✓	✓	✗	✓	Medium	Medium
TED	✓	✓	✓	✗	✓	Very Low	Medium
STP (road/bridge/alternatives)	✓	✓	✓	✗	✓	High	High
State Bonding	✓	✓	✓	✓	✗	High	Medium
Local Road Improvement Program	✓	✓	✓	✗	Varies	High	Medium
State Aid Funds	✓	✓	✓	✗	✗	High	High
Internal Sources (Taxing Tools)							
County Wheelage Tax	✓	✓	✓	✗	✗	High	High
Local Option Sales Tax	✓	✓	✓	✗	✗	High	High
Gravel Tax	✓	✓	✓	✗	✗	Medium	High
Ad Valorem Tax Levy	✓	✓	✓	✗	✗	High	High
Tax Increment Financing (TIF)	✓	✓	✓	✗	✗	Low	Medium
Tax Abatement	✓	✓	✓	✗	✗	Low	Medium
Special Tax Levy for Transportation	✓	✓	✓	✗	✗	Medium	Low
Internal Sources (Bonding Tools)							
Local Bonds (GO Bonds)	✓	✓	✓	✓	✗	High	Medium
Special Reconstruction Bonds	✓	✓	✓	✓	✗	High	Medium
Special Assessment/Special Assessment Bonds	✓	✓	✓	✓	✗	Low	Low
Internal Sources (Agreement)							
Negotiated Developer Fees for Specific Development	✓	✓	✓	✗	✗	Medium	Low
Third Party Agreements	✓	✓	✓	✗	✗	Medium	Medium
Cooperative/Cost Sharing Agreements	✓	✓	✓	✗	✓	High	Medium
Shaded sources represent funding opportunities most suitable for Steele County							

APPENDIX A: PUBLIC FEEDBACK SUMMARY

STEELE COUNTY 2040 TRANSPORTATION PLAN PUBLIC ENGAGEMENT SUMMARY

August 24, 2020 through September 4, 2020

PUBLIC ENGAGEMENT SUMMARY

The first phase of public engagement for the Steele County 2040 Transportation Plan occurred from August 24, 2020 through September 4, 2020. Engagement activities included an online open house, narrated video presentation, survey, open house office hours and interactive mapping exercise. Due to the COVID-19 pandemic, all engagement opportunities were held virtually to ensure the highest levels of safety for project staff and engaged citizens. The goal of this round of engagement was to inform the public of the transportation plan project, understand what themes and goals they would like to prioritize, and allow them to identify specific locations of safety issues or opportunities.

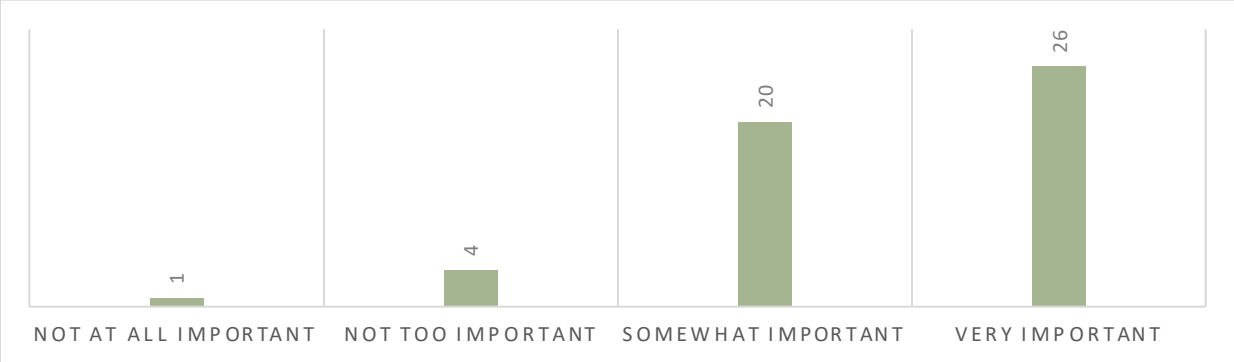
The online open house was hosted on the project website (www.SteeleCo2040TranPlan.com) under the "Public Engagement" tab. The event was publicized using Steele County social media pages and websites, local papers and radio stations, and through targeted advertising on Facebook. The open house consisted of a narrated video presentation (approximately five minutes in length), which highlighted what the transportation plan will achieve, the current status of the project, and how to provide feedback. The presentation used in the video was also available for download.

Following the informational video, visitors were presented with several options to provide feedback and guidance on the plan. The project team hosted several "Open House Office Hours" which provided an opportunity for residents to ask questions and provide feedback to key project team members. Additionally, visitors were asked to complete a survey related to project goals and transportation preferences. As part of this survey, visitors were directed to an interactive mapping exercise using "Wikimap". Here, they could place a pin at a specific location and add a descriptive comment. This is used to consolidate county-wide feedback and address specific locations to be included in the plan.

This variety of engagement activities successfully engaged many residents of Steele County. The online open house webpage hosted over 1,500 visitors between August 24th and September 4th. Over 50 people responded to the survey, identifying 47 specific locations on the interactive map. The detailed results of the online survey and interactive mapping exercise are presented below.

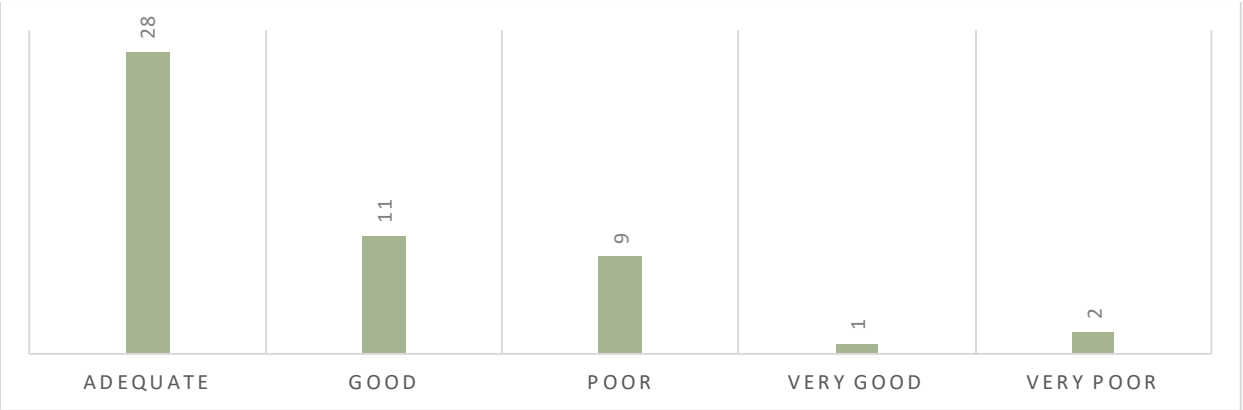
QUESTION 1: HOW IMPORTANT ARE TRANSPORTATION ISSUES TO YOU?

Not at all important	1
Not too important	4
Somewhat important	20
Very important	**26**



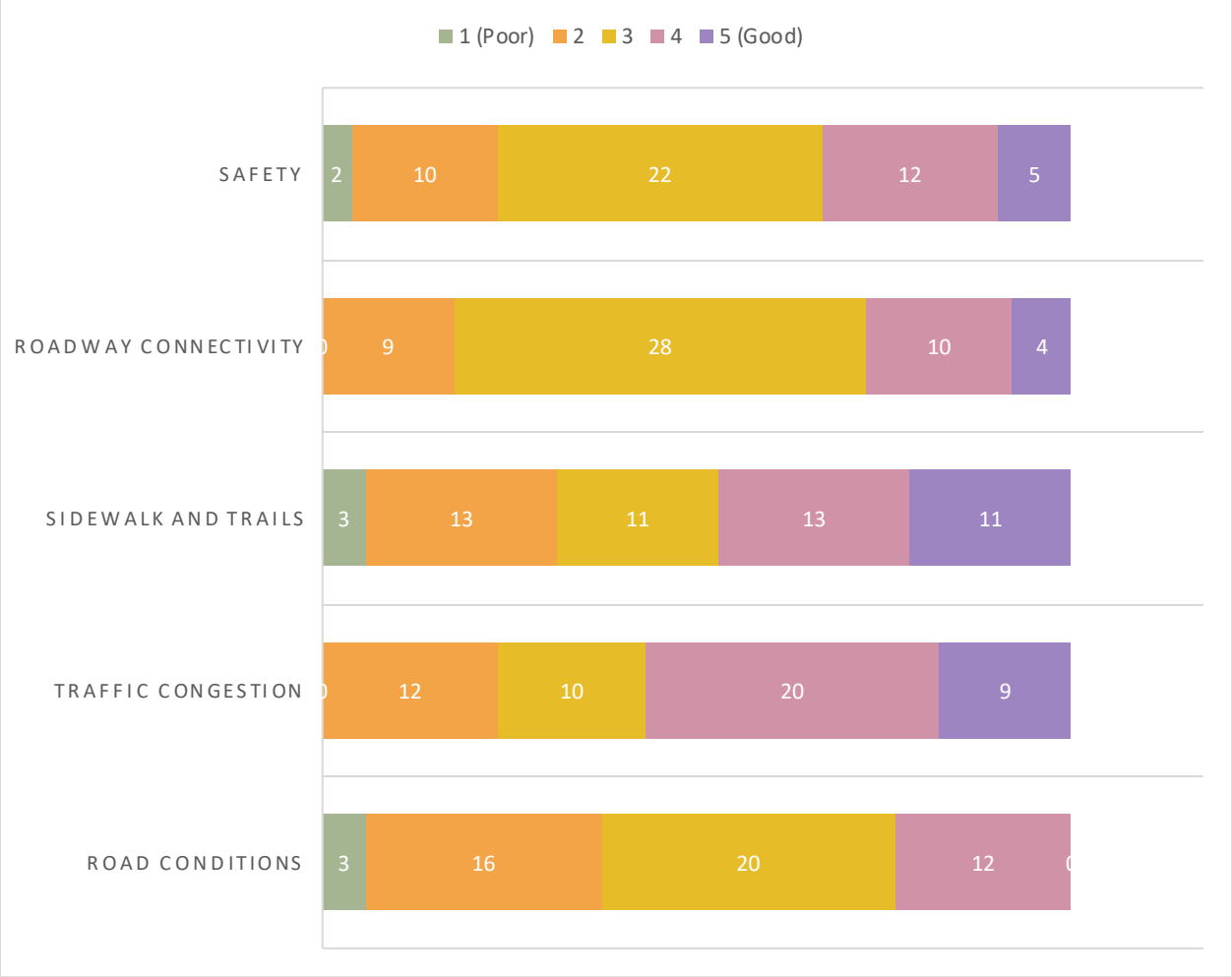
QUESTION 2: HOW WOULD YOU RATE THE CURRENT TRANSPORTATION SYSTEM IN STEELE COUNTY?

Very good	1
Good	11
Adequate	**28**
Poor	9
Very poor	2



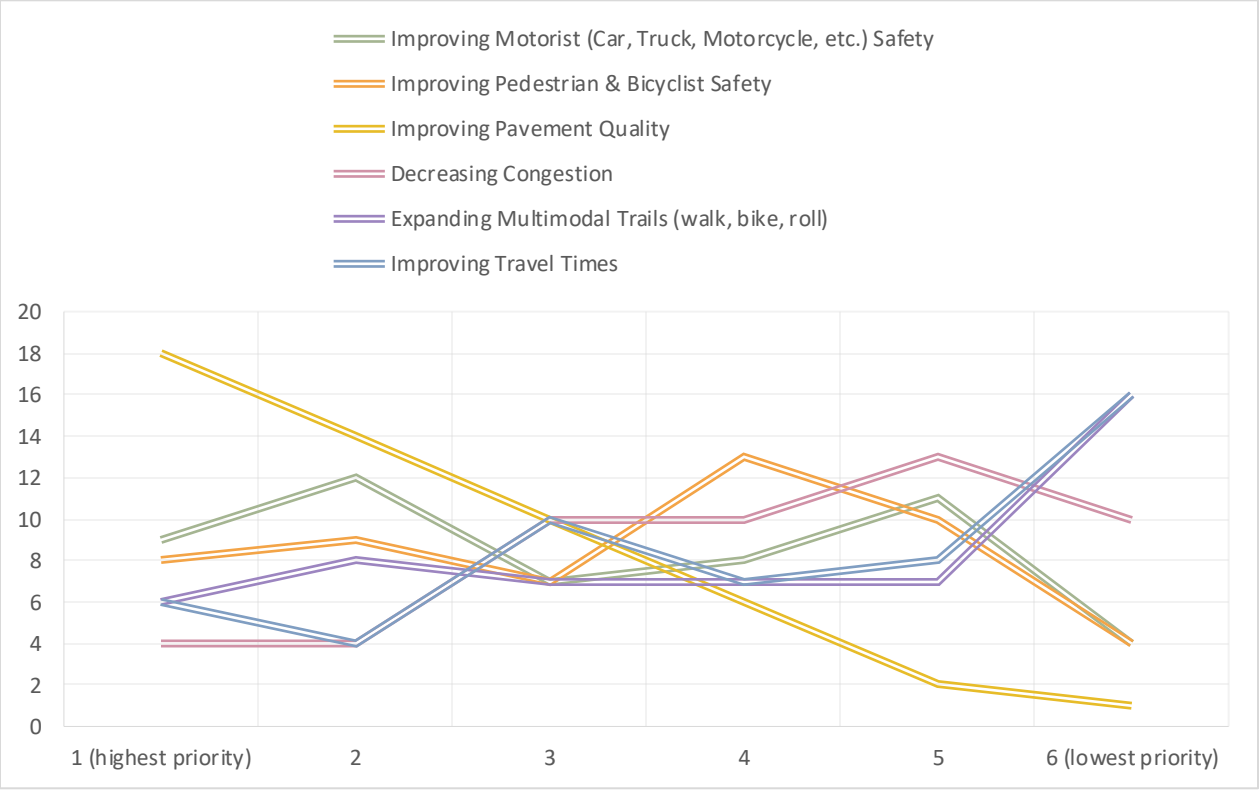
QUESTION 3: RATE EACH OF THE FOLLOWING ON A SCALE OF 1-5 BASED ON CURRENT CONDITIONS, WITH 5 BEING THE BEST:

RATING	1 (POOR)	2	3	4	5 (GOOD)
ROAD CONDITIONS	3	16	**20**	12	0
TRAFFIC CONGESTION	0	12	10	**20**	9
SIDEWALK AND TRAILS	3	**13**	11	**13**	11
ROADWAY CONNECTIVITY	0	9	**28**	10	4
SAFETY	2	10	**22**	12	5



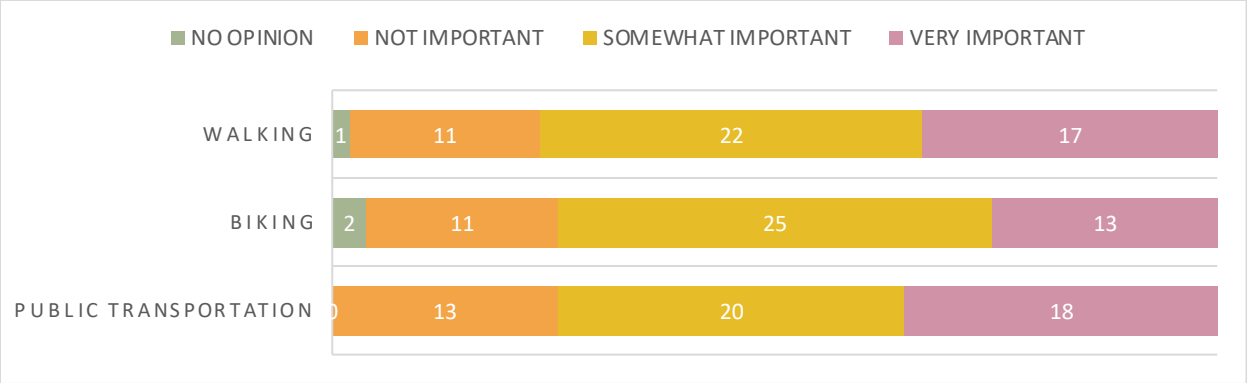
QUESTION 4: THINKING OF WHAT YOU WOULD LIKE THE COUNTY TO FOCUS ON IN THE FUTURE, PLEASE RANK EACH OF THE FOLLOWING IN ORDER OF IMPORTANCE TO YOU, WITH 1 BEING YOUR TOP RANK:

RANKING	1 (HIGHEST PRIORITY)	2	3	4	5	6 (LOWEST PRIORITY)
IMPROVING MOTORIST (CAR, TRUCK, MOTORCYCLE, ETC.) SAFETY	9	**12**	7	8	11	4
IMPROVING PEDESTRIAN & BICYCLIST SAFETY	8	9	7	**13**	10	4
IMPROVING PAVEMENT QUALITY	**18**	14	10	6	2	1
DECREASING CONGESTION	4	4	10	10	**13**	10
EXPANDING MULTIMODAL TRAILS (WALK, BIKE, ROLL)	6	8	7	7	7	**16**
IMPROVING TRAVEL TIMES	6	4	10	7	8	**16**



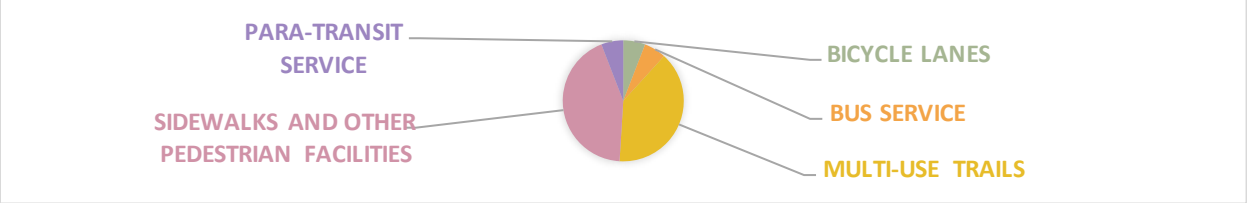
QUESTION 5: HOW IMPORTANT IS IT TO INCREASE ACCESS TO ALTERNATIVE MODES OF TRANSPORTATION FOR EACH OF THE FOLLOWING?

	NO OPINION	NOT IMPORTANT	SOMEWHAT IMPORTANT	VERY IMPORTANT
WALKING	1	11	**22**	17
BIKING	2	11	**25**	13
PUBLIC TRANSPORTATION	0	13	**20**	18



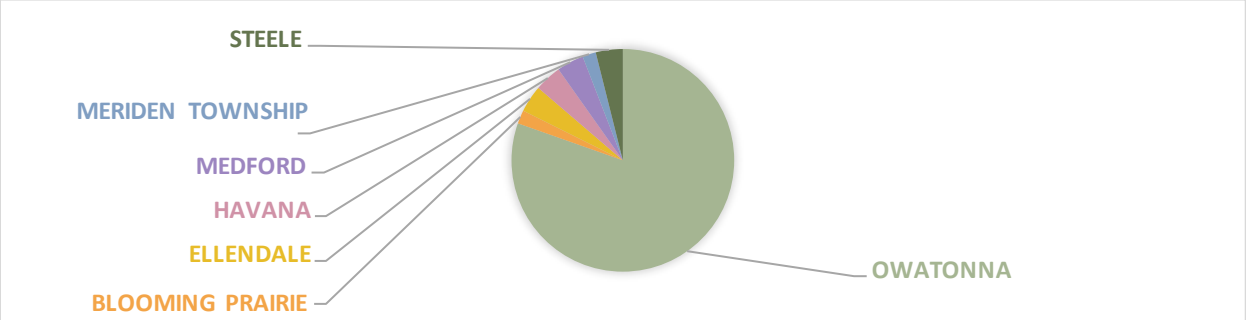
QUESTION 6: BESIDES DRIVING OR RIDING IN A MOTORIZED VEHICLE, WHICH ONE OF THE FOLLOWING ARE YOU MOST LIKELY TO USE?

BICYCLE LANES	3
BUS SERVICE	3
MULTI-USE TRAILS	20
SIDEWALKS AND OTHER PEDESTRIAN FACILITIES	**22**
PARA-TRANSIT SERVICE	3



QUESTION 7: WHAT CITY OR TOWNSHIP DO YOU LIVE IN?

OWATONNA	**41**
BLOOMING PRAIRIE	1
ELLENDALE	2
HAVANA	2
MEDFORD	2
MERIDEN TOWNSHIP	1
STEELE	2



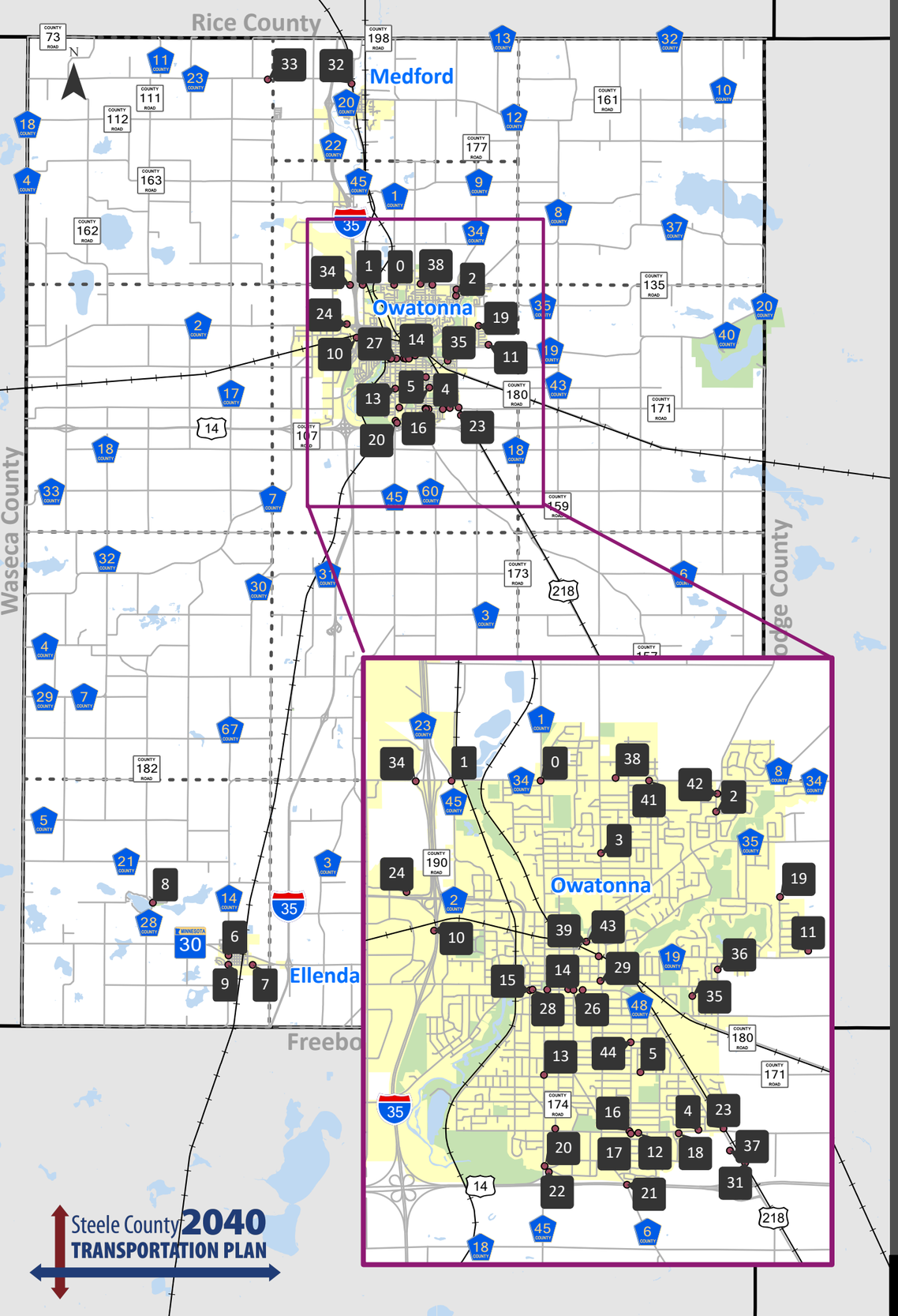
QUESTION 8: WHICH COUNTY IS YOUR PLACE OF EMPLOYMENT LOCATED WITHIN?

STEELE COUNTY	**46**
RICE COUNTY	1
HENNEPIN COUNTY	1
BLUE EARTH COUNTY	1

QUESTION 9: PLEASE VISIT THE FOLLOWING LINK AND ADD COMMENTS WHERE YOU SEE TRANSPORTATION ISSUES, THEN RETURN TO THIS SURVEY.

I do not have any transportation concerns	25
I have transportation concerns and have added them to the map	16

Please see the following page for detailed responses.



Interactive Mapping Responses

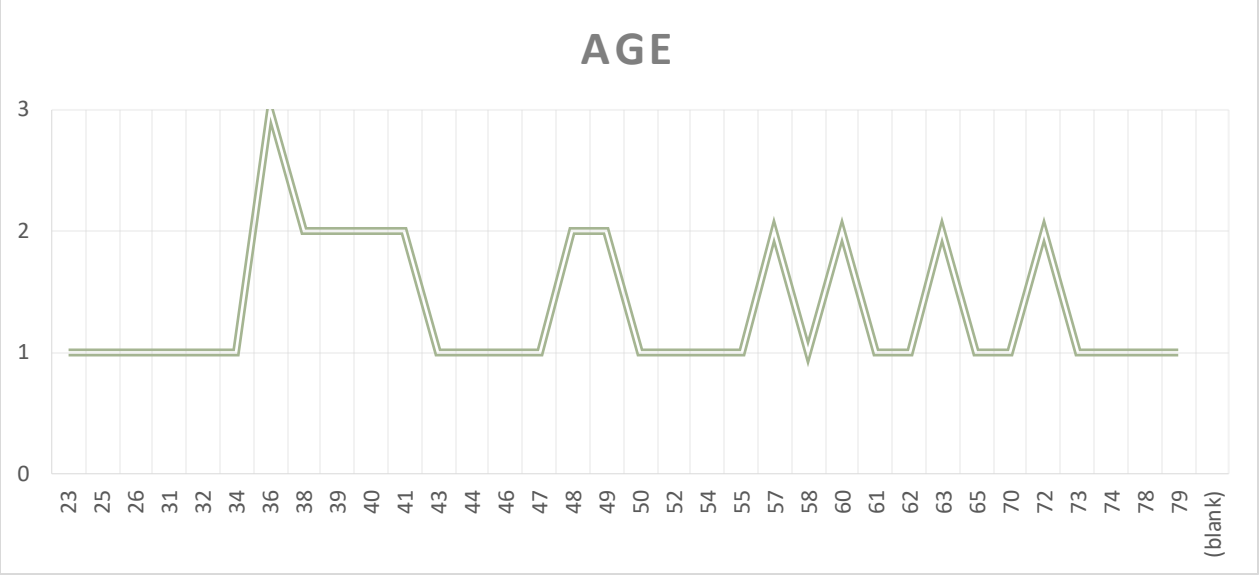
Steele County 2040 Transportation Plan

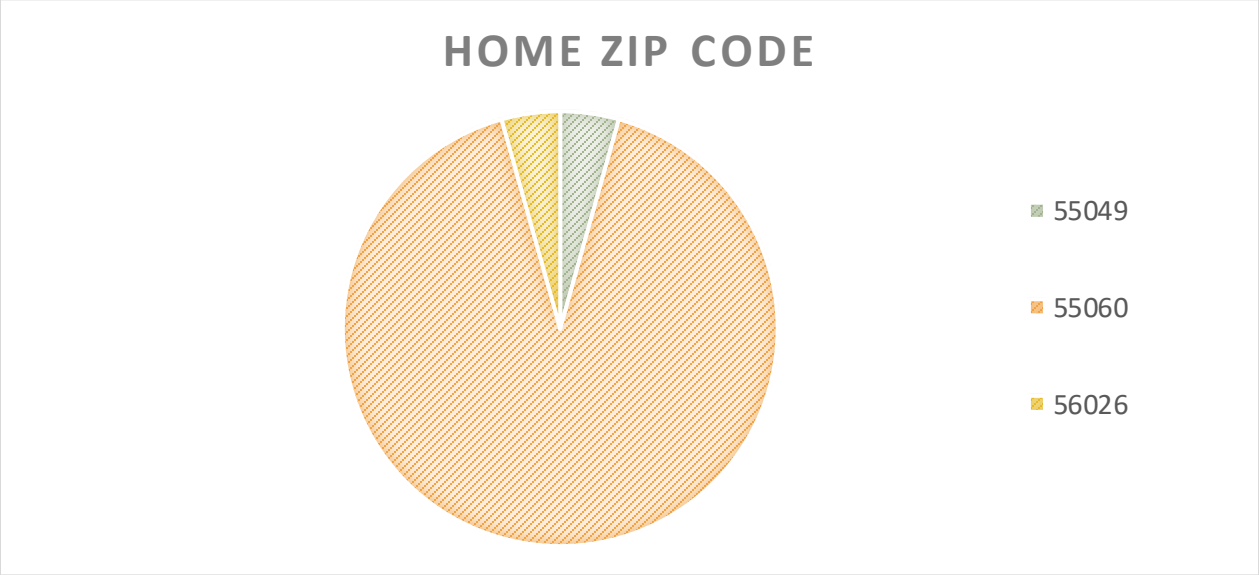
0. Larger roundabout
1. Replace signal with full size roundabout (not mini)
2. Upgrade roadway to improve safety and provide pedestrian facilities
3. School year traffic flow is horrible from about 12th or 13th Street all the way to the middle school. Cars, buses, and pedestrians are literally everywhere!
4. Frequent excessive speeding between Hayes and Hwy 218.
5. School year traffic flow is horrible from around Truman to Smith. Cars, buses, and pedestrians are literally everywhere!
6. The angle of the intersection makes it difficult to see approaching traffic from the west on TH30. This may be more of a MNDot issue than the County as far as trying to eliminate the road intersection angle.
7. It would be desirable to see County RD 38 widened or a pedestrian trail put on the north side. There is a lot of school traffic and pedestrian traffic between School St. and TH30 to the east. There are complaints and concerns with many children walking
8. Propose biking trail from Beaver Lake thru Ellendale connecting to proposed regional trail in Qwatonna. Keeping Bikes and pedestrians off Hwy 30 and other roads to be able to use County Park safely and for improved health and quality of life.
9. Provide pedestrian and bike trails along 14 & 38 to keep bikes and pedestrians off road to provide safe passage to schools for children and for all through town.
10. N. Cedar from Canning Company north needs to be redone.
11. Need to work with city to create a east corridor.
12. 18th Street needs to be cement for new school and heavy bus traffic. Adding a walking and bike lane
13. S.Cedar from Park to Coolege needs to be redone
14. Main Street in Owatonna needs a complete make over. People are totally confused with new lane assignments.
15. Put light back in! Trail going in to west and a new gateway to downtown. I did not agree taking this light out. Traffic accident count for 2020 should not be a determining factor for light. We did not have fair or events to honestly evaluate Oak Ave.
16. Need stop sign to slow traffic
17. Stop sign on 18th and Truman with repainted crosswalks and lower flashing crosswalk signal. Car's constantly fail to yield for kids (esp walking to and from school) and pedestrians when trying to cross 18th. Plus you add the new high school going in it w
18. With new HS going in there needs to be sidewalks put in along 18th street. If put in on south side then cross walks needed at Smith. Even better to slow the current speeders and the future HS speeders Stop signs at Truman and Smith
19. Should make an eastern corridor connecting rose street to 26th street.
20. Should have safer intersection here
21. Open this crossing and start a development plan for the south end of town
22. Take out the old Pizza Hut building (make federated sell it) and put a restaurant in
23. Put a round about here
24. This turn off spot to Walmart/Culver's should be rethought now that highway 14 moved
25. Turning out of the fairgrounds onto 18th can get very difficult and congested
26. Create a dedicated left turn lane to help reduce congestion.
27. Create dedicated turn lane
28. Don't go from one through lane to 2 through lanes to 1 through lane in a matter of 3-5 blocks. Create center turn lane like on Oak.
29. Please find a way to control this area better. People coming off of pine onto Broadway and then to Lincoln and vice versa rarely stop for the stop signs. I see close calls everyday and only see this getting worse. During the school year last year I saw p
30. PLEASE add crosswalks! Washington and Middle school kids have to cross this road because the school won't give them busing for being too close to the school. They say there are crosswalks so its safe but there are none. PLEASE MAKE THIS SAFE FOR OUR
31. slow traffic down coming into town with the new high school it could become a big issue fast
32. sawed and sealed pavement. ride quality is poor. do not repeat mistakes of the past!
33. sawed and seal pavement ride quality is poor.
34. consider roundabout to improve traffic flow and safety
35. Traffic is excessive on Shady Ave during the school year. Cars are also traveling at high rates of speed and often drivers are distracted. Put PARTRIDGE AVE through so that there is an additional route for cars traveling North/South through these neighbo
36. Connect Partridge Ave From Rose Street/County Road 19 to County Road 180. This will help with traffic flow through nearby neighborhoods, give semi trucks an alternate route instead of Shady Avenue, and also be very beneficial for drivers so there is an a
37. I would like to see a new road & bike trail being built from 26th St (NE owatonna) to the expected site of the new High school (SE owatonna). This will alleviate in-town traffic and create a safer route for students to bike and drive to school, plus mini
38. Reduce speed limit on 26th street from Cedar to Kenyon Rd. Many pedestrians crossing 26th street along that whole length, mostly kids.
39. turning traffic off cherry takes forever and is dangerous as cross traffic does NOT slow down and is spaced too close to attempt a turn without waiting forever
40. during school hours, people parking across street from school and crossing with small children is very dangerous. At times the sun is in a drivers eye and is easy to not see pedestrians crossing in middle of block... ignoring no parking signs!
41. provide lighting along the trail on 26th
42. Pedestrian facilities needed along roadway. I see walkers/bikers using this unsafe road all the time
43. Roundabout needed at this intersection. Should have been installed when Kwik Trip was built
44. Sidewalk needed along roadway, major walking route for kids go to Lincoln

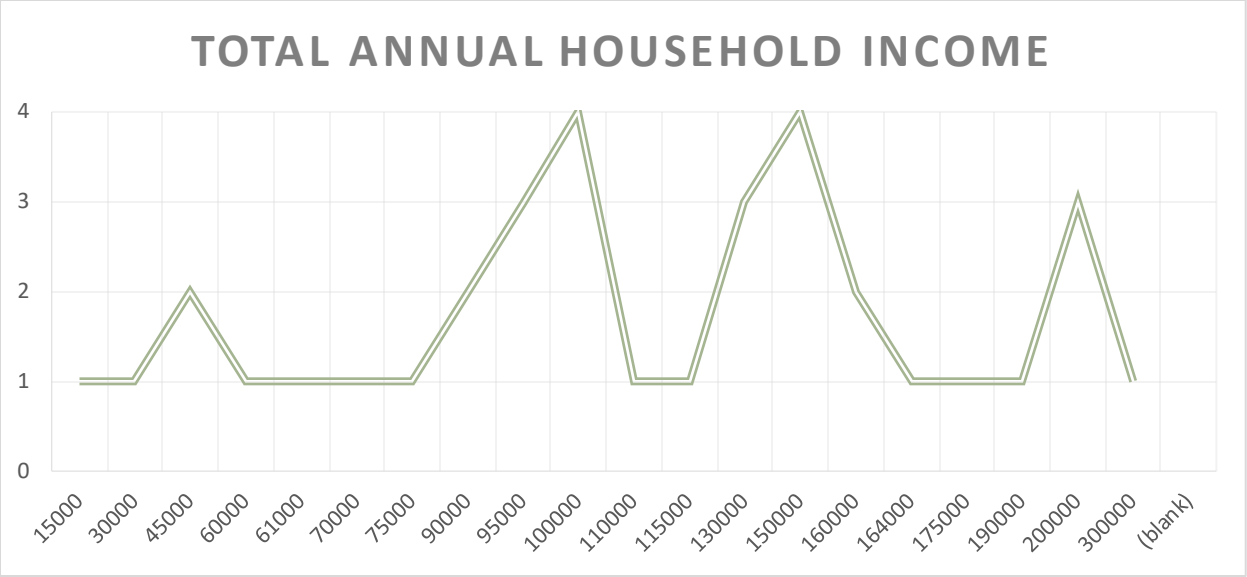
PLEASE SHARE ANY ADDITIONAL COMMENTS YOU HAVE HERE:

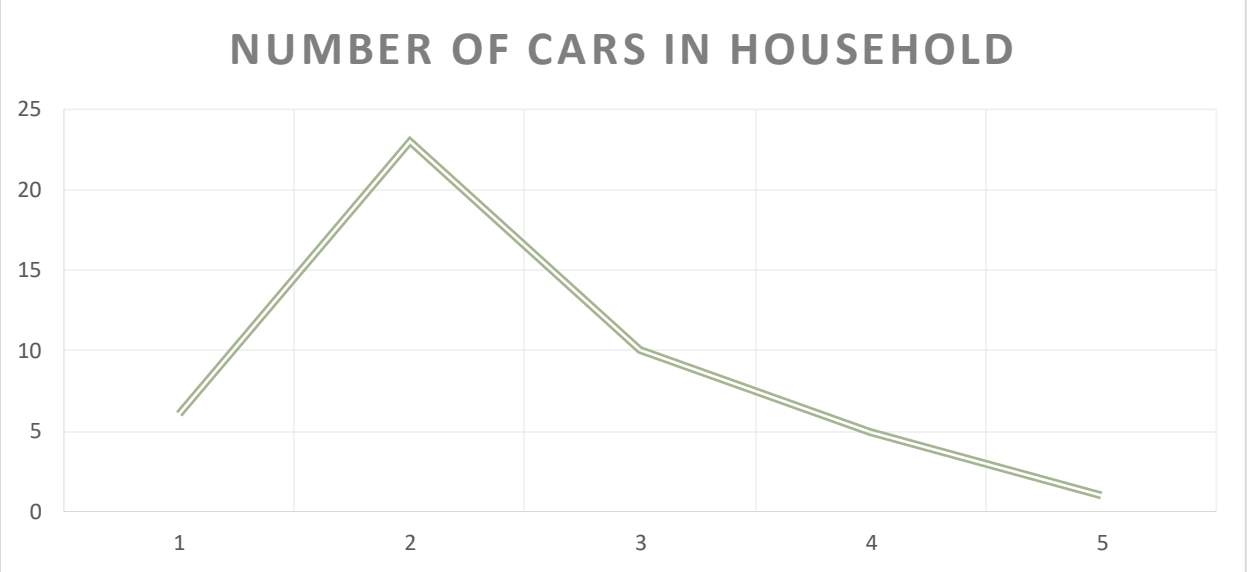
Need a better way to get from NE to SE Owatonna
No more round abouts
Whoever came up with the lane striping idea needs to examine the State mandated STANDARD for traffic control! Youse need to stop thinking with ways to cut spending and focus on increasing SAFETY!!
County roads would be safer for bicycles if at least a 3 ft paved shoulder exists.
I have 5 children that will be going through the school system, and live in NE Owatonna. I believe the idea of a road from NE to SE would alleviate a lot of in town traffic and create a safer route for many fo the students, bus routes, and overall traffic.
Pave more of your shoulders
we have traffic issues at our house we live right on the corner of Lincoln and Broadway (our driveway is right at the stop sign) it would be amazing if someone from the city would be willing to meet with us so we could show and explain what is going on in this spot to find a solution. My name is Jenny Richter and my number is 5076767649
The lack of repairs in Owatonna is criminal. The roads are the worst that I have ever seen. I have lived here since 1969. The repairs with the oil/tar/small stone is a waste. As a citizen, not receiving the quality roads for the taxes I pay. (and that over 20000 plus people pay)
So many intersections in Owatonna without crosswalks for walkers. No through streets around town - especially east side - that channels traffic into and through downtown.
Use street signs, take down County Road markers.
I work with patients with chronic health conditions that require life-saving treatment 3 times a week. Transportation options for our patients (most being low-income) in Steele county is much worse than patients in other counties (with less of a population). We really need to put more focus on the low-income & affordable options for those who require assistance. In a community with many resources we are lacking so far behind so many others counties that have less to work with.
None
Main desire is for more options to travel from south end of town to north end.
continue to get citizens input, very important!
Thank you for all your efforts! County Shop people are doing a great job! Please pass this on to employees we do recognize their efforts! Jeff Okerberg & Elizabeth Okerberg
Beaver Lake is a true gem Steele county has. It needs to be valued and invested in for all county residents to enjoy. It is currently outdated and neglected.
Many people who have limited funds and means have limited transportation abilities to industrial park to work.
Owatonna has a nice trail system but it would be nice to be expanded. I feel it is a highlight of our town and appealing reason to live here, as well as being a great way to promote health and wellness. Public transportation should be developed in a easier fashion to navigate and should be advertised more, with routes to neighboring cities an option for those who work or go to school outside of Owatonna. There is a big enough population for it and it seems pretty difficult to navigate where and when buses are available.

DEMOGRAPHICS






TOTAL ANNUAL HOUSEHOLD INCOME
4
3
2
1
0
15000
30000
45000
60000
61000
70000
75000
90000
95000
100000
110000
115000
130000
150000
160000
164000
175000
190000
200000
300000
(blank)


NUMBER OF CARS IN HOUSEHOLD
25
20
15
10
5
0
1
2
3
4
5

OPEN HOUSE #2: PLEASE SHARE ANY ADDITIONAL COMMENTS YOU HAVE HERE

I believe that the construction of 29th Ave is crucial. We need this to clear the congestion on Mineral Springs Rd, as during school hours it can become incredibly difficult to navigate. This should be a priority as we have a new high school being built which will only increase the traffic in the area with far less students walking to school.

Rice County intends to create a North-South roadway that runs parallel (on the western side) to I-35. As outlined in the Rice County Transportation Plan, the connection to Steele County will likely occur at the western roundabout in Medford.

Date: 11/2/20

To: Samantha Matuke, SRF Consulting Group

From: Shelly Rockman, Operations Manager

Re: Steele County 2040 Transportation Plan

After Kirk and I met with you, I gave each driver a handout with the questions you asked. A few of them offered their feedback. I have gathered their answers and typed them verbatim on the following sheet.

There are several mentions of Cedar Valley Services (CVS). SMART transports numerous consumers to and from work at CVS daily.

I included my own feedback as a resident of Owatonna for 15 years.

Thank you for inviting us to participate. If I get any more feedback through my conversations with drivers, I'll pass it along.

Steele County 2040 Transportation Plan Feedback

1. Do you experience recurring congestion? If so, where?
    - At the two roundabouts. Bad idea. Traffic lights would be better. (Note: I asked the driver why he thought it was a bad idea. He stated that people don't know how to use roundabouts. Nobody knows when to go or when not to go.)
    - The revamped intersection of Bridge St./Main St. and Oak Ave. Dedicated left turn signal is not always offered. When there is a green light, it does stay green longer than it used to for the traffic that didn't get a green arrow to be able to turn left onto Bridge, so that's good.

2. Are there pavement quality concerns? If so, where?
    - 16th St. east of Cedar Ave. N. is in terrible condition.
    - South Oak between Hy-Vee and downtown. Passengers in the back of the bus have commented on how bumpy the ride is.
    - School Street to Havana Road on Bixby Road is very bumpy.
    - Exit onto Mineral Springs out of CVS parking lot, there is a dip that makes the bus bounce. Because of traffic on Mineral Springs traveling west, the bus has to gun it to get out onto the street and that really makes the bus bounce out of the parking lot.
    - Very difficult railroad crossing on 32nd Ave. near the road to the compost site.

3. Do you experience safety concerns (vehicles or pedestrians)? If so, where?
    - Turning out of Cedar Valley Services onto Mineral Springs Road is dangerous because of the railroad tunnel.
    - Grove Avenue and Mineral Springs (4 way stop or lights needed)
    - Leif Avenue is a dead end with no cul-de-sac. We have a preschool bus that has to turn around at the end of the street. It's doable but tight.
    - Wider shoulder or curb/sidewalk needed on Kenyon Road to connect the end of the trail on 26th St. with the trail/sidewalk on Mineral Springs Road.
    - Kudos for adding the flashing crosswalk on Oak Avenue and School Street!

4. Are there any intersections that need signal improvements (example: changing stop light timings)?
    - School Street and Elm Avenue (4 way stop sign)
    - School Street and Cedar Avenue (4 way stop sign)
    - Light timing issues at Park Drive & Bridge Street for vehicles traveling east-west on Bridge. Also at Grove Avenue & Main Street for vehicles traveling north-south on Grove. Also at Bridge Street & State Avenue (left turn onto State is always dedicated but many times (especially outside of peak travel time/work hours) there isn't a turner so anyone heading west on Bridge has to wait through the green arrow cycle).

5. What changes in the future transportation system would help SMART work more efficiently? Examples: New roadway alignments, new roads, add sidewalks, change speed limits, improve pavement, add signage, etc.
    - Could maybe redesign driveway situation at Cedar Valley Services.
    - Connect 20th Street NE
    - Make 20th Street NE go all the way through
    - Missing street signs on Oak Avenue & Vine Street as well as Deer Trail & Pheasant Run.

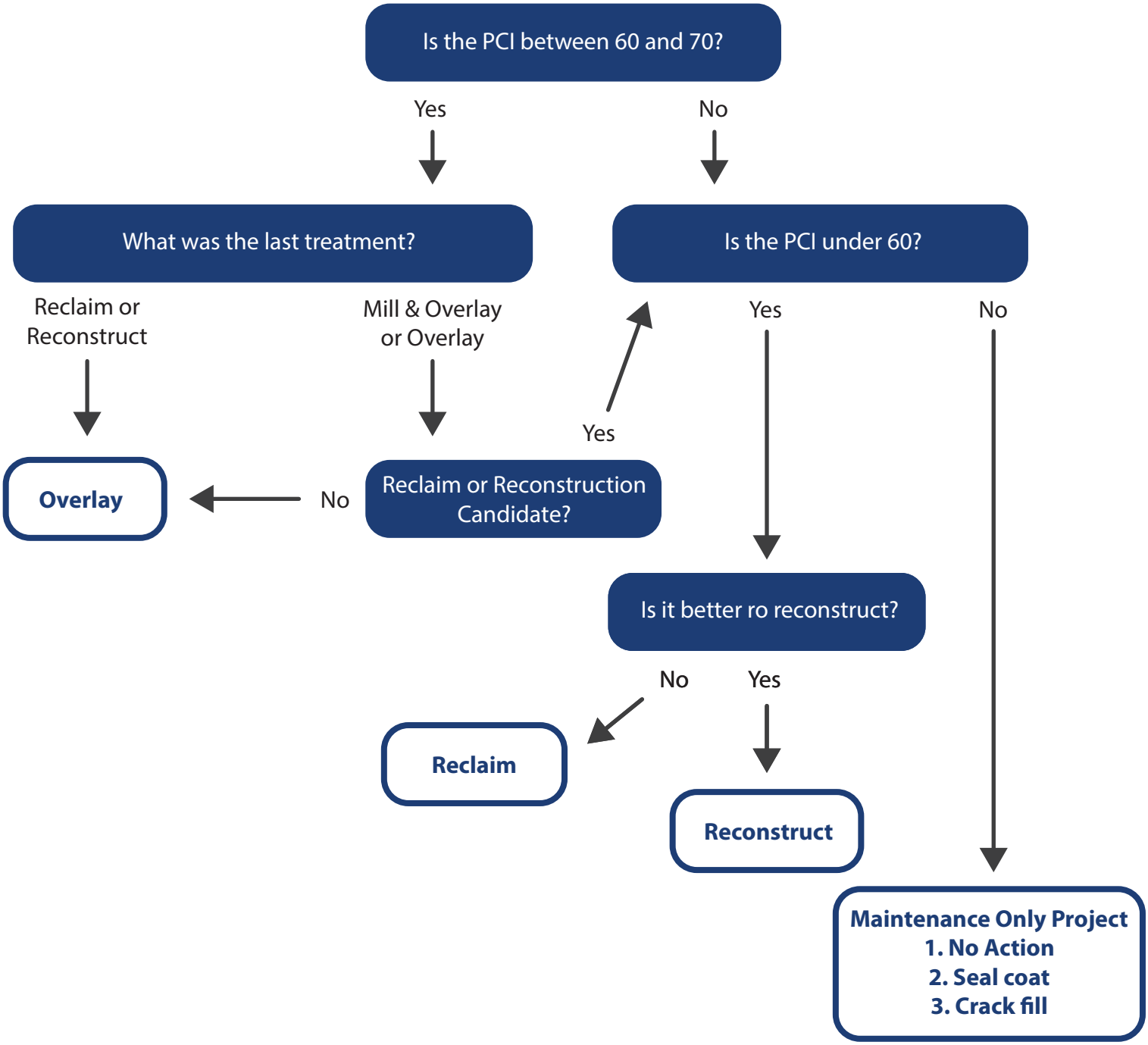
- Speed limit on Austin Road from 18th Street to Hwy 14 is 40 mph but speed limit on State Ave heading north towards 26th St. is 30 mph.
- Speed limit on Old Hwy 14 heading towards Waseca turns to 55 mph before 32nd Ave. and SMART buses need to use the left turn lane to turn on 32nd to get to the garage. Traffic comes up behind them and can be intimidating.
- With the new high school on the south side of town and all the residential neighborhoods to the north, a more direct route on the east side of town would be very beneficial.

APPENDIX B: PROJECT SELECTION FLOWCHARTS

Project Prioritization Flowchart for Bituminous Roadway Projects

The following guidance has been established to aid in the development of future roadway capital improvement projects. Utilizing current available data, projects should be programmed in order of priority based on the following categories.

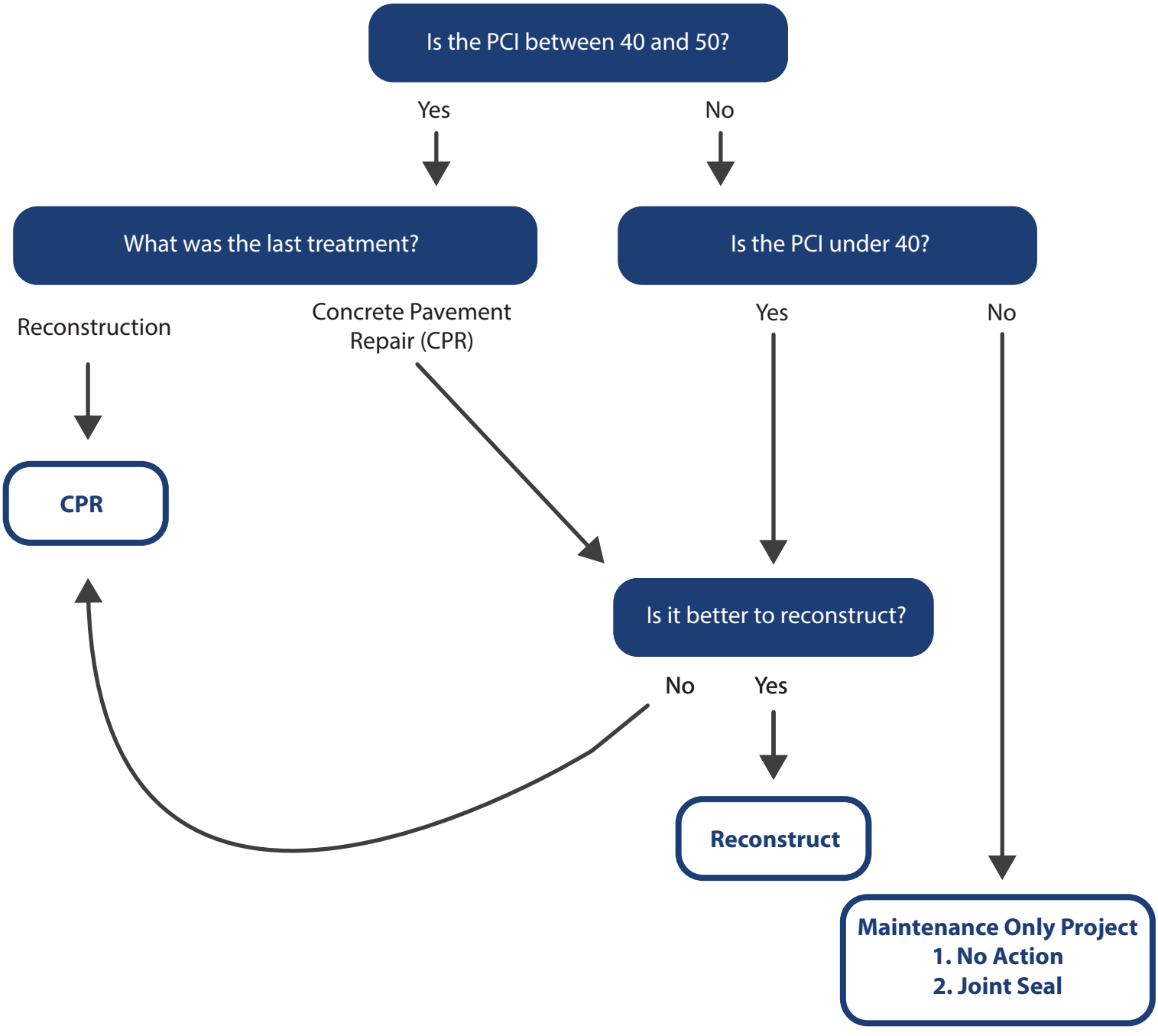
Priority 1: CSAHs with over 1,000 AADT
Priority 2: CSAH with AADT between 500 and 1,000 and CRs over 1,000 AADT
Priority 3: CSAHs with AADT between 250 and 500
Priority 4: CSAHs with AADT less than 250 and CRs with AADT less than 1,000



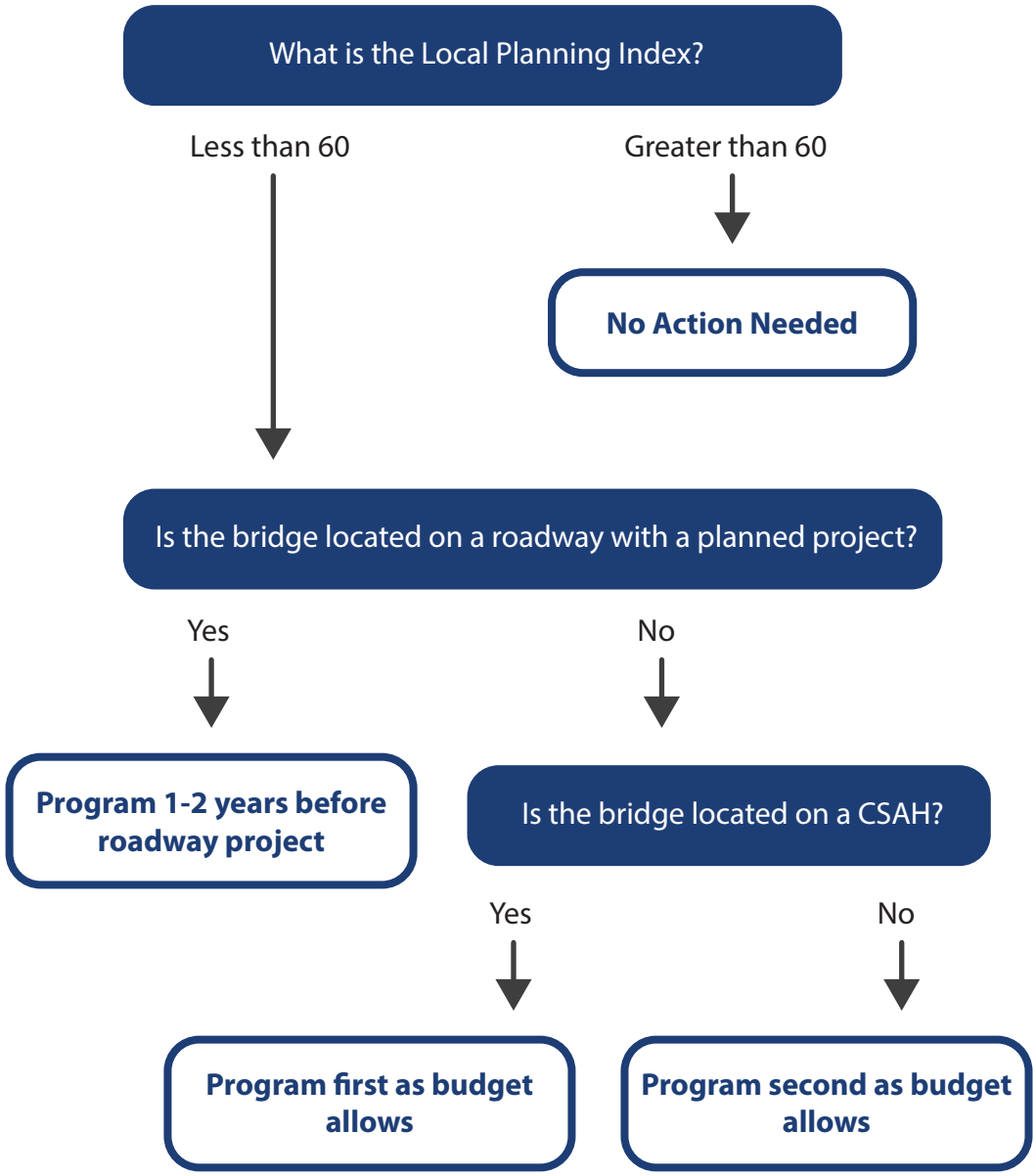
Project Prioritization Flowchart for Concrete Roadway Projects

The following guidance has been established to aid in the development of future roadway capital improvement projects. Utilizing current available data, projects should be programmed in order of priority based on the following categories.

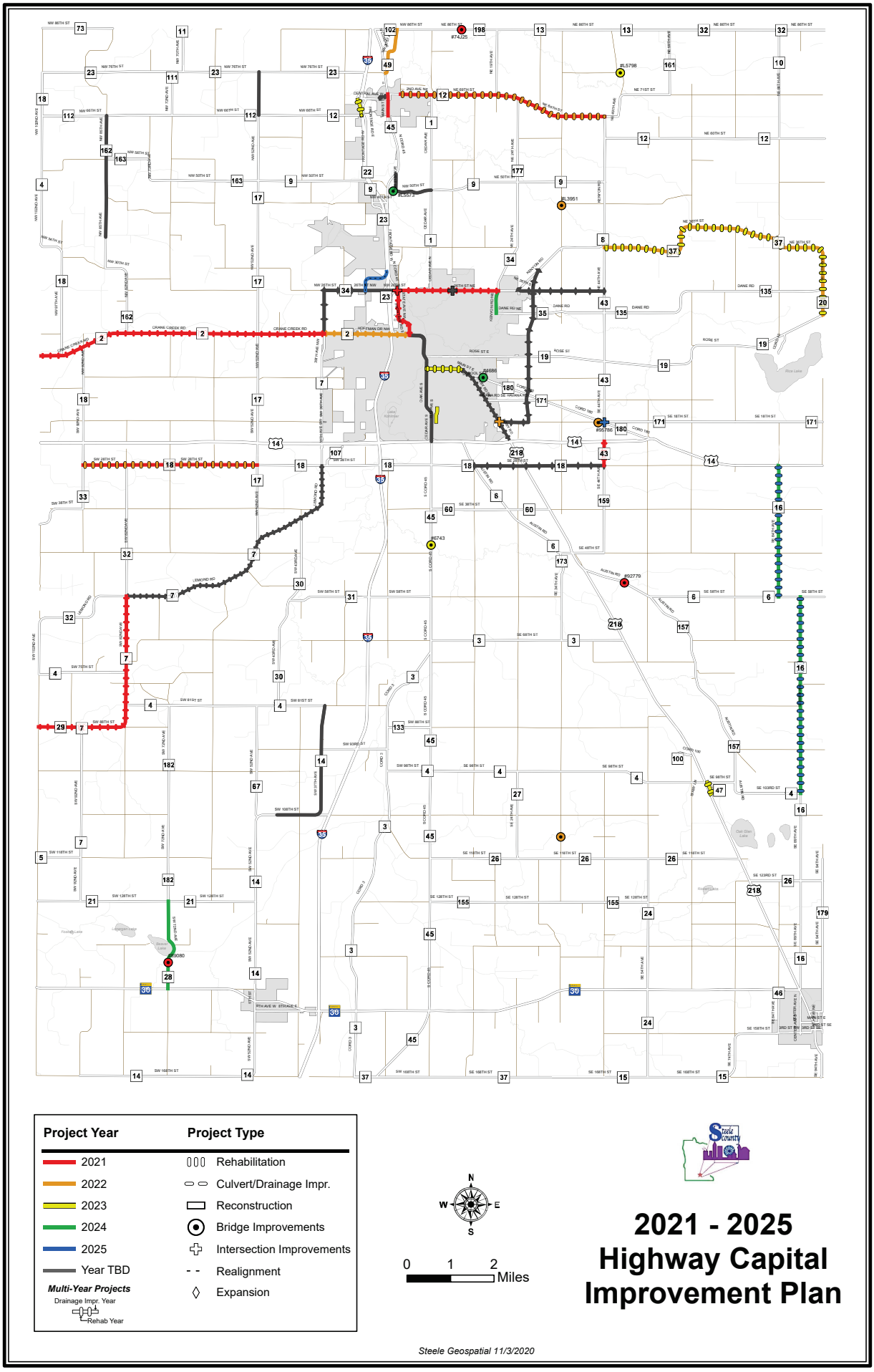
Priority 1: CSAHs with over 1,000 AADT
Priority 2: CSAH with AADT between 500 and 1,000 and CRs over 1,000 AADT
Priority 3: CSAHs with AADT between 250 and 500
Priority 4: CSAHs with AADT less than 250 and CRs with AADT less than 1,000

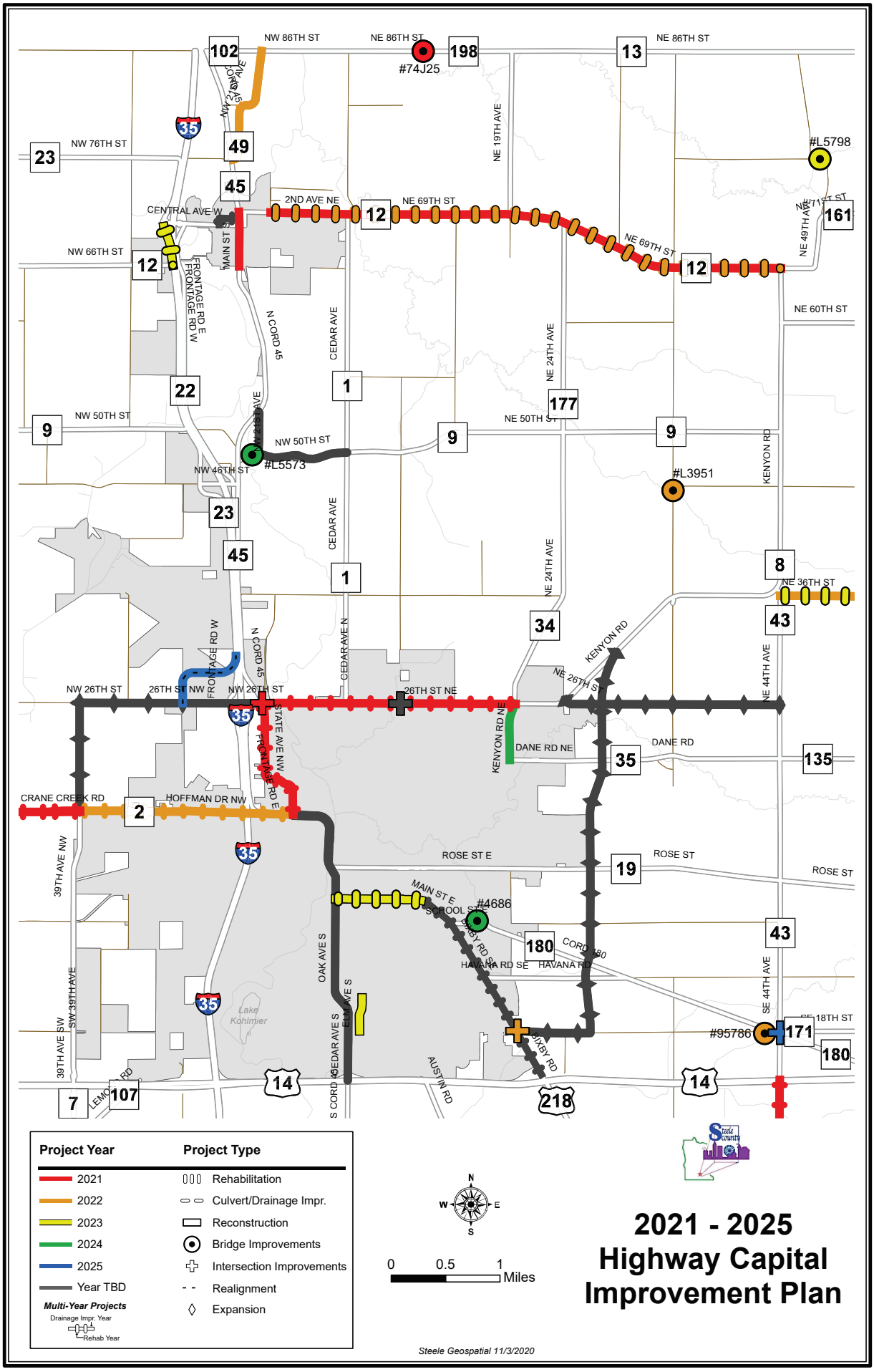


Project Prioritization Flowchart for Bridge Projects



APPENDIX C: CIP MAPS


Project Year
2021
2022
2023
2024
2025
Year TBD
Multi-Year Projects
Drainage Impr. Year
Rehab Year
Project Type
Rehabilitation
Culvert/Drainage Impr.
Reconstruction
Bridge Improvements
Intersection Improvements
Realignment
Expansion
N
W
E
S
0 1 2 Miles
2021 - 2025
Highway Capital
Improvement Plan
Steele Geospatial 11/3/2020


NW 86TH ST
NE 86TH ST
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NE 86TH ST
NW 76TH ST
#L5798
NW 66TH ST
CENTRAL AVE W
2ND AVE NE
NE 69TH ST
NE 69TH ST
NE 60TH ST
NW 50TH ST
NE 50TH ST
NW 50TH ST
#L5573
NW 46TH ST
#L3951
NE 36TH ST
NW 26TH ST
26TH ST NW
NW 26TH ST
26TH ST NE
NE 26TH ST
DANE RD NE
DANE RD
CRANE CREEK RD
HOFFMAN DR NW
ROSE ST E
ROSE ST
ROSE ST
MAIN ST E
SCHOOL ST NE
#4686
HAVANA RD SE
HAVANA RD
#95786
NE 18TH ST
AUSTIN RD
FRONTAGE RD W
FRONTAGE RD E
N CORD 45
CEDAR AVE
CEDAR AVE N
NE 24TH AVE
NE 19TH AVE
KENYON RD
KENYON RD NE
NE 44TH AVE
SE 44TH AVE
OAK AVE S
ELM AVE S
CEDAR AVE S
S CORD 45
39TH AVE NW
39TH AVE SW
SW 39TH AVE
LEMC RD
Lake Kohlmier
Project Year
2021
2022
2023
2024
2025
Year TBD
Multi-Year Projects
Drainage Impr. Year
Rehab Year
Project Type
Rehabilitation
Culvert/Drainage Impr.
Reconstruction
Bridge Improvements
Intersection Improvements
Realignment
Expansion
N
W
E
S
0
0.5
1
Miles
2021 - 2025
Highway Capital
Improvement Plan
Steele Geospatial 11/3/2020