
Owatonna 2040
TRANSPORTATION PLAN

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INTRODUCTION

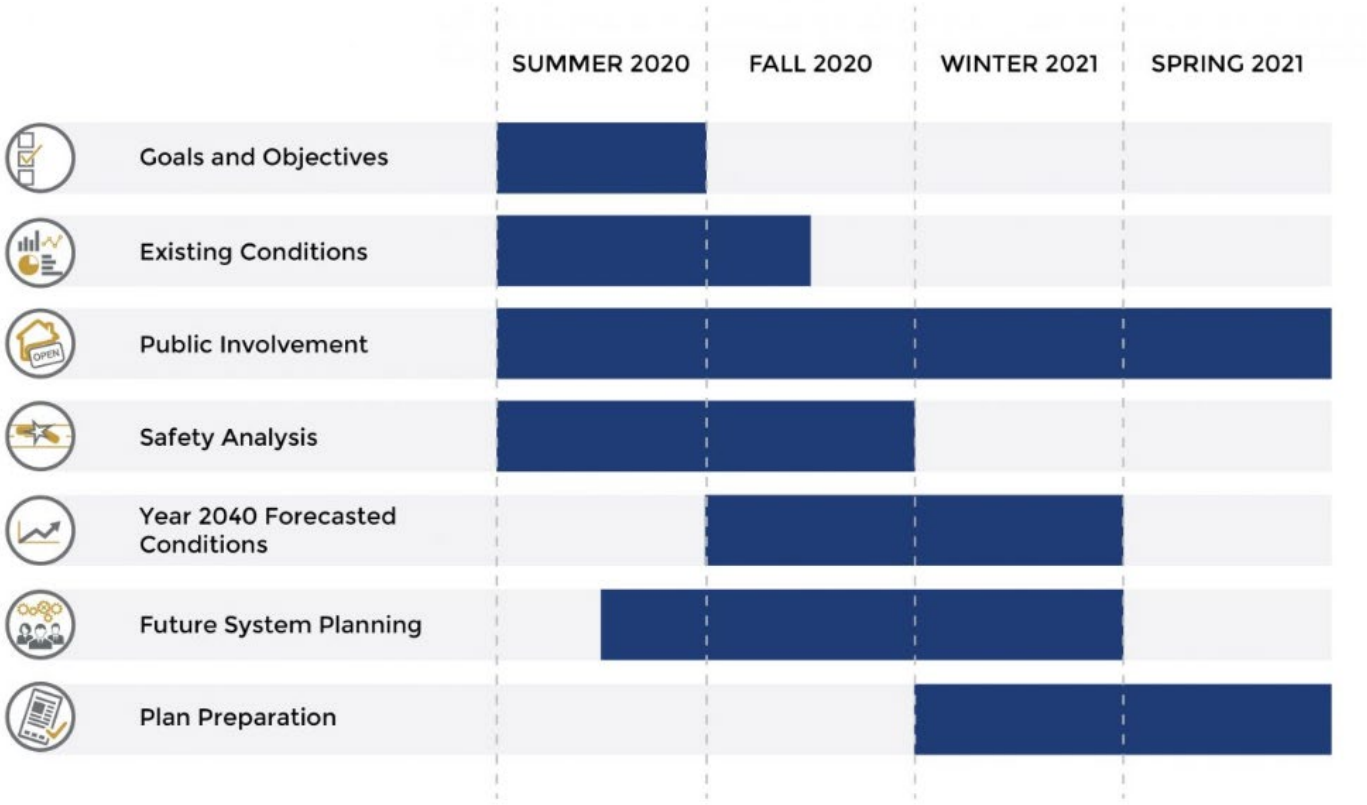
The Owatonna 2040 Transportation Plan translates identified issues and opportunities into specific and actionable strategies. The Plan elements were created in coordination with other city and county efforts and those of other key study partners, cities, townships, and the Minnesota Department of Transportation (MnDOT). The Plan includes key elements such as:

- 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 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 the City of Owatonna 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 city intends to use this Plan as an outline for decision-making and prioritizing investments. The Plan will inform decision-making by elected leaders, residents, economic interests, and other stakeholders throughout Owatonna to achieve a goal of preservation and movement towards the city'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, freight movement, safety, and multimodal operations. Future infrastructure and policy improvements are made based on a review of this data.

2 GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

In order to be effective for the greater community, the Plan needs to have stated goals and policies. These goals reflect the city's vision, while policies provide guidance to achieve these goals. These goals and policies were developed early in the creation of the Plan based on stakeholder feedback and technical analysis. The goals and policies 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 city. 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. 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; potential corridor cross sections; 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 ENGAGEMENT 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 city Plan coincided with the update of the Steele County 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.

STAKEHOLDER LISTENING SESSIONS

Listening sessions were conducted with interested cities and townships from across the county. Approximately 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 project team provided an overview of the planning process and gave each an opportunity to share their thoughts regarding city and 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 and corresponding survey occurred in August 2020, with the second open house and survey occurring in April 2021.

PLAN WEBSITE

A Plan website (www.Owatonna2040TranPlan.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 Owatonna was conducted to understand travel patterns and identify opportunities for improvement. This chapter of the Plan summarizes the city's existing demographics, roadway conditions and management, safety conditions, freight routes, and multimodal system.

LOCATION

The City of Owatonna is located within Steele County, approximately sixty miles south of the Twin Cities metropolitan area (see **Figure 5**). Owatonna is bordered by Rice County to the north, Dodge County to the east, Freeborn County to the south, and Waseca County to the west. Steele County is approximately 430 square miles, with a population of about 36,000 (according to the 2010 census). The primary roadways utilized by Owatonna residents 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. The City of Owatonna, the county seat, is designated as a Micropolitan Statistical Area with a population of approximately 25,700 (see **Table 1**).

Table 1. STEELE COUNTY POPULATION TOTALS

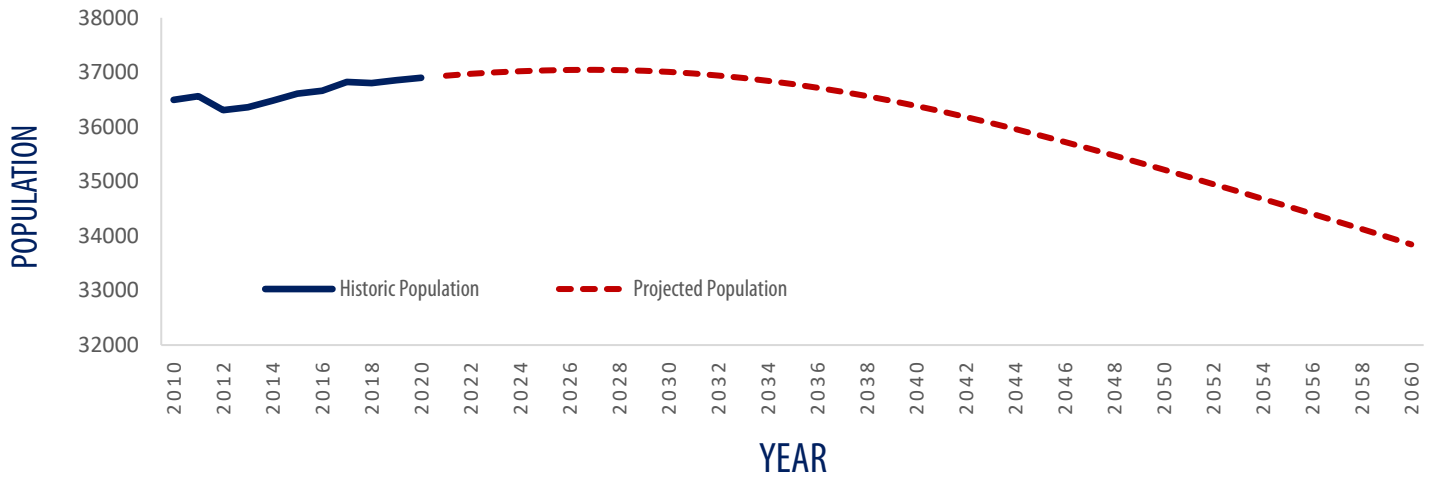
Area	Total Population	Proportion of Population
Aurora township	499	1%
Berlin township	432	1%
Blooming Prairie city	1,916	5%
Blooming Prairie township	387	1%
Clinton Falls township	426	1%
Deerfield township	502	1%
Ellendale city	739	2%
Havana township	581	2%
Lemond township	558	2%
Medford city	1,404	4%
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%
Steele County Total Population	**36,683**	

Source: American Community Survey and US Census

DEMOGRAPHICS

Traffic demand and travel patterns within the City of Owatonna are impacted greatly by population trends and land use patterns. To understand the potential impacts of population shifts within the city, historic and projected population trends were examined. During the past ten years, Steele County has seen a slight increase in population of approximately 2,500 residents. The Minnesota State Demographic Center projects this growth will occur until about 2030 and will then start to decline (see **Figure 2**). According to these projections, the county's population will decline to about 34,000 residents by 2060. Although important to the city, this relatively small change (about 7 percent decrease from 2020 to 2060) in population does not significantly impact transportation system needs.

FIGURE 2. POPULATION TRENDS IN STEELE COUNTY

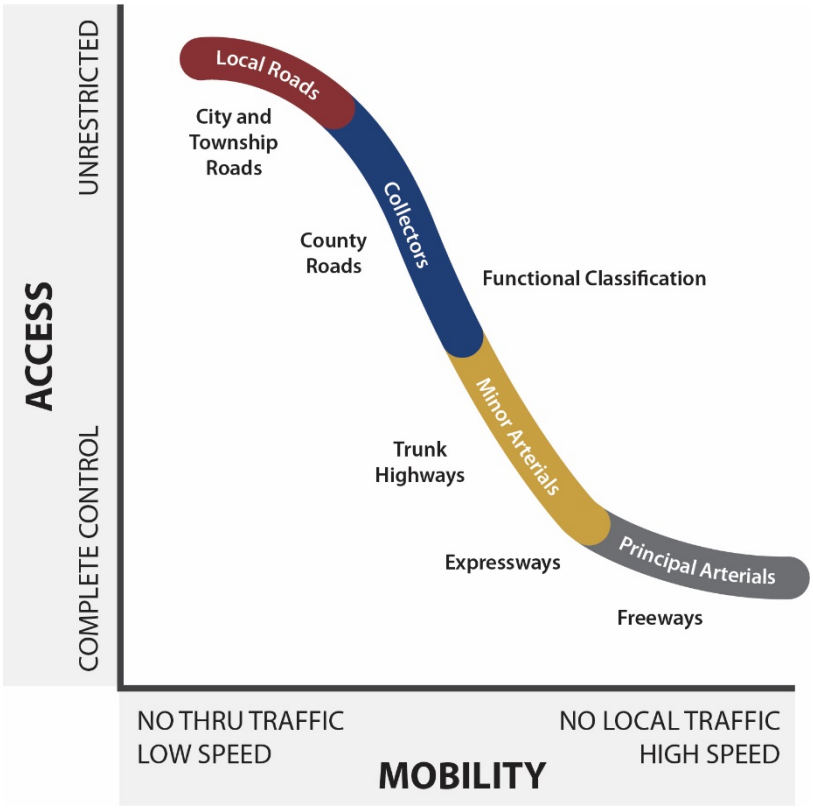


Source: Minnesota State Demographics Center

FUNCTIONAL CLASSIFICATION

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.

FIGURE 3. FUNCTIONAL CLASSIFICATION RELATIONSHIPS



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

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 city's current functional classification system is mostly consistent with FHWA guidelines, with most classes falling within three percent of the suggested range (see **Table 2**). Based on this analysis, it appears the city has the ability, in its future system plan, to adjust its functional classification system to align better with FHWA guidelines.

Table 2. CURRENT FUNCTIONAL CLASSIFICATION MILEAGE

Functional Class	Percentage of Owatonna Roadways	FHWA Percentage Guidelines	Meeting FHWA Guidelines?
Local	66	62 to 74	✓
Minor Collector	7	3 to 15	✓
Major Collector	16	8 to 19	✓
Minor Arterial	7	2 to 6	1% over guideline
Principal Arterial: Expressway	0	0 to 2	✓
Principal Arterial: Interstate	4	1 to 3	1% over guideline
Principal Arterial: Other	0	2 to 6	2% under guideline

Kittson
Roseau
Lake of the Woods
Marshall
Pennington
Red Lake
Polk
Beltrami
Koochiching
Clearwater
Itasca
Norman
Mahnomen
Hubbard
Cass
Clay
Becker
Wadena
Crow Wing
Wilkin
Otter Tail
Todd
Morrison
Mille Lacs
Grant
Douglas
Traverse
Stevens
Pope
Stearns
Benton
Big Stone
Swift
Kandiyohi
Meeker
Wright
Sherburne
Anoka
Washington
Lac qui Parle
Chippewa
Ramsey
Hennepin
Yellow Medicine
Renville
McLeod
Carver
Scott
Dakota
Sibley
Lincoln
Lyon
Redwood
Nicollet
Le Sueur
Rice
Goodhue
Brown
Wabasha
Pipestone
Murray
Cottonwood
Watonwan
Blue Earth
Waseca
Dodge
Olmsted
Winona
Rock
Nobles
Jackson
Martin
Faribault
Freeborn
Mower
Fillmore
Houston

Rice
Goodhue
Waseca
Dodge
City of Owatonna
Steele County
Freeborn
Mower

Figure 5. Study Area

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City of Owatonna

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Figure 6. Existing Functional Classification

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- Principal Arterial: Interstate
- Principal Arterial: Other Freeway
- Principal Arterial: Other
- Minor Arterial
- Major Collector
- Minor Collector
- Local

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JURISDICTIONAL 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 city then maintains the remaining roadways serving local traffic, such as Municipal State Aid Streets and City Streets (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

The majority of roadways within the City of Owatonna are City Streets (59 percent), followed by Municipal State Aid Streets (20 percent) and County State Aid Highways (13 percent) (see **Table 3**). I-35, an Interstate Highway which bisects the city, accounts for 6 percent of the total city system (see **Figure 8**). Relatively few roads are US or State Highways, County Highways, or Township roads within city limits. As almost 80 percent of Owatonna roadways are either City or Municipal State Aid Streets, the city must maintain the vast majority of streets within city limits.

Table 3. JURISDICTIONAL & DESIGNATION CLASSIFICATION

Jurisdictional Classification System		Mileage	Percentage of Total
State System	Interstate Highway	10.82	6%
	US Highway	.04	0%
	State Highway	0	0%
County System	County State Aid Highway	22.02	13%
	County Highway	2.13	1%
Municipal State Aid Street		34.41	20%
City Street		102.26	59%
Township Road		1.80	1%

DESIGNATION

Roadway designation is assigned based upon a set of guidelines and determines funding eligibility. Within the City of Owatonna, roadways are designated as State Highway, County State Aid Highway (CSAH), County Road, Municipal State Aid (MSA) Street, Local Road, Township Road, or Private Road. Roadways designated as CSAHs or MSAs typically are eligible for additional funding. The majority of Owatonna roads are designated as Municipal State Aid Streets or City Streets, with County Roads and CSAHs running through the city intermittently (see **Figure 9**).

Figure 8. Existing Jurisdictional Classification

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Jurisdiction
- City
- County
- MnDOT

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Figure 9. Existing Designations

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Owatonna 2040 TRANSPORTATION PLAN

Designation

- State Highway
- County State Aid Highway (CSAH)
- County Road
- Municipal State Aid (MSA) Street
- Local Road
- Other (Township or Private Road)

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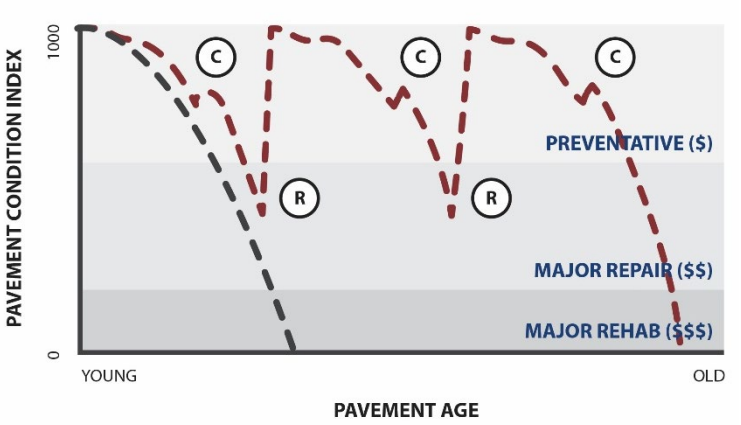
PAVEMENT PRESERVATION

Pavement preservation is a key component of successful system management. It includes roadway maintenance activities that extend the life of pavement while optimizing available funding. Factors such as traffic loading, weather conditions, heavy (commercial) vehicle traffic, and soil conditions can greatly impact pavement condition and lifespan. Although maintenance cannot preserve a roadway indefinitely, well timed maintenance activities can significantly extend the useful life of pavement (see **Figure 10**). By implementing a pavement preservation program, the city will maximize the condition and lifespan of their transportation network while minimizing the overall lifecycle costs.

It may seem counter-intuitive, but when it comes to maintaining the city's system, roadways that receive attention are the ones that are in fairly 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.

FIGURE 10. TYPICAL PAVEMENT LIFE-CYCLE CURVE



Pavement Condition Index

The City of Owatonna collects condition data for their roadways which provides information related to existing pavement conditions and can be used to project future conditions and to identify maintenance needs. The city collected condition data in November of 2020 in the form of detailed Pavement Condition Index (PCI) values.

The PCI is a composite score that combines the Ride Quality Index (RQI) and Surface Rating (SR), and ranges between 0 and 100. 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 were divided into four categories:

Poor (0-49)	Poor-Fair (50-64)	Fair-Good (65-79)	Good (80-100)

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

A significant amount of Owatonna roadways are currently in the "Poor-Fair" PCI range, meaning they may need intensive maintenance in the short-term (see Error! Reference source not found.). These segments are addressed in the Implementation section of this Plan. Many roadways are considered "Good", with PCI values between 80-100, and likely will need little investment outside of regular maintenance.

Table 4. AVERAGE OWATONNA PCI RATING

Quadrant	2015	2017	2018
NW	68.0	68.93	71.33
NE	70.0	72.06	71.52
SE	72.5	77.80	78.58
SW	66.0	66.43	69.27
AVERAGE	**69.10**	**71.32**	**72.70**

The City of Owatonna maintains a separate pavement condition rating, which is based on a 1-100 scale. One quarter of the city system is updated each year, resulting in complete detailed datasets every four years. Based on recent data, the average rating of a local street in the City of Owatonna is approximately 70 out of 100. Based on the most recent data, the southwest quadrant of the city has the lowest average PCI of 69.27. The remaining three quadrants are between 72 and 74 PCI (considered "Fair" or "Good"). In general, the average rating of Owatonna streets is increasing each year, suggesting the maintenance and rehabilitation currently utilized by the city is efficient and effective. For detailed results of the city's pavement analysis, please see **Appendix B**.

MnDOT also maintains a bridge inventory, which includes a bridge operation rating for each structure. Bridges with ratings below 60 are in need of repair or replacement, with those between 60 and 80 needing regular maintenance. Currently, one bridge within Owatonna has a condition rating under 41, with another located just north of the city boundary. The majority of bridges are in acceptable condition, needing only regular maintenance.

Figure 11. Road and Bridge Conditions

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Pavement Condition Index

0 - Poor

100 - Excellent

Bridge Local Planning Index

Poor Condition (0-60)

Good Condition (61-100)

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TRAFFIC VOLUMES, ROADWAY CAPACITY, AND CONGESTION

In order to identify areas of congestion and city 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 to understand current traffic volumes. The Average Annual Daily Traffic (AADT) on city roadways are available from MnDOT, with the most updated values from 2019. According to this data, Florence Avenue NW, Bridge St. W, and Allan Ave. SW experience the highest traffic volumes within the city (not including traffic on I-35), carrying approximately 15,400 vehicles per day (see **Figure 12**). The majority of high-volume roadways are located in the center of Owatonna, with some outlying roadways approaching higher volumes. Notably, higher volumes exist along roadway on the west side of the city, adjacent to retail and I-35.

ROADWAY CAPACITY ANALYSIS

Typical planning-level capacity thresholds were used to evaluate current roadway capacities for varying roadway types (see **Table 5**). 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 judgement. 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 Steele County, so as to ensure continuity throughout the transportation system.

Table 5. CAPACITY THRESHOLDS

Facility Type	Capacity
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, Owatonna roadways are given a capacity rating between 0-2, identifying roadways approaching and exceeding capacity. Within city limits, there are only two roadways exhibiting existing congestion levels over 0.85 (see **Table 6**).

Table 6. ROADWAYS APPROACHING AND EXCEEDING CAPACITY

Roadway	Extents		V/C	AADT
North Street East	County Road 45	Cedar Avenue North	0.89	8,900
Mineral Springs Road	Cherry Street	St. Paul Road	0.93	9,300

Figure 12. Existing AADT

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Annual Average Daily Traffic (AADT)

- 0 - 2,000
- 2,001 - 5,300
- 5,301- 9,900
- 9,901 +

Note: Traffic volumes for I-35 are not shown on this map

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This segment of Mineral Springs Road was not expected to be approaching capacity

Figure 13. Existing Volume to Capacity

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City of Owatonna

Capacity

- Approaching Capacity (VC between .85 and 1)
- Exceeding Capacity (VC above 1)

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SAFETY ANALYSIS

COUNTY ROAD SAFETY PLAN

The 2012 County Road Safety Plan (CRSP) for ATP 7 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.

CRASH ANALYSIS

To assist in the evaluation of crashes, MnDOT maintains a database of crash records throughout the State of Minnesota. These records identify the location, severity and circumstances associated with each crash. This dataset was reviewed to identify the quantity, location, and severity of crashes in the city for the time period of January 2016 through March 2020 (see **Table 7**).

Table 7. CRASHES IN OWATONNA

Year	Fatal	Personal Injury Crashes			Property Damage	Other	Total Crashes
		Type A Incapacitating Injury	Type B Non-Incapacitating Injury	Type C Possible Injury			
2016	1	6	21	33	264	28	**353**
2017	0	5	22	38	310	31	**406**
2018	0	3	24	31	375	45	**478**
2019	1	1	19	38	334	42	**435**
Jan-March 2020	0	0	6	5	100	7	**118**
Totals	**2**	**15**	**92**	**145**	**1,383**	**153**	**1,790**

Source: MnDOT, 2016- March 2020

These crashes were generally widely distributed throughout the city with most locations accounting for only one or two incidents, suggesting that a crash at that location was a random event. However, several of these crashes were concentrated at a limited number of locations. The ten intersection locations with the highest frequency of crashes between 2016 and 2020 are listed in **Table 8** and illustrated in **Figure 14.**

Critical Index

The critical index is the ratio of the observed crash rate to the critical crash rate. Critical indexes above 1.00 indicate there is likely an existing safety concern at the intersection. Additional analysis and observation of the intersection should be completed to determine the cause of the high critical index. The results of the safety analysis concluded that none of the top ten intersections had a critical index over 1.00.

Table 8. TOP 10 INTERSECTION CRASH LOCATIONS (2016 – MARCH 2020)

	Intersection	Severity					Traffic Control	Critical Index All Crashes
		Fatal	Type A	Type B	Type C	Property Damage		
1	Cedar Avenue and 18th Street	0	1	3	1	9	Signal	1.00
2	Hoffman Drive and 21st Avenue	0	0	1	4	14	Signal	0.96
3	Main Street and Grove Avenue	0	0	1	0	16	Signal	0.89
4	Hoffman Drive and 24th Avenue	0	0	2	2	8	Signal	0.77
5	Hoffman Drive / North Street / Industrial Drive	0	0	1	4	18	Signal	0.76
6	Rose Street / Hoffman Drive / Oak Avenue / Glendale Street	0	0	2	2	16	Signal	0.73
7	Bridge Street / Allan Avenue / Florence Avenue	0	1	3	0	20	Signal	0.72
8	Oak Avenue and School Street	0	1	0	1	11	Signal	0.70
9	Oak Avenue and Main Street	0	0	3	3	18	Signal	0.64
10	Hoffman Drive and State Avenue	0	0	1	0	12	Signal	0.43

Source: MnDOT, 2016-2020

Top 10 Crash Intersections

Cedar Ave. & 18th St.	1
Hoffman Drive & 21st Ave.	2
Main St. & Grove Ave.	3
Hoffman Dr. & 24th Ave.	4
Hoffman Dr. & North St.	5
Oak Ave. & Rose St.	6
Bridge St. & Allan Ave.	7
Oak Ave. & School St.	8
Oak Ave. & Main St.	9
State Ave. & Hoffman Dr.	10

Figure 14. Owatonna Crashes, 2016-2020

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City of Owatonna

Crashes (2016 through March 2020)

- Fatal
- Incapacitating Injury
- Non-Incapacitating Injury
- Possible Injury
- Property Damage

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FREIGHT FACILITIES

Major freight in and around Owatonna utilize 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 city's economic vitality. It is imperative that the city have functional and accessible freight routes making connections between agricultural production, manufacturers, and markets.

MnDOT has an existing statewide freight network to support the movement of goods within Owatonna. This creates a safe, timely, and efficient connection from the city 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, Steele 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 highway performance standards require a ten-ton design for new or reconstructed highways. **Figure 15** documents current freight infrastructure for the city, as well as key freight generators and known heavy commercial traffic volumes for certain roadways.

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 the City of Owatonna and surrounding communities.

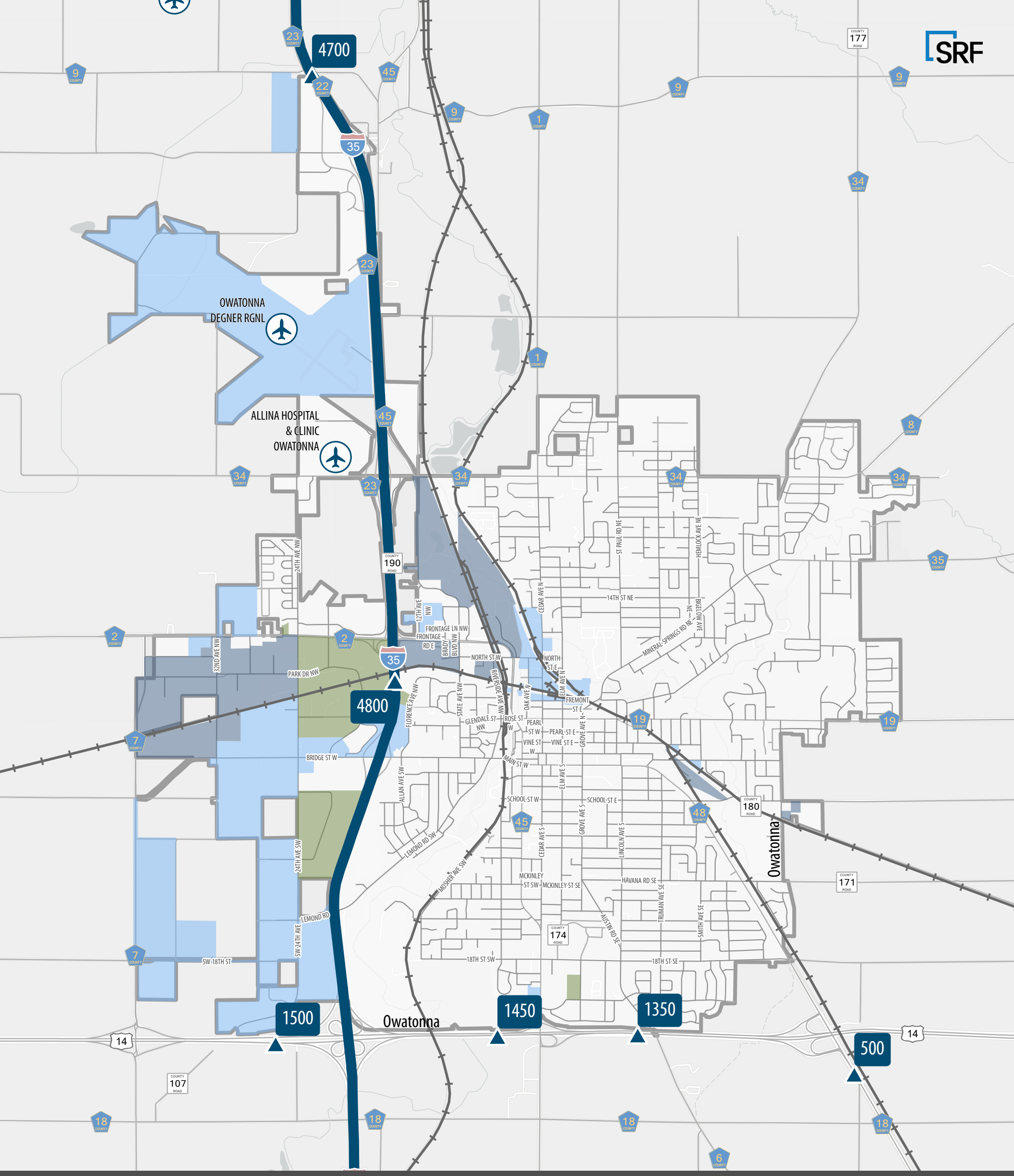

Figure 15. Owatonna Freight System

Owatonna 2040 Transportation Plan
City of Owatonna

Owatonna 2040 TRANSPORTATION PLAN

Industrial Zoning
- Light Industrial
- Heavy Industrial
- Industrial Park

- HCAADT
- Primary Highway Freight System
- Airport

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MULTIMODAL TRANSPORTATION SYSTEM

Owatonna 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 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.

The City of Owatonna has a Sidewalk and Trail Plan Policy, adopted in December of 2012. This plan outlines current multimodal connections as well as possible future construction to help close gaps. The plan focuses on sidewalks and trails to accommodate those who walk, bike, and roll. The Parks Board and Planning Commission have developed a coordinated plan of action which focuses on implementing the "Sidewalk and Trails Map". The "Sidewalk and Trails Map" indicates existing and proposed trails and sidewalks, planned by the Parks and Recreation Board. The plan also outlines a series of policies to guide future development in Owatonna toward creating a comprehensive multimodal network. Key policies from the plan include:

- The city shall develop a construction and development schedule based on the Sidewalk and Trails Map [. . .] and include such projects in the city's capital improvement program.
- Sidewalks as indicated on the plan map [. . .] should be included as part of street construction and reconstruction projects.
- Trails shall be constructed in priority to obtain a continuous loop around the city.
- Trails shall be constructed to provide a trail connection to every park.
- Sidewalks that connect the surrounding residential neighborhoods to the neighborhood school shall be of the highest priority.
- The city will work with and encourage the Minnesota Department of Transportation and Steele County to provide complete streets on all State and County roads.

Specific ordinances and policies outline how the city will implement the goals and above. The "Sidewalk and Trails Map" which outlines the multimodal projects and their priority for construction is available in **Appendix C**.

EXISTING BIKE AND PEDESTRIAN CONDITIONS

The existing multimodal conditions within Owatonna include on-road facilities, regional trails, and local trails (see **Figure 16**).

ON ROAD FACILITIES

Due to distances involved and high average speed limits on most city roadways, biking and walking are currently not viable options for most people outside of the developed more urbanized city core. The presence of wide paved shoulders on some roads such as CSAH 2, 7, 12, 35, US 14, etc. are exceptions. These wide paved shoulders, while not designated bike lines, are highly valued and used by some city 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 Owatonna or 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 scale prioritizes funding and implementation for regional trails. Currently, there are no high-priority routes planned in Steele County.

LOCAL TRAILS

Within city limits are five trail systems: Buxton Trail, Cashman Crossing, Kaplan's Woods Parkway, Muckle Trail, and North Straight River Parkway. These trails are for use by pedestrians and bicyclists, motorized vehicles are not permitted. They intersect local parks, run adjacent to local waterways, and travel through forestland. During the winter season, the City of Owatonna maintains cross-country ski paths along these trails as well.

Most of the trails within the greater Steele County area 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 System Analysis** section of this Plan.

Figure 16. Existing Multimodal System

Owatonna 2040 Transportation Plan
City of Owatonna

Owatonna 2040 TRANSPORTATION PLAN

Multimodal Facilities
- Sidewalks
- Trails

Points of Interest
- Park
- School
- Church
- Hospital

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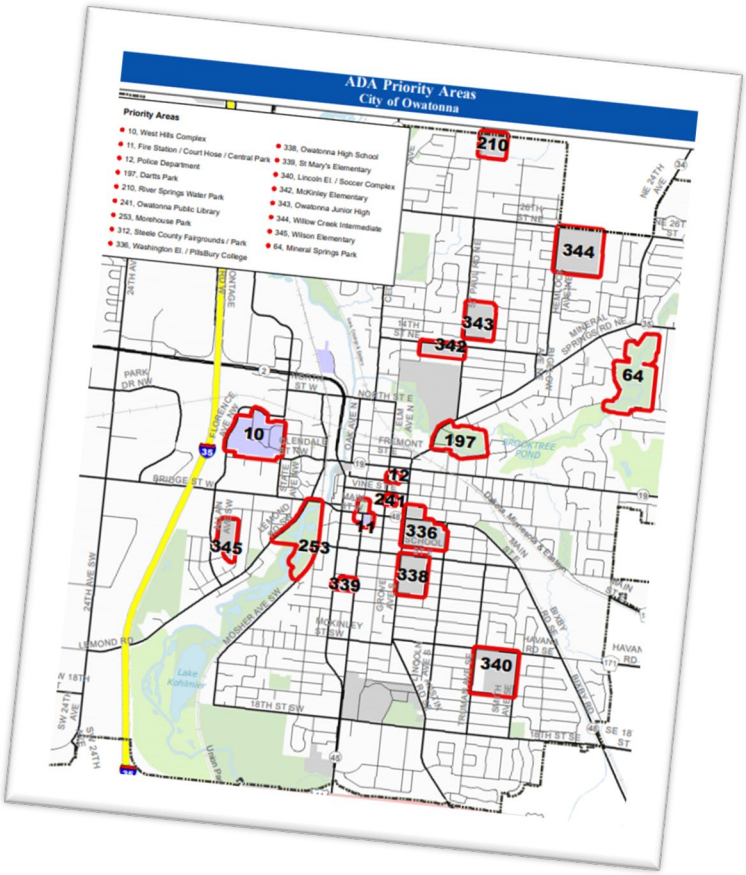
AMERICANS WITH DISABILITIES ACT

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 City of Owatonna must comply with requirements of the ADA as it applies to public service agencies. The City of Owatonna is required to perform a self-evaluation of its current transportation infrastructure policies, practices, and programs.

To summarize work towards achieving ADA requirements, the city completed an ADA Transition Plan in 2016. This plan outlines city ADA requirements, self-evaluation, policies and practices, planned improvements and schedule, public outreach, grievance process, and how the city will continue to monitor its progress. This plan is updated annually to reflect completed projects. A summary of the transition plan is detailed below:



- Inventory of pedestrian facilities:
  - 62.76 miles of sidewalks
  - 1018 curb ramps
  - 19.03 miles of trails
  - 22 traffic control signals
  - 16 bus stops
- The City of Owatonna has identified specific locations as priority areas for planned accessibility improvement projects. These areas have been selected due to their proximity to specific land uses such as schools, government offices and medical facilities, as well as from the receipt of public comments. The priority areas as identified in the 2016 self-evaluation are as follows:
  - Near Public Schools
  - Near Public buildings
  - Public input received
- The City of Owatonna has set the following schedule goals for improving the accessibility of its pedestrian facilities within the City jurisdiction:
  - After 10 years, 100 percent of accessibility features that were constructed after January 26, 1991, will be ADA compliant.
  - After 20 years, 80 percent of accessibility features within the priority areas identified by City staff will be ADA compliant.
  - After 30 years, 80 percent of accessibility features within the jurisdiction of city will be ADA compliant.

For further details and information on the ADA Transition Plan, visit the City of Owatonna's website.

TRANSIT

Transit service within Owatonna 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
- Congestion is 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 & POLICIES

The Owatonna Transportation Plan is guided by a shared vision, community goals, and objectives. The Transportation Vision Statement is intended to capture the community's desires and intentions for its future. Goals further the vision by addressing unique city opportunities and challenges. Policies are specific statements of action that help accomplish the goals and can often be measured (quantitatively and/or qualitatively) over time.

TRANSPORTATION VISION STATEMENT

The transportation vision for the City of Owatonna is to provide an integrated transportation system that will serve the future needs of its residents and businesses, support the city's development plans, and balance the safety and mobility of its system for all users.

The following goals and policies have been identified to achieve the defined vision for the City of Owatonna:

GOAL	POLICIES
1. Provide sustainable investments in the transportation system which are protected by strategically preserving, maintaining, and operating system assets.	Policy 1.1 Ensure that trails and sidewalks will be maintained to result in safe conditions and minimal high maintenance costs. Policy 1.2 Protect investments in the transportation system through strategic preservation, maintenance, and operation of system assets. Policy 1.3 Coordinate transportation planning and implementation with neighboring and affected units of government including the State and County.
2. Provide a safe and efficient roadway system that balances mobility, access and the diverse needs of transportation system users.	Policy 2.1 Manage peak demand on the transportation system by accommodating transportation alternatives. Policy 2.2 Control access to the regional and local roadway systems, including the concentration of driveways and side-street intersections, with respect to functional classification. Policy 2.3 Consider traffic control improvements where appropriate to accommodate roadway capacity and reduce delay.
3. Provide and maintain an interconnected system of pedestrian and bicycle facilities that provide safe transportation and recreational opportunities.	Policy 3.1 Promote design best practices, especially in providing and improving facilities for bicyclists and pedestrians who are the most vulnerable users of the transportation system. Policy 3.2 Promote safe pathways for pedestrians and bicyclists in parking lots and internal traffic circulation areas. Policy 3.3 Develop and utilize Complete Streets principles to plan for and promote the travel needs of pedestrians, bicyclists, and transit users.

4. Support economic development by using a reliable, affordable, and efficient multimodal transportation system that connects people and goods to destinations throughout the region and beyond.

Policy 4.1 Plan, design, and develop a street system in areas where incomplete street facilities exist that reflects the highest standards and relates land use to transportation needs and policies.

Policy 4.2 Require appropriate dedication of public right-of-way and restricted access along roadways based on the functional classification and access guidelines contained within the Transportation Plan.

Policy 4.3 Support County and State access guidelines that limit access on arterials based on their functional classification and access guidelines contained within the Transportation Plan.

Policy 4.4 Utilize Complete Streets principles to meet the travel needs of pedestrians, bicyclists, and transit users when appropriate.

Policy 4.5 Connect pedestrian and bicycle trails with major pedestrian generators (i.e. commercial districts, downtown core), integrate with regional bicycle network connections (where appropriate), and build continuity across major barriers and between jurisdictions.

Policy 4.6 Review new developments for adequacy of parking based upon need, the potential for joint use of parking facilities, and with transportation demand management in mind.

Policy 4.7 Prioritize investments in minor arterials that build, manage, or improve the system's ability to supplement the capacity of the principal arterial system through/adjacent to the community.

TRAFFIC FORECASTS AND OPERATIONAL NEEDS

FORECAST METHODOLOGY

Year 2040 daily traffic volumes were developed by considering the historical traffic growth rates throughout the city, 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 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 Owatonna were prepared using the methodology 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 **Figure 17**). 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 Old Highway 14.

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 the **Existing Conditions** section of the Plan, the projected 2040 traffic volume was compared to the expected capacity (see **Table 5**) of the roadway to produce a Volume to Capacity (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** and **Figure 18**).

Table 9. APPROACHING OR EXCEEDING CAPACITY

Roadway	Extents		V/C	AADT
Bridge Street West	Park Drive NW	Selby Avenue SW	0.93	20,500
18th Street SW	CR 45	Hartle Avenue SE	0.95	9,500
North Street West	CR 45	Cedar Avenue N	1.13	11,300
Cedar Avenue North	North Street W	16th Street NE	0.92	9,200
Mineral Springs Road	Fremont Street E	Cherry Street NE	0.93	9,300
Mineral Springs Road	Cherry Street NE	St. Paul Road NE	1.01	10,100

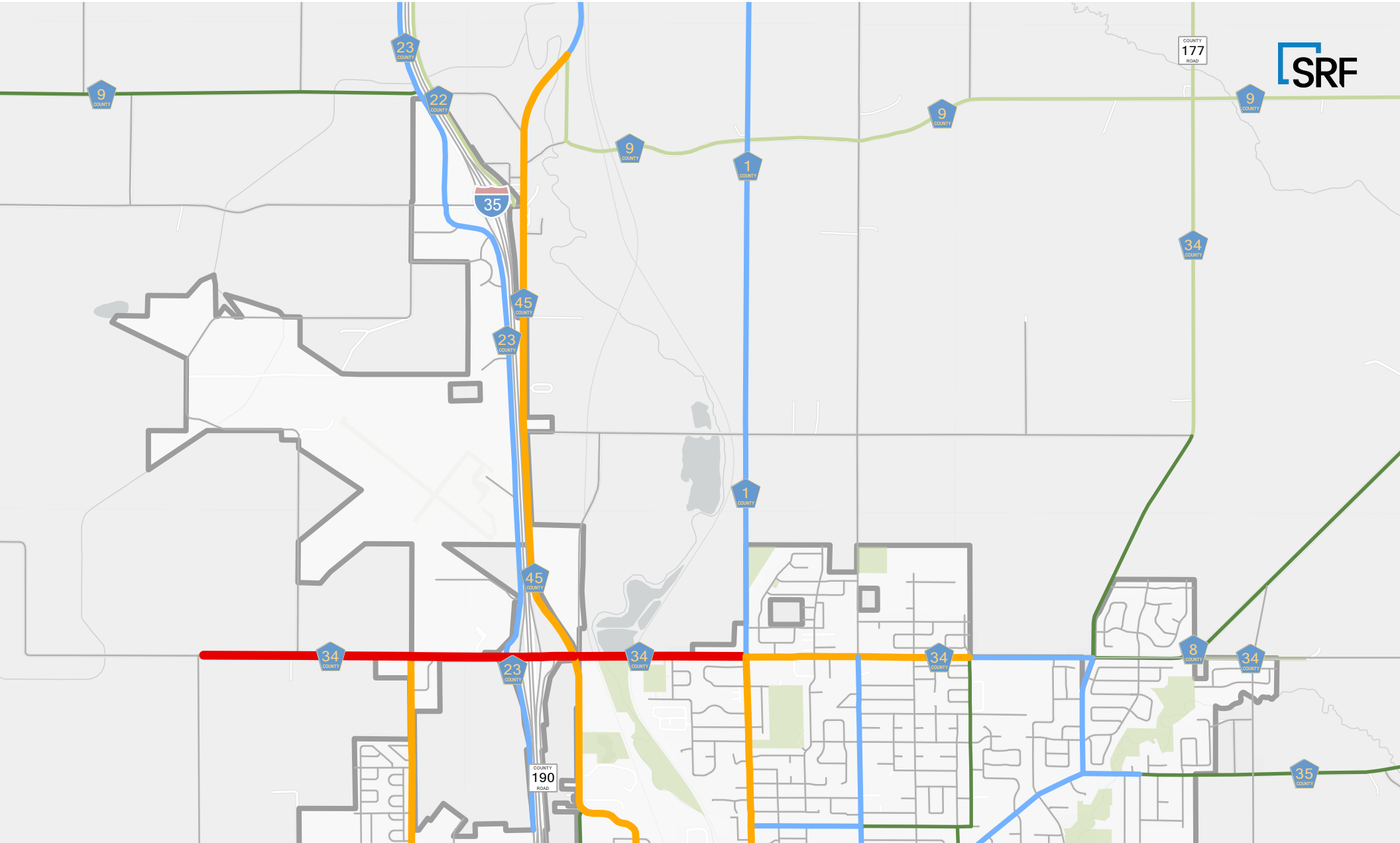


Figure 17. 2040 Traffic Volumes

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City of Owatonna

Owatonna 2040 TRANSPORTATION PLAN

2040 AADT Forecast
- 0 -500
- 501 - 2,000
- 2,001 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- More than 15,000

Note: Traffic volumes for I-35 are not shown on this map

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Figure 18. Future Congestion

Owatonna 2040 Transportation Plan
City of Owatonna

Capacity

- Approaching Capacity (VC between .85 and 1)
- Exceeding Capacity (VC above 1)

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FUTURE SYSTEM ANALYSIS

This portion of the Plan includes Owatonna's proposed future functional classification, jurisdictional transfers, safety improvements, multimodal system enhancements, and freight system advancements. The suggestions within the Plan are detailed further in the **Implementation Plan** section.

FUTURE FUNCTIONAL CLASSIFICATION

Updating the functional classification of Owatonna roadways ensures the function and role of all roadways are best aligned with their use. Changing the classification also enables state, county, and local planning officials to better manage access and design of roadways. The current functional classification, existing volumes, changes in land use, and route alignment were evaluated against established guidelines to determine potential functional classification changes for the city (see **Table 10** and **Figure 19**). The primary objectives of functional 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 the **Existing Conditions** section
- Coordinate with Steele County's future system plan and the future functional classification 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

Table 10. PROPOSED FUNCTIONAL CLASSIFICATION CHANGES

Change ID*	Roadway	Mileage	Existing Classification	Future Classification
1	20th Street NE	0.49	Local	Minor Collector
2	20th Street NE	0.12	Roadway does not exist	Local
3	14th Street NE	1.04	Minor Collector	Major Collector
4	Mineral Springs Road	1.24	Major Collector	Minor Arterial
5	Dane Road	0.73	Minor Collector	Major Collector
6	Florence Avenue	0.80	Minor Collector	Major Collector
7	Riverside Avenue	0.25	Minor Arterial	Minor Collector
8	Riverside Avenue	0.09	Minor Arterial	Major Collector
9	Bridge Street West	0.08	Minor Arterial	Local
10	Private Access along Bridge Street West	0.01	Minor Arterial	Remove
11	Lincoln Avenue South	1.21	Major Collector and Local	Minor Collector
12	Truman Avenue SE	1.00	Local	Minor Collector
13	SW 33rd Avenue	0.59	NA	Local

*Change ID corresponds to the IDs shown on **Figure 19**

It should be noted that emphasis was put on transitions between major and minor collectors, as the city and county have 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 city 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, the proposed functional classification changes will continue to meet (be within 2 percent) federal classification guidelines (see **Table 11**).

Table 11. FUTURE FUNCTIONAL CLASSIFICATION PERCENTAGES

Functional Class	Percentage of Owatonna Roadways	FHWA Percentage Guidelines	Meeting FHWA Guidelines?
Local	64	62 to 74	✓
Minor Collector	6	3 to 15	✓
Major Collector	16	8 to 19	✓
Minor Arterial	8	2 to 6	2% over guideline
Principal Arterial: Expressway	0	0 to 2	✓
Principal Arterial: Interstate	4	1 to 3	1% over guideline
Principal Arterial: Other	0	2 to 6	2% under guideline

FUTURE ROADWAY JURISDICTION

The jurisdiction 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 jurisdiction 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 transportation system. Jurisdictional 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 in the **Existing Conditions** portion of this Plan, along with a set of guiding criteria, were used to identify the appropriate jurisdiction 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 transfer candidates. This list was discussed with the PMT and refined based on local input. The final list of proposed jurisdictional changes is presented in **Table 12** and **Figure 20** 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
1	Kenyon Road	0.52	County	City
2	Dane Road	0.75	County	City
3	29th Avenue (Outside of City system, but along city boundary)	3.35	Roadway does not exist	County
4	Rose Street	2.41	County	City
5	Havana Road	0.24	County	City
6	SE 18th Street Extension	0.67	Roadway does not exist	County

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

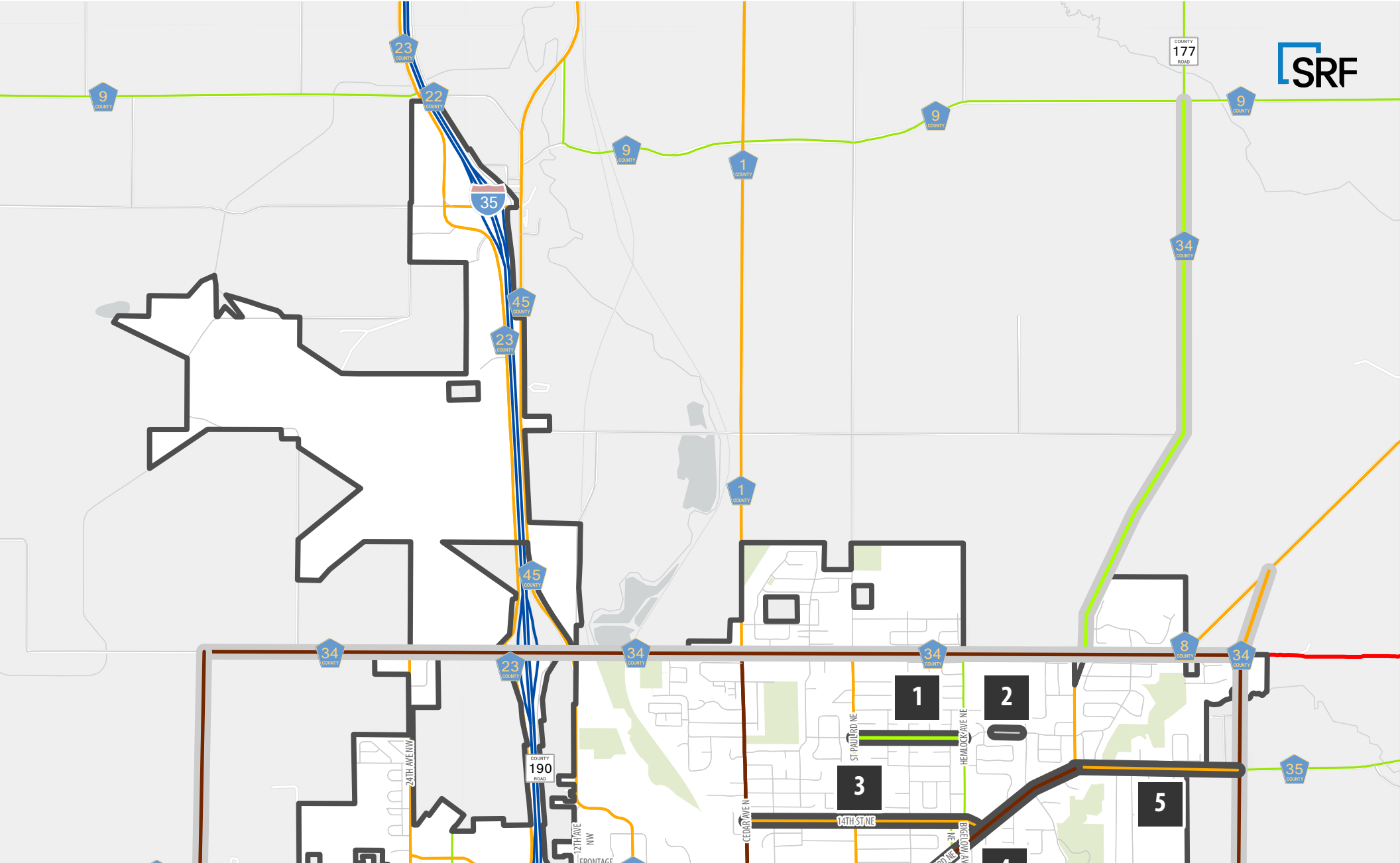

Figure 19. Functional Classification Transfers

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City of Owatonna

Owatonna 2040 TRANSPORTATION PLAN

Existing Functional Classification

- Principal Arterial: Interstate
- Principal Arterial: Other Freeway
- Principal Arterial: Other
- Minor Arterial
- Major Collector
- Minor Collector
- Local

Future Functional Classification (Owatonna System)

- Future Minor Arterial
- Future Major Collector
- Future Minor Collector
- Future Local
- Roadway Removed
- # Change ID (Owatonna Roadways)

Future Functional Classification (Steele County System)

- Future Minor Arterial
- Future Major Collector
- Future Minor Collector
- Future Local
- Roadway Removed

Steele County functional changes are shown here for context only

Owatonna Minnesota

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Figure 20. Jurisdictional Transfers

Owatonna 2040 Transportation Plan
City of Owatonna

Existing Jurisdiction
- City
- County
- MnDOT

Future Jurisdiction
- Transfer to City
- Transfer to County
- # Change ID (Owatonna Roadways)

Owatonna 2040 TRANSPORTATION PLAN

Owatonna Minnesota

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FUTURE MULTIMODAL SYSTEM ANALYSIS

The multimodal infrastructure in Owatonna is a vital component of the overall transportation system. Ensuring residents have access to high quality facilities for walking, biking, and rolling is one of the major goals of this Transportation Plan. Additionally, the city is committed to maintaining and expanding an efficient and effective transit system that serves the City of Owatonna as well as providing connections to nearby destinations.

BICYCLE AND PEDESTRIAN SYSTEM

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 constructed or are planned to be constructed in the future. The proposed multimodal improvements are displayed in **Figure 21** with prioritization including:

- Coordinating with Steele County to create a trail and bikeway system over time and with partners
- Creating trails and bikeways connecting outlying cities to Owatonna

TRANSIT SYSTEM

Future transit needs in Owatonna will continue to be served by Steele County Area Transit. Those with the greatest need for transit (elder adults, people with disabilities, people without consistent access to vehicles, etc.) are well served, but some gaps and unmet needs exist. During initial public engagement, SMART provided feedback on the current transportation system as well as future needs. A summary of requested improvements is listed below along with relevant items from this Plan:

Feedback from SMART	Relevant improvements from this Plan
Ensure signals are properly timed (noted long eastbound wait times at Bridge Street despite no crossing traffic)	Specific locations given to City Engineer for updating
Coordinate on new bus shelters within Owatonna: Highest demand for the scheduled Owatonna route with seven stops	Implementation Action: Continue coordination with SMART
Work toward high quality pavement conditions to prevent injury to riders (specifically noted 16th Street east of Cedar Avenue North, South Oak Street between Hy-Vee and downtown, Bixby Road between School Street and Havana Road)	Prioritizing the maintenance of pavement in the "fair" to "good" range to ensure smooth ride, project planning for "poor" pavement
Improve railroad crossings (noted 32nd Avenue near the compost site)	Implementation Action: Continue coordination with SMART
Safety concern: The exit from Cedar Valley Services onto Mineral Springs Road presents safety issues due to the railroad tunnel	Implementation Action: Continue coordination with SMART
Safety concern: Grove Avenue and Mineral Springs Road intersection could use a four-way stop or signal	Implementation Action: Continue coordination with SMART
Safety concern: Widen shoulder along Kenyon Road to connect the trail end on 26th Street with the trail on Mineral Springs Road	Widening shoulders and implementing sidewalks is prioritized in the Owatonna Sidewalk Plan
Connect 20th Street NE to eliminate disconnect	Planned roadway connection by 2040

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.

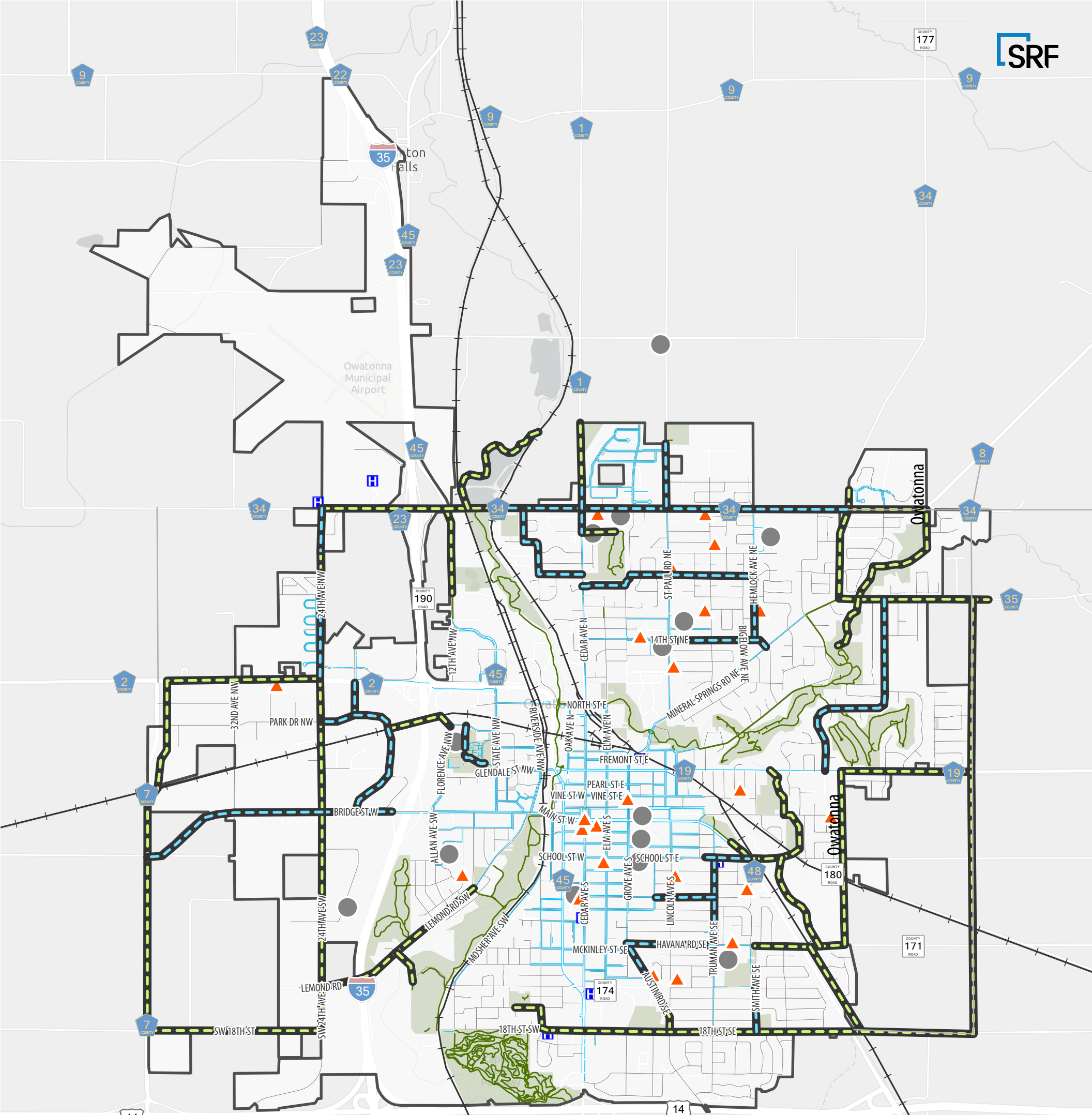

Figure 21. Future Multimodal System

Owatonna 2040 Transportation Plan
City of Owatonna

Owatonna 2040 TRANSPORTATION PLAN

Existing Facilities
- Sidewalks
- Trails

Future Facilities
- Sidewalks
- Trails

Points of Interest
- Park
- Schools
- Hospital
- Church

Owatonna Minnesota

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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. 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 city 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 city may need to prioritize the upgrade of 10-ton roadways and pursue expanded freight parking within or near city borders.

ACCESS MANAGEMENT

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. This ensures proper relationships between roadway volume, speed, connection, and safety to access. **Figure 22** demonstrates the integral relationship between access and mobility along roadways.

FIGURE 22. ACCESS MANAGEMENT RELATIONSHIPS

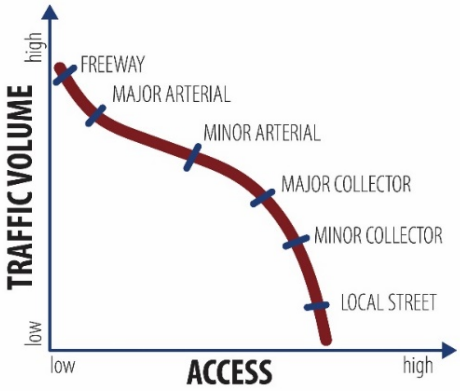


Table 13 identifies the basic access management guidelines that would be applied to city roadways or streets. The guidelines are broken into different categories by area or facility type and then functional classification. For each category, the recommended full-movement intersection spacing (full access) is given along with the spacing for a conditional secondary intersection (partial access - 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).

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 13. ACCESS MANAGEMENT GUIDELINES

Area Type	Functional Class	Facility Type	Intersection Spacing		Signal Spacing	Private Access*
			Full Access	Partial Access (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	330-500' dependent on roadway speed limit
Developing Urban	Collectors	All	.25 mile		.25 mile	330-500' dependent on roadway speed limit
Fully Developed Urban	Collectors	All	300-660 ft. dependent on block length		.125 mile	200-330' dependent on roadway speed limit; limit exceptions
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 intersecting property right-of-way boundary near the intersecting roadway back to the entry point of the developments access point (not the center of the driveway access).

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 city restructures roadways or intersections to meet travel demands, they abide by a set of guidelines presented below in **Table 14.** Applicable zoning regulations and ordinances from the city and county will also need to be considered. The city will coordinate with MnDOT and Steele County for right-of-way acquisition along county or state routes. Graphic visualizations of the right-of-way guidelines are provided in **Appendix D**.

Table 14. RIGHT-OF-WAY GUIDELINES

Facility Type	ROW Width in feet (without sidewalk)	ROW Width in feet (with sidewalk)
High density minor arterial	130	150
Low density minor arterial	100	120
Major Collector	100	120
Minor Collector	60	80
Local Residential	56	66
Local Commercial/Industrial	74	80

SYSTEM PRESERVATION

Infrastructure systems such as roadways, bridges, culverts, and sidewalks have become expensive and challenging to maintain in today's environment with aging infrastructure, rising costs of materials, and stagnant or declining revenue. In fact, many local agencies are being forced to pause, and ask questions about the costs and benefits of continuing to maintain assets throughout their entire system, or if other approaches should be explored to better balance needs with available resources. Generally, approaches to be considered include:

- **Project Prioritization:** Project prioritization can help the city rank infrastructure needs in a manner that is consistent with preservation goals and objectives. This technique can help avoid the typical "worst first" approach to programming preservation projects that tends to invest limited resources in the most expensive improvements instead of directing maintenance funds to infrastructure that merely need rehabilitation, which will provide more cost-effective solutions in a timely manner.
- **New Revenue Sources:** There are methods to capture new revenue streams to close the financial gap in maintaining assets in a state of good repair. Exploring new revenue sources will allow the city to expand and accelerate preservation initiatives.
- **New Maintenance Techniques:** There are new maintenance techniques that can extend the lifecycle of an asset. For example, new maintenance techniques for roadway surfaces can provide longer service life and higher traffic volume thresholds, resulting in more stable road maintenance costs. Cost reduction of life cycle extension strategies which save money, or extend surface life, can directly benefit preservation needs, and minimize any identified financial gap.
- **Asset Management:** Tracking assets and their condition will provide a stronger outlook on lifecycle costs and replacement schedules. This will help establish funding plans and identified future funding gaps or shortfalls.

IMPLEMENTATION PLAN

This portion of the Plan offers strategies to assist city 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 Owatonna residents, neighboring cities and townships, Steele County, and posted on the city'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.

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 city 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** Cities can require right-of-way dedication as part of the platting and subdivision process. The city's 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. Owatonna 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.

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 a few 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 city's 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. Because 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, Owatonna will be in situations where it wishes to widen or construct new roadways. When looking at options for conducting these types of activities, the city must first look at alternatives that do not impact wetlands. If there are no reasonable or prudent alternatives, the city must work to minimize the impacts to the wetlands. If this is not feasible, the city 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.

TRAFFIC MANAGEMENT STRATEGIES

Traffic Signals

A successful traffic signal system will ensure efficient flow of traffic along city roadways, as it reduces the likelihood of through traffic diverting to city streets. Through coordination between the City of Owatonna and Steele County, traffic signals will be periodically monitored on key city roadways to create an efficient system operation. Refinement of the signal operation systems will need to occur regularly, with new signals being installed where signal warrants are achieved, and funding is available. Intersection improvements will be considered on a site-by-site basis and constructed with the warrants identified in the Minnesota Manual on Uniform Traffic Control Devices as funding is available.

Stop Signs

The City of Owatonna will review all requests for stop sign installation by applying best management practices and utilizing MnDOT's uniform traffic warrant criteria.

Traffic Calming

When conflicts arise regarding the volumes, speed, or pedestrian safety along local and collector streets, traffic calming can be utilized to improve the roadway operation. Traffic calming typically refers to strategic physical changes made to roadways that reduce vehicle speeds, increase driver awareness, discourage through traffic on residential streets, and decrease the automobile's visual dominance in neighborhood settings. Some examples of traffic calming include:

- Raised intersections and crosswalks
- Roundabouts
- Curvilinear streets
- Street narrowing
- Bumpouts
- Pavement markings and signage
- Pedestrian crossing islands
- Pedestrian treatments
- Streetscaping

These are best utilized for low volume local and collector roadways where excessive speeds are identified. The City of Owatonna will consider requests for traffic calming techniques on a case-by-case basis.

FUTURE PROJECTS

PLANNED AND POTENTIAL IMPROVEMENTS

Roadway, safety, and multimodal improvements have been identified by both the City of Owatonna and Steele County in independent plans such as the Steele County CIP, Owatonna CIP and Owatonna Sidewalk and Trail Plan. These projects are programmed for completion within this Plan horizon (by year 2040) and are to be considered part of the future roadway system. These projects include:

1. COUNTY ROADWAY PROJECTS

   During the planning process several future system improvements were identified for the City of Owatonna. These projects are focused on identified short-term improvements. Short-term projects are scheduled for the next five years, which are funded and programmed to be constructed between 2021 and 2026 and are part of the Steele County CIP.

2. COUNTY SAFETY PROJECTS

   An update to the County Road Safety Plan is scheduled for 2021 and will evaluate risk factors for areas of improvement on county roadways. Prioritization for these improvements will be safety-related projects at high priority areas. Recommendations relevant to the City of Owatonna should be integrated into the **Implementation Plan** segment of this Plan after release and incorporated into the city's project list.

3. CITY ROADWAY PROJECTS
   The City adopted a five-year Capital Improvement Plan on January 19, 2021. These projects are funded and programmed to be construction between 2021 and 2025 These projects are identified below.

4. CITY BICYCLE AND PEDESTRIAN PROJECTS

   The City recently completed a Sidewalk and Trail Plan, with future improvements to bicycle and pedestrian infrastructure outlined within. This plan will serve as a basis for all pedestrian and bicycle infrastructure and policy planning. The plan will recommend and prioritize projects for future programming decisions, either independently or in concert with scheduled and appropriate highway projects.

As part of the creation of this Plan, several potential projects were identified based on traffic volumes, crash data, future land use, stakeholder feedback and community engagement. These potential projects include safety improvements, roadway projects, and multimodal enhancements. A complete list of the planned and potential projects is identified in **Table 15.**

Table 15. PLANNED AND POTENTIAL PROJECTS

Project Name	Project Description	Identified by:	Planned	Potential
CSAH 34 at CSAH 45 Intersection Improvement	Temporary signal replaced by roundabout	Steele County CIP	✓	
CSAH 34 (Straight River to CSAH 8)	Reconfigure lane markings to 3-lane cross section	Steele County CIP	✓	

Project Name	Project Description	Identified by:	Planned	Potential
CSAH 45 State Avenue (CSAH 2 to CSAH 34)	Reconfigure lane markings from a 4-lane cross section to 3-lane	Steele County CIP	✓	
Signal Upgrades	Evaluate and upgrade signals	Steele County CIP	✓	
CSAH 2 (CSAH 7 to I-35)	Patch concrete pavement	Steele County CIP	✓	
CSAH 48 at 18th Street Roundabout	Construct roundabout	Steele County CIP, Owatonna CIP	✓	
CSAH 48 – Main Street (CSAH 45 to Chambers Ave.)	Rehabilitate pavement, convert to 3-lane cross section	Steele County CIP, Owatonna CIP	✓	
CR 174 Elm Avenue (18th St. SE to Park St.)	Reconstruct roadway	Steele County CIP	✓	
CSAH 8 Kenyon Road (CSAH 35 to CSAH 34)	Reconstruct to urban highway, add links to trail system	Steele County CIP	✓	
Bridge 4866	Replace bridge, add links to trail system	Steele County CIP	✓	
CSAH 23 (CSAH 34 to North) Realignment	Realign to the CSASH 34/24th Street intersection, construct roundabout	Steele County CIP	✓	
29th Avenue (from 18th St. SE to CSAH 34)	Construct a north-south route on the east side of Owatonna	Steele County CIP	✓	
CSAH 34 (Future CSAH 7 to 24th Ave. NW)	Reconstruct gravel highway with paved surface	Steele County CIP	✓	
CSAH 34 (24th Ave. to I-35)	Reconstruct to urban cross section and construct multiuse trail	Steele County CIP	✓	
CSAH 34 at I-35	Construct roundabouts at both I-35 ramps, construct multiuse trails	Steele County CIP	✓	
CSAH 34 at St. Paul Road	Construct a roundabout	Steele County CIP	✓	
CSAH 45 (TH 14 to State Ave.)	Reconstruct the highway	Steele County CIP	✓	
CSAH 48 (US 218 to Chambers Ave.)	Realign intersection at Truman Ave., School Street and Havana Road	Steele County CIP	✓	
Future Sidewalks	Construction of sidewalks as shown in **Figure 21**	Owatonna Sidewalk and Trail Plan	✓	
Future Trails	Construction of trails as shown in **Figure 21**	Owatonna Sidewalk and Trail Plan	✓	
Truman Avenue (Havana Road to Main Street)	Reconstruct Truman Avenue	Owatonna CIP	✓	
Bridge Street Reconstruction	Reconstruct Bridge Street	Owatonna CIP	✓	
Downtown Streetscape (Cedar Avenue from Broadway to Rose Street)	Street reconstruction and streetscaping	Owatonna CIP	✓	
State and 26th Roundabout	Construct roundabout	Owatonna CIP	✓	
18th Street South Trail (Austin Road to Linn Avenue)	Construct shared user path	Owatonna CIP	✓	
Cedar Avenue & 18th Street Intersection	Address safety concerns (critical index near one)	This Plan's Safety Analysis		✓
Hoffman Drive & 21st Avenue Intersection	Address safety concerns (critical index near one)	This Plan's Safety Analysis		✓

Project Name	Project Description	Identified by:	Planned	Potential
North Street (CR 2 to Cedar Avenue)	Address existing congestion issues (V/C currently near or approaching capacity)	This Plan's Congestion Analysis		✓
Mineral Springs Road (Cherry Street to St. Paul Road)	Address existing congestion issues (V/C currently near or approaching capacity)	This Plan's Congestion Analysis		✓
Bridge Street West (Park Drive NW to Selby Avenue SW)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓
18th Street SW (CR 45 to Cedar Avenue North)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓
North Street West (CR 45 to Cedar Avenue North)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓
Cedar Avenue North (North Street West to 16th Street NE)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓
Mineral Springs Road (Fremont Street East to Cherry Street NE)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓
Mineral Springs Road (Cherry Street NE to St. Paul Road NE)	Address future congestion issues (V/C expected to be near or approaching capacity in 2040)	This Plan's Future Congestion Analysis		✓

FUNDING STRATEGIES

Roadways under city jurisdiction are maintained, preserved, constructed, and reconstructed by the city's Department of Public Works. Funding for these activities, including the administrative costs of operating the department, are obtained from a variety of sources, including ad valorem taxes, special assessments, development fees, and tax increment financing. A major concern of the city is the availability of sufficient funds for maintenance and construction activities. If funds are unavailable, needed projects may be delayed or terminated and maintenance of existing facilities may fall short of acceptable standards. The following explains the existing sources of funding and potential new sources of revenue.

State Aid

An important source of revenue to the city is State Aid. A network of city streets called Municipal State-Aid Streets (MSAS) are eligible for funding assistance with revenue from the State Highway User Tax Distribution Fund. This constitutionally protected funding allocation is comprised of gasoline taxes and vehicle registration fees and is allocated based on a formula that considers the population of a city and the financial construction needs of its MSAS system.

Ad Valorem Taxes

For situations in which 20 percent of the cost of a city project can be assessed to the adjacent property owners, the remaining cost of the project can be added to the ad valorem or property taxes of the remaining property owners in the city. Ad valorem taxes for street improvements are excluded from the State-mandated levy limits.

Tax Increment Financing

Establishing a tax increment financing (TIF) district is a method of funding infrastructure improvements that are needed immediately using the additional tax revenue to be generated in future years by a specific development. Municipal bonds are issued against this future revenue, which is dedicated for a period of years to the repayment of the bonds or to other improvements within the TIF project area. TIF districts can accelerate economic development in an area by ensuring that the needed infrastructure is in place without requiring support from the usual funding.

Grant Funding

There are many opportunities for metropolitan cities to take advantage of various grant funding initiatives. Highway Safety Improvement Program (HSIP) is one grant solicitation available for cities. The city should monitor the grant funding opportunities available for applicable projects and submit applications when possible.

APPENDIX A: PUBLIC FEEDBACK SUMMARY

OWATONNA 2040 TRANSPORTATION PLAN PUBLIC ENGAGEMENT SUMMARY

August 24th, 2020 through September 4th, 2020

PUBLIC ENGAGEMENT SUMMARY

The first phase of public engagement for the Owatonna 2040 Transportation Plan occurred from August 24th, 2020 through September 4th, 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.Owatonna2040TranPlan.com) under the "Public Engagement" tab. The event was publicized using the City of Owatonna's 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 city-wide feedback and address specific locations to be included in the plan.

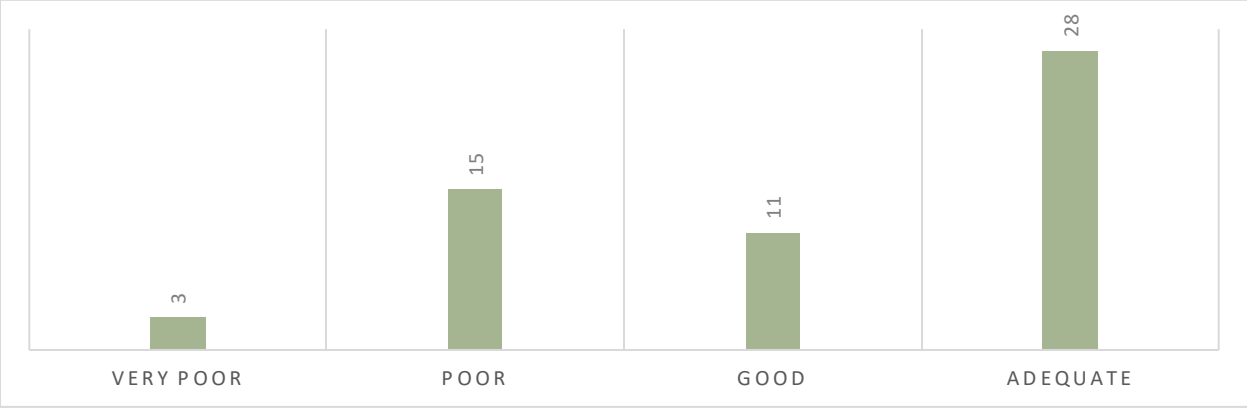
This variety of engagement activities successfully engaged many residents of the City of Owatonna. The online open house webpage hosted over 8,000 visitors between August 24th and September 4th. Over 50 people responded to the survey, identifying 69 specific locations on the interactive map. The detailed results of the online survey and interactive mapping exercise are presented below.

QUESTION 1: HOW IMPORTANT ARE TRANSPORTATION ISSUES TO YOU?

Not too important	2
Somewhat important	27
Very important	**28**

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

Adequate	**28**
Good	11
Poor	15
Very poor	3

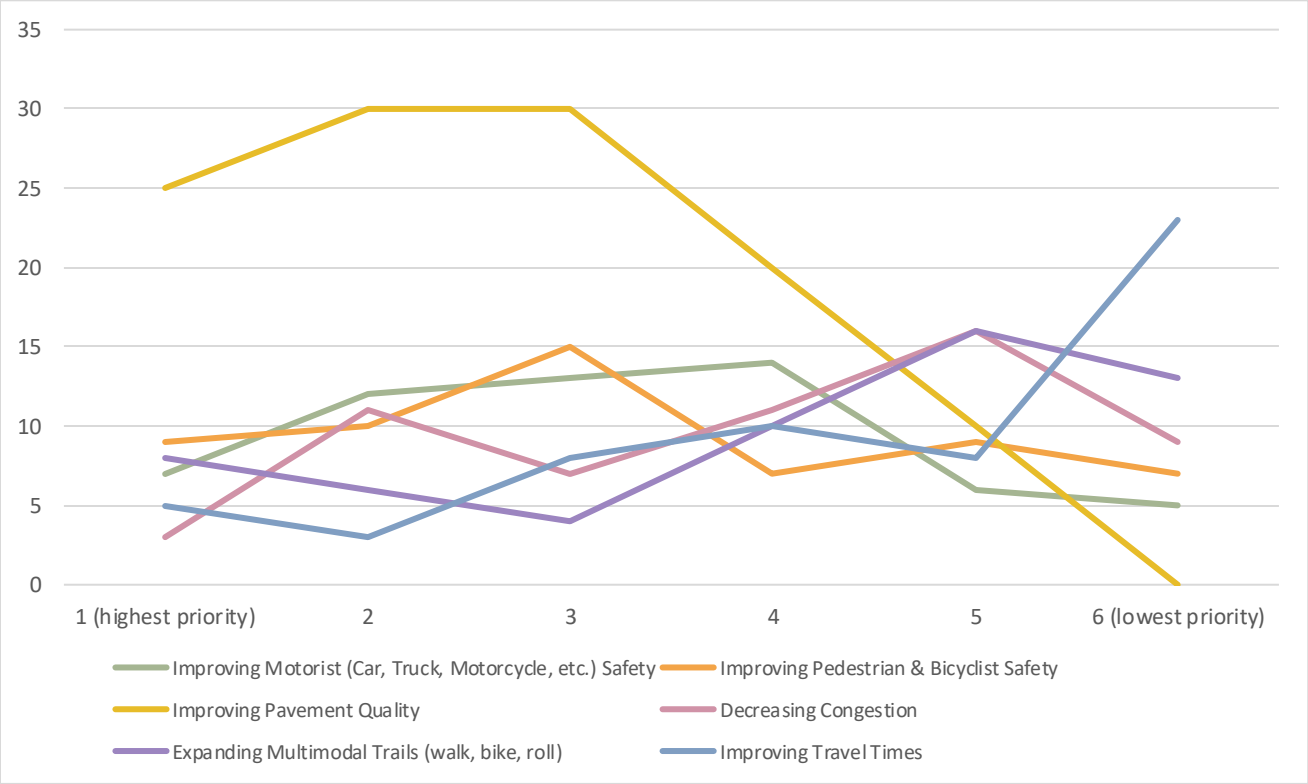


QUESTION 3: RATE EACH OF THE FOLLOWING ON A SCALE OF 1-5 BASED ON CURRENT CONDITIONS, WITH 5 BEING THE BEST:

RATING	1 (POOR)	2	3	4	5 (GOOD)
ROAD CONDITIONS	16	12	**24**	5	0
TRAFFIC CONGESTION	2	8	16	**22**	9
SIDEWALK AND TRAILS	5	8	13	**20**	11
ROADWAY CONNECTIVITY	8	11	**18**	**18**	2
SAFETY	4	9	**25**	14	5

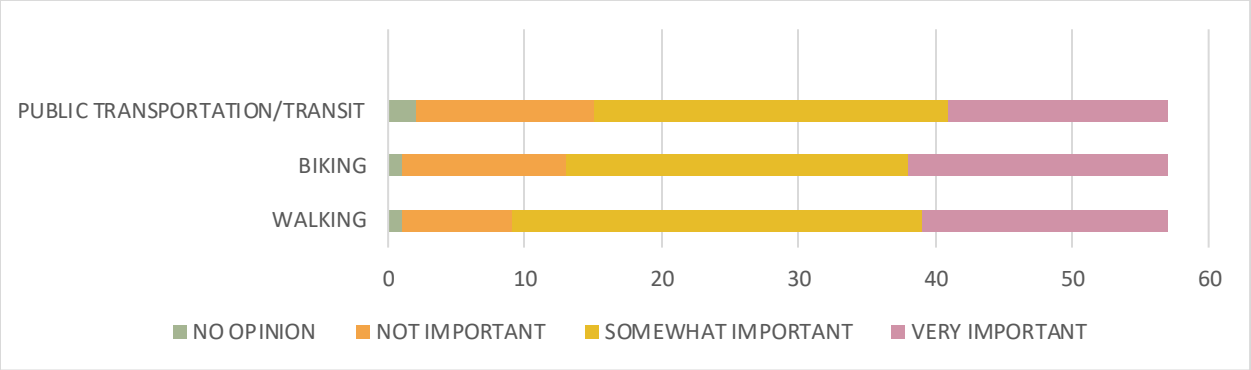
QUESTION 4: THINKING OF WHAT YOU WOULD LIKE OWATONNA TO FOCUS ON IN THE FUTURE, PLEASE RANK EACH OF THE FOLLOWING IN ORDER OF IMPORTANCE TO YOU, WITH 1 BEING YOUR TOP RANK:

RANKING	1 (HIGHEST PRIORITY)	2	3	4	5	6 (LOWEST PRIORITY)
IMPROVING MOTORIST (CAR, TRUCK, MOTORCYCLE, ETC.) SAFETY	7	12	13	**14**	6	5
IMPROVING PEDESTRIAN & BICYCLIST SAFETY	9	10	**15**	7	9	7
IMPROVING PAVEMENT QUALITY	25	**30**	**30**	20	10	0
DECREASING CONGESTION	3	11	7	11	**16**	9
EXPANDING MULTIMODAL TRAILS (WALK, BIKE, ROLL)	8	6	4	10	**16**	13
IMPROVING TRAVEL TIMES	5	3	8	10	8	**23**



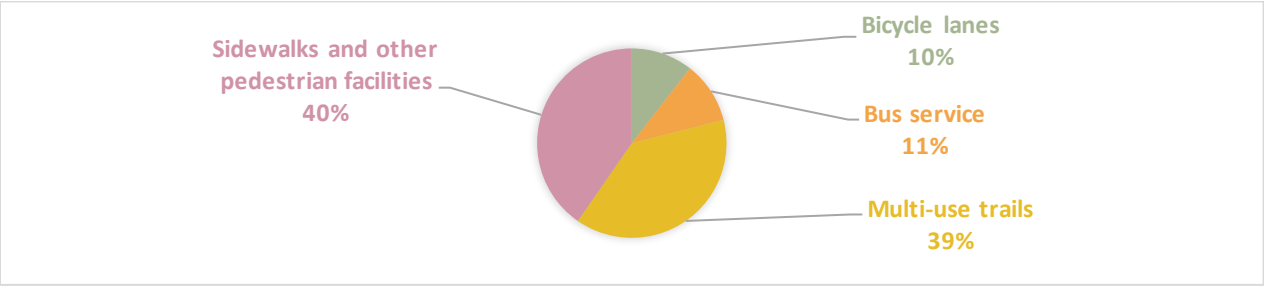
QUESTION 5: HOW IMPORTANT IS IT TO INCREASE ACCESS TO ALTERNATIVE MODES OF TRANSPORTATION FOR EACH OF THE FOLLOWING?

	NO OPINION	NOT IMPORTANT	SOMEWHAT IMPORTANT	VERY IMPORTANT
WALKING	1	8	**30**	18
BIKING	1	12	**25**	19
PUBLIC TRANSPORTATION	2	13	**26**	16



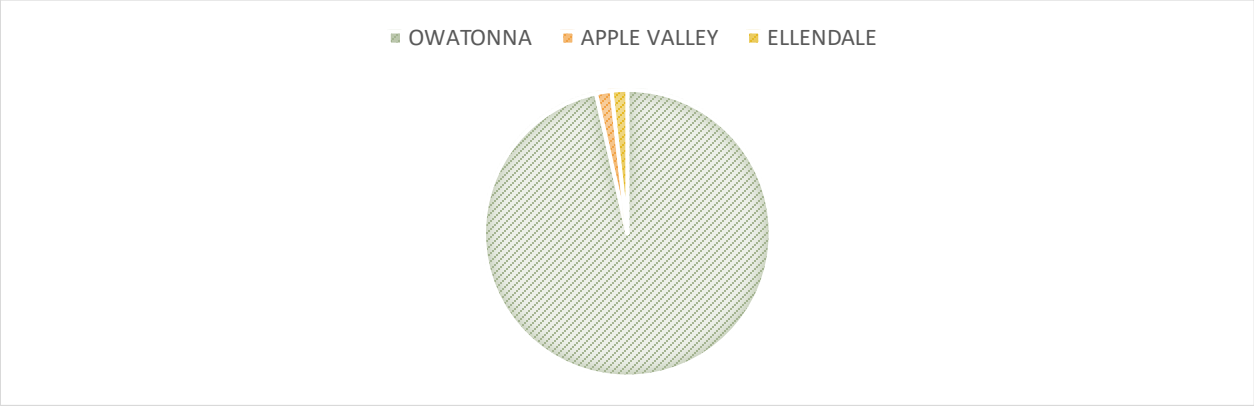
QUESTION 6: BESIDES DRIVING OR RIDING IN A MOTORIZED VEHICLE, WHICH ONE OF THE FOLLOWING ARE YOU MOST LIKELY TO USE?

BICYCLE LANES	6
BUS SERVICE	6
MULTI-USE TRAILS	22
SIDEWALKS AND OTHER PEDESTRIAN FACILITIES	**57**



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

OWATONNA	**55**
APPLE VALLEY	1
ELLENDALE	1



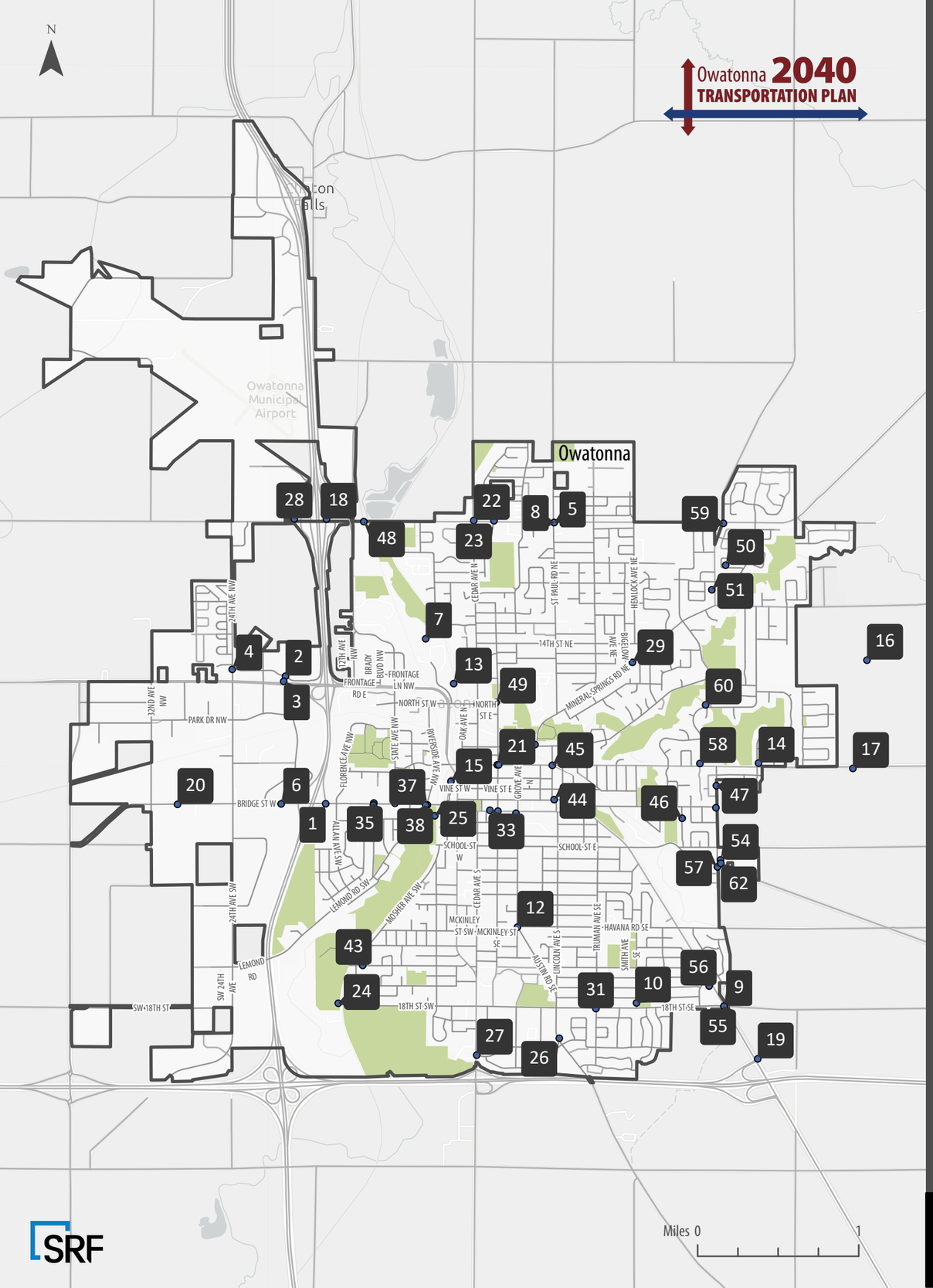
QUESTION 8: WHICH COUNTY IS YOUR PLACE OF EMPLOYMENT LOCATED WITHIN?

STEELE COUNTY	**48**
DODGE COUNTY	1
FREEBORN COUNTY	1
RICE COUNTY	2
DAKOTA COUNTY	4
OLMSTED 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	21
I have transportation concerns and have added them to the map	**26**

Please see the following page for detailed responses.



Interactive Mapping Responses

Owatonna 2040 Transportation Plan

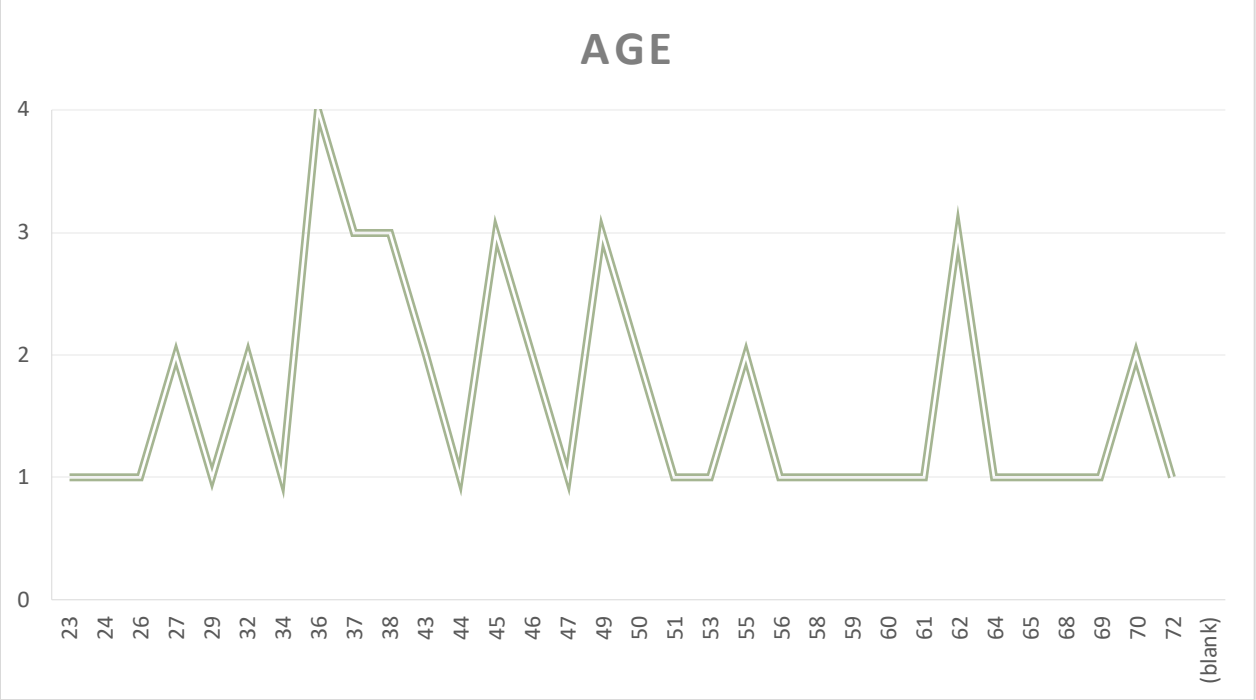
1. Difficult to turn left from I-35n exit on bridge
2. incoming traffic from Crane creek road have right if way and remain at a high speed when coming into intersection. Roundabout?
3. Entrance onto Crane creek road west should be a dedicated lane up to the turn signal by
4. Should add roundabout for intersection
5. Add round-about like N.Cedar,
6. Remove left turn availability to help cross lane traffic
7. Add some way to get from north Cedar to the west side of the river to help congestion by Lakeside.
8. Are round-abouts friendly to pedestrians? I see it being problematic at 26th St NW/Cedar Ave.
9. Will need a light or traffic control for the new high school.
10. More students will be walking and riding their bikes along these roadways. Bike paths or sidewalks should be added along Smith and Truman.
11. The downtown traffic lights should be synchronized to allow East/West traffic to move thru town without stopping. That would be congestion and improve traffic flow.
12. This area is just confusing.
13. Connect bike/walking paths together without having to go on North St.
14. Difficult to get from the SE corner of Owatonna to the NE corner of town.
15. Would like to see this stretch along the river developed into a pretty area with river views and shops, sort of like Northfield.
16. Not a safety concern, but a transportation concern. Would like more access to the bus system - the route bus is badly set up as it takes too long and the other buses usually are full up with long term riders during prime transport times, which means
17. Some type of north/south roadway needs to happen on the east side of town as housing continues to grow that direction.
18. Expand 26th Street to 4 lanes and add roundabouts are the highway exits.
19. Extend 218 North to 26th Street just East of town to create a full loop and improve North to South connections on the eastern half of town.
20. Road is in very bad shape. Several bumps, holes, and huge dip in front of Fleet Farm. Very heavy travel so hard to avoid anything.
21. Mini roundabout added in this area is a menace. It is too small to be able to anticipate what other drivers will do and visibility is not good enough to see other cars that are entering the intersection. Furthermore, people do not understand how it is su
22. Roundabout is too small to anticipate what direction other drivers are going. Why have the passing lane coming up to the intersection. It just offers obnoxious people an opportunity to attempt to pass in too short of a distance.
23. Inability to turn left out of this outlet is a huge convenience issue. This just moves the traffic to the next intersection.
24. I see several vehicles going the wrong way going down to the boat landing. Perhaps improve the signage. Concerns for vehicles driving on the path.
25. Driving to this parking lot is potentially dangerous. Its the only entrance and it is a narrow path. Either open the old mills street entrance (by OPU) or get rid of the parking lot.
26. Road in terrible condition, no shoulder, no room for bikes or walkers
27. Very busy intersection, at certain times of day almost impossible to take a left turn
28. I've seen people pushing strollers and riding in motorized carts coming to and leaving the clinic. Better access for non-motorized transportation is needed.
29. Bike lanes would be helpful and this road seems wide enough to handle at least one (going into downtown.)
30. Needs to be more than a stop sign here gets very congested before and after work time and also school times
31. Need to have a four way stop. During times of the day it's very hard to turn.
32. Signal doesn't allow enough cars to make a left on to Bridge.
33. The pedestrian crosswalk is hard to see dark early rainy mornings at certain times of the year. This should be lighted better!
34. Blind left turn on to bridge short window from traffic turning west off oak and traffic eastbound on bridge coming around the power plant.
35. Traffic control device needed, difficult to turn left from Selby Ave to westbound Bridge St.
36. Traffic control device needed, often difficult to turn left off Selby Ave to west bound Bridge St. turning right from Selby Ave to east bound Bridge St can also be difficult as traffic backs up behind those making a left hand turn. Vehicles park almost t
37. Dangerous pedestrian crossing even with special signs.
38. Difficult to cross Bridge Street from Riversde to Lemond Road. Heavy traffic on Bridge Street, east bound traffic traveling over the speed limit down hill, limited visibility due to commercial buildings on northeast corner.
39. Traffic signal too short for left turns onto Bridge Street, long wait on state for signal to change.
40. Narrow street, parked cars create potential head on crashes at corner, need no parking zones, pavement markings. Especially a problem with school buses meeting other vehicles at corner.
41. Overgrown foliage on northwest corner of Martin St and Lemon Road limits visibility at intersection.
42. East bound Main needs a dedicated left turn only lane, or a left turn signal.
43. Please install a light or something to control for speed on Barney Street & Mosher!
44. Please help find a better way to control this area. It can become a very congested and unsafe intersection when people are coming off of pine on to Broadway and then on to Lincoln and vice versa. I live at this intersection and can't count the number
45. needs cross walks for students trying to cross the road to get to Washington Elementary
and Owatonna Middle School. I have been in a battle with the school district about busing because I don't feel its a safe road for my kids and they say there are cr
46. 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 neigh
47. 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
48. railroad not level with road
49. Prioritize extension of the off-street path so pedestrians and cyclists don't have to use North Street to connect to the other paths. This is part of the Park and Rec long term plan and should be prioritized as a transportation improvement.
50. There needs to be a trail on the west side of road. Very dangerous with pedestrians and bikes trying to get to Trail on Mineral Springs or 26th street.
51. Can road be lowered with curb and gutter?
52. This is a dangerous area. At times it is nearly impossible to exit from Dartt's Park and make a left turn. Also difficult to make a left turn onto Mineral Springs Road from Cherry. A roundabout would help safety in this area.
53. The roundabout has improved traffic flow at this intersection.
54. Need a more direct road to the area of the new high school.
55. Should have a more direct route to NE Owatonna from the new high school. Taking traffic onto Bixby Road and into the heart of Owatonna only adds congestion and decreases safety.
56. Putting the high school in this location was a bad decision, but now we will sidewalks along Bixby road.
57. Partridge Avenue should keep going straight south and be a direct route to the new high school.
58. Rose Street sidewalk is a positive, but now we need a north/south sidewalk leading to the Rose Street sidewalk so we can get there safely. Many more people have begun walking and more sidewalks are needed.
59. Poor visibilty when making a left hand turn to head west on 26th St. NE
60. Need a well marked and safe route for bikes and pedestrians to get from here to the Cherry St sidewalk leading into Mineral Springs park.
61. Partridge Avenue should be extended to School Street and then continue straight south.
62. Agree that traffic should be able to head straight south from here to get to the new high school.

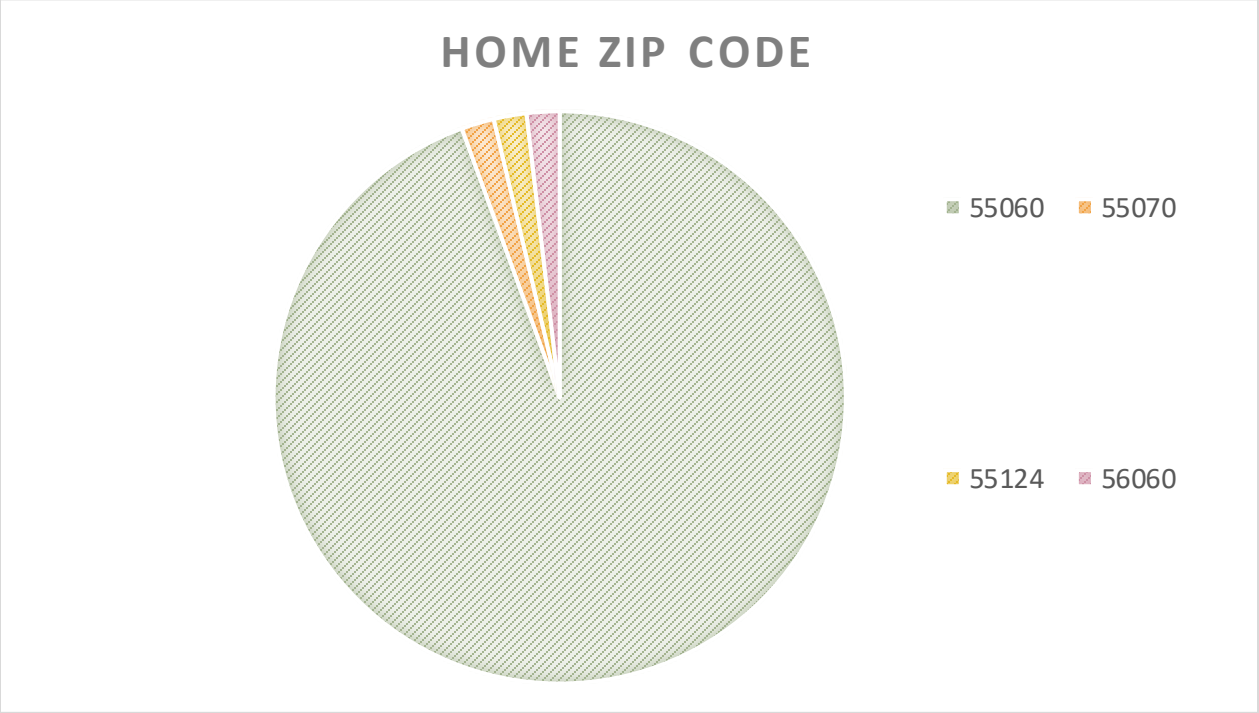
Owatonna
Minnesota

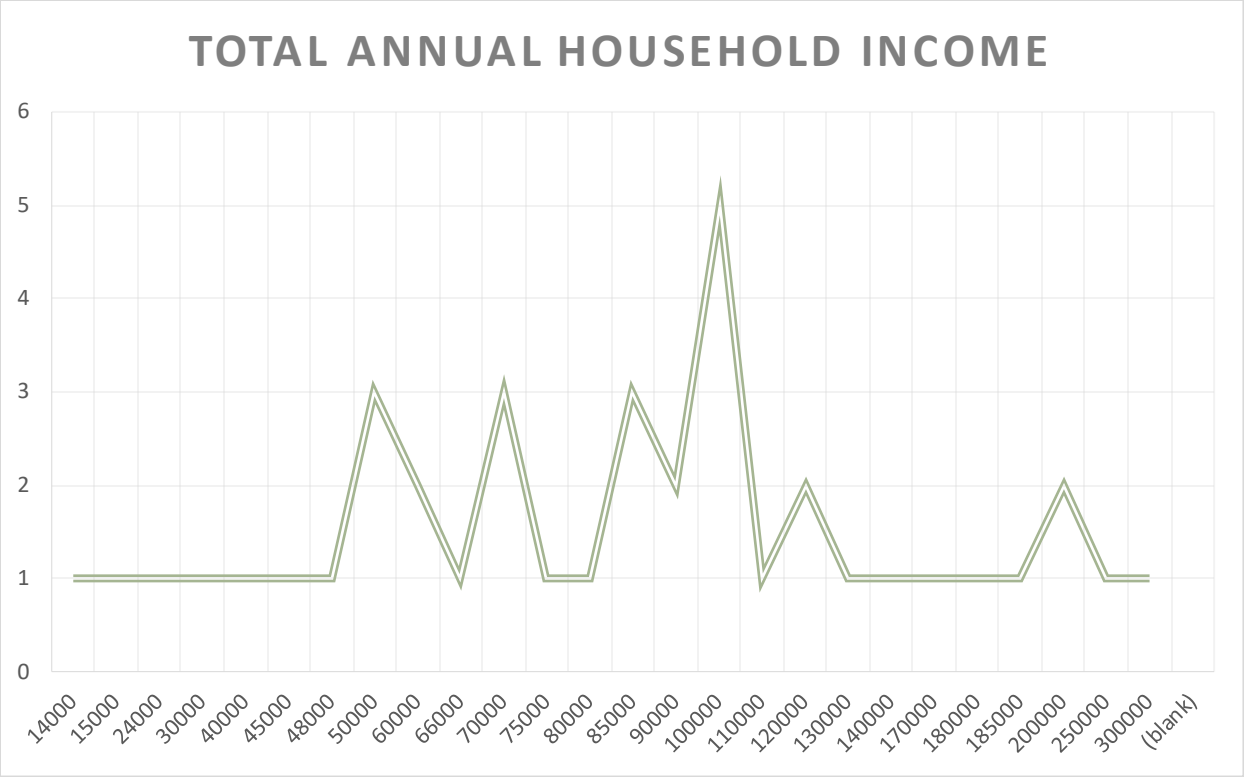
PLEASE SHARE ANY ADDITIONAL COMMENTS YOU HAVE HERE:

More frustrating than any "new" concerns are the various projects that have been started and left for several weeks. Finish paving the residential streets that have been torn up all summer.
I am aware that there is a pavement management system in place, however in my opinion the use of it leading to a decline in quality of roads, not even a holding even
When creating new areas STOP creating so many dead ends and cul de sacs. Put through streets in.
The railroad crossings are really bad and the railroad should be held responsible for correcting them and not just adding some asphalt here and there to patch the issue. The city needs to go after them and work with the railroad to get these intersections FIXED. If we were talking about a suburb city there is no way these conditions would fly, there would be public outcry.
Instead of another round a bout, how about we focus on real safety issues like Bridge Street, Oak Street and put the lights back! Also Barney Street turns into a free for all with zero enforcement.
Extend the trail from rose street to rice lake park
We need high speed rail connected to the metro
Three main things. 1. Get rid of the oil/pea-rock patch rig. Sell it at the next Ritchie Auction. 2. Fix the stop light timing on Hoffman and Bridge presently encourages speeding to make greens. 3. Get the county to show some respect to the city and property owners along Hoffman Rd. by taking better care of the green space along from North St or State Ave to 35W or Walmart, they are like the crack head neighbor that doesn't care what the city thinks. Just saying.. mowing twice a year doesn't cut it!
no more round abouts.
Reliables Bus service increases employment opportunities for marginalized communities and helps all citizens become involved with the owatonna economy. It also helps the environment!
Thank you
Significant changes need to be made in the areas of snow removal and ice abatement at intersections. Current practices make driving in this town treacherous for far too many days after any storm. Other towns, Rochester for instance, are much more effective in their practices. Change is needed!!!
Our plan to 2040 should consider a faster growth rate than historically seen in Owatonna of 1%. Closer to 2%.
Most important issue is east side road to get from 26th St NE to 18th St SE, in my opinion.
Thank You for asking for our input
Owatonna should Continue to add roundabouts in highly congested intersections to ease traffic flow, additional walking trails should be built around town to connect Owatonna, especially looking at se area by new high school.

DEMOGRAPHICS






TOTAL ANNUAL HOUSEHOLD INCOME
6
5
4
3
2
1
0
14000
15000
24000
30000
40000
45000
48000
50000
60000
66000
70000
75000
80000
85000
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110000
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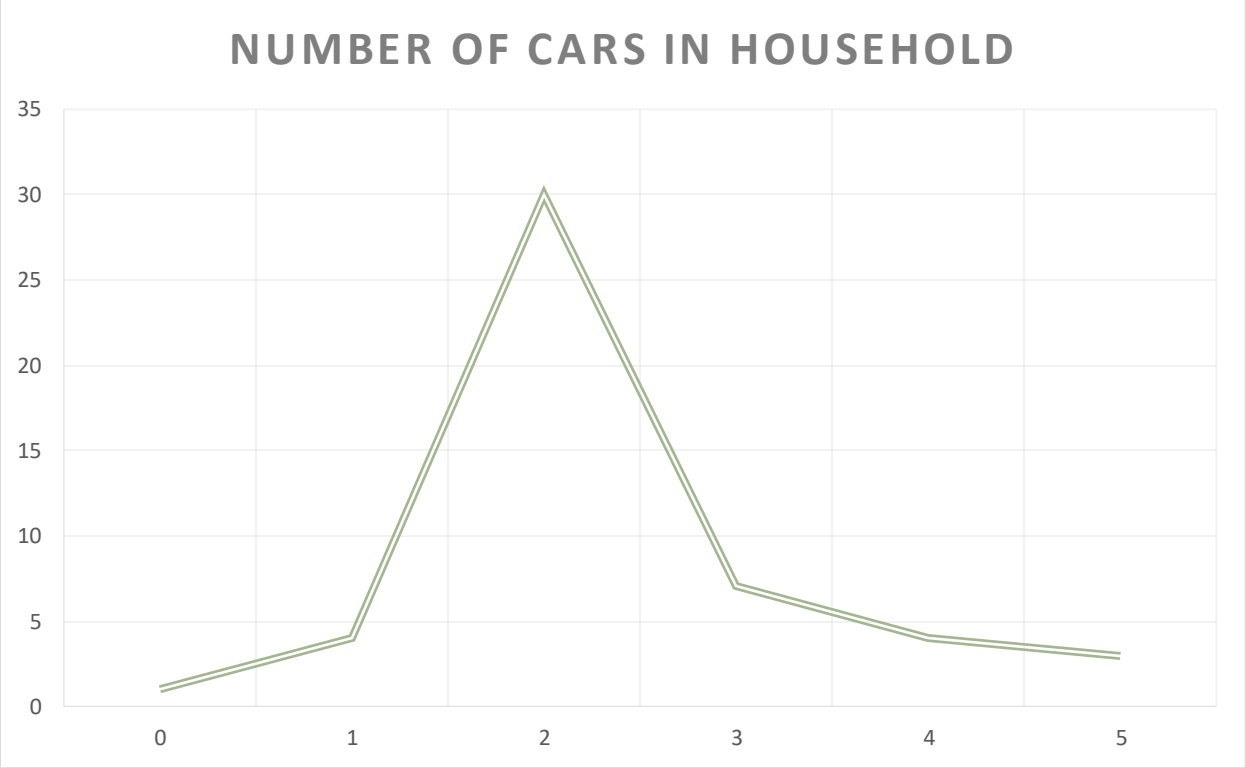
170000
180000
185000
200000
250000
300000
(blank)


NUMBER OF CARS IN HOUSEHOLD
35
30
25
20
15
10
5
0
0
1
2
3
4
5

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: OWATONNA PAVEMENT CONDITIONS

CITY OF OWATONNA

QUADRANTS

PCI NW
74.15

PCI NE
73.60

PCI SW
69.95

PCI SE
72.86

City PCI
72.63

PCI Updated:
OCT 8, 2020

N

0 0.25 0.5 1
Miles

Legend

Owatonna Quadrants

NAME

- OwatonnaNE
- OwatonnaNW
- OwatonnaSE
- OwatonnaSW

CITY OF OWATONNA
2020 PAVEMENT SUMMARY

10/8/2020

PCI BY CITY QUADRANT

	QUAD	AVG PCI	LENGTH (mi.)	2019 PCI	CHANGE	2018	2017	2016	2015
	NW	74.15	33.501	74.15	0.00	71.33	68.93	---	68.0
	NE	73.60	34.030	71.75	1.86	71.52	72.06	---	70.0
	SE	72.86	34.218	72.49	0.37	78.58	77.80	---	72.5
*	SW	69.95	34.051 *	69.98	-0.02	69.27	66.43	---	66.0
	OVERALL	72.63	135.800	72.08	0.55	72.70	71.32	70.10	69.1

* Quadrant Evaluated September 2020

STREET LENGTHS BY PCI

2020 PCI	LENGTH (mi.)	PCT.	2019 PCI (mi.)	CHANGE (mi.)	CONC (mi.)	
0	3.744	2.68%	3.217	0.527	0.000	(GRAVEL)
35	0.303	0.22%	0.351	-0.048	0.000	
40	1.362	0.98%	1.597	-0.234	0.000	
45	4.341	3.11%	4.491	-0.150	0.000	
50	5.275	3.78%	7.030	-1.755	0.323	
55	11.489	8.23%	10.921	0.568	0.441	
60	16.416	11.76%	15.874	0.542	2.586	
65	15.042	10.78%	16.537	-1.495	4.097	
70	13.350	9.57%	12.010	1.340	5.101	
75	20.027	14.35%	18.510	1.517	3.481	
80	14.061	10.08%	13.934	0.127	1.056	
85	9.174	6.57%	10.216	-1.042	0.336	
90	7.427	5.32%	7.755	-0.328	1.296	
95	3.603	2.58%	3.482	0.120	0.126	
100	13.931	9.98%	12.632	1.299	2.512	
TOTAL	139.545 mi.		138.557	0.988	21.356	
AVG	72.63 PCI					

APPENDIX C: SIDEWALK AND TRAILS MAP

Sidewalk & Trail Plan

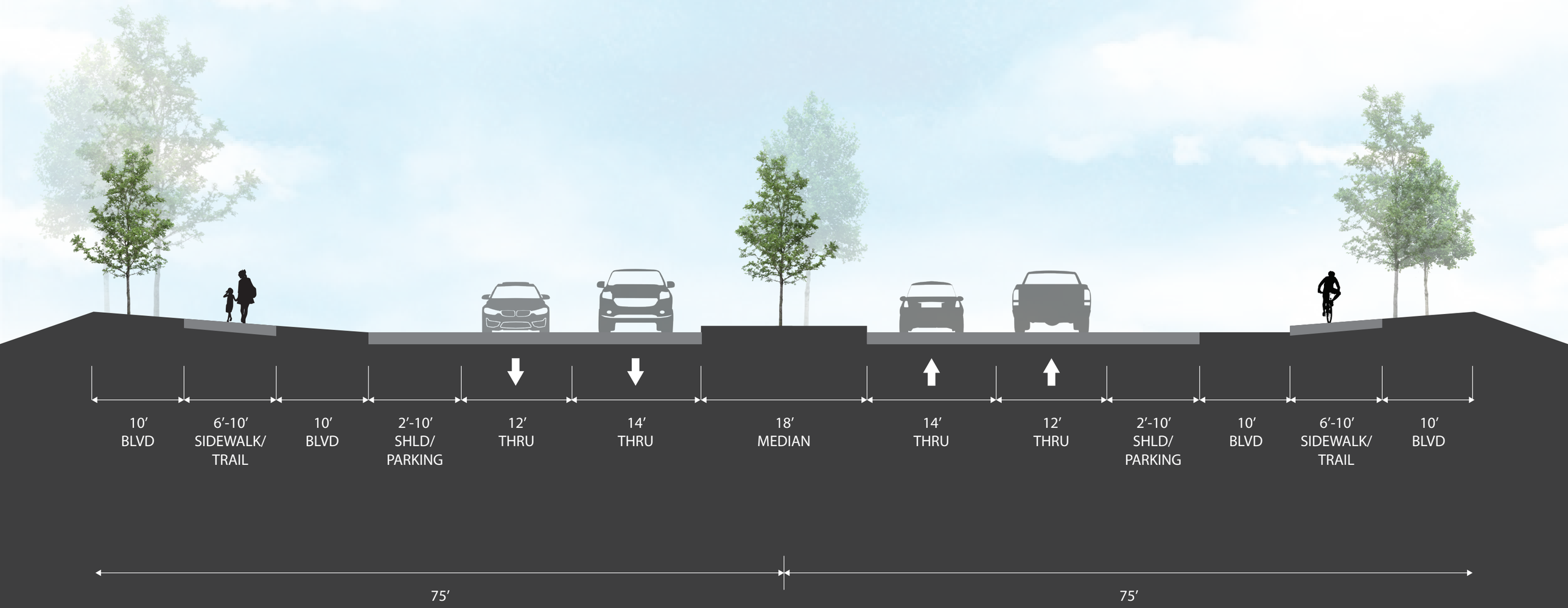
Legend

Trails Status	Sidewalks Status
Constructed	Constructed
Phase 1	Phase 1
Phase 2	Phase 2
Phase 3	Phase 3
Phase 4	

September 10, 2012

APPENDIX D: TYPICAL CROSS SECTIONS

High Density Minor Arterials



Right-of-Way = 130′ - 150′

4-Lane Urban

Low Density Minor Arterial/Major Collector

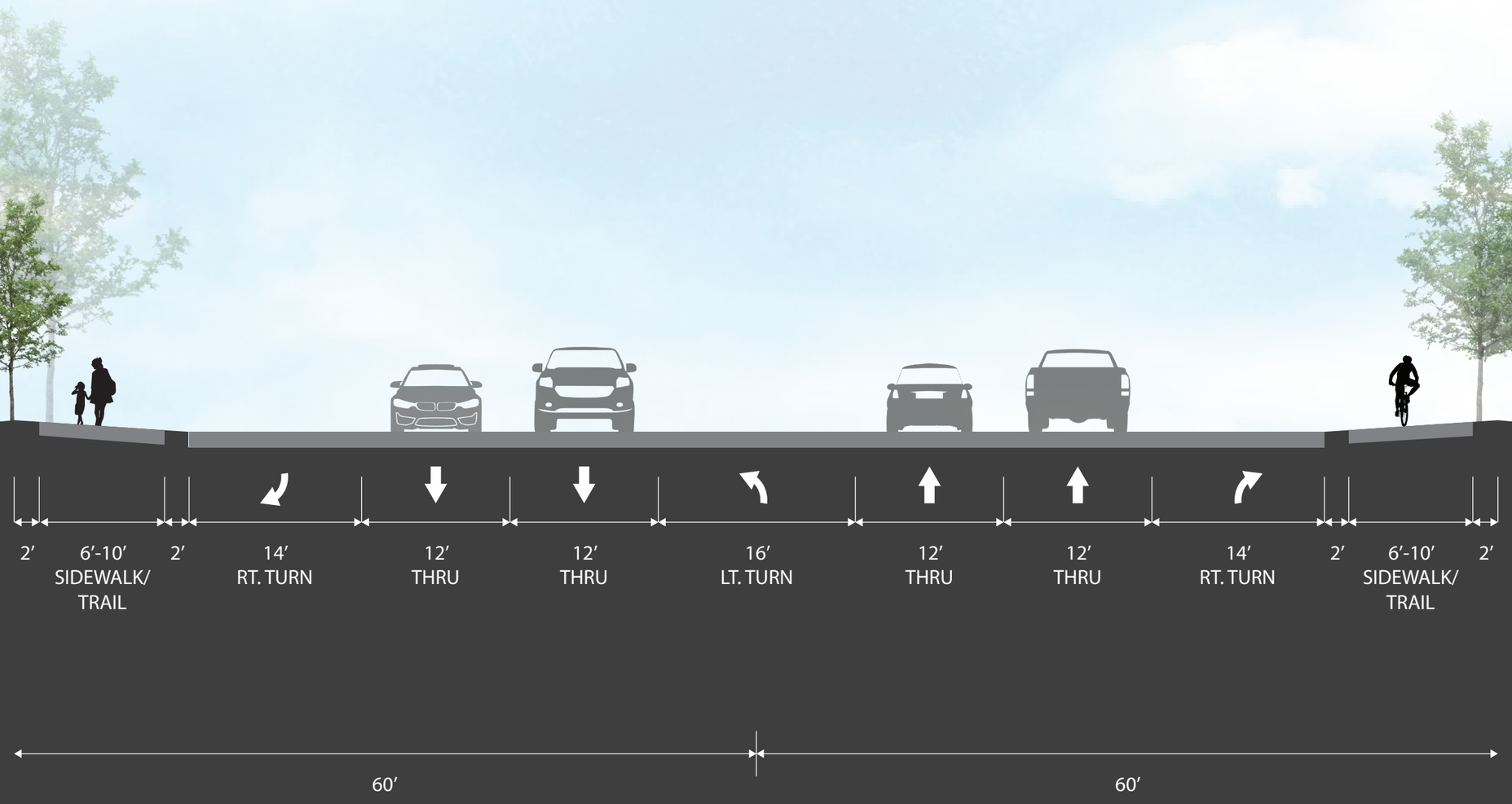
7′ BLVD | 6′-10′ SIDEWALK/ TRAIL | 10′ BLVD | 2′-10′ SHLD/ PARKING | 14′ THRU | 18′ MEDIAN | 14′ THRU | 2′-10′ SHLD/ PARKING | 10′ BLVD | 6′-10′ SIDEWALK/ TRAIL | 7′ BLVD

60′ | 60′

Right-of-Way = 100′ - 120′

2-Lane Divided Urban

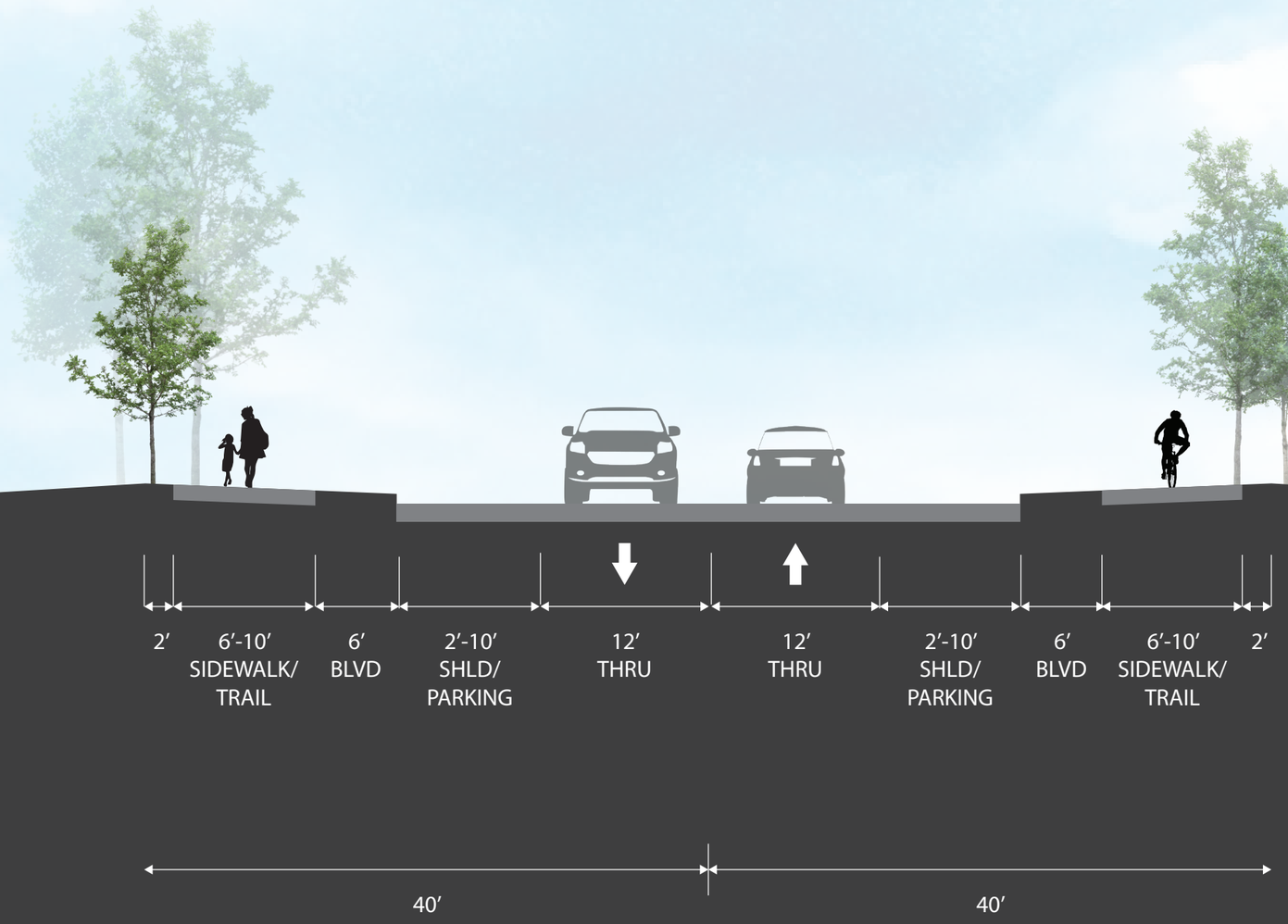
Low Density Minor Arterial/Major Collector



Right-of-Way = 100′ - 120′

4-Lane Urban With Continuous Left-Turn Lane

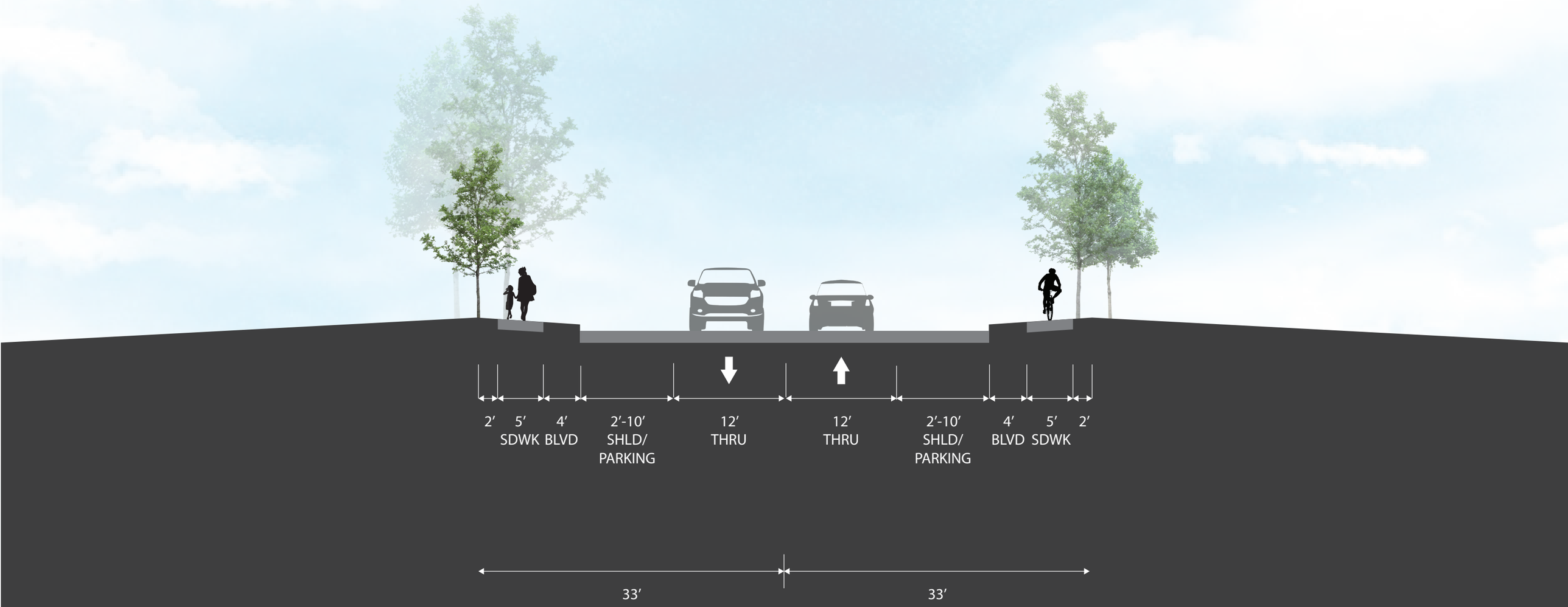
Minor Collector



Right-of-Way = 60′ - 80′

2-Lane Urban Undivided

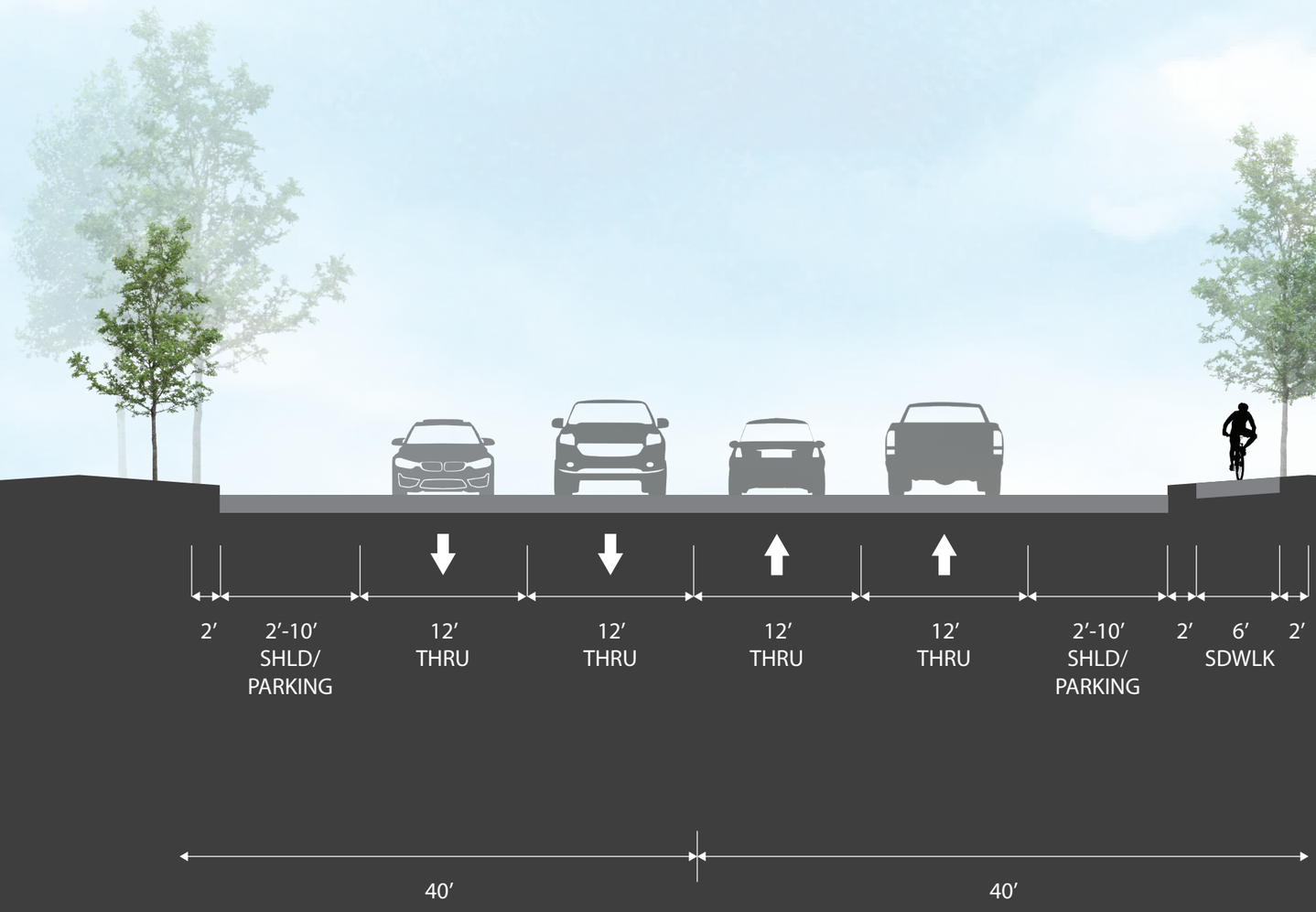
Local Residential



Right-of-Way = 56′ - 66′

2-Lane Urban Undivided

Local Commercial/Industrial



Right-of-Way = 74 - 80′

2-Lane Urban Undivided