Dakota
COUNTY

Dakota County 2040 Transportation Plan

July 2021

Dakota COUNTY
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Chapter 1

Executive Summary

The *Dakota County 2040 Transportation Plan* (Plan) is developed in coordination with the *Dakota County Comprehensive Plan, DC2040*. Both the Transportation Plan and the Comprehensive Plan are guided by the Dakota County Board's Strategic Goals, which define a desired future for Dakota County. The Board's Strategic Goals provide a vision and guide the work of the county and provide direction and context for the work of staff. The Strategic Goals include: A great place to live; A healthy environment with quality natural areas; A successful place for business and jobs; and Excellence in public service. *DC2040* consists of a broadly-based land use plan that is developed every ten years to prepare Dakota County for continued growth. In conformance with the Metropolitan Land Planning Act, MN Statutes, Chapter 473, the county developed *DC2040* to guide the direction of several key systems that have regional relevance (transportation, development, parks and natural resources) to ensure they efficiently and effectively meet the needs of a projected 2030 population base. *DC2040* includes the vision of what the county can become over the next 20 years and incorporates a plan to address key issues affected by population growth and influence quality of life. *DC2040* includes an abridged Transportation Chapter.

The *Dakota County 2040 Transportation Plan* is an implementation document that uses *DC2040* as the framework to provide greater detail than required at the regional level. The Transportation Plan also relies heavily on locally adopted comprehensive plans to identify land use, development and redevelopment that will drive future transportation needs of the county. The Dakota County 2040 Transportation Plan is being strategically updated at this time to incorporate the land use updates that cities and townships have recently made to their comprehensive plans as part of the 10-year comprehensive plan update cycle in the Twin Cities region. Dakota County uses the newly revised city and township land use forecasts to enter into a transportation model. The transportation model allocates the local land use forecasts into transportation analysis zones (TAZs) that are used to represent future growth areas and help Dakota County identify which transportation facilities need to be improved or expanded. The 2040 Transportation Plan contains detailed principles, strategies and policies that guide county transportation system investments, coordination with partnering agencies and daily staff activities.

The Transportation Plan covers the 20-year period from adoption by the Dakota County Board in 2021 to 2040. It was developed in the context of regional, state and national transportation planning and funding policies and guidelines. The Plan supersedes the *Dakota County 2030 Transportation Plan* that was adopted in 2012.

Why an Update to the Transportation Plan?

The following were key reasons for updating the Transportation Plan. These reasons included state, regional and county plans or studies that affect the transportation system in Dakota County. Many of plans or studies were recently completed and or adopted making the Plan update timely.

County Comprehensive Plan Updated

The county updated and adopted its comprehensive plan in 2019. Major findings, influences or considerations of this plan, *DC2040*, provided context for updating the Transportation Plan. These included:

- Incorporating updates of the guiding principles of Sustainability, Connectedness, Collaboration, Economic Vitality and Growing and Nurturing People from DC2040 as Transportation Plan Principles. Supporting strategies and policies to implement these principles were applied.

- Considering and providing rationale for increasing transportation safety, maximizing the value of investments, encouraging active living, investing in pedestrian and bicycling infrastructure, increasing transit advantages, reducing demand for automobile transportation, creating an environmentally sensitive transportation system and recognizing the role of telecommunications and sustainability leadership.

State Transportation Plans and Studies Updated

Five recently-completed primary state plans and studies identified major findings, influences or considerations. The county used these plans and studies as a basis of how the state's goals align with the county's Plan and how county policies and strategies best support state transportation. These plans are:

- *Minnesota GO 50-Year Vision for Transportation*
- *Statewide Multimodal Transportation Plan (SMTP)*
- *Minnesota State Highway Investment Plan: 2018-2037 (MnSHIP)*
- *State Transportation Improvement Plan (STIP)*
- *Trunk Highway (TH) 13 Corridor Study Update*

Regional Plans, Reports and Studies Updated

Nine recently-completed primary regional plans, reports and studies identified major findings, influences or considerations. The county used these plans, reports and studies as a basis of how the region's goals align with Dakota County's Plan and how county policies and strategies best support regional transportation. These plans are:

- *The Metropolitan Council 2040 Transportation Policy Plan (TPP)*
- *Principal Arterial Intersection Conversion Study*
- *Twin Cities Metro Area Regional Freight Initiative (2012)*
- *Regional Truck Highway Corridor Study*
- *Red Rock Corridor Implementation Study*
- *Twin Cities Aviation System Technical Report*
- *Airlake Airport 2035 Long-Term Comprehensive Plan*
- *Regional Highway Spending and Investment Needs Study*
- *MnPass Study*

Completed County Transportation Engineering Plans, Studies and Activities

As a result of recently completed transportation engineering studies, the county has a better understanding of transportation needs with study findings incorporated into the Plan update. Many of these studies were adopted by the county. These studies include:

- *Dakota County Comprehensive Plan*
- *Dakota County 2040 Travel Demand Model*

- *Pine Bend Arterial Connector Study*
- *CSAH 50 Corridor Study*
- *CSAH 28 and CSAH 63 Argenta Trail Realignment Study*
- *American with Disabilities Act (ADA) Transitions Plan for County Highway Rights-of-Way*
- *Fiber and Signal Equipment Upgrade Projects*
- *Dakota County Principal Arterial Study*
- *Dakota County Transportation Sales and Use Tax Transportation Improvement Program*
- *Rural Intersection Assessment*
- *METRO Red Line – Cedar Avenue Transitway BRT Implementation Plan Update*
- *METRO Orange Line Extension Study*
- *East-West Transit Study*
- *Eastern Dakota County Transit Study*

Overview of Significant Transportation Plan Revisions

- Improvement of transportation system elements has been moved to the Replacement and Modernization goal from the Expansion goal. Modernization or improvement activities are standard upgrades to the existing system and not an expansion activity. Modernization activities include addition of turn lanes; shoulders; sidewalks, multi-use trails and highway crossings; and medians. Modernization also applies to replacement of existing traffic signals to the most current standards.

- The previous Transit and Integration of Transportation Modes Goal has been completely revised and moved in priority after the Replacement and Modernization goal. The reasons for the revision and change in priority are that:
  - The integration of transportation modes has been removed from the transit goal and is now included in all other Plan goals, and
  - Dakota County's role and focus in transit has significantly shifted from Transitway development in the last Plan to working with providers to enhance transit accessibility and options to meet the diverse land use and transit needs of the county.

- The Expansion goal needs have been reduced due to the leveling of travel demand and population growth, reduced local city demand for expansion, and application of advanced traffic signal improvements which allow for greater roadway capacity.

Trends Affecting the Transportation System

The Plan also considers many trends affecting the transportation system. These trends were considered in the development of the goals, strategies and policies within the Plan. These trends include:

- Transportation revenues and resources are becoming more limited to meet the transportation system needs over time. The gap between the county's transportation needs and transportation revenues has declined in the past few years, but it is still a significant difference.

- Continued growth and demand for efficient transportation systems pose significant challenges for the future. Recent trends show growth and demand are not increasing as significantly as the past. However, growth and demand remain challenges.

- Dakota County's Travel Model (based on the region's model and future local land use) estimates that vehicle miles driven will grow by approximately one percent annually. The rate of increase is significantly less after the early 2000s and is expected to remain at one percent annually into the future.

- Traffic growth is less than anticipated in the 2030 Plan. Overall concerns with congestion have diminished and expansion demand from cities is trending down.

- Traffic volumes at the CSAH 23 (Cedar Avenue) and CSAH 42 intersection show operation exceeding capacity by 2040. The intersection currently has multiple through lanes and dual left turn lanes for Cedar Avenue. All practical improvements were implemented as part of the Cedar Avenue Transitway improvement project. Projected transportation revenues are inadequate to fund a needed interchange project and will require funding sources beyond current county highway funding sources.

- The Dakota County transportation system is generally in good condition. Recent investments in bridge and pavement preservation and replacement have contributed to the better condition of the transportation system. However, the overall system continues to age resulting in higher future preservation and replacement and modernization needs.

- Land access needs continue to compete with transportation system mobility needs.

- An increasing demand and use from the public of bicycle and pedestrian facilities within the county highway right-of-way. This plan acknowledges these needs and aligns resources to assist with implementation.

- Opportunities and challenges associated with rapidly growing transportation technology such as autonomous and connected vehicles and on demand transit services. This Plan adds a guiding Principle to integrate consideration of technology into transportation activities.

- It is anticipated that proposed investment on the regional transportation system are not adequate to address county growth. Dakota County lacks an east-west system of trunk highways. The county also lacks proper spacing of principal arterials resulting in trips with a purpose of mobility being served on roadways designed to balance or provide preferences for access. Proposed investments in the regional transportation system (state highways and regional transit) are not adequate to address county transportation needs. The state and region envision very little investment to the regional transportation system within the county in the next 20 years and some of the greatest transportation system needs in the county exist on the State Trunk Highway system. This Plan identifies these needs and a partnering approach to work with MnDOT to address them.

- At the time that this plan was being prepared, the COVID-19 pandemic had begun and its longer-term impacts on transportation were unknown. The COVID-19 pandemic has the potential to result in demographic, economic, cultural and financial changes that extend far into the 20-year planning

time horizon for this Plan. It is difficult to speculate on the long-term impacts the global pandemic may have on public health, travel behavior, economics and the availability of transportation financing. This Plan should be updated in the future as those implications become apparent.

Plan Goals

The Plan consists of six goals with desired outcomes, products or services provided by the transportation system. Each goal contains specific investment activities and is supported by strategies, policies and performance measures. These goals were developed to provide for the safe and efficient movement of people and goods and as a guide to direct future transportation investments within the Transportation Capital Improvement Program. These goals include:

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System
Goal 2: Preservation of the Existing System
Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity
Goal 4: Replacement and Modernization of Deficient Elements of the System
Goal 5: Transit and Transitways
Goal 6: Expansion of Transportation Corridors

Plan Summary

Transportation Plan Principles

The Plan includes twelve overarching principles that apply to all Plan goals. These include five guiding principles identified in *DC2040* and seven principles specific to transportation. All these principles together guide the Plan policies and strategies and help in forming the basis for decision-making and priority determination. The Plan incorporates these principles into all aspects of transportation system development and operation. Each principle is supported by strategies and policies to implement the principle objective.

These principles are:

- Sustainability
- Connectedness
- Collaboration
- Economic Vitality
- Growing and Nurturing People
- Transportation Safety and Standards
- Transportation Planning
- Social, Economic and Environmental Impacts (SEE)
- Public and Agency Involvement
- Context-Sensitive Design and Complete Streets
- ADA Transition Plan
- Transportation Technology

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

This goal guides Dakota County efforts to develop the best transportation system to provide for the safe and efficient movement of people and goods within financial constraints. The system vision has been developed and implemented in coordination with the state, adjacent counties, cities, townships and other transportation partners through the goals and policies contained within this Transportation Plan. This includes directing resources to transportation system priority needs and seeking and acquiring a variety of transportation funding sources to meet the many diverse system needs including transportation projects and operation and maintenance activities. Unmet needs will need to be considered on a case-by-case basis with additional funding beyond anticipated revenue to make investments in some areas.

This goal identifies various funding sources available to the county for transportation purposes, along with strategies and policies for use of these resources. Subsequent goal chapters specify how these limited transportation resources will be directed to priority needs of the system. This goal also identifies the staff and fiscal resources anticipated to be necessary to design, build, operate and maintain the transportation system. These resources were determined based on an analysis of the existing system and future system needs.

The strategies and policies of this goal provide for current and future estimated investment needs for directing resources to key transportation system elements. Directing resources for the transportation system will be pursued through the following activities.

Activities

- Transportation funding identification
- Identification of transportation system needs
- Use of Plan strategies and policies
- Coordination with transportation funding partners
- Identification of program delivery, operation and maintenance resource needs
- Development of annual Capital Improvement Programs

Through this update of the Plan, it has been determined that over $1.63 billion will be required to meet the county transportation system needs over the 20-year plan period. Specific needs are identified and explained in detail in chapters throughout this plan document. $1.28 billion of revenue is anticipated during this time. This results in 78 percent of the necessary anticipated revenues available to meet transportation needs in the next 20 years. In comparison, in 2012, the Transportation Plan identified $1.25 billion required to meet needs and $658 million anticipated, resulting in 53 percent of the necessary anticipated revenues to meet needs. Details on specific needs are included in the Limited Resources are Directed to the Highest Priority Needs of the Transportation System Goal chapter.

The county envisions that available revenues will be directed at the highest priority needs of the transportation system. However, this investment is not sufficient to meet all needs through the Plan period. Limited staff and equipment resources will also be necessary to deliver the anticipated annual CIP, operate and maintain the system and meet the identified transportation needs. Additional revenue sources will need to be identified to supplement current resources.

Goal 2: Preservation of the Existing System

The most effective way to protect Dakota County's transportation system investments is to continually evaluate and maintain the existing system to reduce unnecessary or premature replacement investments while maintaining safety and mobility. Preservation investments are intended to maximize infrastructure life and minimize life cycle costs of the transportation system.

Dakota County will continue to experience demands for limited resources to meet the transportation needs of the county. The investments to repair the extensive system of roads, bridges, supporting infrastructure and facilities can be expected to continue to increase as the system ages. Therefore, the investments the county has made in its transportation system must be preserved. Preservation strategies and policies maintain existing transportation system infrastructure in their current condition to serve their current purposes.

The emphasis of this goal is that the county identifies that the most effective way to protect the transportation system investments is to continually evaluate and maintain the existing system to reduce unnecessary or premature replacement investments while maintaining safety and mobility. This includes continuing evaluation of existing conditions and identification of future needs of the transportation system to maximize infrastructure useful lives.

The strategies and policies of this goal provide for current and future estimated investment needs for preservation of key transportation system elements. Preservation of the transportation system will be pursued through the following activities and CIP investment categories.

Activities

- Highway Surface Evaluation
- Pavement Management Program
- Gravel Maintenance
- Bridge Rehabilitation
- Traffic Safety and Operation
- Pedestrian and Bicycle Trail Maintenance
- Winter Maintenance

CIP Investment Categories

- Paved Highway Surface
- Gravel Highway Surface
- Roadway Safety and Operation
- Pedestrian and Bicycle Facilities
- Storm Sewer System Repair
- Retaining Wall Maintenance
- Rail Crossing Resurfacing

Dakota County currently invests approximately $10.9 million per year towards projects to preserve the existing system. Investment activities include highway surface preservation (including both bituminous and gravel), bridge rehabilitation, traffic control devices (traffic signals and durable pavement markings), pedestrian and bicycle trails and facilities, storm sewer system maintenance, retaining wall maintenance and rail crossing resurfacing. Future annual investments for this goal are anticipated to rise slightly as the transportation system ages and traffic volumes increase in the future. The following are the

estimated annual CIP preservation investment needs over the plan period: 2021-2025 is $10.9 million, 2026-2030 is $11.2 million and 2031-2040 is $11.5 million. Details on specific needs are included in the Preservation of the Existing System Goal chapter.

Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

Safe travel on routes with minimal congestion while balancing multi-modal accommodation is an integral part of Dakota County's vision for its transportation system. Fiscal, social and environmental constraints limit the ability for an accelerated road construction program to achieve this vision alone. Management strategies contained in this Goal are intended to optimize the safety and capacity of the existing transportation system to maximize safety for all modes and to defer more costly expansion investments.

This goal aims to enhance the relationship and compatibility between land uses and transportation to assure an efficient and safe transportation system. Management of the system can cost-effectively maximize mobility, safety and capacity of the county transportation system.

The importance of this goal is to provide for safe travel on the county system with minimal congestion. The strategies and policies within this goal aim to optimize the capacity and safety of the existing transportation system with recognition that fiscal, social and environmental constraints limit the ability of conducting only accelerated road construction to achieve safe travel. Management of the transportation system will be pursued through the following activities and CIP investment categories.

Activities

- Land Use
- 10-Ton Highways
- Functional Classification
- Access Management
- Weight and Size Management
- Jurisdictional Classification
- Intersection Assessment and Traffic Control
- Right-of-Way Preservation and Management
- Multi-modal Accommodation

CIP Investment Categories

- Jurisdictional Classification (Highway Replacement and Gravel Road Paving)
- Safety and Management
- Signal Projects
- Right-of-Way Preservation and Management
- Bicycle and Pedestrian Trail Gaps and Crossings
- Rural Intersections

The current CIP investment for projects to manage the existing system is approximately $15.2 million per year. Investment activities include jurisdictional classification, safety and management, signal projects, right-of-way preservation and management, bicycle and pedestrian trail gaps and crossings and rural intersections. Future annual investments for this goal are anticipated to remain stable. These

activities are intended to reduce the need for more costly replacement, improvement or expansion to county highways.

The following are the estimated annual CIP management investment needs over the plan period: 2021-2025 is $15.2 million, 2026-2030 is $16.5 million and 2031-2040 is $13.5 million. Details on specific needs are included in the Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity Goal chapter.

Goal 4: Replacement and Modernization of Deficient Elements of the System

Transportation system elements such as pavement and bridges deteriorate over time. Even with proactive preservation over the life of the transportation system, replacement becomes the most cost-effective approach. Additionally, standards and practices change, affecting system safety and operation to maintain safe and efficient movement of people and goods. Therefore, system modernization occurs at the time of replacement. Dakota County will replace and modernize deficient elements of the transportation system as they become structurally or functionally obsolete to enhance safety and efficiently operate the system.

This goal provides measures, strategies and policies aimed at replacement of four important elements of the transportation system – bridges, highways, traffic signals and gravel roads. It also provides current and future estimated investments and measures for replacement of key transportation system elements.

The strategies and policies of this goal provide for current and future estimated investment needs for replacement of key transportation system elements. Replacement of the transportation system will be pursued through the following CIP investment categories.

CIP Investment Categories

- Highway Replacement and Modernization
- Bridge Replacement
- Gravel Road Paving
- Traffic Signal Replacement
- Through-Lane Reduction
- Two- to Three-Lane Modernization

The current CIP annual investment is approximately $26.9 million per year for replacement and modernization projects. Future annual investments for this goal are anticipated to remain stable.

The following are the estimated annual CIP replacement and modernization investment needs over the plan period: 2021-2025 is $26.9 million, 2026-2030 is $23.6 million and 2031-2040 is $13.3 million. Details on specific needs are included in the Replacement and Modernization of Deficient Elements of the System Goal chapter.

Goal 5: Transit and Transitways

This goal provides guidance to Dakota County's role in developing, coordinating and supporting transit services within the county and region. Continued population growth and diversifying travel needs have led the county, transit service providers and other entities to plan and implement transit services that respond to the diverse needs of residents and businesses in a range of built environments. The county's

role in transit has continued to evolve in recent years as some projects have advanced and new needs are recognized. Though the county is not a transit provider, it historically has supported the development of transit in a variety of ways that continues to evolve.

This Plan identifies and aligns a range of transit services to align with the diverse land use and transit needs of the county. Dakota County will partner with transit providers, communities, employers and the traveling public to enhance transit in a successful manner across the county. The strategies and policies of this goal provide for current and future estimated investment needs for transit elements.

Dakota County currently invests approximately $1 million per year towards transit and transitway projects. Future annual investments for this goal are anticipated to increase as the METRO Orange Line extension and operation are planned.

The following are the estimated annual CIP transit and transitways investment needs over the plan period: 2021-2025 is $0.8 million, 2026-2030 is $2.3 million and 2031-2040 is $2.9 million. Details on specific needs are included in the Transit and Transitways Goal chapter.

Goal 6: Expansion of Transportation Corridors

Dakota County will improve the existing transportation system within available financial resources left after investing in preservation, management and replacement and modernization needs to address emerging capacity needs to provide for safe and efficient travel with minimal congestion.

This goal looks at long-term growth and associated traffic volume projections through the year 2040 to identify needs to expand the county highway system. This goal applies to development of new county highway corridors including lane additions and new highway alignments. The goal identifies and defines current and future estimated expansion needs, measures and planned costs of investments and measures for improvement and expansion of the system.

The main issue faced by the county regarding expansion needs is the large investment required for these types of projects. The county will continue to evaluate the need for expansion on a case-by-case basis to ensure that the highest priority capacity issues are addressed, and that all improvement projects maximize the value of county investment.

The current CIP annual investment is approximately $12.5 million per year for expansion. Future annual investments for this goal are anticipated to increase as growth occurs.

The following are the estimated annual CIP expansion investment needs over the plan period: 2021-2025 is $12.5 million, 2026-2030 is $24.4 million and 2031-2040 is $31.4 million. Details on specific needs are included in the Expansion of Transportation Corridors Goal chapter.

Implementation

Capital Improvement Revenue Summary

The following are the estimated annual County Highway CIP investment needs over the plan period.

	Annual Investment Needs						20 Year Total	
	2021-2025		2026-2030		2031-2040		TOTAL	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR	CSAH	CR
Preservation	$ 8.91	$ 1.95	$ 9.30	$ 1.93	$ 9.66	$ 1.88	$ 187.65	$ 38.20
Management	$ 11.02	$ 4.13	$ 10.40	$ 6.11	$ 8.37	$ 5.09	$ 190.80	$ 102.10
Replacement & Modernization	$ 17.90	$ 8.98	$ 21.72	$ 1.87	$ 12.60	$ 0.66	$ 324.10	$ 60.85
Transit & Transitways	$ -	$ 0.78	$ -	$ 2.23	$ -	$ 2.94	$ -	$ 44.45
Expansion	$ 12.03	$ 0.50	$ 23.91	$ 0.50	$ 30.91	$ 0.50	$ 488.80	$ 10.00
Resources	$ 4.80	$ 2.50	$ 8.24	$ 1.95	$ 7.68	$ 1.63	$ 142.00	$ 38.55
TOTAL (by CSAH & CR)	**$ 54.66**	**$ 18.84**	**$ 73.57**	**$ 14.59**	**$ 69.22**	**$ 12.70**	**$ 1,333.35**	**$ 294.15**

	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined
ANNUAL TOTAL	**$ 73.50**	**$ 88.16**	**$ 81.92**	**$ 1,627.50**

* Does not include Trunk Highways

Total Estimated 20-year Needs **$1.63 Billion**

In addition to the county highway needs, an annual investment of $1 million is estimated for regional greenways that are eligible for the use of federal transportation funds. This investment totals an estimated $20 million over the Plan period, resulting in a total estimated county transportation system investment need of $1.65 billion through 2040. There are discussions underway about accelerating development of the greenways beyond $1 million annually which will increase the estimated $1.65 billion investment need. This investment need does not include any potential trunk highway investments which would also be in addition to the total estimated county needs.

It is anticipated that the needs associated with preservation, management, replacement and modernization will be fully funded. The needs associated with the expansion goal can be fully funded from 2021 through 2025.

Each year the county identifies projects to include into the Transportation CIP. The CIP is a five-year list of projects and anticipated funding sources. For purposes of the plan, Dakota County has assumed the following CIP resources will be available on an annual basis:

Source	2030 Plan	2020 Revenue	2021 Fund Balance	2021-25 Annual Revenue	2021-25 Total Revenue	2026-30 Annual Revenue	2026-30 Total Revenue	2031-40 Annual Revenue	2031-40 Total Revenue	2021-40 Total Revenue
Federal	5.0	9.0	0.0	8.5	42.5	7.7	38.5	6.7	66.7	147.6
State										
Trunk Highway	2.5	1.5	0.0	1.4	7.1	1.3	6.4	1.1	11.1	24.6
Bridge Bonds	0.2	0.3	0.0	0.3	1.4	0.3	1.3	0.2	2.2	4.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CSAH										
Regular	10.0	12.0	2.0	10.8	54.0	10.3	51.3	8.9	88.9	196.2
Maintenance	0.0	2.3	0.0	2.2	10.8	2.0	9.8	1.7	17.0	37.7
Flex Account	0.0	1.9	8.0	1.8	9.0	1.6	8.1	1.4	14.1	39.2
MVLST	0.0	12.0	0.0	10.8	54.0	10.3	51.3	8.9	88.9	194.2
County Funds			84.0							84.0
Levy	5.2	2.7	0.0	2.5	12.7	2.3	11.5	2.0	20.0	44.3
Wheelage Tax	1.7	4.1	0.0	3.9	19.3	3.5	17.5	3.0	30.4	67.2
Gravel Tax	0.2	0.2	0.0	0.2	0.9	0.2	0.9	0.1	1.5	3.3
City	7.0	8.0	0.0	4.2	21.0	3.8	19.0	3.3	33.0	73.0
Sales & Use Tax	0.0	18.0	60.0	16.6	83.0	15.4	76.9	13.3	133.3	353.3
RRA Levy	1.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5
TOTAL	33.4	72.0	166.5	63.2	315.8	58.5	292.5	50.7	507.1	1281.9

Annual
Total

NOTE: Assume 2.0 to 3.0% annual growth in revenues and 4.0 to 4.5% construction cost index inflation results in 2% average annual net loss of revenue buying power.
NOTE: Reduced values calculate to year 3, 8, and 15 from 5,5, and 10-year periods respectively.

An estimated $82.5 million of annual CIP needs is anticipated with approximately $68.1 million of estimated annual revenue. Based on this scenario, it is anticipated that the needs associated with preservation, management and replacement and modernization goals through the plan period can be fully funded. The needs associated with the expansion goal can be fully funded through 2025.

Investment Needs Summary

The *Dakota County 2040 Transportation Plan* identifies six major goals in which funding resources are used for transportation purposes. Within these goals are identified current investments, anticipated needs, and proposed investments through 2040 The Plan identifies available revenues of $72 million annually, in 2020 dollars, for the Transportation CIP to meet transportation needs.

Chapter 2

Introduction and Background

The Dakota County 2040 Transportation Plan is developed in coordination with the Dakota County Comprehensive Plan, DC2040. Both the Transportation Plan and the Comprehensive Plan are guided by the Dakota County Board's Strategic Goals, which define a desired future for Dakota County. The Board's Strategic Goals are meant to provide a vision for the county and to provide direction and context for the work of staff. The Strategic Goals identify the following objectives for Dakota County citizens, businesses, and visitors:

- *A great place to live*
- *A healthy environment with quality natural areas*
- *A successful place for business and jobs*
- *Excellence in public service*

The Dakota County 2040 Transportation Plan

Purpose of the Plan

The *Dakota County 2040 Transportation Plan* (the Plan) is a document used by Dakota County, its partners and residents as a guide to plan, maintain and improve the county's transportation system. The Plan supports land use goals and objectives and documents transportation policies and strategies through 2040. The Plan provides the vision for the future transportation system by identifying major transportation investments needs and priorities, and the principles, strategies and policies to address them.

The Dakota County Comprehensive Plan, *DC2040*, includes an abridged Transportation Chapter. The Dakota County 2040 Transportation Plan is an implementation document that uses the *DC2040* as the framework to provide greater detail than required at the regional level. The Transportation Plan also relies heavily on locally adopted comprehensive plans to identify land use, development and redevelopment that will drive future transportation needs of the county. The Dakota County 2040 Transportation Plan is being strategically updated at this time to incorporate the land use updates that cities and townships have recently made to their comprehensive plans as part of the 10-year comprehensive plan update cycle in the Twin Cities region. Dakota County uses the newly revised city and township land use forecasts to enter into a transportation model. The transportation model allocates the local land use forecasts into transportation analysis zones (TAZs) that are used to represent future growth areas and help Dakota County identify which transportation facilities need to be improved or expanded. The 2040 Transportation Plan contains detailed principles, strategies and policies that guide county transportation system investments, coordination with partnering agencies and daily staff activities.

The Transportation Plan covers the 20-year period from 2021 to 2040. It was developed in the context of regional, state and national transportation planning and funding policies and guidelines. The Plan supersedes the *Dakota County 2030 Transportation Plan* that was adopted in 2012.

Dakota County Transportation System

The purpose of the Dakota County transportation system is to move people and goods in the safest and most efficient manner possible. The Dakota County Board of Commissioners envisions the transportation system as a critical element in the quality of life for the public and a significant contributor to businesses and a strong economy. Transportation systems must safely, efficiently and effectively allow the public to travel to work and to conduct their personal lives. Transportation systems must further provide for the efficient movement of goods to markets to support the county's economic vitality. Multiple transportation options should work in coordination to minimize congestion. Additionally, transportation decisions should carefully consider and reflect environmental and community concerns.

The highway system consists of 339 miles of County State Aid Highways (CSAH) and 75 miles of County Roads (CR). This is shown in Figure 1. The overall county system consists of 414 centerline miles of which approximately 366 miles (88 percent) are paved and 48 miles (12 percent) have a gravel surface. There are 1,034 lane miles in the system. The county system also has 83 bridges and 136 traffic signals.

Role of the County Highway System

Most Dakota County highways are functionally classified as minor arterials. Minor arterials emphasize mobility with limited land access and typically make connections between cities and/or townships. A constant challenge is to provide a balance between mobility and appropriate land accesses. To ensure mobility continues to be emphasized, local supporting roadway networks are essential to provide access to and from the county highway system and to accommodate local traffic. This relationship is illustrated in Figure 2.

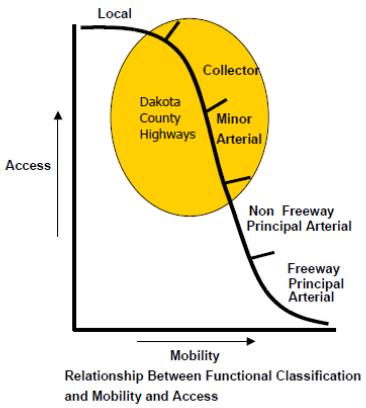


Figure 2

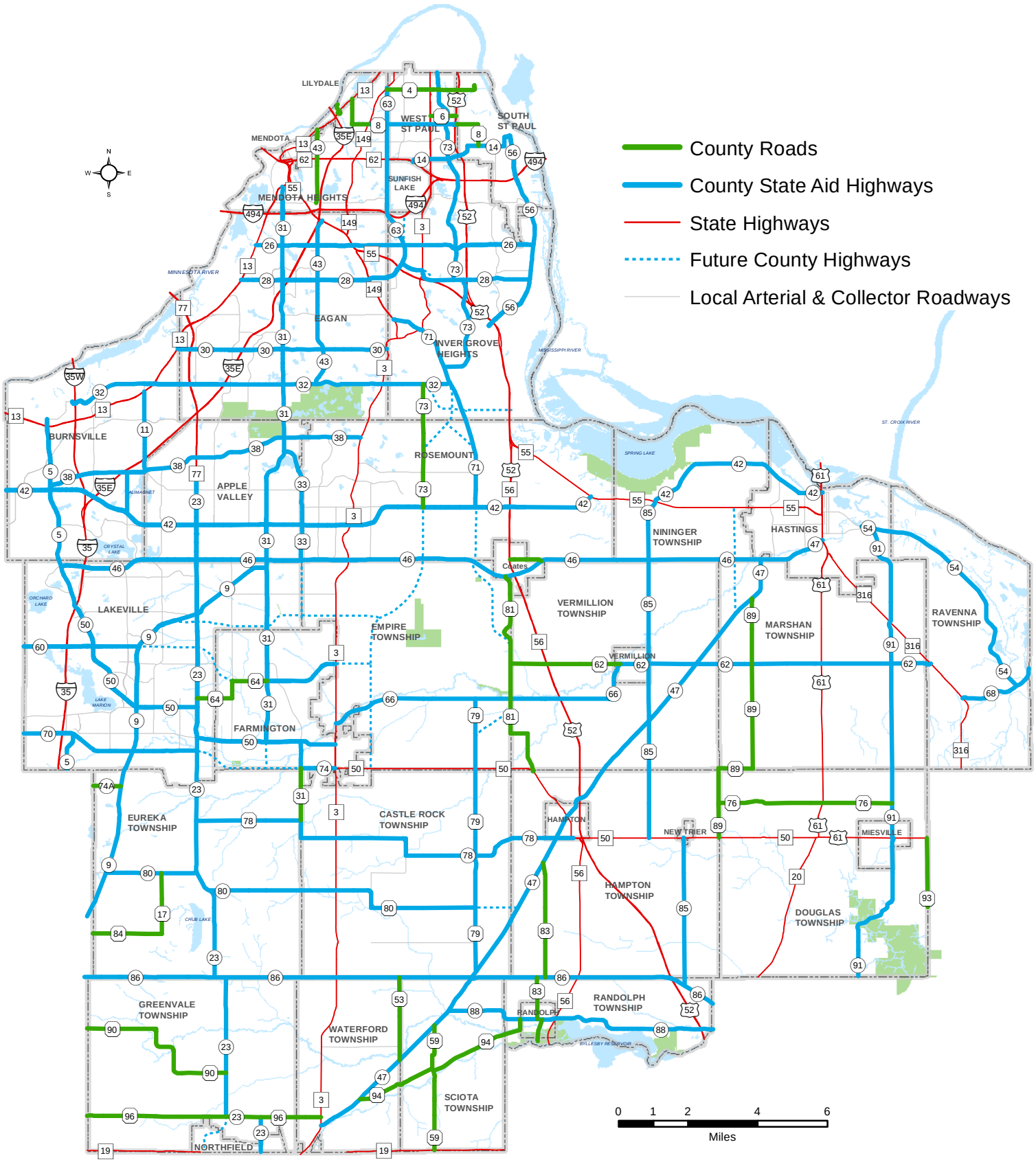
Role of Trunk Highways and Local Streets

The Minnesota Department of Transportation (MnDOT) is responsible for the trunk highway system which is a network of interstates, U.S. highways and state highways that connects communities throughout the state. Trunk highways consist of primarily principal and minor arterials and emphasize mobility over access typically making connections between states and counties. Local streets are under local jurisdiction and emphasize access over mobility and are typically contained within one community.

Functional Classification of Highways

Functional highway classification is the grouping of highways by the character of the service that they provide. Highways are generally classified according to the relationship between how they provide for mobility and access. The assigned classification is determined by the degree to which (1) movement of traffic is encouraged and access to adjacent homes and businesses is discouraged or (2) access is encouraged at the cost of efficiency to the movement of traffic.

County Highway System, 2020



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 1

Dakota County uses the same highway functional classification designation system as the Metropolitan Council. The following are the definitions of each class the number of county roadway miles in each category.

- Principal Arterial: Connect the region with the other areas in the state or connect metro centers to regional business concentrations. The emphasis is on mobility as opposed to land access. The county has 21 miles of principal arterial highway (represents 5 percent of the county system).
- Minor Arterial: Connect the urban service area to cities and towns inside and outside the region. They interconnect the rural growth centers to one another. The emphasis is on mobility with land accesses. The county has 208 miles of minor arterial highway (represents 50 percent of the county system).
- Collector: Highways provide connection between neighborhoods and to minor business concentrations. Mobility and land access are equally important. The county has 165 miles of collector roadway (represents 40 percent of the county system).
- Local: Roadways connect streets and land parcels. The primary emphasis is on land access. The county has 20 miles of local roadway (represents 5 percent of the county system).

The following rationale supports the concept of a functionally classified system:

- The appropriate balance of the four types of roadways provides the greatest degree of safety and efficiency.
- It takes a combination of various types of roadways to meet the needs of different land uses and multi-modal transportation needs found in urban areas.
- Most agencies cannot afford a roadway system made entirely of principal arterials and travel would be slow with a system of only local streets.
- Roadways that are appropriately designed and operated to serve one function are generally safer and tend to operate more efficiently for vehicles and pedestrians.
- The classification can be used to help prioritize roadway improvements.

County State Aid Highways

The County State Aid Highway (CSAH) system is a statewide network of about 30,700 miles of highways under jurisdiction of the 87 Minnesota counties. The CSAH system was devised in the 1950s as a system of county highways that met a set of criteria established by the state. Criteria for CSAH determination focuses mainly on traffic levels, functional classification, and a highway's role in connecting communities or markets. As established in state statute, the County Engineers Screening Board recommends which routes to include on the CSAH system to the MnDOT Commissioner of Transportation. Dakota County has 339 centerline miles of CSAH highways out of 414 total centerline miles for all county highways or approximately 81 percent of all centerline miles within the county.

The CSAH system is financed by the County State Aid Highway Fund, which is established by the Minnesota constitution to provide money to counties for county state aid highways. Counties receive 29 percent of the highway user tax (gas tax and vehicle license tax) revenue. Money in the fund is used for construction, improvement, and maintenance of county state aid highways. These funds can only be expended on CSAH routes.

County Roads

County roads generally do not meet the criteria established for the County State Aid Highway System, but still provide transportation functions associated with highways under county jurisdiction. County roads typically carry lower traffic volumes and provide a higher degree of land access than CSAHs. These routes are not eligible for CSAH funding and are funded primarily through other revenue sources such as property taxes.

The Dakota County highway system is summarized in the following table.

County Highway Mileage by Type

	Miles	Miles Paved	Miles Gravel	Lane Miles
County State Aid Highways (CSAH)	339	328	11	849
County Roads (CR)	75	38	37	185
Total	**414**	**366**	**48**	**1034**

Table 1.

Transportation Modes

Other transportation modes such as transit, bicycle and pedestrian provide options for safe, timely and efficient connections between communities, activity generators and employment centers. Planning and implementation of a transportation system that aligns land use and travel needs of the public with access to various modes of transportation is necessary to provide a safe and efficient transportation system that serves all users. The following are existing transportation modal facilities:

- 245 miles of multiuse trails and sidewalks within county right-of-way.
- 4 transit stations located in Apple Valley, Burnsville and Eagan (two stations).
- 12 park and ride lots served by transit within the county capable of accommodating approximately 5,904 vehicles combined.
- 4 park and pool lots
- 20.6 miles of bus shoulder lanes at the following locations:
    - 16.2 miles on Cedar Avenue
    - 2.4 miles on TH 13
    - 1.4 miles on I-35E
    - 0.6 miles on CSAH 32
- 5 miles of HOV lanes on both sides of I-35W
- 3 transitways planned or under construction (Cedar Avenue Transitway, Interstate 35W Transitway and Robert Street Transitway)

Plan Development

The principles, goals, policies, strategies and performance measures contained in this Plan were developed through several initiatives.

- County staff met with other agency staff through a series of meetings to identify issues and potential policy topics. Three separate sub-committees were established to focus on specific transportation topics. These sub-committees included:
    - A County Highway Sub-committee consisting of city representatives that focused on county highway needs, cost participation policies and strategies;
    - A Trunk Highway Sub-committee consisting of city, MnDOT and Met Council representatives that focused on review and implementation of projects identified in the county's Sales and Use Tax list of eligible projects; and
    - A Transit and Multi-Modal Sub-committee consisting of city, MnDOT and transit representatives that focused on transit, pedestrian and bicycle elements of the Plan.
- The Dakota County Board of Commissioners participated in workshops in July 2019, January 2020 and July 2020 to provide input and direction on development of the Plan.
- Staff provided the Dakota County Planning Commission with updates, presentations and obtained comments in September 2019, May and September 2020.
- Staff met with 21 agencies including cities, townships, chambers of commerce and school districts to discuss transportation system topics and obtain input.
- Staff held 10 public engagement events that engaged the public in an inclusive and multifaceted approach.
- Over 400 people responded to surveys, an interactive map and a comment section on the Plan update website.
- Over 1,300 comments were received from the public.
- Staff evaluated transportation-related survey responses and comments obtained during the development of the Comprehensive Plan.
- County staff conducted a comprehensive review of existing plan policies.

Contributing Planning Activities

Several plans and studies have been completed at the state, regional, county and local level since the last version of the Plan was adopted in 2012. These include the following plans or studies and how they address or are used to influence this Plan update. Many of these state, regional and county plans or studies were recently completed and or adopted making the Plan update timely to incorporate findings and recommendations.

Minnesota Department of Transportation (MnDOT) Plans and Studies

The following are MnDOT plans and studies that influenced or were considered or incorporated in the development of the Dakota County Transportation Plan.

- ***Minnesota GO 50-Year Vision for Transportation***
  MnDOT launched the Minnesota GO visioning process to better align the transportation system with what Minnesotans expect for their quality of life, economy and natural environment. The effort is based on an understanding that transportation is a means to other ends, not an end in itself. It also recognizes that infrastructure is only one of many elements necessary to achieving a high quality of life, a competitive economy and a healthy environment. The visioning process identifies guiding principles, challenges and opportunities.

- ***Statewide Multimodal Transportation Plan (SMTP)***
  The Statewide Multimodal Transportation Plan is Minnesota's highest-level policy plan for transportation. It is a 20-year plan based on Minnesota GO. The Plan is for all types of transportation and all transportation partners. It covers more than just roadways and applies to more than just MnDOT. It evaluates the status of the entire state transportation system, what is changing and how to move forward over the next 20 years. The Plan identifies the decision-making process, transportation safety, critical connections, system stewardship and healthy communities.

  The SMTP provides a framework for a full set of statewide transportation plans with overarching guidance and priorities for the entire transportation system. Major findings include:
  - Higher transportation needs than projected revenue is forecasted. It is unlikely that future transportation funding will increase sufficiently to meet the unmet needs. Therefore, MnDOT's approach will be to emphasize stronger partnerships and innovation and call for a more comprehensive and fiscally realistic approach (moving to smaller low-cost solutions).
  - Identification of challenges including growth, aging and more diversified population, aging infrastructure with declining physical system conditions and concerns for energy and the environment.
  - Identification of opportunities including new approaches to safety and congestion and increased interest in multimodal solutions.

  The SMTP provides for a "family of plans" that directs investments, maintenance, operations, modal programs and services for the following:
  - Greater Minnesota Transit Investment Plan
  - Statewide Pedestrian System Plan
  - Statewide Bicycle System Plan
  - 20-Year State Highway Investment Plan
  - Statewide Freight System Plan
  - State Aviation System Plan
  - State Rail Plan
  - Statewide Ports and Waterways Plan

- ***Minnesota State Highway Investment Plan: 2018-2037 (MnSHIP)***
  MnSHIP is MnDOT's vehicle for deciding and communicating capital investment priorities for the system through 2037. The plan identifies investment priorities given current and expected funding. Investment categories and objective areas include system stewardship, transportation safety, critical connections, healthy communities and other. Major findings include:
  - MnDOT identifies a total of $39 billion in transportation needs and only $21 billion in projected revenue. It is unlikely that future transportation funding will increase sufficiently to meet the unmet needs. MnDOT's approach will be to ensure that the state highway system meets all federal and state performance requirements and manage the greatest risks in each investment category. This approach shifts MnDOT from being a builder of the system to the maintainer and operator of the system.
  - The biggest strengths of this approach are that MnDOT can:

    - Focus most investments on maintaining the condition of the system;
    - Focus on lower cost, proactive safety treatments;
    - Commit to achieving substantial compliance with the American with Disabilities Act (ADA); and
    - Address local concerns through partnerships to support economic competitiveness and quality of life.
  - The biggest drawbacks of this approach are:
    - Conditions of infrastructure decline on National Highway System (NHS) and non-NHS routes
    - Only limited locations with sustained crash history can be addressed
    - Mobility improvement decreases with the reduced ability to maintain reliable travel times
    - Limits MnDOT's ability to address local concerns

- ***State Transportation Improvement Program (STIP)***
  The STIP is a federally required public document which lists Minnesota's four-year transportation improvement program. The STIP includes all state and local transportation projects which are using federal highway and/or federal transit funding along with those state transportation projects with are using 100% state funds.

- ***Trunk Highway (TH) 13 Corridor Study Update***
  MnDOT, in cooperation with Dakota County, Scott County, the City of Burnsville and the City of Savage, initiated a study to update the TH 13 Corridor Study from TH 13/TH 101 in Savage to Nicollet Avenue in Burnsville. The study update identified a corridor vision to provide guidance for transportation improvements within the corridor to:
  - Address corridor system performance;
  - Improve corridor safety; and
  - Support local economic and community corridor development.

  Study update recommendations included potential grade separation, intersection control, local street re-alignment and frontage road improvements

<u>Regional Plans and Studies</u>

The following are regional plans and studies that influenced or were considered or incorporated in the development of the Dakota County Transportation Plan.

- ***The Metropolitan Council 2040 Transportation Policy Plan (TPP)***
  The Metropolitan Council (Met Council) adopted its 2040 TPP in 2015. The TPP reflects a combination of technical analysis and policy discussion. The TPP is based on the goals and objectives in Thrive MSP 2040, the region's development guide. Dakota County uses the TPP for a basis on how the region's goals and plans align with the county's Plan and to ensure county policies and strategies best support regional transportation. The TPP major findings, influences or considerations include:
  - Aging infrastructure will not meet the demands of a growing population without significant investment in the near future.
  - Financial resources are inadequate to address the region's infrastructure needs.
  - Population and job growth will increase highway congestion.
  - An aging population will grow, with a doubling of those aged 65 and older by 2040.

- People and businesses are demanding more and better travel options.
- Traditional transportation needs are greater than the resources available.

- ***Principal Arterial Intersection Conversion Study***
  The Met Council and MnDOT worked with regional highway partners to analyze intersections on the non-freeway principal arterial system to identify and prioritize intersections that may be good candidates for conversion to grade-separated facilities – these include designs such as overpasses, interchanges and other improvements to enhance safety and performance.

- ***Twin Cities Metro Area Regional Freight Initiative (2012)***
  MnDOT partnered with the Met Council to highlight the importance of the region's freight transportation system to businesses and residents. The report helps identify noteworthy examples of freight planning, programming and outreach while developing a core set of freight measures and indicators for date collection, data analysis and planning and policy application.

- ***Regional Truck Highway Corridor Study***
  This 2017 study identified and prioritized the most significant regional trunk highway corridors in the seven-county Twin Cities Metropolitan Area, through evaluation of average annual truck volume, truck percentage of total traffic, proximity to identified freight clusters and proximity to regional freight terminals. Corridors were assigned to one of three significance tiers. Tier One includes more than 200 miles of interstate highways and more than 300 miles of principal and minor arterials, many of which may serve as the important "last mile" connection to freight destinations. Identified corridors were further evaluated for congestion and safety issues to develop investment recommendations.

- ***Red Rock Corridor Implementation Plan***
  The Implementation Plan builds off the recommendations from the Red Rock Alternatives Analysis Update (AAU) to create financial, development and service plans to provide better transit connections between corridor communities and the regional network. Recommendations focus on increasing local and express bus service and building transit ridership.

- ***Twin Cities Aviation System Technical Report***
  The Twin Cities Aviation System consists of 11 airports that provide aviation services to the seven-county metropolitan region. This report contains new aviation forecasts and evaluations to be used to update the Twin Cities 2030 Aviation System Plan. The aviation section of the region's Transportation Policy Plan will be amended as appropriate to reflect the new information.

- ***Airlake Airport 2035 Long-Term Comprehensive Plan***
  This plan envisions:
  - Displacing the Runway 12 threshold to provide airspace clearance over railroad tracks.
  - Extending Runway 12-30 with declared distances to maximize overall airfield utility for existing users.

- Reconfiguring the taxiway and expanding the apron area.
- Any required environmental review for planned improvements will be completed prior to construction

- ***Regional Highway Spending and Investment Needs Study***
  This is an update of the 2040 TPP Finance Chapter aimed at improving information on the A-Minor Functional Classification System. The study provides estimated needs and available revenues.

- ***MnPass Study***
  This is study updates the list of MnPass expansion corridors in the Met Council's 2040 TPP. The study identifies and evaluates MnPass issues, opportunities and risks from a regional needs perspective.

- ***Dakota County Regional Chamber of Commerce (DCRCC) Transit Study***
  This study, "Better Transit Service for Dakota County Employers and Residents: 2020 Needs and Recommendations", provides an assessment of transit needs in Dakota County recognizing that transit is a significant issue for DCRCC members. The study identifies six key strategies and 14 actions to improve transit in the County.

County Plans, Studies and Activities

The following are county-led plans, studies and activities that that influenced or were considered or incorporated in the development of the Dakota County Transportation Plan.

- ***Dakota County Comprehensive Plan, DC2040***
  DC2040 is Dakota County's 10-year update of its Comprehensive Plan to guide county transportation systems, parks and open space, natural resources, and land planning over the next 20 years to respond to population growth and change. DC2040 is focused on the county's core roles with Plan content intended to meet Metropolitan Council long-range planning requirements for specific physical systems and statutory requirements.

- ***Dakota County 2040 Travel Demand Model***
  The Dakota County Travel Demand Model is based on the Twin Cities Regional Model developed and maintained by the Metropolitan Council. The Dakota County model includes enhanced transportation network and socioeconomic detail within the boundaries of the county. Model parameters include county-specific travel information in combination with the regional model parameters in order to maintain consistency with the regional model while providing more accurate local detail. The county model was updated in 2020 to reflect county and local 2040 comprehensive plans.

  Since 2009 portions of the county have developed and travel patterns within the county have changed. The model update incorporates travel pattern changes and utilizes current development plans for local communities. As part of the acceptance within the regional comprehensive planning process, the roadway forecasts were compared and reviewed for consistency with the current regional model forecasts through use of the current regional Activity Based Model as the foundation for the county model.

Forecasted results were a tool used in determining policy decisions and highway needs such as:

- Right-of-way dedication;
- Access spacing;
- Roadway functional classification; and
- Timing of future improvements

Major findings of the Travel Demand Model update included:

- Dakota County traffic continues to grow, but generally not as fast as previously anticipated for 2030.
- Travel habits are changing, and people are not traveling as much or as far.
- Some communities in the county are growing faster than previously anticipated (i.e. Lakeville) but many are no longer expected to grow as fast compared to the previous projections for 2030 (i.e. Rosemount and UMore Park area).
- Overall, the year 2040 daily traffic projections are similar to or lower than the previously published 2030 daily traffic volumes. This is due to the changes in development growth assumptions, regional travel behavior changes, and roadway network improvement assumptions.

- ***Pine Bend Arterial Connector Study***
  Dakota County and the Cities of Inver Grove Heights and Rosemount conducted a study to identify future transportation needs and to determine a shared vision for the transportation system in the Inver Grove Heights and Rosemount area. The study focused on future roadway alignments of County Road 73, CSAH 71 and 117th Street connection to CSAH 32.

- ***CSAH 50 Corridor Study***
  Dakota County and the City of Lakeville conducted this study to provide a better understanding of the existing and future traffic operations along the corridor. The study identified the implementation of the since-constructed roundabout at the CSAH 50/CSAH 60 intersection and associated four-lane improvements to CSAH 50. The study also identified development of an access and traffic control plan.

- ***CSAH 28 and CSAH 63 Argenta Trail Realignment Study***
  This study determined a new alignment for CSAH 28 and CSAH 63 in Inver Grove Heights from its connection with CSAH 28 to I-494. The study consisted of three project areas/segments for new alignment consideration.

- ***American with Disabilities Act (ADA) Transition Plan for County Highway Rights-of-Way***
  Dakota County developed this plan as a guide for the county as it continues to provide accessibility to its transportation infrastructure including the highways, sidewalks, adjacent trails and pedestrian crossings. This plan includes an inventory of these facilities, evaluation of infrastructure conditions, practices, strategies and compliance efforts.

- ***Fiber and Signal Equipment Upgrade Projects***
  These projects involve fiber optic cable installation for traffic signal interconnection, closed circuit television deployment and signal equipment upgrades to improve traffic operations along County State Aid Highways 26, 28, 31, 43 and 46.

- ***Dakota County Principal Arterial Study***
  This study addressed the future designation of some highways in the county as principal arterials to help provide a safe and efficient transportation system in the long term. Considerations included principal arterial spacing, traffic volumes, connections to other principal arterials and the ability to support freight movement.

- ***Dakota County Transportation Sales and Use Tax Transportation Improvement Program***
  The county continued a quarter-percent transportation sales and use tax and $20 excise tax on new vehicle sales in 2017 following the dissolution of the Counties Transit Improvement Board to fund much needed Dakota County transportation projects. This tax is available to address a range of unmet transportation needs in Dakota County. Potential projects that are eligible for the use of this revenue are regional transitways, regional county highway, trunk highway, transit service expansion and regional trail project categories.

- ***Rural Intersection Assessment***
  The county conducted a proactive evaluation of rural intersection with certain characteristics to consider safety improvements to reduce risk factors and maximize safety. Intersections evaluated included locations where a county highway stops for another county highway or state highway. The evaluation focused on identifying intersections with greater risk of serious crashes.

- ***METRO Red Line – Cedar Avenue Transitway BRT Implementation Plan Update***
  This plan reflects operational experience of the METRO Red Line since 2013 and changing conditions in the corridor and region.

- ***METRO Orange Line Extension Study***
  This study evaluated alternatives for operations, station locations, station facilities, and improvements for potential expansion of service into southern Burnsville and Lakeville.

- ***East-West Transit Study***
  In 2017, the county completed this study to evaluate transit needs with the county to identify potential improvements to local service near major east-west thoroughfares. This study identified five corridors (County Road 42, Cliff Road, Yankee Doodle Road, Highway 110 and Wentworth Avenue) for the county, service providers and cities to focus on for service and facility improvements.

- ***Eastern Dakota County Transit Study***
  This study evaluated present and future needs for a variety of transit service and facilities in the northeastern part of the county. Recommendations address a range of needs and development patterns in the study area.

Trends Affecting the Transportation System

Transportation Revenues

Through this update of the Plan, it has been determined that approximately $1.65 billion will be required to meet Dakota County transportation needs over the 20-year plan period. Approximately $1.3 billion of revenue is anticipated during this time. This represents a $350 million shortfall, or approximately 21 percent of the required need. Additionally, MnDOT's planned investment in state highways within the county is extremely limited over the planning period. This Plan establishes the framework to direct extremely limited transportation resources to priority needs of the system.

> By Comparison: The Dakota County 2030 Transportation Plan identified a need of $1.25 billion to meet Dakota County transportation needs and $658 million of anticipated revenue representing 53 percent of the required need.

Growth

Continued growth and demand for efficient transportation systems pose significant challenges for the future. According to Metropolitan Council estimates, between 2000 and 2018, the County's population grew 18.9 percent, from 357,929 in 2000 to 425,423 in 2018. The county's population grew by 40,623, or 11 percent in the first decade of the 2000's to 398,552 in 2010 and slowed slightly to grow by 26,871 of 6.7 percent between 2010 and 2018. Although, the growth rate is moderating, the county's population is estimated to increase to 514,050 (or 21 percent) by 2040.

Annual Vehicle Miles Traveled

MnDOT's Vehicle Miles Traveled (VMT) Report for Dakota County CSAH and County Roads identified a growth rate of 1.1% between 2010 and 2015. MnDOT's current systemwide growth rate for the county is 1.0%. The rate of increase is significantly less than the rate of growth prior to the early 2000's and is expected to remain at approximately 1.0% annually into the future.

This is a trend being experienced at the, state and regional level. Reasons for this are overall reduction in individual miles traveled include, gasoline prices, people choosing other modes of travel or alternatives to travel, people not driving alone, the state of the economy or the driver's economic situation resulting in fewer unnecessary trips, aging population, millennials driving less than previous generations, ridesharing such as Uber or Lyft, cost of vehicle ownership and public social and environmental concerns. Other factors affecting Dakota County's rate includes the slowing or flattening of land development growth and the decrease in size of land development.

While volumes decreased countywide recently, estimates derived from the County's Travel Demand Model indicate that between 2020 and 2040 vehicle miles traveled is estimated to grow by 20 percent (1 percent annually) compared to 21 percent (1.05 percent annually) in estimated population growth. Vehicle miles driven are a measure of highway demand especially when compared to growth. The existing and projected annual vehicle miles traveled on Dakota County highways are shown in Figure 3.

By Comparison: The Dakota County 2030 Transportation Plan estimated vehicle miles traveled to increase two percent annually.

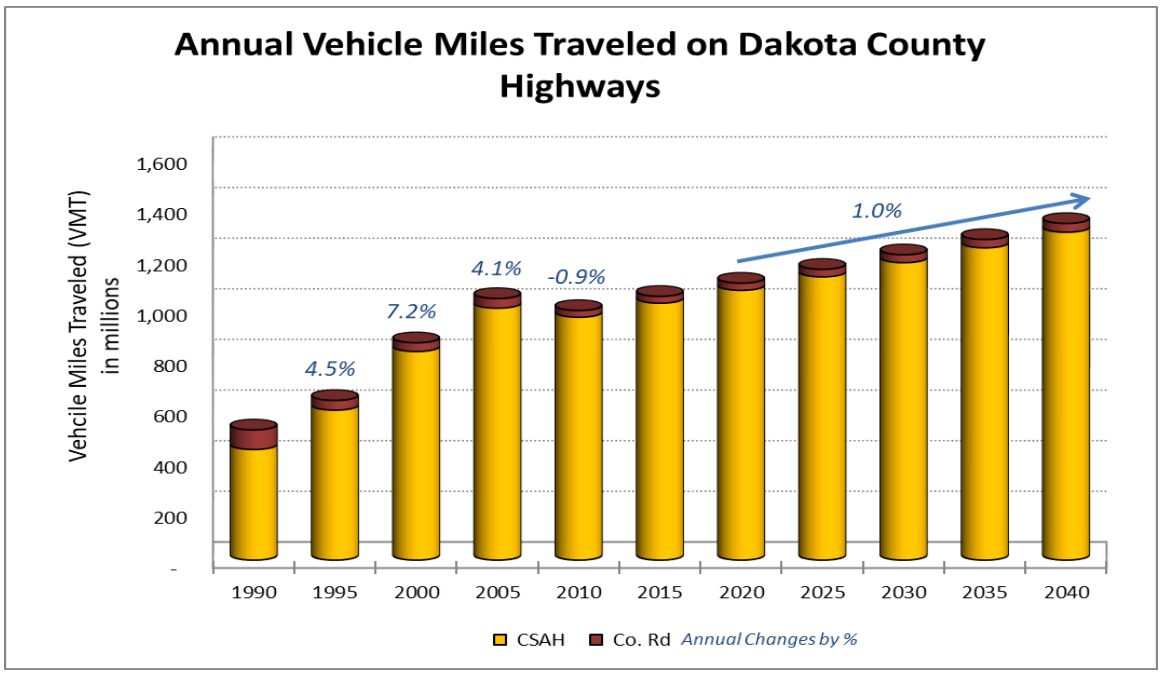


Figure 3.

Highway Capacity Deficiencies

Traffic growth is less than anticipated in the 2030 Plan. Overall concerns with congestion have diminished and expansion demand from cities is trending down. System congestion has held steady with recent expansion investments and is expected to continue to grow slowly into the short-term future.

A capacity deficiency exists when traffic exceeds the acceptable capacity of the highway. The acceptable capacity of the highway depends on:

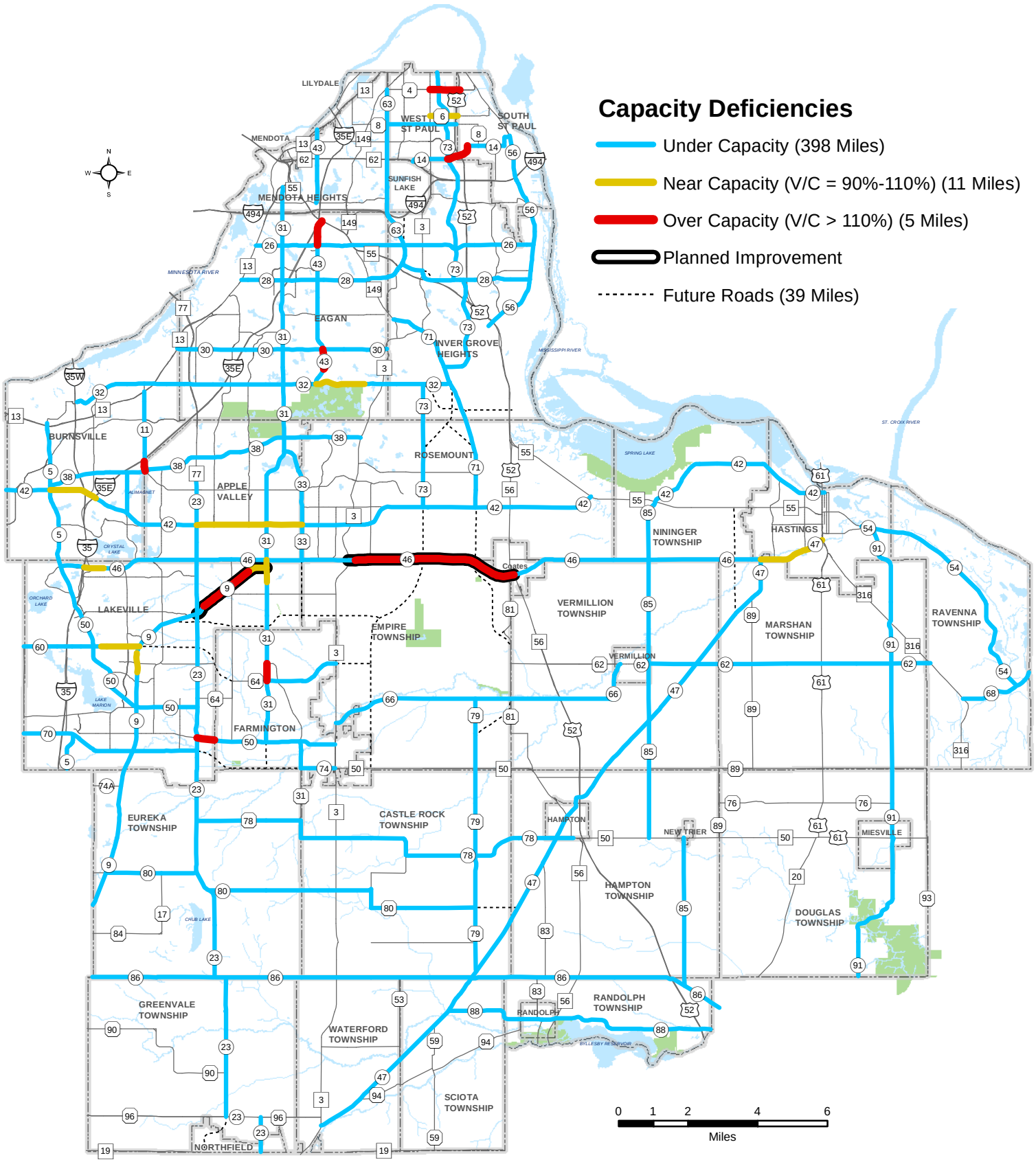
- Location
- Geometrics, including major intersections
- Share of daily traffic occurring during the peak hour of use
- Directions of traffic flow during peak use
- Traffic controls

The following indicates the centerline miles of County highway over capacity by time period.

- 2019 = 5 miles
- 2040 = 19 miles (based on County Travel Demand Model results and assuming only CIP project implementation and identified future county highway alignment development)

By Comparison: The Dakota County 2030 Transportation Plan estimated that 109 miles of county highway centerline would be approaching or over capacity by 2030.

Dakota County Highway Capacity Deficiencies, 2019



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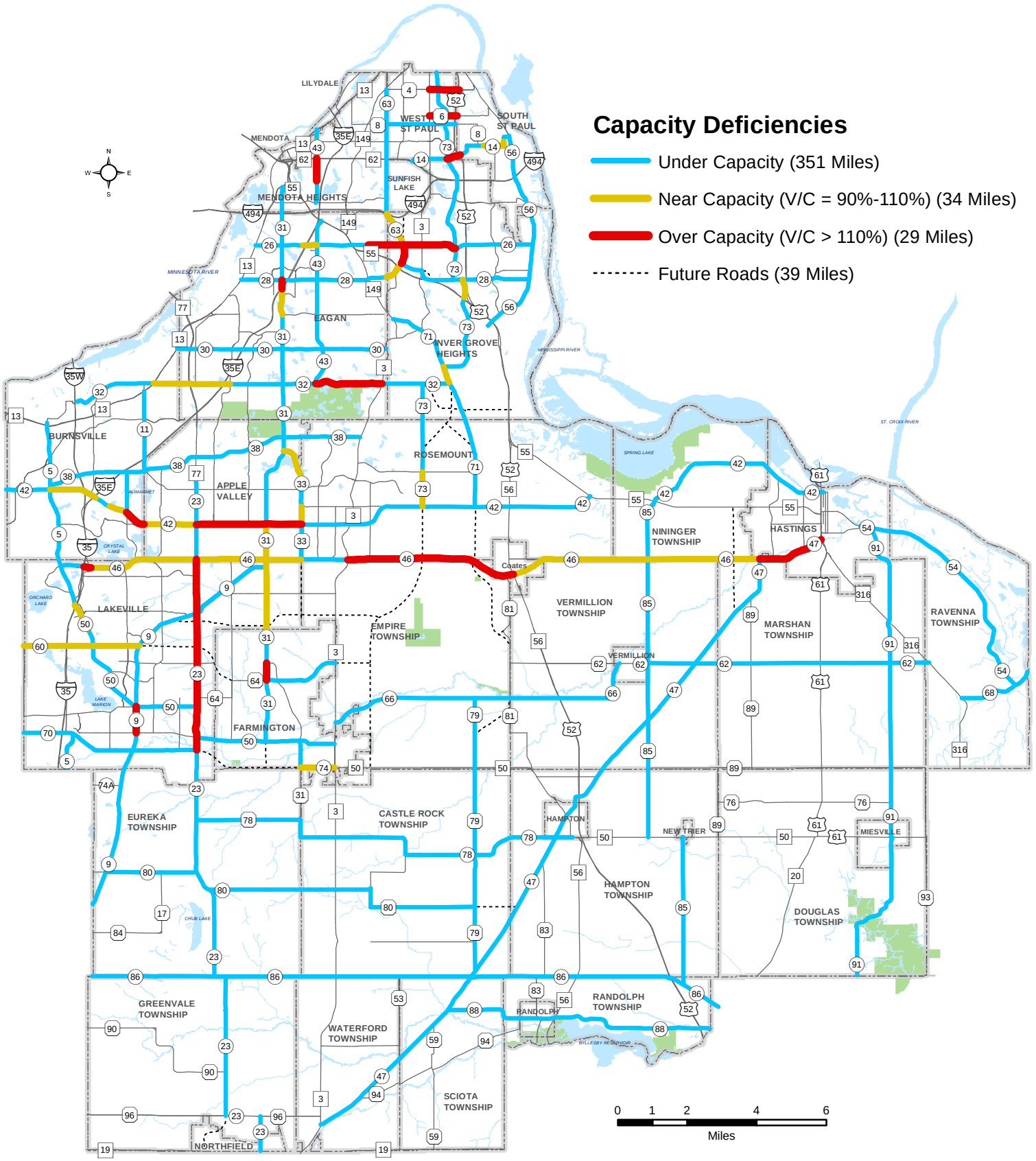
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 4

Dakota County Highway Capacity Deficiencies, 2040



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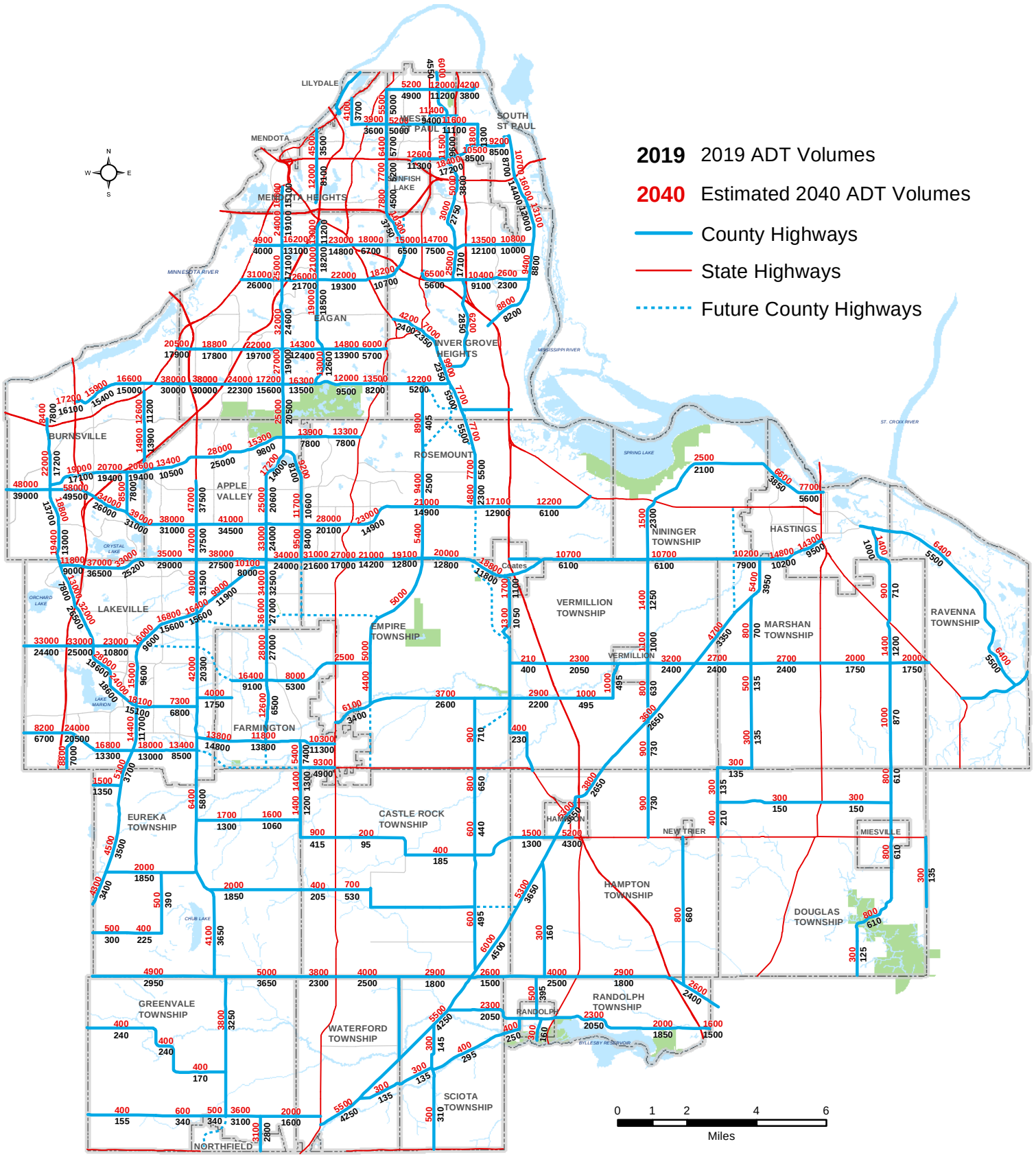
Dakota County 2040 Transportation Plan - Figure 5

Average Daily Traffic - County Highways, 2019/2040



Prepared by:
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Dakota County 2040 Transportation Plan - Figure 6

Highways shown as under capacity indicate that the traffic volume is less than 90 percent of the design highway capacity. Highways shown as near capacity indicate that the projected 2040 traffic volume is between 90 and 110 percent of the design highway capacity. Highways shown as over-capacity indicate that the 2040 traffic volume is expected to be greater than 110 percent of the design highway capacity.

High Volume Intersections

Many times, intersections of major highways result in the greatest capacity issues and deficiencies on the system. Turn lanes, traffic signal operation improvements, and by-pass lanes or roundabouts can assist in improving intersection operation. However, intersections can operate safely and efficiently up to approximately 65,000 to 75,000 vehicles per day. Once the capacity threshold of an at-grade intersection is exceeded, the next step for improvement for mobility and safety is grade-separating the intersecting roadways.

The CSAH 23 (Cedar Avenue) and CSAH 42 intersection, with a volume of 76,000 vehicles daily is above the intersection capacity threshold. The intersection currently has multiple through lanes and dual left turn lanes for Cedar Avenue. All practical improvements, including additional turn lanes, were implemented as part of the Cedar Avenue Transitway improvement project at this intersection to provide for efficient intersection operation. However, congestion will continue to be expected given the high traffic volume entering this intersection daily.

Traffic volumes at one additional intersection shows operation approaching or exceeding capacity by 2040. The intersection of CSAH 23 (Cedar Avenue) and CSAH 46 is anticipated to have a 2040 traffic volume of 84,500 vehicles daily by 2040.

There were no locations identified by the Met Council and MnDOT Principal Arterial Intersection Conversion Study where county highways intersect trunk highways with a high grade-separation priority requiring construction or reconstruction of an interchange.
Projected transportation revenues are inadequate to fund grade separated interchange projects to address these over-capacity intersections. These improvements will require funding sources beyond current county highway funding sources.

System Condition

The county transportation system is generally in good condition. Overall, the condition of the system is better now than it was in 2012 when the *Dakota County 2030 Transportation* plan was adopted. Recent investments in bridge and pavement preservation and replacement have contributed to the better system condition. However, the overall county transportation system continues to age, resulting in higher future preservation and replacement needs.
Estimated investments for highway surface preservation are anticipated to rise through 2040. The preservation strategy identified within the Plan is to keep 95 percent of the highway system as fair or better as rated in the Pavement Quality Index and 75 percent as good or better. In the future, if the preservation investment needs increase more than anticipated, the performance measure may need to be re-evaluated or additional funds identified.

Even with sound pavement and bridge preservation techniques and adequate investment, transportation system infrastructure eventually needs to be replaced. Much of the county highway system is currently 50 years or older. It is expected that 119 miles of county highways

will reach their useful life of 70 years and need to be replaced and modernized to meet current travel demand and multi-modal travel needs years by 2040.

Competing Access and Mobility Needs

Considering other issues such as growth, miles traveled roadway capacity deficiencies, and highest volume intersections, demands on the transportation system increase. Land use development brings more traffic and need for site access. An increase in the number of site accesses and increased traffic compromises safety and mobility for all highway users.

County highways serve multiple functions of meeting through trip needs while also providing access and pedestrian and bicycle accommodation for businesses and residents in the area. Congestion and safety problems arise from conflicts between traffic entering and exiting facilities competing for gaps in highway traffic due to access located only along the highway or when residents' driveways or intersections are closely spaced. These varied travel demands on the county highway system are continually increasing due to growth and related development.

Access management involves planning the location, design, and operation of intersecting streets and driveways, traffic control, and median openings. To maximize the county's highway investment, it is essential to maintain the safety and mobility of the system in consideration of all modes by proactively utilizing access management techniques. The county uses access management policy and review of access needs through corridor studies, traffic review of specific development proposals and the County Plat Commission review to identify the type and best location of access that should be permitted on the county system. Dakota County's access management plan involves working with local agencies and developers so the county can understand the impacts, operation needs, and improvements necessary to accommodate land use changes. The county can then apply specific access management techniques to best balance access and highway needs for all users of the system. With these access management principles in place, the highway system can continue to perform at an acceptable level of service thus preserving the current highway or minimizing the need for additional lanes along the highway system.

Projected Regional Transportation Investments

Dakota County lacks an east-west system of trunk highways. The county also lacks proper spacing of principal arterials resulting in trips with a purpose of mobility being served on roadways designed to balance or provide preferences for access. Metropolitan Council guidelines identify spacing of principal arterials at two to three-mile intervals in developed areas and three to six miles in developing areas. Most principal arterials statewide are under MnDOT's jurisdiction. However, Dakota County has 18 miles of principal arterials on county highways CSAH 23, CSAH 32 and CSAH 42. In Dakota County, the east-west trunk highway system is widely spaced and discontinuous. There is not a cross-county east-west trunk highway from I-494 to the south county border, a distance of almost 30 miles.

Dakota County is projected to have approximately 16 percent of the growth in the Twin Cities region between 2020 and 2040. Proposed investments on the regional transportation system (state highways and regional transit) are not adequate to address this growth. There is very little investment in regional transportation envisioned for our county in the next 20 years despite the fact that we will be home to 89,000 new residents by 2040. This is shown in Figure 7.

Transportation Technology

Advancement in transportation related technology has the potential to produce a number of safety, mobility and environmental benefits for the traveling public over the Plan period. Transportation technology includes advances in both information along with potential newer technologies including electric, connected and autonomous vehicles.

The private sector is currently leading the way with development and introduction on new technologies. The timing or widespread public adoption and necessary changes to public sector transportation system design and operations remains uncertain. Traditional transportation planning and operation will likely still be the predominate approach through the Plan period. However, there will be opportunities for enhanced safety and operation of the county transportation system provided by the evolution of transportation technologies. The county will actively monitor connected and autonomous vehicle technology advancements, technical innovations impacting trends and infrastructure and consider system adaptions when appropriate to maximize safety and efficiency of the system.

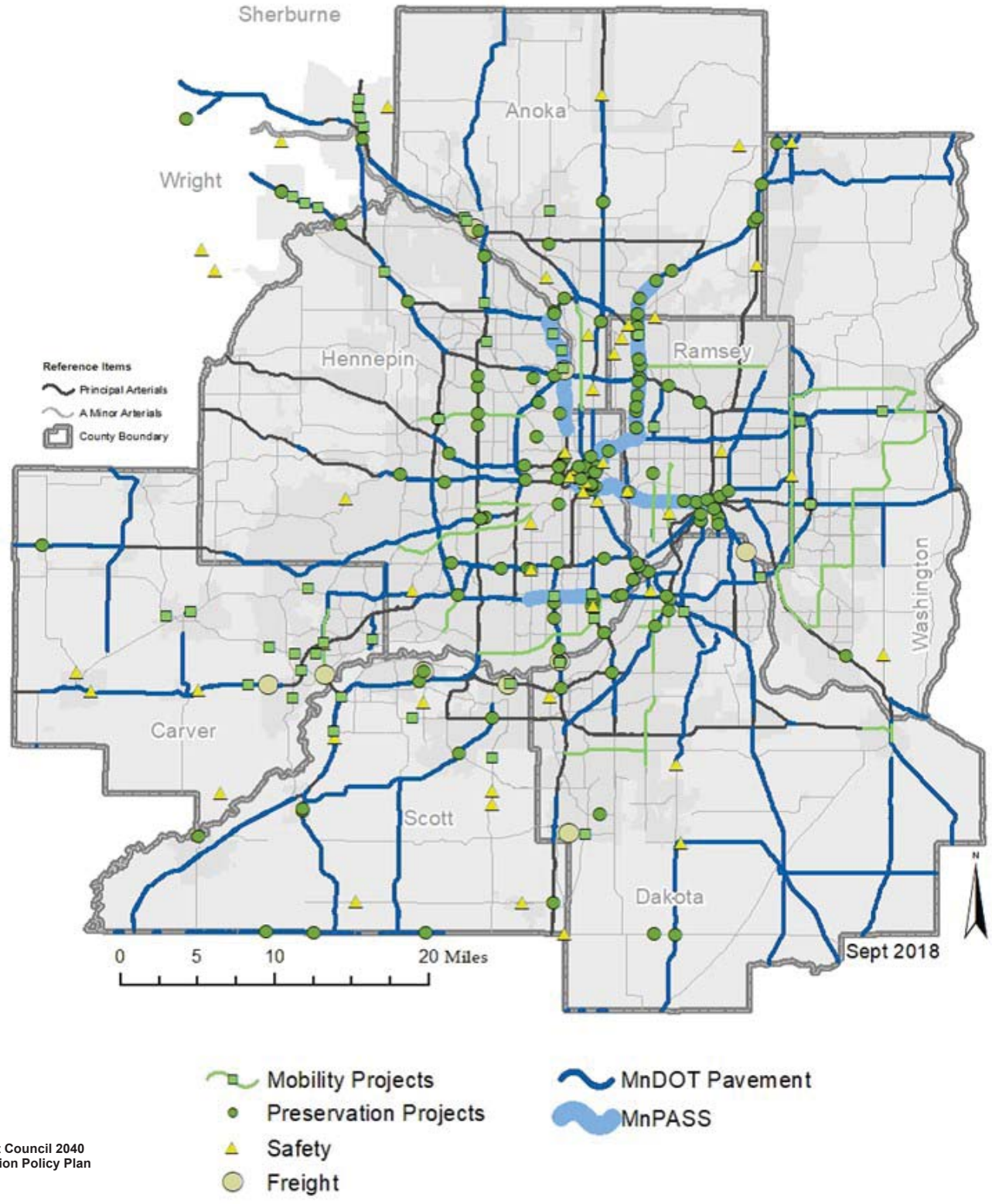
Bicycle and Pedestrian Facilities

Dakota County has built more than 250 miles of multiuse trails and sidewalks within its right-of-way in the past 40 years. Despite completing much of a trail and sidewalk system, critical gaps remain in the urban and suburban portions of the county. In recent county surveys, residents have expressed an increased demand for bicycle and pedestrian facilities to accommodate the increase in these mode activities. Bicycle and pedestrian facilities are important elements of a safe and efficient multi-modal transportation system. Strategies and policies addressing these needs have now been included throughout the Plan goals to be included with county highway needs.

Transit and Transitways

The county's role in transit has continued to evolve in recent years as some projects have advanced and new needs are recognized. Though the county is not a transit provider, the county has historically supported the development of transit in a variety of ways that continues to evolve. Future activities will include supporting roles in the pursuit and support of the advancement of transit and transitways in place of a lead role. The county intends to partner with transit providers, cities and transit riders to pursue transit enhancements that are determined to be effective to meet Dakota County's suburban scale transit needs.

Proposed Regional Highway Investments



Source: Met Council 2040 Transportation Policy Plan 2/2021.

Dakota County 2040 Transportation Plan - Figure 7

COVID-19 Impacts on the Transportation Plan

At the time that this plan was being prepared the COVID19 pandemic had begun and its longer-term impacts on transportation were unknown. The COVID-19 pandemic has the potential to result in demographic, economic, cultural, and financial changes that extend far into the 20-year planning time horizon for this Plan. We need only look back at the Great Recession of 2008 to understand how an event of this magnitude may influence future growth and corresponding assumptions about transportation needs and revenues.

Population and Employment Growth

As of April 27, 2020, an estimated 18% of the Dakota County labor force had filed for unemployment within a 6-week period. Pro-longed periods of unemployment and economic stress have historically delayed household formation and population growth. A COVID-19 triggered recession may have a direct impact on the number of homes and other residential units that are constructed. Similarly, economic strain may impact the number of available jobs. Fewer jobs results in less travel. The Transportation Plan is based on long-range population and employment forecasts prepared for the Metropolitan Council for the region and for Dakota County.

It is unknown how the COVID-19 pandemic will impact long-range socio-economic forecasts for Dakota County. It will be especially important to monitor population and employment growth to determine if we need to adjust the transportation needs assumptions in this plan.

Societal Changes and Highway Congestion Levels

The immediate impacts of the COVID-19 pandemic are clear as traffic levels in the region declined over 40% in March and April 2020 due to less travel to work, school, and other activities. However, by the end of June traffic volumes had returned to less than 10% below levels prior to the onset of the pandemic. What is less clear are how these will affect long-term travel patterns, particularly peak hours most related to congestion. It is apparent that large numbers of people have technology that allows them to work and shop remotely. People have learned how to use new software and methods to replace the communication that would normally occur in a face-to-face environment. Employers have learned how to support employees working from home. The Metropolitan Council has stated in the Transportation Policy Plan that it will monitor the rapid changes in telework capabilities resulting from the COVID-19 pandemic and how they may impact future congestion levels.

Societal Changes and Transit

Transit use has also plummeted during the COVID-19 pandemic, magnifying a trend of declining ridership that had started prior to the pandemic. Transit vehicles by their nature require people to ride together in relatively small spaces, prompting transit agencies to urge riders to use transit only for essential trips. It is anticipated that people that have access to a private automobile, or live close enough to walk or bike to their destination may switch to one of these other travel modes while the pandemic continues. Others may continue to telework reducing trips altogether. Transit riders that do not have access to or ability to use a private automobile may be disproportionately affected in their ability to travel safely until the pandemic is resolved. As of early 2021, the pandemic resulted in 90% decline in express service boardings and 60%

decrease in local bus and light rail boardings throughout the region with a slow and uneven recovery.

Transportation Investment Direction

The COVID-19 pandemic has already had near-term and may potentially have longer-term impacts on multiple sources of transportation revenue. Traditional sources of transportation funding will be impacted by less driving and lower economic activity.

- Highway user fees such as gas tax revenues are directly related to fuel consumption. As less fuel is being purchased, less revenue will be generated.
- County sales and use tax revenues are impacted by a slower economy
- Motor vehicle sales taxes are also likely to be lower as unemployment rates and economic stress may result in fewer vehicle purchases.
- Property tax revenue may be reduced if there is a reduction in demand for commercial property due to more telework, or if a housing crisis follows the COVID-19 recession.
- Transit fare box revenues are tied directly to ridership and will be down as long as ridership is reduced.

To account for this potential, estimated revenue has been reduced in the 2021 to 2025 timeframe to align with assumptions used for development of the Transportation Capital Improvement Programs for this same period.

While revenues are anticipated to see a reduction, the need to expand the transportation system may also decrease due to reduced travel and peak period demand. A reduction in travel may alleviate some of the financial needs associated with expansion projects identified in the Plan. To account for this, long range expansion needs have been adjusted by identifying only those county highways at more than 110% of capacity as likely needing expansion during the plan period. However, the majority of Plan identified needs in the Preservation, Management, Replacement and Modernization investment goals, along with maintenance and operational expenses for the system are not directly associated with increased traffic volumes. These operation and maintenance costs constitute the bulk of the Plan's long-range costs and are not expected to be impacted by reduced transportation revenues or traffic. It is also unclear how transit ridership of various modes will be affected long term, but the array of services outlined in this Plan needs are intended to align with the increasingly diverse rider needs of the county's suburban transit environment.

Agency and Public Engagement

As part of the Transportation Plan development process, staff proactively conducted engagement activities of local agencies and the public to gain perspective and find out what agencies and residents had to say about the county transportation system overall. Findings of agency and public engagement activities were evaluated and used throughout the development of this plan. Highlights of engagement activities included the following.

Agency Engagement:

- Conduct 20 overall meetings with cities, townships, school districts and chambers of commerce to provide Transportation Plan information, listen to concerns and provide answers.

- Met with the county city engineers and public works directors.
- Met with the county city managers organization.
- Met twice with the Dakota County Planning Commission.
- Top comments and concerns
    - Safety and management,
    - Concerns with trunk highways,
    - Intersection control,
    - Trails,
    - Project cost-share, and
    - Role in transit
    - Multi-modal plans

Public Engagement

- Met with the public through nine in-person activities (pop-up events, community events and listening sessions)
- Provided opportunity for comment through online engagement activities (surveys, interactive maps and ideas board) to find out what residents had to say about the county transportation system.
- 1,300 responses to the in-person activities and online engagement resulted in the following top comments and concerns
    - Traffic congestion or delay,
    - Walking and bicycle safety,
    - Availability/reliability of transit, and
    - Driving safety and comfort

A complete summary of agency and public engagement is in Appendices.

2012-2020 Investments and System Accomplishments

The following are the transportation system accomplishments that have occurred since the adoption of the *Dakota County 2030 Transportation Plan.*

Transit

- The Cedar Avenue METRO Red Line Bus Rapid Transit multimodal expansion
- Access to, and expansion of, the Cedar Grove Transit Station.
- Expansion of the Apple Valley Transit Station
- East-West and Eastern Dakota Transit Studies
- I 35W METRO Orange Line Bus Rapid Transit is under construction
- I 35 METRO Orange Line Extension Study

Preservation

- 189 miles of bituminous overlays and other treatments occurred resulting in a pavement quality of 70 percent of lane miles in the good range in 2019 compared to 73 percent in the good range in 2012.
- All gravel roadways have now been resurfaced with lime rock.

Management

- 21 intersection and signal revision projects.
- 13 signal revision projects installing flashing yellow arrows for left turn phases.
- As of 2020, the county has designated 95 miles (78 percent) of the proposed 10-ton county highways.
- 4-2 corridor traffic signal Advanced Traffic Management Systems on CSAH 42, CSAH 23, CSAH 31 and CSAH 46.
- 6 jurisdictional transfers of former county highways to local agencies for:
  - CR 45 in Lilydale
  - CR 87 in Nininger Township
  - CR 79 in Empire Township
  - CR 51, CR 53N, and CR 80 in Castle Rock Township
- Planning for jurisdictional transfers of roadways in Lakeville and South St. Paul
- 3 safety and management projects resulting in new surface and turn lanes on CSAH 28 in Eagan, CSAH 38 in Apple Valley and Rosemount and CSAH 62 in Vermillion.
- 6 roundabouts at the following locations:
  - CSAH 8 and CSAH 73 in West St. Paul
  - CSAH 9 and Highview Avenue in Lakeville
  - CSAH 50 and CSAH 60 in Lakeville
  - CR 64 and Flagstaff Avenue in Farmington
  - CSAH 64 and CSAH 31 in Farmington
  - CSAH 64 and Akin Road in Farmington
  - CSAH 50 and Holyoke Avenue in Lakeville

Replacement

- 1 Fiber interconnect project on CSAH 42, in Burnsville and Apple Valley.
- 10 bridge replacements.
- 3 flood repair projects on CSAH 80, CSAH 86 and CSAH 68
- 21 signal replacements with ADA improvement projects.
- 10 highway replacement projects at:
  - CSAH 9 in Lakeville;
  - CSAH 9, from Scott Co. to CSAH 70, in Lakeville and Eureka Township;
  - CSAH 23, Cedar Avenue BRT completion in Apple Valley;
  - CSAH 38, TH 3 to Johnny Cake Rd, concrete rehabilitation in Apple Valley and Rosemount;
  - CSAH 86, TH 52 to TH 3 in Randolph, Hampton, Castle Rock, Sciota and Waterford Townships;
  - CSAH 31/CSAH-CR 64 replacement in Farmington;
  - CSAH 50, Holyoake to CSAH 23, in Lakeville;
  - CSAH 8, CSAH 63 to Humboldt Avenue, in West St. Paul;
  - CSAH 23, from CSAH 86 to CR 96 in Greenvale Township; and
  - CSAH 42, from TH 55 to Lock Boulevard in Nininger Township.
- 1 safety and management project on CSAH 33 in Rosemount.
- 5 multimodal replacement projects at:
  - CSAH 14 sidewalk, TH 52 to 2nd Street, in South St. Paul;
  - CSAH 33 trail, CSAH 42 to Connemara Trail, in Rosemount;
  - CSAH 42 trail in Burnsville and Apple Valley;

- CSAH 38 pedestrian overpass in Apple Valley; and
- MRRT Trail in Spring Lake Park.

Improvement and Expansion

- 3 Trunk Highway interchange projects at:
  - CSAH 5 and TH 13 interchange in Burnsville;
  - CSAH 86 and TH 52 in Hampton and Randolph Townships; and
  - TH 52 and CSAH 42 in Rosemount.
- Robert Street corridor road improvements in West St. Paul.
- 5 expansion and lane addition projects at:
  - CSAH 9, from 185th Street to Hayes Avenue, in Lakeville;
  - CR 28, from CSAH 63 to Amana Trail, in Inver Grove Heights;
  - CSAH 9 – lane additions in Lakeville
  - CSAH 50 – lane additions in Lakeville
  - CSAH 63 – realignment/lane additions in IGH
- 2 intersection expansion projects at:
  - CSAH 63 / TH 55 intersection in Inver Grove Heights and
  - New roundabout at CSAH 50 and CSAH 60 in Lakeville

Average Annual Investments by Plan Goal

Activity	Average Annually in $millions 2012 Plan	2012-2019 CIP
Goal 1 - Resources	0.8	6.8
Goal 2 - Transit and Mode Integration	12.0	13.4
Goal 3 - Preservation	4.8	7.5
Goal 4 - Management	7.7	9.3
Goal 5 - Replace	11.6	12.7
Goal 6 - Improvement and Expansion	32.4	18.0
Totals	69.3	67.7

The average annual investment during the plan period was approximately 83 percent of what was estimated in the previous Transportation Plan. One reason for this is during the plan period is expansion needs were considerably less than identified in 2012. This may be due to the leveling of actual daily travel demand in the last decade and the advent of advanced, connected and improvement signal systems allowing for greater highway capacity.

The county will continue its commitment to transportation through CIP funding to provide for a safe and efficient transportation system. This resulted in the following affects to each plan goal.

In addition, staffing activities were identified under Operations in the past. This Plan identifies staffing activities within the CIP under the Resources activity. The preservation goal funding has doubled since the 2030 Plan estimate. This goal is one of the most important to the county in that it provides for the most effective way to protect the county transportation system investments while reducing the need for unnecessary or premature replacement costs. Recent preservation investments have led to a significant improvement to pavement quality conditions

and gravel road conditions. 189 miles of bituminous overlays and other treatments have occurred resulting in a pavement quality of 70 percent of lane miles in the good range. All gravel roads have been resurfaced with lime rock. Lime rock resurfacing holds the road's crown better, is more efficient for dust control and requires less maintenance than typical gravel. Staff has found that the lime rock resurface is performing better than anticipated.

Management goal project activities have doubled since the 2030 Plan estimate. Management activities aim to enhance the relationship and compatibility between land uses and transportation to assure an efficient and safe system. The increase was primarily reflected in safety improvement and management projects primarily consisting of intersection improvements. Increases in safety and management projects and signal revision projects and Advanced Traffic Management Systems have allowed for better system management and delay of future expansion needs.

Replacement and modernization goal project activities were approximately 1.7 times more than estimated in 2012. However, this is less than the 3.5 times increase estimated in 2004. Completion of projects resulted in replacement of highway segments that have exceeded their useful life to include improved structural condition and safety conditions for reconstructed segments. In addition, the county has no structurally deficient bridges because of the increased goal investment. Also, gravel road paving has led to improved safety, ease of travel and maintenance on the affected segments. As the transportation system continues to age, future highway replacement and traffic signal replacement projects should be addressed.

The transit and transitway goal funding have changed significantly. Estimated need for this goal is 20 percent of what was identified as a need in 2012. Over the last two decades, Dakota County has had extensive responsibilities in transit project management and regional governance of transitway development with the development of the Cedar Avenue Transitway project and participation in CTIB. Both commitments have concluded. The county may participate in a technical role in developing future transit service and may participate as a funding partner for required transit infrastructure that benefits the overall county transportation system.

Expansion goal project activities decreased approximately 25 percent over the estimated figure in 2012. Travel demand and population growth have moderated in the last decade. City demand for expansion is lessening. In addition, new techniques in other investment goals, such as Management, have helped delay the need for expansion investments.

Transportation Plan Format

The Transportation Plan format follows a hierarchy that includes principles, investment goals, strategies, policies and performance measures to assist the county in planning and prioritization of transportation system projects and studies.

Principle

Twelve principles, including five identified in the adopted County Comprehensive Plan and seven transportation specific principles identified in this Transportation Plan are considered

comprehensive and fundamental guidelines and practices that apply to all Plan Investment Goals.

Investment Goal

Six Investment Goals identified in this Plan are intended to identify what the county intends to accomplish and the resources it will require for the desired outcome for the transportation system.

Principles apply to all Plan Investment Goals. Strategies, policies and performance measures are contained within and are in support of each of the Plan Goals.

Strategy

Strategies identified in this Plan include specific actions or procedures that will typically be taken and applied consistently to achieve Plan Goals.

Policy

Policies identified in this Plan are formal statements of consistent practice or procedure that have been adopted by the County Board that adhere to all circumstances other than by Board resolution to meet Plan goals. Policies clarify how to implement goals and strategies.

Performance Measure

Performance measures identified in this Plan provide the basis or standard for measurement of accomplishments or implementation of Plan direction.

Transportation Plan Principles

The Plan includes twelve overarching principles that apply to all Plan goals. These include five guiding principles identified in the Dakota County Comprehensive Plan, DC2040 and seven principles specific to transportation. All these principles together guide the Plan policies, strategies and help in forming the basis for decision-making and priority determination.

The county will incorporate the following principles into all aspects of transportation system development and operations. Each principle is supported by strategies and policies to implement the principle objective and are identified in greater detail in the Transportation Plan Principles chapter of this document.

Dakota County Comprehensive Plan, DC 2040 Principles

- Sustainability
- Connectedness
- Collaboration
- Economic Vitality
- Growing and Nurturing People

Transportation-Specific Principles

- Transportation Safety and Standards
- Transportation Planning
- Social, Economic and Environmental Impacts (SEE)

- Public and Agency Involvement
- Context-Sensitive Design and Complete Streets
- ADA Transition Plan
- Transportation Technology

Transportation Plan Goals

Plan goals, strategies, policies, and performance measures are described in detail throughout the remainder of this document. This encompasses six primary goals that include the following.

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

This goal guides Dakota County efforts to develop the best transportation system for the safe and efficient movement of people and goods within financial constraints. The system vision has been developed in coordination with the state, adjacent counties, cities, townships, and other transportation partners through the goals and policies contained within this Transportation Plan.

Goal 2: Preservation of the Existing System

The most effective way to protect Dakota County's transportation system investments is to continually evaluate and maintain the existing system to reduce unnecessary or premature replacement investments while maintaining safety and mobility. Preservation investments are intended to maximize infrastructure life and minimize life cycle costs of the transportation system.

Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

Safe travel on routes with minimal congestion while balancing multi-modal accommodation is an integral part of Dakota County's vision for its transportation system. Fiscal, social and environmental constraints limit the ability for an accelerated road construction program to achieve this vision alone. Management strategies contained in this Goal are intended to optimize the safety and capacity of the existing transportation system to maximize safety for all modes and to defer more costly expansion investments.

Goal 4: Replacement and Modernization of Deficient Elements of the System

Transportation system elements such as pavement and bridges deteriorate over time. Even with proactive preservation over the life of the transportation system, replacement eventually becomes the most cost-effective approach. Additionally, standards and practices change, affecting system safety and operation to maintain safe and efficient movement of people and goods. Therefore, system modernization occurs at the time of replacement. The county will replace and modernize deficient elements of the transportation system as they become structurally or functionally obsolete to enhance safety and efficiently operate the system.

Goal 5: Transit and Transitways

This goal provides guidance to Dakota County's roles in developing, coordinating and supporting transit services within the county and region. Continued population growth and diversifying

travel needs have led the county, service providers and other local governments to consider and implement transit services that can respond effectively to the needs of residents and businesses in a range of built environments. The county's role in transit has continued to evolve in recent years as some projects have advanced and new needs are recognized.

Goal 6: Expansion of Transportation Corridors
The county will consider expansion of existing transportation system within available financial resources left after investing in preservation, management, and improvement and modernization needs to address emerging deficiencies to address capacity needs to provide for safe and efficient travel with minimal congestion.

Summary

Updating of this Plan coincides with recent updates to state and regional comprehensive and transportation plans that help define needs that need to be addressed over the next 20 years. In addition, this Plan incorporates results of recently completed transportation studies that address state highways and principal arterial highways within the county; anticipated land development; anticipated population growth; and overall transportation system needs.

Dakota County will use the 2040 Transportation Plan as the primary implementation guide to maintain and improve the county's transportation system through 2040. The principles, investment goals, strategies, and policies will be used to guide capital investments through development of annual 5-year Capital Improvement Programs, and through ongoing operation and maintenance of the county transportation system.

Chapter 3

Transportation Plan Principles

The Plan includes twelve overarching principles that apply to all Plan investment goals. These include five guiding principles identified in the Dakota County Comprehensive Plan, DC2040 and seven principles specific to transportation. All these principles together guide the Plan policies, strategies and help in forming the basis for decision-making and priority determination.

The county will incorporate the following principles into all aspects of transportation system development and operations. Each principle is supported by strategies and policies to implement the principle objective.

Dakota County Comprehensive Plan, DC2040 - Guiding Principles

Sustainability

This principle supports living comfortably in a friendly, clean and healthy community and growing without placing environmental, economic and social burdens on current and future generations. Sustainable transportation is characterized by a transportation system that links people to activity centers through modes of transportation that reduce our use of natural resources and energy.

The following ***strategies*** support the sustainability principle:

- **Greenhouse Gas Emissions**
  Consider the greenhouse gas reduction effects in making decisions on roadway design elements and traffic management techniques to reduce greenhouse gas emissions through more efficient operation of the highway system, including roundabouts, signal timing and use of shoulders for transit vehicles.

- **Environmentally Sound Practices**
  Use environmentally sound practices and/or practical alternatives to the use of roadside chemicals, neonicotinoids, sand, use of salt for snow and ice control and gravel surface treatments, bridge materials, concrete, asphalt and roadbed materials. Use through-lane reductions when practical to reduce impervious surfaces and filter and infiltrate water.

- **Habitat Considerations**
  Use sound practices in consideration of habitat including pollinators, minimized use of materials, native grass seed and animal crossings.

- **Choose Materials with Less Adverse Effects**
  Use of materials with less adverse effects to the environment will be considered.

- **Recycled and Sustainable Materials**
  The use of recycled and sustainable materials, such as recycled asphalt pavement, in accordance with the current edition of the MnDOT Standard Specifications for Construction, will be encouraged and permitted.

- **Dakota County Energy Transportation Strategies**
  Implement Dakota County energy transportation strategies that address greenhouse gas emissions and support transition to alternative or renewable energy.

The following ***policies*** support the sustainability principle:

PP.1 Cultural and Natural Resources
The preservation and enhancement of the region's cultural and natural resources will be balanced with transportation projects in accordance to Minnesota Environmental Quality Board (MEQB), the National Environmental Policy Act (NEPA) and Dakota County Land Conservation Plan guidelines.

PP.2 Wetland Mitigation Areas
When wetland impacts cannot be avoided, create wetland mitigation areas in compliance with local, state and federal permits by delineating wetlands on transportation projects, creating wetland mitigation areas within the affected watershed first and within the county second and developing wetland bank credits for establishment of quality habitat and cost-effective wetland mitigation of future transportation projects.

PP.3 Well and Water Supply
When appropriate, install, maintain or permanently seal all wells impacted or used in conjunction with any transportation project, in accordance with Dakota County Ordinance No. 114, Well and Water Supply Management and MN Rules 4725.

PP.4 On-Site Sewage Treatment
When appropriate, properly install, maintain or properly abandon all sewage systems impacted or used in conjunction with any Dakota County transportation project, in accordance with Dakota County Ordinance No. 113, On-Site Sewage Treatment and MN Rules 7080.

PP.5 Surface Water Drainage System Design
Design surface water drainage systems with transportation system improvements to protect water quality, enhance roadside habitat and reduce long-term costs associated with managing and maintaining drainage systems. Comply with all federal, state and local requirements.

Implementation of the Sustainability principle is supported by the following policies identified in later document chapters: F.2, F.8, F.9, T.3 and M.9.

Connectedness

This principle refers to land use patterns and multimodal transportation networks that allow people to easily move between neighborhoods, provide jobs near housing and offer convenient shopping and services.

The following ***strategies*** support the connectedness principle:

- **Land Use and Transportation**
  Work with local agencies to integrate land use and transportation planning to optimize the use of, and minimize the need for, investments in county and city transportation systems.

- **Multi-Modal Corridor Planning**
  Identify arterial corridors that should be closely coordinated with transit, pedestrian and bicycle needs and regional utility needs

- **Dakota County Plat Commission**
  Utilize the Dakota County Plat Commission to coordinate transportation system needs with development and redevelopment contiguous to county highways.

The following ***policy*** supports the connectedness principle:

PP.6 Pedestrian and Bicycle Facilities
Evaluate all transportation projects for opportunities to improve bicycle and pedestrian connectivity and safety, including repair or provision of shared use paths, shoulder bike lanes, sidewalks and crossing safety improvements.

Implementation of the Connectedness principle is supported by the following policies identified in later document chapters: F.14, F.15, F.16, M.13, M.14, M.15, P.2, M.3, M.4 and M.8.

Collaboration

This principle supports coordinating the efforts of public agencies and private entities toward maximizing transportation infrastructure, services and resources. Transportation corridors and transit services should provide access and mobility to business and residential communities. Collaboration is especially important as estimated resources are not sufficient to keep pace with anticipated transportation needs.

The following ***strategies*** support the collaboration principle:

- **Transportation Advisory Board (TAB)**
  Provide input to the Metropolitan Council and MnDOT regarding county transportation issues through participation in the Transportation Advisory Committee and Transportation Advisory Board.

- **State, Regional, and Local Committees**
  Participate on state, regional, and local committees regarding county transportation issues and pertinent research.

- **Transportation Studies**
  Undertake studies when needed to address emerging transportation issues and needs through cooperation and participation with relevant regional agencies and affected parties.

- **Metropolitan Council**
  Participate in the development of and be consistent with the Metropolitan Council's Regional Development Framework, Transportation Policy Plan and other applicable documents and studies.

- **Minnesota Department of Transportation**
  Coordinate development of the Dakota County Transportation Plan with MnDOT's State Highway Investment Plan and other applicable documents and studies.

- **Local Agencies**
  Coordinate with local agencies including cities, townships, chambers of commerce and school districts on roadway, transit, intermodal and integrated land uses.

- **Maintenance Operation Partnerships**
  Pursue opportunities and continue partnerships with other agencies to maximize efficiency of maintenance and operations through agreements that provide for reimbursement of normal costs for maintenance that is performed by another agency.

- **Coordination with Other Jurisdictions**
  Coordinate transportation system planning, project development, design details and operation with other jurisdictions.

- **CONDAC and MnDOT**
  Participate in monthly coordinating meetings city public works staff through the Coalition of Northern Dakota County Cities (CONDAC) and MnDOT staff.

Implementation of the Collaboration principle is supported by the following policies identified in later document chapters: F.1, F.2, F.3, F.4, F.5, F.6, F.7, F.8, F.9, F.10, F.11, F.12, F.14, F.14, F.15, F.16, F.17, M.5, M.6, M.7, M.8, and M.10.

Economic Vitality

This principle identifies transportation and technology infrastructure playing a large role in attracting high-paying employers in growth industries that are situated to help the region compete nationally and internationally. Interrelationships between transportation investments, telecommunication systems and other public infrastructure are recognized and coordinated with economic development goals.

The following ***strategies*** support the economic vitality principle:

- **Economic Development Considerations**
  Consider transportation planning effects on economic development of adjacent land through:
  - Transportation system design principles and relationship to land use and development
  - Transportation system management and relationship to site access and spacing
  - Work with communities, chambers and businesses to consider employee access to jobs
  - Transportation system expansion and relationship to transit service
  - Consideration of freight needs in transportation system planning and implementation

- **10-Ton County Highway System**
  Complete the designation of the 10-Ton County Highway System to create facilities that encourage commerce and employment growth.

- **County Economic Development**
  Participate in multi-department county economic development planning efforts.

Implementation of the Economic Vitality principle is supported by the following policies identified in later document chapters: F.3, F.10, M.3, M.4, M.10, M.11, E.1, E.2, E.3, and E.4.

Growing and Nurturing People

This principle refers to providing a variety of transportation choices to meet the needs of people of all ages, abilities, incomes and backgrounds. A safe and efficient transportation system exists to provide opportunities for people to accommodate a positive quality of life.

The following ***strategies*** support the growing and nurturing people principle:

- **Transit Service Providers**
  Coordinate with the Minnesota Valley Transit Authority and Metro Transit to accommodate transit service in county right-of-way through the construction of transit stations, bus pull outs, shelters and other transit supportive facilities. Work with transit providers to support transit services that are effective in a variety of development contexts throughout the county.

- **Integrate Transportation Modes**
  Meet with other units of government and other affected parties to better coordinate and integrate transportation modes (e.g., highways, rail, waterways, airports, transit, bikeways, trails and pedestrian ways).

- **Transit Providers**
  Coordinate efforts with Metro Transit, MVTA, DARTS and other transit providers to develop strategies for suburban scale transit enhancements.

- **Pedestrian and Bicycle Facilities**
  Evaluate all transportation projects for opportunities to improve pedestrian and bicycle connectivity and safety, including repair or provision of shared use paths, shoulders, bike lanes, sidewalks and crossing safety improvements.

Implementation of the Growing and Nurturing People principle is supported by the following policies identified in later document chapters: F.17, P.2, M.8, M.13, M.14, and M.15.

Transportation-Specific Principles

Transportation Safety and Standards

Safety is the top consideration underlying in all transportation products and services provided by Dakota County. Safety for all modes of the traveling public is the priority on the county transportation system. This principle pertains to system planning, design, operations and maintenance. The most notable activities are relevant to system design including design standards, traffic control devices, shoulders, trails, speed limits and intersection lighting in consideration of all modes of transportation.

General safety/traffic operations information:
Safety issues are addressed, where possible, by implementing engineering solutions in a collaborative manner with other agencies in consideration of education, enforcement and emergency response considerations. The number of crashes on the county highway system varies from year to year despite efforts to address mobility and safety issues. Often driver behavior, not highway deficiencies, is the primary cause of a crash. Human factors -- including speed, running red lights, driver inattention, drivers under the influence of substances, failure to yield right-of-way or disregarding traffic control devices -- are identified as contributing factors for most crashes on the highway system. The most cost-effective approach to transportation safety includes consideration of a collaborative effort of engineering, enforcement, education and emergency response.

The following ***strategies*** support the transportation safety and standards principle:

- **Roadside Clear Zones**
  Establish roadside clear zones in accordance with AASHTO and MnDOT criteria for maintenance and design.

- **Monitor Traffic and Pedestrian Data**
  Regularly monitor roadway, pedestrian and traffic data and conduct engineering evaluations and proactive safety assessments to identify effective safety improvements in a consistent manner across the transportation system.

- **Project Analysis and Selection**
  Consider roadway segment and intersection crash history as part of the process for Capital Improvement Program project selection.

- **Towards Zero Deaths**
  Partner with MnDOT, the Department of Public Safety and other agencies to promote elements of Minnesota's Toward Zero Deaths program where practical.

- **Law Enforcement Collaboration**
  Work closely with law enforcement personnel to evaluate and address safety issues and alert them to driver and pedestrian behavior that may be contributing to safety issues on the system.

- **Safety or Operational Issues**
  Implement changes, when appropriate, to an intersection or highway segment to address specific safety or operational issues. Proactively evaluate opportunities to increase safety.

- **Access Management**
  Apply proactive access management measures to minimize points of conflict.

- **Operation Policies and Procedures**
  Develop and periodically update Transportation Department Operation Policy and Procedures practice documents. These documents are intended to establish and maintain uniform definitions and practices for operation and design to improve the County highway system. These practices cover:
  - maintenance activities
  - permits and right-of-way management
  - maintenance operations including snow and ice removal
  - traffic operations including signing, signal maintenance and pavement marking
  - traffic and traffic safety related practices including bicycle, pedestrian and transit

The following ***policies*** support the transportation safety and standards principle:

PP.7 Design and Construction Standards
Use MnDOT, AASHTO, State Aid and Federal Aid standards as appropriate in the design and construction of highways.

PP.8 Traffic Control Devices Design and Operation
Design and operate traffic control devices on the highway and on adjacent trail systems according to engineering study and standards as stated in applicable Minnesota Statutes and Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD).

PP.9 Speed Limits
Speed limits will be posted on highways as provided by Minnesota law. The County Engineer is authorized to request MnDOT to perform traffic studies to determine the reasonable and safe speed limits on highways where conditions have sufficiently changed to warrant a study and/or when a city council requests a speed study by resolution. Special speed zones may be appropriate adjacent to schools, in rural centers and in areas where many pedestrians are present.

PP.10 Parking Restrictions
The County Engineer is authorized, at the county's discretion, to place parking restrictions on county highways when supported by city council resolution.

PP.11 Temporary Traffic Controls
The County Engineer is authorized to establish, maintain, and remove temporary traffic controls as necessary to allow safe and efficient progress of authorized highway projects, or for emergency situations.

Implementation of the Transportation Safety and Standards principle is supported by the following policies identified in later document chapters: F.4, F. 13, F.15, F.17, P.1, P.3, P.4, P.5, P.6, M.7, M.8, M.9, M.10, M.11 and R.2.

Transportation Planning

Transportation planning activities include the development of plans and studies that identify potential solutions to a transportation issue and future transportation system needs. The county developed a travel demand model to provide 2040 traffic projections to assist with future transportation plans and studies.

Dakota County participates with state, regional and local jurisdictions in transportation planning activities. Transportation planning activities also include the continual monitoring of land use and development for coordination with the county transportation system. Planning activities also include identification of methods to integrate transit and other transportation modes within the overall transportation system.

The following ***strategies*** support the transportation planning principle:

- **Transportation Plan**
  Review and update the Transportation Plan in conjunction with County Comprehensive Plan updates.

- **Travel Demand Model**
  Develop and maintain a County Travel Demand Model that is coordinated with the cities' planned development and land use and the Metropolitan Council to ensure regional and local compatibility.

- **State and Regional Plans and Studies**
  Participate in statewide and regional transportation plans and studies to help shape outcomes and represent county interests.

- **Location Specific Transportation Studies**
  Undertake site- or condition-specific studies in cooperation with applicable partners to assess and address location specific transportation needs.

The following ***policies*** support the transportation planning principle:

PP.12 CIP
Annually review and prepare the five-year Transportation CIP.

PP.13 CIP Resolution
Annually require a city council or township board resolution that requests and supports inclusion of a proposed project in the Transportation CIP.

PP.14 Transportation Plan Consistency
Prioritization and selection of Transportation CIP projects will consider consistency with the Transportation Plan and with Plan investment goals.

Implementation of the Transportation Planning principle is supported by the following policies identified in later document chapters: F.13, T.2, T.9, T.10, T.12, T.13, M.2, M.3, M.5, M.10, E.1 and E.3.

Social, Economic, and Environmental Impacts (SEE)

This principle identifies activities that result in avoiding, minimizing or mitigating impacts associated with the transportation system. Also identified are ways to address air pollution, erosion, noise, wetlands, storm sewers, water quality, aesthetics and waste management within the transportation system. Federal and state requirements pertaining to this principle will be followed.

The following ***strategies*** support the social, economic, and environmental impacts principle:

- **Avoid, Minimize and Mitigate**
  Avoid transportation system construction in wetlands, protected wildlife habitat, unique agricultural land and other sensitive environmental areas where feasible. When avoidance is not feasible, impacts caused by transportation projects will be minimized and mitigated in accordance with applicable laws, regulations and the Comprehensive Plan.

- **Erosion and Sediment Containment**
  Use temporary and permanent best management practices for the prevention of erosion and containment of sediments on highway right-of-way and during construction projects.

- **Maintaining Storm Sewer Systems**
  Maintain effectiveness of storm sewer systems to prevent flooding and limit the amount of sediment and debris from entering catch basins through street sweeping and road maintenance.

- **Conformance with National and State Requirements**
  Conform to national and state requirements including the National Environmental Policy Act (NEPA), National Pollutant Discharge Elimination System (NPDES) Phase II and Minnesota Environmental Quality Board (MEQB).

- **Road Design and Infiltration**
  Consider road design elements (such as ditches, swales and rainwater gardens (where appropriate) that will infiltrate storm water when practical.

The following ***policies*** support the social, economic and environmental impacts principle:

PP.15 Environmental Regulations
Follow the Dakota County Physical Development Division Environmental Due Diligence Process, investigate and clean up contamination in accordance with Minnesota Pollution Control Agency guidance when encountered, complete Regulated Building Materials Surveys on buildings that are to be demolished, and adhere to best management practices on all projects.

PP.16 NURP/NPDES
Apply National Urban Runoff Program (NURP) standards, or their equivalent, for highway projects and share maintenance costs. Conform to the National Pollutant Discharge Elimination System (NPDES) requirements and to state water quality standards in accordance with Mn Rules Chapter 7050.

PP.17 Solid Waste Management
Manage solid waste and evaluate available soil management options consistent and in accordance with Dakota County Ordinance No. 110 Solid Waste Management, the *Dakota County Solid Waste Master Plan* and applicable state and federal solid waste regulations. Expand the use of compost (yard waste and food waste-derived) in MnDOT and local government transportation infrastructure projects when appropriate. Use MnDOT specifications for compost use as appropriate in roadside construction and landscaping projects.

PP.18 Hazardous Wastes and Materials
Manage hazardous wastes and hazardous materials in accordance with Dakota County Ordinance No. 111, Hazardous Waste Regulation, and applicable state and federal hazardous waste and hazardous materials regulations.

PP.19 Storm Water Pollution Prevention Plan
Prepare a Storm Water Pollution Prevention Plan (SWPPP) for transportation construction projects in conformance with MPCA permit requirements and develop soil erosion control plans and practices for transportation projects. Work with local watersheds to implement their plans to clean, infiltrate and manage water.

Implementation of the Social, Economic and Environmental Impacts principle is supported by the following policies identified in later document chapters: P.3, P.6 and M.9.

Public and Agency Involvement

This principle identifies activities resulting in opportunities for residents and agencies to contribute to transportation plans, studies and projects. Examples include open houses, workshops, surveys, publications, web site information and email. In addition, staff will

frequently meet with staff from local county communities and MnDOT regarding transportation planning documents, studies and projects.

Key supporting actions include monthly participation at Coalition of Northern Dakota Cities (CONDAC) meetings, MnDOT coordination meetings, planning commission meetings and township officers' meetings as needed; conducting open houses and public information meetings on studies and projects; social media, virtual platform and web site information; annual resident surveys; and the Adopt-a-Highway program.

The following ***strategy*** supports the public and agency involvement principle:

- **Public Comment and Input Opportunities**
  Solicit public input throughout development of transportation projects and plans through:
  1. Involving the public in the preliminary discussion, information gathering (surveys), design and construction
  2. Holding public meetings and virtual public forums as needed to seek public input to assist in defining the scope of a proposed project
  3. Setting up community workshops to obtain early input for decisions by inviting constituencies and the public to learn about and discuss issues in a variety of settings and forums
  4. Producing publications that increase the public's knowledge and understanding of issues and informing them of activities and decisions
  5. Facilitating public meeting information about issues to the public through social media and news media
  6. Making use of the county website, electronic mailing lists and other communication tools that enhance providing information to the public
  7. Provide opportunities for public comment through traditional methods and through social media and virtual forum options
  8. Responding to calls and email correspondence from the public regarding highways and intersections within a reasonable time frame
  9. Involving cities and townships in the CIP process, including receiving requests on project selection and priority
  10. Considering project requests received by the public. Make the draft CIP available to the public and hold a public hearing prior to adoption of the CIP
  11. Providing the opportunity for ongoing citizen involvement in policymaking through advisory bodies that develop recommendations and advise the county on major policy issues
  12. Increasing interaction and dialogue with local governments on day-to-day problems and obtain their views early in the process of developing policies
  13. Develop project specific public engagement plans for transportation management, replacement and expansion projects to promote effective engagement opportunities

The following ***policies*** support the public and agency involvement principle:

PP.20 State and Federal Requirements
Adhere to state and federal requirements in soliciting comments regarding construction of the transportation network.

PP.21 Minnesota Data Practices Act
Make available to the public all policies, guidelines and plans concerning highways consistent with the Minnesota Data Practices Act.

PP.22 Capital Improvement Program - Agency Involvement
Involve affected units of government, transit providers and other partners in the annual development of the CIP.

PP.23 Multi-Disciplinary Work Teams
Solicit input from and involve all interested parties in the planning and design of transportation projects to properly reflect community and environmental values.

PP.24 Manage the Adopt-a-Highway Program
Manage a program whereby the public can adopt segments of the county highway system to assist in keeping the highway right-of-way clean.

Implementation of the Public and Agency Involvement principle is supported by the following policies identified in later document chapters: F.1, F.2, F.3, F.4, F.5, F.6, F.7, F.8, F.9, F.10, F.11, F.12, F.13, F.14, F.15, F.16, F.17, M.5, M.6, M.7, M.8, and M.10.

Context-Sensitive Design and Complete Streets

The context-sensitive design principle refers to roadway standards and development practices that are flexible and sensitive to community values and allows roadway design decisions to better balance economic, social and environmental objectives.

In recent years, the importance of transportation design that is sensitive to the surrounding environment and the needs of all roadway users has become a priority. The growing emphasis on community-supportive, environmentally sensitive and multi-modal roadway projects has been exhibited at the federal and state level through funding and design policies. Local governments also have asked for transportation systems that are less disruptive to the adjacent area and are welcoming to all users. Local government input and cooperation will be a major component in the development of context-sensitive design and complete streets.

Complete streets is an approach to road planning and design that evaluates and balances the needs, safety, accessibility and usability of all transportation users to preserve safety and efficiency for all modes. Minnesota Statutes §174.75 identifies complete streets as the planning, scoping, design, implementation, operation and maintenance of roads in order to reasonably address the safety and accessibility needs of motorists, pedestrians, transit users and vehicles, bicyclists and commercial and emergency vehicles moving along and across roads, intersections and crossings in a manner that is sensitive to the local context and recognizes that the needs vary in urban, suburban and rural settings.

The county will implement the complete streets approach during transportation project planning, project development, operation and maintenance activities. This approach helps to maximize the use of county highways and right-of-way to provide a safe, comprehensive and connected multimodal transportation system. Complete streets implementation is based on,

but not limited to, the following: community context, topography, road function, traffic volumes and speed, transit service, freight volumes and pedestrian and bicyclist demand.

Complete streets implementation options are selected depending on each project's unique characteristics. The county will implement the complete streets approach in compliance with State Statutes, State Aid Rules and applicable Minnesota Department of Transportation Policy.

The following ***strategies*** support the context-sensitive design and complete streets principle:

- **Minimum Urban, Low-Speed, Highway Widths**
  Consider use of reduced widths for two-lane, low-speed highways in urban areas to help meet economic, social and environmental objectives. Depending on the context, the county may be required to meet certain minimum width standards to meet safety objectives and funding requirements.

- **Aesthetics**
  Consider aesthetic needs on projects to complement context-sensitive design and complete streets philosophies.

- **Context Consideration**
  Prioritize transportation projects through a process that considers economic development, local environments and environmental sustainability.

- **Transit, Pedestrian and Bicycle Facility Preservation within County Road Right-of-Way**
  Consider transit, pedestrian and bicycle facility preservation needs including ADA requirements. Priority will be given to preservation and rehabilitation projects that increase effective multi-modal and ADA accessibility.

- **Vegetation in Right-of-Way**
  Where practical, plant native or appropriate vegetation in county right-of-way to help sequester carbon; shade pedestrians; manage runoff; and provide for bird, animal and pollinator habitat. Participate in pilot projects that have the opportunity to improve roadside habitat when appropriate.

- **Safety Improvements**
  Design for safety of pedestrians and bicyclists on the road and trail system, including provision of clear zones for all users including enhanced pedestrian crossings, street lighting, attention to bikeway geometrics, consideration of pedestrian bridges and tunnel crossings along high-speed and high-volume highways where pedestrian destinations are present and incorporation and alignment of curb cuts and signage when appropriate.

Implementation of the Context-Sensitive Design and Complete Streets principle is supported by the following policies identified in later document chapters: F.2, F.3, F.8, F.9, F.13, F.17, T.2, M.10.

ADA Transition Plan

In 2018, Dakota County developed the Dakota County Americans with Disabilities Act (ADA) Transition Plan for County Highway Rights of Way. This plan guides the county as it continues to provide accessibility to its transportation infrastructure including the highways, sidewalks, adjacent trails and pedestrian crossings. The plan also includes an inventory of these facilities with and evaluation of infrastructure conditions.

Implementation of the ADA Transition Plan is considered an overarching principle as it applies to all Plan goals.

The following ***strategies*** support the plan principles and implementation of the ADA Transition Plan:

- **Incorporate ADA Guidance into All Transportation CIP and Maintenance Projects**
  Consider ADA related guidance and best practices with the design of all maintenance, construction and reconstruction projects to provide accessible pedestrian features such as pedestrian curb ramps, accessible traffic signal pedestrian interactions and trails and sidewalks with ADA compliant grades and widths.

- **Internal Coordination**
  Routinely evaluate existing policies and practices to ensure they do not limit full participation or present any barriers to accessibility for those with a disability.

- **Accessibility Improvement Requests**
  The county will consider and respond to all accessibility improvement requests. The county will coordinate with external agencies to ensure that all new or altered pedestrian facilities within county jurisdiction are ADA-compliant to the extent feasible.

- **Transportation Studies**
  All county transportation studies will incorporate the strategies identified within the ADA Transition Plan.

- **Implementation Methodology**
  The county will upgrade pedestrian facilities in conjunction with scheduled Transportation CIP projects to current ADA accessibility standards.

- **External Agency Coordination**
  The county will coordinate with other agencies responsible for pedestrian facilities within Dakota County, including local cities and MnDOT, to track and assist in the facilitation of the elimination of accessibility barriers along their facilities.

Transportation Technology

Advancement in transportation-related technology has the potential to produce a number of safety, mobility and environmental benefits for the traveling public over the Plan period. Guidance for use of new technology is outlined in the Transportation Technology Resources

Procedure document. Transportation technology includes advances in both traditional transportation technology such as traffic signal operations and traveler information along with potential newer technologies including electric, connected and autonomous vehicles. Electric vehicles provide potential environmental benefits. Connected and autonomous vehicles have the capability to use wireless exchange of data to allow vehicles to communicate between one another and with transportation related infrastructure.

The private sector is currently leading the way with development and introduction of new technologies. The timing of widespread public adoption and necessary changes to public sector transportation system design and operations remains uncertain. Traditional transportation planning and operation will likely predominate through the current Transportation Plan, but autonomous vehicles will mix with vehicles controlled by drivers during this timeframe and create new challenges and opportunities for transportation agencies.

Transitioning highway infrastructure to be ready for these technologies will require significant investment in time and financial resources to prepare highway infrastructure for navigation, sign reading, safety and other functions. Choosing which technologies and when to implement them will also be an important factor to ensure that the transportation system evolves in a safe and efficient manner. Additionally, the use of county right-of-way for some forms of emerging transportation technology such as shared mobility, may require changes to county policy and permitting standards.

Dakota County will monitor connected and autonomous vehicle (CAV) technology advancements, technological innovations impacting trends and infrastructure and consider system adaptions. The progression to fully autonomous vehicles* is:

Level 0, No A**utomation**: Zero autonomy, the driver performs all driving tasks.

Level 1. Driver Assistance: Vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design

Level 2, Partial Automation: Vehicle has combined automated functions like acceleration and steering, but the driver must remain engaged with the driving task and monitor the environment at all times.

Level 3, Conditional Automation: Driver is a necessity, but not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice.

Level 4, High Automation: The Vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle.

Level 5, Full Automation: The vehicle is capable of performing all driving functions under all conditions. The driver may have the option to control the vehicle.

** Source: National Highway Traffic Safety Administration*

The U.S. Department of Transportation (U.S. DOT) identifies the benefits of AV technology as: improved safety and a reduction of roadway fatalities; improved quality of life, access and

mobility for all citizens; lower energy usage; and improved supply chain management. The U.S. DOT provides guidance* on the transition to connected and autonomous vehicles through the following principles:

1. **Protect Users and Communities**
   a. Prioritize safety
   b. Emphasize security and cybersecurity
   c. Ensure privacy and data security
   d. Enhance mobility and accessibility

2. **Promote Efficient Markets**
   a. Remain technology neutral
   b. Protect American innovation and creativity
   c. Modernize regulations

3. **Facilitate Coordinated Efforts**
   a. Promote consistent standards and policies
   b. Ensure a consistent federal approach
   c. Improve transportation system-level effects

** Source: Ensuring American Leadership in Automated Vehicle Technology, Automated Vehicles 4.0, U.S. DOT*

MnDOT has prepared a strategic plan for the Connected and Autonomous Vehicle (CAV) transition and identifies the following goals:

1. **Safety**: Support deployment of CAV technology to improve safety and achieve Toward Zero Death (TZD) goals
2. **Efficiency**: Harness CAV technology to improve the efficiency of the transportation system for the movement of people, goods, and services
3. **Equity and Accessibility**: Use CAV technology to improve transportation equity and accessibility for all Minnesotans
4. **Economic Benefits**: Position Minnesota as a place to safely test and deploy CAV in order to accelerate public benefits and encourage workforce and economic development
5. **Trust and Understanding**: Engage the public and other stakeholders to build trust and develop understanding of CAV
6. **Readiness**: Support MnDOT in preparing the organization to proactively address changes in transportation technology
7. **Sustainability**: Emphasize CAV technologies that have the potential to promote environmental and fiscal sustainability

MnDOT identifies an approach* organized around the following three themes that can provide guidance to Dakota County during this time of transition:

1. Strategic investment: Make modest strategic investments, recognizing that CAV technology is in its infancy and will change quickly.
2. Innovation: Question assumptions, embrace new ideas and partners, and remain nimble to shifts in technology in a rapidly changing environment.
3. Knowledge-sharing: Be transparent with the public and share ideas and lessons learned with peer agencies and the industry at large.

** Source: Connected and Automated Vehicle Strategic Plan, MnDOT*

MnDOT provides specific guidance to local agencies through the recently completed report *Preparing Local Agencies for the Future of Connected and Autonomous Vehicles*. The report provides a toolbox for local agencies to prepare for CAVs in the short term, over the next five to 10 years.

Following the guidance of these state and federal agency CAV plans will enable Dakota County to be an early adopter of CAV technology, and position Dakota County to modify transportation infrastructure at the earliest opportunity to improve safety and operation of the system for transportation users.

The following ***strategies*** support the transportation technology principle:

- **Transportation Infrastructure Investment Decisions**
  Consider future transportation technology needs when making investment decisions in transportation infrastructure including:
  - Pavement marking
  - Signing
  - Traffic signal control equipment and modernization of signal controller systems
  - Fleet equipment
  - Survey and inspection equipment
  - Communication infrastructure
  - Maintenance of road markings and road signage for visibility
  - High resolution mapping and other data platforms
  - Follow guidance from the U.S. DOT and state agencies where available

- **Emerging Technologies**
  Participate in committees and research initiatives involving transportation technology to stay abreast of emerging technologies and potential uses.

- **Department Transportation Technology Committee**
  Maintain an active cross department county transportation technology committee to share information, discuss challenges and identify potential applications for utilizing transportation technology.

- **Demonstration and Pilot Projects**
  Participate in demonstration and pilot projects that hold potential for improvement to the transportation system.

- **Proven Transportation Technologies**
  Utilize proven transportation technologies as appropriate to address transportation system needs and to improve safety and efficiency of the county transportation system.

- **Capital Improvement Program – Transportation Technologies**
  Consider application of transportation technologies during development of all transportation system capital improvement projects.

- **Enhanced Personal Mobility**
  Monitor and pursue technology to assist with mobility for transit dependent populations and people that cannot drive a vehicle including persons with physical disabilities, cognitive disabilities, visual impairments and older adults.

- **Traffic Signal Coordination**
  Install high-speed fiber optic networks between traffic signals to improve traffic signal coordination and traffic flow or utilize cell modems for connectivity especially in more remote areas as applicable.

- **Technology-Driven Agency Coordination**
  Coordinate with transportation partners in monitoring, evaluating and implementing technology-driven changes to the transportation systems.

- **Legislative and Regulatory Coordination**
  Monitor and coordinate with legislative and regulatory issues. Respond to proposed and enacted new legislation as it pertains to transportation technology, definitions of vehicle autonomy, testing provisions and insurance and liability issues.

- **Vehicle and Infrastructure Communication**
  Plan for the interaction of vehicles with existing and planned infrastructure, particularly for use in safety applications such as traffic control, notification for construction zones, weather and road hazards.

- **County Permitting and Implementation Role**
  Consider the future role the county may have in permitting or allowing new technology to operate within the county right-of-way. Identify best practices and implementation policies to manage the county right-of-way for the safe integration of emerging transportation technologies. Permitting of emerging transportation technologies may include, but are not limited to:
  - Mobility hubs
  - Scooter/bike share regulations
  - Shared mobility options
  - Electric vehicle charging stations

Summary

The intent of the transportation plan principles and supporting strategies and policies are to assist the county with guidance that helps provide the basis for its transportation system

decision-making and priority determination. The principles identified in this chapter are not specific to any one Plan goal, but rather are intended to be overarching and pertain to all plan goals. These principles are a combination of *DC2040* guiding principles and existing principles of the *Dakota County 2030 Transportation Plan.*

Chapter 4

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

This goal guides Dakota County efforts to develop the best transportation system for the safe and efficient movement of people and goods within financial constraints. The system vision has been developed in coordination with the state, adjacent counties, cities, townships, and other transportation partners through the goals and policies contained within this Transportation Plan.

Goal Purpose

Through this update of the Plan, it has been determined that over $1.65 billion will be required to meet county transportation system needs over the 20-year plan period through 2040. Specific needs are identified and explained in detail in chapters throughout this plan document. $1.28 billion of revenue is anticipated during this same timeframe. This results in approximately 78 percent of the necessary anticipated revenues available to meet transportation needs in the next 20 years. In comparison, in 2012, the Transportation Plan identified $1.25 billion required to meet needs and $658 million anticipated resulting in 53 percent of the necessary anticipated revenues to meet county transportation system needs. In addition to county highway system needs, there are substantial unmet needs on the county's State Trunk Highway system under the jurisdiction of the Minnesota Department of Transportation. These trunk Highway needs are described in the Expansion Goal chapter of this plan.

This chapter identifies various funding sources available to the county for transportation purposes, along with strategies and policies for use of these resources. Subsequent chapters will specify how these limited transportation resources will be directed to priority needs of the county transportation system. This chapter also discusses the staff and fiscal resources anticipated to be necessary to design, build, operate, and maintain the transportation system. These resources were determined based on an analysis of the existing system and future system needs.

The strategies and policies contained within this Plan goal provide the framework for prioritizing and directing resources to key transportation system elements defined within the other Plan goals. Directing resources for the transportation system will be pursued through the following primary activities.

Activities that support the resources goal include:

- Transportation funding identification.
- Identification of transportation system needs.
- Use of Plan strategies and policies.
- Coordination with transportation funding partners.
- Identification of program delivery, operation, and maintenance resource needs.
- Development of annual Capital Improvement Programs.

County Transportation Funding

Transportation system finance is complex and there is not a single approach to try to meet anticipated transportation funding needs. Multiple funding sources are utilized to meet the many and diverse needs of our transportation system. The county proactively pursues a variety of sources to fund transportation projects, operation, and maintenance activities. The following list describes transportation funding sources and estimated revenue through the 2040 Plan period.

Dakota County Highway System

The Dakota County highway system is comprised of 414 miles of highways under the jurisdiction of the Dakota County Board of Commissioners and consists of two types of highways, County Roads, and County State Aid Highways.

County Roads

The county highway system includes 75 miles of County Roads that typically accommodate lower traffic volumes and provide a lower county transportation function such as collector or local roads. The primary sources of funding for the maintenance, replacement and improvement of County Roads are county property tax levy, county imposed wheelage tax, county gravel tax, and Transportation fund balance. The County Road system is not eligible for County State Aid or Motor Vehicle Lease Sales Tax funding.

County property tax (levy)

A primary source of funding for County Roads is county property taxes (levy). Since the last Transportation Plan in 2012, County Program Aid (CPA) received from the State was also used to supplement levy funds used for County Roads to reduce risk associated with variables in CPA received and to increase County Road funding without raising the levy. The combination of CPA and levy used for transportation investment varied significantly, from a maximum of $4.4 million of levy and $9.2 million of CPA for a total of $13.6 million in 2013 to the current level of $2.66 million of levy and no CPA funds in 2020. The reduction in levy funds, and particularly the elimination of CPA in 2017, is due to competing priorities for other county programs and services and the enactment of the Transportation Sales and Use Tax in 2017. County levy funding for County Roads is approximately $2.7 million in 2020.

Wheelage Tax

Minnesota Statutes (MS 163.051 Subd. 1) allows the county to collect up to a $20 wheelage tax on each motor vehicle housed in Dakota County. Vehicle owners pay the wheelage tax with the annual renewal of state license tabs. The statute requires that revenues from the tax be used only for road and bridge purposes. The Dakota County Board approved levying this tax starting in 2007 to reduce the amount of general levy funds being used for Dakota County Roads. The Dakota County wheelage tax is currently at $10 per vehicle and is estimated to raise approximately $4.1 million in 2020 for improvements on the County Road system. Additional wheelage tax authority of $10 per vehicle is available to Dakota County as a potential additional highway revenue source.

Gravel Tax

Minnesota statutes (MS 298.75 Subd. 7) mandate that Dakota County collect a production tax on aggregate material produced within the county or imported into the county. Sixty percent of this revenue goes to the county; 30 percent to cities and townships, and 10 percent goes into a special reserve fund. This tax is estimated at approximately $0.23 million in 2020 for improvements on the County Road System.

Transportation Fund Balance

Dakota County maintains a Transportation Fund for road and bridge funding in accordance with Minnesota statutes (MS 163.03). This fund is specifically to finance the county highway system and provide cashflow reserves to account for expenses drawn from, and revenues deposited to this fund. The Transportation Fund has grown over recent years due to generally lower actual expenditures than budgeted for projects. The Transportation Fund balance is currently estimated at $84 million at the end of 2020, or approximately 1 year of transportation capital investment. These funds have recently been programmed for an increased level of investment for reconstruction of rural County Roads that have exceeded their useful life. The Transportation fund revenue is accounted for in revenue estimates over the Plan period and is anticipated to be substantially spent by 2025 except for reserves necessary for cash flow.

County State Aid Highway System

Dakota County has 339 miles of County State Aid Highways (CSAH) out of the total 414 miles on the county highway system. County highways designated as CSAH are typically designated as higher functioning roads, such as Minor Arterial, connect multiple communities, and carry a relatively higher volume of traffic than County Roads and local streets. CSAH's are eligible for funding from Minnesota's state-aid highway fund for construction, improvement and maintenance. Federal, state and local funding sources are also typically used to fund these highways.

County State Aid Highway (CSAH) Funds

The Minnesota Constitution directs, through the Minnesota Highway User Tax Distribution Fund (HUTDF), that Minnesota's 87 counties shall receive CSAH funds from state-collected motor fuel taxes, motor vehicle sales taxes, and motor vehicle license fees. These Constitutionally dedicated funds can only be spent for road and bridge construction and maintenance on County State Aid Highways. In 2018, the Minnesota legislature also dedicated a portion of the sales tax on auto parts to the HUTDF resulting in over $200 million of additional HUTDF funding. The total HUTDF in 2020 amounted to approximately $2.5 Billion and is distributed as shown in Figure 8. Of that amount, CSAH funding available for distribution to the 87 Minnesota counties totaled approximately $675 million in 2020.

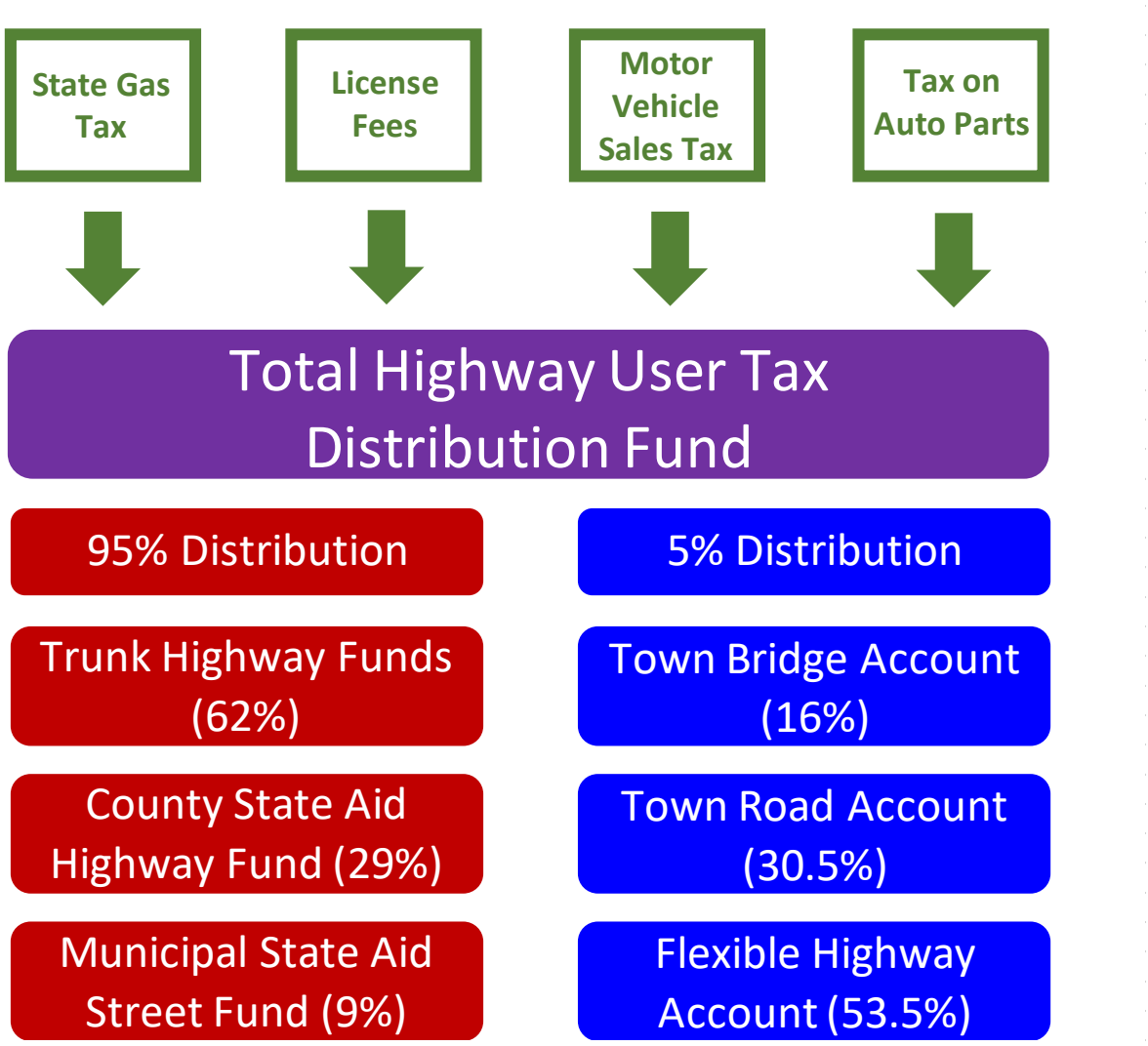


Figure 8.

Money in the County State Aid Highway Fund is allocated to the 87 Minnesota counties by a combination of two formulas provided in Minnesota Statutes:

68 percent of the CSAH revenue is allocated based on the Apportionment sum:

- 10 percent is divided equally among all counties;
- 10 percent based on registered motor vehicles in each county;
- 30 percent based on total lane miles of the County State Aid Highway system in each county; and
- 50 percent based on the construction needs of the state aid highway system in each county.

32 percent of the CSAH revenue is allocated based on the Excess sum:

- 40 percent based on motor vehicle registration in each county; and
- 60 percent based on each county's construction needs.

Construction needs are defined as the estimated total annual costs of constructing, over a period of 25 years, the county state-aid highway system each county. To avoid variances in costs due to differences in

construction policy, construction costs shall be estimated based on the engineering standards developed cooperatively by the Commissioner of Transportation and the Screening Board comprised of County Engineers in accordance with Minnesota Statutes (MS 162.07 Subd. 5.).

CSAH Funding is received annually as an apportionment to the county. Dakota County receives about 3 percent of the County State Aid Highway Fund which amounted to $19.9 million in 2020. Sixty percent of these funds, or about $12 million in 2020, are dedicated to the Transportation Capital Improvement Program for capital projects on CSAH routes. Forty percent of these funds, or about $8 million annually, is dedicated to maintenance and operation of CSAH routes. The majority of the CSAH maintenance funds are used for day to day costs for staff, equipment, and materials to operate and maintain the CSAH system. Approximately $2.3 million was directed to the Transportation Capital Improvement Program in 2020 for pavement maintenance and preservation activities and is counted as a revenue for Preservation investment needs.

Dakota County's annual apportionment of CSAH funding has increased significantly from approximately $14.3 million in 2012 to $19.9 million in 2020 due primarily to growth in the HUTDF. The Dakota County share of the CSAH distribution has remained approximately constant at approximately 3 percent of the statewide distribution.

Dakota County currently has 339 miles of CSAH's. Additional CSAH mileage is made through a request to the Screening Board for review and consideration. This process includes a review of the county's entire CSAH system for appropriateness of current designation and consideration of both mileages to be added or revoked from the CSAH system. The process is rigorous since increased mileage results in a CSAH allocation increase for the requesting county and a slight decrease in allocation for the other 86 counties.

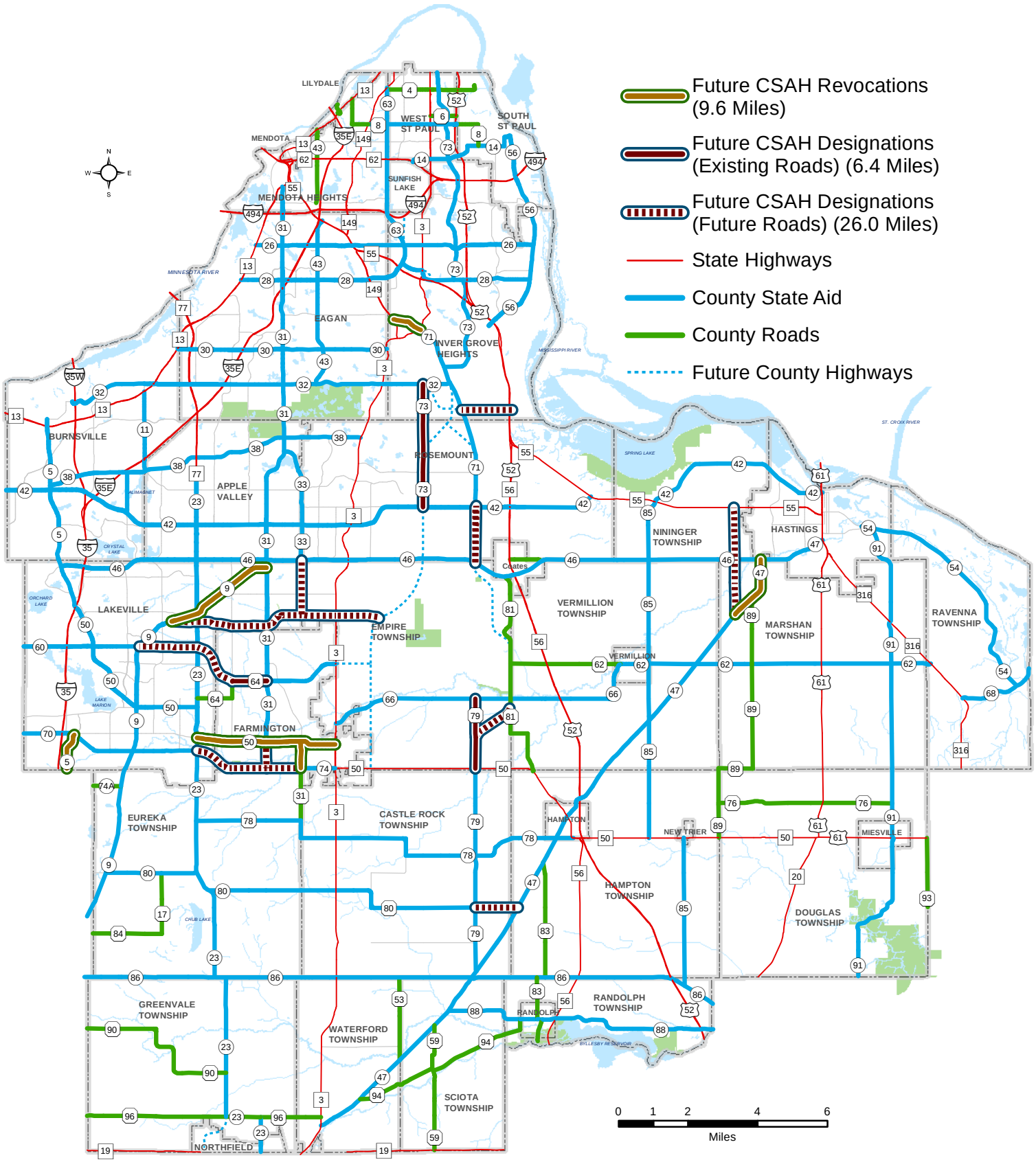
In 2012, Dakota County made a request for additional CSAH mileage due to highway system changes anticipated to support planned growth and development. This request resulted in the approval of an additional 53 miles and the revocation and use of banked mileage of 13.4 miles for a net increase of 39.6 CSAH miles. Since that time, the county has designated and revoked a net increase of 17 CSAH miles, from approximately 322 miles to the current 339 CSAH miles. The county has a further 31.4 miles to designate, and 9.6 miles to revoke, which will result in just over 361 miles on the CSAH system as the county highways system evolves to support planned development. The future Dakota County CSAH system is shown in Figure 8.

In 2020 Dakota County received approximately $58,700 of CSAH allocation, for construction and maintenance, for each mile on the CSAH system. Neither additional revenue or system needs were included in estimates over the planning period due to uncertainties in timing of additional mileage and needs that will be generated by these new miles.

Flexible Highway Account

As shown in Figure 8, Minnesota's constitutional framework for transportation finance includes a 5-percent "set-aside" from the highway user tax distribution fund (HUTD). Of the set-aside, 53.5 percent is allocated by statute to a Flexible Highway Account (FHA). Distribution of the FHA is established legislatively for a period of at least 6 years. Recently, the FHA has been limited to trunk highway expenditures and "turnbacks" of trunk highways to counties or cities.

Future CSAH System



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 9

Based on 2008 legislation 16 percent of the FHA is allocated directly to the seven metropolitan counties and distributed by population of these counties minus population from cities of the first class. These Flexible Highway account funds must be used on the state aid highways in Dakota County and the allocation is estimated at approximately $1.9 million in 2020.

Motor Vehicle Lease Sales Tax (MVLST)
Minnesota imposes a sales tax on motor vehicle leases at the rate of 6.5 percent, which is the same as the statewide sales tax for other goods and services.

In 2017 the Minnesota Legislature by statute (MS 297A.815) dedicated all MVLST revenue to transportation purposes. In recognition of transportation needs associated with growing suburban populations 38 percent of this MVLST revenue is allocated to the County State Aid Highway fund to be distributed to the metropolitan counties excluding Hennepin and Ramsey Counties. The MVLST revenue must be spent on the CSAH highway system. The distribution to the remaining five suburban metropolitan counties is made based on the population of each of these counties. Dakota County receives approximately 33 percent of this amount, or approximately $12.0 million in 2020.

Other County Transportation Funding Sources

City Cost Participation
Cities, with populations greater than 5,000, participate in the cost of most county highway construction projects in accordance with various policies contained within this Plan with specific cost participation policies identified within this chapter. The county anticipated city cost participation revenue be approximately $8.0 million in 2020. However, based on county cost participation policy changes made with the 2040 Plan update, it is now expected that city revenue will be approximately $4.2 million in 2021. The estimated city revenue has been adjusted accordingly for revenue estimates identified in Table 2.

State Trunk Highway Funds
MnDOT's planned investment in state highways in Dakota County is extremely limited over the Plan period through 2040. Even if available additional funding is received it would be limited because of statewide distribution formulas and the magnitude of needs on the trunk highway system. The State Highway Investment Plan (MnSHIP) recently prepared by the Minnesota Department of Transportation identified trunk highway system needs of $39 billion through 2037 with only $21 billion of estimated revenue during this period, a shortfall of $18 billion.

As shown in Figure 8, the state Constitution directs 62 percent of the Highway User Tax Distribution Fund (HUTDF) to MnDOT for trunk highway purposes. These funds can only be used for highway and bridge work on trunk highways. The county works with MnDOT on cooperative projects where county and trunk highways intersect. Trunk highway funding is determined in accordance with MnDOT policy and priorities and is anticipated to be approximately $1.5 million in 2020.

In addition to these funds, MnDOT also makes investments in trunk highway corridor level improvement projects. Most of the priority trunk highway improvement needs in Dakota County would provide additional capacity and safety improvement on congested corridors. No State funds are specifically identified in the MnSHIP for improvements to these corridors through 2037; however, priority trunk highway corridors and the status of potential improvements are described in the Expansion Goal of this

Plan. It is anticipated that funding for any of these improvements, including any county funds, would be developed on a project by project basis.

State Transportation Bridge Bond Funds

The state legislature authorizes state general obligation bonds for funding local bridge repair and replacement needs. Funds are received for eligible bridges on a project-by-project basis as a funding grant. The county anticipates approximately $0.3 million per year through 2030 for Dakota County local bridge and replacements.

Federal Aid

Dakota County pursues and receives federal funds through a variety of programs and stand-alone grant opportunities. The primary source of federal funds is through the Regional Solicitation for federal funds administered by the Metropolitan Council for the region's Transportation Advisory Board to allocate funds. Every two years, the Regional Solicitation distributes federal transportation funds to locally initiated projects that meet regional transportation needs. Three federal funding programs administered through the solicitation are the Surface Transportation Block Grant Program, the Congestion Mitigation Air Quality program, and Highway Safety Improvement Program.

The county also pursues federal funds on a case by case through stand-alone federal transportation programs that have eligibility criteria that may meet funding needs of individual projects. Recent examples of such federal programs include the Federal Highway Freight Program, Federal Lands Acquisition Program, and the Infrastructure for Rebuilding America (INFRA) programs. Finally, Dakota County periodically receives a small amount of National Highway System federal funds directly through the Minnesota Department of Transportation to fund pavement preservation projects on the 19 miles of county highways functionally classified as Principal Arterials.

The county anticipates approximately $9.0 million of federal funding 2020 for federally funded county transportation projects.

Periodic and Unique Revenue Sources

Dakota County is continuously pursuing revenue streams beyond typical, annual, revenues previously described in this chapter, that may be available on a periodic or project specific basis. Such funds are usually available from federal or state sources and may specific to certain types of projects or available due to special congressional or legislative action. Recent federal funding of this nature includes various economic stimulus programs, freight corridor funding, and Infrastructure for Rebuilding America (INFRA) discretionary grant program. At the state level programs such as Local Road Improvement Program and Transportation for Economic Development. Since revenues from these funds are infrequent and on a project by project basis, they are not included in revenue estimates but are anticipated to provide some level of additional revenue to address future transportation needs.

County Transportation Sales and Use Tax

Dakota County participated as a member of the County Transit Improvement Board (CTIB) joint powers organization from its inception in 2008 through dissolution of the CTIB in 2017. The CTIB provided annual capital and operating grants to advance regional transitway projects, including funds for capital costs of the METRO Red Line Cedar Avenue Bus Rapid Transit project.

The CTIB was funded through a transportation sales and use tax comprised of these sources:

1. a 0.25 percent sales and use tax
2. a $20 per motor vehicle excise tax

Upon dissolution of the CTIB, Dakota County became eligible to enact the County Transportation Sales and Use Tax authorized under Minnesota Statute (MS 297A.993). This revenue stream is composed of the same sources as the CTIB tax, but the sales and use tax can be imposed up to 0.5 percent. However, these revenues can be used on a much broader range of transportation purposes than the CTIB tax, and all revenue generated is returned to Dakota County for eligible Transportation purposes. The statutorily eligible Transportation purposes are the payment of:

1) Capital cost of a specific transportation project or improvement
2) Costs, which may include both capital and operating costs, of a specific transit project or improvement
3) Capital costs of a safe routes to school program
4) Payment of transit operating costs.

Dakota County chose to enact the County Transportation Sales and Use tax at the same 0.25 percent sales and use tax rate as the previous CTIB tax and retains the authority to enact the remaining 0.25 percent. The county has designated the use of Sales and Us Tax revenue for regional transportation projects. These types of projects have been defined by the County Board as those that meet the following criteria:

- Regional Transitway Capital and Operating Costs
- Regional County Highway Projects
    - Principal Arterials
    - Highways with greater than ½ mile access spacing
    - 10-Ton County Highways
    - 4-Lane County Highways on New Alignments
- Trunk Highway Projects
- Transit Service Enhancement Capital and Operating Costs
- Regional Trail Projects to match transportation federal funds

Projects identified for potential use of the Dakota County Transportation Sales and Use Tax are identified in the Dakota County Transportation Sales and Use Tax Capital Improvement Program. Revenue from this source is estimated at $18 million in 2020. Additional County Transportation Sales and Use Tax authority of 0.25 percent is available to Dakota County as a potential additional revenue source.

<u>Dakota County Regional Railroad Authority (DCRRA)</u>

The DCRRA has powers granted by Minnesota Statute (MS 398A.04) to, among other powers, to undertake activities for the development of regionally adopted Bus Rapid Transitways (BRT) The DCRRA lead development of the METRO Red Line BRT service on Cedar Avenue and is partnering with The Metropolitan Council and other partners to implement the METRO Orange Line BRT on I 35W. To support these BRT Transitway projects, the DCRRA levied a property tax of approximately $1.6 million. Following enactment of the County Transportation Sales and Use Tax which includes BRT capital and operating costs as eligible expenditures, the DCRRA has adopted a $0 property tax levy. The DCRRA intends to expend the current DCRRA fund balance and then utilize the County Transportation Sales and Use tax for eligible BRT expenses. The estimated DCRRA fund balance at the end of 2020 is $12.5 million.

Dakota County Transportation Funding Summary

Transportation Revenue available to Dakota County from all sources is estimated at approximately $72 million in 2020 as detailed in Table 2. 2020 revenue are assumed as the base level of funding for revenue projections for the 20-year plan period and no changes in federal or state law, or county policy or revenue streams currently established by the County Board, that would change the annual level of funding were assumed. In addition to these annual revenues, the balances in the Transportation, Transportation Sales and Use Tax, and Regional Railroad Authority funds are included as a one-time revenue.

The various County State Aid Highway and Motor Vehicle Lease Sales Tax revenues can only be used on the CSAH portion of the county highway system. Therefore, needs on the County Road system have been identified separately to determine if sufficient revenue is available for the County Road system. These County Road eligible revenues are identified as county funds including, levy, wheelage tax, and gravel tax. These county funds are estimated at $7 million in 2020.

To account for the different rates of growth in revenue when compared to inflation in the cost of transportation infrastructure investments 2020 base annual revenues were adjusted by an estimated annual decrease of 2 percent annually over the 20-year plan period. This adjustment is based on assumed annual revenue growth of 2 to 2.5 percent based on the average growth of these revenue streams in recent years, and construction cost increases of approximately 4 percent annually based on recent data from the Minnesota Department of Transportation construction cost index for highway construction. This results in a buying power approach to inflation in lieu of adjusting future construction costs that would have required consideration of construction type, timing, and other market conditions to accurately inflate construction costs to future years.

Based on the 2020 estimated revenue, adjusted for estimated revenue growth and construction expense, it is estimated that Dakota County will have approximately $1,282 million available for transportation system investment through 2040. Of this amount, county funds comprised of county levy, wheelage tax, gravel tax, and Transportation fund balance available for County Road investments is estimated at approximately $198 million through 2040.

Source	2030 Plan	2020 Revenue	2021 Fund Balance	2021-25 Annual Revenue	2021-25 Total Revenue	2026-30 Annual Revenue	2026-30 Total Revenue	2031-40 Annual Revenue	2031-40 Total Revenue	2021-40 Total Revenue
Federal	5.0	9.0	0.0	8.5	42.5	7.7	38.5	6.7	66.7	147.6
State										
Trunk Highway	2.5	1.5	0.0	1.4	7.1	1.3	6.4	1.1	11.1	24.6
Bridge Bonds	0.2	0.3	0.0	0.3	1.4	0.3	1.3	0.2	2.2	4.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CSAH										
Regular	10.0	12.0	2.0	10.8	54.0	10.3	51.3	8.9	88.9	196.2
Maintenance	0.0	2.3	0.0	2.2	10.8	2.0	9.8	1.7	17.0	37.7
Flex Account	0.0	1.9	8.0	1.8	9.0	1.6	8.1	1.4	14.1	39.2
MVLST	0.0	12.0	0.0	10.8	54.0	10.3	51.3	8.9	88.9	194.2
County Funds			84.0							84.0
Levy	5.2	2.7	0.0	2.5	12.7	2.3	11.5	2.0	20.0	44.3
Wheelage Tax	1.7	4.1	0.0	3.9	19.3	3.5	17.5	3.0	30.4	67.2
Gravel Tax	0.2	0.2	0.0	0.2	0.9	0.2	0.9	0.1	1.5	3.3
City	7.0	8.0	0.0	4.2	21.0	3.8	19.0	3.3	33.0	73.0
Sales & Use Tax	0.0	18.0	60.0	16.6	83.0	15.4	76.9	13.3	133.3	353.3
RRA Levy	1.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5
TOTAL	33.4	72.0	166.5	63.2	315.8	58.5	292.5	50.7	507.1	1281.9

Annual
Total

NOTE: Assume 2.0 to 3.0% annual growth in revenues and 4.0 to 4.5% construction cost index inflation results in 2% average annual net loss of revenue buying power.
NOTE: Reduced values calculate to year 3, 8, and 15 from 5,5, and 10-year periods respectively.

Table 2.

Identified Investment Needs

The *Dakota County 2040 Transportation Plan* utilizes five subsequent Investment Goals in which funding resources are directed to cost effectively address priority transportation system improvements. These Goals identify anticipated needs and proposed investments through 2040. The Plan identifies available revenues of $1.3 billion over the 20-year plan period to meet transportation needs identified within subsequent Investment Goal chapters of this Plan.

The following are the estimated annual Transportation CIP estimated investment needs over the plan period.

	Annual Investment Needs						20 Year Total	
	2021-2025		2026-2030		2031-2040		TOTAL	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR	CSAH	CR
Preservation	$ 8.91	$ 1.95	$ 9.30	$ 1.93	$ 9.66	$ 1.88	$ 187.65	$ 38.20
Management	$ 11.02	$ 4.13	$ 10.40	$ 6.11	$ 8.37	$ 5.09	$ 190.80	$ 102.10
Replacement & Modernization	$ 17.90	$ 8.98	$ 21.72	$ 1.87	$ 12.60	$ 0.66	$ 324.10	$ 60.85
Transit & Transitways	$ -	$ 0.78	$ -	$ 2.23	$ -	$ 2.94	$ -	$ 44.45
Expansion	$ 12.03	$ 0.50	$ 23.91	$ 0.50	$ 30.91	$ 0.50	$ 488.80	$ 10.00
Resources	$ 4.80	$ 2.50	$ 8.24	$ 1.95	$ 7.68	$ 1.63	$ 142.00	$ 38.55
TOTAL (by CSAH & CR)	**$ 54.66**	**$ 18.84**	**$ 73.57**	**$ 14.59**	**$ 69.22**	**$ 12.70**	**$ 1,333.35**	**$ 294.15**

	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined
ANNUAL TOTAL	**$ 73.50**	**$ 88.16**	**$ 81.92**	**$ 1,627.50**

* Does not include Trunk Highways

Total Estimated 20-year Needs **$1.63 Billion**

Table 3.

In addition to the county highway needs, an annual investment of $1 million is estimated for regional greenways that are eligible for the use of federal transportation funds. This investment totals an estimated $20 million over the Plan period, resulting in a total estimated county transportation system investment need of $1.65 billion through 2040. There are discussions underway about accelerating development of the greenways beyond $1 million annually which will increase the estimated $1.65 billion investment need. This investment need does not include any potential trunk highway investments which would also be in addition to the total estimated county needs.

It is anticipated that the needs associated with the priority Goals of Preservation, Management, Replacement and Modernization, and Transit and Transitways can be fully funded through the 2040 Plan period. The needs associated with the county highway Expansion Goal, and those associated with any potential Dakota County expansion investment on trunk highway corridor projects, will need to compete on a priority basis for anticipated funding, or utilize additional revenue that could be made available form sources such as increased county wheelage tax ($4.1 million available annually in 2020 dollars) or Transportation Sales and Use Tax ($18 million available annually in 2020 dollars).

Capital Improvement Program (CIP) and Anticipated Capital Improvement Funding Resources

Every year Dakota County prepares a five-year CIP that includes a one-year Capital Budget and four subsequent years of planning level projects. The CIP is the primary tool for implementing the Board of Commissioner's goals regarding infrastructure. In addition to being used as a planning tool, the CIP is used by departments and divisions, cities, and other agencies in the following ways:

- To support budget and grant requests;
- To document planned projects;
- To plan annual work programs; and
- To identify consulting needs.

Dakota County works very closely with all the local governmental agencies, MnDOT, transit providers, and the public to develop the Transportation CIP. The CIP process begins in late spring with public hearings and formal adoption in December. The adopted CIP includes projects and funding sources for the following five years. Development of future Transportation CIPs will be closely aligned with investment goal direction and priorities, principals, strategies, and policies established in this 2040 Transportation Plan.

Transportation capital investments are currently identified in three separate CIP's; Transportation, Transportation Sales and Use Tax, and Regional Railroad Authority. The 2020-2024 CIP's are as follows:

Transportation CIP

Year	Annual Cost	City	Federal	State	CSAH	County Fund Balance, Gravel Tax & Other	County Fund Balance, Gravel Tax & Other
2020	$ 76,963,875	$ 8,416,977	$ 5,748,000	$2,810,075	$ 42,658,951	$ 14,666,485	$ 2,663,387
2021	$ 72,733,552	$10,667,096	$ 7,000,000	$ 300,000	$ 31,678,177	$ 20,398,258	$ 2,690,021
2022	$ 70,823,999	$ 9,143,688	$ 5,835,000	$ 360,000	$ 32,709,876	$ 20,058,514	$ 2,716,921
2023	$ 65,881,378	$ 5,031,722	$ -	$ 360,000	$ 30,189,417	$ 27,556,149	$ 2,744,090
2024	$ 57,514,736	$ 4,262,271	$ 5,600,000	$ -	$ 21,451,646	$ 23,429,288	$ 2,771,531
TOTAL	**$ 343,917,540**	**$37,521,754**	**$24,183,000**	**$3,830,075**	**$ 158,688,067**	**$ 106,108,694**	**$ 13,585,950**

Transportation Sales and Use Tax CIP

Year	Annual Cost	City	Federal	State	Transportation Sales Tax
2020	$ 32,551,476	$3,907,000	$14,000,000	$ -	$ 14,644,476
2021	$ 10,446,112	$ 213,000	$ -	$150,000	$ 10,083,112
2022	$ 10,177,168	$ 810,000	$ -	$ -	$ 9,367,168
2023	$ 25,236,026	$1,980,000	$ -	$ -	$ 23,256,026
2024	$ 24,353,628	$ -	$ -	$ -	$ 24,353,628
TOTAL	**$ 102,764,410**	**$6,910,000**	**$14,000,000**	**$150,000**	**$ 81,704,410**

The City share is as specified in the adopted CIP based on cost shares in accordance with applicable County policies for these projects.

Regional Rail Authority CIP

Year	Annual Cost	Minnesota Department of Transportation	Regional Rail Authority Funds
2020	$ 2,367,053	$ -	$ 2,367,053
2021	$ 145,892	$ -	$ 145,892
2022	$ 666,861	$ -	$ 666,861
2023	$ 1,007,497	$ -	$ 1,007,497
2024	$ 1,620,205	$ 246,000	$ 1,374,205
TOTAL	**$ 5,807,508**	**$ 246,000**	**$ 5,561,508**

Personnel and Material Resources

For every transportation project, a proportional amount of staff and operating resources are required to plan, design, construct, and maintain the resulting transportation system.

The current transportation operating budget is approximately $13.9 million annually. This budget supports a current compliment of 98 full time employees with seasonal employees equal to 5.4 full time employees. These numbers include the Survey and Multi-modal office staff. It also provides for material such as salt, sand, sign and signal equipment, culverts, striping, paint, and gravel.

The following staff positions and associated funding were considered during development of this Plan to support Transportation Department programs and services.

Transportation Planning and Administration

Five permanent staff positions are currently assigned to planning and administrative activities of the department. Staff is responsible for the development of the Transportation Plan, the 5-Year Transportation Capital Improvement Program, County State Aid highway needs, pursuit of federal, state and regional funding for projects, highway functional classification, public involvement programs, environmental documentation, local document review, plat review, and serves as liaison on various state and regional transportation committees.

Capital Improvement Program Development

Program development includes forty-three county staff who undertake project development and design, right-of-way acquisition, traffic engineering, and construction administration to develop and build transportation capital improvement projects programs and services. Cost for these activities are directly funded from the Transportation, Transportation Sales and Use tax, Regional Railroad Authority Capital Improvement Program (CIP) budgets. These costs amounted to approximately $5.5 million in 2020 to deliver approximately $99.6 million of budgeted capital improvements.

Consulting engineers, planners, and right-of-way specialty services are retained to supplement county staff and assist with delivery of larger and more complex transportation projects. These costs are also funded from the CIP budgets and are directly attributed to overall project costs. The cost for these services amounted to about $4.5 million in 2020. Based on anticipated investment needs and revenues identified in this plan, the need for some additional staff resources are anticipated in the areas of project management, and construction administration.

Project Development and Design

Seventeen permanent staff positions are currently assigned to tasks related to preliminary engineering, environmental documentation, public engagement, preparation of plans and specifications, traffic control evaluation and design, consultant management, and pavement management. This group also works closely with state, city, and other partners to coordinate activities and resources for delivery of CIP projects. The cost for project development and design engineering for a project is typically 8 percent to 15 percent of a construction project's total cost depending on scope and complexity.

Right-of-Way Acquisition

Six staff are responsible for the acquisition of approximately 150 parcels of property to support transportation CIP improvement projects. This includes survey staff who prepare right-of-way maps and acquisition specialists who work directly with appraisers and property owners to negotiate right-of-way settlements.

Construction Engineering

Twenty permanent staff positions are currently assigned to tasks related to construction engineering. Additionally, traffic signal, striping, and sign staff provide support for specialized projects. These tasks usually are related to the physical construction or reconstruction of a highway and often require technical certifications to perform this work in accordance with federal and state requirements. The cost for staff to perform construction engineering on a project is typically about 7-8 percent of a construction project's total cost. To supplement construction engineering, seasonal employees, city staff, MnDOT, or a private consultant are hired. The cost of construction engineering by MnDOT is typically 8 percent and by a private consultant is 10 to 15 percent of a construction project's total cost.

System Maintenance and Operations

Forty-one permanent staff positions are currently assigned to tasks related to system maintenance and operations. These programs and services consist of highway maintenance, snow and ice control, traffic control devices, right-of-way management and permitting, and bridge inspection. Cost for the personnel, equipment and vehicles, materials and supplies are funded directly through the transportation operating budget and are reimbursed at approximately 85 percent CSAH maintenance funding based on the percentage of state aid eligible county highway lane miles. The balance is paid for from fees and county property tax levy.

Highway Maintenance

Fourteen staff undertake highway maintenance activities that consist of a number of tasks and activities to keep roads smooth and safe. These include grading nonpaved roads and replacing aggregate material, keeping the drainage structures clean and open for source water to flow; replacement of collapsed and deteriorated culverts and opening culverts that are plugged due to frozen water, clearing of fallen trees, brush and storm debris, mowing weeds on medians, boulevards and ditches.

Snow and Ice Control

Approximately sixteen and a half staff are utilized for plowing, salt materials application, and ice control to keep county highways clear and safe during the winter months. These staff typically plow 1,200 lane-miles of highway (including turn lanes) for about 35 snow and ice events per year using 29 pieces of equipment. Salt use has been reduced in recent years from 13,000 tons annually to approximately 10,000 tons due to computerized salt controls, use of specialty materials, and variable application rates based on conditions.

Traffic Engineering

Eight staff are responsible for the installation, maintenance and operation of traffic control devices such as signals, signing, and pavement markings. To supplement traffic engineering needs, seasonal employees are hired yearly, and private consultants are hired on an as-needed basis. The staff provides timing and operation of approximately 230 traffic signals, 36 all way stops, seven county jurisdiction roundabouts, 10 dynamic speed signs and other enhanced signing devices and approximately 1500 side stop intersections along with pavement markings and signs to keep traffic moving safely and efficiently throughout the county.

Right-of-Way Management and Permits

Two staff are responsible for managing the use of county highways and associate right-of-way through the issuance of permits. These activities include oversight and permitting for oversized and overweight trucks, and work done within county right-of-way by private contractors, utilities, and other governmental agencies and to coordinate utility relocates for construction projects. Cost for these activities are paid by permit fees. The Transportation Department also coordinates with the County Sheriff's Office to provide staff responsible for commercial vehicle enforcement.

Bridge Inspection

One half of a staff position is assigned for statutorily required inspection of 139 bridges in compliance with the National Bridge Inspection Standards to assure safe bridges for the traveling public. The inspections maintain an inventory of critical bridge criteria to assist with determination of deficiencies and provide a basis for bridge maintenance and replacement investments.

Regional and Multi-modal Transportation Office

This office is comprised of three permanent staff positions. Primary activities include working with partners to develop transitways and other transit services and facilities, advance interagency efforts to develop and deliver trunk highway and trail projects that are generally regional in scope. The office serves as staff to the Regional Railroad Authority and assists with planning, project management, coordination with external partners, budgeting, environmental documentation and coordination on design and implementation activities. Staff works closely with the Metropolitan Council, the Minnesota Valley Transit Authority, the Minnesota Department of Transportation, and cities. Cost from this group are funded from the Transportation, Transportation Sales and Use Tax, and Regional Railroad Authority CIP's based on

direct charges to individual projects, and a small portion from the county and Regional Railroad Authority operating budgets.

Surveyor's Office

Eight permanent staff positions are currently assigned to the Surveyor's Office. The Surveyor's Office provides professional surveying support to the county through technical and field support services. Survey is responsible for the enforcement of laws and ordinances governing land subdivision. Survey also provides geographically based information to citizens, other government units, and county staff, leading to better decision-making and facilitating land transfers in Dakota County.

The primary programs and services of the Survey Office include:

- Providing professional land surveying services for county projects to departments around the county including Parks, Environmental Resources, Transportation, CPPM, and Property Records for parcel updates.
- Review and approval of plats in accordance to Minnesota Statutes, Minnesota Plat Manual, and review plats along county roads that are subject to the Dakota County Contiguous Plat Ordinance through the County Plat Commission.
- In accordance with statutory requirements, assure Public Land Survey (PLS) monuments are in place and replace if necessary. Create certificates to document monumentation history.

Seasonal Employees

Seasonal employees are used to meet peak demands of seasonal work. These seasonal employees are equivalent to 5.4 full time staff positions. In the summer, seasonal employees are used to supplement construction engineering, highway signing and striping, traffic data collection, and survey activities. In the winter, seasonal employees are used to supplement staff available to operate snow and ice equipment.

Other Staff

Staff from other offices, including Financial Services, Administration, County Attorney, Planning, and Geographical Information Systems (GIS) offices assist the Transportation Department as needed to provide support in the delivery of transportation projects and services.

Resource Efficiency Efforts

To maximize the ability to staff transportation system capital improvement, maintenance, and operation at minimal costs, efforts such as the following are and will continue to be undertaken:

- Work in partnerships with MnDOT and local cities
- Use inter-department staff reassignment for right-of-way mapping, permitting, snowplowing and park trail design
- Seek maintenance assistance for traffic operations and construction
- Seek design assistance from construction engineering when possible
- Seek Survey Office assistance for surveying and right-of-way mapping needs when possible
- Utilize efficient contracted services such as gravel hauling for gravel road resurfacing and highway epoxy striping for high volume locations
- Increased life span of materials such as sign and signal materials
- Assure the county system consists of appropriate routes through jurisdictional transfers

Operations

$13.9 million was budgeted in 2020 for planning and administration, project development and design, maintenance and operation activities for the county highway system. Of these funds, approximately $1.3 million came from the county levy, $6.1 million came from the state through County State Aid allocations, and $2.0 million from other funding sources including fees and charges for services.

The balance of approximately $4.5 million for engineering costs has been shown as an expense in the Transportation CIP and revenue in the Transportation Operating Budget. These funds are for reimbursement of department staff who are directly responsible for activities necessary for capital program project delivery activities including project management, design, traffic engineering, right-of-way acquisition and construction administration.

Operating	Annual
County Levy	$1.3 million
County State Aid Highway Funds (CSAH)	$6.1 million
Other fees and charges	$2.0 million
Engineering CIP Reimbursement	$4.5 million
TOTAL	$13.9 million

Staffing and funding resources are adequate to deliver the annual CIP of approximately the $72 million of identified annual system needs identified in this Plan. This assumes that a proportional amount of CIP projects continues to utilize consultant services, and continued efficiencies are realized through innovative practices and application of technology.

However, there are a few critical deficiencies in staffing for specific areas of CIP delivery and existing resources will likely need to be supplemented as the system grows to accommodate additional traffic and for peaks associated with individual years of the Transportation CIP. The most likely area for additional resources includes construction engineering, right-of-way, project management, and management of increased consultant use.

Strategies and Policies

The following ***strategies*** support the goal of directing limited resources to the highest priority needs of the transportation system.

- **Advance Funding – City Funded**
  Allow a city or cities to advance fund a project in the adopted County CIP with county repayment in accordance with a schedule identified through a Joint Powers Agreement when the city has determined a county highway project is necessary prior to the time designated in the CIP.

- **Funding Assistance**
  Seek funding assistance for transportation projects of all modes from federal, state, and regional funding programs in accordance with adopted priorities and consistent with the Plan.

- **Performance Measures**
  Use performance measures to direct investments in the transportation system and to assess the effectiveness of these investments.

- **Development Driven Investments**
  Encourage cities to pursue local and/or private investments in the transportation system to address transportation needs necessitated by development.

- **Trunk Highway Corridor and Interchange Projects**
  Work with MnDOT and local partners to develop funding for priority trunk highway corridor and interchange projects on a case by case basis.

- **Shared Purchases**
  Participate in shared purchase and use of equipment, services, and materials with other governmental agencies when practical.

- **State Funding**
  Support increases in long term, sustainable state funding for highway and bridge purposes.

- **State/Federal Bridge Funding**
  Pursue funding for replacement of bridges that are eligible for state and/or federal funding.

- **CSAH Revenue**
  Pursue opportunities with County State Aid Highway needs and CSAH system changes to maximize funds made available to Dakota County.

- **Metropolitan County Highway Funding**
  Support the current distribution to metropolitan counties for Motor Vehicle Lease Sales Tax and Flexible Highway Account revenues.

The following ***policies*** support the goal of directing limited resources to the highest priority needs of the transportation system. Revisions to previous Plan policies are identified in Appendix A, pages A-14 through A-31.

F.1 Cost Participation - Roadway

For cities with populations over 5,000, the county will participate in engineering and construction costs for county highway and associated improvements as defined in Table 4 after deducting federal and state cost participation amounts, for the following cost-shared items, individually or in combination, for projects included in the adopted County CIP:

1. Highway construction.
2. Mitigation required by local, state and federal permits, including accessibility requirements.
3. Eligible storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
4. Replacement or restoration of fences, landscaping, and driveways when affected by construction.
5. Centerline drainage culverts.
6. Existing traffic signals as part of a roadway project.
7. Replace or adjust sanitary sewer, water, and storm sewer systems, if required due to county highway construction.
8. Replace or adjust privately owned public utilities when utilities exist within privately held easements.

9. Eligible water pollution control best management practice items based on the county's share of contributing flows and meeting National Pollution Discharge Elimination System (NPDES) standards such as outlet structures, sedimentation basins and ponds, and temporary erosion control. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.
10. Trail and sidewalks along county highways including pedestrian crossing improvements such as beacons, median refuges and bump outs, and overpasses or underpasses, including the Transportation share of greenway crossings, as deemed necessary by the county for safe accommodation of pedestrians and bicycles in the highway right-of-way.
11. Lighting of sidewalks and trails adjacent to county highways in marked school zones and pedestrian crossings in county highways right-of-way.
12. Transit infrastructure improvements on highways, including bus pullouts, bus shelter pads, and other pedestrian facilities determined necessary to support transit.

The county will be responsible for 100 percent of the costs of existing pavement retained and/or rehabilitated through mill and overlay, resurfacing, reclamation, or other methods, as part of the final project. Applicable cost share policies will be applied to all other new construction or reconstruction involving excavation, installation, and placement of other new or reconstructed infrastructure. All other maintenance responsibilities not stated within a policy are county responsibilities. This policy (F.1) also is applied to the county highway portion of trunk highway projects.

Investment Goal Activities by County/City Share

Dakota County Highway Cost Share Policy Overview

Please refer to individual policies for specific details.

Investment Goal	Activities	County Share	City Share	Comments	Cost Share Policy
Preservation	Paved Highway Surface Gravel Highway Surface Bridge Rehabilitation Traffic Safety and Operation Pedestrian and Bicycle Facilities Retaining Wall Rail Crossings	100%	0%		F.17 F.8
	Storm Sewer Maintenance	up to 80%		Up to 80% County for leads and up to 80% City for mainline	F.7
Management	Small Safety Projects	up to 100%			F.15
	Roundabouts	up to 85%	15%	+15% City share per City leg	F.13
	New Traffic Signals	55%	45%		F.4
Replacement and Modernization	Highway Replacement Bridge Replacement Gravel Road Paving Lane Reductions 2- to 3-Lane Modernization	85%	15%	Includes improvements such as turn lanes, medians, shoulders, trails, sidewalks and school zone and pedestrian crossing lighting. Does not include additional through lanes, small safety projects, traffic signals or interchanges.	F.1 F.2 F.3 F.19
	Signal Replacement and Modernization	up to 100%		Cost split per leg	F.4
Replacement and Modernization and Expansion	Aesthetics	up to 3%		Up to 3% of construction cost	F.2
Expansion	Principal Arterials - non-Freeway	85%	15%	Does not include small safety projects, traffic signals or interchanges	F.1 F.2
	10-ton Routes and 6-lane -1/2 mile spacing	75%	25%	Does not include small safety projects, roundabouts, traffic signals or interchanges	F.3 F.14
	All Other Expansion Projects	55%	45%		
	Interchanges	avg. legs		Average of legs	

Table 4.

NOTE: The county is responsible for operation, maintenance and power cost for enhanced or dynamic signing unless otherwise noted.

F.2 Cost Participation - Aesthetic

Participate in aesthetics up to three percent of the county share of highway construction costs (excluding right-of-way, bridges, ponds, and storm sewers) prior to application of federal, state, or jurisdictional transfer funds. The county share of aesthetic participation may not exceed the local cost share for aesthetics. Aesthetics may include landscaping, plantings, decorative pavements, surface treatments, or decorative fencing. The county will not participate in aesthetics on preservation or management projects.

Aesthetic elements are subject to clear zone and sight line requirements, may not hinder normal maintenance operations, or degrade safety or operation of the highway, including trail or sidewalk facilities. The county will not participate in additional right-of-way necessary for only aesthetic enhancements. The local agency is responsible for maintenance of all aesthetic elements. Failure to maintain aesthetic elements may result in the local agency no longer being eligible for aesthetic funding participation. The county reserves the right to remove non-maintained aesthetic elements and recover costs from the local agency.

F.3 Cost Participation - Right-of-Way

For cities with populations over 5,000, the county will participate in the cost of right-of-way for county highway and associated improvements as defined in Table 4 for existing highways where right-of-way is required for:

1. The construction of items described in F.1, (1-11), F.4 (Traffic Signals), and F.13 (Roundabouts) provided city land use decisions have supported right-of-way needs in the corridor.
2. The county's portion of storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
3. The county portion of water pollution control best management practice items based on the county's share of the contributing flows and meeting NPDES standards. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.

F.4 Cost Participation – Traffic Signals

Traffic signals on county highways including construction costs for attached streetlights, interconnection, pre-emption, etc., will be eligible for the following county engineering and construction item participation after subtracting federal and/or state funds as follows:

1. New traffic signal installation, both independent installations or when included with a broader highway project, up to 55 percent county funds.
2. Existing traffic signal replacement or modernization including operational revisions for independent intersection projects such as flashing yellow arrows and pedestrian indications up to the percentage of intersection approach legs under county jurisdiction.
3. 100 percent of traffic signal removals and any directly associated intersection revision construction costs as independent or included in a broader highway project.
4. County standard for signal poles is galvanized. Initial painting and maintenance re-painting costs are aesthetic and is at city cost.

F.5 Cost Participation Involving Federal and State Funds

Subtract from the county eligible project costs, funds received from regional federal solicitation, Trunk Highway Fund, Trunk Highway Jurisdictional Transfer Fund, or federal or state grants, with the balance of remaining costs divided according to applicable county policies.

F.6 Cost Participation for Populations Less Than 5,000

Pay all costs for eligible construction and reconstruction for county highway improvements in cities with populations less than 5,000 and all townships.

F.7 Cost Participation for Storm Sewer System Maintenance

Share the cost of city maintenance of the following elements of county transportation facility storm water drainage systems:

1. Roadway catch basins and pipes connecting catch basins to mainline pipes are eligible for up to 80 percent county participation, or the county share of contributing flows, whichever is less.
2. Mainline pipes at a minimum of 20 percent or the county’s share of contributing flows, whichever is greater.
3. Storm water treatment and mitigation facilities based on the county's share of contributing flows.

4. To be eligible for county participation, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide storm water roles and cost responsibilities. These cost share agreements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
5. To be eligible for county participation, storm sewer repair and maintenance projects must be included in the currently adopted CIP or be approved by the county prior to incurring costs.

F.8 Multi-Use Trails and Sidewalk Maintenance

Participate in pavement preservation, overlay, or reconstruction of trails and sidewalks along the county highway system up to 100 percent. The city is responsible for snow and ice removal. To be eligible for county participation in trails and sidewalks, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide trail and sidewalk roles and cost responsibilities.

F.9 Transit Capital and Operating

Consider participation in transit capital and operating enhancements, or pilot projects, up to 50 percent after application of federal or state funds available for the project as determined by the county.

F.10 Tax Increment Financing (TIF) Costs

Subtract from the county eligible project costs, the costs of highway improvements or other highway costs (e.g. turn lanes, traffic controls, etc.), which are, in the determination of the county, the result of tax increment financing plan or an amendment to a TIF plan with the balance of costs divided according to policies. County Board resolution is required for any significant deviation from this policy.

F.11 Township Allotment Fund

As requested by the township and approved by the County Engineer, use the "township allotment" to fund:

1. 50 percent of township road or bridge construction projects.
2. Intersection lighting of county highways, including energy costs. (Energy costs will be submitted on an annual basis.)
3. Sign replacement funding.

F.12 Capital Improvement Program

Annually prepare and review the five-year Transportation, Transportation Sales and Use Tax and Regional Railroad Authority CIP's.

F.13 Cost Participation – Roundabouts

Participate up to 85 percent of the costs for eligible engineering and construction items, including streetlights and other features determined as necessary for operation, for roundabouts as described in Policy F.1. as follows:

- County Intersections: 25 percent base level of participation plus 15 percent for each county approach leg of the intersection.
- Trunk Highway Intersections: 85 percent for each county leg of the intersection after application of federal and/or state funds.

The county does not participate in strictly aesthetic elements for roundabout projects.

F.14 Cost Participation – Future County Road Segments

At county discretion, participate in the construction and engineering costs in accordance with F.1 for constructing local roadways that are identified as future county highway segments to county standards, over and above the costs that would have been incurred to construct the segment to city collector street standards.

F.15 Cost Participation – Small Safety Projects

The county may participate up to 100 percent of the engineering and construction costs of the following project types based on county review or prioritization to improve the safety of the transportation system, provided that they would not otherwise be included in a larger management, replacement and modernization or expansion project, or permit request:

1. Median closures or modifications;
2. Access closures or modifications;
3. Streetlights at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs;
4. Turn lanes or channelization at the intersection of two county highways;
5. Pedestrian crossing improvements including median refuges, bump outs, and pavement markings;
6. Guardrail Installation; and
7. ADA required safety improvements including curb ramps, sidewalk and bus shelter pads, and sidewalk connections within county highway right-of-way.

F.16 Cost Participation – Local Roadway System

The county may participate up to 85 percent, as defined on Table 4, of the costs for construction of local roadways necessary to directly mitigate physical, safety or operational deficiencies on the county highway system. Actual participation amount shall be based on the quantifiable benefit to the county highway system, as determined by the county based on engineering study. Local roadway construction costs that will be considered include:

1. Costs associated with relocation and construction of portions of the local roadway system to provide for its continuity and operation at a level that approximates its condition prior to construction of a county highway project.
2. Costs associated with improvements necessary to adequately accommodate county highway traffic detoured onto a local roadway during county highway construction.
3. Costs to improve local roadways to adequately accommodate traffic turning from the county highway onto a local roadway due to the addition of turn lanes on the county highway.
4. Costs directly associated with removal or consolidation of existing access to the county highway system.
5. Costs associated with construction of a local roadway that directly mitigates an existing county highway safety or operational issue or directly eliminates or significantly delays the need to expand the county highway system.

F.17 Traffic Signal and Street Lighting Power Costs and Maintenance Responsibilities

Participate in the maintenance and power costs for new and replacement traffic signals and standard streetlights as follows. Aesthetically enhanced and decorative streetlights are subject to Policy F.2.

A. New and Replacement

a. Installation (New and Replacement) Streetlights at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs.
b. Street lighting at roundabouts – The county will be responsible for power costs and maintenance on county-county and state-county intersection roundabouts and the city will be responsible on city-county intersection roundabouts.
c. Street lighting, maintenance and power costs for traffic signals – The county will participate in power costs for traffic signals including the streetlight up to the percentage of intersection approach legs under county jurisdiction. The streetlights must be energy saving and connected to the service cabinet. Street lighting is the luminaire, pole and all wiring located above the signal mast arm. The city is responsible for maintenance of streetlights and all costs for unmetered services. Painting maintenance of streetlights for signals is 100 percent city responsibility.

B. Existing
a. Energy saving light retrofits - The county does not participate. Cities may elect to retrofit streetlights at their cost and by permit through the county.

F.18 County Advanced Funding for City Cost Participation

The county will consider advancing the local share of a project, consistent with adopted county cost participation policies, in the approved CIP's by agreement with the city involved when all the following criteria are met:

1. The county determines there is a need on the county transportation system that should be addressed sooner than city funding allows.
2. The county has the available funds to pay the city cost share at the time the cost will be incurred.
3. The city submits a request to the county explaining the reason(s) for the county to advance fund their share.
4. The plan for city repayment is defined in an agreement between the city and county.
5. County advance funding is limited to a maximum 3-year period.

F.19 Left Turn Lane/Access Permit Process

In cities over 5,000 in population, the county will participate up to 85 percent of one half (42.5 percent) of the engineering, right-of-way and construction costs for left turn lanes required by the county through the access permitting process on high speed, two-lane, undivided county highways to accommodate a new access across from an existing access that does not have an existing left turn or bypass lane. For locations in cities under 5,000 in population or townships, the county may participate up to 50 percent of the engineering, right-of-way and construction costs.

Goal 1 Summary

The emphasis of this Goal is for the county to develop the best transportation system to provide for safe movement of people and goods within financial constraints. The system vision has been developed in coordination with the state, adjacent counties, cities, townships, and other transportation partners

through the goals and policies within this Transportation Plan. This includes directing resources to transportation system priority needs and seeking and acquiring a variety of transportation funding sources to meet the many diverse system needs including transportation projects, operation and maintenance activities.

The county envisions available revenues of approximately $1.3 billion, in 2020 dollars, to invest towards transportation needs of approximately $1.63 billion of transportation needs over the 20-year Transportation Plan timeframe through 2040. Available revenues will be directed at the highest priority needs of the transportation system. Unmet needs will need to be considered on a case-by-case basis with pursuit of additional funding beyond anticipated revenue to make investments in some areas, particularly expansion needs of the county and state trunk highway systems. Limited additional staff and equipment resources are anticipated to be necessary to deliver the anticipated annual CIP, operate and maintain the system, and meet the identified transportation needs dependent on actual capital investment levels and system maintenance and operating needs.

Chapter 5

Goal 2:
Preservation of the Existing System

The most effective way to protect Dakota County's transportation system investments is to continually evaluate and maintain the existing system to reduce unnecessary or premature replacement investments while maintaining safety and mobility. Preservation investments are intended to maximize infrastructure life and minimize life cycle costs of the transportation system.

Goal Purpose

The preservation goal is the most important Transportation Plan goal for long term, cost effective investment in the transportation system. Dakota County will continue to experience demands for limited resources to meet the transportation needs of the county. The investments necessary to maintain and repair the extensive system of roads, bridges, supporting infrastructure and facilities will increase through the Plan period. Therefore, the investments the County has made in its transportation system must be preserved. Preservation strategies and policies are intended to maintain the existing transportation system infrastructure in predominantly the current configuration.

The strategies and policies of this goal provide for future estimated investment needs for preservation of key transportation system elements. Preservation of the transportation system will be pursued through the following activities and CIP investment categories.

Activities

- Highway Surface Evaluation
- Pavement Management Program
- Gravel Maintenance
- Bridge Rehabilitation
- Traffic Safety and Operation
- Pedestrian and Bicycle Trail Maintenance
- Winter Maintenance

CIP Investment Categories

- Paved Highway Surface
- Gravel Highway Surface
- Roadway Safety and Operation
- Pedestrian and Bicycle Facilities
- Storm Sewer System Repair
- Retaining Wall Maintenance
- Rail Crossing Resurfacing

Paved Highway Surface

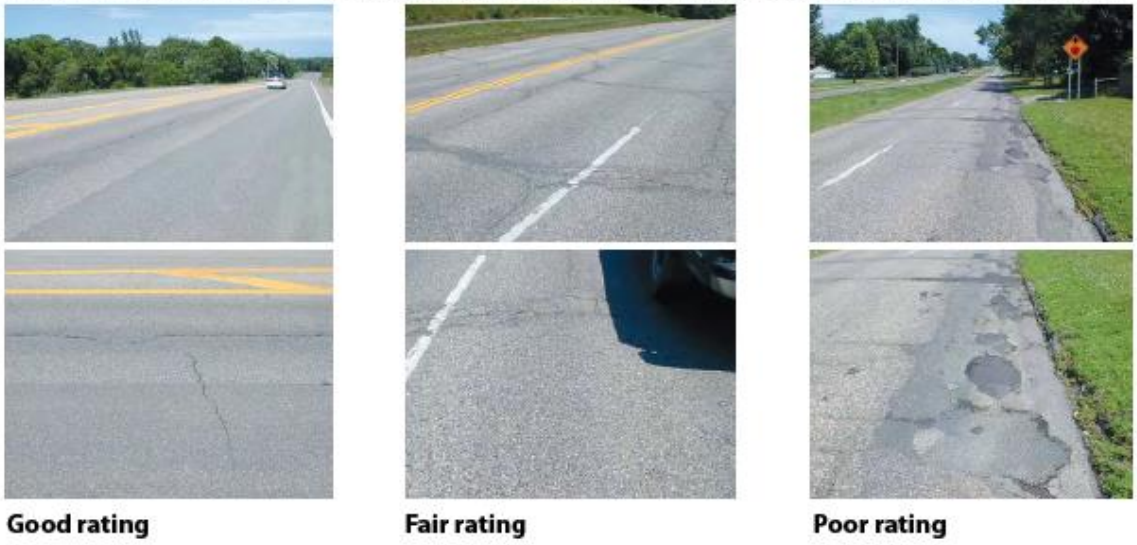
The County highway system consists of 414 centerline miles of which approximately 366 miles (88 percent) are paved and 48 miles (12 percent) have a gravel surface. Preservation techniques are applied to extend the useful life and delay reconstruction needs of the transportation system.

Year	Centerline Miles	Paved	%	Gravel	%
2020	414	366	88%	48	12%
2012	424	359	85%	65	15%
2004	440	350	80%	90	20%

For more than 20 years the County has evaluated the condition of the entire paved system. Every other year data is collected and analyzed in an asset management tool. Ride and pavement distresses are combined, and a pavement condition is calculated for each segment.

PQI Rating	Condition Rating
0.0 – 2.1	Poor
2.2 – 2.9	Fair
3.0 – 4.0	Good

Pavement Quality Index — Roads deteriorate over time and need maintenance to delay replacement



Good rating **Fair rating** **Poor rating**

Dakota County utilizes several techniques for tools in preserving bituminous pavement. The most commonly used technique is the milling and overlaying of the pavement. Other effective pavement preservation measures used on Dakota County include crack sealing, fog sealing, patching, microsealing, ultra-thin-bonded-wearing course, cold-in-place-recycling, and full depth reclamation. The life of the pavement can be maximized by applying the correct preservation measure at the appropriate time to maintain the majority of highway pavements in the good or fair category.

PERFORMANCE MEASURE: Keep a Pavement Quality Index (PQI) of Fair or better on 95 percent of the highway system and Good or better on 75 percent of the highway system.

Figure 10 shows pavement quality index results of the County paved system from 1999 to 2019. Recent investments and funds programmed for overlays were applied to improving the pavement quality.

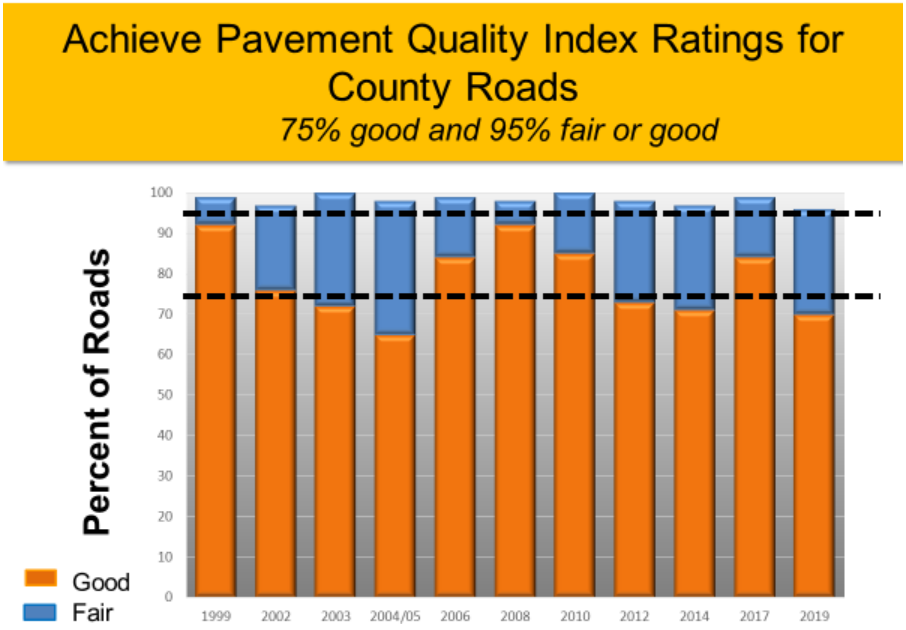


Figure 10.

Figure 10 shows the projected pavement quality index of the County paved system through 2040 based in investments identified in this Plan. The projection was developed using ICON™ as the County's pavement asset management tool. Twenty years of data along with funding programmed were applied to determine the projections. Specifically, pavement performance curves were used to determine projected PQI. Projects identified in the 2021-2025 were input directly and funding for reconstruction projects identified in the Replacement Chapter and preservation funds identified in this chapter were input into

the program to forecast the future pavement condition. A slight increase in average PQI is projected over the next 20 years based on this Plan investment approach.

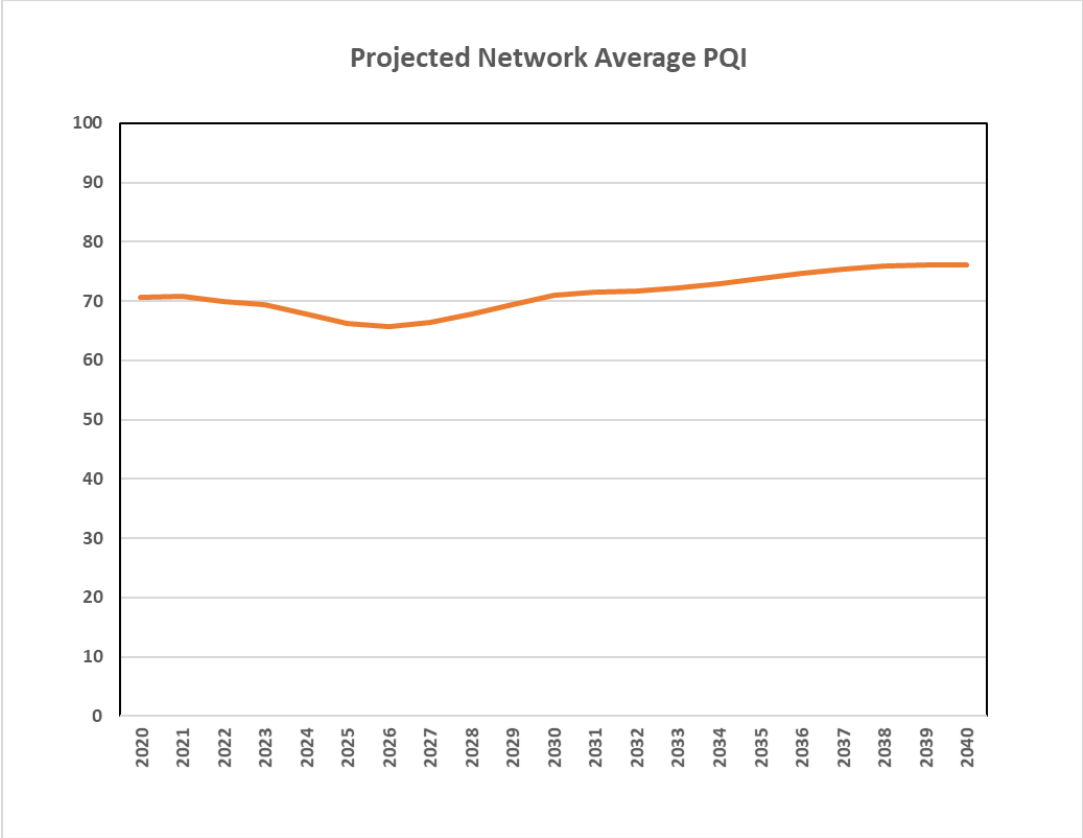


Figure 11.

The current CIP investment for improving and extending the useful life of bituminous highway surfaces is $3.3 million per year. In the future, estimated annual CIP needs are expected to slowly increase to meet the above performance goal. An investment increase is also due to the addition of pavement markings, ADA upgrades to curb ramps and traffic signals in paved highway improvements. Previously theses were not included under the highway surface investment category. The following are the estimated annual CIP investments for highway surface improvements over the plan period including estimated investments for County Roads:

- 2021-2025 = $7.71 million ($1.15 million for County Roads)
- 2026-2030 = $8.20 million ($1.25 million for County Roads)
- 2031-2040 = $8.71 million ($1.30 million for County Roads)

The following ***strategies*** support preservation of the existing system for bituminous highway surfaces.

- **Highway Surface Evaluation**
  Evaluate highway pavement quality and performance measures on the entire County paved system every two years.

- **Pavement Management Program**
  Utilize a pavement management program for highways to guide the maintenance and preservation of the highway system including bicycle and pedestrian facilities. Assess and apply various preservation treatments as appropriate.

- **Cost Effectiveness of Pavement Preservation**
  Consider a range of pavement preservation techniques and design practices to maximize cost effectiveness and pavement life.

- **Rumble Strips and Safety Edges**
  Utilize tapered pavement safety edges and rumble strips, particularly in rural areas, where practical to improve safety through reduced occurrence of run off the road and centerline cross over crashes.

Gravel Highway Surface

Beginning in 2004, the County started a program to resurface all gravel roads with lime rock aggregate material. By 2007, all gravel-surfaced roads were converted to lime rock treated with liquid chloride.

This conversion provided for better roadway surfaces, longer service life and higher traffic volume thresholds than previous gravel surfaces resulting in stabilized gravel road maintenance costs. The conversion to lime rock allowed the County to eliminate the need to stockpile gravel. The conversion also led to contracting of lime rock hauling, thus reducing the usage of County tandem dump trucks and motor graders.

Of the 48 miles of gravel roads remaining, the long-term plan for gravel roads is to pave approximately 21 miles that will remain under County jurisdiction. However, not all will be paved within the 20-year Plan period.

County Gravel Roads
(to Remain Under County Jurisdiction)

Road	Location	Miles
CR 59	Sciota	3.5
CR 73	Inver Grove Heights	1.0
CSAH 80	Castle Rock & Eureka	3.6
CR 89	Douglas & Marshan	6.0
CSAH 91	Douglas	3.1
CR 96	Greenvale	4.0
	TOTAL	**21.2**

County Gravel Roads
(to Transfer to Local Jurisdictions)

Road	Location	Miles
CR 53	Sciota	2.5
CR 62	Vermillion Twp.	1.1
CR 76	Douglas	5.0
CR 83	Hampton Twp.	3.3
CR 84	Eureka	2.0
CR 90	Greenvale	5.1
CR 93	Douglas	2.0
CR 94	Randolph Twp., Sciota, Waterford	5.5
	TOTAL	**26.5**

Details regarding the jurisdictional transfer of County highways are outlined in the Management Goal, Chapter 7, and paving for gravel County highways in Replacement and Modernization Goal, Chapter 8 of this document.

The current CIP investment for preservation of gravel roadway surfaces is $0.7 million per year. In the future, estimated annual CIP needs are expected to decrease over the next 20 years due to the conversion of gravel roads to paved roadways and transferring gravel roadways to other jurisdictions. The following are the estimated annual CIP investments for gravel surface improvements over the plan period including estimated investments for County Roads:

- 2021-2025 = $ 0.7 million ($ 0.6 million for County Roads)
- 2026-2030 = $ 0.5 million ($ 0.4 million for County Roads)
- 2031-2040 = $ 0.3 million ($ 0.3 million for County Roads)

The following ***strategies*** support preservation of the existing system for gravel roadway surfaces:

- **Gravel Hauling**
  Maximize efficiency in gravel placement through contract gravel hauling when appropriate.

- **Gravel - Chloride Application**
  Apply liquid dust control chloride as necessary to improve ride, control dust, and minimize material loss.

- **Gravel - Resurfacing Efficiency**
  Utilize high quality aggregate material and chloride application to reduce loss of gravel and maximize time between aggregate highway resurfacing.

Bridge Rehabilitation

The County currently has 83 bridges under its jurisdiction, 59 on the CSAH system and 24 on County Roads. Bridges have historically been rated according to a sufficiency formula based on several factors. The County now uses the Local Planning Index (LPI) for bridges that was recently established by MnDOT to monitor the operation quality of bridges. The LPI is a risk score which factors both the consequence of a service interruption and the probability of service interruption. The LPI is an improvement to the sufficiency rating that the County has used in the past and uses a more risk-based approach. The sufficiency rating is no longer being used by the FHWA or MnDOT.

Bridge rehabilitation usually is considered for a bridge if it is 35 years or older in age, shows deterioration or minor deficiency and is not eligible for federal or state replacement funds. In general, major bridge rehabilitation work is not considered unless the bridge deck is less than 20 percent unsound or delaminated. Minor bridge rehabilitation includes sealing surface cracking with epoxy sealants and replacing expansion joint material as needed. Costs associated with bridge rehabilitation are estimated at under $20,000 per year and have been included in the Bridge Replacement needs identified in Chapter 8.

PERFORMANCE MEASURE: The County will have no bridges under its jurisdiction that have a Local Planning Index (LPI) rating of 60 or less.

Costs associated with bridge rehabilitation are included within the transportation operating budget or other project expenses in the CIP. It is anticipated that three bridge decks will need to be resurfaced within the next ten years.

The following ***strategies*** support preservation of the existing system for bridge rehabilitation:

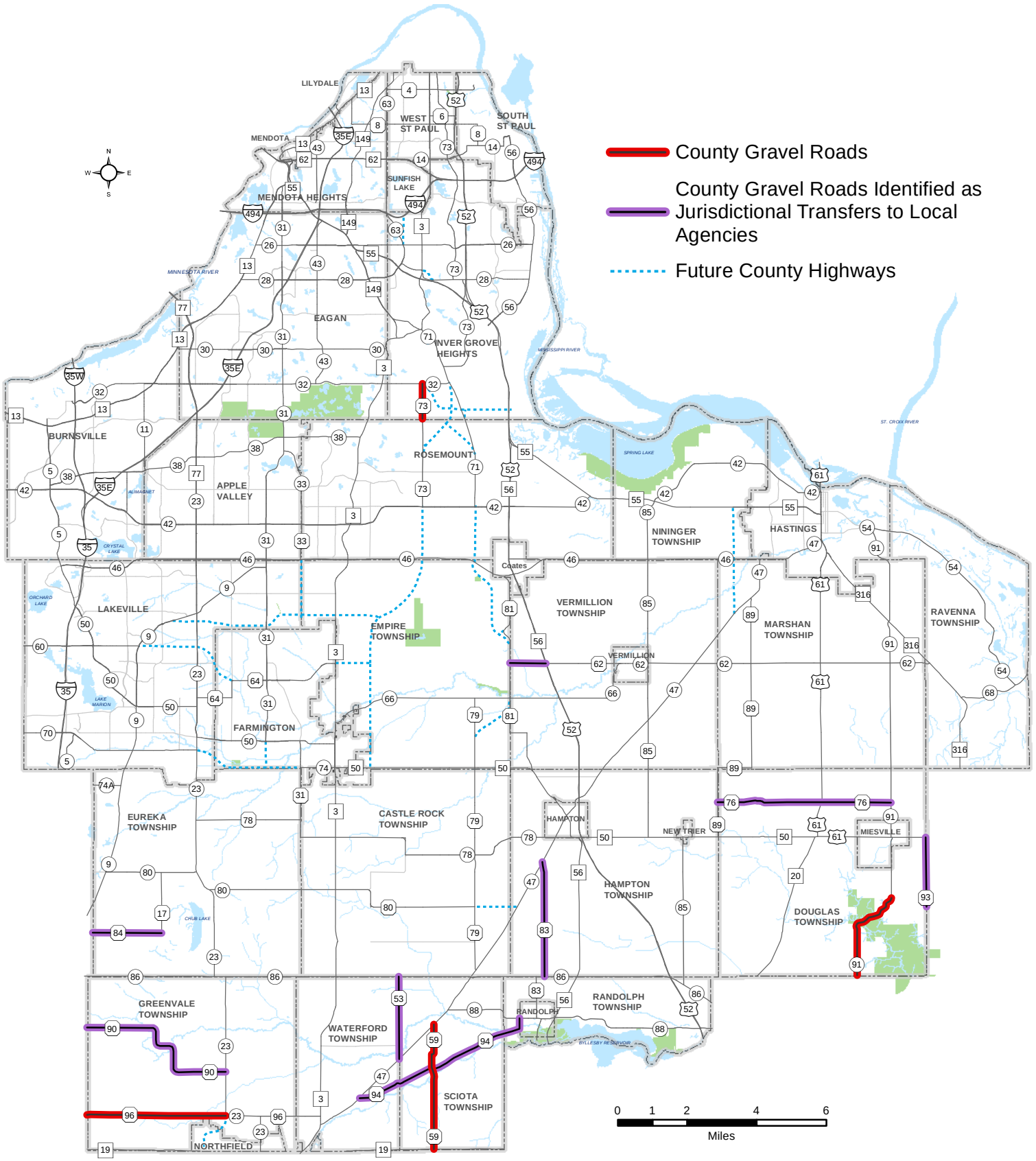
- **Bridge Rehabilitation Practices**
  Utilize bridge rehabilitation practices to maximize structure life. Bridge rehabilitation will be considered if a bridge is 35 years or older in age, shows deterioration or minor deficiency and is not eligible for federal or state replacement funds. Examples include deck deterioration, channel erosion, rust protection, and expansion joint repair.

- **Functionally Obsolete Bridges**
  The County will address improvements to bridges that are functionally obsolete when associated roadway projects allow or when funding is available.

The following ***policy*** supports preservation of the existing system for bridge rehabilitation:

P.1 Bridge Inspection and Maintenance
Perform inspection and maintenance of bridges in compliance with state statutes, MnDOT, and federal requirements.

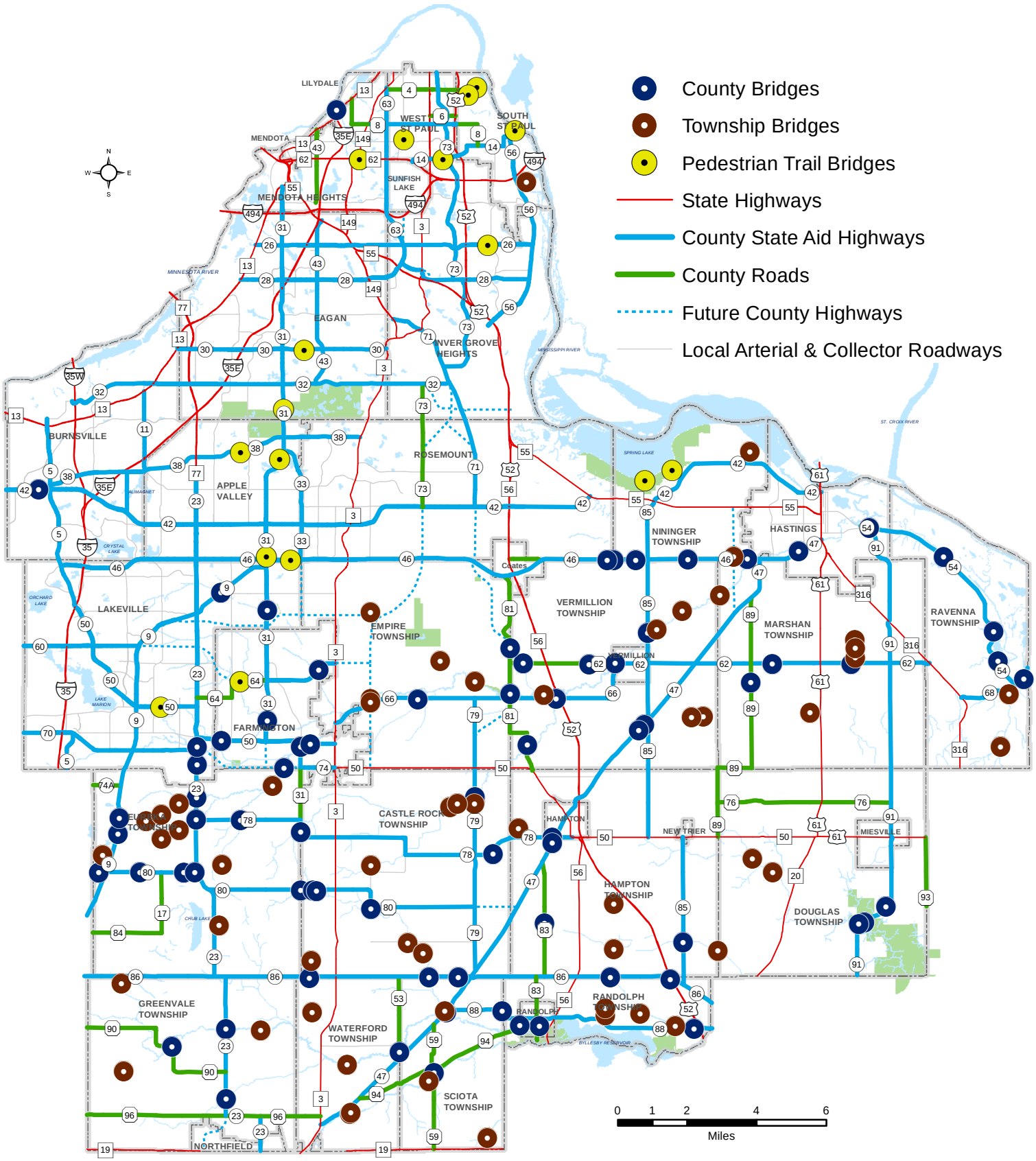
Gravel Roads



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 12

Bridge Inventory



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 13

Roadway Safety and Operation

Pavement markings, signing, guard rail, rumble strips/rumble stripes and other highway measures are used along the County highway system to ensure guidance, information and safety measures for roadway users. Pavement markings associated with pavement preservation improvements are accounted for with the Paved Highway Surfaces investment category.

The current CIP investment for preservation of traffic safety and operation is $0.35 million per year. In the future, estimated annual CIP needs are expected to remain stable. The following are the estimated annual CIP investments for traffic safety and operation projects over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.35 million ($0.05 million for County Roads)
- 2026-2030 = $0.35 million ($0.05 million for County Roads)
- 2021-2040 = $0.35 million ($0.05 million for County Roads)

The following ***strategy*** support preservation of pavement markings:

- **Infrastructure Assessments**
  Conduct regular assessments of pavement markings, signs, guard rail and culverts on the County highway system to prioritize preservation investments.

Pedestrian and Bicycle Facilities

The county currently has 185 miles of multi-use trails alongside County highways that are designated for the exclusive use of bicyclists and pedestrians. These separate facilities maximize safety for these uses in the County highway right-of-way. Trail and sidewalk preservation have traditionally been performed by the cities. This work was eligible for up to 55% County funding participation by requests from the cities through terms of the Bikeway Maintenance Agreement with the city to replace trails. Through the update of this Plan, the County has determined maintenance and ultimate replacement of the trails and sidewalk is best managed and funded by the county. The useful life of a bicycle trail is typically 20 years for trail rehabilitation and replacement, however individual segments will vary considerably. Bicyclists are more sensitive to pavement quality than motor vehicle users and may require more frequent maintenance in areas of high-use, high-speed or horizontal curves.

The current CIP investment for preservation of bicycle and pedestrian trails is $1.1 million per year. These costs will now be paid for 100% by the County. The cost includes surface sealing, patching, and

replacement. The following are the estimated annual CIP investments for preservation of bicycle and pedestrian trails over the plan period:

- 2021-2025 = $1.1 million
- 2026-2030 = $1.1 million
- 2031-2040 = $1.1 million

The following ***strategies*** support preservation of bicycle trails and facilities:

- **Bicycle Trail Maintenance**
  Maintenance practices and activities will provide a useful life of 15 to 20 years before trail rehabilitation and replacement is necessary.

- **Anticipating Future Needs**
  Incorporated bike trails along county roads into the existing roadway pavement asset management tool. Anticipate and prioritize trail maintenance needs.

The following ***policy*** supports preservation of bicycle trails and facilities and transit facilities:

P.2 **Bicycle Trail Resurfacing**
Perform trail maintenance and trail resurfacing at end of useful pavement life for trails in county right-of-way.

Storm Sewer Maintenance

Storm sewer construction inspection and maintenance is mainly the responsibility of local jurisdictions. However, the county acknowledges that the county highway system contributes to storm water drainage and resulting storm sewer system maintenance needs due to the proportion of water typically draining from the highway right-of-way. Thus, the county has recognized sharing the cost of maintenance for elements of the county transportation facility storm water drainage systems. This includes maintenance cost participation of up to 80 percent for roadway catch basins and pipes connecting catch basins to mainline pipes. Maintenance cost participation is based on the county's share of contributing flows for mainline pipes and storm water treatment and mitigation facilities. County maintenance cost participation is for repair and replacement projects and not for routine maintenance activities.

The following are the estimated annual CIP investments for preservation of storm sewers over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.4 million ($0.1 million for County Roads)
- 2026-2030 = $0.4 million ($0.1 million for County Roads)
- 2031-2040 = $0.4 million ($0.1 million for County Roads)

The following policy is identified in Chapter 4 and appears in this chapter for reference convenience.

F.7 Cost Participation for Storm Sewer System Maintenance

Share the cost of city maintenance of the following elements of county transportation facility storm water drainage systems:

1. Roadway catch basins and pipes connecting catch basins to mainline pipes are eligible for up to 80 percent county participation, or the county share of contributing flows, whichever is less.
2. Mainline pipes at a minimum of 20% or the county's share of contributing flows, whichever is greater.
3. Storm water treatment and mitigation facilities based on the county's share of contributing flows.
4. To be eligible for county participation, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide storm water roles and cost responsibilities. These cost share agreements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
5. To be eligible for county participation, storm sewer repair and maintenance projects must be included in the currently adopted CIP or be approved by the county prior to incurring costs.

Retaining Wall Maintenance

Retaining walls have been constructed throughout county right-of-way for protection of adjacent facilities or minimizing the need for additional road right-of-way. Retaining walls useful life exceeds 50 years. Some modular block retaining walls constructed in the 1980's and early 1990's is susceptible to deterioration through freeze thaw cycles. The deterioration can be accelerated by deicing materials use in winter maintenance. Periodic sealing of these retaining walls has slowed the deterioration of the walls.

The following are the estimated annual CIP investments for preservation and replacement of retaining walls over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.33 million ($0.1 million for County Roads)
- 2026-2030 = $0.33 million ($0.1 million for County Roads)
- 2031-2040 = $0.33 million ($0.1 million for County Roads)

Rail Crossing Resurfacing

The county highway system has 20 at-grade rail crossings. The rails are the responsibility of the railroad and the surface is the responsibility of the county. The surface performance of each crossing varies greatly depending on truck traffic, rail traffic, materials used by the railroad, and the geometry of the crossing. On average the crossing surface requires resurfacing approximately every 10 years.

The following are the estimated annual CIP investments for the resurfacing of rail crossings over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.12 million ($0.03 million for County Roads)
- 2026-2030 = $0.12 million ($0.03 million for County Roads)
- 2031-2040 = $0.12 million ($0.03 million for County Roads)

Other Strategies and Policies

To further accomplish the preservation of the existing transportation system the following preservation strategies and policies apply to all aspects of the transportation system.

The followings ***strategies*** support preservation of the existing system:

- **Preservation Priority**
  Maintain and preserve the existing transportation systems in a safe and usable state as the top system investment priority. High priority will be given to preservation and rehabilitation projects that increase safety, and effective multimodal and intermodal accessibility.

- **Monitoring of Systems**
  Develop and maintain the following systems for the continuous monitoring of transportation facilities to identify highway system preservation needs:
  - A traffic counting system that is compatible with MnDOT systems.
  - A crash data and analysis system that is compatible with MnDOT data.
  - A safety assessment rating system that can assist in needs prioritization.
  - Traffic signal management.
  - Pavement management including pedestrian and bicycle facilities.
  - Bridge inventory.
  - Highway database inventories for roadway, retaining walls, culverts, signs, traffic signals, and other highway appurtenances.

- **Roadside Aesthetics**
  Local agencies are responsible for roadside aesthetic and landscape maintenance. Maintenance of these elements is required for the local agency to maintain eligibility for aesthetics funding. The county reserves the right to remove aesthetic elements that are not maintained and recover costs from the local agency.

- **Utilities Adjustments**
  Cities are responsible for adjustment or cost of adjusting city utilities in pavement preservation projects. The county will coordinate in a timely manner with local government staff regarding repairs or adjustments of public utility systems in conjunction with county highway projects.

- **Maintenance Reimbursement**
  Pursue opportunities to partner with cities and townships to maximize efficiency of maintenance operations through agreements that provide for reimbursement of normal county costs for maintenance, such as mowing and/or sweeping, that are performed by another agency.

- **Cost Effectiveness of Materials**
  Utilize life cycle cost analysis to determine cost effectiveness of materials used for system maintenance and operation.

- **Winter Maintenance Practices**
  Update and maintain winter maintenance practices for highways that establish levels of service for snow and ice removal and sand and salt application practices.

- **Highway Surface Maintenance**
  Conduct regular highway surface maintenance activities including gravel roads.

The following ***policies*** support preservation of the existing system.

P.3 County Highway Sweeping
Sweep all county highways with urban sections, and selected county highways with rural sections as necessary based on debris, annually in the spring. County highway segments will also be swept in the non-snow season as determined necessary by the county based on debris. Fall street sweeping will focus on removing leaves from urbanized segments of the county's road system. The county will:

1. Strive to remove sand before it goes into the storm sewer.
2. Attempt to remove leaves from the gutters.
3. Rotate the order of sweeping among the cities.
4. Work with cities to determine priority areas to clean first (e.g., to prevent sand from going into catch basins where there may be a problem).
5. If additional assistance is needed, consider contracting with local municipalities.
6. Comply with NPDES requirements.

P.4 Mowing Policy
During the growing season (May to October), mow medians and boulevards in non-rural areas up to six times per year for safety. In rural areas observe Minnesota Statute 160.232 - Mowing Ditches Outside Cities. Cities may supplement the mowing.

P.5 Mailbox Replacement
Mailboxes conforming to current design standards adjacent to highways that have been hit directly by a snowplow or have been removed by a county project or maintenance activity will be repaired or replaced with a conforming mailbox at the expense of the county. Owners are responsible for the care and replacement of mailboxes unless hit directly by a snowplow. Mailboxes adjacent to highways that require repair or replacement because they are a safety hazard or because they are non-conforming will be replaced by the owner or the county in accordance with Minnesota Statute 169.072.

P.6 Drainage Cleaning
Clean drainage ditches, gutters, and storm sewer inlet grates as identified per maintenance agreements for storm sewer systems.

P.7 Permit Coordination
Coordinate permit approval with cities prior to issuing permits to avoid possible city conflicts.

Goal 2 Summary

The emphasis of this goal is that the county identifies that the most effective way to protect the transportation system investments is to continually evaluate and maintain the existing system to reduce unnecessary or premature replacement investments while maintaining safety and mobility. This includes continuing evaluation of existing conditions and identification of future needs of the transportation system to maximize useful infrastructure life. This includes evaluation and identification of bituminous

highways, gravel-surfaced roads, pavement markings, pedestrian and bicycle facilities, storm sewer, retaining walls and rail crossing preservation needs.

Dakota County currently invests approximately $9.86 million per year towards projects to preserve the existing system. Activities include highway surface preservation (including both bituminous and gravel), traffic control devices (traffic signals and durable pavement markings), pedestrian and bicycle trail preservation, storm sewer preservation, retaining wall preservation and rail crossing preservation. Future annual investments for this goal are anticipated to rise as the transportation system ages and traffic volumes increase. The following are the estimated annual CIP preservation needs and investments over the plan period.

Annual Preservation Investment Needs						
	2021-2025		2026-2030		2031-2040	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR
Paved Highway Surface	$ 6.56	$ 1.15	$ 6.95	$ 1.25	$ 7.41	$ 1.30
Gravel Highway Surface	$ 0.10	$ 0.60	$ 0.10	$ 0.40	$ -	$ 0.30
Bridge Rehabilitation	$ -	$ -	$ -	$ -	$ -	$ -
Roadway Safety and Operation	$ 0.30	$ 0.05	$ 0.30	$ 0.05	$ 0.30	$ 0.05
Pedestrian and Bike Facilities	$ 1.10	$ -	$ 1.10	$ -	$ 1.10	$ -
Storm Sewer System Repair	$ 0.40	$ 0.10	$ 0.40	$ 0.10	$ 0.40	$ 0.10
Retaining Wall Maintenance	$ 0.33	$ 0.02	$ 0.33	$ 0.10	$ 0.33	$ 0.10
Rail Crossing Resurfacing	$ 0.12	$ 0.03	$ 0.12	$ 0.03	$ 0.12	$ 0.03
ANNUAL AVERAGE	**$ 8.91**	**$ 1.95**	**$ 9.30**	**$ 1.93**	**$ 9.66**	**$ 1.88**

Chapter 6

Goal 3:
Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

Safe travel with minimal congestion while balancing multi-modal accommodation is an integral part of Dakota County's vision for its transportation system. Fiscal, social and environmental constraints limit the ability for a road construction program to achieve this vision alone. Management strategies contained in this Goal are intended to optimize the safety and capacity of the existing transportation system to maximize safety for all modes and to defer more costly expansion investments.

Goal Purpose

This goal aims to enhance the relationship and compatibility between land uses and transportation to assure an efficient and safe transportation system. Management of the system can cost effectively maximize mobility, safety and capacity of the county transportation system.

This section of the plan provides strategies and policies to support management of the existing transportation system. It also provides current and future estimated costs of the investments and measures for management of key transportation system elements. Management of the transportation system will be pursued through the following activities and CIP investment categories.

Activities

- Functional Classification
- Access Management
- Vehicle Size and Weight Management
- Jurisdictional Classification
- Intersection Traffic Control
- Right-of-Way Preservation and Management
- Bicycle and Pedestrian Accommodation

CIP Investment Categories

- Jurisdictional Classification (Highway Replacement and Gravel Road Paving)
- Safety and Management
- Signal Projects
- Rural Intersections
- Right-of-Way Preservation and Management

- Bicycle, Pedestrian, and Greenway Trail Gaps and Crossings
- Greenway Crossings
- Non-Greenway Crossings

Functional Classification

A highway functional classification system is a grouping of highways based on the type of trip the highway is predominantly intended to serve. It provides guidelines for planning a highway network for the safe and efficient movement of people and goods throughout Dakota County.

The Metropolitan Council and the Transportation Advisory Board together, functioning as the Metropolitan Planning Organization for the Twin Cities Metropolitan Region, have adopted a series of functional classification system criteria for the Twin Cities region. The functional classification system of highways is determined at the regional level.

Highways cannot provide both maximum access and maximum mobility without safety and traffic problems. Functional classifications address the balance between the need for both mobility and access. Highways are generally classified into four main categories: local, collector, minor arterial, and principal arterial (which include Interstate freeways). Local roads typically under city and township jurisdiction provide high levels of access and pedestrian accommodation with minimal mobility while principal arterials typically under state jurisdiction provide limited access and pedestrian accommodation with high levels of mobility.

The county highway system is ideally comprised of roads that are functionally classified as minor arterials and collectors. However, Dakota County has both Principal arterials and local roads on county highway system. These highways are candidates for potential jurisdictional transfer in consideration of other factors.

Costs associated with management of the functional classification system are included with other project expenses in the CIP or are administrative and assumed at no cost. The functional classification of roadways in Dakota County is shown in Figure 30 and are defined as follows:

- Principal Arterials – The emphasis of principal arterials is on moving large volumes of traffic over long distances rather than providing direct land access and are typically under state jurisdiction.
- Minor Arterials – The minor arterial system supplements the principal arterial system and provides connections between local and collector roads and the principal arterial system and trips between cities or townships. They emphasize mobility while balancing the need for limited access and pedestrian accommodation. Minor Arterials are ideally under county jurisdiction although there are many Minor Arterial state highways. Minor Arterials are further defined as:
    - A-Minor Relievers – provide supplementary capacity for congested parallel principal arterials.
    - A-Minor Augmentors – supplement the principal arterial system in more densely developed or redeveloping areas.
    - A-Minor Expanders – supplement the principal arterial system in less densely developed or redeveloping areas.

    - A-Minor Connectors – provide safe, direct connections, between rural centers and to principal arterials in rural areas without adding continuous general-purpose land capacity.
    - Other Arterials – do not meet the criteria for A-Minor (above) and were identified as B-Minor arterials in the past.
- Collector Roads – Mobility, pedestrian accommodation, and land access are equally important on the collector road system. These roads provide connection between arterials and local roads and are typically under local or county jurisdiction.
- Local Roads – Local roads connect blocks and land parcels within a community with the primary emphasis on land access and pedestrian accommodation over mobility and are typically under township or city jurisdiction.

Dakota County Principal Arterial Study

This study conducted in partnership with MnDOT, the Metropolitan Council, and local agencies, addressed the future designation of some highways in the county as principal arterials to provide a safe and efficient transportation system in the long term. Technical guidance encourages principal arterials 2-6 miles apart in developed suburban areas and 6-12 miles apart in rural areas. Other considerations included traffic volumes, connections to other principal arterials and the ability to support freight.

The following highways provide continuity over long distances, serve many trips, serve commuters and service population or employment destinations and are considered future Principal Arterial candidates:

- Near-Term Principal Arterial Designation Candidates (highways that currently display Principal Arterial characteristics)
    - CSAH 70, from I-35 to CSAH 23
    - CSAH 23, from CSAH 42 to CSAH 70
- Recommended longer term Future Principal Arterials
    - TH 149, from TH 55 to TH 3
    - CSAH 63, from TH 149 (as CSAH 28) to I-494 (as new alignment)
    - TH 3, from TH 149 to TH 19
    - CSAH 70, from Scott County to I-35
    - CSAH 70, (as new alignment) from CSAH 23 to TH 3
    - TH 50, from TH 3 to TH 316
    - CSAH 86, from Scott County to TH 52

The following ***strategies*** support management of the functional classification system:

- **Functional Classification - County**
  Consider functional classification in the design and operation of all highways in consideration of all past, current and future studies addressing functional classification.

- **Functional Classification**
  Plan, construct, and maintain an appropriate functional classification system that is developed in coordination with existing and planned land uses through:
    - Periodic review and update of the functional classification system;
    - Coordination with other agencies in developing the regional functional classification system;
    - Consideration of traffic demands, access controls and accommodation of other modes on highways to protect safety and mobility; and

- Evaluation of roadway networks when reviewing plats.

- **Functional Classification – Local Road Network**
  Encourage cities to construct a road network to appropriately accommodate local trips on the local street system and provide connection to the higher functional classification roadways at multiple locations.

- **Functional Classification – Jurisdictional Classification**
  Consider functional classification as a component when implementing future jurisdictional classification adjustments.

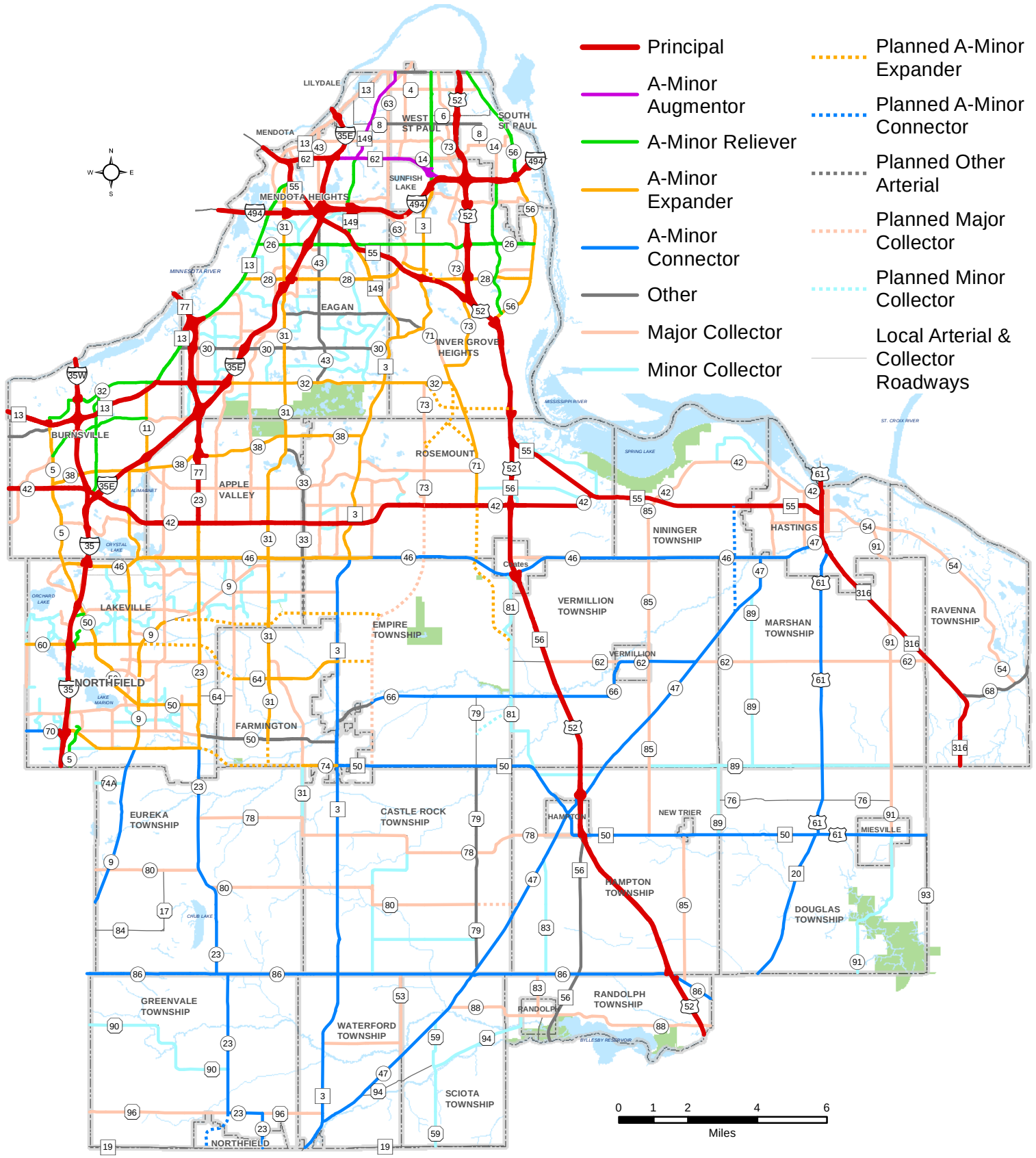
- **Functional Classification – Maintain Highway Function**
  Work with the cities to use traffic controls, design practices, land use policies, and local street systems to maintain the function of the county highways, as designated in the functional classification map contained in this plan.

- **County Principal Arterial Highways**
  Dakota County will work with the Metropolitan Council, MnDOT, and state and federal officials to address transportation needs and funding on county principal arterial highways.

- **Functional Classification – Revisions**
  Request the Metropolitan Council to consider functional classification revisions to the county system to appropriately reflect the mobility and access needs of the traveling public as needed.

- **Functional Classification – Dakota County Principal Arterial Study**
  Implement study observations, results, conclusions and recommendations. Include any need for additional studies, focus areas, and need for coordination of decision-making among various study segments.

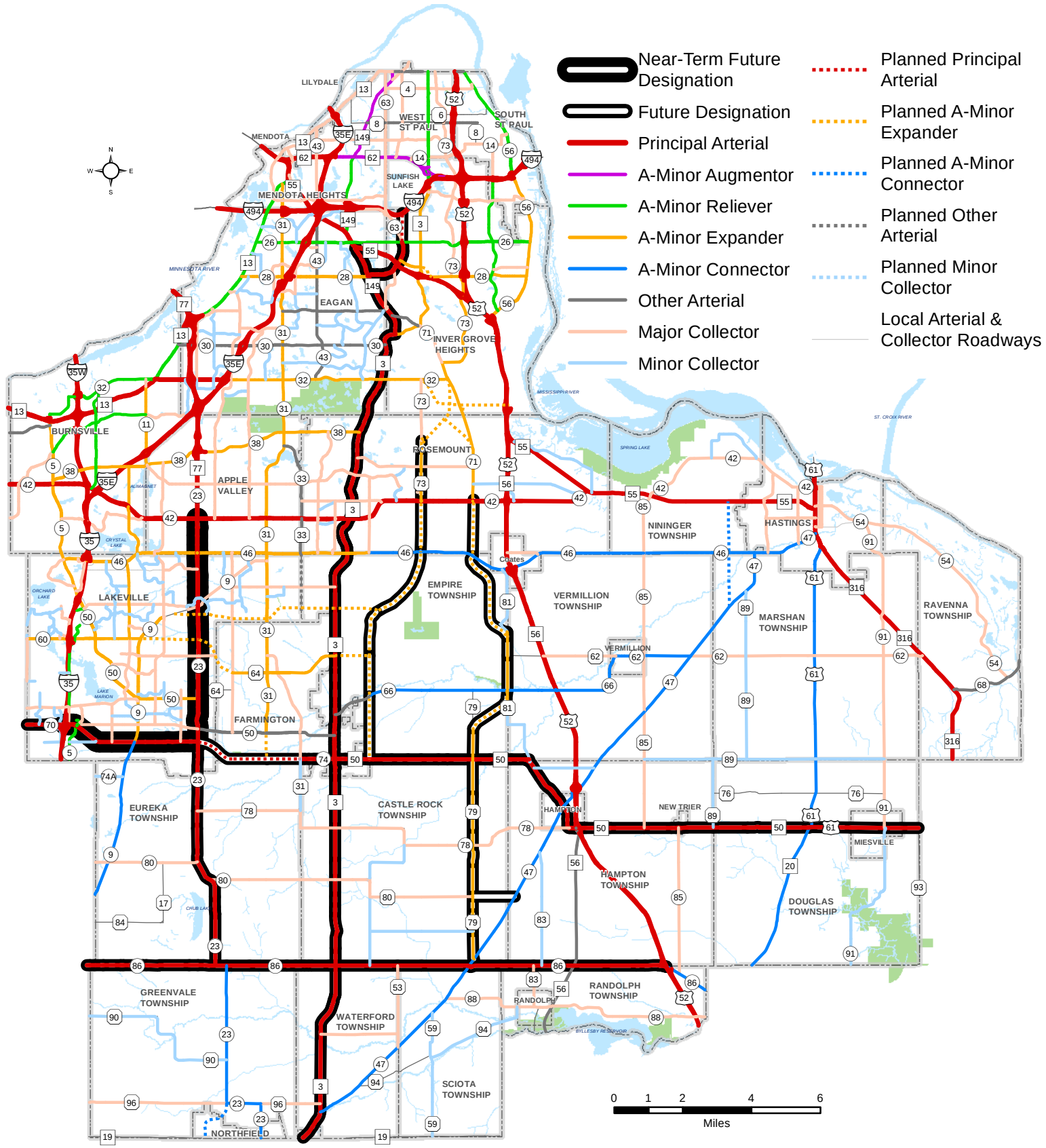
Functional Classification



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 14

Future Functional Classification, 2040



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Dakota County Office of GIS, 2/2021.

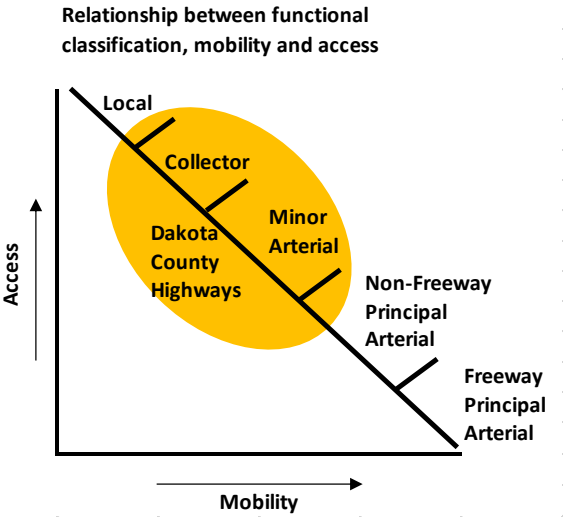
Dakota County 2040 Transportation Plan - Figure 15

Access Management

Comprehensive Roadway System

The primary functions of the highway system are moving traffic in a safe and efficient manner while ensuring appropriate levels of bicycle and pedestrian accommodation and access to the local roadway system. The highway system provides:

- Mobility and continuity of all modes of travel between major activity centers, communities, and adjacent counties (including farm-to-market travel); and
- Access to commercial, industrial and agricultural establishments; and residential land uses.



Access effects mobility. Significant numbers of access points or driveways along a highway will degrade the mobility and safety of the highway. Signalized intersections at ½-mile spacing rather than ¼-mile spacing, particularly for high volume corridors, can greatly increase the average travel speed of the corridor due to reduced delays. Intersections also are the portions of highways most likely to experience crashes due to vehicle conflicts and delays.

Principles of Access Management

Access management involves planning the location, design, and operation of streets, driveways, traffic control, and median openings. To maximize the county's highway investment, it is essential to maintain the integrity (safety and mobility) of the system by creating sufficient access and travel patterns for the area. To promote system connectivity and mobility, the county applies several access management techniques.

Access to and from county highways should be provided in a manner that preserves safety and ensures efficiency for the transportation system. County highways serve a dual function of meeting through-highway needs while also providing access to business and residents in the area. Many county highways are also utilized by bicycle and pedestrian modes that require appropriately spaced intersections for crossings of county highways. Congestion and collision problems arise from conflicts between traffic entering and exiting facilities competing for gaps in highway traffic due to access located only along the highway or when driveways and/or intersections are closely spaced. Because access management involves tradeoffs between competing objectives, the appropriate location and type of access for each turning function needs to be determined through the access strategies and policies.

<u>System Planning:</u>

The county stipulates the specific access spacing requirements for highway types through the Plan, the Plat Commission, permits, and corridor studies. These activities involve identifying the best location and requirements for access.

Strategies to ensure access and mobility are properly balanced consistent with the function of the roadway will reduce delay, improve traffic movement and create an overall safer system through

implementing access management principles to allow the highway system to continue performing at an acceptable level of service, thus preserving or maximizing roadway safety and efficiency.

Application of Access Management Techniques

Many safety and operational features of the county highway system are directly impacted by access management techniques including:

- Full access intersections on high volume (4-6 lanes) highways may require access restrictions or additional traffic controls, to handle traffic conflicts allowing motorists to turn on, off or cross main highways.
- Closely spaced signalized intersections may restrict traffic flow and travel speed but need to be balanced with access for adjacent land uses and pedestrian needs.
- Building additional lanes for high volume traffic without restricting access spacing or traffic signals results in a costly highway system that does not yield capacity benefits.
- Access spaced too closely make it difficult to accommodate turn lane tapers, storage areas and weaving activities.
- Left turns across multiple lanes require a design that provides good visibility.
- High volume and high-speed roadways may necessitate the removal or modification of access intersections when safety or operation is a concern.
- Speed, in addition to traffic volume and roadway design, is also a factor in allowing time for drivers to react to conflicts. However, speed can change over time as the roadway environment changes.
- Coordination of access management with safe accommodation of bicycle and pedestrian modes.

Access management is an important tool to efficiently manage the highway system in a way that preserves or increases highway safety and mobility. Highway access management may be accomplished using several tools, including restricting median cuts or crossings, building grade-separated interchanges and restricting land access points.

Access Guidelines

Dakota County has developed Access Spacing and Access Configuration Guidelines to provide guidance in making decisions regarding type and location of access along the Dakota County roadway system. These guidelines will typically be applied when addressing safety or operational issues, reviewing access for permit issuance or plat review, and in conjunction with planning studies and CIP projects. The overall intention of the Access Guidelines is to ensure the county roadways help to provide a transportation system that minimizes the potential for safety issues while maximizing system efficiency. This is shown in Table 5.

Dakota County Contiguous Plat Ordinance No. 108 is an ordinance relating to plats and surveys on real property contiguous with any existing or proposed county road or highway in Dakota County. Plats contiguous to county highways require review of certain transportation related factors which are of countywide significance by the Dakota County Plat Commission. Recommendations of the Plat Commission relating to these factors are subject to final approval by the Dakota County Board of Commissioners prior to the issuance of building permits by the municipalities in which the property is located.

The review of a proposed plat by the Dakota County Plat Commission and final approval of that plat by the Dakota County Board of Commissioners is limited to the seven factors of countywide significance. The primary factor is related to ingress and egress to and from county roads or highways. The Dakota County Plat Commission uses the Access Guidelines shown in Table 5 to assist in determination of access

location. Table 5, Dakota County Access Guidelines, is a guide to the spacing and configuration of access location in general based on 2030 traffic projections and posted or design speeds. Figure 15, 2030 ½-Mile Full Access Spacing Needs, considers the future needs of a highway corridor based on future land use projects and number of roadway lanes. Both are used together as guides in determining access.

The following ***strategies*** support management of access to increase system efficiency and safety and to maximize existing highway capacity:

- **Access Management Principles**
  Plan for appropriate access to the county highway system through implementation of access management principles and implementation of adopted corridor study recommendations related to access to maximize the operation, safety, and mobility for all users of the highway system.

- **Access Management Investments**
  Invest in access management improvements to defer highway expansion costs and maximize mobility and capacity benefits of expansion projects.

- **Access Spacing - New Development**
  Require appropriate access spacing with new development adjacent to highways in accordance with the plat approval process and access spacing guidelines.

- **Minimize Private Access**
  Work with cities and townships to minimize private access to county highways considering access spacing guidelines and functional classification.

- **Supporting Street and Circulation System**
  Work with cities and townships to interconnect local streets as appropriate to support the proper balance of access to the county highway system

- **Consolidate Accesses**
  Consolidate accesses to county highways in accordance with access guidelines to maximize operation, safety and mobility of the highway system.

- **Consider Bicycle and Pedestrian Needs**
  Consider bicycle and pedestrian needs and provide for safe accommodation as part of access management, planning, and design considerations.

Table 5: Dakota County Access Guidelines (Spacing and Configuration)

Road Type (A)	Posted or Design Speed	Projected 2040 Average Daily Traffic	Full Movement Intersection	Partial Movement Intersection
Principal Arterial	All	All	½ mile	¼ mile (C)
Divided Highway	All	> 35,000	½ mile	¼ mile (C)
	All	< 35,000	¼ mile	⅛ mile (B)
Undivided Highway	(≤ 40 mph)	All	⅛ mile	N/A
	(≥ 45 mph)	> 1,500	¼ mile	N/A
	(≥ 45 mph)	< 1,500	Allowed per (D)	N/A

(A) Road type refers to the anticipated future roadway cross-section and functional classification.

(B) Partial Movement intersections do not allow left turns from the minor street to the major street or movements straight across the major street. Movements that are allowed will be based on engineering study that can prove overall safety can be maintained or the access provides a benefit to the county highway system.

(C) Right-in/right-out access may be permitted *at approximately ⅛ mile* for public or private (See Note #3) streets if the county determines the access improves the overall safety and/or efficiency of the transportation system.

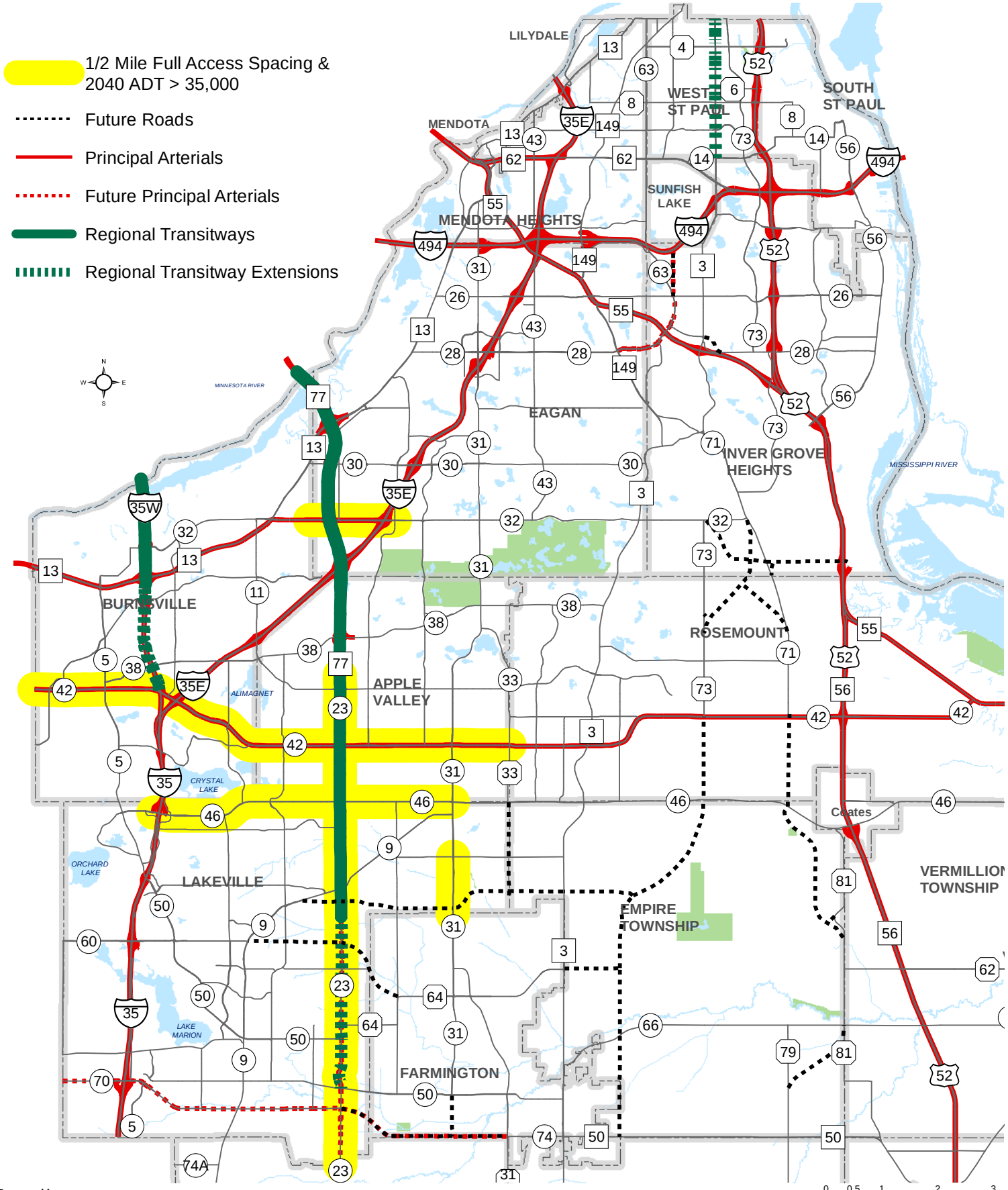
(D) Private street or driveway access requests will be considered based on engineering judgment and the following factors: location, distance from other driveways and intersections, alignment with other access points, easement/access rights that allow widespread usage and system connectivity, the potential to combine accesses, visibility, adjacent land use, and other operational/safety issues.

N/A – Not Applicable to undivided roadway segments.

Access Spacing Notes:

1. These are minimum access spacing guidelines. The county may require accesses be spaced at distances greater than the minimums considering conditions specific to any county highway segment.
2. County roadways with full movement access spacing of ½ mile are shown in Figure 31. Considerations include regional transitways, adopted studies, principal arterials, system continuity and projected ADT > 35,000.
3. Access to county roadways is typically provided through public street connections. Private access will be considered along the county roadway system based on engineering assessment of the function and use of the private access point in consideration of the spacing criteria.
4. Specific corridor access plans or project designs developed through a public process and adopted by the County Board shall supersede these guidelines.
5. Medians may be added, or median openings may be removed or modified at any time by the county to address safety and/or operational issues identified through engineering review.
6. Where there is opportunity for access on more than one public roadway, access shall be provided from the lower-function roadway, unless deemed impractical by the county. To support the objectives of system efficiency and connectivity, access to the higher-function county roadway may be allowed in addition to the lower-function roadway, provided there is adequate distance to accommodate access based on these access guidelines.

2040 1/2-Mile Full Access Spacing Needs



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 16

The following ***policy*** supports management of access spacing to increase system efficiency and safety and to maximize existing highway capacity:

M.1 Access Guidelines - Local Streets and Driveways
Pursue spacing and configuration of intersecting local streets and driveways in accordance with access management principles and with the county's adopted access guidelines through the plat approval process, in conjunction with construction projects, corridor studies, or as required by safety and operation of the highway in consideration of all users.

Vehicle Size and Weight Management

Dakota County will manage highways by guiding heavy commercial travel to appropriate highways. Tools in doing this are to set appropriate weight restrictions to county highways, address twin trailer travel on county highways and designate a 10-ton County Highway System. The authorized uses of a highway will be based upon consideration of pavement structure, geometric design factors, adjacent land use, traffic control, safety for all modes, and efficient movement for trucks and freight.

Weight Restrictions

Most of Dakota County highways are rated for 9-ton or 10-ton per axle vehicle loads except during spring load restrictions. County Road 81 from CSAH 66 to TH 50 north of Hampton is restricted and posted as 7-ton.

The following ***policy*** supports weight restrictions to increase system efficiency and safety and to maximize existing highway capacity:

M.2 Weight Restrictions
The County Engineer may impose weight restrictions on county highways to prevent significant structural deterioration.

Twin-Trailers

Dakota County has established routes for twin-trailer trucks to travel within the county. These truck routes connect with state highways to freight distribution facilities located within the county. Twin-trailer truck configurations must also comply with applicable Minnesota statutes. MN Statute 169.87 allows local authorities to petition the State's Commissioner of Transportation to establish these routes. County twin-trailer routes are shown in Figure 16.

The following ***strategy*** supports twin-trailer route designations to increase system efficiency and safety and to maximize existing highway capacity

- **Twin-Trailer Route Designation**
  Develop and implement a system of twin-trailer route designations on structurally adequate county highways to provide primary access routes for twin-trailer trucks from state highways to freight distribution facilities on county highways.

Regional Truck Highway Corridors

In 2017, the Metropolitan Council developed a study to provide for the efficient movement of freight on regional highways. The study identified and prioritized the most significant regional truck highway corridors.

Corridors were evaluated across four factors including average annual truck volume, truck percentage of total traffic, proximity to identified freight clusters and proximity to regional freight terminals (i.e. rail intermodal yards, riverport terminals and MSP airport). Corridors were assigned to one of three tiers with consideration of the following:

- Annual average truck volumes
- Truck percentage of total traffic
- Proximity to existing freight clusters
- Proximity to regional freight terminals

Regional truck highway corridors as established by the Metropolitan Council study in Dakota County are shown in Figure 17.

10-Ton Highways

Dakota County developed a 10-ton system on principal or minor arterial routes that provide primary access for intensive concentrations of heavy industrial land uses to state highways or other 10-ton routes. Providing a system capable of handling repeated use by heavy loads will help direct heavier traffic to appropriate designated and managed routes on the highway system. Damage effects to other routes can be reduced through use of a designated 10-ton route system.

The 10-ton system refers to highways that can carry axle weights of 20,000 pounds, or 10 tons per axle year-round. Since the 1980s most of Dakota County's highways have been designed to a 10-ton structural standard. MN Statue 169.87 designates all county highways as 10-ton highways unless posted otherwise.

PERFORMANCE MEASURE: Designate a system of principal and minor arterial county highways that provide primary access routes for intensive concentrations of heavy industrial land uses to state highways or other 10-ton routes as segments meet 10-ton criteria.

Costs associated with 10-Ton System designation are included with other project expenses in the CIP or are assumed at no cost, as part of project development for other Plan goals.
10-ton system designated routes, future routes and twin trailer truck routes are shown in Figure 16. Proposed routes are those that meet technical criteria of policies M.3 and M.4 and require consultation with Township Boards and action through City Council and/or the County Board of Commissioner resolutions for designation. These routes account for approximately 122 miles of highway.

As of 2020, the county has designated 95 miles (78 percent of total) of the proposed 10-ton county highways. Five additional miles have support through city resolution but require surface overlay improvements prior to designation. There are 22 proposed miles remaining to designate as 10-ton routes.

Contingent 10-ton routes account for approximately 47 miles of highway and are identified as meeting the criteria identified in policy M.4 in the future. A route is identified as being contingent if the route is dependent upon future highway expansion or infrastructure improvements to meet the criteria of policy M.4. These include:

- CSAH 32/117th Street East alignment - Contingent upon improvements to 117th Street East and designation of 117th Street as a county highway.
- CSAH 71/CR 81/CR 79 alignment - Contingent upon future aggregate mining operations, future development patterns and implementation of *Rosemount / Empire / UMore Transportation System Study* recommendations.
- CSAH 70/CSAH 74 alignment - Contingent upon implementation of *East West Corridor Preservation Study Phase 1 and Phase 2* recommendations.
- CSAH 23 alignment - Contingent upon implementation of *Northwest Northfield Highway Corridor Study* recommendations.
- CSAH 86 - Contingent upon improvements to the highway corridor across the county and the Union Pacific Railroad trestle over CSAH 86.

The following ***policies*** support management of 10-ton system implementation to increase system efficiency and safety and to maximize existing highway capacity:

M.3 10-Ton Routes - Plan Updates

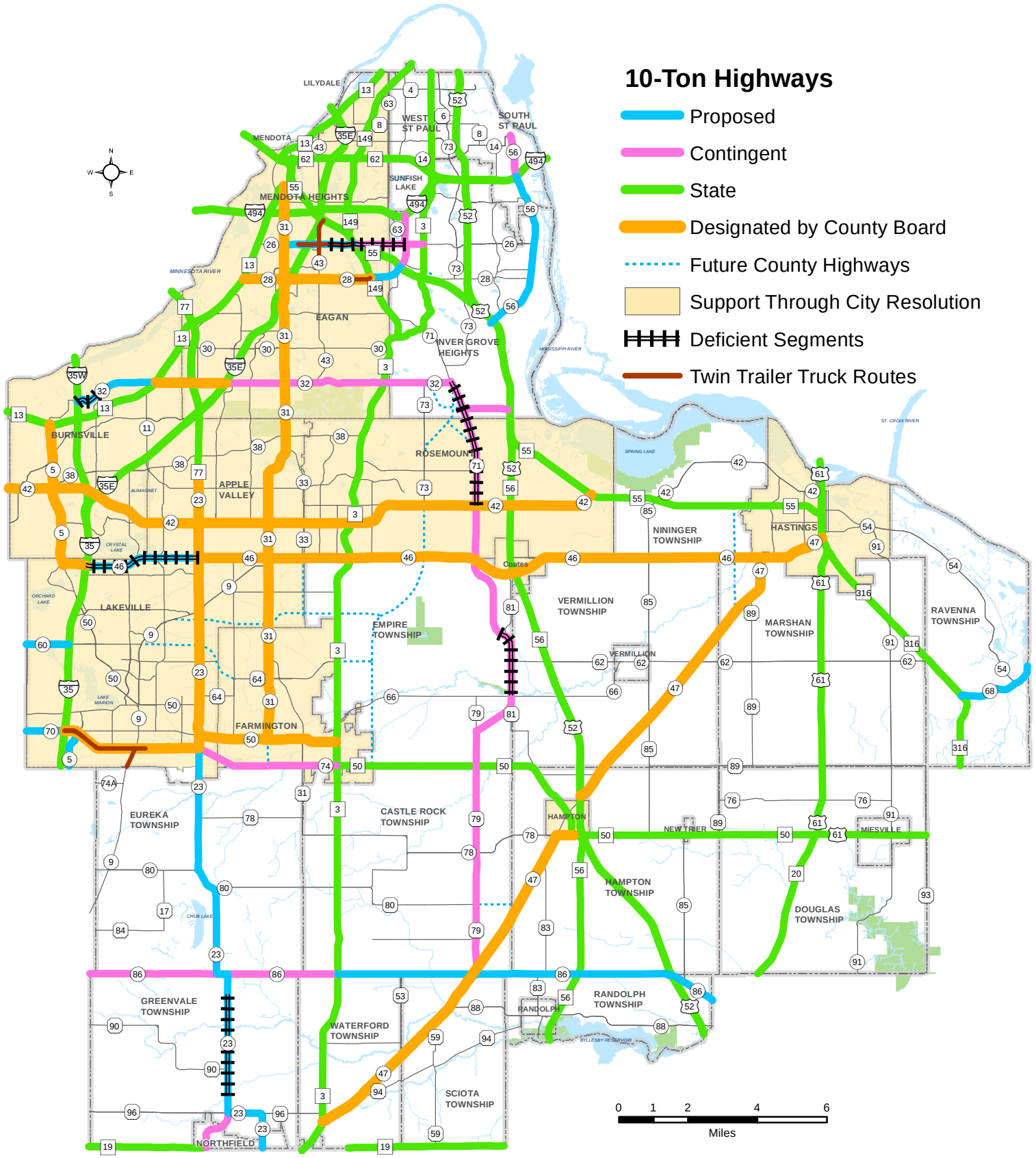
With each plan update, adopt an updated network of 10-ton routes.

M.4 10-Ton Routes – Designation

10-ton routes will be designated consistent with applicable State Statutes based on the following criteria:

- The proposed route is included on the adopted 10-ton route system;
- Adequate pavement structure and cross section design;
- Provides primary access to intensive industrial and commercial development;
- Provides primary access to trunk highways or other 10-ton routes;
- Has support of townships through township board consultation and cities through a city council resolution; and
- Board resolution.

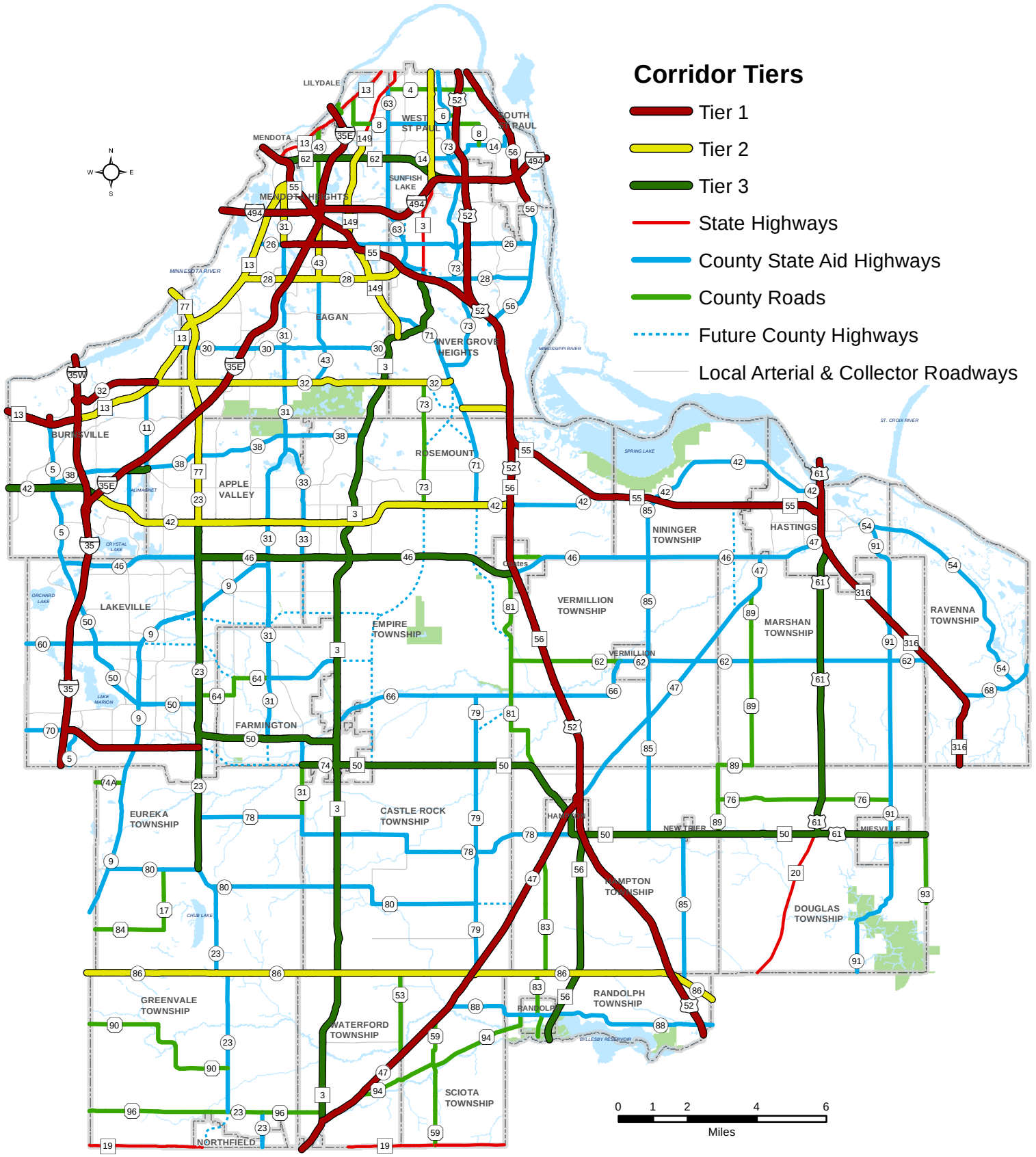
County 10-Ton Highways and Twin Trailer Truck Routes



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 17

Regional Truck Highway Corridors, 2019



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Dakota County 2040 Transportation Plan - Figure 18

Jurisdictional Classification

The jurisdictional classification system relates to functional classification of highways, funding source and maintenance responsibility for the highway. Highways with higher mobility functions – such as arterials and limited land access – should fall under the jurisdiction of a higher level of government. Roadways providing shorter trips predominantly oriented to land access and discontinuous routes should be under local jurisdiction.

Jurisdiction over roadways is distributed among state, county and local units of government. If a road is of regional or interregional importance, it is most appropriately designated under state control. If a road is of county or sub regional importance, it is more appropriately under county or local control. If a road is only of local importance or is classified as a local street, then it is most appropriately under city or township control.

Functional Classification and Desirable Jurisdiction

Roadway Functional Classification		*Jurisdictional Classification*
Local Roadway	=	city or township
Collector Roadway	=	city or county
Minor Arterial Highway	=	county
Non-Freeway Principal Arterial	=	state
Freeway Principal Arterial	=	state

In addition to functional classification, the county considerers several factors including traffic volumes, connectivity, freight and goods movement, mobility vs. land access, and highway spacing to determine appropriate jurisdiction. Roadways on the County system are typically referred to as either County Roads (CR) or County State Aid Highways (CSAH). County State Aid Highways are more regionally significant and are eligible for funding from Minnesota's County State Aid Highway fund for improvements and maintenance. The county may periodically request additional mileage is added to the CSAH system from the CR system based on changing conditions of the system. The jurisdictional classification system in shown in Figure 19.

MnDOT Metro District has determined it will concentrate most of its resources on the principal arterial system. However, functional classification and jurisdictional classification do not always equate. In some cases, MnDOT has jurisdiction over some minor arterials within the county and the county has jurisdiction over some principal arterials within the county. This continues to be an issue to be addressed through the strategies and policies in this section.

PERFORMANCE MEASURE: Complete all highway jurisdictional transfers identified on the County Jurisdictional Transfer Map by 2040.

To better track management investment needs under jurisdictional classification. Staff has divided investments into highway replacement and gravel paving categories. The current CIP investment for jurisdictional classification for highway replacement is $1.6 million per year. This involves transfer or "turnback" of the roadway jurisdiction from the county to the local city or township. The following are the estimated annual CIP investments for jurisdictional classification for highway replacement over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.6 million ($0.0 million for County Roads)*
- 2026-2030 = $3.4 million ($2.6 million for County Roads)*
- 2031-2040 = $1.3 million ($1.3 million for County Roads)*

The current CIP investment for jurisdictional classification for gravel road paving is $2.9 million per year. This involves paving of a county gravel road as part of transfer or "turnback" of the roadway jurisdiction from the county to the local city or township. In many cases townships may prefer for the road to remain gravel surfaced rather than paving prior to jurisdictional transfer. Flexibility in the timing of the transfers, type of road surfacing, and payment in lieu of bringing the road up to standards will be considered while working with the townships. The following are the estimated annual CIP investments for jurisdictional classification for gravel road paving over the plan period including estimated investments for County Roads:

- 2021-2025 = $2.9 million ($2.9 million for County Roads)*
- 2026-2030 = $2.0 million ($2.0 million for County Roads)*
- 2031-2040 = $2.3 million ($2.3 million for County Roads)*

*Figures assume staff recommended approach to jurisdictional classification.

Existing jurisdiction classification is shown in Figure 19. Fifty-seven miles of highway are identified as candidates to transfer to local jurisdiction. Details of the process of jurisdictional transfers are identified in the strategies and policies of this section. Additionally, some county highways have the potential for jurisdictional transfer to the state and some state routes have potential as jurisdictional transfers to the county. Limited jurisdictional transfer funding at the state level has limited activity in this area. The County's Jurisdictional Transfer Plan identifies approximately 6 miles of state and local roadways for transfer consideration to county jurisdiction over the plan period and approximately 51 miles (25 miles paved and 26 miles gravel) of county highways for transfer consideration to local jurisdiction over the plan period. This is shown in Figure 20. County staff analyzed and prioritized potential timing of jurisdictional transfers as shown in Figure 21. The identified recommendations depicted in Figure 21 are considered preliminary and are subject to the strategies and policies within this section for implementation.

Overall System changes or anticipated change based on recent study results were also considered. The time frames identified for transfer correspond with investment estimates required, availability of funding, ease of transfer/local willingness and opportunity for transfer.

Based on this, the following county highway segments are identified for jurisdictional transfer within the first five years of this Plan adoption.

- County to City or Township:
    - County Road 45 in Lilydale, 0.2 miles
    - County Road 6 (Thompson Avenue) in West St. Paul, 0.8 miles and South St. Paul, 1.2 miles
    - CSAH 9 (Dodd Boulevard) in Lakeville, 3.2 miles
    - CR 48 (160th Street) in Coates and Rosemount, 0.9 miles
    - CR 53 (Arkansas Avenue) in Sciota and Waterford Townships, 2.3 miles
    - CR 83 (Dixie Avenue) in Randolph and Randolph Township, 0.6 miles

    - CR 94 (Cannon River Boulevard) in Waterford Township, 1.2 miles; in Sciota Township, 3.4 miles; in Randolph Township, 0.5 miles; and in Randolph and Randolph Township, 0.3 miles
- State, City or Township to County:
    - Trunk Highway 156 (Concord Street) in South St. Paul, 1.7 miles
    - 179th Street in Lakeville, 3.7 miles
    - 117th Street in Inver Grove Heights, 1.4 miles

The following gravel County Roads are identified for jurisdictional transfer within the Plan period.

County Gravel Roads
(to Transfer to Local Jurisdictions)

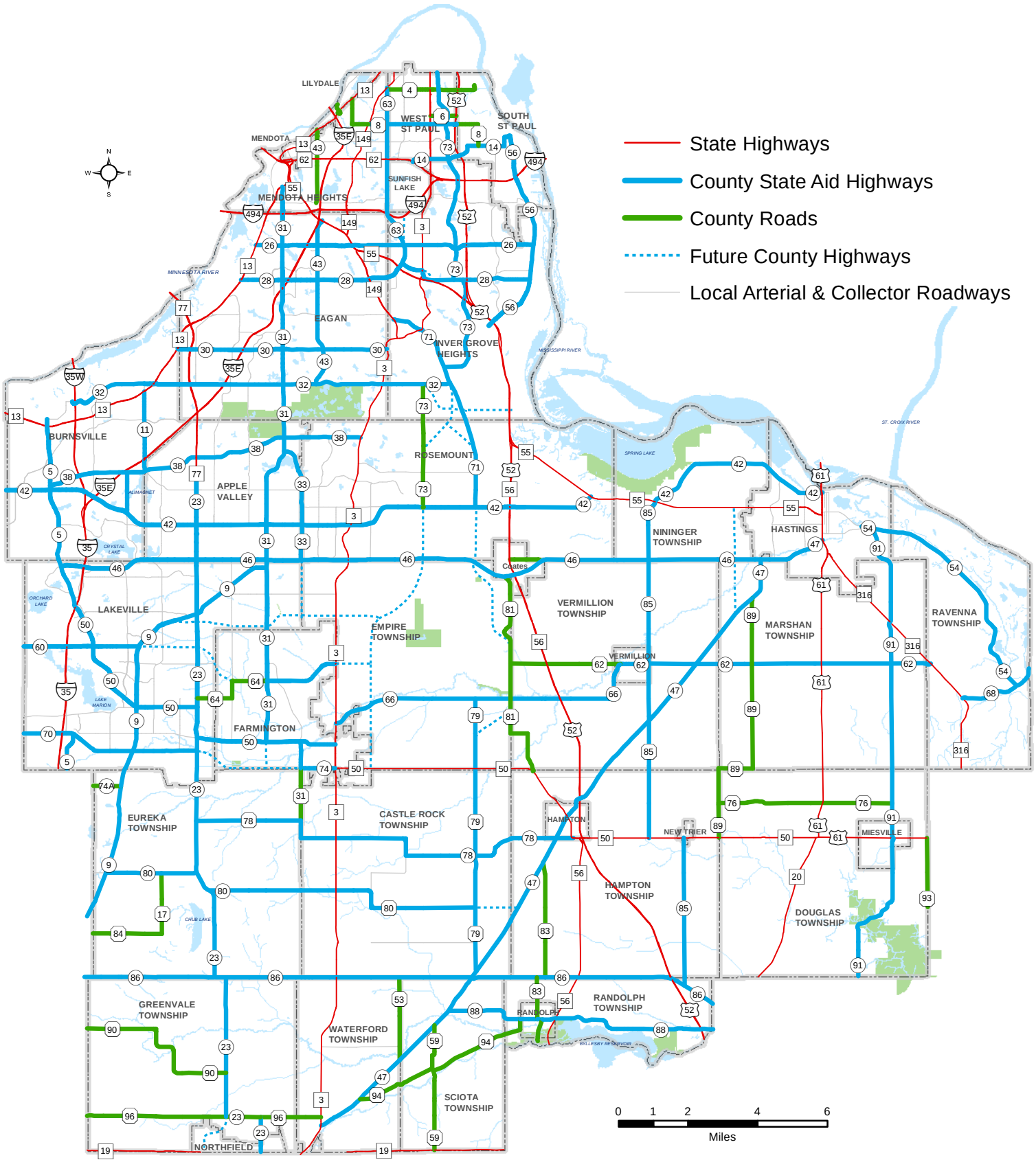
Length	Road	Location	Length
3.5	CR 53	Sciota	2.5
1.0	CR 62	Vermillion Twp.	1.1
3.6	CR 76	Douglas	5.0
6.0	CR 83	Hampton Twp.	3.3
3.1	CR 84	Eureka	2.0
4.0	CR 90	Greenvale	5.1
21.2	CR 93	Douglas	2.0
	CR 94	Randolph Twp., Sciota, Waterford	5.5
		TOTAL	26.5

County staff also analyzed additional future county and state highway jurisdictional changes. This is shown in Figure 22. The identified recommendations depicted in Figure 22 are considered preliminary and are subject to discussion with MnDOT and the strategies and policies within this section prior to approval. All county highways with a functional classification of principal arterial are identified as potential jurisdictional transfer candidates to MnDOT. This is based on the regional planning concept that principal arterials should be under MnDOT jurisdiction. Jurisdictional transfer of principal arterial county highways is highly unlikely within the Plan period (by 2040) and requires additional analysis before further consideration.

Figures 20, 21 and 22 are not intended to reflect equal mileages, but the appropriate long-term jurisdiction considering a roadway's function and the types of connection that are made.

Ideally, principal arterial highways should be under state jurisdiction and minor arterial highways under county jurisdiction. MnDOT's plans have stated that they will continue to pursue opportunities to align roadway jurisdictions with the appropriate functional classification through turnback opportunities. However, jurisdictional transfer of state highways is expected to be extremely limited and likely not considered in the next 20 years. State long range plans are to fund preservation activities to the fullest extent possible, making turnback opportunities less likely. Figure 22 reflects functional classification and jurisdiction for principal and minor arterials.

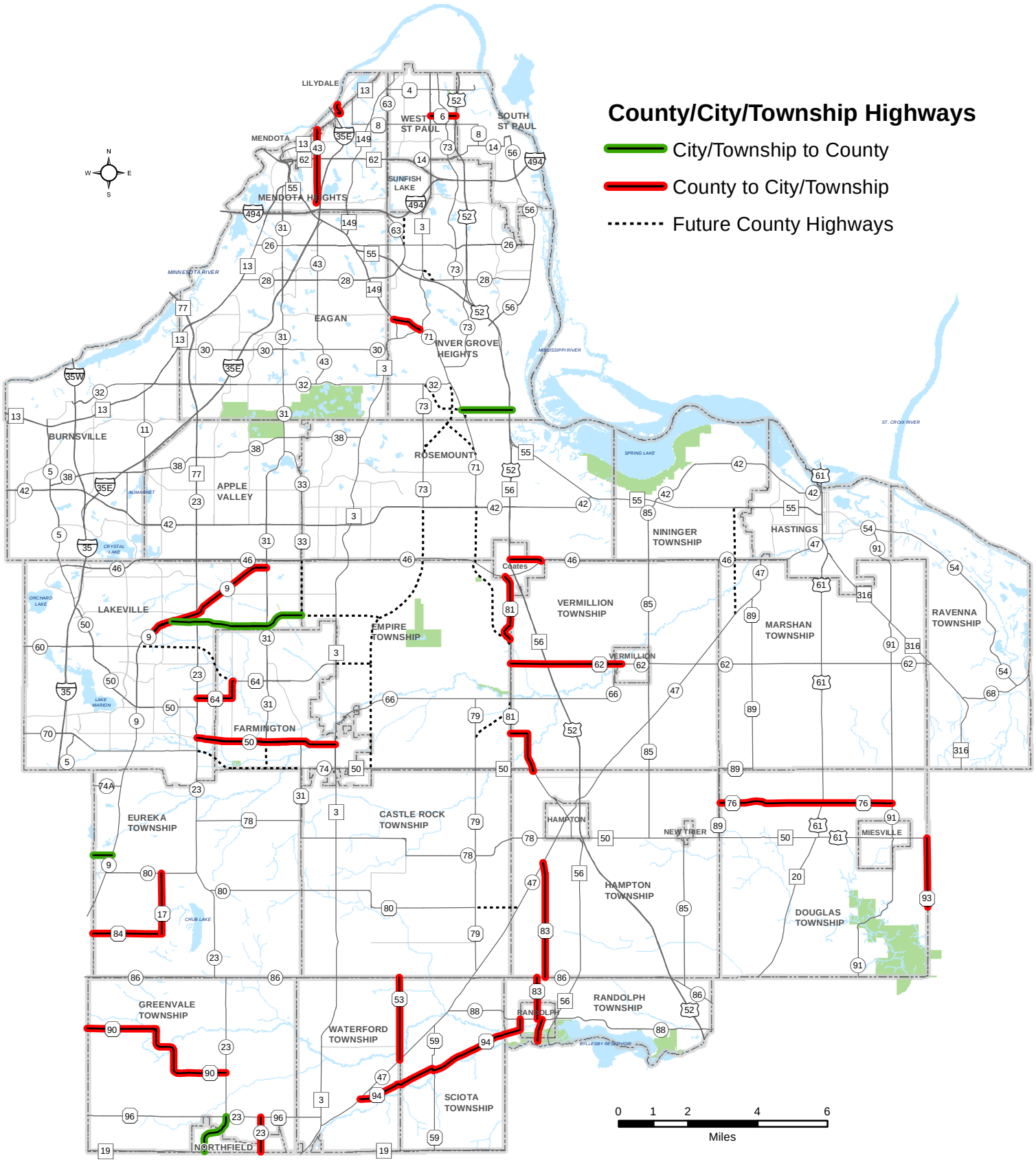
Jurisdictional Classification



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 19

County Jurisdictional Transfer Plan



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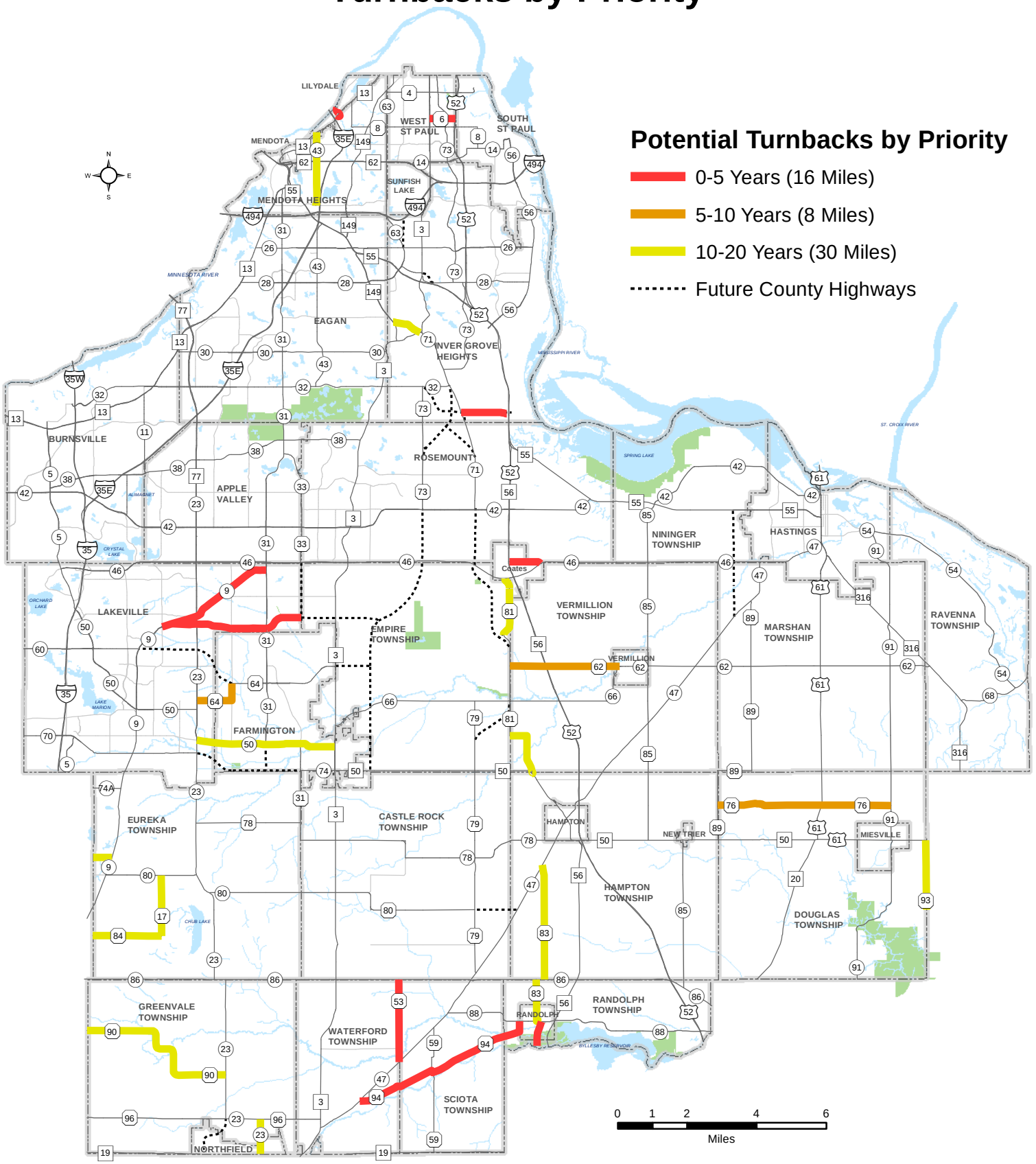
Dakota County 2040 Transportation Plan - Figure 20

County Jurisdictional Transfer Plan
Turnbacks by Priority



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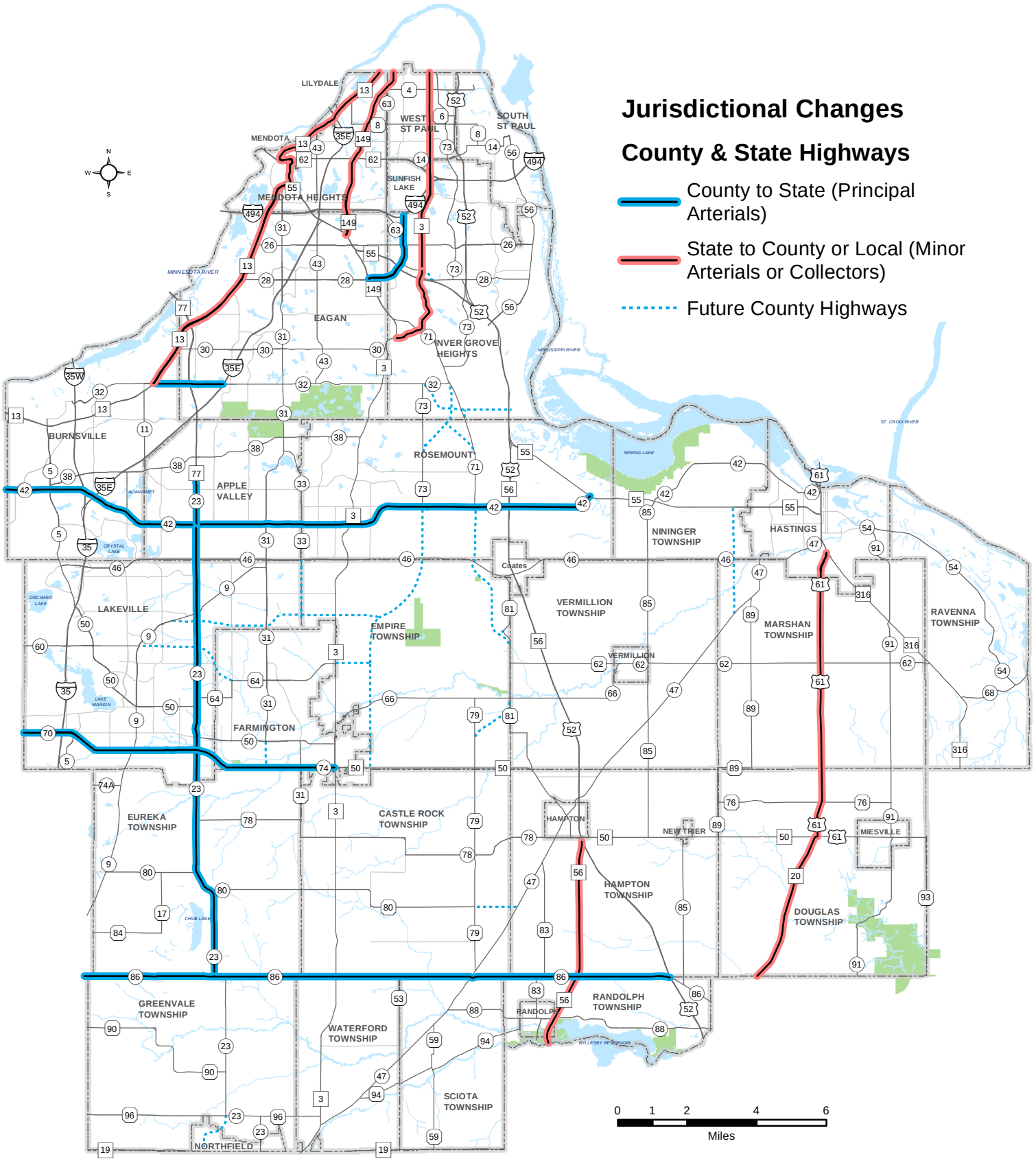
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 21

Potential County and State Highway Jurisdictional Changes



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 22

Frontage Road Management

County staff has developed an inventory of frontage roads adjacent to county highways that may be more practical for the county to manage and maintain than the local jurisdiction. In many cases these frontage roads provide no or few connections to the local roadway network and primarily provide for safer access to the county highway. These locations are shown in Table 6.

Frontage Road Management

Highway	Location	Local Jurisdiction	Length	Notes
CSAH 23	Chub Lake	Eureka Twp	800	15' wide, does not meet standards
CSAH 23	CSAH 42	Apple Valley	800	northwest quadrant
CSAH 30	CSAH 31	Eagan	700	20' wide
CSAH 30	Rahn Rd	Eagan	500	south side
CSAH 30	Rahn Rd	Eagan	675	north side
CSAH 30	Diamond Dr	Eagan	1,100	
CSAH 42	Hoover Ln	Apple Valley	675	
CSAH 42	Kent Ln	Apple Valley	2,620	
CSAH 42	Streese Ln	Apple Valley	1,275	
CSAH 42	Elm Dr	Apple Valley	1,260	north side
CSAH 42	Elm Dr	Apple Valley	1,280	south side
CSAH 42	CSAH 5	Burnsville	1,200	cross easements exist
CSAH 42	Audrey Av	Rosemount	650	
CSAH 42	TH 55 Jct E	Nininger Twp	1,060	north side, AKA Mississippi Trl
CSAH 56	75th St E	Inver Grove Heights	820	36' wide, with curb & gutter
CSAH 85*	TH 55	Nininger Twp	1,300	south side, AKA Goodwin Av
		TOTAL	**16,715**	
		TOTAL	**3.17**	**miles**

* Identified as future jurisdiction transfer

Table 6.

The following ***strategies*** support management of jurisdiction classification of highways to increase system efficiency and place highways with the most appropriate unit of government:

- **Jurisdictional Classification - Changes**
  Cooperate with affected units of government to periodically review the jurisdictional classification of highways and frontage roads to identify potential jurisdictional transfers.

- **Jurisdictional Classification - Pursue Jurisdictional Transfers**
  Pursue jurisdictional transfer of highways identified as higher priority on the adopted jurisdictional transfer map. Determine the appropriate course of action for lower priority jurisdictional transfers.

- **Jurisdictional Classification – Municipal State Aid Mileage Designations**
  The county will request that the cities reassign municipal state aid mileage designations from county highways when the County Screening Board has approved a highway for CSAH status.

- **Frontage Road Management**
  The county will work with local jurisdictions in managing and maintaining frontage roads that are located adjacent to county highways that provide no or few connections to the local roadway network and primarily provide for safer access to the county highway. Frontage roads may be considered for turnback, typically in conjunction with an adjacent project, or on a case-by-case basis.

The following ***policies*** support management of jurisdiction classification of highways to increase system efficiency and place highways with the most appropriate unit of government:

M.5 Jurisdictional Classification - Potential Jurisdictional Transfers

Evaluate county highways identified for potential jurisdictional changes, including highways not on the county system according to the following criteria:

- Traffic volumes
- Functional classification
- Connections to major activity centers
- Connectivity to the metropolitan transportation system
- Goods movement function
- Economic impact
- Mobility versus land access
- Spacing between county highways
- Route continuity
- Connectivity to multiple communities and areas outside the region

M.6 Jurisdictional Transfers

For roadways identified in the Plan for jurisdictional transfer:

- Coordinate efforts with local units of government to complete jurisdictional transfers in accordance with MN Statute 163.11.
- Work in cooperation with local governments to execute agreements prior to official revocation of the highway by County Board resolution.
- Consider potential MnDOT jurisdictional transfers on a case-by-case basis by County Board resolution.
- If agreeable between the county and a city or township, provide financial payment for jurisdictional transfers based on need or highway improvement in lieu of making improvements.

Intersection Traffic Control

The county places and operates traffic control devices according to standards as established in MN Statute Chapter 169 and the Minnesota Manual on Uniform Traffic Control Devices. Traffic control devices regulate, warn and guide highway users along highways. County staff assesses intersections and determines the best traffic control device when a change in traffic control is justified and the best measure to manage traffic. At grade intersection traffic control for the county highway system includes

through-stop operation, all way stop control, roundabouts and traffic signals. Each device has appropriate uses based on traffic volumes and operating conditions. Intersection traffic control is a significant factor in providing a safe and efficient transportation system for all users. Decisions about traffic control devices are made very carefully in consideration of the safety impact and recognition that crash and severity rates typically increase as higher levels of traffic control are added to a given location.

The following summarizes when each device is applicable and drawbacks of each traffic control device.

- **Through-Stop:** Lower volume side roads intersecting a high-volume highway is best managed with a side road stop from both a safety and mobility perspective. Through-stop intersections have the lowest crash rate which considers the number of crashes with respect to the entering vehicle volume. Pedestrian accommodations across the county highway at side-stop locations are typically provided only at lower speed locations provided a traffic engineer study outlines the need and safe application.

- **All Way Stop:** Work best with moderate traffic volumes when the intersecting roadway volumes are approximately equal and speed limits are 40 mph or less. Typically, all way stops have a lower collision rate than traffic signals. However, all way stops may begin to break down at traffic levels much below the levels a roundabout or a traffic signal can accommodate. Pedestrian crosswalk markings will be provided when the all way stop has trails or sidewalks to connect at the intersection.

  Drawbacks to all way stops include inefficient traffic flow which cause additional delay and backups. There may be risk and confusion determining which driver has the right of way to proceed. Stop signs can be disregarded by some drivers which increase serious and fatal crashes. The acceleration and deceleration of vehicles also increase noise near all way stops.

- **Roundabouts:** Roundabouts provide many benefits when used in appropriate locations. Benefits include ability to manage high traffic volumes, reduced delay at intersections, effective U-turn movements, lower speeds, fewer serious crashes and increased safety for pedestrians.

  Roundabouts manage conflicting traffic through intersection geometry and signing, with traffic yielding before entering the circulatory roadway. Since all movements happen to the right after yielding, head-on and high-speed right-angle collisions are virtually eliminated. This traffic control can often accommodate the traffic volume of a signal with a lower number of fatal and serious injury crashes.
  When intersection improvements are planned, different traffic control devices are evaluated. Roundabouts are best used when:
  - Moderate to high traffic volumes on intersection roads exists
  - An all-way stop or signalized intersection will not improve traffic flow; and/or
  - A heightened risk of fatal or serious injury crashes exists.
    Roundabouts fit within the context of the corridor and adjacent intersection traffic controls do not impact the function of the roundabout

  Drawbacks include typically higher construction costs and more extensive right-of-way needs; the potential for higher levels of property damage crashes; and roundabouts may not be suitable for six-lane or principal arterial highways, or highways with high levels of truck traffic.

While roundabouts require lighting, they have less regular maintenance than traffic signals which require regular operation and equipment checks. Roundabouts require yielding to oncoming traffic and pedestrians. During lower traffic conditions, roundabouts work efficiently and reduce overall stops minimizing delay and vehicular emissions. Roundabouts work well with roadways with similar traffic volumes on each intersecting roadway.

Roundabouts provide several elements to accommodate pedestrian crossings. The crosswalks are set back from the roundabout to increase pedestrian visibility and simplify decision making for drivers, allowing the motorist to focus on pedestrians crossing separate from entering or exiting vehicular traffic. A center median island provides refuge for pedestrians, allowing them to cross one direction at a time. The slower vehicle speeds and reduced conflict points are additional factors that improve pedestrian safety of a roundabout compared to other traffic control devises.

MnDOT reviewed pedestrian crashes at 126 roundabouts compared to 126 similar locations with signal or all way stop control in an addendum to "A study of Traffic Safety at Roundabouts in Minnesota" in August 2019. The study found 87% fewer pedestrian injury crashes at roundabouts compared to signal or all way stops.

The county has installed several single-lane and multi-lane roundabouts over the last 10 years. Roundabout locations are shown in Figure 25.

- **Traffic Signals:** Traffic signals are considered when it is necessary to manage continuously high levels of conflicting traffic along arterial corridors crossing other major highways or collector streets. The determination that a signal is justified is made considering traffic volumes and overall operation recognizing that traffic signals tend to have the highest crash rates and severity rates due to the additional decision making for drivers.

  Traffic signals are best used to manage a consistently high volume of traffic on intersecting roads throughout the day and the intersecting roads are functionally classified as a collector or arterial highway.

  There are several drawbacks caused by the introduction of traffic signals at an intersection including additional decision makers for drivers and red light running which leads to an increase in property damage, serious injury and fatal crashes. At higher volume intersections traffic delay can be increased.

  Traffic signals can provide flexibility in terms of operation throughout the day to accommodate traffic fluctuations and can be coordinated with near-by signals to move groups of vehicles through a corridor efficiently.

  Pedestrian accommodations at traffic signals include pedestrian ramps, ADA push buttons, crosswalk markings and count down timers which are considered with the design for all new or replaced signals. These accommodations provide direction to pedestrians crossing roadways while they navigate wide intersections, right and left turning vehicles or other potential conflicts with vehicles.

- **Advanced Traffic Management System (ATMS):** The county uses ATMS to efficiently manage traffic flow on signalized county arterial highways. ATMS allows for greater ability to efficiently and

effectively manage and monitor the county highway system to minimize delay, maximize highway capacity and respond to service needs.

ATMS equipment includes cameras, fiber connections and cell modems to connect to traffic management software. This provides real time information to improve operation and respond to maintenance needs in the timeliest manner. The county began work on the system in 2016 with a focus on the highest volume county highways. When initially implementing ATMS the county also coordinated signal timing updates. These efforts along with minor updates based on real-time condition review provide for ensuring the highest volume county highways are best managed based on changing conditions. These procedures provide for the county signal systems to be in compliance with Minnesota Statute §160.235 review and certification.

The county has 136 signals on the county highway system. By 2022, the county will have 82 signals incorporated into ATMS resulting in 60 percent of all county highway signals. Additional signals will continue to be incorporated into ATMS with a vision of having all county highway signals into ATMS by 2027. The county will also work with MnDOT and local cities to coordinate bringing signals under their jurisdiction into ATMS when opportunities arise.

The major corridors within the County that have been the focus of the initial implementation for ATMS include the following:

Highway	Location	Miles*	Year**
CSAH 23 (Cedar Av)	Apple Valley and Lakeville	3.3	2017
CSAH 26 (Lone Oak Rd)	Eagan	1.3	2022
CSAH 28 (Yankee Doodle Rd)	Eagan	2.2	2022
CSAH 31 (Pilot Knob Rd)	Apple Valley and Lakeville	4.7	2019
	Eagan	3.0	2022
CSAH 32 (Cliff Rd)	Eagan	4.5	2017
	Burnsville	1.6	2020
CSAH 42	Burnsville, Apple Valley and Rosemount	9.6	2017
CSAH 43 (Lexington Av)	Eagan	2.0	2022
CSAH 46 (160th St)	Apple Valley and Lakeville	5.2	2019

* Miles are estimated. The summary represents area of coordinated signals that are part of ATMS.
** Year indicates the time of implementation. 2022 projects have anticipated construction dates in 2021 with completion by 2022.
Other isolated signals or smaller areas will also be incorporated into ATMS based on evaluation of priorities, cost and opportunities with project work.

Intersection Crash Rates by Traffic Control, Traffic Volume and Speed

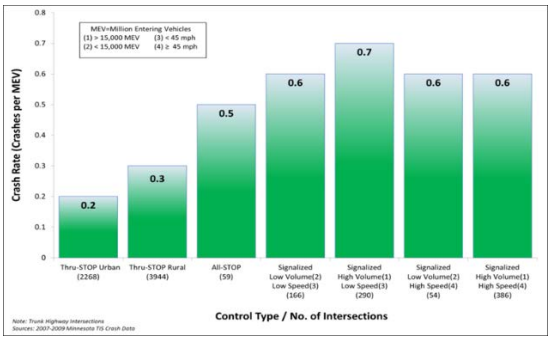
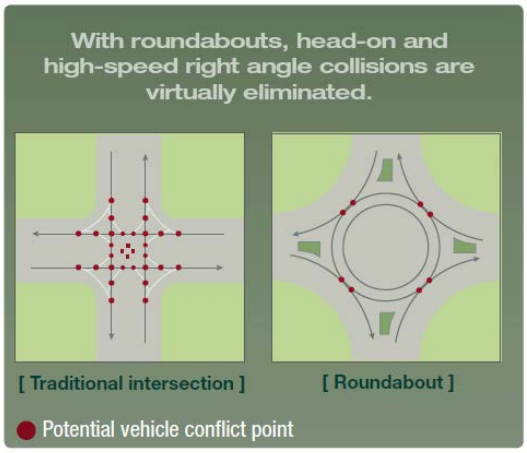


Table 7

Roundabout Circulation and Benefits



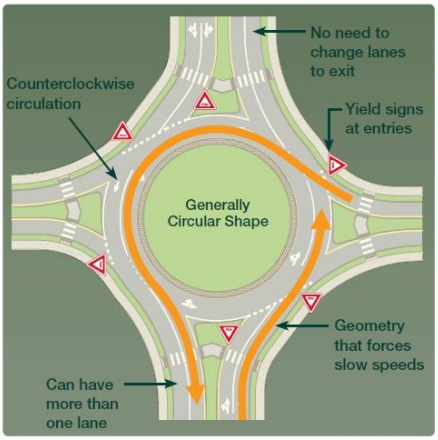


Figure 23

Pedestrian Conflicts, Roundabout Verses Signal

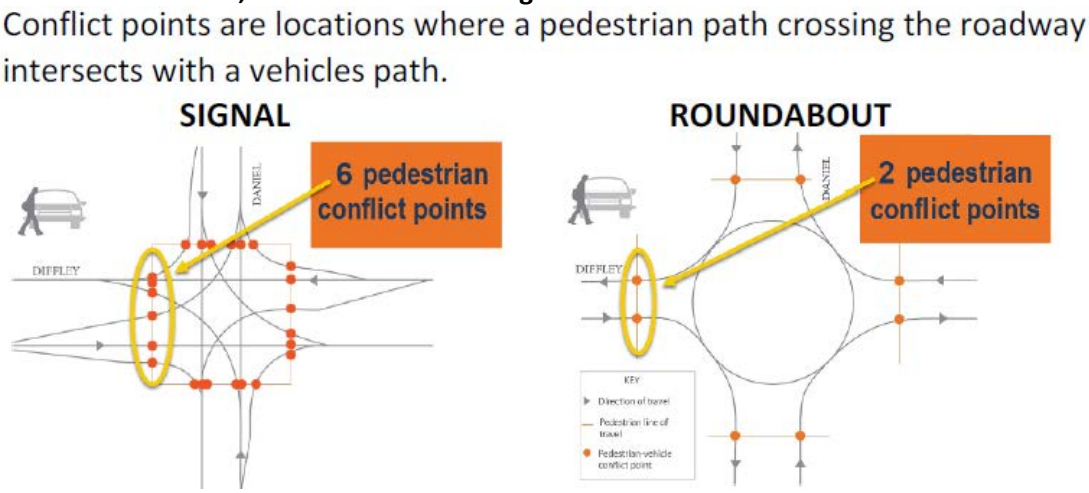
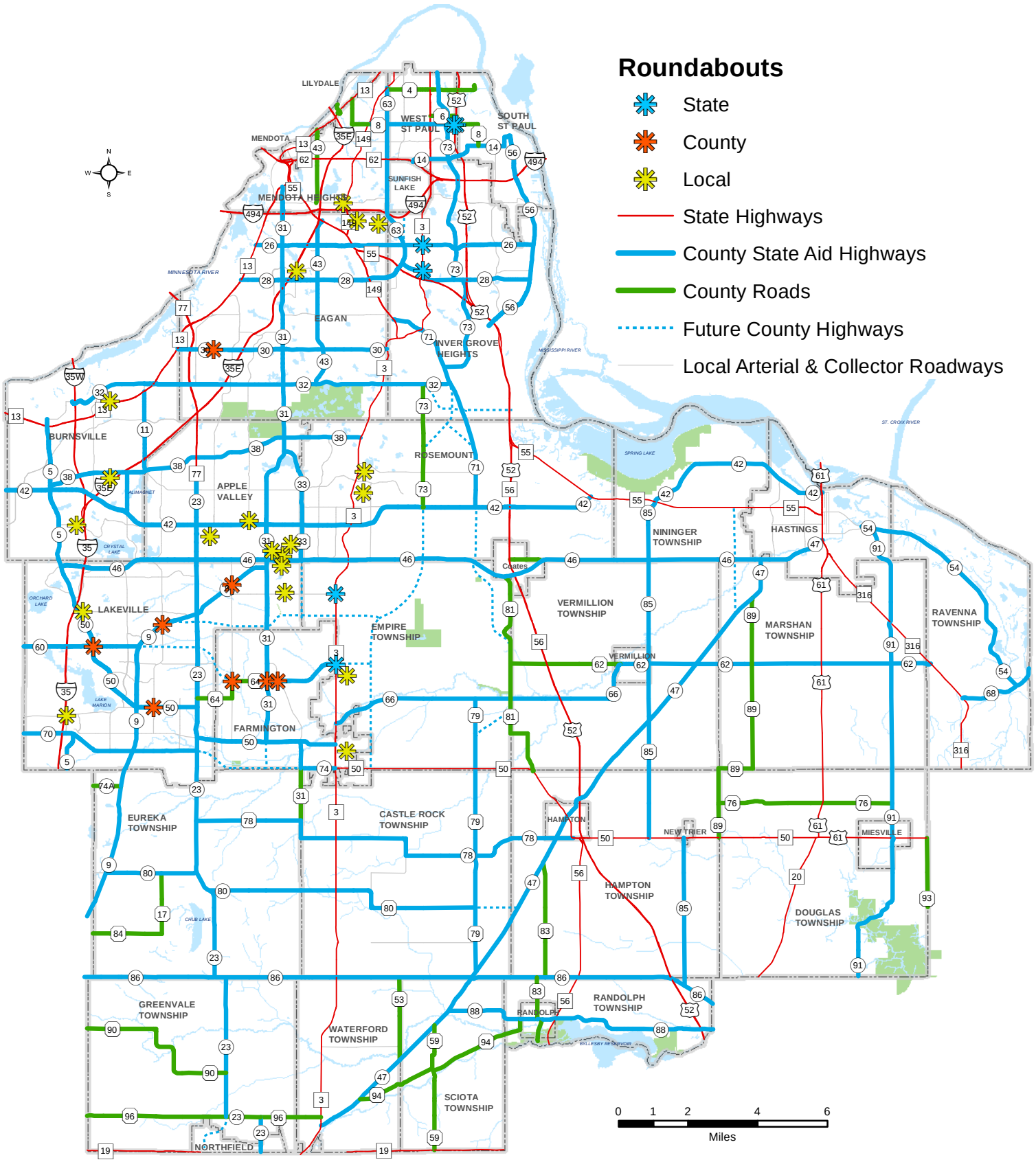


Figure 24

Roundabouts reduce the distance pedestrians need to cross a roadway, number of conflicts and typically the time to wait for a gap in traffic to cross each approach compared to traffic signals.

Roundabouts Located within Dakota County



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Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 25

The following ***strategies*** support management of traffic control devices:

- **System Reviews**
  Conduct system reviews as appropriate to identify safety risks county-wide and consider improvement options through a comprehensive approach.

- **Intersection Traffic Control Study**
  Conduct intersection traffic control assessments for priority intersection locations system wide to evaluate the need for potential changes in traffic control consistent with the Manual on Uniform Traffic Control Devices (MUTCD) on a case by case basis.

- **Traffic Signal Coordination**
  Consider coordination of signal systems on county highways as appropriate to maximize system efficiency and the capacity of the county highway system.

The following ***policies*** support management of traffic control devices:

M.7 Traffic Control Signals – City or State Maintenance Assistance

Provide maintenance assistance and advanced traffic management system management (ATMS) for traffic control signals under the jurisdiction of cities or the state. Maintenance assistance and access to the county's ATMS will be defined through agreements. The city will reimburse the county for actual costs incurred for staff, equipment and materials used through an annual fee. The county will evaluate the annual fee each year.

M.8 Traffic Control Signals – Transit Priority

Work with transit providers, cities, and the state to evaluate the use of priority timing of signal systems for transit vehicles along specific corridors.

M.9 Intersection Traffic Control Changes

Install, modify, or remove intersection traffic controls based on engineering study to determine the best measure for the safety and operation of the intersection and adjacent corridor. Installation or removal of intersection traffic controls requires County Board approval.

The recommended CIP investment for signal projects is $0.3 million per year. The following are the estimated annual CIP investments for signal projects over the plan period including estimated investments for County Roads

- 2021-2025 = $0.3 million ($0 for County Roads)
- 2026-2030 = $0.3 million ($0 for County Roads)
- 2031-2040 = $0.3 million ($0 for County Roads)

Safety and Management

Dakota County continually monitors the safety and operation of the county highway system. As safety and operational issues arise, specific measures to remedy these issues will be implemented as appropriate based on engineering review.

The traffic safety and management funds are utilized for various smaller projects that arise throughout the year and are not included with projects already programmed in the CIP. These funds allow the county to respond to safety or management needs that come up during the current year including participating in the county's share of costs related to work done by other agencies.

Safety related projects examples include but are not limited to: rural street lighting, traffic signing enhancements at intersections, dynamic speed signs, small trail connections and bus pads to support transit stops, median and curb revisions to improve pedestrian crossings, ramps and signal ADA updates associated with city projects, safety studies, and median modifications to improve safety. All ramp and signal ADA upgrades associated with pavement preservation improvements have costs which have been accounted for within the investment categories for paved highway surfaces.

Management project examples include railroad crossing improvements upgrades, minor irrigation repairs, and box culvert enhancements.

The current CIP investment for safety and management is $3.6 million per year. The following are the estimated annual CIP investments for safety and management over the plan. period including estimated investments for County Roads:

- 2021-2025 = $4.5 million ($0.7 million for County Roads)
- 2026-2030 = $4.5 million ($0.7 million for County Roads)
- 2031-2040 = $4.5 million ($0.7 million for County Roads)

Rural Intersections

Dakota County staff conducted a comprehensive review of rural intersections in advance of the development of the 2040 Transportation Plan. The evaluation process was aimed at improving overall safety through an assessment of higher speed rural intersections where the county highway stops for another county highway or state highway. Using traditional crash analysis methods, it would be difficult to assess the need for the most appropriate safety improvements due to low traffic volumes coupled with the relatively low number of crashes. The evaluation included a system wide, data driven approach of assessing roadway characteristics to identify intersections with a greater risk for angle crashes. Characteristics which suggest a potential greater risk of a motorists not complying with the stop condition include roadway curves, approach characteristics, distance to previous stop condition, and traffic volumes factors.

The study resulted in several low-cost safety improvements including enhanced signing, markings and street lighting at locations based on the review process. Larger capital improvement projects were identified for the highest priority locations. These locations exhibited a higher number of crash factors and demonstrated a higher severity rate or crash index over the last 10 years compared to similar rural county road intersections.

The following are priority County Highway-to-County Highway intersection locations:

Location	Potential Improvement
CSAH 47 & CSAH 85	Realign skew intersection
CSAH 54 & CSAH 68	Roundabout
CSAH 46 & CSAH 85	Roundabout
CSAH 32 & CSAH 71	Roundabout

The following are priority County Highway/State Highway intersection locations:

Location	Potential Improvements to consider with MnDOT
CSAH 88 & TH 56	Restricted Intersection (split T)
CSAH 86 & TH 56	Roundabout
CSAH 86 & TH 3	Roundabout

The following are the estimated annual CIP investments for rural intersections over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.5 million ($0 for County Roads)
- 2026-2030 = $0.8 million ($0 for County Roads)
- 2031-2040 = $0.8 million ($0 for County Roads)

Right-of-Way Preservation and Management

The highway right-of-way serves many functions:

- Provides ditches to drain excess water away from roads;
- Serves a safety function for vehicles that leave the travel lanes;
- Provides a place for snow storage in winter;
- Provides a location for public utilities such as sewer, storm sewer, electric and communications lines;
- Contains desirable vegetation that improve highway aesthetics and provides control or erosion and drifting snow; and
- Provides habitat for pollinators, nesting birds and other small wildlife.

The acquisition of right-of-way for transportation facilities is an undesirable but necessary impact of some projects, requires significant financial resources and is a time-consuming process. Without policies to guide an orderly process, needed improvement to the transportation system can suffer costly delays. To provide for an orderly process and assure efficient implementation of transportation improvements, right-of-way preservation tools will be utilized to minimize future right-of-way acquisition costs. These include:

- Plat dedication for highway corridors in accordance with Contiguous Plat Ordinance No. 108.
- Right-of-way ordinance through permits.
- Official mapping for interchanges and intersections.
- Transportation permits.

Dakota County identifies the right-of-way needed for future transportation facilities through its long-range plans. These plans rely on traffic forecasts developed with a transportation demand model based

on local land use. The county projects average daily traffic for each county roadway segment to help decide what type of facility to plan. Topography, environmental factors and discussions with cities and other agencies supplement the transportation demand model in decisions. Typical right-of-way needs are identified on the Dakota County Plat Needs Map.

The county also uses area-wide and transportation-corridors studies to develop more refined information to identify future transportation system needs. These studies usually are undertaken to identify new alignments, coordinate facilities among jurisdictions or to respond to major development proposals.

The county works with landowners to dedicate the necessary right-of-way for future transportation facility needs as a condition of subdivision approval through the Contiguous Plat Ordinance. The County's Plat Commission reviews development proposals to determine right-of-way dedication needed at the location based on the factors outlined above. Dedicated right-of-way is then recorded at the County Recorder's Office. A plat needs map is developed in coordination with local units of government to identify these future highway needs and associated right-of-way dedication necessary for future highway improvement and expansion.

The county also purchases right-of-way for highway projects, typically to address a safety or mobility issue. With a public participation process, the county or partner agency designs the new facility and identifies the necessary right-of-way. County appraisers then work with landowners to acquire needed right-of-way.

The current CIP investment for right-of-way preservation and management is $0.3 million per year. This is in addition to costs associated with programmed project right-of-way needs. The following are the estimated annual CIP investments for right-of-way preservation and management over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.3 million ($0.1 million for County Roads)
- 2026-2030 = $0.3 million ($0.1 million for County Roads)
- 2031-2040 = $0.3 million ($0.1 million for County Roads)

The following ***strategies*** support right-of-way preservation and management to increase system efficiency and maximize existing highway capacity:

- **Right-of-Way – Acquisition Consistency**
  When appropriate, assure that right-of-way acquisition for highway construction projects are consistent with plat dedication requirements.

- **Right-of-Way – Local Land Use Changes**
  Encourage cities and townships to consider appropriate future right-of-way needs when authorizing land use changes, whether platting changes are occurring or not.

- **Plat Needs Map and Right-of-Way – Long-Term Needs**
  Develop and maintain in coordination with cities and townships a countywide plat needs map that establishes right-of-way width for plat dedication and information associated with access spacing

guidelines. Dakota County will consider the following factors in the development of the Plat Needs Map:

- 20-year traffic projections
- Function of highway
- Corridor preservation
- Consistency with policy objectives
- Environmental considerations
- Transit and transitway needs
- Intermodal potential
- Coordination with adjacent land use
- Corridor Study Recommendations
- Future Interchange Locations
- Continuity along corridors

- **Official Mapping for Intersections and Interchanges**
  Partner with MnDOT and cities to develop official maps and agreements for acquisition of right-of-way for future intersection and interchange projects.

The following ***policies*** support right-of-way preservation and management to increase system efficiency and maximize existing highway capacity:

M.10 Right-of-Way - Landscaping

By permit, allow low maintenance landscape plantings on highway right-of-way. Permittees will be responsible for maintenance of landscape and associated facilities.

M.11 Contiguous Plat Ordinance

The Plat Commission will review any plat adjacent to a county highway or a highway shown on the plats needs map as identified in the Contiguous Plat Ordinance No.108.
The review of a proposed plat and final approval of that plat is specifically limited to the following factors of countywide significance:

1. Ingress and egress to and from county roads.
2. Approach grade intersection with county roads.
3. Drainage.
4. Safety standards.
5. Right-of-way requirements of county roads.
6. Local road system integration with county road system.
7. Land use impact on development of county road system.

M.12 Right-of-Way Permits

Require a permit for any obstruction, excavation or placement of signs, utilities, facilities or other items within the county rights-of-way. The permit application process and requirements are described in Ordinance No. 126, Management of the Public Right-of-Way, and the Right-of-Way Management Procedures document, which details permit issuance practices.

Bicycle, Pedestrian and Trail Gaps

Bicycle and pedestrian facilities are important elements of a safe and efficient multi-modal transportation system and should be designed to meet the needs of all ages and abilities. Addressing the needs of pedestrians and bicyclists is essential to those who walk, bike, and take transit to meet their daily transportation needs as well as those who walk and bike for recreation and exercise. A network of safe and accessible trails, sidewalks, and bikeways provides multiple benefits to the county including improved safety, environmental sustainability, active living and improved health, more transportation options, and quality of life.

Pedestrian and bicyclists share destinations with motorists including commercial areas, schools, employment centers and regional parks. Many of these destinations are along county highways, requiring pedestrians and bicyclists to travel along or across the county highway system for all or part of their trip. Additionally, the lack of connected local road and trail networks often leaves county highways as the only available route for people who walk and bike.

Dakota County has built more than 200 miles of shared use trails and sidewalks within highway right-of-way. County practice is to construct shared use trails on each side of the highway within the urban and suburban areas. This provides separation from motor vehicle traffic, supports biking and walking on one facility, and minimizes crossings of county highways. On-street bicycle facilities, such as shoulders and bike lanes, may be appropriate in some contexts such as rural areas and low-speed highways. The existing bicycle and pedestrian network in the county are shown in Figure 26.

Despite completing much of the system, critical gaps remain in the urban and suburban areas of the county. The 2018 Dakota County Pedestrian and Bicycle Study identified and prioritized trail and sidewalk gaps throughout the county. In urban and suburban areas, bicycle gaps are locations along county highways without a shared use trail and pedestrian gaps are locations without a trail or sidewalk. In rural areas, gaps are identified as locations without a bikeable shoulder. Figure 27 depicts bicycle and pedestrian gaps on county highways. Gaps were prioritized based on several factors including:

- Demand – population and employment density;
- Destinations – presence of schools, retail, transit stops;
- Need – households without vehicles, age (population under 18 and over 65);
- Highway characteristics – traffic volumes, speeds, number of travel lanes;
- Regional priorities – along the Regional Bicycle Transportation Network.

In addition to the county highway system, bicycles and pedestrians use local, regional, and state networks to reach destinations. The county will continue to work closely with other transportation agencies to improve connections to the county highway system with the following networks:

Regional Trails and the Countywide Greenway System - The county greenway system encompasses the Regional Trail System within Dakota County, and connects to regional and state trails in adjacent counties. Greenways include a shared use trail and, for the most part, are located or planned away from roadways, but in some cases, they will share right-of-way with roads.

Regional Bicycle Transportation Network (RBTN) - The Regional Bicycle Transportation Network (RBTN) was established in The Metropolitan Council's 2040 Transportation Policy Plan, to establish a network of

on-street bikeways and off-road trails improve bicycle transportation at the regional level. This is shown in Figure 28.

State Highways - Pedestrian and bicycle facilities along and across state and Interstate Highways are essential for connectivity to trails across the Minnesota and Mississippi Rivers. Due to higher speeds and traffic volumes, all state highways in Dakota County are barriers for local pedestrian and bicycle networks.

State Trails - State Trails and bikeways provide important connections between Greater Minnesota and the Metropolitan Area. MnDOT has identified a State Bicycle Route Network and the Department of Natural Resources has identified future State Trails in Dakota County. In some cases, State Trails may be located along county highways.

The county has identified priority trail and sidewalk gaps to implement over the timeframe of the Plan. This is shown in Figure 29. Some gaps will be filled as independent trail and sidewalk projects, others will be addressed in conjunction with major roadway projects. Factors considered in identification of these priority segments include the following:

- The county has a goal of providing pedestrian and bicycle facilities on every county road in urban and suburban areas within the next twenty years, typically a shared use trail on at least one side of the road.
- All future road reconstruction, expansion, turnback, and lane reduction projects would incorporate bicycle and pedestrian facilities, on both sides of the road where practical, in the overall highway project cost. Cost for pedestrian and bicycle elements on these corridors is included in the appropriate future highway needs category.
- Trail gaps along roads not programed for reconstruction, expansion, lane reduction, or turnback within the next 20 years would be delivered as independent projects. This estimate also includes bicycle and pedestrian connections to transit off the county highway system.
- Trail gaps that are proposed to be addressed with roadway projects may be pursued by cities as independent trail gap projects on a case by case basis if they are determined to be an immediate priority or safety issue, are feasible to construct, and have local support.

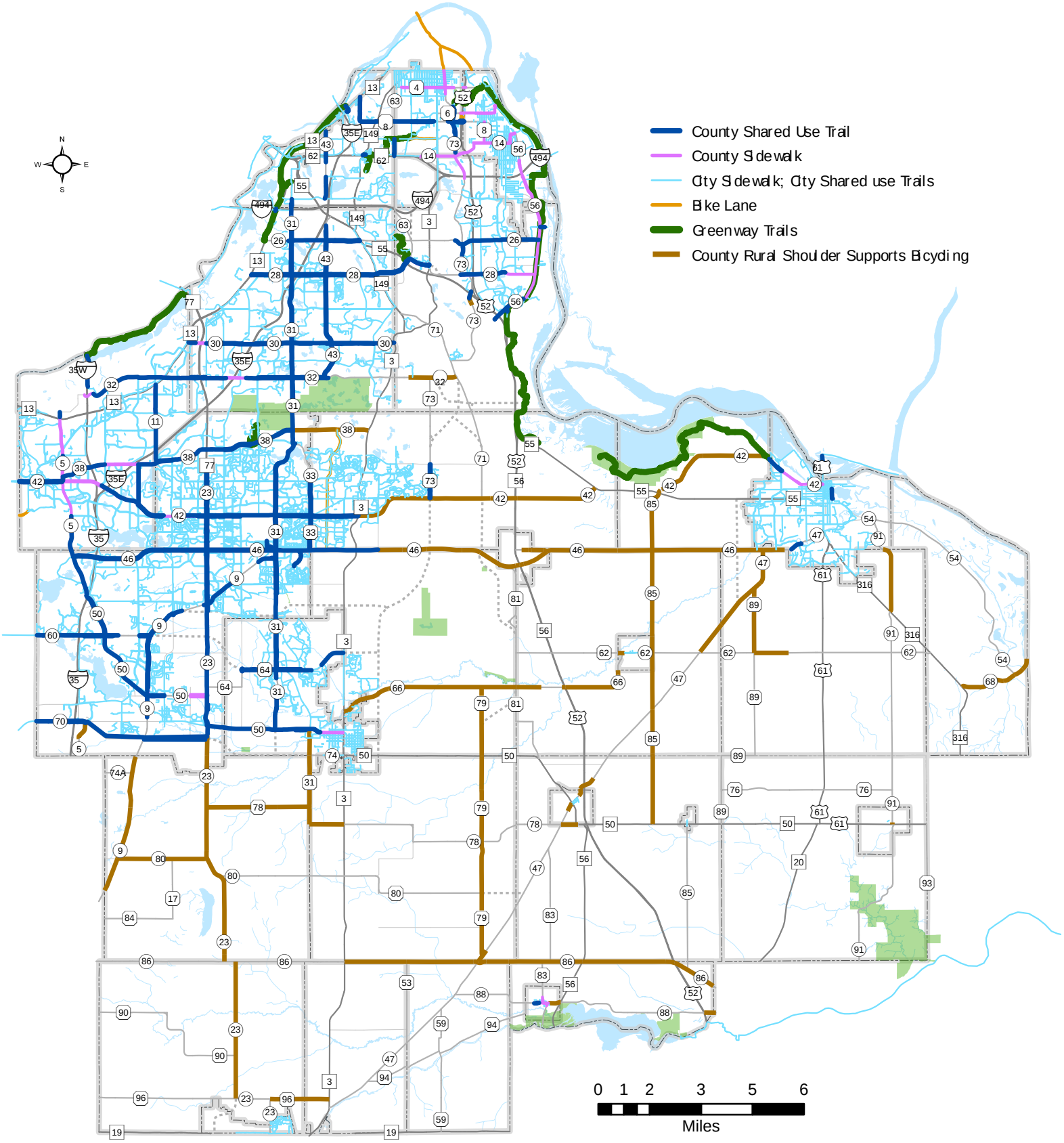
The current CIP investment for bicycle, pedestrian and trail gaps is approximately $2 million per year. The following are the estimated annual CIP investments for bicycle, pedestrian and trail gaps over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.5 million ($0.5 million for County Roads)
- 2026-2030 = $2.3 million ($0.8 million for County Roads)
- 2031-2040 = $2.3 million ($0.8 million for County Roads)

The following ***strategies*** support integrating pedestrian and bicycling modes:

- **Multi-Modal Transportation System**
  Develop a transportation system that appropriately integrates all modes to move people safely and efficiently.

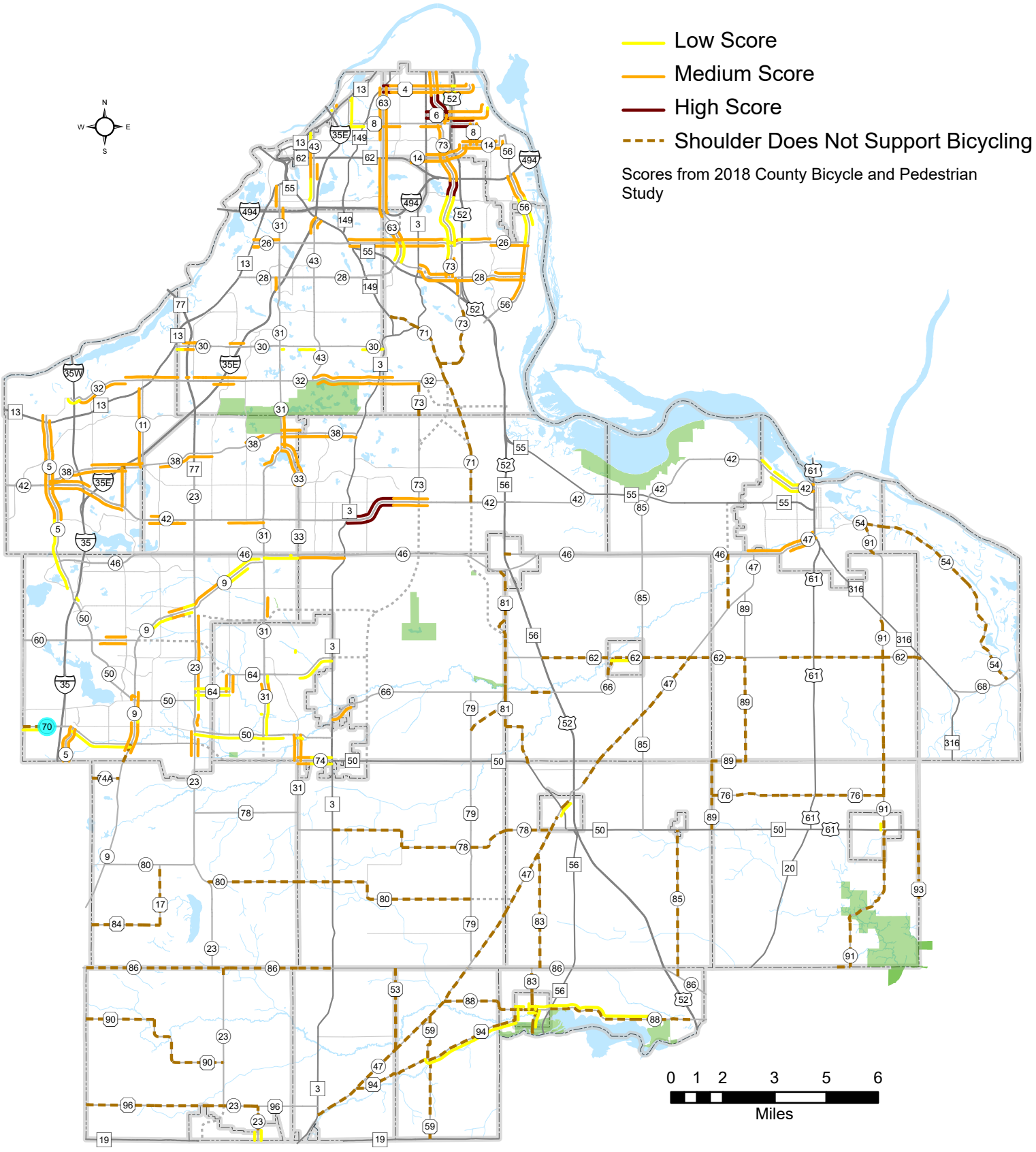
Existing Pedestrian and Bicycle Network



Prepared by: Office of Planning 02/26/2021

Dakota County 2040 Transportation Plan - Figure 26

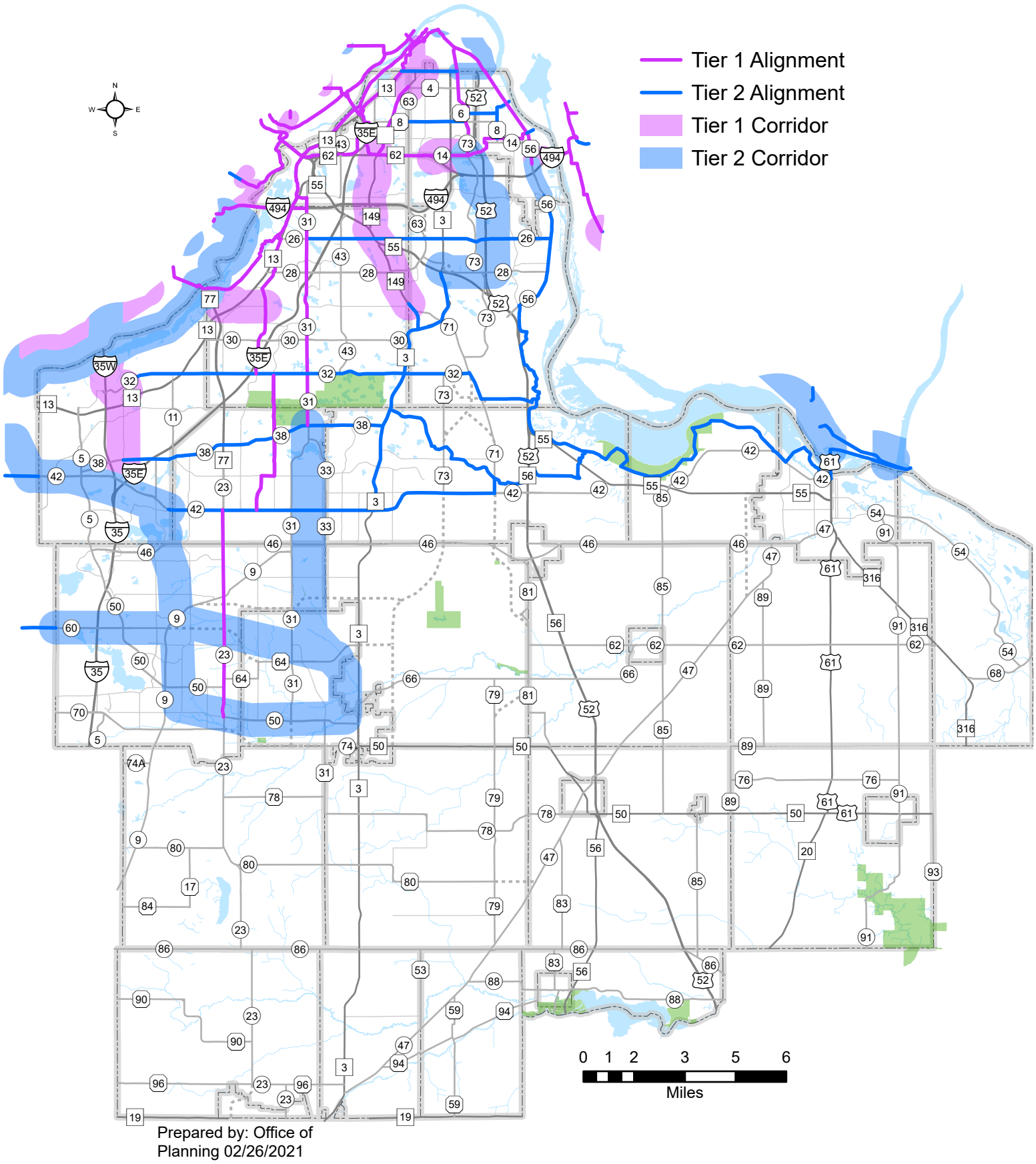
County Highway Pedestrian and Bicycle Gaps



Prepared by: Office of Planning 03/12/2021

Dakota County 2040 Transportation Plan - Figure 27

Regional Bicycle Transportation Network



Dakota County 2040 Transportation Plan - Figure 28

- **Provide Continuous Pedestrian and Bicycle Facilities Along County Highways Based on Land Use Context**
  - Construct shared use trails in urban and suburban contexts on both sides of county highways, where practical.
  - Consider, as part of the planning and design process, sidewalks, alternate routes on local or state roads, on-road bicycle facilities, where shared use trails are not practical in urban and suburban contexts, due to right-of-way constraints or other considerations.
  - When shared use trails are not practical, on-road bicycle facilities will be considered on a case by case basis in consideration of the following conditions:
    - There is local support
    - An off-road shared-use trail is not practical or feasible
    - An alternate route for an on-road facility, such as a parallel local street, is not available
    - On-street parking is prohibited, or the city agrees to remove parking to accommodate the on-road bicycle facility
    - The on-road facility is part of an identified system that provides for regional connectivity and transportation system connections
    - State Aid design guidelines can be met
    - Speed limit is 35 miles per hour or lower
  - Construct paved shoulders on construction and resurfacing projects in the rural areas, to provide widths that support bicycling, where practical.
  - Construct shared use trails in rural contexts where there is high pedestrian and bicycle demand, such as near county facilities, rural centers, parks and greenways, schools, facilities for older adults, continuity between urban and suburban areas, and when trails align with state and regional trails and bikeways.
  - Provide pedestrian and bicycle connections between municipalities and to adjacent counties.

- **Provide for Barrier Removal**
  - Address physical barriers such as busy roads and water crossings.
  - Prioritize barriers and gaps to overcome with preference for areas of high pedestrian activity that are bisected by multi-lane roads with speeds of 35 MPH or greater, railroads, missing trail segments or water features.

- **Coordinate with the Countywide Greenway System**
  - Integrate the county greenway system in future county highway projects where applicable.
  - Where greenway trails would meet regional intent with respect to connectivity, continuity, and existing or potential bicycle trip demand, work with the Metropolitan Council and local jurisdictions to integrate greenway trails into the RBTN.
  - Coordinate trails along county highways with greenways.

- **Ensure Safety of Bicycle and Pedestrian Facilities Based on Context**
  - Follow Americans with Disabilities Act requirements and guidelines.
  - Evaluate conditions at county roadways and areas with high potential pedestrian and bicycle demand, such as county facilities, employment centers, commercial activity centers, rural centers, parks and greenways, schools, and facilities for older adults.
  - Assess pedestrian and bicycle connectivity and safety as part of all transportation system studies, transportation improvement projects, and CIP project development processes.
  - Ensure facility design keeps pace with changing technologies such as the growth in use of electric bicycles and scooters.

The following ***policies*** support integrating pedestrian and bicycling modes:

M.13 Bicycle and Pedestrian Facilities within County Right-of-Way
Require approval for design and location of bicycle and pedestrian facilities by non-county agencies within county highway right-of-way.

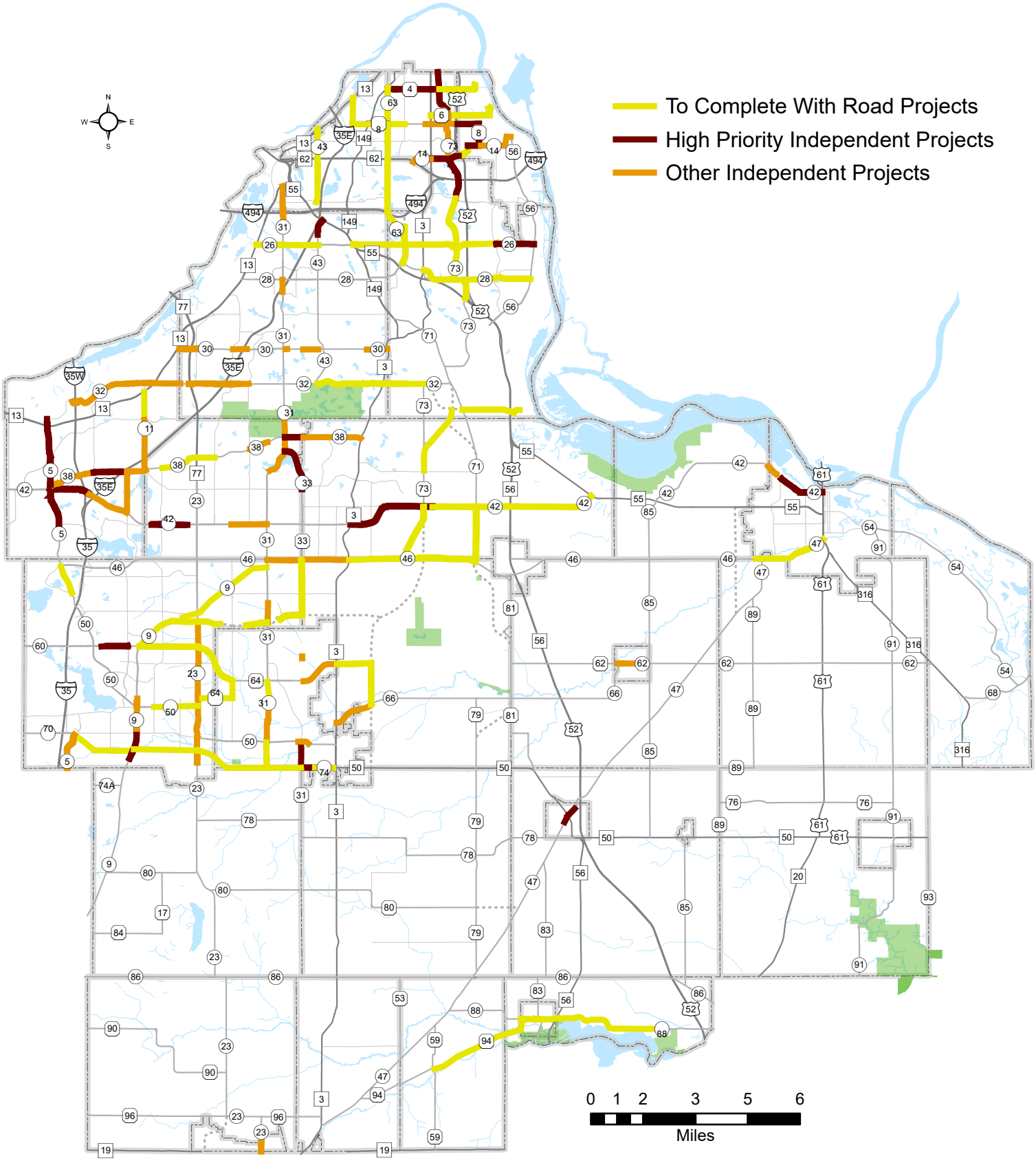
M.14 Bicycle and Pedestrian Facilities Signs and Pavement Markings
Traffic controls and signage on bicycle and trail facilities will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

M.15 Bicycle and Pedestrian Facility Construction
Construct bicycle and pedestrian facilities in conjunction with all highway construction and mill and overlay projects based on needs and context, to the extent practical.

M.16 On-Road Bicycle Facilities
Include bikeable shoulders on county highways in rural and urban areas with roadway projects when practical.

PERFORMANCE MEASURES: By 2040 Provide: 1) Pedestrian and bicycle facilities on every county highway in the urban and suburban area; and 2) All newly constructed rural highways have bikeable shoulders.

County Highway Trail Gap Implementation



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Dakota County 2040 Transportation Plan - Figure 29

Pedestrian and Bicycle Crossings of County Highways

Public engagement for the 2040 Transportation Plan Update as well as the 2018 County Pedestrian and Bicycle Study noted that many residents are concerned about the safety of crossing county highways when walking and biking. Safe crossings with minimal delays are important to all users of the transportation system, but especially pedestrians and bicyclists who face a greater risk of harm when conflicts occur with motor vehicles. Pedestrians and bicyclists may also be more sensitive to time, distance, and delay associated with finding a safe highway crossing since they travel at a slower rate when compared to motor vehicles. Existing traffic signals are typically spaced at a distance that may be significantly out of the way for pedestrians and bicyclists to reasonably access. In some locations, such as Principal Arterials with multiple travel lanes and turn lanes, traffic signals may not be enough to facilitate safe and comfortable crossings for pedestrians and bicyclists.

Strategies to improve pedestrian and bicycle crossings can range from design and geometric improvements at intersections, improved lighting, leading pedestrian intervals at signals, installation of pedestrian refuge medians, the reduction of through travel lanes, technologies such as flashers (Pedestrian Hybrid Beacons or Rapid Rectangular Flashing Beacons, and grade separated crossings (bridges or underpasses)). Selecting the most appropriate improvement strategy for pedestrian and bicycle crossings is highly dependent on the context of the crossing. Factors to consider include number of travel lanes to cross, speed of roadway, sight distance, topography, location of pedestrian and bicycle generators, and characteristics of likely users (i.e. children, older adults, people with disabilities).

Grade separated crossings provide the highest degree of safety and comfort by physically separating pedestrians and bicyclists from vehicles. However, these facilities can have several challenges with implementation including available space, right-of-way, topography, and cost. Additionally, encouraging use of bridges and tunnels requires that they are located to provide direct and convenient access for most users and include design features such as adequate lighting and minimal slopes. Given the complexities and cost to implement these facilities, the county will prioritize locations for potential grade separated crossings to ensure they are in the areas with the greatest demand and safety need. Criteria for consideration include:

- Functional Classification of highway crossed
- Existing and projected traffic volumes
- Posted speed limits
- Number of traffic lanes
- Pedestrian/Bicycle demand
    - Suitability of at-grade crossings
    - Efficiency or circuitousness of crossing location
- Presence of vulnerable populations
- Identified safety issues
- Site feasibility
- Regional Plans/Studies
- County Greenways

Figure 30 shows county highways with multiple lanes and speeds over 35 miles per hour in conjunction with existing, funded and proposed grade separated crossings. The map and selection criteria can help guide decisions about the need for additional grade separated bicycle and pedestrian crossings of

county highways, however each specific crossing solution will be evaluated on a case-by-case basis. An understanding of the site context and user needs is critical for successful implementation and use.

The county greenway system has a performance goal of providing grade separated crossings of all roadways that are classified as arterials or above. This goal supports a wide range of users, from children to older adults. The Dakota County Parks Department manages the county greenway system and the County Board has adopted greenway master plans that identify greenway crossings of county highways be grade separated. Grade separated crossings of greenways and county highways provide shared benefits to both recreation and transportation goals for county residents and therefore will have a shared cost between the Parks department and the Transportation department when greenway crossings of county highways are implemented.

Future county greenway grade separated crossings of county highways were estimated to 2040 based on county greenway master plans. After cost shares were determined, the total Transportation Department cost is $14.1 million. The following are the estimated Transportation CIP investments over the plan period:

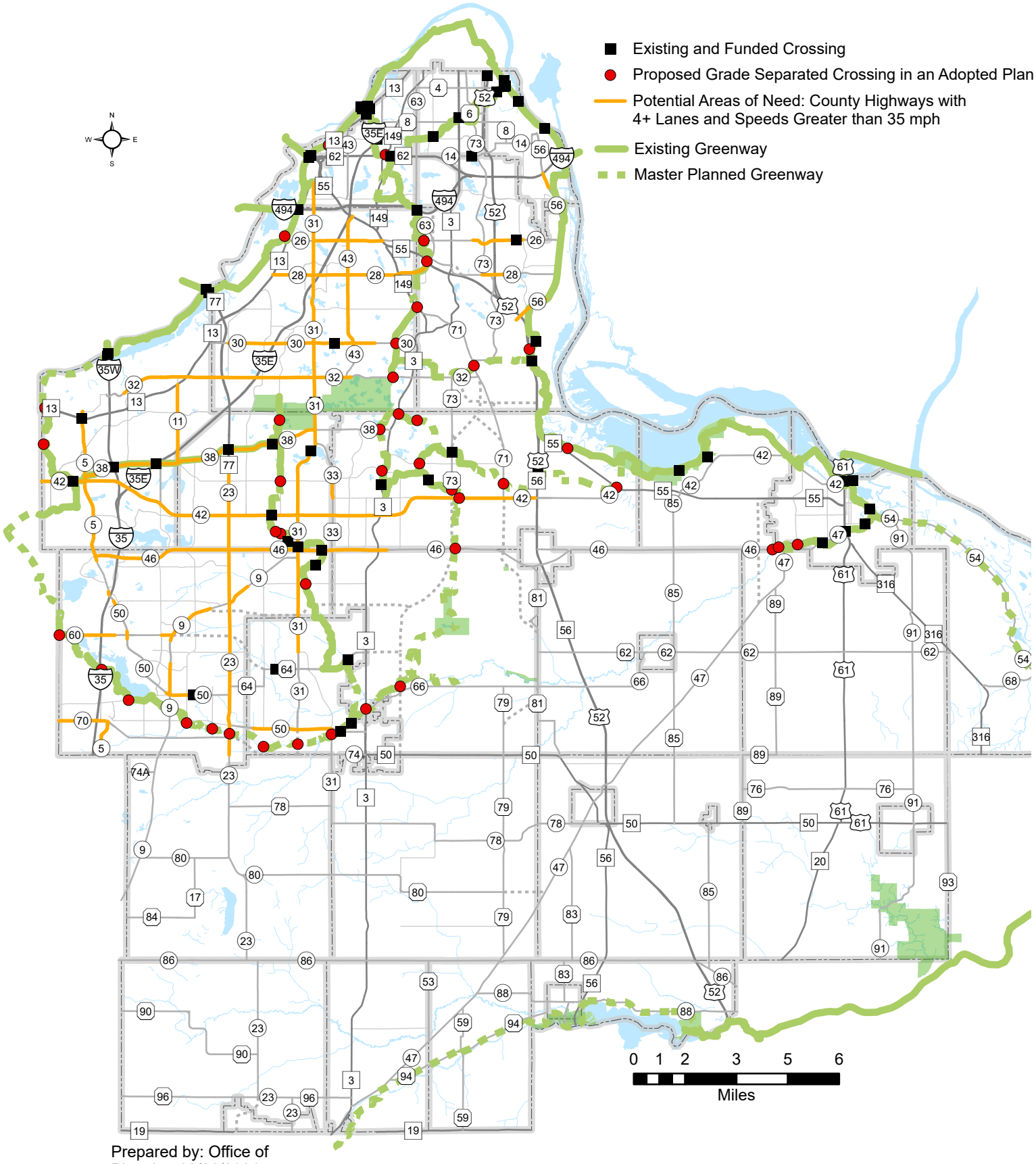
The current CIP investment for greenway crossings of county highways is $1.7 million per year. The following are the estimated annual CIP investments for greenway crossings of county highways over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.7 million ($0 for County Roads)
- 2026-2030 = $1.6 million ($0 for County Roads)
- 2031-2040 = $0.3 million ($0 for County Roads)

Future pedestrian and bicycle crossing needs were identified by determining the approximate number of grade separations that were built during the last 20 years with an understanding that there will be a need and desire to build more of these facilities across the county's largest and busiest highways and at locations that attract pedestrian and bicycle trips such as schools and parks. The total estimated cost over 20 years is $19.8 million with the approximate annual CIP investment over the life of the plan estimated below.

- 2021-2025= $0.4 million ($0 for County Roads)
- 2026-2030 =$0.8 million ($0 for County Roads)
- 2031-2040 =$0.8 million ($0 for County Roads)

Pedestrian and Bicycle Grade Separated Crossings



Prepared by: Office of Planning 02/26/2021

Dakota County 2040 Transportation Plan - Figure 30

The following ***strategies*** supports integrating pedestrian and bicycling modes:

- **Improve Pedestrian and Bicycle Crossings of County Highways**
  - Review all transportation projects for opportunities to improve bicycle and pedestrian safety at crossings during the planning and design process.
  - Prioritize locations for potential grade separated crossings to ensure they are built in areas with the greatest demand and safety need. Criteria for consideration include:
    - Functional Classification of highway crossed
    - Vehicular volumes
    - Posted speed limits
    - Number of traffic lanes
    - Pedestrian/Bicycle demand
    - Presence of vulnerable populations
    - Identified safety issues
    - Site feasibility
    - Regional Plans/Studies
    - County Greenways
  - Where grade separated crossings aren't feasible, identify other options for improving pedestrian and bicycle safety and employ best practices as identified in state and national design manuals and guidelines.

- **Pedestrian Consideration in Traffic Control**
  Select, design, and operated intersection and mid-block traffic control devices including signing, striping, lighting in consideration of MUTCD guidance, location context, pedestrian needs and best practices to maximize safety of pedestrian crossings.

- **Support the Countywide Greenway System**
  - When greenway trails or natural resource corridors cross county highways, locate crossings to take advantage of existing grade separations where possible. Consider new separations where natural resource, wildlife, pedestrian, and bicycle benefits justify them.
  - Integrate the county greenway system in future county highway projects where applicable.

Goal 3 Summary

This goal aims to enhance the relationship and compatibility between land uses and transportation to assure a safe and efficient transportation system. Management of the system can cost effectively maximize mobility, safety and capacity of the county transportation system.

The strategies and policies within this goal aim to optimize the capacity and safety of the existing transportation system with recognition that fiscal, social and environmental constraints limit the ability of expanding the highway system to achieve safe travel. Management strategies and policies address access jurisdictional classification; safety and management; signal projects; rural intersections; right-of-way preservation and management; bicycle, pedestrian and trail gaps; and greenway, pedestrian and bicycle crossings of county highways as critical elements in managing the existing system.

The current CIP investment for projects to manage the existing system is approximately $16.2 million per year. Future annual investments for this goal are anticipated to remain stable. These activities are

intended to reduce the need for more costly replacement, improvement or expansion to county highways. Costs associated with access management activities are included with other project expenses in the CIP or are assumed at no cost. The following are the estimated annual CIP investments over the Plan period.

Annual Management Investment Needs						
	2021-2025		2026-2030		2031-2040	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR
Juris. Class. - Hwy Replace	$ 1.60	$ -	$ 0.74	$ 2.61	$ -	$ 1.30
Juris. Class. - Gravel Paving	$ -	$ 2.88	$ -	$ 2.00	$ -	$ 2.29
Safety and Management	$ 3.80	$ 0.70	$ 3.80	$ 0.70	$ 3.80	$ 0.70
Signal Projects	$ 0.30	$ -	$ 0.30	$ -	$ 0.30	$ -
Rural Intersections	$ 1.50	$ -	$ 0.75	$ -	$ 0.75	$ -
ROW Pres. & Mgmt	$ 0.20	$ 0.05	$ 0.20	$ 0.05	$ 0.20	$ 0.05
Bike, Ped & Trail Gaps	$ 1.50	$ 0.50	$ 2.25	$ 0.75	$ 2.25	$ 0.75
Greenway Crossings	$ 1.72	$ -	$ 1.56	$ -	$ 0.27	$ -
Non-Greenway Crossings	$ 0.40	$ -	$ 0.80	$ -	$ 0.80	$ -
ANNUAL AVERAGE	**$ 11.02**	**$ 4.13**	**$ 10.40**	**$ 6.11**	**$ 8.37**	**$ 5.09**

In addition to the Management needs identified above, an annual investment of $1 million is estimated for regional greenways that are eligible for the use of federal transportation funds. This investment totals an additional $20 million over the Plan period. There are discussions underway about accelerating development of the greenway system that may result in a higher level of actual investment.

Chapter 7

Goal 4: Replacement and Modernization of Deficient Elements of the System

Transportation system elements such as pavement and bridges deteriorate over time. Even with proactive preservation over the life of the transportation system, replacement eventually becomes the most cost-effective approach. Additionally, standards and practices change, affecting system safety and operation to maintain safe and efficient movement of people and goods. Therefore, the county will replace and modernize deficient elements of the transportation system as they become structurally or functionally obsolete to enhance safety and efficiently operate the system.

Goal Purpose

This goal provides measures, strategies and policies aimed at replacement and modernization of four important elements of the transportation system – bridges, highways, traffic signals and gravel roads. It also provides current and future estimated investments and measures for replacement of key transportation system elements.

Modernization of the transportation system includes the addition of shoulders, turn lanes, and medians to reduce crashes and channelize traffic to efficiently move vehicles. Pedestrians and bicyclists are also accommodated with the addition of trails and sidewalks. Installation of street lighting at school zones and pedestrian crossings improves safety for vulnerable users. Each of these elements are considered on highway replacement and modernization projects.

The strategies and policies of this goal provide for current and future estimated investment needs for replacement of key transportation system elements. Replacement and modernization of the transportation system will be pursued through the following CIP investment categories.

CIP Investment Categories

- Highway Replacement and Modernization
- Bridge Replacement
- Gravel Road Paving
- Traffic Signal Replacement
- Through-Lane Reduction
- Two- to Three-Lane Modernization

Highway Replacement and Modernization

The county reconstructs highways when they have exceeded their functional lives. The highway useful life is based on the adequacy of structural, operational or functional highway elements. Safety, operational and modernization improvements are also incorporated into reconstruction projects when appropriate. Even with proactive preservation, eventually highway replacement becomes the most cost-

effective approach for safe and efficient maintenance and operation of the system. The county considers the general expected highway life to be approximately 70 years. The current Dakota County highway system age is shown by highway segment in Figure 31.

Highway age will be one factor in considering reconstruction and modernization needs of a highway. Additional analysis including assessment of safety, consideration of bicycle and pedestrian accommodation, and the structure of the individual highway segments will be conducted to better determine the actual replacement and modernization needs. Replacement and modernization projects may consist of a wide variety of improvement types depending on the actual needs and condition of the particular highway segment. Future prioritization and timing of projects will still be based on a number of factors per Plan priorities, strategies, and policies.

The following are the estimated annual CIP investments for highway replacement and modernization over the plan period including estimated investments for County Roads:

- 2021-2025 = $17.9 million ($9.0 million for County Roads)
- 2026-2030 = $24.3 million ($2.5 million for County Roads)
- 2031-2040 = $12.6 million ($0.7 million for County Roads)

PERFORMANCE MEASURE: The County will consider reconstruction and modernization of County highways when they have exceeded their functional lives, generally expected to be approximately 70 years. This includes consideration of the adequacy of the structure and operation of functional highway elements including age, multi-modal accommodation, safety assessment and cost effectiveness.

The following ***policy*** supports replacement and reconstruction of deficient highway elements of the system.

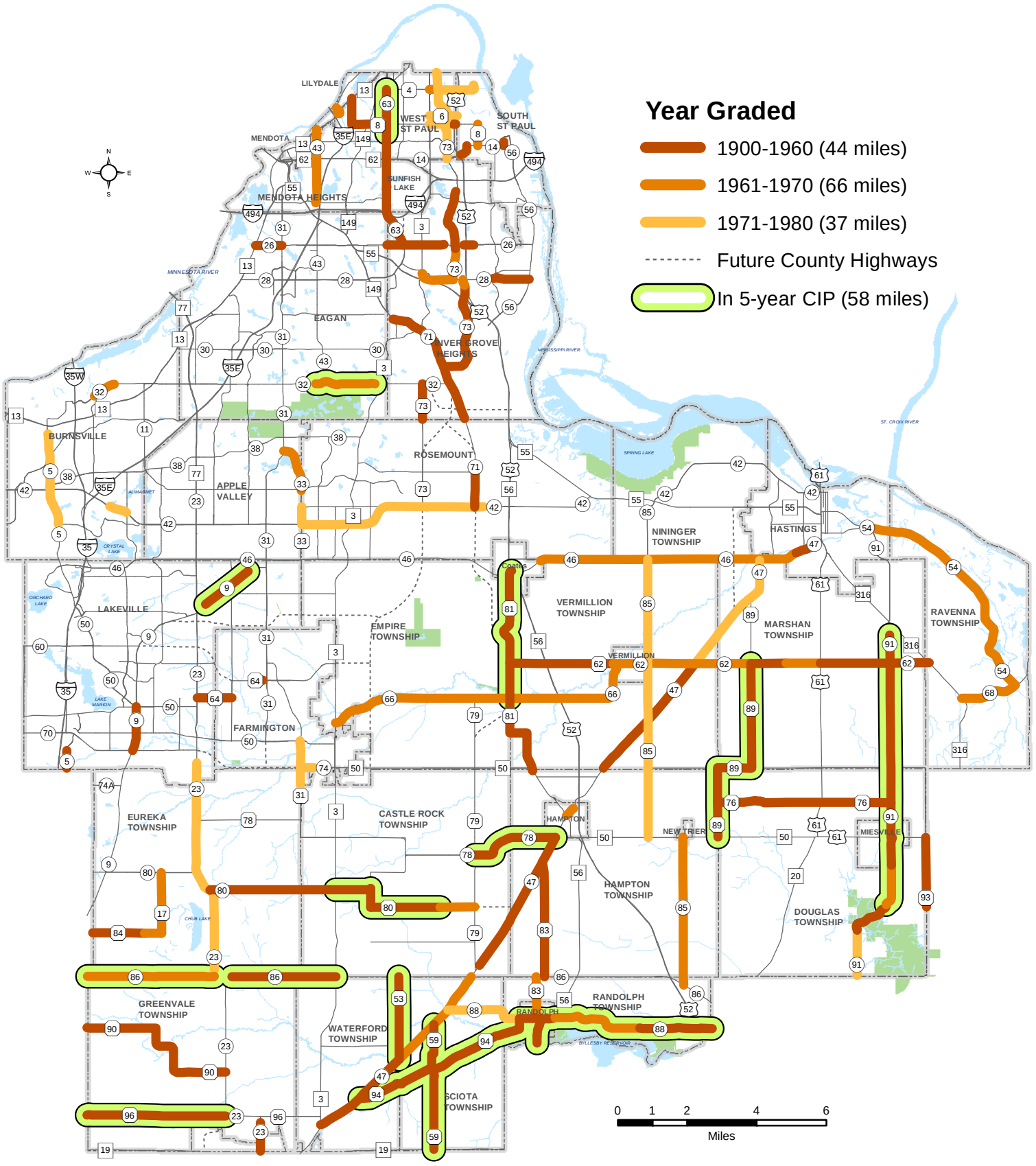
R.1 Highway Replacement
Reconstruct and modernize highways or highway elements that have exceeded their useful life based on structural, functional, operational or safety factors.

Bridge Replacement

The county uses the Local Planning Index (LPI) for bridges that was recently established by the Minnesota Department of Transportation (MnDOT) to monitor the operation quality of bridges. The LPI is a risk score which factors both the consequence of a service interruption and the probability of service interruption. The following factors are considered in determining the probability of a bridge failure:

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

Dakota County Road Age



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Dakota County 2040 Transportation Plan - Figure 31

The following factors are considered in determining the consequence of failure:

- Traffic volume
- Detour length
- Bridge length
- Local considerations (such as impacts to industry, trade and agriculture)

The LPI is an improvement to the sufficiency rating that the county has used in the past and uses a more risk-based approach. The sufficiency rating is no longer being used by the Federal Highway Administration (FHWA) or MnDOT.

To monitor operation quality of bridges, the county conducts annual bridge inspection to determine the LPI. As bridges age over the plan period, bridge replacement investment will continue to be necessary. county bridges are shown in Figure 32.

PERFORMANCE MEASURE: The county will have no bridges under its jurisdiction that have a Local Planning Index (LPI) rating of 80 or less.

The following are the estimated annual CIP investments for bridge replacement over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.2 million ($0 for County Roads)
- 2026-2030 = $0.5 million ($0.1 million for County Roads)
- 2031-2040 = $0.5 million ($.0.1 million for County Roads)

The following ***strategies*** support replacement of deficient bridge elements.

- **Bridge Replacement - Condition**
  Replace bridges determined as deficient according to state guidelines and funding availability.

- **Bridge Replacement – Adjacent Highway Project**
  Replace bridges if an adjacent highway project necessitates replacement for functional or safety reasons.

- **Bridge Replacement – Beyond 20-Year Needs**
  Anticipate traffic needs beyond 20-year ADT to determine bridge design elements.

- **Bridge Replacement – Funding**
  Pursue federal and state funds for the replacement of eligible bridges.

- **Township Bridge Program**
  Assist townships with administration of Township Bridge Program. Funding for township bridge replacements will be pursued from the Township Bridge Program, State Bridge Bonds, and townships in accordance with state program criteria. The ability to accomplish township bridge projects is contingent upon eligibility and availability of funds. Townships are responsible for funding any costs not provided for by the state and concurrence with consultant selection and coordination of project schedule. The County Engineer may be the administrator or the township agent. Typically, county staff will:

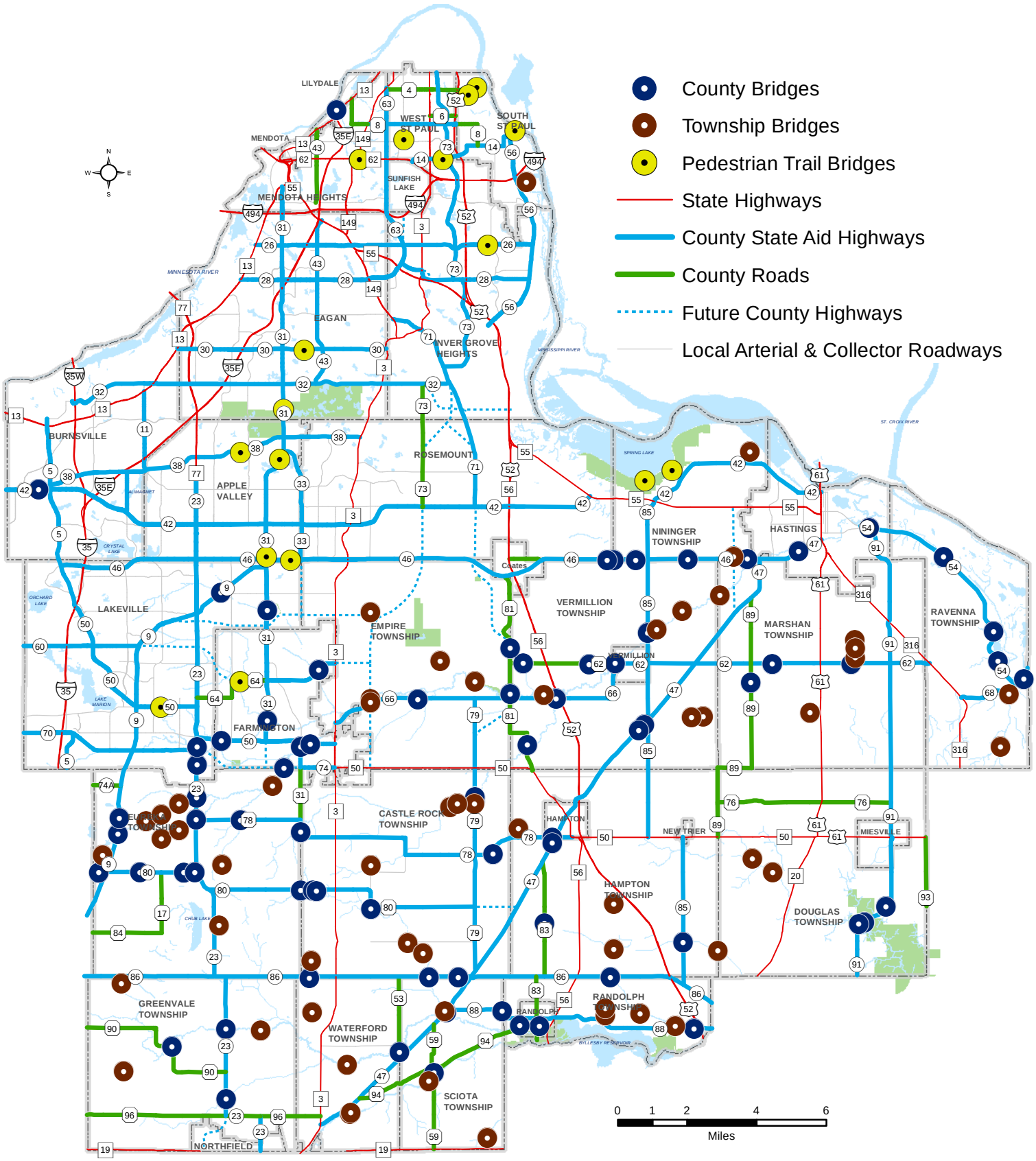
- Assist with pursuit and administration of State Bridge funding; and
- Administer plan and specification submittal and review by the state

- **Timber Bridge Replacement**
  Replace timber bridges that have exceeded the design life of 50 years or that have succumbed to substructure decay and cannot be rehabilitated.

The following ***policy*** supports replacement of deficient bridge elements of the system.

R.2 Bridge Inspections
Perform bridge inspections of county bridges in accordance with applicable laws and rules.

County Bridges



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Dakota County 2040 Transportation Plan - Figure 32

Gravel Road Paving

The county currently has approximately 48 miles of gravel roads. This is compared to 65 miles in 2010 when the *Dakota County 2030 Transportation Plan* was adopted. To provide better mobility, safety and maintenance efficiency, the county will continue to direct its resources at paving gravel highways that carry an Average Daily Traffic (ADT) volume of 300 to 500 vehicles per day or greater. Life cycle cost analysis indicates that traffic volumes greater than 300 to 500 ADT typically makes paving gravel roads cost effective for the county. This is at a higher traffic threshold than most guidance, including County State Aid Highway standards would suggest largely due to the approach the county uses to cost effectively maintain its gravel county highways.

County gravel roads are resurfaced with crushed lime rock material with chloride material added as a binding agent. The life cycle costs of initially placing and maintaining lime rock is less than traditional gravel. Also, in the future, a potential exists for a long-term shortage of gravel. Therefore, the county will consider factors in addition to ADT in determining the paving need. These include:

- Urban road segment or rural road segment;
- Located within the Municipal Urban Service Area (MUSA);
- Typical ease and speed of travel;
- Safety and mobility;
- Maintenance efficiency;
- Funding availability;
- Coordination with partnering agencies;
- Bridge needs; and
- Environmental impacts

The existing CIP investment for gravel road paving is $7.0 million annually. Future gravel road reconstruction and paving needs are estimated for a minimum ADT of 300 on gravel roads that will remain under county jurisdiction. The following are the estimated annual CIP investments for gravel road paving over the plan period including estimated investments for County Roads:

- 2021-2025 = $7.0 million ($7.0 million for County Roads)
- 2026-2030 = $0.6 million ($0.6 million for County Roads)
- 2031-2040 = $0 million ($0 for County Roads)

Costs associated with paving County Roads that are identified for jurisdictional transfer are included in needs for the Management Goal.

The following **strategies** support reconstruction of deficient gravel road elements.

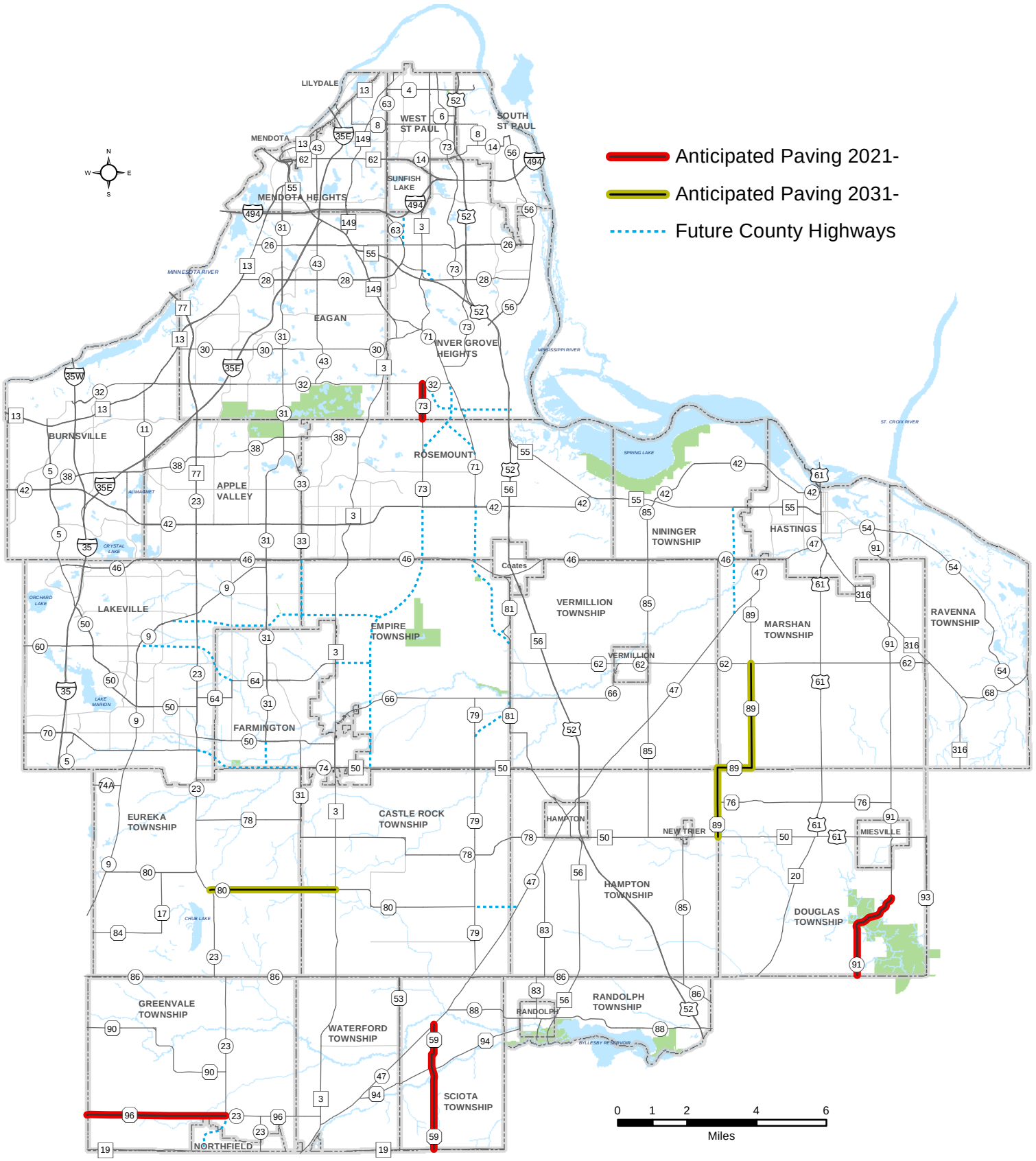
- **Project Inclusion in CIP**
  Gravel highway paving projects will be considered based on the identified factors to determine programming of gravel road paving projects in the CIP.

- **Gravel Conversion to Paved**
  To provide better mobility, safety and maintenance efficiency, the county will direct resources to pave or reconstruct gravel highways that:
  - Have a current and projected Average Daily Traffic (ADT) count of 300 vehicles per day or higher;

- Provide a continuous paved route with adjacent county highway segments; or
- Address a safety, operational, of functional deficiency on the county highway system.

Figure 33 depicts the future jurisdiction of county gravel roads. Approximately 21 miles of gravel roads are anticipated to remain under county jurisdiction. Approximately 27 miles of gravel roads currently under county jurisdiction are anticipated to be transferred to local jurisdictions.

County Gravel Roads - Paving Priority



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Dakota County 2040 Transportation Plan - Figure 33

Traffic Signal Replacement

Dakota County has installed approximately 70 percent of traffic signals under county jurisdiction within the 15-year period from 1985 through the year 2000. Maintenance and preservation techniques are periodically applied to lengthen the overall life span of a traffic signal.

Over a period of time, signals will eventually require replacement consideration due to age and changes in intersection traffic control and operational needs. The county typically considers traffic signal replacement between 30 to 35 years after installation. Actual timing of signal replacement is based on actual intersection assessments.

The current number of Dakota County traffic signals installed by year is shown in Figure 34.

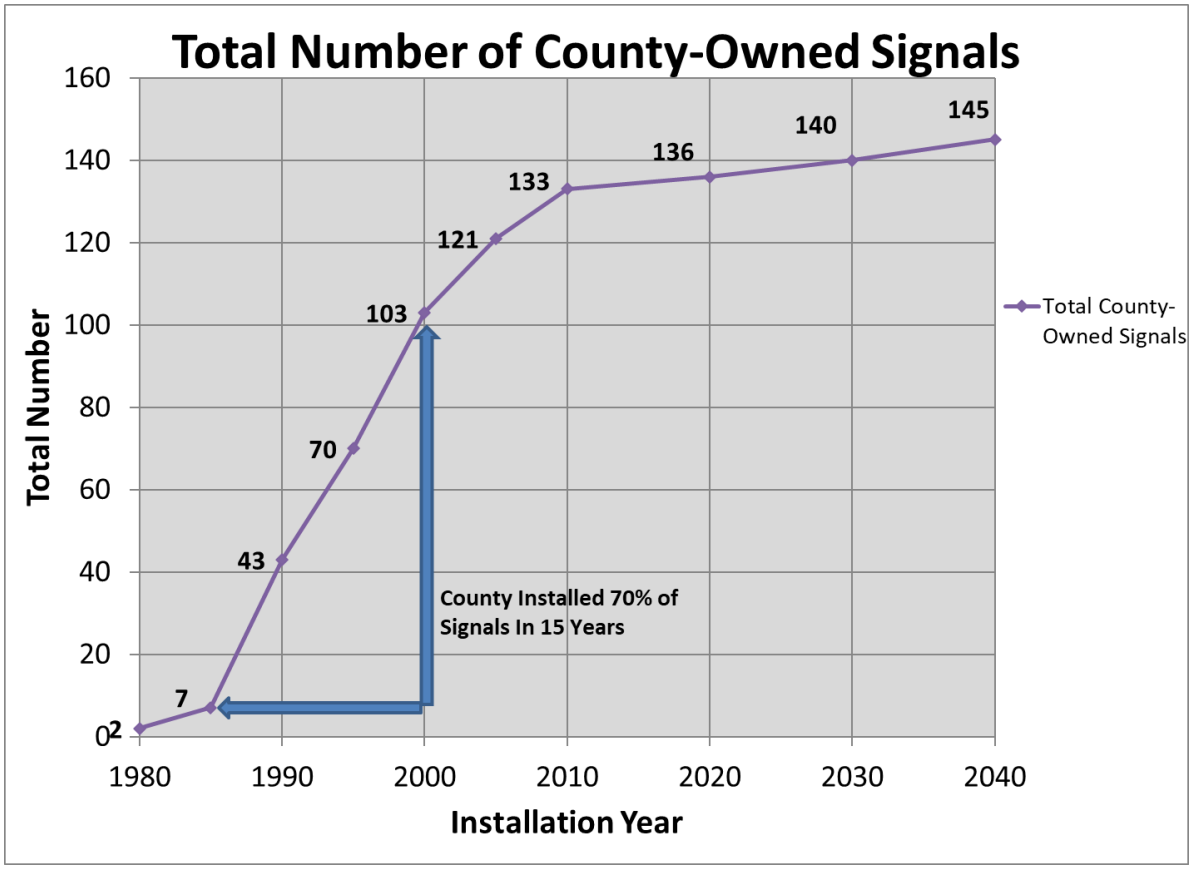


Figure 34.

In the mid 1980's the county only had seven traffic signals on the county system. As of 2020, that number is 136. The focus has shifted from installing new signals to replacing existing signals. The need for additional traffic signals has been further diminished in recognition of poor safety performance when compared to other forms of intersection traffic control such as roundabouts.
The following are the estimated annual CIP investments for traffic signal replacement over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.4 million ($0 for County Roads)
- 2026-2030 = $1.4 million ($0 for County Roads)
- 2031-2040 = $1.8 million ($0 for County Roads)

The following **strategy** supports replacement and reconstruction of deficient highway elements of the system.

- **Traffic Signal Replacement**
  Apply preventative maintenance techniques to defer the need for signal replacement. Prioritize traffic signal replacement for signals that exceed their operational or functional life, typically around 30 years of age. The replacement signal selection process consists of considering operation, maintenance needs and collaboration with cities in consideration of cost share policies through the following steps:
    1) Apply preventive maintenance techniques to defer the need for signal replacement;
    2) Evaluate traffic control per Policy M.10 Intersection Traffic Control Changes; and
    3) Evaluate the scope of signal replacements on a case-by-case basis.

    When it is determined that a signal replacement is the appropriate action, the signal replacement will include updating the system to current standards including ADA criteria, Advanced Traffic Management System (ATMS) updates and other current design elements as applicable to the specific location.

Three-Lane Road Sections

Three lane road sections are comprised of a through travel lane in each direction and a left turn lane, either with or without medians, at all cross-road intersections. These sections typically also include right turn lanes and shoulders. Because these sections separate turning from through traffic, they provide a high level of safety and efficient movement of traffic with a minimal roadway footprint. They work well for daily traffic volumes of 10,000 to 18,000 vehicles and promote safety through minimized weaving when compared to multi-lane through sections, dedicated lanes for turning traffic, and shorter distances for pedestrian crossings. Three-lane sections typically have lower crash and severity rates when compared to multi-lane road sections. They are less expensive, and less impactful to construct than roadway sections with multiple through lanes and have lower annual operating and maintenance costs. Further, they can be designed for cost effective expansion to the outside of the roadway if longer term traffic needs warrant additional lanes. Two approaches are identified to implement three lane road sections where they are applicable to the county highway system based on anticipated 2040 traffic volumes.

Through-Lane Reduction

Through-lane reductions is a newer approach to properly size a highway to fit its anticipated volumes. Approximately 6 miles of four-lane highways have been identified as candidates for reduction to three-lane sections to improve safety and operation of these highways based on 2040 traffic volumes. Highway segments for consideration are shown in Figure 35. These segments have a 2040 anticipated traffic volume of 80 percent or less than the 18,000 capacity for a three-lane highway section, or 14,400 vehicles per day. This is also less than the minimal projected 20-year traffic of 15,000 vehicles per day where a four-lane section would typically be considered. Thus, these segments are considered over-sized and may see safety and operational benefits from a reduction in through lanes. Through-lane reduction of four-

lane highways to three-lane highways will be considered based on other highway segment needs and consultation and agreement with local jurisdictions. The most appropriate time to consider conversion is at a time when pavement overlay or reconstruction and modernization is required.

The following are the estimated annual CIP investments for through-lane reductions over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.0 million ($0 for County Roads)
- 2026-2030 = $0.4 million ($0 for County Roads)
- 2031-2040 = $0.4 million ($0 for County Roads)

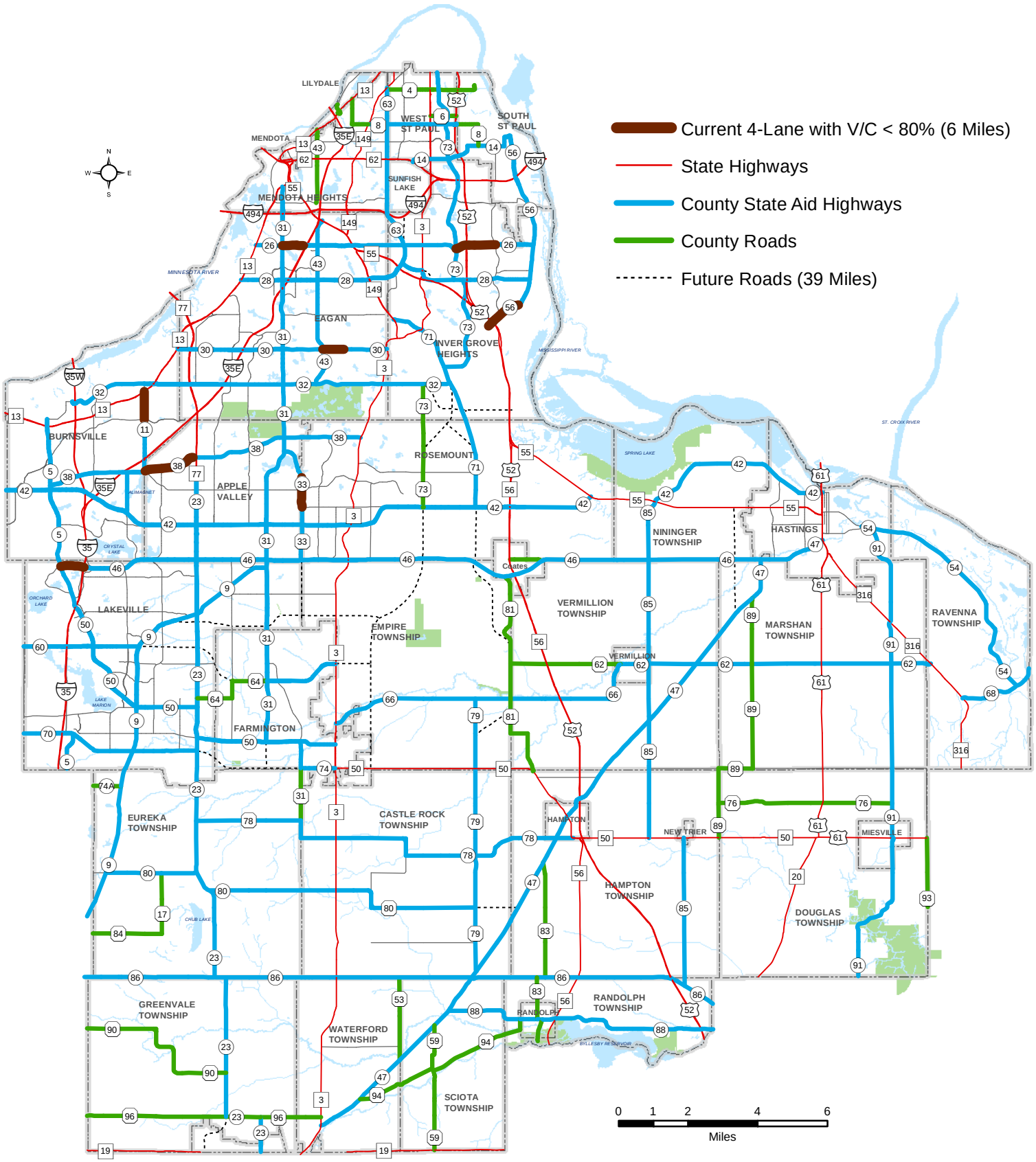
Two-Lane to Three-Lane Modernization

For two-lane highways requiring replacement and modernization that have an anticipated future traffic volume between 10,000 and 15,000 ADT, a three-lane modernization improvement will be considered. This modernization includes improvements to the existing two-lane highway to include left and right turn lanes, medians, shoulders, trails and sidewalks. This type of improvement does not include additional through lanes. Approximately 21 miles of two-lane highways have been identified as candidates for three-lane modernization. Highway segments for consideration are shown in Figure 36.

The following are the estimated annual CIP investments for two-lane to three-lane modernization over the plan period including estimated investments for County Roads:

- 2021-2025 = $1.5 million ($0 for County Roads)
- 2026-2030 = $1.5 million ($0 for County Roads)
- 2031-2040 = $1.5 million ($0 for County Roads)

Through Lane Reduction Candidates



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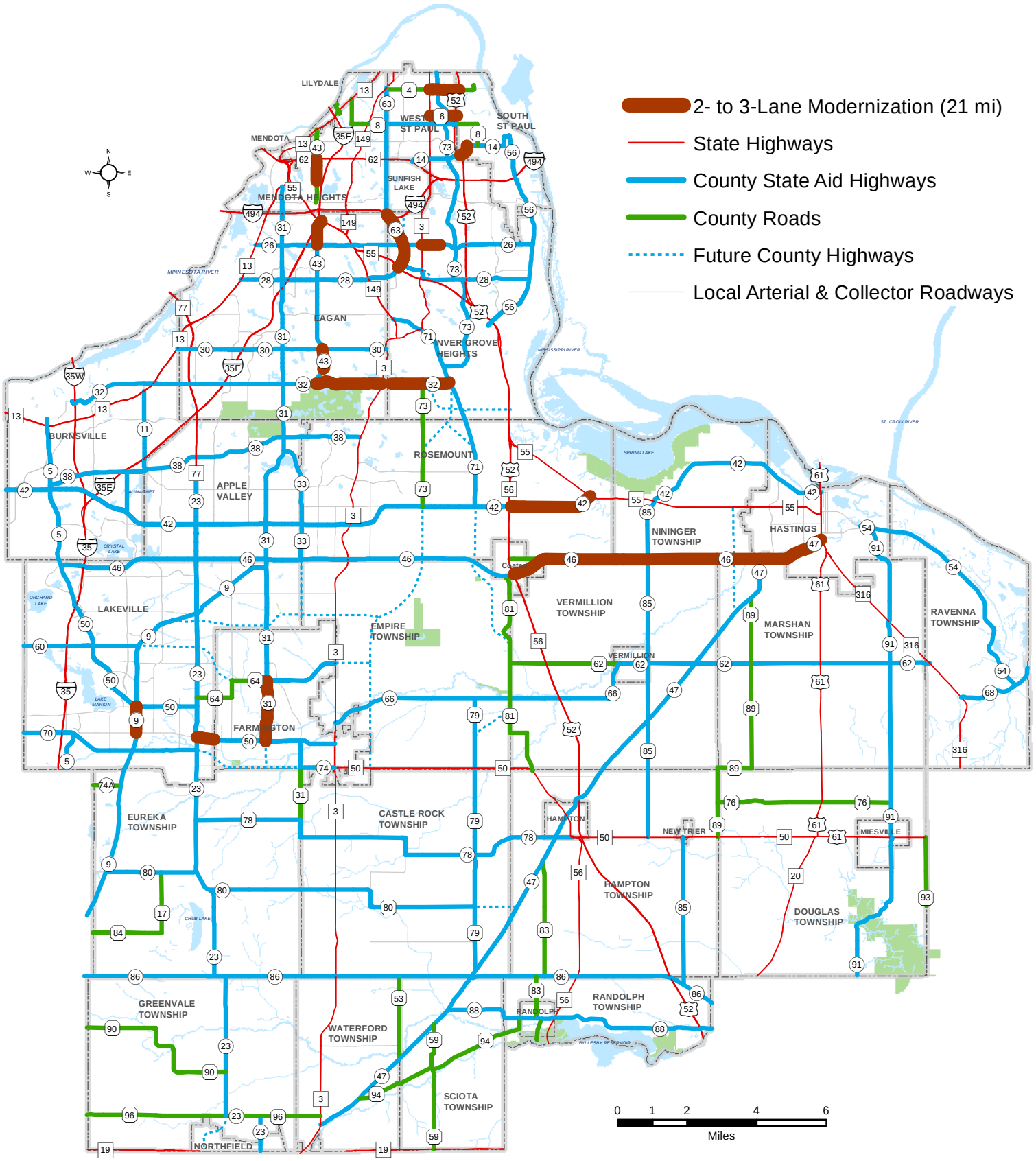
Dakota County 2040 Transportation Plan - Figure 35

Two- to Three-Lane Modernization



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Dakota County 2040 Transportation Plan - Figure 36

Goal 4 Summary

The emphasis of this goal is to address the transportation system elements that have deteriorated over time through replacement and modernization. The goal recognizes that even with proactive preservation of system elements replacement and modernization eventually becomes the most cost-effective approach. Replacement and modernization investments are focused on highway replacement and reconstruction, bridge replacement, gravel paving, traffic signal replacement, through-lane reduction and two-lane to three-lane improvements. These investments are made as these transportation system elements age and deteriorate to the point where preservation techniques are no longer practical or cost effective. The following are the estimated annual CIP replacement and modernization needs and investments over the plan period.

	Annual Replacement & Modernization Investment Needs					
	2021-2025		2026-2030		2031-2040	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR
Highway Replace. & Modern.	$ 13.97	$ 1.99	$ 18.11	$ 1.21	$ 8.51	$ 0.60
Bridge Replacement	$ 0.18	$ -	$ 0.40	$ 0.06	$ 0.40	$ 0.06
Gravel Road Paving	$ -	$ 6.99		$ 0.60	$ -	$ -
Traffic Signal Replacement	$ 1.35	$ -	$ 1.35	$ -	$ 1.83	$ -
Through-Lane Reduction	$ 0.95	$ -	$ 0.41	$ -	$ 0.41	$ -
Two- To Three-Lane Modern.	$ 1.45		$ 1.45		$ 1.45	
ANNUAL AVERAGE	**$ 17.90**	**$ 8.98**	**$ 21.72**	**$ 1.87**	**$ 12.60**	**$ 0.66**

Chapter 8

Goal 5: Transit and Transitways

Continued population growth and diversifying travel needs have led the county, transit service providers and other entities to plan and implement transit services that respond to the needs of residents and businesses in a range of built environments. This chapter provides guidance to Dakota County's roles in developing, coordinating, and supporting transit services within the county and region.

Goal Purpose

This chapter describes existing and emerging transit services, issues and trends within the county, and the role of the county in supporting transit.

There are currently a variety of transit services operating within Dakota County including bus rapid transit (BRT), express, local fixed route, microtransit, and demand-response. Each serves different travel needs of residents and is most effective in certain community contexts. New technologies have introduced private transportation services such as Uber and Lyft as well as scooter and bike share that were not on the horizon during the development of the last Transportation Plan. These technologies present new opportunities to complement public transit services or provide alternatives in areas where fixed route transit is not available. In the midst of the COVID-19 pandemic, there are considerable uncertainties about lasting changes to telework, commuting, and transit ridership. As the county looks ahead to its role in transit over the next 20 years, these underlying factors require an approach that is flexible and responsive to varying community contexts, emerging technologies, and changing travel patterns.

Strategies and policies in the chapter identify various ways Dakota County can support transit within the county and region over the next 20 years. The chapter includes an estimate of needs to guide investments in transit from the county and the Dakota County Regional Railroad Authority (DCRRA) for transit needs previously identified in county plans as well as potential emerging needs to be identified by the county and transit partners.

Background

Dakota County supports transit through activities of the DCRRA, the Dakota County Transportation Department, and the Dakota County Community Services Division. Each plays a different role in support of transit with significant coordination to ensure effectiveness across county programs.

- DCRRA: Transit activities of the DCRRA are limited to railroads, including light rail transit (LRT), and BRT projects that are recognized in the Transportation Policy Plan (TPP) of the Metropolitan Council.

Dakota County transportation staff serves at the direction of the DCRRA in the conduct of planning studies and transitway design work.

- Transportation Department: The Transportation Department includes the construction of transit infrastructure within county highway right-of-way. The Transportation Department also partners with transit service providers for planning and developing non-transitway capital projects and operating services through funding generated by the County's Transportation Sales and Use Tax.

- Community Services Division: The Community Services Division provides information, resources, and services to clients to improve access to transportation services within the county.

Due to the variety of objectives and funding sources involved, the development of transit services and facilities require cooperation with several agencies to plan, authorize and implement improvements. The county and the DCRRA often work with the Metropolitan Council in their capacity as the metropolitan planning organization to ensure agreement with regional plans and funding programs. The county also coordinates closely with the Minnesota Valley Transit Authority (MVTA), the designated transit provider for the communities of Apple Valley, Burnsville, Eagan, Rosemount, and portions of Scott County. Metro Transit provides transit services to other communities served by transit within Dakota County as shown on Figures 38 and 41.

Metro Transit and MVTA have a contributing or lead role in the implementation stage of a project or plan to draw on their expertise and ensure improvements are consistent with their operational needs. State and federal agencies provide a significant share of the funding for local service operations and facilities through a number of programs and budget allocations, which are most commonly administered by the Metropolitan Council. Cities are critical to identifying local transit and transportation needs and, in the planning and implementation of transit facilities and services.

Dakota County, along with other metro counties, has had a historical role in planning and funding transitway services such as BRT, light rail and commuter rail that was advanced through formation of the Counties Transit Improvement Board (CTIB) in 2008. The county managed the development and construction of the Cedar Avenue Transitway and has led or participated in development work for other defined transitways within the county including Robert Street, Orange Line, and Red Rock.

County involvement in the support of transit services and facilities broadened to address a wider range of needs to allow for more complete integration into the transportation system. The county's Transportation Department led two significant transit feasibility studies in coordination with service providers and communities within the county in recent years. The East-West Transit Study, completed in 2017, evaluated transit needs to identify potential improvements to local service near major east-west thoroughfares. Following the conclusion of the East-West Transit Study, Dakota County partnered with MVTA to fund a pilot transit service along one of the recommended study corridors to Dakota County Technical College. The pilot service has since concluded. In 2019, the Eastern Transit Study evaluated transit needs in the northeast quarter of the county, considering both local and express services. These studies have helped answer important questions about potential transit demand in the developed areas of the county. They have also underscored the challenges of serving areas of the county where land use and development patterns are not conducive to fixed route transit.

Table 8 summarizes Dakota County's previous roles in transit with example projects since the last Transportation Plan update.

Table 8. Dakota County's Past Roles in Transit Support and Development

Role	Description	Examples
Capital and Service Planning	Led or played a key role in planning for transit capital facilities and services.	METRO Red Line-Cedar Avenue BRT East-West Transit Study Eastern Transit Study Robert Street Transitway Alternatives Study Orange Line Extension Study
Project Management	Managed the implementation of transit and transitway projects	METRO Red Line-Cedar Avenue BRT Cedar Grove Transit Station
Regional Administration	Participate in external processes and committees that govern or set regional transit policies.	Counties Transit Improvement Board (CTIB) Transportation Advisory Board (TAB)
Funding Partner	Assist with funding transit capital facilities and services	METRO Red Line- Cedar Avenue BRT Cedar Grove Transit Station METRO Orange Line Apple Valley Transit Station expansion Dakota County Technical College Transit Service Pilot
Mobility Management	Coordinate transportation services and provide resources for individuals including older adults, people with disabilities, and individuals with lower incomes (Community Services Division)	GoDakota Lyft Pilot Travel Training DakotaLink
Advocacy	Represent Dakota County's interests in transit related matters.	Great River Rail Commission, County Board Legislative Platform, METRO Red Line- Cedar Avenue BRT
Stakeholder	Serve as participant or advisor to policies, plans, or projects led by other partner agencies to represent Dakota County interests.	Red Rock Corridor METRO Orange Line Great River Rail Commission NetworkNext
Technical Resource	Provide technical guidance, share information, and/or convene partners when approached by partner agencies or stakeholders with transit related issues and potential solutions.	Highway corridor studies
Permitting	Issue permits for transit facilities on county right-of-way	Transit stops and stations
System Improvements	Program and construct system improvements to the county highway system to improve the operation and accessibility of the transit system.	Bus pad construction Bicycle and pedestrian connections to transit stops

Looking ahead to the next 20 years, several key factors emerged that will influence transit needs within the county as well as the county's future role in supporting transit.

- Regional coordination: The CTIB, responsible for funding the development and operations of regional transitways, was disbanded in 2017.

- County revenue: In 2017, Dakota County enacted a quarter-cent Transportation Sales and Use Tax enabled through state statutes that is dedicated towards transportation including capital and operating expenses for transit.

- Demographic changes: Maturing suburban communities have become more diverse in age, race and economic status.

- Land development: Existing and planned land use patterns in most of the county have proven very difficult to serve with standard fixed route transit service.

- Mobility management: A growing set of strategies has been developed to coordinate and provide information and training to help the general public and specific groups connect to public and private transportation options.

- Employment access: There is growing attention to reverse commute needs, connecting residents to jobs within the county, and serving shift work schedules. These needs may become a more significant share of the transit market if the traditional suburban commute to downtown office centers is disrupted with widespread telework.

- Technology: The emergence of transportation network companies and the continued integration of technology into transit operations and marketing has shown an ability to extend the reach of transit. Technology has the potential to change all aspects of the transit landscape including improvements to operations, safety, fare payment, ride scheduling, marketing, and trip information.

- Integration: With two major transit service providers in the county and the emergence of new services such as shared mobility and microtransit, coordination and integration of services and information is important to ensure ease of use by the public.

- Ridership: Usage of most fixed route services in the county, region and nation have experienced gradual declines in the past several years. This is partly attributed to lower fuel prices, increased telework, and the emergence of shared mobility services. COVID-19 has resulted in a significant decline in transit ridership and transit service in the short-term with uncertainty about long-term impacts.

With these factors in mind, it is not anticipated that the county will continue to lead transit and transitway planning or project management as it has done in the past. Other potential roles for the county have emerged during the development of the 2040 Transportation Plan recognizing that the county can best support transit through roles including funding partner, stakeholder, technical resource, and coordinator of mobility management programs. These roles recognize that partner agencies and organizations such as transit service providers are often better positioned to identify opportunities and needs based on performance of existing routes, customer feedback, and requests from businesses and stakeholders. The proposed roles for the county also create flexibility to respond to emerging needs as technologies and travel patterns change during this time of incredible uncertainty.

Transit Services

This section provides an overview of existing and planned transit services within Dakota County, the community contexts where they are most effective, their general objectives, the county's future roles in each, and county-defined strategies and policies. Dakota County's geography and place within the region has led to the use of a range of transit services to meet the needs of residents and workers. Figure 37 shows the Transit Market Areas (TMA) within Dakota County as defined in the Metropolitan Council's Transportation Policy Plan (TPP). TMAs identify different levels of transit demand based on several factors such as demographics, development density, and land use, that lead to a wide range of transit demands and the need for a variety of services to best serve these variable needs. The types of transit services that are successful in one TMA, such as local fixed-route service, may not be supported in another. Available transit services also depend on whether a community is a Transit Capital Levy Community. These communities, shown on Figure 37, levy a property tax to pay for transit capital needs. With several different TMAs within the county, the types and levels of transit services will vary to meet demand.

- TMA 1: This TMA has the highest potential for transit ridership and supports transit at higher frequencies, longer hours and more options outside of peak periods. It is associated with communities within the urban core (currently none within Dakota County) that have higher densities and a walkable street network.

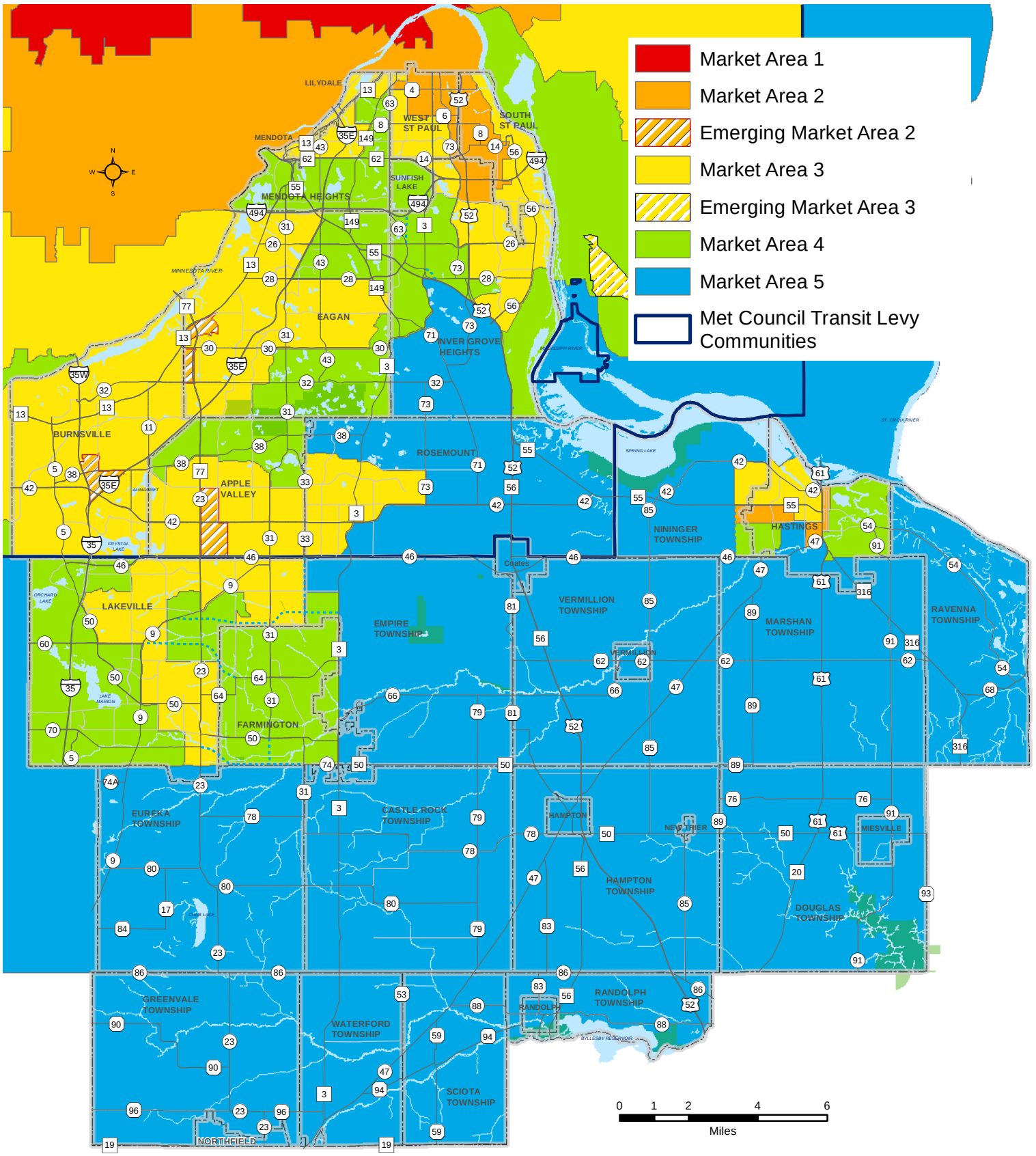
- TMA 2: These areas support fixed-route transit but may have lower frequencies and hours of service when compared to TMA 1. Areas with moderate densities and traditional grid street patterns such as areas of West St. Paul, South St. Paul, Inver Grove Heights, and Hastings are included in TMA 2 within the county.

- TMA 3: This TMA is characterized by moderate density and suburban street networks that are more challenging to serve by transit and covers a significant portion of the developed area within the county. Transit service in this area is primarily commuter express bus service with some fixed-route local service providing basic coverage. General public dial-a-ride services are typically available where fixed-route service is not viable.

- TMA 4: These areas have lower densities of population and employment and a higher rate of auto ownership making fixed-route service a challenge. This market can support peak-period express bus services when a sufficient concentration of commuters is located along a corridor. General public dial-a-ride services are appropriate in Market Area 4.

- TMA 5: These areas have very low population and employment densities and tend to be primarily rural or agricultural. General public dial-a-ride service may be appropriate here, but due to the very low-intensity land uses these areas are not well-suited for fixed-route transit service.

Transit Market Areas



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Dakota County 2040 Transportation Plan - Figure 37

While different services may have distinct purposes and measures for effectiveness, most are also evaluated against standard measures such as subsidy per passenger, boardings, and passengers per in-service hour. Additional performance measures may also be used to evaluate services according to additional goals or objectives such as serving a key community destination, providing geographic coverage, or supporting economic development. Decisions on service implementation vary by service type and which agencies are responsible for operation and oversight. A summary of transit service types and programs with applicable community context (including TMAs), performance measures, and county roles is shown in Table 9.

Table 9. Summary of Transit Services Types and Programs in Dakota County

Service Category	Community Context	Performance Measures	County Roles	Dakota County Examples
Express	Suburban communities (TMAs 3 and 4)	Passengers/hour Subsidy/passenger Subsidy compared to peer services Farebox recovery Ridership Park and Ride capacity Geographic coverage Destinations and populations served	Stakeholder Funding partner Technical resource System improvements	See Figure 38 Express Service
Transitways	Corridors with a concentration of destinations and density. (TMAs 1-3)	Passengers/hour Subsidy/passenger Subsidy compared to peer services Farebox recovery Ridership Geographic coverage Destinations and populations served Economic development	Stakeholder Funding partner System improvements	See Figure 40 Regional Transitways METRO Red Line METRO Orange Line Robert Street
Local Route	Urban and suburban communities (TMAs 1-3)	Passengers/hour Subsidy/passenger Subsidy compared to peer services Farebox recovery Ridership Geographic coverage Destinations and populations served	Stakeholder Funding partner Technical resource Permitting System improvements	See Figure 41 Local Route Service
Demand Response	Varies according to program.	Passengers/hour Subsidy/passenger Farebox recovery Geographic coverage Destinations and populations served	Stakeholder Funding partner	See Figure 42 Transit Link, Metro Mobility, DARTS Individual Rides

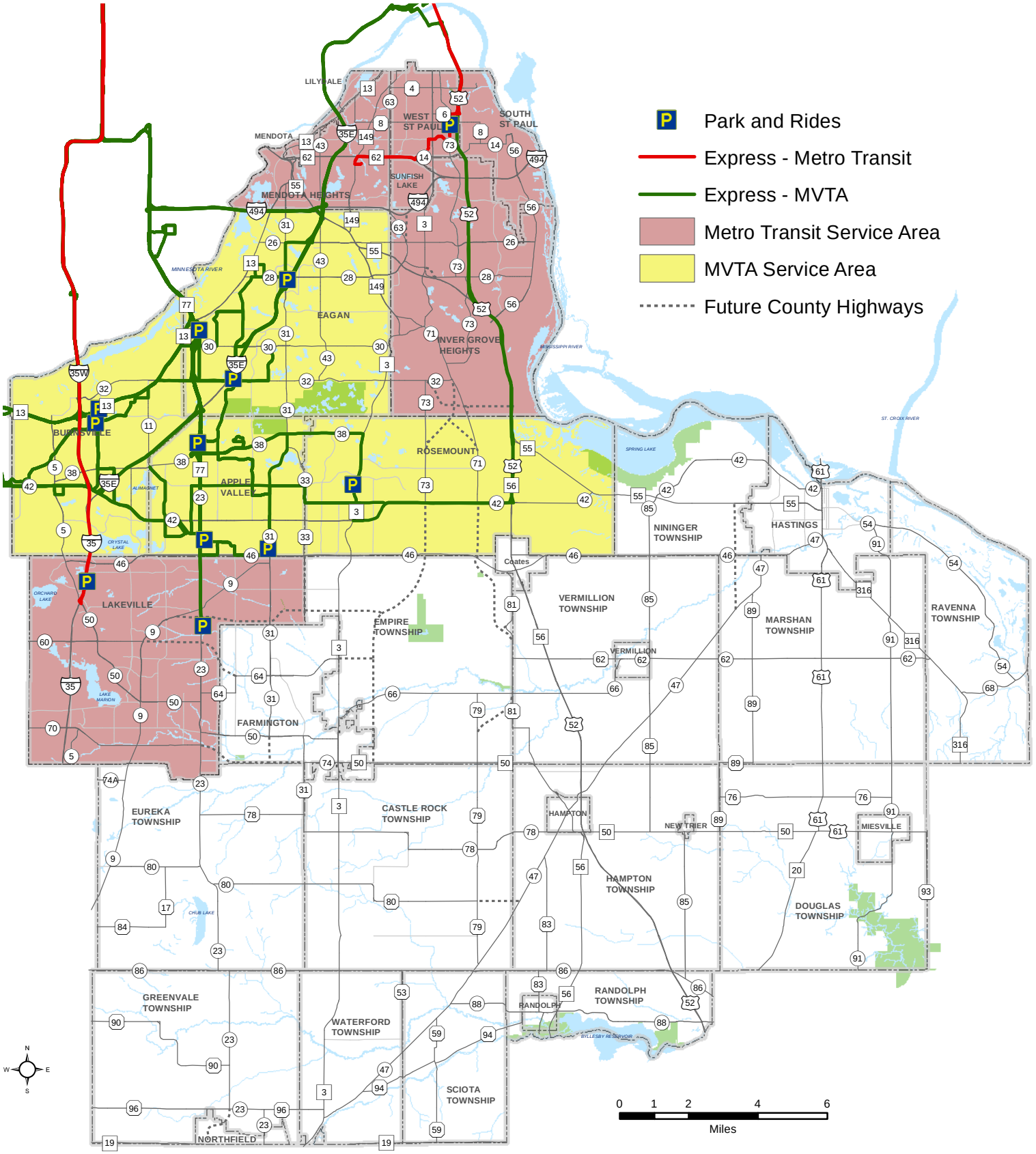
		Average wait times		
Microtransit & Shared Mobility	Microtransit typically serves areas with limited or low performing fixed route service (TMAs 1-5) Densely populated areas for car/bike/scooter share. Transportation Networking Company services (Uber/Lyft) available more widely. Vanpools could also be considered a type of shared mobility.	Varies according to service and provider	Permitting Technical resource Stakeholder Funding partner System improvements Mobility management	MVTA Connect Uber Lyft Metro Vanpool
Human Services Transportation	Tailored to meet the needs of people and programs.	Varies according to program objectives	Mobility management Stakeholder Technical resource Funding partner	Lyft Pilot DakotaLink DARTS Loops

Express Service

Express service provides a travel option for commuters to downtown Minneapolis, downtown St. Paul, and the University of Minnesota campus during peak weekday commuting times. This mode provides an option that is competitive with automobile travel times and costs and has an effect on lowering traffic congestion in major travel corridors in the region. As a result, express routes are among the most used and cost-effective transit services. Access to express service is typically made through park and ride facilities located in the suburban areas of the county, which are critical in creating and maintaining service quality. During the COVID-19 pandemic, Express service had the largest decline in ridership as downtown office workers largely took to teleworking or driving alone.

Areas and Contexts Served: Express services are available in Transit Levy Communities that generate enough travel volumes to the downtowns and other significant employment destinations (TMAs 3-4). These services are provided by Metro Transit and MVTA. Northfield, which is beyond the typical express market (TMA 5) is served by the Metro Express, operated by Northfield Lines. Access to express service is mostly focused on park and ride facilities that can provide frequent and convenient service levels.

Express Service



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Dakota County 2040 Transportation Plan - Figure 38

Areas of Potential Need: Express ridership is currently the transit mode most impacted by the COVID-19 pandemic. As a result, needs identified prior to the pandemic may be slow to materialize. Continued monitoring of express ridership in coordination with transit partners will be important to determine future needs.

- Kenrick Park and Ride expansion: Prior to 2020, this was identified as a potential need to serve commuters on the I-35 Corridor. During the COVID-19 pandemic express service at this facility has been temporarily suspended. Though expansion is no longer a near-term need, there may be a long-term need for additional capacity.
- Reverse Commute Services: Dakota County employers have long noted the need have noted the need for reverse commute services from the city to employers in the county. The Dakota County Regional Chamber of Commerce Transit Study also identified this a priority strategy.

County Roles: Depending on express ridership demands and other applicable performance measures, the county will consider roles including:

- Stakeholder and funding partner in the planning, development, and expansion or modernization of park and ride facilities and enhanced express of service.
- Stakeholder, technical resource, and funding partner in advancing express services in new areas and reverse commute markets.
- System improvements such as the implementation of bus-only shoulder lanes on county and state highways to improve travel speed and reliability for express service.

PERFORMANCE MEASURES: Express performance may be measured by regional standards such as passengers per in-service hour, subsidy per passenger, subsidy compared to peer services, farebox recovery, and ridership as well as additional measures such as Park and Ride capacity, geographic coverage, and destinations and populations served.

Transitways

Transitways are regional corridors designated for frequent, high quality transit service to serve high demand areas and destinations. Transitways are designated by the Metropolitan Council in the Transportation Policy Plan (TPP). Regional transitways designated in the TPP are shown in Figure 39.

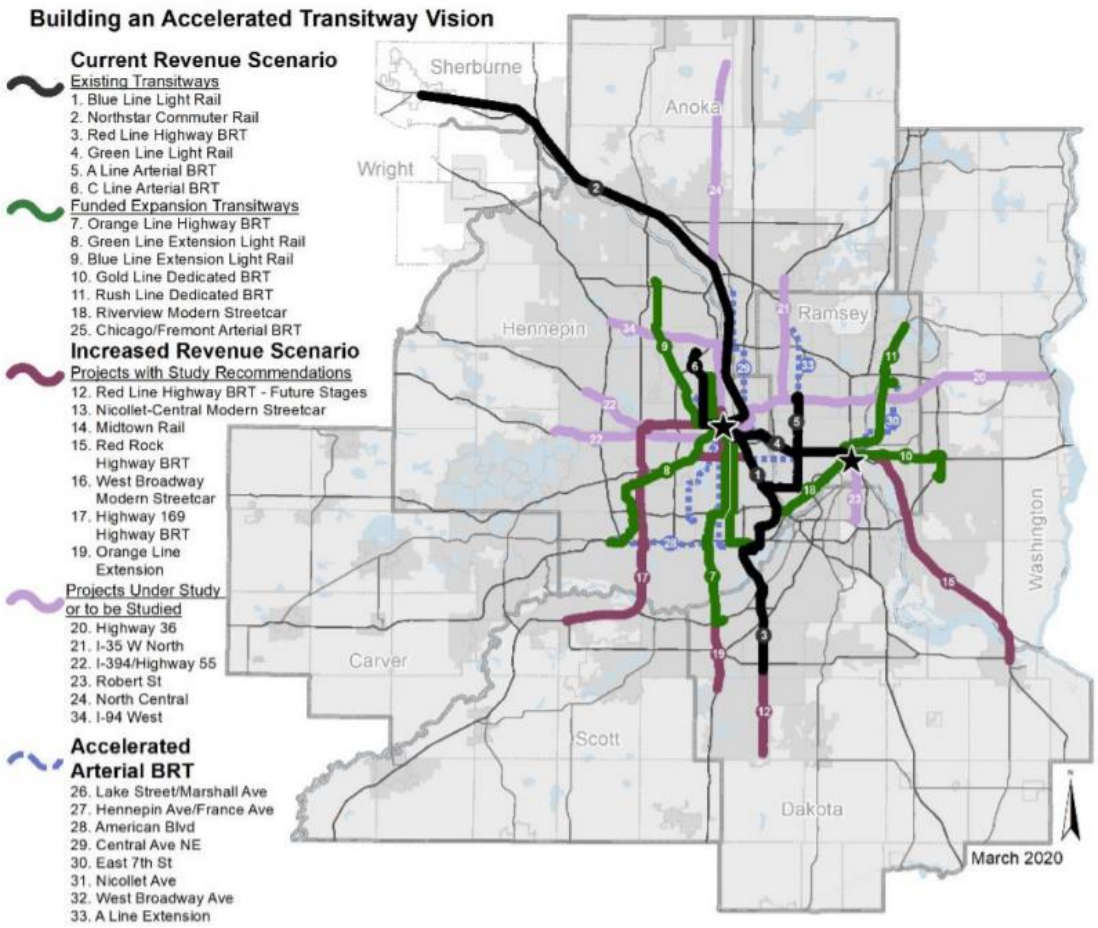


Figure 39. Regional Transitways in Metropolitan Council's 2040 TPP Increased Revenue Scenario

Regional standards for operations, service span, stop spacing, travel speeds, capacity, stations and rider amenities guide the development of transitway projects, which include commuter rail, light rail, highway bus rapid transit and arterial bus rapid transit. There is one transitway in operation within the county today, the METRO Red Line bus rapid transit (BRT). Dakota County is involved with development of four regional transitways that lie partially within its borders. This is shown in Figure 40.

- The METRO Red Line is a BRT service between the Apple Valley Transit Station in Apple Valley and the Mall of America in Bloomington that began service in 2013. Service extensions and additional infill stations have been identified through updates to an implementation plan led by the county.

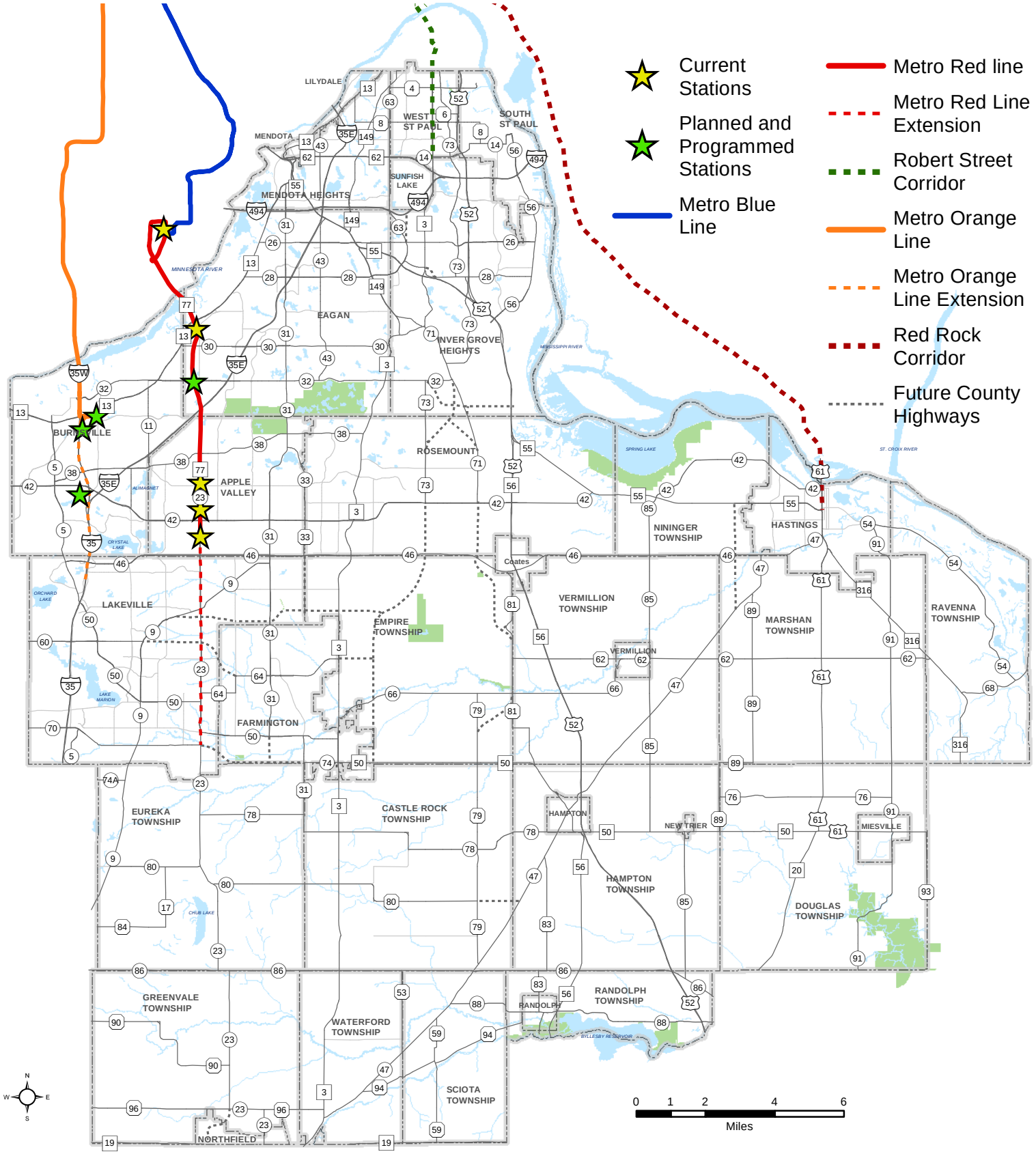
- The METRO Orange Line is a BRT corridor under development by Metro Transit and scheduled to begin service in 2021. Service will operate between downtown Minneapolis and Burnsville Parkway in Burnsville. The DCRRA led a study regarding the potential extension of the Orange Line to Burnsville Center with a recommendation to move forward with the extension once there is sufficient progress toward redevelopment in the area and ridership of Orange Line Phase I is better understood.

- The Robert Street Corridor extends from downtown St. Paul through West St. Paul to Mendota Road. An analysis of service alternatives defined a route but did not determine a preferred mode

between streetcar or arterial BRT, deferring a decision until local land use and development goals are better understood. The county will continue to work with cities, the Metropolitan Council and Ramsey County to identify and implement a preferred alternative. The Metropolitan Council is currently prioritizing Arterial BRT (ABRT) corridors within the region for implementation by the Metropolitan Council through the Network Next planning process. The Robert Street Corridor has been included in a potential line that would extend through St. Paul and suburbs north along Rice Street. The Metropolitan Council has recommended the Rice/Robert corridor as the METRO G Line, planned for implementation between 2025 and 2030.

- The Red Rock Corridor follows TH 61 between downtown St. Paul and Hastings. The Red Rock Implementation Plan, completed in 2016, determined BRT as the preferred mode and determined a timeline for implementation based on observed growth of demand. Per the Plan's recommendations, service to Hastings is not planned for implementation within the next 20 years.

Regional Transitways



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Dakota County 2040 Transportation Plan - Figure 40

Areas and Contexts Served: Transitways provide service frequencies of 15 minutes or better throughout much of the day. As such, transitways are generally planned for areas with high population and activity levels (TMAs 1-3). Accessibility to service is another key to success; service should only be established where pedestrian accessibility and safety are well established.

Areas of Potential Need: Ridership and demand will be monitored to determine future needs and stations for transitways in Dakota County. Transitway needs identified in past plans include:

- Orange Line Extension: The Orange Line Extension to Burnsville Center was studied in 2019 with a recommendation to implement once ridership levels and redevelopment are sufficient to support transitway service.
- Red Line Infill Stations: Cliff Road and Palomino Drive were identified as potential future locations for Red Line stations in the 2015 Implementation Plan Update. Timing will depend on ridership demand as well as the availability of local service connections at these locations.
- Robert Street ABRT: ABRT on Robert street was evaluated through the Robert Street Transitway Alternatives Analysis completed in 2015. Metro Transit has identified an expanded corridor, the Rice/Robert corridor, as the future METRO G Line. The corridor would serve West St. Paul and have a station at the Dakota County Northern Service Center, connecting these areas to St. Paul and beyond. Metro Transit would lead and fund project development and implementation in close coordination with the county. This corridor was also identified as a priority in the Dakota County Regional Chamber of Commerce Transit Study.

County Role: Depending on ridership demands and other applicable performance measures, the county will consider roles including:

- Funding partner for existing operating commitments on existing transitways, and planned transitway facilities;
- Stakeholder for the planning, design, and implementation of future transitway elements such as infill stations, transitway extensions, and support facilities;
- System improvements such as pedestrian and bicycle connections to transitways.

PERFORMANCE MEASURES: Transitway performance may be measured by regional standards such as passengers per in-service hour, subsidy per passenger, subsidy compared to peer services, farebox recovery, and ridership as well as additional measures such as geographic areas served, access to destinations, population near stations, and achievement of local economic development goals.

Local Route Service

Local bus routes provide scheduled transit service on fixed routes to a range of population and activity centers throughout the developed areas of the county. Routing and schedules are developed and modified by the service operators to meet the observed demand and travel patterns within an area. Local routes in a suburban context generally face significant challenges in providing quality service. Large areas of low-density development, physical barriers to accessing service by foot, and unconcentrated transit dependent populations often limit service providers' abilities to meet all needs.

Dakota County is served by two primary operators of local service. Metro Transit operates within Inver Grove Heights, Lakeville, Mendota Heights, South St. Paul and West St. Paul. The MVTA serves the cities of Apple Valley, Burnsville, Eagan and Rosemount. In addition to fixed-route local service, MVTA operates several flex routes that may deviate slightly from a fixed route to pick up or drop off passengers. DARTS, which focuses on serving seniors, also provides local flexible loop routes in several Dakota County communities including Lakeville, South Saint Paul, West Saint Paul and Hastings to link seniors with key destinations.

Areas and Contexts Served: Local route service is appropriate in suburban areas that have a demonstrated need for service as may be indicated by employment concentration and demographic measures (TMAs 1-3). Additional considerations for local services may include presence of major individual demand generators like shopping centers or educational institutions, connectivity to the regional transit system, and span of service throughout the day.

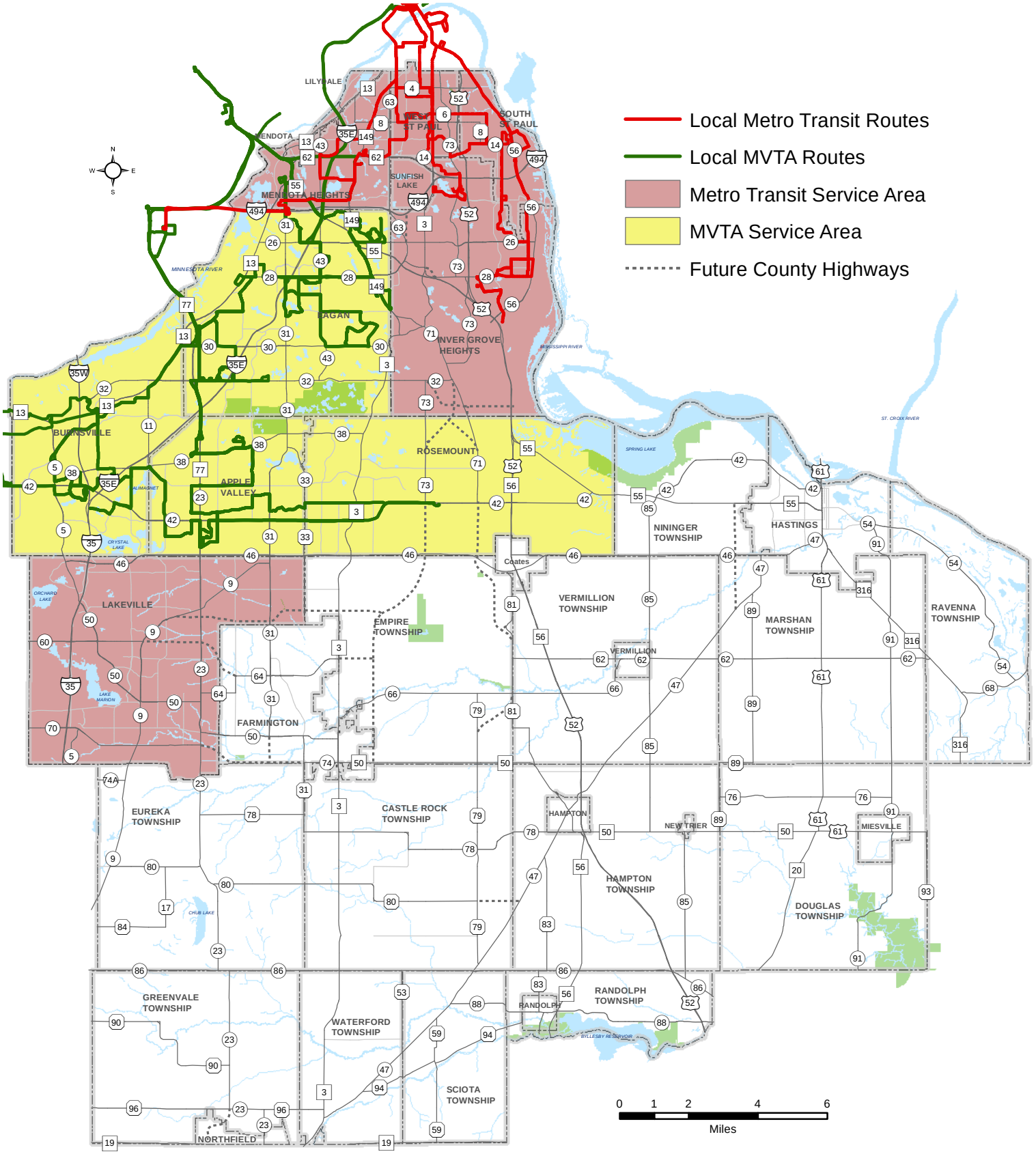
Areas of Potential Need: Dakota County has led two previous transit studies to identify corridors and service concepts with the greatest demand and potential for future improvements Key needs identified in those studies include:

- Improved east-west service**:** The Dakota County East-West Transit Study was developed to address existing and emerging needs for east-west oriented transit in the county since many transitways and transit services in the county are focused on north-south travel to Minneapolis and St. Paul. The study evaluated 15 east-west corridors on several factors to determine those best suited for further consideration of transit improvements. The corridors recommended for further consideration are Wentworth Avenue, Trunk Highway 62, Yankee Doodle Road, Cliff Road, and CSAH 42. The CSAH 42 Corridor has also been identified as a priority for improved transit service by the Dakota County Regional Chamber of Commerce Transit Study as well as the draft Scott County Transit Plan.
- Local transit service in Hastings: The lack of transit service within Hastings and between Hastings and Minneapolis/St. Paul is often identified as a need from residents, businesses, and community service providers. The Dakota County Eastern Transit Study evaluated local transit service within Hastings, which showed potential for success due to a large share of residents that both live and work in the city. A connecting route between Hastings and the metropolitan area faces greater challenges since work travel patterns into and out of Hastings are scattered, and any single service would only meet the needs of very few trips.

County Role: Depending on ridership demands and other applicable performance measures, the county will consider roles including:

- Funding partner and stakeholder to pilot new services or improvements to existing service;
- Technical resource to utilize previous county-led planning studies to guide decisions on the potential and feasibility of additional service;
- System improvements such as bus pull outs, bus station pads, and pedestrian and bicycle connections;
- Permitting for stations within county highway right-of-way.

Local Route Service



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Dakota County 2040 Transportation Plan - Figure 41

PERFORMANCE MEASURES: Measures for local route service include regional standards such as passengers per in-service hour, subsidy per passenger, subsidy compared to peer services, farebox recovery, and ridership as well as additional measures such as geographic coverage and access to population and destinations.

The following ***strategies*** define actions Dakota County should pursue in the development of fixed route transit services including express, transitway, and local route services within the county:

- **Collaborate with transit partners to enhance fixed route transit services**
  Pursue planning, development, and implementation of fixed route transit service enhancements and pilot projects in Dakota County through collaborative partnerships with Metro Transit, Minnesota Valley Transit Authority, cities, regional partners, the public, and other transit providers to address changing needs and emerging opportunities.

- **Collaborate with the public and stakeholders**
  Participate in and create new stakeholder groups to facilitate identification of transit needs and potential enhancements, with an emphasis on the needs of transit dependent populations.

- **Secure funding sources for transit**
  Work with transit providers and other local and regional partners to secure funds for transit projects within the county, and cooperate with regional partners to ensure permanent, dedicated, and reliable funding for transit operations through local, regional, state and national sources.

The following ***policies*** set Dakota County's role in the provision of transit service within the county:

T.1 Funding Partnerships
Provide funding for transitway operations in accordance with established regional and interagency agreements and consider providing funding contributions for other services on an individual basis in cooperation with service providers and local municipalities and according to applicable County Cost Participation Policies.

T.2 Improve Operating Conditions
Dakota County will identify and pursue feasible improvements to county highways through the Capital Improvement Program that can improve transit service quality, operating efficiency, and accessibility to provide an integrated multi-modal system that will maximize the movement of people within Dakota County and the region.

Demand Response Services

Two demand responsive paratransit services are operated at a regional scale by the Metropolitan Council for residents unable access other transit services. A separate dial-a-ride service is also available within the City of Northfield. DARTS also offers a dial-a-ride service for seniors. Trips on these services are generally arranged with the provider on an individual basis and typically provide direct trips from origin to destination.

Areas and Contexts Served:

- Metro Mobility: Paratransit service mandated by the Americans with Disabilities Act in areas within the Transit Taxing District where local fixed-route service is provided. As capacity allows, this service also provides trips on a stand-by basis in areas in the remainder of the Transit Taxing District. Metro

Mobility is available seven days a week for all travel purposes to residents with a certified disability that prevents them from accessing other transit services.

- Transit Link: Dial-a-ride service available on weekdays to areas within the seven-county metro area where local fixed route services are unavailable. This service may provide direct point-to-point service or connect to local bus service if one end of the trip is served by a route.
- Northfield Dial-a-Ride: Dial-a-ride service administered by Three Rivers Community Action, Inc. provides point-to-point transportation within the city limits of Northfield on weekdays and Saturdays.
- DARTS Individual Rides: Dial-a-ride service administered by DARTS to provide seniors with transportation to local destination or appointments.

County Role: Dakota County has not historically had a direct role in the development or operation of these services. The county will serve as a stakeholder as needed to represent county interests since many county residents and Community Services clients rely on these services. In the future, the county may consider a role as a funding partner for demand response providers to support the expansion of demand response service.

PERFORMANCE MEASURES: These services are typically evaluated by the operators on trips performed per service hour, subsidy/passenger, farebox recovery, wait time for trips, and customer feedback.

The following ***strategy*** define actions Dakota County should pursue in the enhancement of demand response services in the county:

- **Coordinate with providers on needs and potential service improvements**
  Work with demand-response providers and the public to identify areas for potential service improvements and consider partnering with providers on pilot projects or service enhancements as opportunities and needs arise.

Microtransit and Shared Mobility Services

Although agencies throughout the region aim to provide transit services that address as many travel purposes as possible, there is recognition that many needs and areas remain underserved. New public and private transportation service models implemented in recent years have demonstrated potential to be used in tandem with fixed route transit to complete a trip, or to serve areas where operation of fixed route services is marginal or impractical. These services are typically accessed via mobile technology for information, registration, booking and payment. Vanpools are another form of shared mobility where people with long commutes share a ride to and from work through a subsidized Metropolitan Council program.

- Microtransit: A demand responsive service operated by a private or public entity, typically within a bounded area. Service may be dynamically routed according to trip requests as they are made or have semi-fixed routing or fixed timepoints according to anticipated or observed demand over a period of time. Within the region, service providers are currently operating microtransit service at a limited scale; MVTA operates MVTA Connect, providing on-demand service within Burnsville, Apple Valley, and Rosemount.

- Shared Mobility: Typically operated by the customer, shared mobility services provide access to a range of vehicles, including cars, bicycles and scooters. The availability of these services has grown and evolved within the more densely developed areas of the Twin Cities, but to date they have had

a limited presence within Dakota County. These services can play a supporting role to transit by providing a first or last mile connection to transit stops or stations. A strategy under consideration locally and in other metropolitan areas is the creation of mobility hubs, spaces where mobility services, public transportation and private transportation providers like Uber, Lyft and Lime have a presence and provide an accessible portal to range of services and an opportunity to use them in tandem as needed.

- Metro Vanpool: Vanpools have five to 15 people sharing the ride to and from work an average of three or more days a week. Each van has a volunteer driver and back-up driver(s). The program is subsidized by the Metropolitan Council to help meet the needs of commuters who reside or work in the seven-county metropolitan area. Vanpools typically serve origins and destinations not served by fixed-route bus service.

Areas and Contexts Served: Both microtransit and shared mobility services could operate in the same general areas as fixed route transit in a supplemental role to extend access to transit. In some cases, microtransit may replace fixed route service where its performance is marginal. Additionally, Dakota County and other human service providers have begun to use private transportation services to provide trips for clients in programs where reliable transportation is a vital to their success. Dakota County is active in considering more ways to use mobility services to improve the effectiveness of the programs in its Community Services Division; more detail on these efforts is provided later in this chapter. Vanpools typically operate in areas not served by fixed route transit.

Areas of Potential Need: There is strong interest among residents and employers in these emerging technologies that may provide greater potential for serving low density areas where trip patterns are more difficult to serve with fixed route transit.

- Shared mobility to serve employers: The Dakota County Regional Chamber of Commerce Transit study identifies greater availability of vanpool services to employers as a key strategy. The study also identifies shared mobility, such as microtransit, as a strategy to link suburban employment centers to transit stations.

County Role: Depending on ridership demands, identified needs, and other applicable performance measures, the county will consider roles including:

- Serve as a stakeholder and provide technical assistance in exploring or developing service;
- Funding partner for newly established services;
- Permitting and supporting system improvements for shared mobility infrastructure within county right-of-way;
- Mobility management to continue utilizing shared mobility services in innovative ways to meet the needs of county residents.

PERFORMANCE MEASURES: Measures will vary according to service and provider, measures could include geographic coverage, customer feedback, or wait times for trips.

The following ***strategies*** will guide Dakota County's actions in considering and integrating microtransit and shared mobility services with existing services and facilities:

- **Technical Resource**
  Partner with local agencies to evaluate demand for, and potential roles, for microtransit and shared mobility and their integration with existing transit services and facilities.

- **Pilot Projects**
  Aid in the development and operation of microtransit and shared mobility service where they may complement or substitute for existing transit services.

Human Service Transportation and Mobility Management

The use of transportation services for a growing number of Dakota County residents has become a necessity as the number of transit dependent residents and workers grows, and prevalent land-use patterns negatively affect access to employment, housing, government services, and medical facilities. As a result, providers of essential services geared towards older adults, individuals with disabilities, individuals with low incomes and other transit dependent populations struggle to connect their clients to services and housing that they are able to access. Local agencies and transit service operators face a major challenge in finding feasible solutions to the population's changing needs in an efficient manner.

Current County Commitment to Human Service Transportation

Dakota County provides transportation to the clients of its Community Services Division through a number of means, including bus passes, volunteer driver programs, non-emergency medical transportation services, waiver transportation, and taxi services. Total transportation costs for the Division in 2019 totaled $1.67 million; included in this amount are staff reimbursements, contracted door-to-door transportation services, and bus pass purchases.

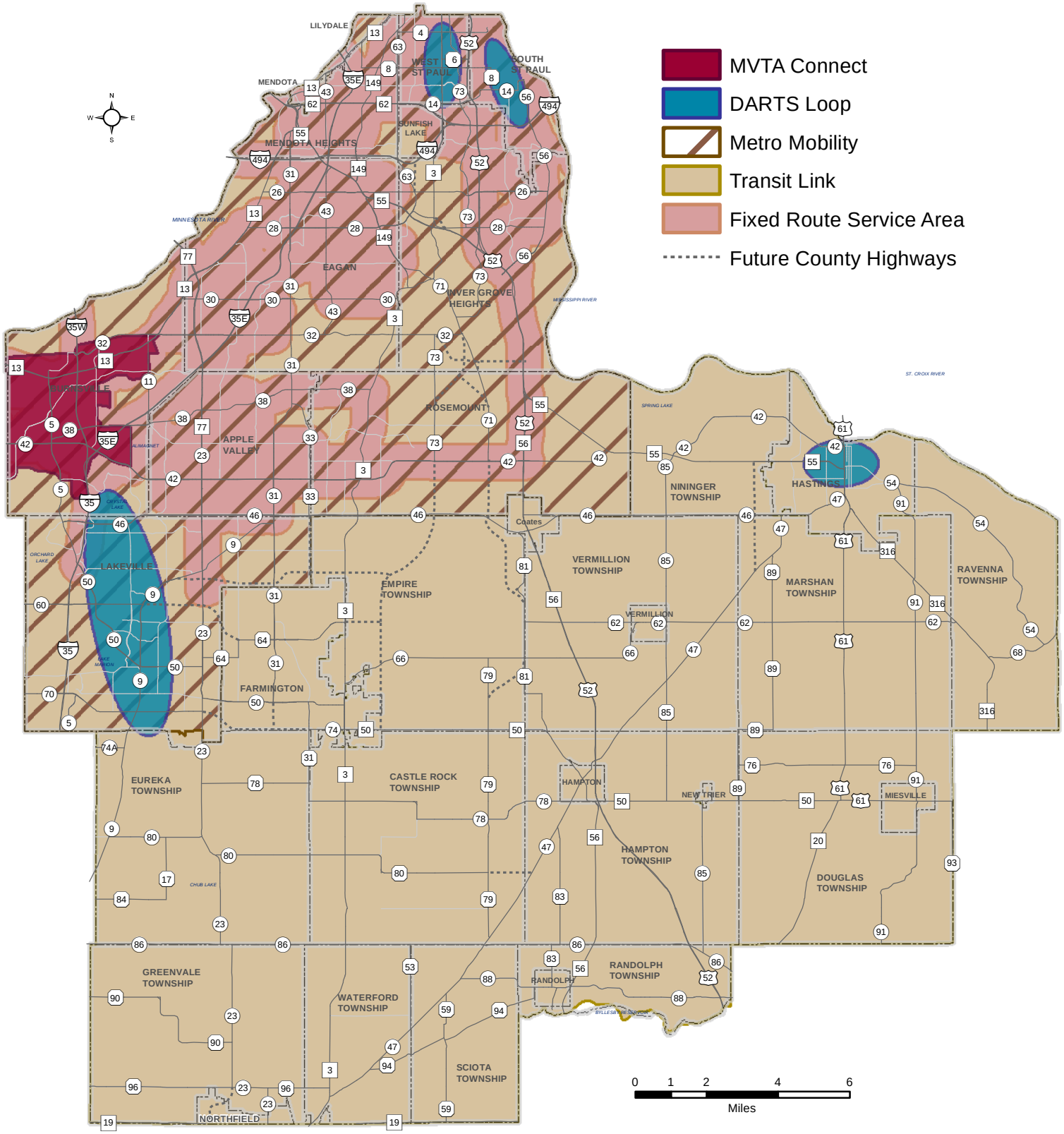
Mobility Management

In addition to established fixed route transit services, a growing share of county residents, workers and human service clients require transportation better tailored to their needs and abilities. Dakota County and other public and private agencies have recognized this and the need for a coordinated approach to maximize resources to deliver and improve transportation options. The adoption of mobility management principles and market-specific service planning are important to achieving a system that maximizes resources for the delivery of specialized transportation services.

Mobility management is an approach to service development and delivery that focuses on individualized customer markets and involves establishing services tailored to the needs of those markets. It also entails a responsibility for establishing a coordinated service delivery network among service providers to achieve connectivity for customers and efficiency for taxpayers through maximizing existing resources and programs. In 2014, Dakota County developed a strategic action plan to provide a more organized approach towards identifying, funding and delivering transportation services to meet diversifying needs. This work identified a number of recommendations for the county and its partners:

- Formation and funding of a coordinating collaborative
- Shared data collection and reporting among transportation providers
- Greater integration of transportation needs into local land use decisions
- Establishment of a travel training program
- Creation of a communications and marketing program to improve public awareness

Demand Response and Specialized Transit Services



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 42

The county and partner agencies in the county and region formed GoDakota, a coordinated and public-facing program to pursue these recommended actions and identify other opportunities to more effectively deliver transportation services. To date, GoDakota has launched travel training services, an interactive mapping tool and resource guide to identify transportation options by location, a partnership with Lyft to provide rides for eligible Community Services clients, and a program offering free transportation to and from Hastings for jail releasees. Through GoDakota, Dakota County is continuing to respond to the changing needs of its residents with special transportation needs and carry out its strategic action plan in partnership with human service agencies in the area.

Areas and Contexts Served: Current and future services are expected to cover the county, and potentially areas beyond, as needed depending on the specific goals of a program.

Areas of Potential Need:

- Wheelchair Accessible Vehicles available for on-demand rides: Currently, options for individuals who need wheelchair accessible vehicles are limited. As the use of on-demand services grow, having wheelchair accessible vehicles is critical to meeting the transportation needs of residents.
- Mobility As A Service (MAAS): Offering a one click/one call service for residents to determine, schedule and pay for their transportation solutions will increase convenience and accessibility for users.

County Role:

- Mobility management by continuing to lead and collaborate with both regional partners and with individual human service agencies within the region;
- Technical resource to provide county residents with complete information about all transportation options available as well as education and training on how to access them;
- Serve as a stakeholder and provide technical assistance in the identification and development of services and programs to meet the needs of residents;
- Funding partner for pilot programs and services.

PERFORMANCE MEASURES: County-developed service and partnerships may be measured by trips provided, customer feedback, and observed effect on human service programs associated with the transportation service.

The following ***strategies*** define actions for Dakota County to pursue in support of mobility management programs:

- **Assessment of Transportation Needs**
  Continue the county's role in identifying new and ongoing challenges towards providing transit and transportation services for a growing population and range of travel needs.

- **Implementation of Mobility Management Programs**
  Assume a lead role in coordinating with public and private agencies to develop and provide information and services responsive to specialized transportation needs.

- **Participate in Transportation Management Organizations or Related Committees**
  Participate in transit management organizations or related committees to assist in identification and development of transit services to meet county transit needs.

The following ***policy*** supports the development of a comprehensive transit service network through the use of mobility management principles:

T.3 **Develop Cost Effective and Efficient Transit Solutions through Mobility Management**
Dakota County will assume a lead role, currently through GoDakota, with transit providers and human service agencies and other community stakeholders to identify opportunities for broad collaboration, coordination and integration between all transportation modes that is consistent with mobility management concepts.

Transit Facilities

In addition to the previously described transit services, Dakota County collaborates with transit providers, cities, and other partners to develop facilities and infrastructure that aid transit and transit operations. Transit centers, park and rides, and roadway improvements have a significant role in delivering quality transit services and provide a tangible presence for transit in the county. Each type of facility plays a role in improving the reach and convenience of transit and are key to their usability.

- Transit Centers: serve as a focal point for both local and express services, providing a comfortable place to access service or transfer between buses. These facilities provide climate-controlled waiting areas, parking, restrooms and service information. There are currently four transit centers in the county, Apple Valley Transit Station, Burnsville Transit Station, Cedar Grove Transit Station and Eagan Transit Station.

  Transit centers may have the ability to serve as mobility hubs to accommodate the growing range of mobility services established in recent years. Co-location of ride-hailing and sharing services for cars, bicycles and scooters can serve as a complement to fixed route service and provide non-auto travel options where none exist. Fixed-route service providers in the county are considering potential arrangements for integrating these services into existing transit facilities where they are a feasible option. The Metropolitan Council will also be producing a mobility hub planning guide in the coming years which may help guide local efforts in implementing these facilities.

- Park and Rides: are typically served only by express routes and serve to concentrate demand for express service to a single location via auto access. Including transit centers, there are 12 park and ride facilities in Dakota County supplying 5,904 parking spaces.

- Passenger Amenities: stop-level facilities including shelters, pedestrian connections, trash receptacles and service information are important for providing safe and comfortable waiting places for transit riders. Dakota County cooperates with the service providers to identify these facilities along county highways.

- Operating Facilities: Improvements to county and state highways may include shoulders or dedicated operating lanes for buses that improve travel speeds and maintain service reliability. Additional improvements including bypass ramps, bus stop pull-out lanes and use of high-occupancy vehicle lanes have been implemented within the county on the state trunk highway system.

The following ***strategies*** define actions for Dakota County to pursue in the development of transit facilities within the county:

- **Modal Integration**
  Consider transit needs for accessibility, right-of-way and operations during the planning and design of county highway and trail projects; involve internal departments and external agencies to assure a comprehensive approach.

- **Multimodal Facilities and Hubs**
  Participate in the funding and enhancement of multimodal facilities in partnership with transit providers according to the County's Cost Participation Policy, including transit centers, park-and-rides, and mobility hubs. Facilitate cooperation among transit agencies, transportation service providers, and municipalities to consider infrastructure improvements such as vehicle charging stations, ride share drop-off points, bicycle parking, and pedestrian and bicycle connections to improve access and integration of multiple modes and services.

- **Technology**
  Leverage existing county fiber network capacity to facilitate service agencies' systems for operations and customer information.

The following **policies** define Dakota County's role in developing facilities for the use and operation of transit service:

T.4 Consider Transit Facility Needs in All Transportation Projects
Provide infrastructure for transit operations and transit service access within county highway right-of-way where practical including signage, pedestrian facilities, bus pull-outs, and bus stop amenities.

Goal 5 Summary

This goal identifies the need for a range of transit services within Dakota County to serve the variety of development patterns and needs of residents and businesses. The chapter defines policies and practices to guide the county in developing services and facilities in partnership and close coordination with other agencies in the region. Continuing changes in demographics, economic activity, and regional projects have led to evolving roles for the county in the planning and delivery of services and capital improvements. New technologies and service models for both general and specific needs may provide opportunities to extend the reach of transit to more people and locations within the county.

The current DCRRA CIP identifies $3.0 million between 2021 and 2025 for transitway improvements and operations; the Sales and Use Tax CIP program $1.7 million in the same period for improvements to rider facilities, roadway improvements for transit operations, and operations for specific service improvements. The timing and implementation of many planned projects, such as the METRO Orange Line Extension, and METRO Red Line infill stations will depend on factors such as demand, feasibility, and external funding sources and partnerships. Specific investments include:

METRO Orange Line operations. Through an agreement with Hennepin County and the Metropolitan Council, Dakota County will fund 7% of total operations when service begins in late 2021. Annual costs will average approximately $400,000.

METRO Orange Line Extension. The DCRRA completed a study for an extension of the Orange line in 2020, with a recommendation to add an additional station near the Burnsville Center Mall within the next decade once progress is made toward local redevelopment plans. Estimated cost for the station,

vehicles and related improvements are $7,000,000. The local share of operating costs for the extension may be assumed by Dakota County and the determination of long-term needs is based on the current approach of the county providing 50 percent of operating costs.

Future transitways. The 2015 Red Line Implementation Plan Update identified additional stations on the METRO Red Line near Cliff Road and Palomino Station as well as a need for improved pedestrian connections to existing stations. Dakota County will work with Metro Transit and cities to consider these stations based on potential ridership and other performance measures. Approximately $7,100,000 is estimated for infill stations and pedestrian improvements.

Non-transitway service enhancements. The Transportation Plan identifies annual funding towards transit operations outside of transitway service to be funded by the Transportation Sales and Use Tax. This funding may be broadly applied towards local service operations including technology upgrades identified by service providers, recommendations from recent county-led studies, microtransit and shared mobility pilots, or service programs developed through GoDakota that are intended to address needs of specific populations or human service programs in the area. The county will work with transit providers and other partners on an annual basis to identify potential projects that further the county's transit goals and show potential for meeting performance measures. The County's Cost Participation Policy will apply when determining the amount of county funding available for projects.

Annual Transit & Transitways Investment Needs						
	2021-2025		2026-2030		2031-2040	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR
Enhancement-Transitways						
Orange Line BRT Operations*		$ 0.34		$ 0.49		$ 0.62
Orange Line Extension		$ -		$ 0.28		
Orange Line BRT Extension Oper.*		$ -		$ 0.86		$ 1.09
Future Transitways**		$ 0.02		$ 0.10		$ 0.65
Enhancement-NonTransitway						
Capital and Operating Enhancements/Pilot Projects		$ 0.42		$ 0.50		$ 0.58
ANNUAL AVERAGE	**$ -**	**$ 0.78**	**$ -**	**$ 2.23**	**$ -**	**$ 2.94**

*Funding needs are based on current statutes and agreements. The county is pursuing legislation to remove the county's funding obligation for METRO Orange Line and Orange Line Extension operations.
**Additional Red Line facilities identified in the 2015 Implementation Plan Update.

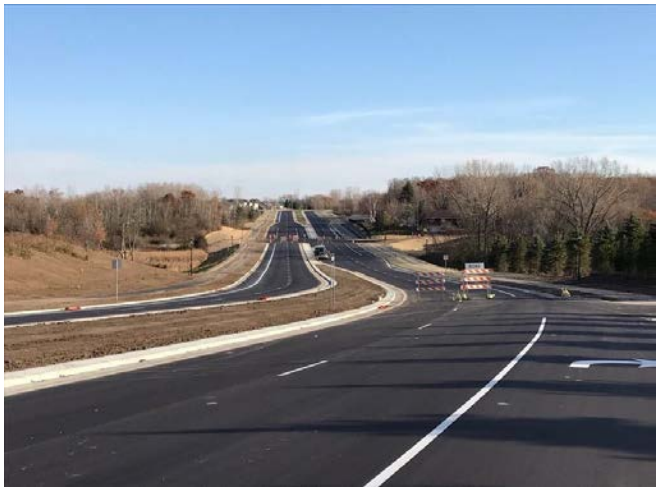
Chapter 9

Goal 6: Expansion of Transportation Corridors

The county will consider expansion of the existing highway system within available financial resources after investing in preservation, management, and replacement and modernization needs to address emerging capacity needs to provide for safe and efficient travel with minimal congestion.

Goal Purpose

This goal considers long term growth and associated traffic volume projections through the year 2040 to identify expansion needs on the county highway system. Investments within this Goal include increased capacity for county highway corridors including lane additions, new county highway alignments, future studies and interchanges and overpasses. The goal identifies estimated expansion needs to accommodate future traffic, defines measures and planned costs of investments, and measures for improvement and expansion of the system.



The need for expansion and major corridor improvements on the state trunk highway system is also discussed within this Goal. The ability to address these trunk highway needs not only improves the specific segments of the trunk highway system, but often has the potential for reduced traffic on the county highway system as well.

Between 2000 and 2018, Dakota County's population grew 18.9 percent, from 357,929 in 2000 to 425,423 in 2018. The county's population grew by 40,623, or 11 percent in the first decade of the 2000's to 398,552 in 2010 and slowed slightly to grow by 26,871, or 6.7 percent, between 2010 and 2018. Although, the growth rate is moderating, the county's population is estimated to increase to 514,050, or 21 percent, by 2040.

Vehicle miles traveled on all highways within the county prior to 2000 was growing at over five percent annually. However, in the years between 2000 and 2018 the vehicle miles traveled on all roads within the county leveled off to an average increase of 1.4 percent annually. This trend is similar to that on county highways which saw vehicle miles traveled increase from 858 million in 2000 to 1,098 million in 2018, or a growth rate of approximately or only about 1.6% per year. Current estimates derived from the County's Transportation Demand Model based on planned city and township land uses and density indicate that between 2020 and 2040 vehicle miles traveled is estimated to grow more slowly, by about 20 percent or 1 percent annually.

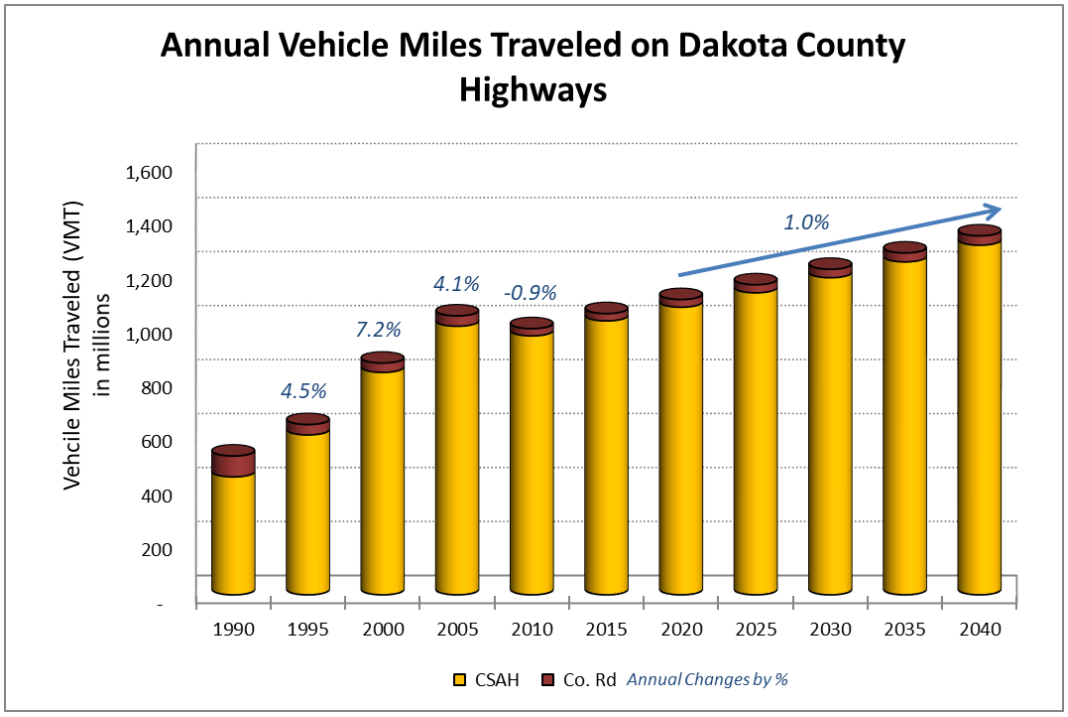


Table 10.

In some cases, management efforts to maximize the operation and efficiency of the existing system are not sufficient to meet traffic demand. In these situations, additional capacity is necessary to meet anticipated transportation needs within the planning period. However, it is anticipated that the traffic growth rates through the 2040 Plan period will continue at this slower, and potentially even a further reduced, rate of growth due to several factors including:

- Reduced rate of population growth within the county
- Reduced planned growth and density per city and township comprehensive plans
- Increased use of teleworking, virtual meetings, and e-commerce
- Opportunities that may arise through connected and autonomous vehicles and other transportation technologies
- Increasing interest and use of bicycle and pedestrian modes
- And, most recently, on travel patterns and virtual activities associated with the COVID19 pandemic

Further, there are safety, cost, and maintenance issues with roadways that are designed with too much capacity and wider roads are more challenging for pedestrians and bicyclists to safely cross. This potential for reduced traffic growth coupled with operational and safety factors has resulted in a more conservative approach to identification of potential highway expansion needs through the Plan period. Only those county highways that are anticipated to be at 110% or more of existing roadway capacity by 2040 are identified for expansion needs in this Plan. Those segments between 90 and 110% are identified as near capacity, and will be monitored, but not planned for expansion through 2040.

Due to the reduced rate of traffic growth, limited highway expansion needs are expected for highways under the jurisdiction of Dakota County, with somewhat greater needs on MnDOT trunk highways due to a backlog of mobility needs within the planning horizon.

This section addresses expansion of highway corridors through the following types of investment:

- Lane additions
- New highway alignments
- Grade separated interchanges
- Future studies
- Potential trunk highway investment on priority corridors

Proposed measures, strategies, and policies to address the anticipated expansion needs are presented under these corresponding subsections. Estimated needs include cost of corridor studies, preliminary engineering and environmental study, design/construction engineering, right-of-way acquisition and construction costs.

Improvement and expansion of the transportation system will be pursued through the following activities and CIP investment categories.

Activities

- Fully utilize Management goal strategies and investments prior to considering expansion.
- Work with cities and other agencies to minimize or mitigate expansion needs.
- Coordinate improvements with development to accommodate traffic growth.
- Conduct transportation studies to plan for long term system and sub-area needs.
- Utilize 2 and 3 lane-divided highway sections that are easily expandable for long term growth
- Partner with MnDOT to identify trunk highway expansion project, scope and costs.

CIP Investment Categories

- County Highway Lane Additions/Expansion
- Future County Highway Alignments
- Interchanges and Overpasses
- Trunk Highway Projects
- Engineering Studies

County Highway Lane Additions/Expansion

A capacity deficiency exists when actual traffic exceeds the vehicular capacity of the highway. The acceptable capacity of the highway depends on many factors including location, route options, roadway geometrics, locations of major intersections, access management, peak hour traffic volumes and traffic controls.

A highway's level of service is used to assign a value to the level of congestion and efficiency of the highway. Each highway segment has a finite capacity that is the maximum number of vehicles that can be accommodated, including all its lanes. The level of service is determined by the ratio of the highway traffic volume to the established segment capacity. In general, the higher the volume, the lower the level of service of the highway. There are six levels of service depending on the extent of congestion and service on the roadway. The anticipated traffic volume to highway capacity ratio is based on the County

Travel Demand Model that determines 2040 traffic volume projections resulting from anticipated land use and development based on adopted city and township comprehensive plans.

Due to reduced rates of traffic growth, potential for increases in capacity through Management goal activities and new technology, and previously described uncertainties with long range traffic volumes, the county will be monitoring those county highways with a 0.90 to 1.10 volume to capacity ratio as Near Capacity. These corridors are not identified as needing expansion through 2040. This plan identifies the likely need for county highway expansion on those corridors where the volume to capacity ratio is expected to exceed 1.10. This is considered a sufficiently high level of traffic to likely require the need for additional lanes even with the anticipated further decline in future traffic growth. County highway capacity criteria is shown in Table 11.

County Highway Capacity Criteria

Roadway Design	1/2 ROW Needs	ADT (Average Daily Traffic) Capacity	90% of Capacity	110% of Capacity
2-Lane Urban	50'	0 to 10,000	9,000	11,000
2-Lane Rural	55'	0 to 10,000	9,000	11,000
3-Lane	60'	10,000 to 18,000	16,200	19,800
4-Lane Divided	75'	18,000 to 35,000	31,500	38,500
6-Lane +	100'	35,000 and over	31,500	38,500

Table 11.

Highway capacity deficiencies in 2019 are shown in Figure 43. Deficiencies for 2040 are shown in Figure 44. Highways shown as under capacity indicate that the 2040 projected traffic volume is less than 90 percent of the maximum highway capacity design (Levels of Service A through D). Highways shown as Near Capacity indicate that the projected traffic volume is projected at between 90 and 110 percent of the maximum highway capacity design (Levels of Service E and potentially F). Highways shown as Over Capacity indicate that the projected traffic volume is greater than 110% the maximum highway capacity design (over Level of Service F).

Not all county highway segments identified as Over Capacity are expected to require additional through lanes. Those existing two-lane segments that have projected 2040 traffic volumes between 10,000 and 15,000 ADT are identified as potential three-lane sections. These segments are identified on Figure 36 and accounted for in replacement and modernization needs.

Expansion improvements, including addition of through-lanes, will be evaluated and monitored as a highway approaches the Near Capacity threshold of 90 percent of traffic volume capacity. Expansion needs cannot be related directly to site-specific development in place of overall transportation system needs. In some instances, the rate of development may result in certain segments being over capacity well before funds are available for expansion of highways.

The goals of preservation, management and replacement are considered a higher priority to ensure existing infrastructure is maintained and managed to maximize safety, function, capacity, and life of the facility before expansion is considered. As the overall needs of the transportation system exceed the

funds available to address these needs, expansion projects may need to be delayed ensuring higher-priority projects on the system are funded.

County Highways That Exceed 6-Lane Capacity

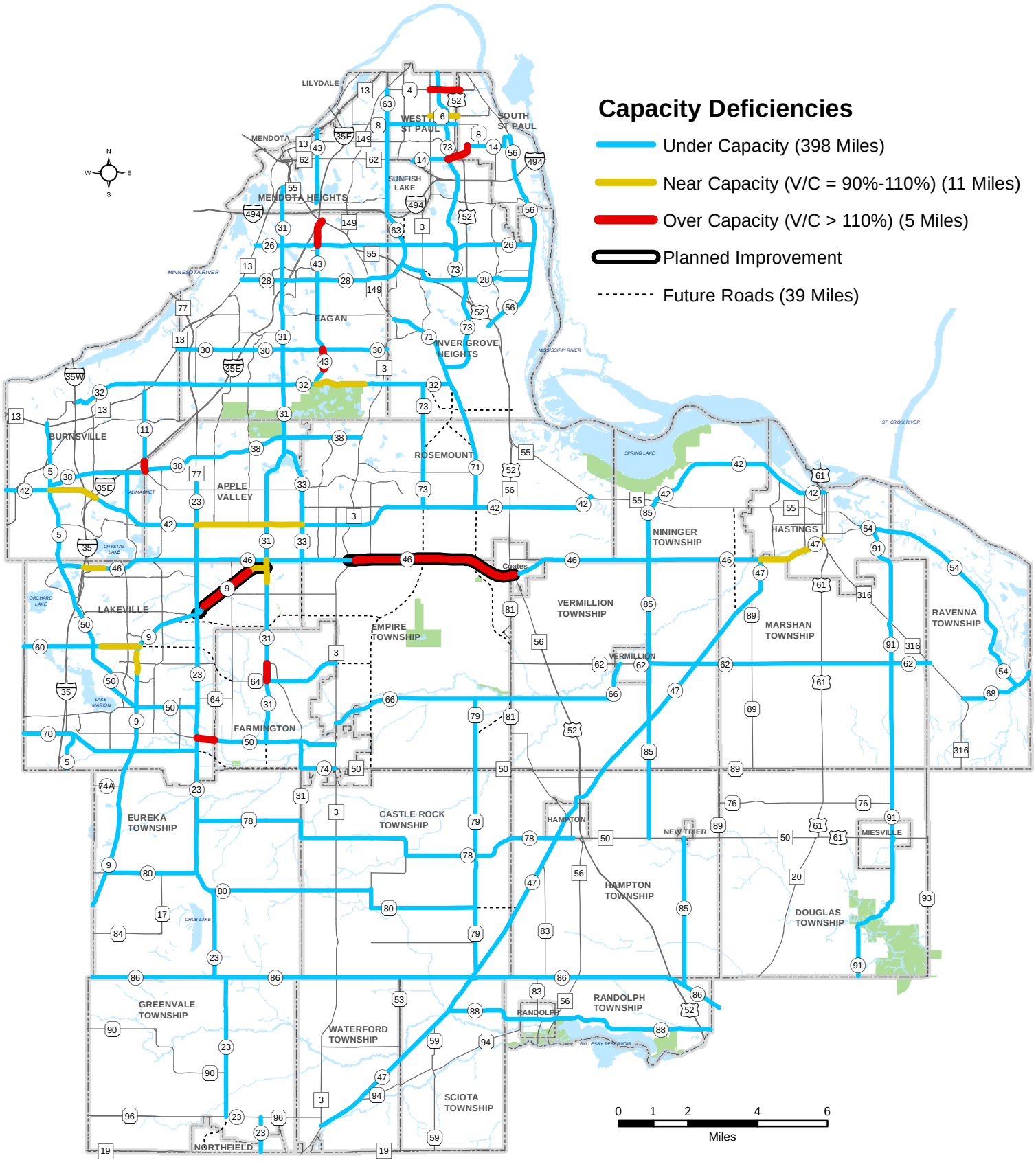
Currently, all highways on the county system contain at-grade intersections where county highways intersect county highways. Highways with traffic exceeding 6-lane divided capacity often exhibit unique operational challenges because at-grade intersections and traffic signals limit the effectiveness of additional lanes to increase capacity. The county's 2040 Travel Demand Model projection indicates that only CSAH 42, from CSAH 5 to I-35E in Burnsville, will be near 6-lane capacity by 2040.

Fewer solutions are available to deal with this capacity issue since expanding to an eight-lane section is not likely practical from impact, cost, or operational perspectives. Further, this location involves two major grade separated interchanges at I-35W and I-35E. Determination of an appropriate solution will be made in cooperation with MnDOT and the City of Burnsville in the future when actual traffic conditions warrant and dependent on availability of resources. The ultimate vision for these corridors will be developed in close coordination with the cities and other affected interests.

The following are the estimated annual CIP investments for lane additions to address over capacity highway segments over the plan period including estimated investments for County Roads:

- 2021-2025 = $8.7 million ($0 for County Roads)
- 2026-2030 = $10.1 million ($0 for County Roads)
- 2031-2040 = $10.1 million ($0 for County Roads)

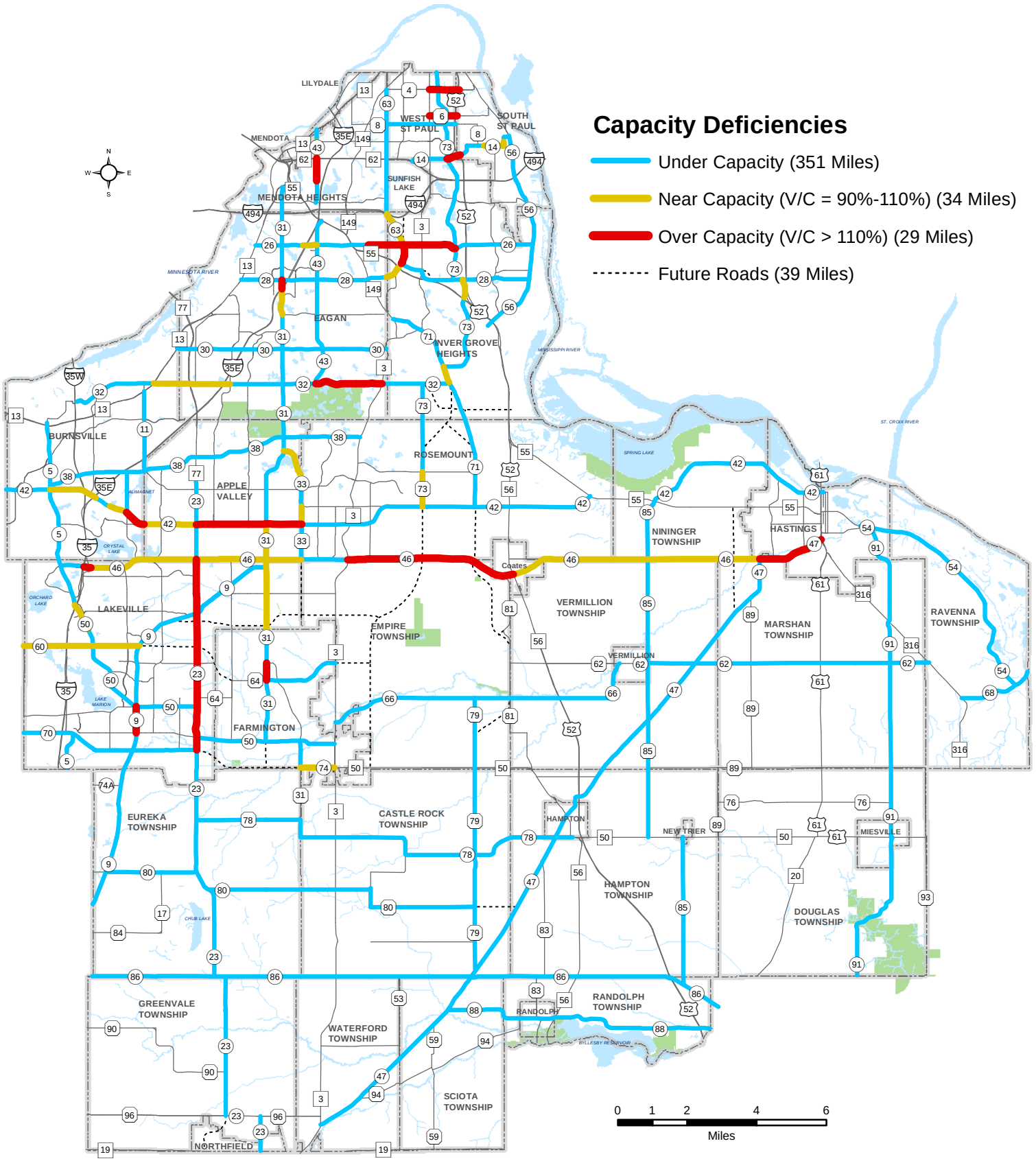
Dakota County Highway Capacity Deficiencies, 2019



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 43

Dakota County Highway Capacity Deficiencies, 2040



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Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 44

Future County Highway Alignments

As the county population grows and planned development occurs the need arises for capacity, safety and operational improvement of the highway system which sometimes requires that highways be built on new alignments or that existing highways be realigned. These new alignments are important to evolve the county highway system to support planned development and the associated local road network, and their implementation is closely coordinated with cities, townships and developers. The following new county highway alignments have been identified through previous engineering studies in cooperation with partnering cities, townships, other transportation agencies, and public engagement as appropriate for implementation during the Plan period.

East/West Alignments

- As identified in the Regional Roadway System Visioning Study, 2010:
  - Realignment of CSAH 28 from TH 3 to ½ mile east of TH 3 in Inver Grove Heights.
- As identified in the Pine Bend Arterial Connector Study, 2017:
  - Realignment of CSAH 32 from west of CSAH 71 to east of CSAH 71 and then along the existing 117th Street alignment to TH 52 in Inver Grove Heights.
- As identified in the East-West Corridor Preservation Study Phase 1, 2003 and Phase 2, 2006:
  - New county highway on the 179th Street alignment between CSAH 9 in Lakeville and the future Biscayne Avenue new alignment in Empire Township.
  - New county highway within the 185th Street and 195th Street alignments between CSAH 9 in Lakeville and Biscayne Boulevard in Empire Township.
  - New county highway within the 215th and 220th Street alignments between CSAH 23 in Lakeville and TH 3 in Farmington.
- As identified in the 2012 CSAH Mileage Request:
  - Extension of CSAH 80 from CSAH 79 to CSAH 47 in Castle Rock and Hampton Townships.

North/South Alignments

- As identified in the Regional Roadway System Visioning Study, 2010:
  - New county highway on a north-south alignment east of current CSAH 63 from south of CSAH 26 to a future interchange at I 494 in Inver Grove Heights.
- As identified in the Pine Bend Arterial Connector Study, 2017:
  - Realignment of CR 73 to connect with CSAH 71 south of CSAH 32, and realignment of CSAH 71 to a new intersection with CR 73 in Rosemount and Inver Grove Heights.
  - Realignment of CSAH 71 to the new realignment of CR 73 in Rosemount.
- As identified in the East-West Corridor Preservation Study Phase 1, 2003 and Phase 2, 2006:
  - Extension of CSAH 31 from CSAH 50 to the future east/west county highway (near the 220th Street alignment) in Farmington.
  - Extension of CR 33 from CSAH 46 to 179th Street in Lakeville.
- As identified in the Rosemount/Empire/UMore Transportation System Study, 2009:
  - Extension of CSAH 71 from CSAH 42 to connect with existing CR 81 in Rosemount and Empire Township.
  - Extension of CR 81 from Vermillion Township to connect with existing CSAH 71 in Empire Township and Rosemount.
  - Extension of CR 73 from CSAH 42 to TH 50 (along the Biscayne Avenue alignment) in Rosemount and Empire Township.
- As identified in the Hastings Area Roadway System Study, 2009:

    - New county highway on the Jacob Avenue alignment between TH 55 and CSAH 47 in Marshan and Nininger Townships.
- As identified in the Northwest Northfield Highway Corridor Study, 2009:
    - Realignment of CSAH 23 from CR 96 to TH 19 along the Garrett Avenue alignment in Greenvale Township.

Future county highway alignments are identified as dashed lines on various figures throughout this Plan and are identified specifically on Figure 45. The following segments are identified as future county highway alignments, but are not expected to be necessary by to 2040 and are not included the system needs estimated for future county highway alignments:

- County Highway 73 south of CSAH 46, Empire Township
- County Highways 9, and 64 east of Trunk Highway 3, Empire Township
- County Highway 46 between Trunk Highway 55 and CSAH 47, Nininger Township

The following are the estimated annual CIP investments for new alignments over the plan period including estimated investments for County Roads:

- 2021-2025 = $3.29 million ($0 million for County Roads)
- 2026-2030 = $13.79 million ($0 million for County Roads)
- 2031-2040 = $13.79 million ($0 million for County Roads)

The following ***strategies*** support expansion of county highways and future county highway alignments:

- **Right-of-Way Land Use Changes and Platting**
  Encourage cities to consider right-of-way needs to support the future county highway system needs when authorizing development plans and land use changes, whether or not platting changes occur.

- **Lane Additions/Expansion - Locally Funded**
  The county will not participate in expansion of existing highway segments that are not identified as having capacity deficiencies by 2040 as shown in Figure 45 but may permit local funding for these improvements if expansion needs are anticipated beyond 2040.

- **Minimize Arterial Expansion Needs**
  Encourage and support local agencies in the development of supportive local and collector street systems to properly balance the demands on the transportation system and minimize the need to expand county arterials.

- **Fully Managed Corridor**
  Highways should be fully evaluated to ensure management strategies such as access spacing, signal coordination, supporting road networks, technology applications, and transit alternatives are fully maximized before expansion options are considered.

- **Coordination with Development**
  Work with cities to utilize opportunities to plan for and implement expansion improvements in consideration of system needs, design standards, and in coordination with local land use plans and development early in the platting process.

- **Plan for Efficient Expansion**
  Utilize readily expandable 2 or 3 lane highways sections for new county highway alignments to accommodate short term traffic needs yet plan for efficient expansion to accommodate future traffic volumes when needed.

- **Transit Development**
  Support transit and multi-modal options as alternatives to single-occupant vehicle trips, further delaying the need for expansion, where applicable.

The following ***policies*** support county highway expansion and new county highway alignments.

E.1 Right-of-Way Acquisition - Highway Construction/Plat Dedication
When appropriate, assure that right-of-way acquisition for highway construction projects is consistent with plat dedication requirements to plan for long term system needs.

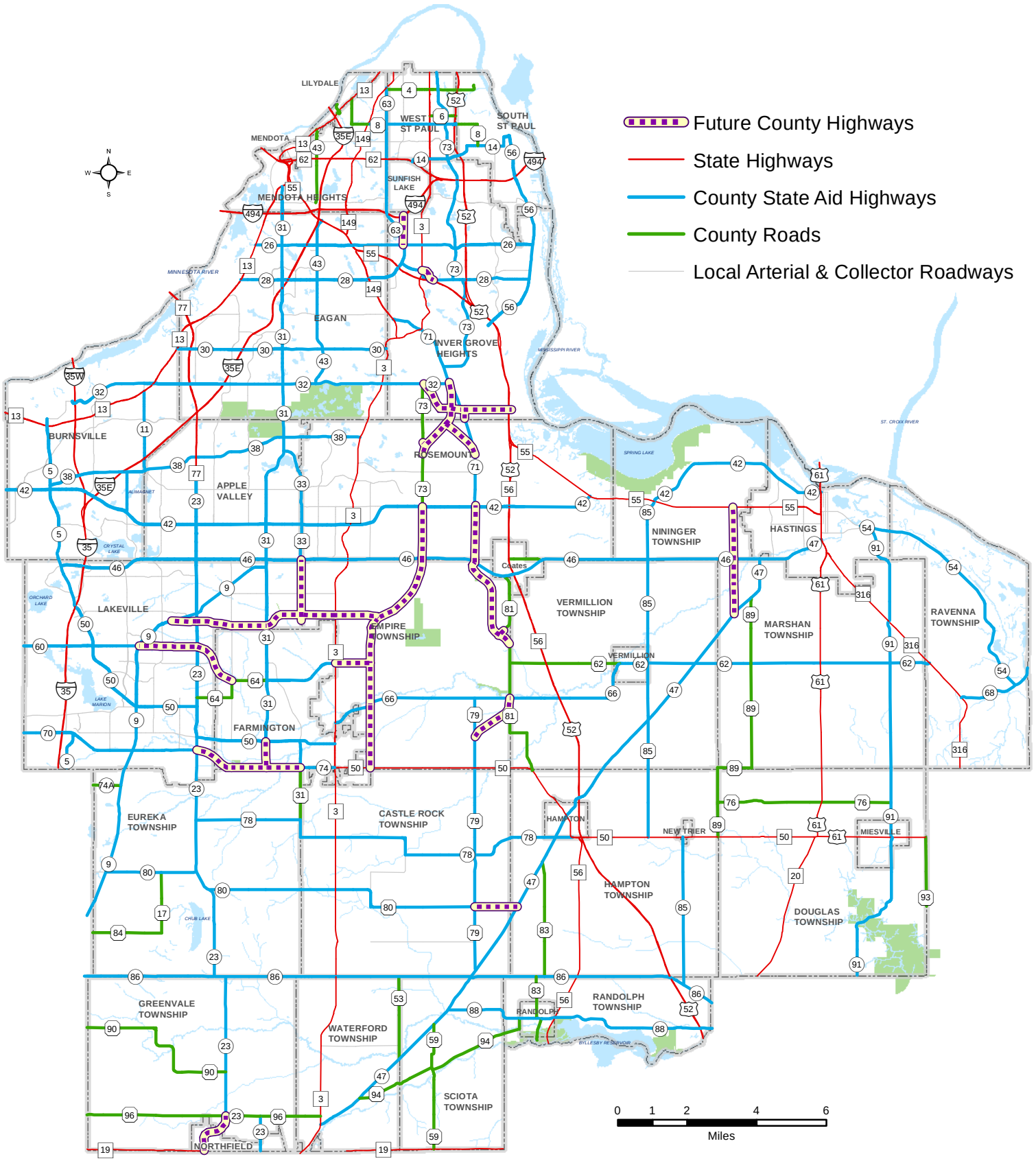
E.2 Right-of-Way - Standards
Follow standards for placement of utilities, trails, and other structures within highway right-of-way to minimize the need for relocation due to future expansion.

E.3 Right-of-Way - 20-Year Needs Map
Develop and maintain a countywide right-of-way needs map based upon long-term system capacity needs to identify future right-of-way needs. The following factors will be considered:

1. 20-year traffic projections.
2. Function of highway.
3. Corridor preservation.
4. Consistency with policy objectives.
5. Environmental considerations.
6. Intermodal potential.
7. Coordination with adjacent land use.
8. Corridor study recommendations.
9. Future interchanges locations.
10. Continuity along corridors.

E.4 Future County Highway Alignments
Future county highway alignments and re-alignments are identified through engineering studies and adopted by County Board resolution.

Future County Highway Alignments



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 45

Grade Separated Interchanges

Grade separated interchanges may be necessary to address high-capacity at grade intersections that have exceeded the capacity to safely and efficiently operate with at grade intersection geometry and traffic control. These intersections are typically at nodes that connect the most important, heavily traveled, principal and minor arterial highway segments of the system. Total entering traffic volume of 70,000 entering vehicles per day was used in previous versions of the Transportation Plan as the threshold to consider the need for interchanges, However, recent advancements in traffic control, traffic management systems, the potential for other technology based improvements have increased the planning threshold for future interchanges to 75,000 entering vehicles by 2040.

In some instances, limited right-of-way, intersection spacing or existing development may preclude the development of an interchange. For these instances other activities identified throughout this Plan will need to be evaluated to determine the best alternatives to constructing an interchange and obtain the best safety and operation possible for these locations.

In 2017, the Metropolitan Council and MnDOT developed the Principal Arterial Intersection Conversion Study by working with regional highway partners to analyze intersections on the non-freeway principal arterial system. The study identified and prioritized intersections that may be good candidates for conversion to grade-separated facilities included overpasses, interchanges and other improvements to enhance safety and performance. This study ranked Dakota County highway intersections shown in Table 12.

Installation of an interchange is considered a last resort activity after all other options have been implemented or considered. Metropolitan Council guidance should be referenced for future interchange need and study.

The CSAH 23 and CSAH 42 intersection and the CSAH 23 and CSAH 46 intersection are likely to have the need for interchanges in the future based on 2040 projected traffic volumes in excess of 75,000 vehicles per day. Intersections approaching and exceeding capacity are shown in Figure 46.

Dakota County Highway Intersections

Intersections Exceeding 65,000 ADT

Intersection	2017 ADT	Projected 2040 ADT	M.C./MnDOT Rating*	Location
CSAH 23 & CSAH 42	76,000	92,500	High	Apple Valley
CSAH 23 & CSAH 46	63,000	84,500	not rated	AV, L'ville
CSAH 42 & Aldrich Av	62,150	72,780	Low	Burnsville
CSAH 23 & 147th St	58,800	70,760	High	Apple Valley
CSAH 23 & 140th St	66,150	70,300	High	Apple Valley
CSAH 42 & Nicollet Av	57,800	69,660	High	Burnsville
CSAH 31 & CSAH 46	54,000	69,500	not rated	AV, L'ville
CSAH 5 & CSAH 42	53,400	65,450	Medium	Burnsville
			TOTAL	

= Exceeds intersection capacity during the time frame.

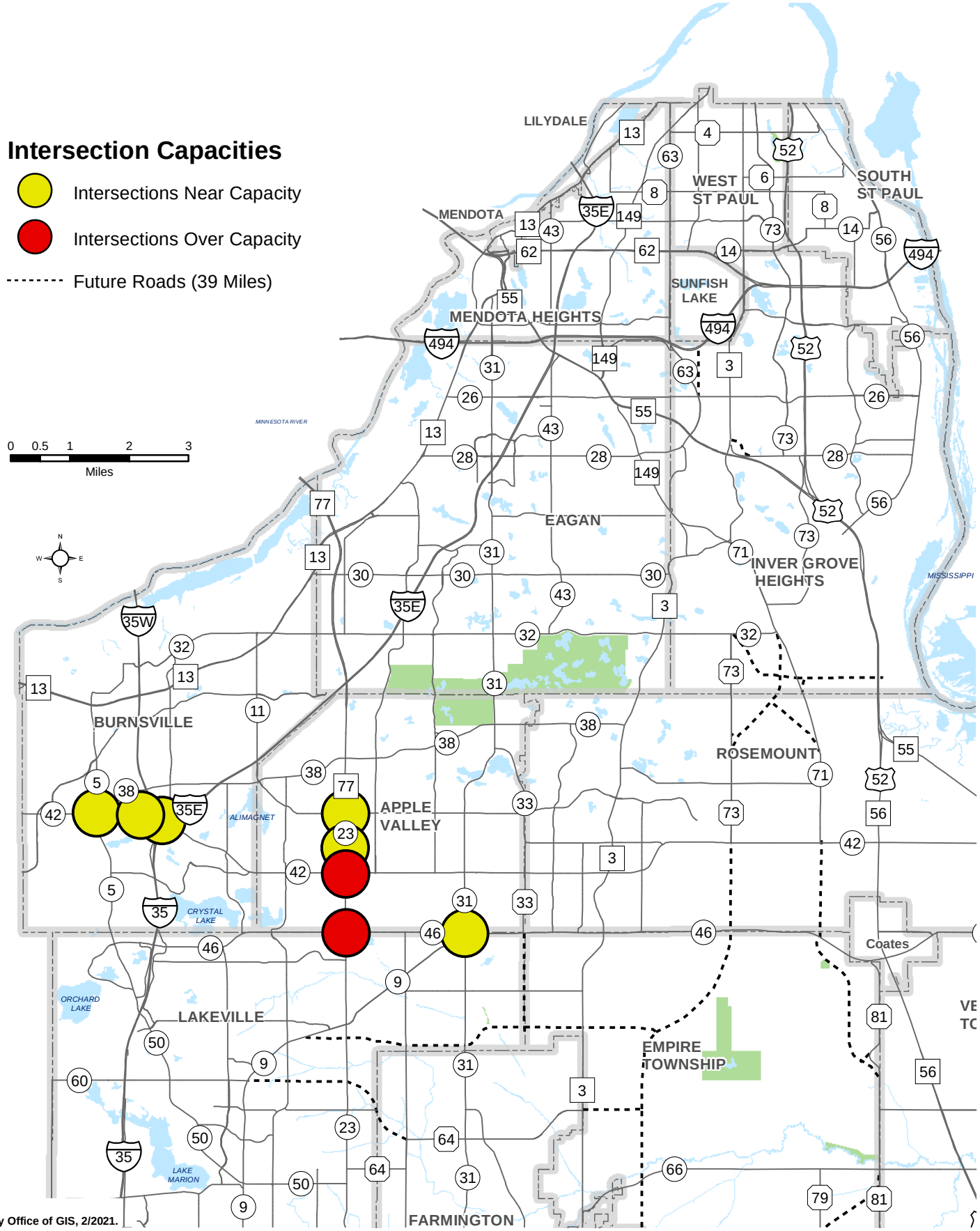
= Approaching intersection capacity (minimum of 65,000 ADT) during the time frame.

* Met Council & MnDOT Principal Arterial Intersection Conversion Study, 2017

Table 12.

Table 12 only identifies county-to-county or county-to-city highway intersections that are approaching intersection capacity by 2040.

2040 Intersections Approaching Capacity



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 46

Trunk Highways

The Minnesota Department of Transportation (MnDOT) owns and operates state trunk highways as well as US highways and interstates in Minnesota. Dakota County works collaboratively with MnDOT to address safety and mobility needs on state highways within the county. Though state highways are under MnDOT's jurisdiction, they are an integral element to the county's overall transportation network because they are intended to provide the highest order of mobility and connectivity in the system. When the state highway system doesn't meet the mobility needs of the traveling public, traffic can often divert to other roadways in the network including county highways and city streets. As important freight corridors, congestion and safety issues on the state highway system can also impact economic development and business interests in the county.

The importance of state highways to residents of Dakota County is evident in the most recent County Residential Survey (2019). When asked which highways (regardless of ownership) have the most safety needs, the following highways were listed in rank order. Four of the top five were state highways:

1. Highway 3
2. Highway 52
3. Interstate 35
4. Highway 13
5. County Road 42

In the same survey, residents were asked which highways had the most congestion needs. Again, residents noted state highways in four of top five:

1. County Road 42
2. Interstate 35
3. Cedar Avenue/Highway 77
4. Highway 13
5. Highway 52

Residential Survey Results

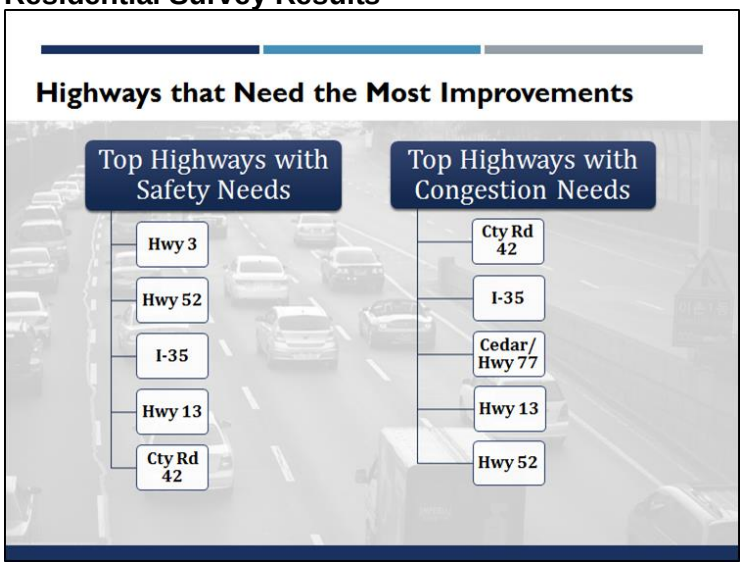


Table 13

In recognition of very limited trunk highway funding MnDOT has shifted its focus to system preservation rather than expansion to address the needs of aging roads and bridges in recent years. The State Highway System Investment Plan recently prepared by MnDOT identified trunk highway system needs of $39 billion through 2037 yet only $21 billion of revenue estimated to be available over this same period, or an $18 billion shortfall. This funding shortfall and corresponding shift in investments has resulted in fewer highway modernization and expansion projects even as population and congestion in the region grows. Mobility or expansion projects are typically directed to areas of the state and region with the most severe congestion or areas where a preservation project, such as pavement or bridge replacement, can be leveraged to address mobility needs.

Dakota County staff regularly work with MnDOT to communicate county priorities and needs on the state highway system. The county has a history of leading or partnering with MnDOT on state highway projects that intersect with the county highway system such as the construction of new interchanges, signals, and roundabouts. The county has also led improvements to state highways by securing funding through competitive funding solicitations such as the Local Partnership Program. County staff also regularly participate and provide technical assistance for MnDOT led corridor studies and construction projects in the county.

In 2017 Dakota County implemented a quarter-cent sales tax and $20 excise tax on new vehicle sales to fund transit and transportation projects. The program identifies priority transportation projects in the county that would be eligible for this funding source over a ten-year period. These projects are eligible for the use tax but does not ensure the project will be completed. In addition to regional county highway projects, transit projects, and regional trail projects, the program identifies several projects on the state highway system listed below and on Figure 47:

- TH 13: Corridor Improvements from county line to CSAH 5 in Burnsville
- TH 77: Managed lane/MnPASS expansion in Apple Valley and Eagan
- I-35 Managed lane/MnPASS extension to CSAH 50 in Burnsville and Lakeville including I-35 and CSAH 50 interchange reconstruction in Lakeville
- TH 3: 2 to 4 lane expansion from 55th Street to TH 55 in Inver Grove Heights
- TH 3: 2 to 4 lane expansion from TH 149 to downtown Rosemount in Eagan, Inver Grove Heights, and Rosemount
- I-494 and Future CSAH 63 interchange in Inver Grove Heights
- TH 55: 2 to 4 lane expansion from CSAH 42 to Hastings in Rosemount and Nininger Township
- TH 52 and CSAH 66 interchange in Vermillion Township

Additionally, through agency and public engagement that occurred during development of this Plan, two other state highways under MnDOT jurisdiction were identified as potentially needing modernization and will be considered for possible use of sales tax funds:

- TH 316: Safety and mobility improvements from TH 61 to Tuttle Drive in Hastings
- TH 50: Safety improvements from TH 52 in Hampton to TH 20/61 in Douglas Township.

Dakota County actively works with MnDOT to identify and plan for future opportunity projects based MnDOT's 10-year Capital Highway Improvement Plan (CHIP). Of the projects in the CHIP, several align with Dakota County's priorities. The county is actively working in partnership with MnDOT on the efforts listed below and will continue to work with MnDOT to advance county priorities through opportunity projects.

- TH 13 corridor Improvements from county line to CSAH 5 in Burnsville—MnDOT is currently leading a corridor study of TH 13 in Savage and Burnsville between US 169 and Nicollet Avenue. The study includes design of intersection improvements at Dakota Avenue in Scott County that is currently funded and programmed for construction in 2022. A vision for the corridor to determine whether the corridor will retain at-grade intersections, operate like a freeway, or have elements of both will be an outcome of the study with concepts for intersection improvements for each alternative.

- TH 77 managed lane/MnPASS expansion in Apple Valley and Eagan—MnDOT has a planned pavement project on TH 77 in 2026. In advance of the pavement project, MnDOT will study the corridor and go through the environmental process to determine the preferred future alternative to address mobility and capacity issues on the corridor. A MnPASS lane is one of the options for consideration, but the study will evaluate other alternatives. The study is scheduled to be complete by the end of 2021. Improvements identified in the study would be considered for inclusion with the 2026 pavement project if improvements are feasible and funding is secured.

- I-35 managed lane/MnPASS extension to CSAH 50 in Burnsville and Lakeville including I-35 and CSAH 50 interchange reconstruction in Lakeville—MnDOT has a planned bridge and pavement preservation project planned for 2025. The project includes replacement of the I-35W and TH 13 bridge, replacement of the I-35W and Cliff Road bridge, and pavement preservation between the I-35W/I-35E split and Cliff Road. Prior to initiating the project, MnDOT is studying spot mobility improvements that could be implemented with the project. This study will be complete by the end of 2020. In coordination with this effort, MnDOT agreed to partner with Dakota County to study the feasibility of extending MnPASS to CSAH 50 as a separate study and is seeking funds for state fiscal year 2022. The study and resulting recommendations will inform potential improvements that may be added to a planned MnDOT pavement preservation project in the study area for 2029.

- TH 3 from I-494 to CSAH 42—MnDOT has identified two pavement projects in the CHIP that align with county priorities. In 2025 a mill and overlay is planned from 170th to TH 149 in Empire, Rosemount, Eagan, and Inver Grove Heights. In 2029, a reconstruction of TH 3 is planned from Amana Trail to Upper 55th Street in Inver Grove Heights. In advance of these projects, MnDOT and the county will study future safety and mobility needs in the corridor between CSAH 42 and I-494. The study will develop roadway improvement concepts and cost estimates and establish conditions for a potential future turnback of TH 3 from TH 149 to I-494 as identified in Dakota County's 2018 Principal Arterial Study.

- I-494 and Future CSAH 63 interchange in Inver Grove Heights—Dakota County has identified funding in 2020 to develop and identify the location and general footprint of the proposed future interchange to help the county, cities, MnDOT and landowners plan for future design and construction of the interchange.

- TH 55 expansion from two to four lanes from CSAH 42 in Rosemount to the city of Hastings—Though there are no expansion plans for this corridor in the near future, MnDOT is using Highway Safety Improvement Program funding to add turn lanes in a segment of TH 55 at Doyle Path in Rosemount. The area has had several recent serious crashes and fatalities. The project is currently programmed for 2023.

- TH 52 and CSAH 66 interchange in Vermillion Township—Dakota County has identified funding for preliminary engineering of the interchange. The preliminary engineering will consider location alternatives in the vicinity of CSAH 66 and CSAH 62 due to numerous challenges associated with adjacent land uses and environmental concerns to maximize connectivity to the county highway system. MnDOT has a pavement project planned for 2023 on TH 52 that will be coordinated with the potential interchange construction.

- TH 316 safety and mobility improvements from US 61 to Tuttle Drive in Hastings—MnDOT and the City of Hastings completed an extensive corridor study to address safety issues, access management, pedestrian and bicycle mobility, motor vehicle speeds, and drainage needs in advance of a programmed MnDOT pavement preservation project in 2021. The proposed construction project includes recommendations from the study including three roundabouts, a center median, bicycle and pedestrian trails, and drainage improvements. TH 316 is not currently included in the Transportation Sales and Use Tax program. However, it is anticipated to be proposed for inclusion as part of the 2021 Capital Improvement budgeting process.

- TH 50 safety improvements from US 52 to US 61 through Hampton and Douglas Townships—Public input during the 2040 Transportation Plan revealed concerns about safety and drainage along this rural 2-lane highway that currently has narrow shoulders and poor sight lines due to the topography. This segment is identified as a future principal arterial as it provides an east-west connection across the county. MnDOT has a planned resurfacing of this corridor in 2026, with no current plans for additional improvements. This corridor is not currently included in the Transportation Sales and Use Tax program. However, it is anticipated to be proposed for inclusion as part of the 2021 Capital Improvement budgeting process.

PERFORMANCE MEASURE: The county will work with MnDOT to complete corridor and preliminary engineering studies for those trunk highway segments identified in this Plan. Any subsequent construction projects that result from these efforts will be pursued in consideration of:
Congestion as measured in MnDOT's annual freeway Congestion Report or by using StreetLight data for non-freeway corridors.

The following ***strategies*** will be used to advance Dakota County priority improvements to the state trunk highway system:

- **Identify County Priorities on State Trunk Highway System**
  Encourage and assist MnDOT in identifying and evaluating options to address trunk highway and Interstate Highway needs within the county including expansion, modernization, safety, and multi-modal improvements.

- **Monitor MnDOT's 10-year CHIP**
  Coordinate with MnDOT staff regularly for updates on planned projects in the 10-year CHIP to identify opportunity to coordinate and advance priority trunk highway projects in Dakota County.

- **Consider Advanced Funding for County Priorities** Consider advancing the state share of a trunk highway project programmed in the State Transportation Improvement Program (STIP) to accelerate priority trunk highway improvements within the county.

- **Partner with MnDOT on Studies and Engineering Efforts**
  Partner with MnDOT on preliminary engineering and scoping studies to help ensure that priority trunk highway improvements in Dakota County are defined and positioned for funding opportunities that arise.

- **Apply for External Funding**
  The county will lead or assist in preparation of funding applications for priority trunk highway improvements in partnership with MnDOT and cities.

- **Consider County Funding**
  The county will consider contributing funds toward priority projects on the state trunk highway system following identification of the project scope through engineering study, if insufficient federal, state or other non-county funding sources are available to advance the project and the county has funds available in its Sales and Use Tax program. These opportunities would be evaluated by the County Board on a case-by-case basis.

MnDOT and Dakota County Highway Intersections

Intersections at Dakota County highways and MnDOT trunk highways have been identified for interchange improvements based on capacity and safety needs. Coordination between MnDOT, Dakota County and local agencies is critical to plan for improvements and prioritize needs. Recently completed interchange improvements have successfully address both safety and capacity issues. Planned interchanges for improvements have been identified based on existing capacity thresholds, safety issues and future traffic growth based on 2040 projections.

The following include recently completed interchanges and planned interchanges for state and county highway intersection location.

Recently completed interchanges:

- TH 13 and CSAH 5 in Burnsville
- TH 52 and CSAH 47 in Hampton Township
- TH 52 and CSAH 86 in Hampton and Randolph Townships
- TH 52 and CSAH 42 in Rosemount (Phase I)

Planned interchanges:

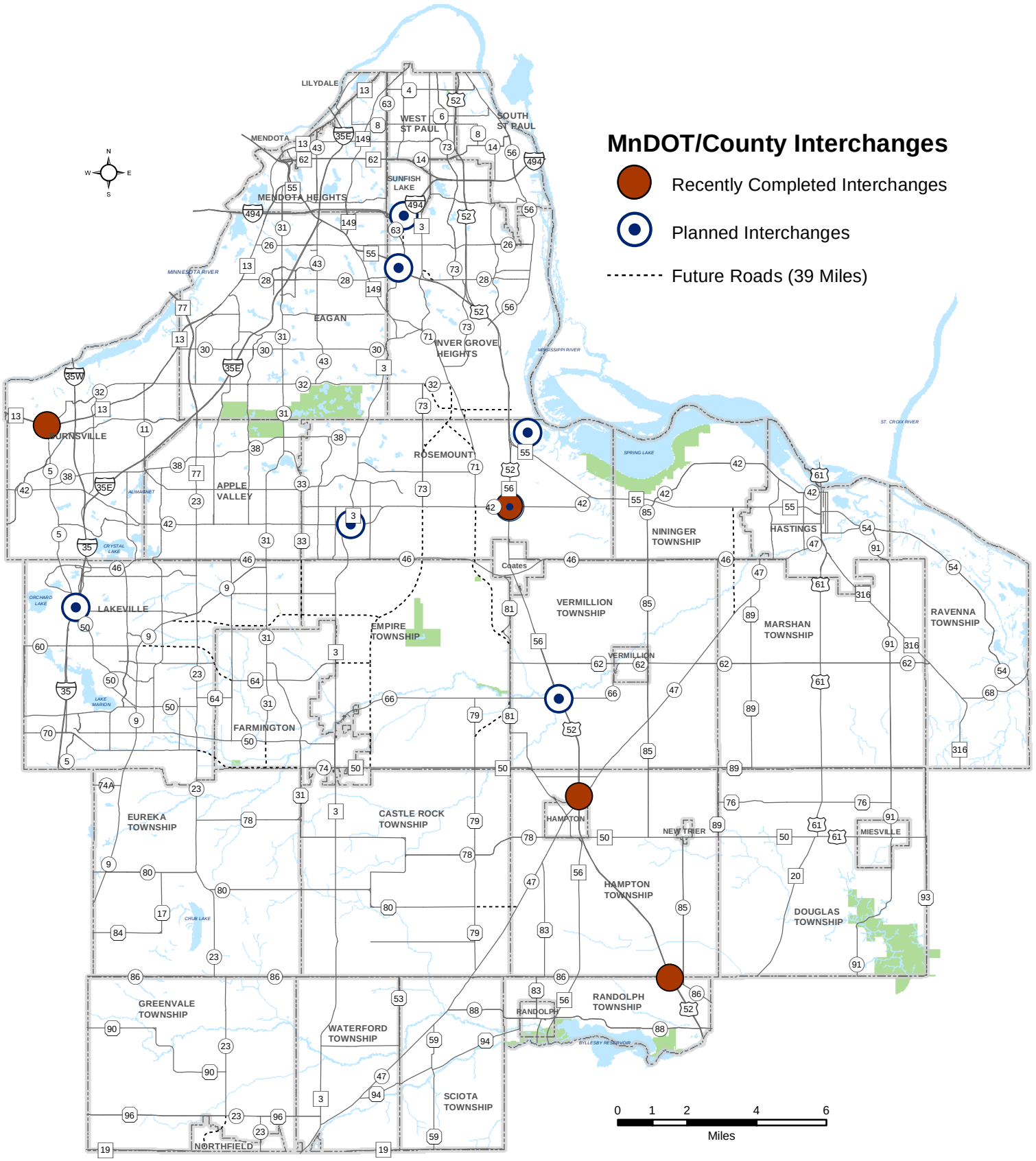
- Existing I-35 and CSAH 50 in Lakeville
- New TH 3 and CSAH 42 in Rosemount
- New TH 55 and CSAH 28 in Inver Grove Heights
- New TH 52 and in the vicinity of CSAH 66 in Vermillion Township
- New I 494 and future CSAH 63 in Inver Grove Heights

- TH 52 and CSAH 42 in Rosemount (Phase II)

Costs and timing for interchange improvements that involve both state trunk highways and county highways vary significantly in project scope and priority from one location to another. Investment for each interchange may range from $20 to $40 million or more. The county will cooperate with responsible jurisdictions to plan and implement these improvements. Because these interchanges are beyond anticipated highway revenue and are under the jurisdiction of the state through MnDOT, the county plans to work with MnDOT and local partners to develop project scope and cost through engineering study and pursue funding for each project individually as opportunities arise. Priorities for pursuit of interchange funding will be determined in coordination with the County Board. This approach has been successful to implement interchanges at four MnDOT and Dakota County highway locations in the past 10 years.

Recently completed and planned interchanges are shown on Figure 47.

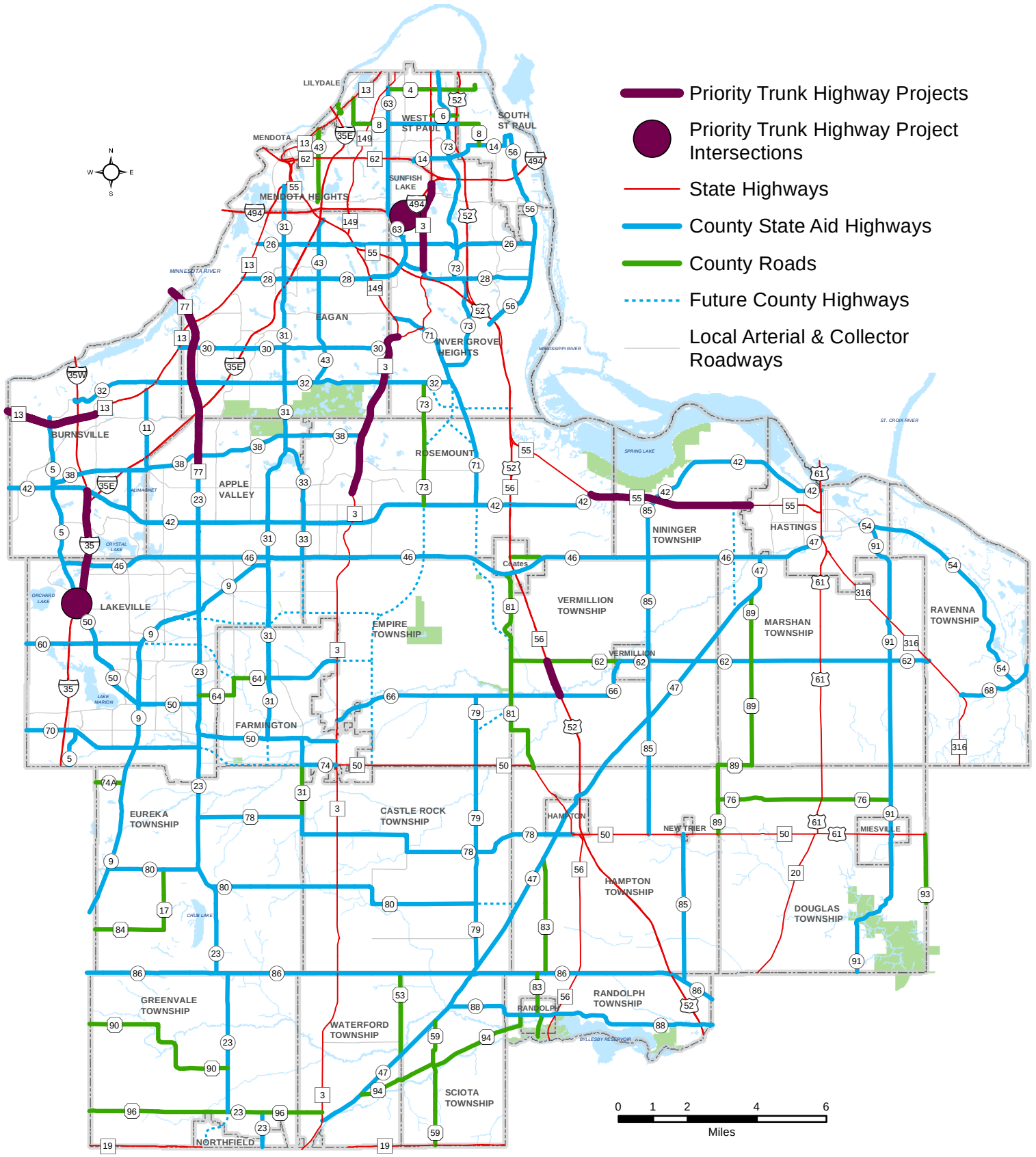
2040 MnDOT and County Highway Intersections-Interchanges



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 47

Priority Trunk Highway Projects



Prepared by:
Dakota County Office of GIS, 2/2021.

Dakota County 2040 Transportation Plan - Figure 48

The following ***strategies*** support improvement and expansion of transportation corridors through construction or reconstruction of interchanges and overpasses:

- **Interchange Construction at County Highway Intersections**
  Construction of interchanges will be considered at existing capacity deficient at-grade intersections with entering volume of approximately 75,000 ADT, and to address severe safety and operational deficiencies.

- **Interchanges and Overpasses – Official Maps**
  Develop official maps or development agreements at future interchange locations in coordination with MnDOT and cities for preservation of future right-of-way beyond what can be acquired through dedication based on the 20-year Plat Review Needs Map.

The following are the estimated annual CIP investments for grade-separated interchanges over the plan period including estimated investments for County Roads:

- 2021-2025 = $0 ($0 for County Roads)
- 2026-2030 = $0 ($0 for County Roads)
- 2031-2040 = $7 million ($0 for County Roads)

Engineering Studies

To ensure transportation demands from residents and public/private entities are met, the county will consider proactively directing system development and investments to address these needs. Future studies of the needs and solutions can center on issues such as highway preservation, construction of new alignments or transit improvements. These studies will assist in avoiding costly investments and propose viable options for development of the transportation system beyond highway infrastructure. The need for engineering study varies greatly in scope and may emerge from numerous scenarios, including to address system needs that may change due to a particular development, trends in safety and operation of the highway system, or to address location specific issues on the highway system.

Many transportation system needs involve trunk highways which often require study coordinated between the county, MnDOT, the Federal Highway Administration, the Metropolitan Council and local agencies. The county will work proactively in coordination with MnDOT and other agencies as appropriate to undertake such studies in a timely manner to address local county priority transportation needs and coordinate with projects identified in MnDOT's 10-year Capital Highway Improvement Program.

The following future engineering studies are identified for analysis within the next five-year plan period.

- Partner with MnDOT and local jurisdictions on the following studies and preliminary engineering efforts:
  - I-35 managed lane/mobility and safety improvements in Burnsville and Lakeville
  - I-35/CSAH 50 interchange reconstruction in Lakeville

    - TH 3 mobility and safety improvements and jurisdictional considerations in Eagan, Inver Grove Heights and Rosemount
    - TH 13 mobility and safety improvement in Burnsville
    - TH 50 safety improvements in Douglas and Hampton Townships
    - TH 55 mobility and safety improvements in Hastings, Nininger Township and Rosemount
      TH 77 managed lane/mobility and safety improvements in Apple Valley and Eagan

- Partner with MnDOT, City of Eagan, and the City of Inver Grove Heights to update the roadway system findings identified in the *Regional Roadway System Visioning Study.* to address development impacts and transportation system needs including a potential interchange at CSAH 63 and I-494.

- Work with the Metropolitan Council, MnDOT and other partners as appropriate to adopt the findings of the recently completed Dakota County Principal Arterial Study into the regions adopted Transportation Policy Plan.

- *TH 52/CSAH 66 Interchange:* Partner with MnDOT and local jurisdictions to conduct an engineering study to determine roadway alignments and the future interchange location.

- *10-Ton Route System Implementation:* Work with local jurisdictions in implementing a 10-ton route system as identified through Management Policy M.4. as shown on Figure 17.
- *TH 3/CSAH 42 Intersection:* Partner with MnDOT and the City of Rosemount to study a possible grade separation or interchange at the location based on the exposure factor of vehicle and train volumes at the location.

- *CSAH 46 Rail Crossing:* Partner with local jurisdictions to study a possible grade separation of the rail crossing west of TH 3 based on the exposure factor of vehicle and train volumes at the location.

The following ***strategy*** supports improvement and expansion of transportation corridors through conducting engineering studies:

- **Emerging Transportation Needs**
  Undertake engineering studies to consider emerging and future transportation needs to proactively identify and direct highway system development and future investments.

The following are the estimated annual CIP investments for engineering studies over the plan period including estimated investments for County Roads:

- 2021-2025 = $0.5 million ($0.5 for County Roads)
- 2026-2030 = $0.5 million ($0.5 for County Roads)
- 2031-2040 = $0.5 million ($0.5 for County Roads)

Goal 6 Summary

This goal defines the approach for the county to expand the existing transportation system by adding lanes or new roadway to address emerging capacity deficiencies and provide safe and efficient highway

system connections. County efforts to improve and expand the transportation system include lane additions or expansion, future county highway alignments, interchanges and overpasses, coordination with MnDOT on trunk highway improvements, and engineering studies. The main issue faced by the county regarding expansion needs is the large investment required for these types of projects. The county will continue to evaluate the need for expansion on a case-by-case basis to ensure that the highest priority capacity issues are addressed, and that all improvement projects maximize the county investment.

Annual Expansion Investment Needs						
	2021-2025		2026-2030		2031-2040	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR
County Highways						
Lane Additions / Expansion	$ 8.74	$ -	$ 10.12	$ -	$ 10.12	$ -
Future Co. Hwy. Alignments	$ 3.29	$ -	$ 13.79	$ -	$ 13.79	$ -
Interchanges & Overpasses	$ -	$ -	$ -	$ -	$ 7.00	$ -
Other						
Engineering Studies	$ -	$ 0.50	$ -	$ 0.50	$ -	$ 0.50
ANNUAL AVERAGE	**$ 12.03**	**$ 0.50**	**$ 23.91**	**$ 0.50**	**$ 30.91**	**$ 0.50**

The Annual Expansion Investment Needs are for county highways only and do not include costs for trunk highway investments.

Chapter 10

Implementation

Plan Direction

The Strategic Goals adopted by the Dakota County Board of Commissioners are meant to provide a vision for the county and to provide direction and context for the work of staff. The Strategic Goals identify the following objectives for Dakota County citizens, businesses, and visitors:

- A great place to live;
- A healthy environment with quality natural areas;
- A successful place for business and jobs; and
- Excellence in public service

The Dakota County 2040 Transportation Plan provides the vision and implementation approach for the future transportation system in Dakota County to support this broader County Vision and Strategic Goals. The county will use the Plan Principles, Strategies, Policies, and Investment Goal direction in coordination with partnering transportation agencies and the public to develop, operate and maintain a safe and efficient transportation system for the travelling public.

Capital Improvement Revenue Summary

The following are the estimated annual CIP investment needs over the plan period.

	Annual Investment Needs						20 Year Total	
	2021-2025		2026-2030		2031-2040		TOTAL	
REVENUE/EXPENSE	CSAH	CR	CSAH	CR	CSAH	CR	CSAH	CR
Preservation	$ 8.91	$ 1.95	$ 9.30	$ 1.93	$ 9.66	$ 1.88	$ 187.65	$ 38.20
Management	$ 11.02	$ 4.13	$ 10.40	$ 6.11	$ 8.37	$ 5.09	$ 190.80	$ 102.10
Replacement & Modernization	$ 17.90	$ 8.98	$ 21.72	$ 1.87	$ 12.60	$ 0.66	$ 324.10	$ 60.85
Transit & Transitways	$ -	$ 0.78	$ -	$ 2.23	$ -	$ 2.94	$ -	$ 44.45
Expansion	$ 12.03	$ 0.50	$ 23.91	$ 0.50	$ 30.91	$ 0.50	$ 488.80	$ 10.00
Resources	$ 4.80	$ 2.50	$ 8.24	$ 1.95	$ 7.68	$ 1.63	$ 142.00	$ 38.55
TOTAL (by CSAH & CR)	**$ 54.66**	**$ 18.84**	**$ 73.57**	**$ 14.59**	**$ 69.22**	**$ 12.70**	**$ 1,333.35**	**$ 294.15**

	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined	CSAH & CR Combined
ANNUAL TOTAL	**$ 73.50**	**$ 88.16**	**$ 81.92**	**$ 1,627.50**

* Does not include Trunk Highways

Total Estimated 20-year Needs **$1.63 Billion**

Through this update of the Plan, it has been estimated that over $1.65 billion will be required to meet county transportation system needs over the 20-year plan period through 2040. Specific needs are identified and explained in detail in chapters throughout this plan document. $1.28 billion of revenue is anticipated during this same timeframe. This results in 78 percent of the necessary anticipated revenues available to meet transportation needs in the next 20 years. By comparison, in 2012, the Dakota County 2030 Transportation Plan identified $1.25 billion required to meet needs and $658 million anticipated resulting in 53 percent of the necessary anticipated revenues to meet county transportation system needs. Additional revenue from the Motor Vehicle Lease Sales Tax and the County Transportation Sales and Use Tax have been the biggest factors to help close this funding gap. In addition to county highway system needs, there are substantial additional unmet needs on the county's greenway system and state trunk highway system under the jurisdiction of the Minnesota Department of Transportation that could further increase the gap in county transportation funding.

Dakota County Transportation Funding Summary

Transportation Revenue available to Dakota County from all sources is estimated at approximately $72 million in 2020. 2020 revenue are assumed as the base level of funding for revenue projections for the 20-year plan period and no changes in federal or state law, or county policy or revenue streams currently established by the County Board, that would change the annual level of funding were assumed. In addition to these annual revenues, the balances in the Transportation, Transportation Sales and Use Tax, and Regional Railroad Authority funds are included as a one-time revenue.

The various County State Aid Highway and Motor Vehicle Lease Sales Tax revenues can only be used on the CSAH portion of the county highway system. Therefore, needs on the County Road system have been identified separately to align revenue available for the County Road system with County Road needs. These County Road eligible revenues are identified as County Funds including, levy, wheelage tax, and gravel tax. These County Funds are estimated at $7 million in 2020.

To account for the different rates of growth in revenue when compared to inflation in the cost of transportation infrastructure investments 2020 base annual revenues were adjusted by an estimated annual decrease of 2% annually over the 20-year plan period. This adjustment is based on assumed annual revenue growth of 2 to 2.5% based on the average growth of these revenue streams in recent years, and construction cost increases of approximately 4% annually based on recent data from the Minnesota Department of Transportation construction cost index for highway construction. This results in a buying power approach to inflation in lieu of adjusting future construction costs that would have required consideration of construction type, timing, and other market conditions to accurately inflate construction costs to future years.

Based on the 2020 estimated revenue, adjusted for estimated revenue growth and construction expense, it is estimated that Dakota County will have approximately $1.28 billion available for transportation system investment through 2040. The estimated revenue over the Plan period has been adjusted to account for reduced revenue anticipated form cities due to cost share policies and impacts related to COVID19 in the first few years of the Plan period. County funds comprised of county levy, wheelage tax, gravel tax, and transportation fund balance available for County Road investments is estimated at approximately $198 million through 2040. Adjustments to target the use of the Transportation Sales and Use Tax and County State Aid Highway funding for broader application to eligible projects will help ensure that these funding sources can be aligned to the extent possible with County Road needs.

Source	2030 Plan	2020 Revenue	2021 Fund Balance	2021-25 Annual Revenue	2021-25 Total Revenue	2026-30 Annual Revenue	2026-30 Total Revenue	2031-40 Annual Revenue	2031-40 Total Revenue	2021-40 Total Revenue
Federal	5.0	9.0	0.0	8.5	42.5	7.7	38.5	6.7	66.7	147.6
State										
Trunk Highway	2.5	1.5	0.0	1.4	7.1	1.3	6.4	1.1	11.1	24.6
Bridge Bonds	0.2	0.3	0.0	0.3	1.4	0.3	1.3	0.2	2.2	4.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CSAH										
Regular	10.0	12.0	2.0	10.8	54.0	10.3	51.3	8.9	88.9	196.2
Maintenance	0.0	2.3	0.0	2.2	10.8	2.0	9.8	1.7	17.0	37.7
Flex Account	0.0	1.9	8.0	1.8	9.0	1.6	8.1	1.4	14.1	39.2
MVLST	0.0	12.0	0.0	10.8	54.0	10.3	51.3	8.9	88.9	194.2
County Funds			84.0							84.0
Levy	5.2	2.7	0.0	2.5	12.7	2.3	11.5	2.0	20.0	44.3
Wheelage Tax	1.7	4.1	0.0	3.9	19.3	3.5	17.5	3.0	30.4	67.2
Gravel Tax	0.2	0.2	0.0	0.2	0.9	0.2	0.9	0.1	1.5	3.3
City	7.0	8.0	0.0	4.2	21.0	3.8	19.0	3.3	33.0	73.0
Sales & Use Tax	0.0	18.0	60.0	16.6	83.0	15.4	76.9	13.3	133.3	353.3
RRA Levy	1.6	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5
TOTAL	33.4	72.0	166.5	63.2	315.8	58.5	292.5	50.7	507.1	1281.9

Annual
Total

NOTE: Assume 2.0 to 3.0% annual growth in revenues and 4.0 to 4.5% construction cost index inflation results in 2% average annual net loss of revenue buying power.
NOTE: Reduced values calculate to year 3, 8, and 15 from 5,5, and 10-year periods respectively.

Investment Needs Summary

The *Dakota County 2040 Transportation Plan* utilizes five subsequent Investment Goals in which funding resources are directed to cost effectively address priority transportation system improvements. These Goals identify anticipated needs and proposed investments through 2040. The Plan identifies available revenues of $1.28 billion over the 20-year plan period to meet transportation needs identified within subsequent Investment Goal chapters of this Plan.

It is anticipated that the needs associated with the priority Goals of Preservation, Management, Replacement and Modernization, and Transit and Transitways can be fully funded through the 2040 Plan period. The needs associated with the county highway Expansion Goal, and those associated with any potential Dakota County expansion investment on trunk highway corridor projects, will need to compete on a priority basis for anticipated funding, or utilize additional revenue that could be made available from sources such as increased County Wheelage Tax,$4.1 million available annually in 2020 dollars, or Transportation Sales and Use Tax, $18 million available annually in 2020 dollars.

Appendix A

Plan Policies

Transportation Plan Principles

PP.1 Cultural and Natural Resources
The preservation and enhancement of the region's cultural and natural resources will be balanced with transportation projects in accordance to Minnesota Environmental Quality Board (MEQB), the National Environmental Policy Act (NEPA) and Dakota County Land Conservation Plan guidelines.

PP.2 Wetland Mitigation Areas
When wetland impacts cannot be avoided, create wetland mitigation areas in compliance with local, state and federal permits by delineating wetlands on transportation projects, creating wetland mitigation areas within the affected watershed first and within the county second and developing wetland bank credits for establishment of quality habitat and cost-effective wetland mitigation of future transportation projects.

PP.3 Well and Water Supply
When appropriate, install, maintain or permanently seal all wells impacted or used in conjunction with any transportation project, in accordance with Dakota County Ordinance No. 114, Well and Water Supply Management and MN Rules 4725.

PP.4 On-Site Sewage Treatment
When appropriate, properly install, maintain or properly abandon all sewage systems impacted or used in conjunction with any Dakota County transportation project, in accordance with Dakota County Ordinance No. 113, On-Site Sewage Treatment and MN Rules 7080.

PP.5 Surface Water Drainage System Design
Design surface water drainage systems with transportation system improvements to protect water quality, enhance roadside habitat and reduce long-term costs associated with managing and maintaining drainage systems. Comply with all federal, state and local requirements.

PP.6 Pedestrian and Bicycle Facilities
Evaluate all transportation projects for opportunities to improve bicycle and pedestrian connectivity and safety, including repair or provision of shared use paths, shoulder bike lanes, sidewalks and crossing safety improvements.

PP.7 Design and Construction Standards
Use MnDOT, AASHTO, State Aid and Federal Aid standards as appropriate in the design and construction of highways.

PP.8 Traffic Control Devices Design and Operation
Design and operate traffic control devices on the highway and on adjacent trail systems according to engineering study and standards as stated in applicable Minnesota Statutes and Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD).

PP.9 Speed Limits

Speed limits will be posted on highways as provided by Minnesota law. The County Engineer is authorized to request MnDOT to perform traffic studies to determine the reasonable and safe speed limits on highways where conditions have sufficiently changed to warrant a study and/or when a city council requests a speed study by resolution. Special speed zones may be appropriate adjacent to schools, in rural centers and in areas where many pedestrians are present.

PP.10 Parking Restrictions

The County Engineer is authorized, at the county's discretion, to place parking restrictions on county highways when supported by city council resolution.

PP.11 Temporary Traffic Controls

The County Engineer is authorized to establish, maintain, and remove temporary traffic controls as necessary to allow safe and efficient progress of authorized highway projects, or for emergency situations.

PP.12 CIP

Annually review and prepare the five-year Transportation CIP.

PP.13 CIP Resolution

Annually require a city council or township board resolution that requests and supports inclusion of a proposed project in the Transportation CIP.

PP.14 Transportation Plan Consistency

Prioritization and selection of Transportation CIP projects will consider consistency with the Transportation Plan and with Plan investment goals.

PP.15 Environmental Regulations

Follow the Dakota County Physical Development Division Environmental Due Diligence Process, investigate and clean up contamination in accordance with Minnesota Pollution Control Agency guidance when encountered, complete Regulated Building Materials Surveys on buildings that are to be demolished, and adhere to best management practices on all projects.

PP.16 NURP/NPDES

Apply National Urban Runoff Program (NURP) standards, or their equivalent, for highway projects and share maintenance costs. Conform to the National Pollutant Discharge Elimination System (NPDES) requirements and to state water quality standards in accordance with Mn Rules Chapter 7050.

PP.17 Solid Waste Management

Manage solid waste and evaluate available soil management options consistent and in accordance with Dakota County Ordinance No. 110 Solid Waste Management, the *Dakota County Solid Waste Master Plan* and applicable state and federal solid waste regulations. Expand the use of compost (yard waste and food waste-derived) in MnDOT and local government transportation infrastructure projects when appropriate. Use MnDOT specifications for compost use as appropriate in roadside construction and landscaping projects.

PP.18 Hazardous Wastes and Materials

Manage hazardous wastes and hazardous materials in accordance with Dakota County Ordinance No. 111, Hazardous Waste Regulation, and applicable state and federal hazardous waste and hazardous materials regulations.

PP.19 Storm Water Pollution Prevention Plan

Prepare a Storm Water Pollution Prevention Plan (SWPPP) for transportation construction projects in conformance with MPCA permit requirements and develop soil erosion control plans and practices for transportation projects. Work with local watersheds to implement their plans to clean, infiltrate and manage water.

PP.20 State and Federal Requirements

Adhere to state and federal requirements in soliciting comments regarding construction of the transportation network.

PP.21 Minnesota Data Practices Act

Make available to the public all policies, guidelines and plans concerning highways consistent with the Minnesota Data Practices Act.

PP.22 Capital Improvement Program - Agency Involvement

Involve affected units of government, transit providers and other partners in the annual development of the CIP.

PP.23 Multi-Disciplinary Work Teams

Solicit input from and involve all interested parties in the planning and design of transportation projects to properly reflect community and environmental values.

PP.24 Manage the Adopt-a-Highway Program

Manage a program whereby the public can adopt segments of the county highway system to assist in keeping the highway right-of-way clean.

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

F.1 Cost Participation - Roadway

For cities with populations over 5,000, the county will participate in engineering and construction costs for county highway and associated improvements as defined in Table 4 after deducting federal and state cost participation amounts, for the following cost-shared items, individually or in combination, for projects included in the adopted County CIP:

1. Highway construction.
2. Mitigation required by local, state and federal permits, including accessibility requirements.
3. Eligible storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
4. Replacement or restoration of fences, landscaping, and driveways when affected by construction.
5. Centerline drainage culverts.
6. Existing traffic signals as part of a roadway project.

7. Replace or adjust sanitary sewer, water, and storm sewer systems, if required due to county highway construction.
8. Replace or adjust privately owned public utilities when utilities exist within privately held easements.
9. Eligible water pollution control best management practice items based on the county's share of contributing flows and meeting National Pollution Discharge Elimination System (NPDES) standards such as outlet structures, sedimentation basins and ponds, and temporary erosion control. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.
10. Trail and sidewalks along county highways including pedestrian crossing improvements such as beacons, median refuges and bump outs, and overpasses or underpasses, including the Transportation share of greenway crossings, as deemed necessary by the county for safe accommodation of pedestrians and bicycles in the highway right-of-way.
11. Lighting of sidewalks and trails adjacent to county highways in marked school zones and pedestrian crossings in county highways right-of-way.
12. Transit infrastructure improvements on highways, including bus pullouts, bus shelter pads, and other pedestrian facilities determined necessary to support transit.

The county will be responsible for 100 percent of the costs of existing pavement retained and/or rehabilitated through mill and overlay, resurfacing, reclamation, or other methods, as part of the final project. Applicable cost share policies will be applied to all other new construction or reconstruction involving excavation, installation, and placement of other new or reconstructed infrastructure. All other maintenance responsibilities not stated within a policy are county responsibilities. This policy (F.1) also is applied to the county highway portion of trunk highway projects.

Investment Goal Activities by County/City Share

Dakota County Highway Cost Share Policy Overview

Please refer to individual policies for specific details.

Investment Goal	Activities	County Share	City Share	Comments	Cost Share Policy
Preservation	Paved Highway Surface Gravel Highway Surface Bridge Rehabilitation Traffic Safety and Operation Pedestrian and Bicycle Facilities Retaining Wall Rail Crossings	100%	0%		F.17 F.8
	Storm Sewer Maintenance	up to 80%		Up to 80% County for leads and up to 80% City for mainline	F.7
Management	Small Safety Projects	up to 100%			F.15
	Roundabouts	up to 85%	15%	+15% City share per City leg	F.13
	New Traffic Signals	55%	45%		F.4
Replacement and Modernization	Highway Replacement Bridge Replacement Gravel Road Paving Lane Reductions 2- to 3-Lane Modernization	85%	15%	Includes improvements such as turn lanes, medians, shoulders, trails, sidewalks and school zone and pedestrian crossing lighting. Does not include additional through lanes, small safety projects, traffic signals or interchanges.	F.1 F.2 F.3 F.19
	Signal Replacement and Modernization	up to 100%		Cost split per leg	F.4
Replacement and Modernization and Expansion	Aesthetics	up to 3%		Up to 3% of construction cost	F.2
Expansion	Principal Arterials - non-Freeway	85%	15%	Does not include small safety projects, traffic signals or interchanges	F.1 F.2
	10-ton Routes and 6-lane -1/2 mile spacing	75%	25%	Does not include small safety projects, roundabouts, traffic signals or interchanges	F.3 F.14
	All Other Expansion Projects	55%	45%		
	Interchanges	avg. legs		Average of legs	

Table 4.

NOTE: The county is responsible for operation, maintenance and power cost for enhanced or dynamic signing unless otherwise noted.

F.2 Cost Participation - Aesthetic

Participate in aesthetics up to three percent of the county share of highway construction costs (excluding right-of-way, bridges, ponds, and storm sewers) prior to application of federal, state, or jurisdictional transfer funds. The county share of aesthetic participation may not exceed the local cost share for aesthetics. Aesthetics may include landscaping, plantings, decorative pavements, surface treatments, or decorative fencing. The county will not participate in aesthetics on preservation or management projects.

Aesthetic elements are subject to clear zone and sight line requirements, may not hinder normal maintenance operations, or degrade safety or operation of the highway, including trail or sidewalk facilities. The county will not participate in additional right-of-way necessary for only aesthetic enhancements. The local agency is responsible for maintenance of all aesthetic elements. Failure to maintain aesthetic elements may result in the local agency no longer being eligible for aesthetic funding participation. The county reserves the right to remove non-maintained aesthetic elements and recover costs from the local agency.

F.3 Cost Participation - Right-of-Way

For cities with populations over 5,000, the county will participate in the cost of right-of-way for county highway and associated improvements as defined in Table 4 for existing highways where right-of-way is required for:

1. The construction of items described in F.1, (1-11), F.4 (Traffic Signals), and F.13 (Roundabouts) provided city land use decisions have supported right-of-way needs in the corridor.
2. The county's portion of storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
3. The county portion of water pollution control best management practice items based on the county's share of the contributing flows and meeting NPDES standards. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.

F.4 Cost Participation – Traffic Signals

Traffic signals on county highways including construction costs for attached streetlights, interconnection, pre-emption, etc., will be eligible for the following county engineering and construction item participation after subtracting federal and/or state funds as follows:

1. New traffic signal installation, both independent installations or when included with a broader highway project, up to 55 percent county funds.
2. Existing traffic signal replacement or modernization including operational revisions for independent intersection projects such as flashing yellow arrows and pedestrian indications up to the percentage of intersection approach legs under county jurisdiction.
3. 100 percent of traffic signal removals and any directly associated intersection revision construction costs as independent or included in a broader highway project.
4. County standard for signal poles is galvanized. Initial painting and maintenance re-painting costs are aesthetic and is at city cost.

F.5 Cost Participation Involving Federal and State Funds

Subtract from the county eligible project costs, funds received from regional federal solicitation, Trunk Highway Fund, Trunk Highway Jurisdictional Transfer Fund, or federal or state grants, with the balance of remaining costs divided according to applicable county policies.

F.6 Cost Participation for Populations Less Than 5,000

Pay all costs for eligible construction and reconstruction for county highway improvements in cities with populations less than 5,000 and all townships.

F.7 Cost Participation for Storm Sewer System Maintenance

Share the cost of city maintenance of the following elements of county transportation facility storm water drainage systems:

1. Roadway catch basins and pipes connecting catch basins to mainline pipes are eligible for up to 80 percent county participation, or the county share of contributing flows, whichever is less.
2. Mainline pipes at a minimum of 20 percent or the county’s share of contributing flows, whichever is greater.
3. Storm water treatment and mitigation facilities based on the county's share of contributing flows.

4. To be eligible for county participation, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide storm water roles and cost responsibilities. These cost share agreements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
5. To be eligible for county participation, storm sewer repair and maintenance projects must be included in the currently adopted CIP or be approved by the county prior to incurring costs.

F.8 Multi-Use Trails and Sidewalk Maintenance

Participate in pavement preservation, overlay, or reconstruction of trails and sidewalks along the county highway system up to 100 percent. The city is responsible for snow and ice removal. To be eligible for county participation in trails and sidewalks, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide trail and sidewalk roles and cost responsibilities.

F.9 Transit Capital and Operating

Consider participation in transit capital and operating enhancements, or pilot projects, up to 50 percent after application of federal or state funds available for the project as determined by the county.

F.10 Tax Increment Financing (TIF) Costs

Subtract from the county eligible project costs, the costs of highway improvements or other highway costs (e.g. turn lanes, traffic controls, etc.), which are, in the determination of the county, the result of tax increment financing plan or an amendment to a TIF plan with the balance of costs divided according to policies. County Board resolution is required for any significant deviation from this policy.

F.11 Township Allotment Fund

As requested by the township and approved by the County Engineer, use the "township allotment" to fund:

1. 50 percent of township road or bridge construction projects.
2. Intersection lighting of county highways, including energy costs. (Energy costs will be submitted on an annual basis.)
3. Sign replacement funding.

F.12 Capital Improvement Program

Annually prepare and review the five-year Transportation, Transportation Sales and Use Tax and Regional Railroad Authority CIP's.

F.13 Cost Participation – Roundabouts

Participate up to 85 percent of the costs for eligible engineering and construction items, including streetlights and other features determined as necessary for operation, for roundabouts as described in Policy F.1. as follows:

- County Intersections: 25 percent base level of participation plus 15 percent for each county approach leg of the intersection.
- Trunk Highway Intersections: 85 percent for each county leg of the intersection after application of federal and/or state funds.

The county does not participate in strictly aesthetic elements for roundabout projects.

F.14 Cost Participation – Future County Road Segments

At county discretion, participate in the construction and engineering costs in accordance with F.1 for constructing local roadways that are identified as future county highway segments to county standards, over and above the costs that would have been incurred to construct the segment to city collector street standards.

F.15 Cost Participation – Small Safety Projects

The county may participate up to 100 percent of the engineering and construction costs of the following project types based on county review or prioritization to improve the safety of the transportation system, provided that they would not otherwise be included in a larger management, replacement and modernization or expansion project, or permit request:

1. Median closures or modifications;
2. Access closures or modifications;
3. Streetlights at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs;
4. Turn lanes or channelization at the intersection of two county highways;
5. Pedestrian crossing improvements including median refuges, bump outs, and pavement markings;
6. Guardrail Installation; and
7. ADA required safety improvements including curb ramps, sidewalk and bus shelter pads, and sidewalk connections within county highway right-of-way.

F.16 Cost Participation – Local Roadway System

The county may participate up to 85 percent, as defined on Table 4, of the costs for construction of local roadways necessary to directly mitigate physical, safety or operational deficiencies on the county highway system. Actual participation amount shall be based on the quantifiable benefit to the county highway system, as determined by the county based on engineering study. Local roadway construction costs that will be considered include:

1. Costs associated with relocation and construction of portions of the local roadway system to provide for its continuity and operation at a level that approximates its condition prior to construction of a county highway project.
2. Costs associated with improvements necessary to adequately accommodate county highway traffic detoured onto a local roadway during county highway construction.
3. Costs to improve local roadways to adequately accommodate traffic turning from the county highway onto a local roadway due to the addition of turn lanes on the county highway.
4. Costs directly associated with removal or consolidation of existing access to the county highway system.
5. Costs associated with construction of a local roadway that directly mitigates an existing county highway safety or operational issue or directly eliminates or significantly delays the need to expand the county highway system.

F.17 Traffic Signal and Street Lighting Power Costs and Maintenance Responsibilities

Participate in the maintenance and power costs for new and replacement traffic signals and standard streetlights as follows. Aesthetically enhanced and decorative streetlights are subject to Policy F.2.

A. New and Replacement

a. Installation (New and Replacement) Streetlights at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs.
b. Street lighting at roundabouts – The county will be responsible for power costs and maintenance on county-county and state-county intersection roundabouts and the city will be responsible on city-county intersection roundabouts.
c. Street lighting, maintenance and power costs for traffic signals – The county will participate in power costs for traffic signals including the streetlight up to the percentage of intersection approach legs under county jurisdiction. The streetlights must be energy saving and connected to the service cabinet. Street lighting is the luminaire, pole and all wiring located above the signal mast arm. The city is responsible for maintenance of streetlights and all costs for unmetered services. Painting maintenance of streetlights for signals is 100 percent city responsibility.

B. Existing
a. Energy saving light retrofits - The county does not participate. Cities may elect to retrofit streetlights at their cost and by permit through the county.

F.18 County Advanced Funding for City Cost Participation

The county will consider advancing the local share of a project, consistent with adopted county cost participation policies, in the approved CIP's by agreement with the city involved when all the following criteria are met:

1. The county determines there is a need on the county transportation system that should be addressed sooner than city funding allows.
2. The county has the available funds to pay the city cost share at the time the cost will be incurred.
3. The city submits a request to the county explaining the reason(s) for the county to advance fund their share.
4. The plan for city repayment is defined in an agreement between the city and county.
5. County advance funding is limited to a maximum 3-year period.

F.19 Left Turn Lane/Access Permit Process

In cities over 5,000 in population, the county will participate up to 85 percent of one half (42.5 percent) of the engineering, right-of-way and construction costs for left turn lanes required by the county through the access permitting process on high speed, two-lane, undivided county highways to accommodate a new access across from an existing access that does not have an existing left turn or bypass lane. For locations in cities under 5,000 in population or townships, the county may participate up to 50 percent of the engineering, right-of-way and construction costs.

Goal 2: Preservation of the Existing System

P.1 Bridge Inspection and Maintenance

Perform inspection and maintenance of bridges in compliance with state statutes, MnDOT, and federal requirements.

P.2 Bicycle Trail Resurfacing

Perform trail maintenance and trail resurfacing at end of useful pavement life for trails in county right-of-way.

P.3 County Highway Sweeping

Sweep all county highways with urban sections, and selected county highways with rural sections as necessary based on debris, annually in the spring. County highway segments will also be swept in the non-snow season as determined necessary by the county based on debris. Fall street sweeping will focus on removing leaves from urbanized segments of the county's road system. The county will:

1. Strive to remove sand before it goes into the storm sewer.
2. Attempt to remove leaves from the gutters.
3. Rotate the order of sweeping among the cities.
4. Work with cities to determine priority areas to clean first (e.g., to prevent sand from going into catch basins where there may be a problem).
5. If additional assistance is needed, consider contracting with local municipalities.
6. Comply with NPDES requirements.

P.4 Mowing Policy

During the growing season (May to October), mow medians and boulevards in non-rural areas up to six times per year for safety. In rural areas observe Minnesota Statute 160.232 - Mowing Ditches Outside Cities. Cities may supplement the mowing.

P.5 Mailbox Replacement

Mailboxes conforming to current design standards adjacent to highways that have been hit directly by a snowplow or have been removed by a county project or maintenance activity will be repaired or replaced with a conforming mailbox at the expense of the county. Owners are responsible for the care and replacement of mailboxes unless hit directly by a snowplow. Mailboxes adjacent to highways that require repair or replacement because they are a safety hazard or because they are non-conforming will be replaced by the owner or the county in accordance with Minnesota Statute 169.072.

P.6 Drainage Cleaning

Clean drainage ditches, gutters, and storm sewer inlet grates as identified per maintenance agreements for storm sewer systems.

P.7 Permit Coordination

Coordinate permit approval with cities prior to issuing permits to avoid possible city conflicts.

Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

M.1 Access Guidelines - Local Streets and Driveways

Pursue spacing and configuration of intersecting local streets and driveways in accordance with access management principles and with the county's adopted access guidelines through the plat approval process, in conjunction with construction projects, corridor studies, or as required by safety and operation of the highway in consideration of all users.

M.2 Weight Restrictions

The County Engineer may impose weight restrictions on county highways to prevent significant structural deterioration.

M.3 10-Ton Routes - Plan Updates

With each plan update, adopt an updated network of 10-ton routes.

M.4 10-Ton Routes – Designation

10-ton routes will be designated consistent with applicable State Statutes based on the following criteria:

- The proposed route is included on the adopted 10-ton route system;
- Adequate pavement structure and cross section design;
- Provides primary access to intensive industrial and commercial development;
- Provides primary access to trunk highways or other 10-ton routes;
- Has support of townships through township board consultation and cities through a city council resolution; and
- Board resolution.

M.5 Jurisdictional Classification - Potential Jurisdictional Transfers

Evaluate county highways identified for potential jurisdictional changes, including highways not on the county system according to the following criteria:

- Traffic volumes
- Functional classification
- Connections to major activity centers
- Connectivity to the metropolitan transportation system
- Goods movement function
- Economic impact
- Mobility versus land access
- Spacing between county highways
- Route continuity
- Connectivity to multiple communities and areas outside the region

M.6 Jurisdictional Transfers

For roadways identified in the Plan for jurisdictional transfer:

- Coordinate efforts with local units of government to complete jurisdictional transfers in accordance with MN Statute 163.11.
- Work in cooperation with local governments to execute agreements prior to official revocation of the highway by County Board resolution.
- Consider potential MnDOT jurisdictional transfers on a case-by-case basis by County Board resolution.
- If agreeable between the county and a city or township, provide financial payment for jurisdictional transfers based on need or highway improvement in lieu of making improvements.

M.7 Traffic Control Signals – City or State Maintenance Assistance

Provide maintenance assistance and advanced traffic management system management (ATMS) for traffic control signals under the jurisdiction of cities or the state. Maintenance assistance and

access to the county's ATMS will be defined through agreements. The city will reimburse the county for actual costs incurred for staff, equipment and materials used through an annual fee. The county will evaluate the annual fee each year.

M.8 Traffic Control Signals – Transit Priority

Work with transit providers, cities, and the state to evaluate the use of priority timing of signal systems for transit vehicles along specific corridors.

M.9 Intersection Traffic Control Changes

Install, modify, or remove intersection traffic controls based on engineering study to determine the best measure for the safety and operation of the intersection and adjacent corridor. Installation or removal of intersection traffic controls requires County Board approval.

M.10 Right-of-Way - Landscaping

By permit, allow low maintenance landscape plantings on highway right-of-way. Permittees will be responsible for maintenance of landscape and associated facilities.

M.11 Contiguous Plat Ordinance

The Plat Commission will review any plat adjacent to a county highway or a highway shown on the plats needs map as identified in the Contiguous Plat Ordinance No.108.
The review of a proposed plat and final approval of that plat is specifically limited to the following factors of countywide significance:

1. Ingress and egress to and from county roads.
2. Approach grade intersection with county roads.
3. Drainage.
4. Safety standards.
5. Right-of-way requirements of county roads.
6. Local road system integration with county road system.
7. Land use impact on development of county road system.

M.12 Right-of-Way Permits

Require a permit for any obstruction, excavation or placement of signs, utilities, facilities or other items within the county rights-of-way. The permit application process and requirements are described in Ordinance No. 126, Management of the Public Right-of-Way, and the Right-of-Way Management Procedures document, which details permit issuance practices.

M.13 Bicycle and Pedestrian Facilities within County Right-of-Way

Require approval for design and location of bicycle and pedestrian facilities by non-county agencies within county highway right-of-way.

M.14 Bicycle and Pedestrian Facilities Signs and Pavement Markings

Traffic controls and signage on bicycle and trail facilities will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

M.15 Bicycle and Pedestrian Facility Construction

Construct bicycle and pedestrian facilities in conjunction with all highway construction and mill and overlay projects based on needs and context, to the extent practical.

M.16 On-Road Bicycle Facilities

Include bikeable shoulders on county highways in rural and urban areas with roadway projects when practical.

Goal 4: Replacement and Modernization of Deficient Elements of the System

R.1 Highway Replacement

Reconstruct and modernize highways or highway elements that have exceeded their useful life based on structural, functional, operational or safety factors.

R.2 Bridge Inspections

Perform bridge inspections of county bridges in accordance with applicable laws and rules.

Goal 5: Transit and Transitways

T.1 Funding Partnerships

Provide funding for transitway operations in accordance with established regional and interagency agreements and consider providing funding contributions for other services on an individual basis in cooperation with service providers and local municipalities and according to applicable County Cost Participation Policies.

T.2 Improve Operating Conditions

Dakota County will identify and pursue feasible improvements to county highways through the Capital Improvement Program that can improve transit service quality, operating efficiency, and accessibility to provide an integrated multi-modal system that will maximize the movement of people within Dakota County and the region.

T.3 Develop Cost Effective and Efficient Transit Solutions through Mobility Management

Dakota County will assume a lead role, currently through GoDakota, with transit providers and human service agencies and other community stakeholders to identify opportunities for broad collaboration, coordination and integration between all transportation modes that is consistent with mobility management concepts.

T.4 Consider Transit Facility Needs in All Transportation Projects

Provide infrastructure for transit operations and transit service access within county highway right-of-way where practical including signage, pedestrian facilities, bus pull-outs, and bus stop amenities.

Goal 6: Expansion of Transportation Corridors

E.1 Right-of-Way Acquisition - Highway Construction/Plat Dedication

When appropriate, assure that right-of-way acquisition for highway construction projects is consistent with plat dedication requirements to plan for long term system needs.

E.2 Right-of-Way - Standards

Follow standards for placement of utilities, trails, and other structures within highway right-of-way to minimize the need for relocation due to future expansion.

E.3 Right-of-Way - 20-Year Needs Map

Develop and maintain a countywide right-of-way needs map based upon long-term system capacity needs to identify future right-of-way needs. The following factors will be considered:

1. 20-year traffic projections.
2. Function of highway.
3. Corridor preservation.
4. Consistency with policy objectives.
5. Environmental considerations.
6. Intermodal potential.
7. Coordination with adjacent land use.
8. Corridor study recommendations.
9. Future interchanges locations.
10. Continuity along corridors.

E.4 Future County Highway Alignments

Future county highway alignments and re-alignments are identified through engineering studies and adopted by County Board resolution.

Plan Policy Revisions

Transportation Plan Principles

PP.1 Cultural and Natural Resources

The preservation and enhancement of the region's cultural and natural resources will be balanced with transportation projects in accordance to Minnesota Environmental Quality Board (MEQB), the National Environmental Policy Act (NEPA) and Dakota County Land Conservation Plan ~~Farmland/Natural Areas~~ guidelines.

PP.2 Wetland Mitigation Areas

When wetland impacts cannot be avoided, create~~Create~~ wetland mitigation areas in compliance with local, state and federal permits by delineating wetlands on transportation projects,~~;~~ creating wetland mitigation areas within the affected watershed first and within the county second~~;~~ and developing wetland bank credits for cost effective wetland mitigation of future transportation projects.

PP.3 Well and Water Supply

When appropriate, install, maintain, or permanently seal all wells impacted or used in conjunction with any transportation project, in accordance with Dakota County Ordinance No. 114, Well and Water Supply Management and MN Rules 4725.

PP.4 On-Site Sewage Treatment

When appropriate, properly install, maintain, or ~~permanently seal~~properly abandon all sewage systems impacted or used in conjunction with any Dakota County transportation project, in accordance with Dakota County Ordinance No. 113, On-Site Sewage Treatment and MN Rules 7080.

PP.5 Surface Water Drainage System Design

Design surface water drainage systems with transportation system improvements to protect water quality and reduce long-term costs associated with managing and maintaining drainage systems. Comply with all federal, state and local requirements.

~~**PP.6 Paved Shoulders, Trails and Bike Lanes**~~

~~Include paved shoulders or trails as a regular component of highway improvements on both sides of the highway where practical. Prioritization of bike lanes or shoulder improvements will be made in consideration of an identified system.~~

PP. 6 Pedestrian and Bicycle Facilities

Evaluate all transportation projects for opportunities to improve bicycle and pedestrian connectivity and safety, including repair or provision of shared use paths, shoulders bike lanes, sidewalks and crossing safety improvements.

PP.7 Design and Construction Standards

Use Mn/DOT, AASHTO, State Aid, and Federal Aid standards as appropriate in the design and construction of highways.

PP.8 Traffic Control Devices Design and Operation

Design and operate traffic control devices on the highway and on adjacent trail systems according to engineering study and standards as stated in the Highway Traffic Regulation Act (MS Ch. 169) and Minnesota Manual on Uniform Traffic Control Devices (MNMUTCD).

PP.9 Speed Limits

Speed limits will be posted on highways as provided by Minnesota law. The County Engineer is authorized to request MnDOT~~Mn/DOT~~ to perform traffic studies to determine the reasonable and safe speed limits on highways where conditions have sufficiently changed to warrant a study and/or when a city council requests a speed study by resolution. Special speed zones may be appropriate adjacent to schools, in rural centers and in areas where many pedestrians are present.

PP.10 Parking Restrictions

The County Engineer is authorized, at the county's discretion, to place parking restrictions on county highways when supported by city council resolution.

PP.11 Temporary Traffic Controls

The County Engineer is authorized to establish, maintain, and remove temporary traffic controls as necessary to allow safe and efficient progress of authorized highway projects, or for emergency situations.

PP.12 CIP

Annually prepare and review the five-year Transportation CIP.

PP.13 CIP Resolution

Annually require a city council or township board resolution that requests and supports inclusion of a proposed project in the Transportation CIP.

PP.14 Transportation Plan Consistency

Prioritization and selection of Transportation CIP projects will consider consistency with the Transportation Plan and with Plan investment goals.

PP.15 Environmental Regulations

Follow the Dakota County Physical Development Division Environmental Due Diligence Process, investigate and clean up contamination in accordance with Minnesota Pollution Control Agency guidance when encountered, complete Regulated Building Materials Surveys on buildings that are to be demolished, and adhere to best management practices on all projects. ~~Evaluate environmental effects of projects and adhere to guidelines, licenses, and permits as required by local, county, state and federal regulations.~~

PP.16 NURP/NPDES

Apply National Urban Runoff Program (NURP) standards, or their equivalent, for highway projects and share maintenance costs. Conform to the National Pollutant Discharge Elimination System (NPDES) requirements and to state water quality standards in accordance with Mn Rules Chapter 7050. ~~and Mn Statute 115.03.~~

PP.17 Solid Waste Management

Manage solid waste and evaluate available soil management options consistent and in accordance with Dakota County Ordinance No. 110 Solid Waste Management, the *Dakota County Solid Waste Master Plan*, and applicable state and federal solid waste regulations. Expand the use of compost (yard waste and food waste-derived) in MnDOT and local government transportation infrastructure projects when appropriate. Use MnDOT specifications for compost use as appropriate in roadside construction and landscaping projects.

PP.18 Hazardous Wastes and Materials

Manage hazardous wastes and hazardous materials in accordance with Dakota County Ordinance No. 111, Hazardous Waste Regulation, and applicable state and federal hazardous waste and hazardous materials regulations.

PP.19 Storm Water Pollution Prevention Plan

Prepare a Stormwater Pollution Prevention Plan (SWPPP) for highway construction projects in conformance with MPCA permit requirements~~,~~ and develop soil erosion control plans and practices for transportation projects. Work with local watersheds to implement their plans to clean, infiltrate and manage water.

PP.20 State and Federal Requirements

Adhere to state and federal requirements in soliciting comments regarding construction of the transportation network.

PP.21 Minnesota Data Practices Act

Make available to the public all policies, guidelines, and plans concerning highways consistent with the Minnesota Data Practices Act.

PP.22 Capital Improvement Program - Agency Involvement

Involve affected units of government, ~~and~~ transit providers and other partners in the annual development of the CIP.

PP.23 Multi-Disciplinary Work Teams

Solicit input from and involve all interested parties in the planning and design of transportation projects to properly reflect community and environmental values.

PP.24 Manage the Adopt-a-Highway Program

Manage a program whereby the public can adopt segments of the county highway system to assist in keeping the highway right-of-way clean.

Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

F.1 Cost Participation - Roadway

For cities with populations over 5,000, the county will participate in engineering and construction costs for county highway and associated improvements as defined in Table 4 after deducting federal and state cost participation amounts, for the following cost-shared items, individually or

in combination, ~~up to 55 percent of the engineering and construction costs of the following cost-shared items~~ for projects included in the adopted CIP:

1. Highway construction. ~~items.~~
2. Mitigation required by local, state and federal permits, including accessibility requirements.
3. Eligible storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
4. Replacement or restoration of fences, landscaping, and driveways when affected by construction.
5. Centerline drainage culverts.

~~5.~~6. Existing t~~T~~raffic s~~S~~ignals as part of a roadway project.

~~6.~~7. Replace or adjust sanitary sewer, water, and storm sewer systems, if required due to county highway construction.

~~7.~~8. Replace or adjust privately owned public utilities when utilities exist within privately held easements. ~~not performed at the expense of the utility.~~

~~8.~~9. Eligible water pollution control best management practice items based on the c~~C~~ounty's share of contributing flows and meeting National Pollution Discharge Elimination System (NPDES) ~~National Urban Runoff Protection (NURP)~~ standards such as outlet structures, sedimentation basins and ponds, and temporary erosion control. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.

~~9. Design elements integral to the safe design and operation of a roundabout, including: street lighting, line of sight treatments, and pedestrian safety and accessibility treatments.~~

10. Trail and sidewalks along county highways including pedestrian crossing improvements such as beacons, median refuges and bump outs, and overpasses or underpasses, including the Transportation share of Greenway crossings, as deemed necessary by the county for safe accommodation of pedestrians and bicycles in the highway right-of-way.
11. Lighting of sidewalks and trails adjacent to county highways in marked school zones and pedestrian crossings in county highways right-of-way.

~~10.~~12. Transit infrastructure improvements on highways, including bus pullouts, bus shelter~~s~~ pads, and other ~~a~~ll pedestrian facilities determined necessary to support transit.

The county will be responsible for 100 percent of the costs of existing pavement retained and/or rehabilitated through mill and overlay, resurfacing, reclamation, or other methods, as part of the final project. Applicable cost share policies will be applied to all other new construction or reconstruction involving excavation, installation, and placement of other new or reconstructed infrastructure. All other maintenance responsibilities not stated within a policy are county responsibilities. This policy (F.1) also is applied to the county highway portion of t~~T~~runk t~~H~~ighway p~~P~~rojects. ~~Along principal arterials, interchanges and segments designated for ½ mile full access spacing, the City's cost share for the County eligible engineering and construction costs of the above items will be a maximum of 25 percent of the total costs.~~

TABLE 4.

Dakota County Highway Cost Share Policy Overview

Please refer to individual policies for specific details.

Investment Goal	Activities	County Share	City Share	Comments	Cost Share Policy
Preservation	Paved Highway Surface Gravel Highway Surface Bridge Rehabilitation Traffic Safety and Operation Pedestrian and Bicycle Facilities Retaining Wall Rail Crossings	100%	0%		F.17 F.8
	Storm Sewer Maintenance	up to 80%		Up to 80% County for leads and up to 80% City for mainline	F.7
Management	Small Safety Projects	up to 100%			F.15
	Roundabouts	up to 85%	15%	+15% City share per City leg	F.13
	New Traffic Signals	55%	45%		F.4
Replacement and Modernization	Highway Replacement Bridge Replacement Gravel Road Paving Lane Reductions 2- to 3-Lane Modernization	85%	15%	Includes improvements such as turn lanes, medians, shoulders, trails, sidewalks and school zone and pedestrian crossing lighting. Does not include additional through lanes, small safety projects, traffic signals or interchanges.	F.1 F.2 F.3 F.19
	Signal Replacement and Modernization	up to 100%		Cost split per leg	F.4
Replacement and Modernization and Expansion	Aesthetics	up to 3%		Up to 3% of construction cost	F.2
Expansion	Principal Arterials - non-Freeway	85%	15%	Does not include small safety projects, traffic signals or interchanges	F.1 F.2
	10-ton Routes and 6-lane -1/2 mile spacing	75%	25%	Does not include small safety projects, roundabouts, traffic signals or interchanges	F.3 F.14
	All Other Expansion Projects	55%	45%		
	Interchanges	avg. legs		Average of legs	

Table 4.

NOTE: The county is responsible for operation, maintenance and power cost for enhanced or dynamic signing unless otherwise noted.

F.2 Cost Participation - Aesthetic

Participate in aesthetics up to three percent of the county share of highway construction costs (excluding right-of-way, bridges, ponds, and storm sewers) prior to application of federal, state, or jurisdictional transfer funds. The county share of aesthetic participation may not exceed the local cost share for aesthetics. Aesthetics may include landscaping, plantings, decorative pavements, surface treatments, or decorative fencing. The county will not participate in aesthetics on preservation or management projects.

~~Along designated transitway corridors, participate in aesthetics up to six percent of the County share of transit improvement costs, and up to three percent of the County share of highway improvement costs. The local share of construction and installation costs for aesthetic elements determined by the County to be a necessary component of a regional transitway project will be 20 percent after application of applicable federal, state and regional funding sources. The local share of costs for aesthetic elements not determined as a necessary component by the County will be 100 percent. Maintenance of aesthetic elements of transitway projects will be~~

~~accomplished in accordance with applicable County highway maintenance policies. (Also as Policy T.4).~~

Aesthetic elements are subject to clear zone and sight line requirements, may not hinder normal maintenance operations, or degrade safety or operation of the highway, including trail or sidewalk facilities. The county will not participate in additional right-of-way necessary for only aesthetic enhancements. The local agency is responsible for maintenance of all aesthetic elements. Failure to maintain aesthetic elements may result in the local agency no longer being eligible for aesthetic funding participation. The county reserves the right to remove non-maintained aesthetic elements and recover costs from the local agency.

F.3 Cost Participation - Right-of-W~~w~~ay

For cities with populations over 5,000, the county will participate in ~~up to 55 percent of~~ the cost of right-of-way for county ~~existing~~ highway~~s~~ and associated improvements as defined in Table 4 for existing highways where right-of-way is required for:

4. The construction of items described in F.1, (1-~~10~~11) and F.~~45~~ (Traffic Signals), and F.1~~3~~2 (Roundabouts) provided city land use decisions have supported right-of-way needs in the corridor.
5. The county's portion of storm sewer and other drainage facilities based on contributing flows meeting State Aid sharing factors.
6. The county portion of water pollution control best management practice items based on the county's share of the contributing flows and meeting NPDES standards. This includes recognition of the best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.

~~Along principal arterials, interchanges, and segments designated for ½ mile full access spacing, the City's cost share for the right-of-way acquisition costs as described above will be a maximum of 25 percent of the total right-of-way costs.~~

~~**F.4 Cost Participation - Engineering**~~

~~For cities with populations over 5,000, design and construction engineering costs will be split based on the County and city share of construction costs.~~

F.~~4~~5 Cost Participation – Traffic Signals

Traffic signals on county highways ~~(~~including construction costs for attached street lights, interconnection, pre-emption, etc.~~)~~, will be eligible for the following county engineering~~participation~~ and construction item participation after subtracting federal and/or s~~S~~tate funds as follows:

1. New traffic s~~S~~ignal i~~I~~nstallation, both independent installations or when included with a broader highway project, ~~Operational Revisions and Signal Placement with highway projects –~~ up to 55 percent ~~%~~ c~~C~~ounty funds.
2. Existing traffic s~~S~~ignal r~~R~~eplacement or modernization ~~due to signal age –~~ including operational revisions for independent intersection projects such as flashing yellow arrows and pedestrian indications up to the percentage of intersection approach legs under c~~C~~ounty jurisdiction.
3. 100 percent of traffic signal removals and any directly associated intersection revision construction costs as independent or included in a broader highway project.

~~2.~~4. County standard for signal poles is galvanized. Initial painting and maintenance re-painting costs are aesthetic and is at city cost. ~~Painting cost, when requested is aesthetic and would be at city cost.~~

F.~~5~~6 Cost Participation Involving Federal and State Funds

Subtract from the county eligible project costs, funds received from regional federal solicitation, Trunk Highway Fund, Trunk Highway Jurisdictional Transfer Fund, or federal or state grants, with the ~~then~~ balance of the remaining costs ~~will be~~ divided according to applicable county policies.

F.~~6~~7 Cost Participation for Populations Less Than 5,000

Pay costs for eligible construction and reconstruction ~~(F.1, 1-8)~~ for county highway improvements in ~~existing projects for~~ cities with populations less than 5,000 and all townships.

F.~~7~~8 Cost Participation for Storm Sewer System Maintenance

Share the cost of city maintenance of the following elements of county transportation facility storm water drainage systems:

1. Roadway catch basins and pipes connecting catch basins to mainline pipes are eligible for up to 80 percent county participation~~.~~, or the county share of contributing flows, whichever is less.
2. Mainline pipes at a minimum of 20 percent or ~~and storm water treatment and mitigation facilities based on~~ the county's share of contributing flows~~.~~, whichever is greater.
3. Storm water treatment and mitigation facilities based on the county's share of contributing flows.
4. To be eligible for county participation, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide storm water roles and cost responsibilities. ~~storm sewer repair and maintenance projects must be included in the adopted CIP or be approved by the County prior to incurring costs.~~ These cost share replacements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
5. To be eligible for county participation, storm sewer repair and maintenance projects must be included in the currently adopted CIP or be approved by the county prior to incurring costs.

F.~~8~~9 ~~Cost Participation for~~ Multi-Use Trails and Sidewalk~~s~~ Maintenance

Participate in pavement preservation, ~~the~~ overlay or reconstruction of trails and sidewalks along the county highway system up to 100 ~~55~~ percent. The city is responsible for snow and ice removal. To be eligible for county participation in trails and sidewalks, a system-wide maintenance agreement between the county and local agency will be required to identify system-wide trail and sidewalk roles and cost responsibilities. ~~(less any applicable grants), if the local unit of government is following the adopted Bikeway Trail maintenance agreement. If the local unit of government has failed to follow the maintenance agreement, the overlay or reconstruction costs become the sole responsibility of the city.~~

F.~~10~~9 Transit Capital and Operating ~~Cost Participation for Transitways~~

Consider participation in transit capital and operating enhancements, or pilot projects, up to 50 percent after application of federal or~~,~~ state ~~or regional~~ funds available for the project as determined by the county. ~~The County will participate in providing the local share of regional transitway improvements as required by the Counties Transit Improvement Board (CTIB). Participate in the transit components of improvements on County Highways that are also Regional Transitways up to 80 percent of the local share. Participate in transit infrastructure~~

~~improvements up to 55 percent for less significant elements normally associated with transit projects as determined necessary by the County to support transit.~~

F.10~~11~~ Tax Increment Financing (TIF) Costs

Subtract from the county eligible project costs, the costs of highway improvements or other highway costs (e.g. turn lanes, traffic controls, etc.), which are, in the determination of the county, the result of tax increment financing plan or an amendment to a TIF plan with the balance of costs divided according to policies. County Board resolution is required for any significant deviation from this policy.

F.~~12~~11 Township Allotment Fund

As requested by the township and approved by the C~~c~~ounty E~~e~~ngineer, use the ~~—~~"township allotment" to fund:

4. 50 percent of township road or bridge construction projects.
5. Intersection lighting of county highways, including energy costs. (Energy costs will be submitted on an annual basis.)
6. Sign replacement funding.

F.~~13~~12 Capital Improvement Program

Annually prepare and review the five-year T~~t~~ransportation, Transportation Sales and Use Tax and R~~r~~egional R~~r~~ail A~~a~~uthority CIP's.

F.~~14~~13 Cost Participation – Roundabouts

Participate up to 85 ~~55~~ percent of the costs for eligible engineering and construction items, including street~~-~~lights and other features determined as necessary for operation, for roundabouts as described in Policy F.1 as follows:~~.~~

- County Intersections: 25 percent base level of participation plus 15 percent for each county approach leg of the intersection.
- Trunk Highway Intersections: 85 percent for each county leg of the intersection after application of federal and/or state funds.

The county does not participate in strictly a~~A~~esthetic elements for ~~of~~ roundabout~~s~~ projects.~~are subject to Policy F.2. For roundabouts along principal arterials, interchanges, and segments designated for ½ mile full access spacing, the City's cost share for the engineering and construction costs will be a maximum of 25 percent.~~

F.~~15~~14 Cost Share Participation – Future County Road Segments

At county discretion, participate in the construction and engineering costs in accordance with F.1 for constructing local roadways that are identified as future county roadway segments to county standards, over and above the costs that would have been incurred to construct the segment to city collector street standards.

F.~~16~~15 Cost Share Participation – Small Safety Projects

The county may participate up to 100 percent~~%~~ of the engineering and construction costs of the following project types based on county review or prioritization to improve the safety of the transportation system, provided that they would not otherwise be included in a larger management, replacement and modernization or expansion project, or permit request:

1. Median cClosures or mModifications;
2. Access cClosures or mModifications;
3. ~~Intersection~~ Streetlights ~~Street Lighting;~~ at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs;
4. Turn lLanes or cChannelization at the Intersection of tTwo county highways: ~~Roadways (including minor signal changes to accommodate improvement);~~
4.5. Pedestrian crossing improvements including median refuges, bump outs, and pavement markings;
5.6. Guardrail iInstallation; and
6.7. ADA required safety improvements including curb ramps, sidewalk and bus shelter pads, and sidewalk connections within county highway right-of-way.

F.~~17~~16 Cost Share Participation – Local Roadway System

The county may participate up to 85 percent~~55%~~, as defined on Table 4, of the costs for construction of local roadways necessary to directly mitigate physical, safety or operational deficiencies on the county highway system. Actual participation amount shall be based on the quantifiable benefit to the county highway system, as determined by the county based on engineering study. Local roadway construction costs that will be considered include:

1. Costs associated with relocation and construction of portions of the local roadway system to provide for its continuity and operation at a level that approximates its condition prior to construction of a county highway project.
2. Costs associated with improvements necessary to adequately accommodate county highway traffic detoured onto a local roadway during county highway construction.
3. Costs to improve local roadways to adequately accommodate traffic turning from the county highway onto a local roadway due to the addition of turn lanes on the county highway.
4. Costs directly associated with removal or consolidation of existing access to the county highway system.
5. Costs associated with construction of a local roadway that directly mitigates an existing county highway safety or operational issue or directly eliminates or significantly delays the need to expand the County highway system.

F.~~17~~18 Traffic Signal and Street Lighting Power Costs and Maintenance Responsibilities

Participate in the maintenance~~installation,~~ and power costs for new and replacement traffic signals and ~~maintenance, and utility costs of~~ standard streetlights as follows. Aesthetically~~-~~enhanced and decorative streetlights are subject to Policy F.2.

A. ~~Installation (~~New and Replacement~~)~~
   a. Installation (New and Replacement) Streetlights~~Intersection Street lLights~~ at intersections, marked pedestrian crossing locations and lighting along county highway trails within school zones ~~stop-controlled intersections~~ with demonstrated safety benefit based on county evaluation – Participate up to 100 percent for power and maintenance costs.~~-~~
   b. Street lighting at roundabouts – The county will be responsible for power costs and maintenance on county-county and state-county intersection roundabouts and the city will be responsible on city-county intersection roundabouts.

c. Street l~~L~~ightings~~,~~ maintenance and power costs for ~~on t~~Traffic s~~S~~ignals – The county will p~~P~~articipation in power costs for traffic signals including the streetlight up to the percentage of intersection approach legs under county jurisdiction. The streetlights must be energy saving and connected to the service cabinet. Street lighting is the luminaire, pole and all wiring located above the signal mast arm. The city is responsible for maintenance of streetlights and all costs for unmetered services. Painting maintenance of streetlights for signals is 100 percent city responsibility. ~~will be consistent with other improvements per Policy F.5.~~

~~b. Integral Street Lights at Roundabout Intersections – Participate up to 55 percent.~~

~~C. Street Lighting along High Priority Transit Corridors – Participate up to 55 percent.~~

~~D.~~ B. Existing ~~Maintenance and Utility Power Costs~~

~~a.~~ Energy saving light retrofits – The county does not participate. Cities may elect to retrofit street lights at their cost and by permit through the county. ~~Intersection Street Lights at stop-controlled intersections with demonstrated safety benefit based on County evaluation – Participate up to 100 percent.~~

~~b. Street Lighting at Roundabouts and High Priority County Transit Corridors – The County does not participate.~~

~~c. Street Lights on Traffic Signals – The County does not participate in power costs or maintenance. (Street lighting is the light, luminaire pole and all wiring located above the signal mast arm.)~~

F.18 County Advanced Funding for City Cost Participation

The county will consider advancing the local share of a project, consistent with adopted county cost participation policies, in the approved CIP's by agreement with the city involved when all the following criteria are met:

1. The county determines there is a need on the county transportation system that should be addressed sooner than city funding allows.
2. The county has available funds to pay the city cost share at the time the cost will be incurred.
3. The city submits a request to the county explaining the reason(s) for the county to advance fund their share.
4. The plan for city repayment is defined in an agreement between the city and county.
5. County advance funding is limited to a maximum 3-year period.

F.19 Left Turn Lane/Access Permit Process

In cities over 5,000 in population, the county will participate up to 85 percent of one half (42.5 percent) of the engineering, right-of-way and construction costs for left turn lanes required by the county through the access permitting process on high speed, two-lane, undivided county highways to accommodate a new access across from an existing access that does not have an existing left turn or bypass lane. For locations in cities under 5,000 in population or townships, the county may participate up to 50 percent of the engineering, right-of-way and construction costs.

NOTE: Goal 2: Transit and Integration of Transportation Modes has undergone a complete re-write. Transit-related policies are now located under Chapter 8 – Goal 5: Transit and Transitways.

~~**Goal 2: Transit and Integration of Transportation Modes**~~

T.1 Support Flexible and Expandable Transit Services

Dakota County will partner with local agencies and transit providers to maximize resource flexibility and to identify opportunities for the expansion and better utilization of existing transit services.

T.2 Secure Dedicated and Reliable Funding Sources for Transit

Dakota County will provide a leadership role in obtaining funds for transit capital projects within the County, and cooperate with regional partners to ensure permanent, dedicated, and reliable funding for transit operations through local, regional, state and national sources.

T.3 Transit Signage

Dakota County will seek to accommodate service providers in placement of signage compliant with the Minnesota MUTCD in County right-of-way to aid the effectiveness and visibility of transit service and facilities.

T.4 Streetscape Improvements

The local share of construction and installation costs for aesthetic elements determined by the County to be a necessary component of a regional transitway project will be 20 percent after application of applicable federal, state and regional funding sources. The local share of costs for aesthetic elements not determined as a necessary component by the County will be 100 percent. Maintenance of aesthetic elements of transitway projects will be accomplished in accordance with applicable County highway maintenance policies.

T.5 Transitway Development

Dakota County shall act as the lead agency for the conduct of feasibility studies and alternatives analyses for transitway projects within the County.

T.6 Improve Operating Conditions

Dakota County will identify and pursue feasible improvements to County highways through the Capital Improvement Program that can improve transit service quality and operating efficiency to provide an integrated intermodal system that will maximize the movement of people within Dakota County and the seven county Twin Cities Region.

T.7 Coordinated Service Delivery

Dakota County will lead efforts to identify and implement organizational and operating efficiencies in the delivery of paratransit service and Community Services Transportation.

T.8 Account for Evolving Transit Facility Needs

Dakota County will identify transit facilities that can effectively provide convenient access to transit users and meet service providers' needs for vehicle maintenance and efficient operation as a component of established regional and national transitway planning processes and through regional service planning efforts led by the Metropolitan Council and through the development of the Transportation CIP.

T.9 Pull-outs

Dakota County will identify and pursue opportunities to include bus pull-outs as part of ongoing construction and maintenance projects or through the Capital Improvement Program where they may benefit both transit and automobile operations.

T.10 Meet the Transit Needs of the Transit Dependent Population

Dakota County will cooperate with relevant agencies and stakeholders to identify and advance: a) provisions of better transit coverage and frequency of service; b) addition of new routes with high concentrations of transit dependent people; and c) improvement of the level of service for specialized transportation in exurban areas.

T.11 Develop Cost Effective and Efficient Transit Solutions through Mobility Management

Dakota County will partner with transit providers to identify opportunities for collaboration, coordination and integration between all transportation modes at a broader infrastructure investment level that is consistent with mobility management concepts.

T.12 Effective Use of New Technologies

Dakota County will identify and investigate technologies that can prospectively improve transit service quality and efficiency. Investigation of technology will be undertaken, as appropriate, with the cooperation of regional planning agencies and service providers.

T.13 Regional Cooperation

Dakota County will participate in the regional cooperative efforts aimed towards increasing the effectiveness of transit through technology and multi-modal demand management practices.

T.14 Link Land Use, Economic Development, Transit, and Transportation Decisions Dakota County will coordinate with local communities and agencies to promote land use and economic development that support transit services and are compatible with community and regional planning goals.

T.15 Bicycle and Trail Facilities within County Right of Way

Require the approval for design and location of bicycle and trail facilities within County highway right-of-way.

T.16 Bicycle and Trail Facilities Signs

Traffic controls and signage on bicycle and trail facilities will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

T.17 Bicycle and Trail Facilities Maintenance

Local governments are required to provide maintenance through terms of the County Bikeway Trails Maintenance Agreement. If not addressed through the trail maintenance agreements, snow removal is at the discretion of the local government.

T.18 Bicycle and Trail Facilities Construction

Construct off-highway bicycle and trail facilities in conjunction with all urban highway projects, whenever practical. Construct paved shoulders to service bicycle and pedestrian modes on rural construction and resurfacing projects whenever practical.

T.19 Complete Streets

~~Evaluate pedestrian and bicycle facilities (lighting, ramps, crosswalks, countdown timers, etc…) by context and identify deficiencies to be addressed by the County or cities.~~

Goal 2~~3~~: Preservation of the Existing System

P.1 Bridge Inspection and Maintenance

Perform inspection and maintenance of bridges in compliance with state statutes, MnDOT~~Mn/DOT~~ and federal requirements.

P.2 Bicycle Trail Resurfacing

Perform ~~Participate in~~ trail maintenance and trail resurfacing at end of useful pavement life for trails in county right-of-way. ~~maintained in accordance with the Bikeways Trails Maintenance Agreement between the County and city.~~

P.3 County Highway Sweeping

Sweep all county highways with urban sections, and selected county highways with rural sections as necessary based on debris, annually in the spring. County highway segments will also be swept in the non-snow season as determined necessary by the county based on debris. Fall street sweeping will focus on removing leaves from urbanized segments of the county's road system. The county will:

1. Strive to remove sand before it goes into the storm sewer.
2. Attempt to remove leaves from the gutters.
3~~2~~. Rotate the order of sweeping among the cities.
4~~3~~. Work with cities to determine priority areas to clean first (e.g., to prevent sand from going into catch basins where there may be a problem).
5~~4~~. If additional assistance is needed, consider contracting with local municipalities.
6. Comply with NPDES requirements.

P.4 Mowing Policy

During the growing season (May to October), mow medians and boulevards in non-rural areas up to six times per year for safety. In rural areas observe Minnesota Statute 160.232 Mowing Ditches Outside Cities. ~~and rural ditches up to four times per year for safety, in accordance with Department of Natural Resources recommended wildlife and environmental regulations.~~ Cities may supplement the mowing.

P.5 Mailbox Replacement

Mailboxes conforming to current design standards adjacent to highways that have been hit directly by a snowplow or have been removed by a county project or maintenance activity will be repaired or replaced with a conforming mailbox at the expense of the county. Owners are responsible for the care and replacement of mailboxes unless hit directly by~~with~~ a snowplow. Mailboxes adjacent to highways that require repair or replacement because they are a safety hazard or because they are non-conforming will be replaced by the owner or the county in accordance with Minnesota Statute 169.072.

P.6 Drainage Cleaning

Clean drainage ditches, gutters, and storm sewer inlet grates~~.~~ as identified per maintenance agreements for storm sewer systems.

P.7 Permit Coordination

Coordinate permit approval with cities prior to issuing permits to avoid possible city conflicts.

Goal 3~~4~~: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

M.2~~1~~ Weight Restrictions

The County Engineer may impose weight restrictions on county highways to prevent significant structural deterioration.

M.1~~2~~ Access Spacing Guidelines - Local Streets and Driveways

Pursue spacing and configuration of intersecting local streets and driveways in accordance with access management principles and with the county's adopted access guidelines through the plat approval process, in conjunction with construction projects, corridor studies or as required by safety and operation of the highway in consideration of all users.

M.3 10-Ton Routes - Plan Updates

With each plan update, adopt an updated network of ~~potential~~ 10-ton routes.

M.4 10-Ton Routes - Designation~~Implementation~~

10-ton routes will be implemented consistent with applicable ~~Minnesota~~ State Statutes based on the following criteria:

- The proposed route is included on the adopted ~~potential~~ 10-ton route system;
- Adequate pavement structure and cross section design;
- Provides primary access to intensive industrial and commercial development;
- Provides primary access to trunk highways or other 10-ton routes;
- Has support of townships through township board consultation and cities through a city council resolution; and
- Board resolution.

M.5 Jurisdictional Classification - Potential Jurisdictional Transfers

Evaluate county highways identified for potential jurisdictional changes, including highways not on the county system according to the following criteria:

- Traffic volumes
- Functional classification
- Connections to major activity centers
- Connectivity to the metropolitan transportation system
- Goods movement function
- Economic impact
- Mobility versus land access
- Spacing between county highways
- Route continuity
- Connectivity to multiple communities and areas outside the region

M.6 Jurisdictional Transfers

For roadways identified in the Plan for jurisdictional transfer:

- Coordinate efforts with local units of government to complete jurisdictional transfers in accordance with Minnesota Statute 163.11.
- Work in coordination with local governments to execute agreements prior to official revocation of the highway by County Board resolution.
- Consider potential MnDOT~~Mn/DOT~~ jurisdictional transfers on a case-by-case basis by ~~with~~ County Board resolution. ~~approval.~~
- If agreeable between the county and a city or township, provide financial payment for jurisdictional transfers based on need or highway improvement in lieu or making improvements.

M.7 Traffic Control Signals – City or State Maintenance Assistance

Provide maintenance assistance and advanced traffic management system management (ATMS) for traffic control signals under the jurisdiction of cities or the State. Maintenance assistance and access to the county's ATMS will be defined through agreements. The city will reimburse the county for actual costs incurred for staff, equipment and materials used through an annual fee. The county will evaluate the annual fee each year.

M.8 Traffic Control Signals – Transit Priority

Work with transit providers, cities, and the state to evaluate the use of priority timing of signal systems for transit vehicles along specific corridors.

~~**M.9 Traffic Control Signal Operations, Maintenance, and Energy Costs with Cities**~~

~~The county and city will share in the operation, maintenance, and energy costs of traffic signal systems in the following manner:~~

~~1. Energy costs for operation of the traffic signal system, excluding street lights, will be shared between the County and city based on the number of County and city approaches entering the intersection.~~

~~2. The County is responsible for all costs associated with maintenance and operation of traffic signal control equipment and hardware, cleaning and painting, and replacement of signal indications.~~

~~3. The city is responsible for power costs of attached street lights in accordance with Policy F.18~~

M.9~~10~~ Intersection Traffic Control Changes

Install, modify or remove intersection traffic controls ~~(such as traffic signals, roundabouts, stop signs, and channelization)~~ based on ~~a county~~ engineering study to determine ~~that indicates~~ the best measure for the safety and operation of the intersection and adjacent corridor. ~~an intersection. Installation is based on priority and availability of funds.~~ Installation or removal of intersection traffic controls requires County Board approval.

M.10~~11~~ Right-of-Way - Landscaping

By permit, allow low maintenance landscape plantings on highway right-of-way. Permittees will be responsible for maintenance of landscape and associated facilities.

M.1112 Contiguous Plat Ordinance

The Plat Commission will review any plat adjacent to a county highway or a highway shown on the plats needs map as identified in the Contiguous Plat Ordinance No.#108. The review of a proposed plat and final approval of that plat is specifically limited to the following factors of countywide significance:

1. Ingress and egress to and from county roads.
2. Approach grade intersection with county roads.
3. Drainage.
4. Safety standards.
5. Right-of-way requirements of county roads.
6. Local road system integration with county road system.
7. Land use impact on development of county road system.

M.1213 Right-of-Way Permits

Require a permit for any obstruction, excavation or placement of signs, utilities, facilities or other items within the county rights-of-way. The permit application process and requirements are described in Ordinance No. 126, Management of the Public Right-of-Way, and the Right-of-Way Management Procedures document, which details permit issuance practices.

M.13 Bicycle and Pedestrian Facilities within County Right-of-Way

Require approval for design and location of bicycle and pedestrian facilities by non-county agencies within county highway right-of-way.

M.14 Bicycle and Pedestrian Facilities Signs and Pavement Markings

Traffic controls and signage on bicycle and trail facilities will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

M.15 Bicycle and Pedestrian Facility Construction

Construct bicycle and pedestrian facilities in conjunction with all highway construction and mill and overlay projects based on needs and context, to the extent practical.

M.16 On-Road Bicycle Facilities

Include bikeable shoulder on county highways in rural and urban areas with roadway projects when practical.

Goal 45: Replacement and Modernization of Deficient Elements of the System

R.1 Highway Replacement

Reconstruct and modernize highways or highway elements that have exceeded their useful life based on structural, functional, operational or safety factors.

R.2 Bridge Inspections

Perform bridge inspections of county bridges in accordance with applicable laws and rules.

Goal 5: Transit and Transitways

T.1 Funding Partnerships

Provide funding for transitway operations in accordance with established regional and interagency agreements and consider providing funding contributions for other services on an individual basis in cooperation with service providers and local municipalities and according to applicable County Cost Participation policies.

T.2 Improve Operating Conditions

Dakota County will identify and pursue federal improvements to county highways through the Capital Improvement Program that can improve transit service quality, operating efficiency, and accessibility to provide an integrated multi-modal system that will maximize the movement of people within Dakota County and the region.

T.3 Develop Cost Effective and Efficient Transit Solutions Through Mobility Management

Dakota County will assume a lead role, currently through GoDakota, with transit providers and human service agencies and other community stakeholders to identify opportunities for broad collaboration, coordination and integration between all transportation modes that is consistent with mobility management concepts.

T.4 Consider Transit Facility Needs in All Transportation Projects

Provide infrastructure for transit operations and transit service access within county highway right-of-way where practical including signage, pedestrian facilities, bus pull-outs and bus stop amenities.

Goal 6: ~~Improvement and~~ Expansion of Transportation Corridors

~~I~~E.1 Right-of-Way Acquisition - Highway Construction/Plat Dedication

When appropriate, assure that right-of-way acquisition for highway construction projects is consistent with plat dedication requirements to plan for long term system needs.

~~I~~E.2 Right-of-Way - Standards

Follow standards for placement of utilities, trails, and other structures within highway right-of-way to minimize the need for relocation due to future expansion.

~~I~~E.3 Right-of-Way - 20-Year Needs Map

Develop and maintain a countywide right-of-way needs map based upon long-term system capacity needs to identify future right-of-way needs. The following factors will be considered:

1. 20-year traffic projections.
2. Function of highway.
3. Corridor preservation.
4. Consistency with policy objectives.
5. Environmental considerations.
6. Intermodal potential.
7. Coordination with adjacent lane use.
8. Corridor study recommendations.
9. Future interchanges locations.
10. Continuity along corridors.

~~I~~E.4 Future County Highway Alignments

Future county highway alignments and re-alignments are identified through engineering studies and adopted by County Board resolution.

Plan Policy Conversion Chart

Plan Principles

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
PP.1	Cultural and Natural Resources	PP.1	
PP.2	Wetland Mitigation Areas	PP.2	
PP.3	Well and Water Supply	PP.3	
PP.4	On-Site Sewage Treatment	PP.4	
PP.5	Surface Water Draingage System Design	PP.5	
PP.6	Paved Shoulders, Trails and Bike Lanes	revised	
	Pedestrian and Bicycle Facilities	PP.6	
PP.7	Design and Construction Standards	PP.7	
PP.8	Traffic Control Devices Design and Operation	PP.8	
PP.9	Speed Limits	PP.9	
PP.10	Parking Restrictions	PP.10	
PP.11	Temporary Traffic Controls	PP.11	
PP.12	CIP	PP.12	
PP.13	CIP Resolution	PP.13	
PP.14	Transportation Plan Consistency	PP.14	
PP.15	Environmental Regulations	PP.15	
PP.16	NURP/NPDES	PP.16	
PP.17	Solid Waste Management	PP.17	
PP.18	Hazardous Wastes and Materials	PP.18	
PP.19	Storm Water Pollution Prevention Plan	PP.19	
PP.20	State and Federal Requirements	PP.20	
PP.21	Minnesota Data Practices Act	PP.21	
PP.22	Capital Improvement Program - Agency Involvement	PP.22	
PP.23	Multi-Disciplinary Work Teams	PP.23	
PP.24	Manage the Adopt-a-Highway Program	PP.24	

Goal 1: Limited Resources are Directed to the Highest Priority Needs

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
F.1	Cost Participation -Roadway	F.1	
F.2	Cost Participation - Aesthetic	F.2	
F.3	Cost Participation - Right-of-Way	F.3	
F.4	Cost Participation - Engineering	removed	no longer applies
F.5	Cost Participation - Traffic Signals	F.4	reorganization
F.6	Cost Participation Involving Federal and State Funds	F.5	reorganization
F.7	Cost Partipcation for Populations Less Than 5,000	F.6	reorganization
F.8	Cost Participation for Storm Sewer System Maintenance	F.7	reorganization
F.9	Cost Participation for Mult-Use Trails and Sidewalks	revised	
	Multi-Use Trails and Sidewalks Maintenance	F.8	reorganization
F.10	Cost Participation for Transitways	revised	
	Transit Capital and Operating	F.9	reorganization
F.11	Tax Increment Financing (TIF) Costs	F.10	reorganization
F.12	Township Allocation Fund	F.11	reorganization
F.13	Capital Improvement Program	F.12	reorganization
F.14	Cost Participation - Roundabouts	F.13	reorganization
F.15	Cost Participation - Future County Road Segments	F.14	reorganization
F.16	Cost Participation - Small Safety Projects	F.15	reorganization
F.17	Cost Participation - Local Roadway System	F.16	reorganization
F.18	Street Lighting	revised	
	Traffic Signal and Street Lighting Power & Maintenance	F.17	reorganization
	County Advanced Funding for City Cost Participation	F.18	new policy
	Left Turn Lane/Access Permit Process	F.19	new policy

Goal 2: Preservation of the Existing System

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
P.1	Bridge Inspection and Maintenance	P.1	
P.2	Bicycle Trail Resurfacing	P.2	
P.3	County Highway Sweeping	P.3	
P.4	Mowing Policy	P.4	
P.5	Mailbox Replacement	P.5	
P.6	Drainage Cleaning	P.6	
P.7	Permit Coordination	P.7	

Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Capacity

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
M.1	Weight Restrictions	M.2	reorganization
M.2	Access Guidelines - Local Streets and Driveways	M.1	reorganization
M.3	10-Ton Routes - Plan Updates	M.3	
M.4	10-Ton Routes - Implementation	revised	
	10-Ton Routes - Designation	M.4	revised
M.5	Jurisdictional Classification - Potential Jurisdictional Transf	M.5	
M.6	Jurisdictional Transfers	M.6	
M.7	Traffic Control Signals - City or State Maintenance Assistan	M.7	
M.8	Traffic Control Signals - Transit Priority	M.8	
M.9	Traffic Control Signal Operations, Maintenance and Energy	removed	reorganization
M.10	Intersection Traffic Control Changes	M.9	
M.11	Right-of-Way - Landscaping	M.10	
M.12	Contiguous Plat Ordinance	M.11	
M.13	Right of Way Permints	M.12	
T.15	Bicycle and Trail Facilities within County Right of Way	revised	
	Bicycle and Pedestrian Facilities within County Right of Wa	M.13	reorganization
T.16	Bicycle and Trail Facilities and Signs	revised	
	Bicycle and Pedestrian Facilities, Signs and Pavement Mark	M.14	reorganization
T.18	Bicycle and Trail Facilities Construction	revised	
	Bicycle and Pedestrian Facilities Construction	M.15	reorganization
	On-Road Bicycle Facilities	M.16	new policy

Goal 4: Replacement and Modernization of Deficient Elements of the System

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
R.1	Highway Replacement	R.1	
R.2	Bridge Inspections	R.2	

Goal 5: Transit and Transitways

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
T.1	Support Flexible and Expandable Transit Service	removed	chapter re-write
T.2	Secure Dedicated and Reliable Funding Sources for Transit	removed	chapter re-write
T.3	Transit Signage	removed	chapter re-write
T.4	Streetscape Improvements	removed	chapter re-write
T.5	Transitway Development	removed	chapter re-write
T.6	Improve Operating Conditions	T.2	revised
T.7	Coordinated Service Delivery	removed	chapter re-write
T.8	Account for Evolving Transit Facility Needs	removed	chapter re-write
T.9	Pull-outs	removed	chapter re-write
T.10	Meet the Transit Needs of the Transit Dependent Populati	removed	chapter re-write
T.11	Develop Cost Effective and Efficient Transit Solutions throu	T.3	revised
T.12	Effective Use of New Technologies	removed	chapter re-write
T.13	Regional Cooperation	removed	chapter re-write
T.14	Link Land Use, Economic Development, Transit and Transpo	removed	chapter re-write
T.15	Bicycle and Trail Facilities within County Right of Way	revised	
	Bicycle and Pedestrian Facilities within County Right of Wa	M.14	reorganization
T.16	Bicycle and Trail Facilities and Signs	revised	
	Bicycle and Pedestrian Facilities, Signs and Pavement Mark	M.15	reorganization
T.17	Bicycle and Trail Facilities Maintenance	removed	chapter re-write
T.18	Bicycle and Trail Facilities Construction	revised	
	Bicycle and Pedestrian Facilities Construction	M.16	reorganization
T.19	Complete Streets	removed	chapter re-write
	Funding Partnerships	T.1	new policy
	Consider Transit Facility Needs in All Transportation Projec	T.4	new policy

Goal 6: Expansion of Transportation Corridors

2012 Plan Policy #	Policy	2020 Plan Policy #	Reason
IE.1	Right-of-Way Acquisition - Highway Construction/Plat Ded	E.1	chapter revised
IE.2	Right-of-Way - Standards	E.2	chapter revised
IE.3	Right-of-Way - 20-Year Needs Map	E.3	chapter revised
IE.4	Future County Highway Alignments	E.4	chapter revised

Appendix B

Agency and Public Engagement

AGENCY ENGAGEMENT SUMMARY - Sorted by Plan Category

INTRODUCTION AND BACKGROUND

- Q – Question concerning the travel demand model and assumptions. A – The County follows Met Council guidelines when developing the County model.

TRANSPORTATION PLAN PRINCIPLES

Technology

- Include winter treatments with Technology Principle

Environmental (SEE)

- Runoff/sustainability – what is being improved?

Context Sensitive Design

- Context sensitive design and aesthetics – make better. "Place making"

RESOURCES GOAL

Funding Sources

- Q – what about the influx of electric cars and loss of gas tax. A – slight rise into early 2020s then plateaus. Now $75/electric vehicle to make up the difference. Could double in future.
- Q – TH 3 & CSAH 86 intersection safety? A – MnDOT has funds for street lights, flashing stop sign…future roundabout?

Cost-share

- Local cost share
  - Lower cost shares help make projects more doable and quicker.
  - Would like to see a reduction in reliance on cities participation.
- Concern with local share for CSAH 46
- Cost shares 25% for 10-ton, 15% for P.A., Reconstruction less local share
- CSAH 70 improvements and cost share
- Q – What is the different between CSAH and CR? A – provided funding split percentages. Designation between the two rarely change.

TRANSIT GOAL

General

- Not sure what transit will look like in 20 years
- Cost-effectiveness of transit, make it fit demand and fit cost
- Look at need and scale
- Northfield Lines provides trips to the airport
- Hiawatha Transit Line (Northfield) is local – goes to the hospital, show on map
- There is a park and ride at the northwest corner of TH 19 & I-35.

County Role

- Non-traditional transportation
  - Partnership with other agencies, Lyft/Uber for disabled, provide mobility to those that don't drive, expand to seniors

- Q – Will County be sponsoring Uber or Lyft? A – County will examine role with other agencies.
- County role can be assisting in communication and coordination with the public and transit agencies regarding transit.
- Describe mechanism of how County pays for transit. A = direct payment to Met Council, 14% of capital and operating of Orange Line.
- Q – What is County's future role in transit. A – to be determined through this process. County would be stakeholders maybe funding partner, case-by-case scenarios.
- Transit service expansion – how to collaborate, how to advocate for additional frequency?
- Q – What is County's role in Light Rail? A – Focus on bus service to locations

Missing Services/Connections

- No express service to St. Paul, park-and-rides, how to get to park-and-rides from feeder lines.
- Consider transit needs in areas that can support (B'ville, Robert Street) – opportunity corridors.

PRESERVATION GOAL

General

- Highway Lifespan
  - Q – Lifespan of roads? A – 70 years for roads, 80-100 years for bridges.
  - What is the expect life span of a paved road? A – About 70 years with preservation techniques.
- Costs
  - Q – what is cost to maintain 55 miles of gravel in the County? A – Usually ¼ to ½ $million/yr. Mostly in southern part of the County.

Gravel Highway Surface

- Concern with the chloride used on CR 76 – good in summer, very slick in winter
- County will conduct a spring chloride application this year and will inform travelers when it is applied.

Traffic Safety and Operation

- CSAH 91 – bituminous by golf course entrance issue

Comprehensive Maintenance Agreements

- Add comprehensive maintenance agreements under preservation strategy.

Transit, Pedestrian and Bicycle Facilities

- Overlay trails at same time as roads? Will be evolving, we'll do it in the future. Eliminate city cost share on trail maintenance.

MANAGEMENT GOAL

General

- Snow Removal
  - Concern with CSAH 96/320th Street snow plow timing, seems last.
  - Concern with safety and snow control. Could have living snow break/corn rows on CSAH 47 and CSAH 88.
  - Concern with snow drifting on CSAH 88 at Cooper in Randolph.
- Concern with truck breaking on CSAH 47 – can't do anything about it, can't enforce.
- Concerns with the railroad side tracks and spur line in the Eureka township.
- Township Cost - should contact the County's Assistant Engineer regarding township costs for dust control, asphalt, gravel and salt contracts.
- Q – How does the County guide lane use? A – Cities and townships are responsible for guiding land use.

- Concern with casino bus traffic using CSAH 54. They are not supposed to, they get notified and stop for a while, but then it continues.

Functional Classification

- Update CSAH 86 as a Principal Arterial

10-ton Highways

- Concern with CSAH 47 and 10-ton designation and if it requires rebuilding or widening.
- Q – How do truck drivers know where 10-ton routes are located? A – The County posts all other roads as 9-ton roads.

Jurisdictional Classification

- Thompson is a turnback candidate to SSP & WSP. Upgrade to city requirements including sidewalk and trail.
- Concern with taking jurisdictional ownership
  - CSAH 90 turnback. They are concerned with it and don't want turnbacks.
  - Concern with 225th & 245th (Dodd to County boundary) as potential township to county turnback candidates. County will continue to work with the Township on these future designations. County will only take jurisdiction if township is a willing partner.
  - Concerns with 225th turnback. Depends on the township. County has no schedule to improve it.

Traffic Control Devices

- Would like to see more flashing yellow traffic turn signals in future upgrades.
- Q – How is the County managing signals and coordination. A – Top corridors now have signal coordination and real-time adjustment capabilities.

Safety & Management

- Questions about speed limits and traffic control. Speed limits set by MnDOT speed study for Co Rd. Traffic control set by MnDOT Manual.
- Review access spacing guidelines – issue with CSAH 64 and TH 3 limiting access thus requiring connections into Empire from Farmington development.
- Canada/Cannon Avenue at CSAH 47 – issue with drainage, no ditch at intersection.
- CSAH 86 & 78 closer to Hampton is in a dark location, put chevrons up.

  Study/Education/Etc.
  - Update of Dodd/Icenic, ¾'s, school district will change circulation patterns
  - Roundabout use education, especially for pedestrian use – difficulty in how to use (good example East Ridge HS)
  - Explained that speed limits are set by state statute, MnDOT speed study, statute requires school zone study.

  School Zone Study/Concerns
  - School study – CSAH 50/Ipava/185th ped gap?
  - County school zone study
  - Concern with Diffley speeds being too high and people driving over the speed limit, lots of people crossing the road to schools and tournaments
  - Reference in plan under management that all county roads adjacent to schools, develop tool box of strategies
  - Concern with safe routes to schools and safe access for Summerset, Pilot Knob, and HSHS.
  - Concerns with Delaware cross walk location and bicycle safety at HSHS.
  - School zones – reduce speeds in front of schools (similar to Simley HS) A = Section in manual and criteria on how to sign is followed.
  - Pilot Knob school on Lone Oak needs better crossings, large residential area across the street

- Burnsville school district is closing three schools, no future plans for them identified. Visit 191 website for info.
- Q – Why is speed limit on CSAH 88 in Randolph 35 mph and not 25 mph. A – Speed study must be done by statute to deviate from 55 mph. Hard to enforce. Look into designation as a school zone.

Management-related Concerns on MnDOT Highways

- TH 3
  - Highway needs to be replaced
  - Discussion regarding roundabout at RHS
  - EB to SB at 297th visibility is poor
  - EB to SB at 315th visibility is poor
  - Intersection at CSAH 47 has drainage problems and concerns regarding safety. Future roundabout and access changes?
  - TH 3/CSAH 66 intersection – what can be done signal/roundabout.
- TH 19
  - Concern with the timing of TH 19 improvements and if Dakota County can be involved.
  - Rice County has the Garrett and Decker intersections with TH 19 as high priorities and would like Dakota County to reflect this in our plan. Committee members want a safe intersection.
  - TH 19 is important for industries. Concern with truck congestion, trucks entering/leaving. Pedestrian crossing issues exist at the industrial park and Malt-O-Meal area.
  - TH 19 – in 2025. Need EB LTL on TH 19 to Garrett. MnDOT needs to look at closer. Intersection should be improved before new CSAH 23 alignment
- TH 50
  - Why TH 50 is just being repaved and no shoulders or turn lanes?
  - Coordinate a meeting with Hampton, New Trier and Miesville to discuss issues on TH 50 with MnDOT
- TH 52
  - increasing congestion and safety concerns.
  - Concern with TH 52 and CSAH 66 intersection being a Reduced Conflict Intersection only. Hard to move farm equipment through intersection. Interchange need is being shown.
- TH 56 and The CSAH 86, curve is in a dark location, put chevrons up for safety.
- TH 61 concerns
  - Intersection safety
    - At TH 50
  - Turn lanes needed
  - Intersection lighting
- TH 316 has undersized culverts south of CSAH 62. Township will talk to MnDOT about it.
- Why can't trucks use I-35E? A = legislatively established
- Coordinate and be an advocate with MnDOT
  - Keep working with MnDOT
  - Encouraged County to work with MnDOT.
  - What can city do to help the County improve TH's? What is the approach, role of County?

Intersection Traffic Control Projects

Specific Areas of Concern

- Concerns with Delaware and Charleton intersection
- Concerns with Delaware and Salem Church Rd intersection – slick, crash data (no info showing a problem).
- Concern with safety at CSAH 46/47 at General Sieben and at Pleasant.

- Concern with CSAH 68 & 54 intersection safety, especially with a new bike trail to be installed.

Roundabouts

- What are the criteria for a roundabout? Provide more detail, signage and markings, education.
- Q – what is the cost of a roundabout? A – Approximately $1 million in rural areas and $2 million in urban areas.

Rural Intersections

- Marshan Township likes the red of the stop sign posts and flashing lights. Would like to see more.
- CSAH 62/TH 61 intersection is difficult to see because of shrubbery in right of way.
- CSAH 91 & 190th – flashing stop signs?

Right-of-Way Preservation and Management

- City coordination with County in broadband installation.

Bicycle, Pedestrian and Trail Gaps

- Concern with future bike lanes on Concord. What is the % that use trails? Survey? Ped safety. A = trails provide a bike/ped accommodation, painted lane is less safe for less skilled cyclists.
- Concern with narrow area for bike trail on CSAH 54, wet areas, is part of MRRT?
- Would like to see connectivity for all sidewalks. A = Bike/Ped study shows missing gaps
- City (Bville) has heard an increased public interest in bike and pedestrian accommodations.
- Q about Mill Town/Lake Byllsby Trail. A – Still in works, provisions made in redesign on the highway, but not part of design/built at this time. Road scheduled for 2022. Trails still has alignment options and DNR coordination issues.
- Concerned that focus on trails with only half year use.

Greenway Crossings

- Update on the bike/ped underpass of TH 62

Non-Greenway Crossings

- Southview signal was removed, crossing concerns, flashing lights instead?
- Opportunity for median refuge on Delaware, like Butler, no sidewalk on east side.
- A lot of concern about school pedestrian areas, specifically LNHS and potential ped overpass
- Concern with CSAH 68 & 54 intersection safety, especially with a new bike trail to be installed.
- Bike lane on local streets (Lac Lavon) – how to continue across county roads? Add local bike/ped trail crossing needs to management goal.

REPLACEMENT AND MODERNIZATION GOAL

Highway Replacement, Reconstruction and Modernization

- Concerns with safety on CSAH 63 (Delaware), potential for shoulders, turn lanes, modernization? Bike/ped facility?
- CSAH 54
  - lack of turn lanes, shoulder needed, drainage issues.
  - install a bypass lane at 185th?
- Concern with CSAH 23 construction and people not following the detour. It's causing a dust control issue.
  - County will conduct a spring chloride application this year and will inform travelers when it is applied.
- CSAH 86 – make sure the common section of CSAH 23/CSAH 86 stays open, construction phasing
- Would like to see straightening of CSAH 59. County will discuss and consider with township.

Bridge Replacement

- Concerns with bridge replacement and qualifications and how to fund.
- Have township bridge/culvert completed before fall harvest.

- Township bridge inspection is conducted by the County every two years. Bridge maintenance is the township's responsibility.

Gravel Road Paving

- Q – what is the cost to convert gravel to paved? A – Approximately $2 million/mile.

EXPANSION GOAL

Lane Additions / Expansion

- CSAH 46 – future 4 lane improvements also review the interchange area for improvements
- Consider a "road diet" = If 80% of capacity or less, consider lesser need.
- Future CSAH 23 alignment would be 25% city share in future, identified as 10-ton route.
- Concerns with CSAH 70 construction as 4-lanes. Road will not be closed. Construction will begin on the south side of the roadway.

Future Alignments

- Why isn't the future road between CSAH 47 and TH 61 shown as a future Co. highway? A = the study identified it being a local roadway.
- Work with Farmington and Empire in developing a collector street plan to identify locations for future roadways.
- Land use changes – more concepts of residential north and west of CSAH 23 and North Ave. in Northfield

Interchanges and Overpasses

- Discussion of I-35/CSAH 50 interchange

AGENCY MEETINGS AND DATES

South St. Paul School District 6 (10-1-19)
West St. Paul ISD 197 (10-10-19)
Rosemount City Council Work Session (11-4-19)
River Heights Chamber of Commerce (11-6-19)
Lakeville Chamber of Commerce (11-15-19)
ISD 196 (11-15-19)
City of Sunfish Lake Staff Meeting (11-18-19)
Hastings City Council Workshop (11-18-19)
Ravenna Township Meeting (12-2-19)
Douglas Township Meeting (12-2-19)
Empire Township Board & Planning Commission Meeting (12-3-19)
City of Burnsville Staff Meeting (12-5-19)
City of Northfield Staff Meeting (1-3-20)
Marshan Township Meeting (1-14-20)
Greenvale Township Meeting (1-21-20)
Waterford Township Meeting (1-27-20)
Vermillion Township Meeting (2-4-20)
Sciota Township Meeting (2-10-20)
Eureka Township Meeting (2-11-20)
City of Northfield Transportation Advisory Committee Meeting (2-13-20)

Transportation Plan Comments and Responses

October 20 to December 21, 2020

Chapter 1: Executive Summary

Comment: Executive Summary after Appendix: Recommend moving the executive summary to the beginning of the document. The graphic nature of the executive summary section makes it easy to read and understand the gist of the document without getting into the details.
Response: The Executive Summary is located at the beginning of the document as Chapter 1 and will remain in that location.

Comment: Page 1-3, Overview of Significant Transportation Plan Revisions: This section is difficult to follow and might be easier if there was a graphic that showed the significant changes. Perhaps a comparison graphic of the previous compared to the proposed.
Response: County staff will take this comment under consideration prior to final document development.

Comment: Page 1-5, Plan Goals: Multi-modal transportation goals appear to be missing from the overall Plan Goals and it is recommended that an additional goal be added to address multi-modal transportation needs.
Response: Page 1-3 states that the integration of transportation modes (multi-modal, pedestrian, bicycle) has been removed from the transit goal and is now included in all other Plan goals. In place of identifying this as a specific goal, it is now considered integrated in all the County's transportation planning activities.

Comment: Page 1-6; Goal 1, Paragraph 2: Using the phrase "extremely limited resources: does not seem to fit when it is noted that the County's revenue over the 20 years' timeframe is anticipated to be $1.28B. It seems as if the concern is that there is less revenue projected than is needed.
Response: Page 1-6 also states that the County has determined to over $1.65 billion will be required to meet the county transportation system needs over the 20-year plan period. County staff will consider revision of the description.

Chapter 2: Introduction and Background

Comment: Page 2-11, Fiber and Signal Equipment Upgrade Projects: Will Dakota County be allowing Small Cell Wireless on County facilities or within County right-of-way?
Response: The manner that Dakota County will address small cell is addressed by Dakota County Ordinance Number 126 Management of the Public Right-of-Way which was updated in 2017 in part to address these right-of-way users.

Comment: Page 2-21 Figure 7: Is the purpose of this figure to note that not enough regional investment is being made in Dakota County?
Response: The purpose is to show the proposed regional highway investments per the Met Council 2040 Transportation Policy Plan.

Comment: Page 2-24; Top Concerns: It is suggested that multi-modal plans be added to the list or to replace trails.
Response: This will be added to the list.

Comment: Page 2-24 through 2-26; Accomplishments: Converting this list to a graphic would be more impactful and easier to comprehend.
Response: Graphics of individual project locations are identified in the County's Capital Improvement Program.

Comment: Anecdotally, I've heard that regular route bus ridership is at about 90% of pre-Covid levels, though commuter bus ridership is still way down. Statement that transit ridership dropped 90% and has been slow to recover may be misleading (certainly would be in St. Paul, where most ridership is on local routes). Consider consulting with Metro Transit to improve the accuracy of this statement about Covid impacts on transit. (p.2-22)
Response: As of early 2021, the pandemic resulted in 90 percent decline in express service boardings and 60 percent decrease in local bus and light rail boardings throughout the region with a slow and uneven recovery. The text will be updated to reflect the most recent trends.

Comment: Future traffic projections on Biscayne Avenue (Figure 6) have increased substantially from the 2030 projections. Please provide the reasoning behind this increase. In addition, traffic on Biscayne has been impacted by the construction on adjacent and parallel roadways, including TH 3, over much of the last 3 years, resulting in an increase in current traffic. Was the temporary increase taken into consideration as part of the modeling?
Response: The Dakota County Travel Demand Model uses city and township land uses as identified in jurisdiction comprehensive plans. The 2030 model did not consider future Umore development as the 2040 model now does. The model also uses the build scenario improvements as identified through local and county plans to identify potential highway improvements and expansion by 2040. The Rosemount/Empire/Umore Area Transportation System Study, of 2010, recommends Biscayne Avenue as a future county highway to align with the Akron Avenue alignment. Future traffic projections are based upon future development, including within the city of Rosemount, and future roadway expansion in the corridor and surrounding area. Impacts of construction duration was not considered in the model.

Chapter 3: Transportation Plan Principles
Comment: p.3-10, consider revision of PP.15 to reference the Division's Environmental Due Diligence Process. Suggest the following, "Follow the approved Dakota County Physical Development Division Environmental Due Diligence Process, investigate and clean up contamination in accordance with Minnesota Pollution Control Agency guidance when encountered, compete Regulated Building Material Surveys on buildings that are to be demolished, and adhere to best management practices on all projects."
Response: Text for PP.15 will be revised accordingly.

Comment: p.3-10, please incorporate the following from the County's Solid Waste Master Plan, "Expand the use of compost (yard waste and food waste-derived) in the Minnesota Department of

Transportation's (MnDOT) and in local government transportation infrastructure projects. Use MnDOT specifications for compost use as appropriate in roadside construction and landscaping projects."
Response: Text for PP.17 will be revised to include the above statement.

Comment: Page 3-1; Sustainability: The language used to describe sustainability as "living comfortably" seems to imply that we do not need to push boundaries to meet sustainability goals so that we do not burden future generations.
Response: The language used is verbatim from the County's Comprehensive Plan which has been approved by the Metropolitan Council.

Comment: Page 3-7; Speed Limits: Is Dakota County open to developing a county-wide approach to speed limits? Many cities are struggling with how to respond to the recent legislation allowing municipalities to set their own speed limits.
Response: County Highways were excluded from legislative changes to how cities may set speed limits. The County will continue to follow State law as it pertains to establishment of speed limits for County Highways.

Chapter 4: Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System
Comment: Page 4-13; Transportation Sales and Use Tax CIP: Please provide details as to how the City share is determined, as well as the federal and state share.
Response: The City share is as specified in the adopted CIP based on cost shares in accordance with applicable County policies for these projects.

Comment: Page 4-18; Development Driven Investments: What kind of improvements are contemplated? There may be legal implications to requiring developers to pay for improvements, lawsuit Woodbury v. Harstad.
Response: The strategy encourages cities to pursue local and/or private investments in the transportation system to address transportation needs necessitated by development. The strategy does not identify that developers are required to pay for improvements.

Comment: Page 4-18 through 4-23; Cost Participation: Please provide notes as to what has changed since the policy was updated a couple of years ago.
Response: Text will be included on page 4-18 to address this. "Plan Policy Revisions are identified in Appendix A, pages A-14 through A-31."

Chapter 5: Goal 2: Preservation of the Existing System
Comment: Page 5-10; Pedestrian and Bicycle Facilities: The City of Burnsville appreciates the change that has the County funding 100% of trail pavement maintenance.
Response: Noted. The costs include surface sealing, patching and replacement.

Comment: Page 5-13; Roadside Aesthetics: It is suggested that the County reconsider their approach to roadside aesthetics and work with cities to develop a plan or policy to address a cost share approach.

Response: The County does not have resources to meet the base transportation system needs over the Plan period. The County will consider participation as part of larger corridor improvements rather than stand-alone or smaller, spot location oriented, preservation and management projects.

Comment: Page 5-14; County Highway Sweeping: It is recommended that the County consider fall sweeping as well. Keeping leaves out of water bodies can be just as important as sand.
Response: Language has been added to the County Highway Sweeping Policy regarding fall sweeping.

Comment: Page 5-14; Mowing Policy: It should be noted that cities are allowed to mow county right-of-ways more frequently. Burnsville does this on CR-11 and McAndrews.
Response: Language has been added to allow for supplemental mowing by cities.

Chapter 6: Goal 3: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity
Comment: Missing information under sub-bullet on page 6-41.
Response: The information for the sub-bullet will be entered.

Comment: Anything that can be done to increase the availability of, safety of and use of cycling lanes, trails, etc., is critical. Please do whatever you can to do so! Thanks!
Response: The 2040 Transportation Plan provides more guidance and emphasis on bicycle and pedestrian mobility and safety when compared to the previous Plan. The Management chapter incorporates findings from the County's 2017 Bicycle and Pedestrian Study, which identified and prioritized gaps in bicycling and pedestrian infrastructure on county highways. The Plan also identified funding needs to fill significant trail and sidewalk gaps, construct grade-separated greenway crossings of county highways, and at-grade crossing improvements. One of the most significant changes was the revision to the County Cost Participation Policy for trails and sidewalks along county highways. The revised policy reduces the share of city costs for trail gaps and eliminates any city costs for trail surface maintenance. These changes should accelerate the pace of trail construction and resurfacing by minimizing financial barriers for city partners.

Comment: On Figure 22, Potential County and State Highway Jurisdictional Changes, it appears the proposed jurisdictional transfer of TH 61 is to local. We are hoping that the limit of any transfer would be from the State to the County.
Response: The map legend will be revised to "State to County or Local".

Comment: p.6-2, Should include discussion on rural/urban differences in functional classification as a majority of Dakota County is still considered rural today by MnDOT and FHWA. Unless this discussion is found elsewhere.
Response: The functional classification definitions are consistent with the Metropolitan Council 2040 Transportation Policy Plan-Appendix D definitions.

Comment: p.6-3, Add discussion on major/minor collectors? While similar, they do function differently.
Response: The functional classification definitions are consistent with the Metropolitan Council 2040 Transportation Policy Plan-Appendix D definitions.

Comment: Figure 25 does not show the roundabout located at TH 3 and 170th Street. This roundabout was completed in September 2020.
Response: This roundabout location will be added to the map.

Comment: In 2019, a box culvert was constructed under TH 3, about ½ mile south of CSAH 46. The original purpose of this culvert was to allow a conveyor from the nearby aggregate facility to cross the highway. However, this culvert was specifically designed to meet the specifications for a pedestrian underpass. The conveyor will be removed in the relatively near future, and the adjacent are will begin to develop as the mining operations cease. We believe this underpass should be identified in Figure 30. Identifying the crossing at this time allows for planning and identification of future regional trail systems.
Response: This location will be added to the map.

Comment: Page 6-10; Table 5: Have there been any changes to the access guidelines or is this table consistent with past practice?
Response: The table is consistent with the past Transportation Plan. No changes have been made.

Comment: Page 6-11; Figure 16; If access closures are being contemplated in the areas highlighted, the City has concerns with development and redevelopment potential, particularly in our Burnsville Center Village area.
Response: Half-mile full access spacing is identified for divided highways with projected 2040 average daily traffic over 35,000. Spacing full access on roadways with high volume highways at half-mile intervals increases the average travel speed on the corridor and reduces delays and crashes. Quarter-mile partial movement intersections are allowed with eighth-mile right-in/right-out access permitted if the county determines the access improves the overall safety and/or efficiency of the transportation system. CSAH 42 is also designated as a principal arterial highway within the regional system. The emphasis of principal arterials is on moving large volumes of traffic over long distances rather than providing direct access to land. Currently, Dakota County is working with the cities of Burnsville, Apple Valley and Rosemount to prepare a long-term vision for CSAH 42. The County Highway 42 Visioning Study will provide greater detail to provide a 20-year guidance for managing CSAH 42 in the future for efficient and safe travel.

Comment: Page 6-12; Vehicle Size and Weight Management: Does Dakota County enforce vehicle size and weight restrictions? If so, who does the enforcement?
Response: Dakota County has a Commercial Vehicle Inspector position under the Sheriff's Office that enforces laws and rules relating to the size and weight of commercial vehicles, driver qualification, hours of service, and vehicle inspections.

Comment: Page 6-15; Figure 17: Does Dakota County want to show city streets that are 10-ton design? Burnsville has some 10-ton roadways.
Response: The figure will show the county system only. The title will be revised appropriately.

Comment: Page 6-23; Figure 22: This figure identifies CSAH 42 as a potential jurisdictional change from County to State. As was noted in the City's comment letter for the 2030 Transportation Plan, the City of Burnsville does not support any proposed jurisdictional changes to CSAH 42. This roadway is vital to the commercial core of Burnsville and we do not believe this roadway and its maintenance would be viewed as a priority by the State, thus negatively impacting the City and local businesses, Additionally, the City does not support the jurisdictional change of CSAH 32 between TH 13 and I-35E for the same reasons.
Response: The identified recommendations depicted in Figure 22 are considered preliminary and are subject to discussion with MnDOT prior to approval. All county highways with a functional classification of principal arterial are identified as potential jurisdictional transfer candidates to MnDOT. This is based on the regional planning concept that principal arterials should be under MnDOT jurisdiction. Recommendations depicted in Figure 22 are highly unlikely within the Plan period (by 2040) and require additional analysis before consideration. The city's concerns are noted.

Comment: Page 6-24; Frontage Road Management: More information is needed regarding the potential frontage road management transfers as listed in Table 6.
Response: The table is an inventory of frontage roads adjacent to county highways that may be more practical for the county to manage and maintain than the local jurisdiction. County staff will engage and work with local jurisdictions prior to any jurisdictional transfer discussions.

Comment: Page 6-24; Jurisdictional Classification: More information is needed regarding changes and transfers.
Response: Figures 20 identifies the locations of potential jurisdictional transfers and agencies involved. Figure 21 identifies the priority and time frame for potential jurisdictional transfers. County staff will engage and work with local jurisdictions prior to any jurisdictional transfer discussions.

Comment: Page 6-31; Traffic Control Signals – City Assistance: Does the City need access to the ATMS? Is this planned to provide access?
Response: The system is currently used by Transportation Staff to manage the system and signal timing. The County will discuss potential access with cities in future. This would require a change not addressed by this Transportation Plan, but in the County's "Transportation Technology Resources Procedures".

Comment: Page 6-35; Plat Needs Map and Right-of-Way – Long Term Needs: The City is interested in participating in development of this map.
Response: The existing Plat Needs Map will be updated in 2021 (after adoption of this Plan). The city (and all local jurisdictions) will be asked to participate in responding to identified revisions.

Comment: Page 6-38; Figure 26: The map should be updated to include the completed trail through Cam Ram/Kelleher Park; newly constructed Lake Marion Trail segments; connection of Kelleher Trail to City of Savage; and new bike lanes.
Response: The map will be revised to show this.

Comment: Page 6-39; Figure 27: The map should note that the trail segment on the north side of CSAH 32 between TH-13 and the Eagan border will be constructed in 2021. All of the Burnsville gaps are

noted as low or medium priority; should any of these gaps be re-evaluated and changed to a high priority, particularly on CSAH 42?
Response: The maps reflect what is existing as of 2020 when the Draft Plan was completed. The County will regularly update map data in coordination with cities and provide that information in advance of discussions about Capital Improvement Plan (CIP) priorities. The trail gap priorities were evaluated as part of the 2017 County Bicycle and Pedestrian Study based on factors that are indicators of bicycle and pedestrian demand. There is not currently a schedule for updating that prioritization score. The County acknowledges that local interest and feasibility are two elements that were not accounted for in that analysis. Therefore, the map will be changed to refer to these as high, medium and low scores rather than priorities. This acknowledges that local interest will be a strong determinant of implementation priority.

Comment: Page 6-43, Figure 29: Burnsville is interested in Dakota County working toward constructing the trail gaps in Burnsville; how do these projects get added to the County's CIP?
Response: The County will work with cities at the annual CIP meeting to discuss local interest in trail gap implementation priorities and program projects for implementation.

Comment: Page 6-46: Figure 30: The graphic shows proposed grade separated crossings on the western Burnsville border crossing TH-13 and another crossing south of TH-13. More information is requested regarding the plan for these proposed crossings. Additional red dots should be added on Nicollet crossing TH-13 and on CSAH 42 near Burnsville Center. There is also an existing crossing of TH-13 on CR-5.
Response: The proposed grade separated crossings on the western Burnsville border reflect crossings identified in County greenway master plans. The crossing of TH 13 in the vicinity of Chowen Avenue is a proposed long-term crossing for the Minnesota River Greenway that likely won't develop until there is trail access to the Minnesota River north of TH 13. This location is not exact and will co-locate with any planned future interchanges of TH 13 in the area. The location south of TH 13 is a proposed crossing for the Lake Marion Greenway at Williams Drive. This is identified in the master plan as a potential location for a grade separation if the CP rail bridge under Williams Drive is made available for trail use in the future. The map will be revised to show the additional crossings the City has identified.

Chapter 7: Goal 4: Replacement and Modernization of Deficient Elements of the System
Comment: Page 7-11 through 7-14; Three Lane Road Sections: Is there a timeframe for converting CR-11 north of Burnsville Parkway? What will the impacts of this conversion be on the capacity of CR-11, as Figure 5 shows it as overcapacity?
Response: Figure 5 will be revised to remove this highway section from the map. The timeline for conversion to three-lane section will be determined through annual CIP discussions with the City.

Chapter 8: Goal 5: Transit and Transitways
Comment: Figure 41 should be updated to include Lakeville in Metro Transit service area.
Response: Revision will be made.

Comment: Page 8-9; Figure 38: Are the routes listed as MVTA Express actual routes? Figure 41 on page 8-14 lists these same routes as local.

Response: Both local and express service use many of the same higher volume roadways in the County and also serve the same stations. This leads to some overlapping of routes which may make the two maps look similar, but they are both accurate.

Comment: Scott County will be completing a Countywide Transit Plan by the end of the first quarter of 2021. One recommendation being developed into the plan is to work with partners to implement service along CSAH 42 corridor between Scott County and Dakota County. At the regional policy level, the plan calls for working with partners to establish a long-term BRT Corridor Vision on CSAH 42.
Response: Dakota County acknowledges that the CSAH 42 corridor has been recommended for improved service by the Dakota County Regional Chamber of Commerce study and Scott County's proposed transit plan. The Dakota County East-West Transit Study, completed in 2017, identified CSAH 42 between TH 13 and Dakota County Technical College as one of five east-west corridors in Dakota County to be considered for improved transit service. The Transportation Plan text will be updated to reflect the transit needs identified along this corridor by Dakota County, local partners and the public. The Transportation Plan also identifies potential roles for the County in working with transit partners, stakeholders, cities and adjacent counties to improve transit service for residents and businesses. Transit service types and levels of service are ultimately determined by transit service providers.

Comment: Would be nice to have bus transportation to Lakeville & Apple Valley for those of us who do not drive. Sooner than 2 yrs.
Response: Dakota County recognizes the challenges of accessing jobs, daily needs and services for residents who do not drive. Dakota County is not a transit service provider and therefore cannot make decisions about where to provide transit. The Transportation Plan identifies other roles for the County in working with transit providers to improve transit service in the County. One such role is assisting residents in need of transit and transportation services by providing information about available options and training on how to use those options through the GoDakota program at: https://www.co.dakota.mn.us/Transportation/GettingAround/Pages/default.aspx.

Comment: We need to have a bus service around all areas of Hastings every day and bus service to Cottage Grove or Apple Valley to be able to get to downtown Minneapolis and St. Paul
Response: The Dakota County Eastern Transit Study evaluated transit service options for Hastings. The most promising option was for local service within the city. Service to other communities did not look feasible due to long travel distances and low travel volumes to any single place.

Comment: I note that, once again, Hastings is left without any discernible public transportation. Disappointing.
Response: The Dakota County Eastern Transit Study evaluated transit service options for Hastings. The most promising option was for local service within the city. Service to other communities did not look feasible due to long travel distances and low travel volumes to any single place.

Chapter 9: Goal 6: Expansion of Transportation Corridors
Comment: The text on p.9-9 identifying the limits of the new highway alignment on Jacob Avenue does not match the map for future alignments.

Response: The text will be revised in the final document to state the limits are between TH 55 and CSAH 47.

Comment: Page 9-5; County Highways that Exceed 6-Lane Capacity: The text indicates that CSAH 42 from CSAH 5 to I-35E in Burnsville is the only County Highway that will likely exceed 110% of six-lane divided highway capacity by 2040. Why is this not shown on Figure 44?
Response: The text on page 9-5 will be revised to indicate that the highway segment described is near capacity and not over capacity by 2040.

Comment: Page 9-16, 9-17 and Figure 48: The list of projects on Page 9-16 and the description on Page 9-17 indicates priority projects on TH-13 from county line to CR-5, but Figure 48 shows the priority project extending to I-35W. The City requests changing the language to extend to Nicollet Avenue and adding a priority Trunk Highway intersection symbol to TH-13 and Nicollet. This correlates with the entire TH-13 Corridor Study limits in Dakota County.
Response: The map will be revised to reflect the TH 13 east corridor study limits to Nicollet Avenue. This potential change can be addressed with changes to the Transportation Sales and Use Tax Program that will be discussed with the County Board prior to development of the 2022-2026 CIP.

Comment: Page 9-17: With the potential turnback of portion of TH-13 to Dakota County, how likely is it that the limits of the turnback will extend into Burnsville?
Response: The regional planning concept that principal arterial highways should be under MnDOT jurisdiction also allows for minor arterial highways under MnDOT jurisdiction to be considered for jurisdictional transfer. TH 13 north of CSAH 32 is identified as a potential state to county turnback as shown on Figure 22. As previously identified, jurisdictional transfer is highly unlikely during the Plan period (by 2040).

Comment: Figure 47 – shows locations with recent interchange projects and locations for future interchanges. Should 42/23 and 46/23 also be shown as future interchanges? Showing these as future interchanges aligns better with our direction for 42.
Response: Figure 47 shows the MnDOT and County Highway intersection and interchange locations. Text on page 9-12 describes Dakota County highway intersections and states, “The CSAH 23 and CSAH 42 intersection and the CSAH 23 and CSAH 46 intersection are likely to have the need for interchanges in the future based on 2040 projected traffic volumes in excess of 75,000 vehicles per day.” Intersections approaching and exceeding capacity are shown in Table 12 and Figure 46. Staff will evaluate the differences between the descriptions and figures to further clarify.

Comment: For the CSAH 42 and TH 3 intersection. Is there any backup documentation of the noted partnership with MnDOT and Rosemount around train exposure issues?
Response: Staff is not aware of any partnership documentation.

Chapter 10: Implementation
No comments received.

Appendices

Comment: Page A-4; Item F.2 Cost Participation-Aesthetic: Consider extending cost participation for aesthetics to pedestrian, bike, and other multi-modal improvements.
Response: The County does not have the resources to meet the base transportation system needs over the Plan period. The County will consider participation as part of larger corridor improvements rather than stand-alone or small, spot location oriented, preservation and management projects. A City can consider aesthetics for these types of projects or stand-alone at City cost through permit.

Comment: Page A-10; Items M.5 and M.6 Jurisdictional Classifications: Please strongly consider how to ensure City involvement and City Council approval can be included in the process.
Response: M.6 identifies, "…coordination with local governments to execute agreements prior to official revocation of the highway by County Board resolution." The County Board will not approve official revocation of a highway to a local agency without coordination with and approval from said agency.

Comment: Page A-11; item M.12 Contiguous Plat Ordinance: Please provide a copy of the map to the City.
Response: County staff will do this. The map is also available on the County's website.

Comment: Page A-13; Item E.3: Please include the City in this process of identifying areas within the City and provide a copy of the final map to the City.
Response: As previously stated the county will notify the city to participate in update of the Plat Needs Map.

Comment: Page A-16 through A-23: Confirm that these are the exact same changes that are already in place with the latest version of the Cost Sharing Policy.
Response: County staff will confirm this.

Comment: A-27; M.7: Is it the County's intent to provide Cities with access to the ATMS system?
Response: The system is currently used by Transportation Staff to manage the system and signal timing. The County will discuss potential access with cities in future. This would require a change not addressed by this Transportation Plan, but in the County's "Transportation Technology Resources Procedures".

Overall, General and Miscellaneous Comments

Comment: Hi, we are experiencing a very frequent Internet Provider (IP) outage to the Hastings, Minnesota Veterans Home where I reside. This is lengthening my communication response time considerably. I ask that you please be patient under these circumstances. A 6-mile walk to the public library necessary for Internet access takes me a while and under COVID-19 restrictions I am allowed 1 hour of computer time a day there. Here's hoping the Veterans Home IP service will improve and shorten my response time to your communication.
Response: We've allowed for a 60-day comment period on the draft plan to provide adequate time for review and comment.

Comment: Thank you for sharing this information. Following these directions to view the draft plan directions lead to a variety of options. The option most clearly labeled as the Draft 2040 Transportation plan is actually a slide deck and not a draft plan. I suspect this is not the document that the public is invited to comment on. At least I hope that's not the case. I would therefore like a response with a link to the appropriate document as well as an explanation of the rationale for why this wasn't provided in the first place. Thank you in advance.
Response: A follow up email was sent to this commenter with the link to the draft plan. Staff received no other similar comments.

Comment: The City of Newport does not have any comments

Comment: Will the approval of this plan result in any major process, relationship, or requirement changes with municipalities? Will there be any noticeable changes in how Dakota County completes capital projects or maintenance activities? How might the City of Burnsville need to change its processes as it relates to Dakota County Transportation:
Response: County Transportation Staff anticipates no major changes in how projects are delivered or maintained, or in our relationships with local jurisdictions, as a result of the approval of this plan.

Comments Received From:
Citizens (6)
Scott County
City of Burnsville
City of Hastings
City of Newport
City of St. Paul
Dakota County Environmental Resources Department Staff
Dakota County Transportation Department Staff
Empire Township
MnDOT Metro District

Dakota County 2040 Transportation Plan

Public Engagement Executive Summary

April 2020

Overview

What's a Transportation Plan?

Dakota County is updating its transportation plan. The 2040 Transportation Plan will identify policies, programs and investment priorities for the next 20 years. The plan covers county roads and highways, adjacent sidewalks and trails, and county public transportation services. The Plan:

- Sets the vision for the future transportation system
- Presents county transportation policies and strategies
- Prioritizes the transportation system needs
- Supports land use goals and objectives
- Identifies major transportation investment
- Guides the county's transportation system through 2040

Community Priorities

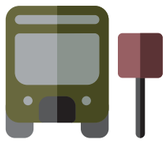
Community members were asked how we can improve the transportation system in Dakota County. Here's what they prioritized:

25%

Decrease traffic, congestion or delay

22%

Make it more comfortable or safer to walk or bike



22%

Increase the availability or reliability of buses

19%

Make it more comfortable or safer to drive

12%

Other (such as improve pavement conditions)

Public engagement

To help inform the plan, community members were asked what's working well, what needs to improve and what should be prioritized in the county's transportation system.

In-person events

Pop-up events hosted at community events or activity centers

Listening sessions held at familiar locations that are easily accessible for underrepresented communities

Online engagement website

Online survey

Interactive comment map

Ideas board

Check out the website results here (accessible until November 2020):

zan.mysocialpinpoint.com/dakotacountytransportation

Spreading the word

Social media

Emails to cities and townships

Posters at Dakota County libraries

Estimated community interactions

1,300

Unique comments

1,000+

Timeline

December 2019

March 2020

Engagement Activities

In-person and online engagement activities took place between December 2019 and March 2020.

Heroes and Helpers Holiday Celebration
West Saint Paul, MN

Dec. 8, 2019 Staff hosted a table at the Heroes and Helpers Holiday Celebration and talked with families, members of the West St. Paul Police Department, and emergency service providers. People said they wanted more sidewalks and bus service options in West St. Paul.

Second Harvest Food Shelf
South Saint Paul, MN

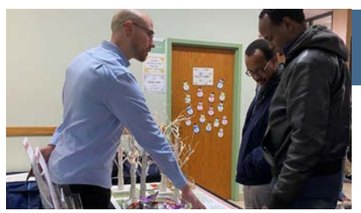
Dec. 12, 2019 Staff hosted a table at the Second Harvest Food Shelf and heard about the people's desires for more bus options and sidewalks in South St. Paul.

Family Services Holiday Food Shelf
Hastings, MN

Dec. 13, 2019 Staff hosted a table at Hastings Family Services during their holiday food shelf and talked to people about transportation needs. They said it is difficult to get to important destinations because there is no bus service in Hastings.

Farmington Community Expo
Farmington, MN

Jan. 25, 2020 Staff hosted a table at the Farmington Community Expo at Farmington High School. People talked about safety concerns crossing busy roads in Farmington such as CR 50 and Hwy 3.



Burnsville Mosque
Burnsville, MN

Jan. 31, 2020 Staff hosted a table at the Burnsville Mosque before and after prayer time and heard about the difficulties of getting to important destinations like school and jobs. People said they wish there was less traffic congestion on Burnsville roads.

Apple Valley Mid-Winter Fest
Apple Valley, MN

Feb. 1, 2020 Staff hosted a table at the Apple Valley Mid-Winter Fest at Apple Valley Community Center. People talked about issues such as speeding and traffic congestion in Apple Valley.

Eagan Senior Board
Eagan, MN

Feb. 7, 2020 Staff led a listening session with members of the Eagan Senior Board during their monthly meeting. People talked about difficulties getting around without access to a vehicle and said they wish there were more bus service options in Eagan.

Somali Listening Session
Dakota County, MN

Mar. 2, 2020 Staff led a listening session with people from the Dakota County Somali community. People talked about decreasing traffic congestion in the county and increasing safety for all users, especially for walkers.

African American Listening Session
Hastings, MN

Mar. 4, 2020 Staff led a listening session with people from the Dakota County African American community and heard they would like the county to have better ways to share information on services offered in the county. People also talked about decreasing traffic congestion and increasing bus service.

Survey
Online

Jan. 10 – Feb. 21, 2020 Staff used an online survey to learn about how people travel in Dakota County and what improvements they would like to see for the county's transportation system. People talked about increasing safety for all users and increasing options for travel in the county.

Interactive Map
Online

Jan. 10 – Mar. 31, 2020 Staff used an online map to learn about where people would like to see improvements on the county's transportation system. People talked about concerns and ideas on specific roads and locations and want to see safety improvements for all users.

Ideas Board
Online

Jan. 10 – Mar. 31, 2020 Staff used an online ideas board to learn about other ideas and suggestions for transportation improvements. People talked about having more options to get around in the future and creating land uses that allow for more sustainable development, among other ideas.

Key Takeaways

People in Dakota County had a lot to say about the county transportation system.
The following are some of the key themes.

A lot to like

> **"It's wonderful to have easy bike access to the river trail systems and to both St. Paul and Minneapolis. This is a great resource and I have used it for commuting as well as fun."**

- **Dakota County's walking and biking trails are well liked.** Many like walking and biking in county parks and on the trails and greenways.
- **Roundabouts are well liked in Dakota County.** Respondents said that the existing roundabouts work well and they support the construction of more.
- **Those who take transit in Dakota County like the service.** However, many people also suggested improvements to increase frequency or extend service to more parts of the county.

Access for everyone

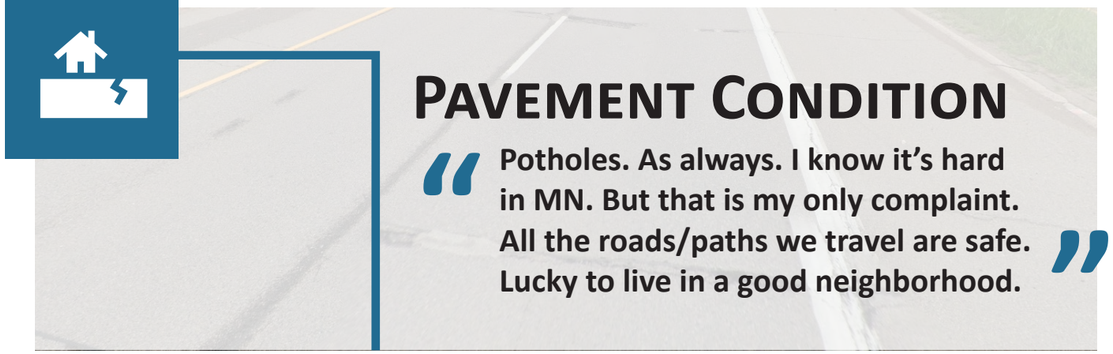
> **"There aren't many transit options and people sometimes struggle getting to the food shelf, especially when the weather is bad."**

- **Create more frequent and affordable public transportation options for people with low income, people with disabilities and older adults.** People are also looking for better walking and biking accommodations for people who use mobility devices.

Safety Issues

> **"Speed limit enforcement on all county roads to ensure safety for everyone."**

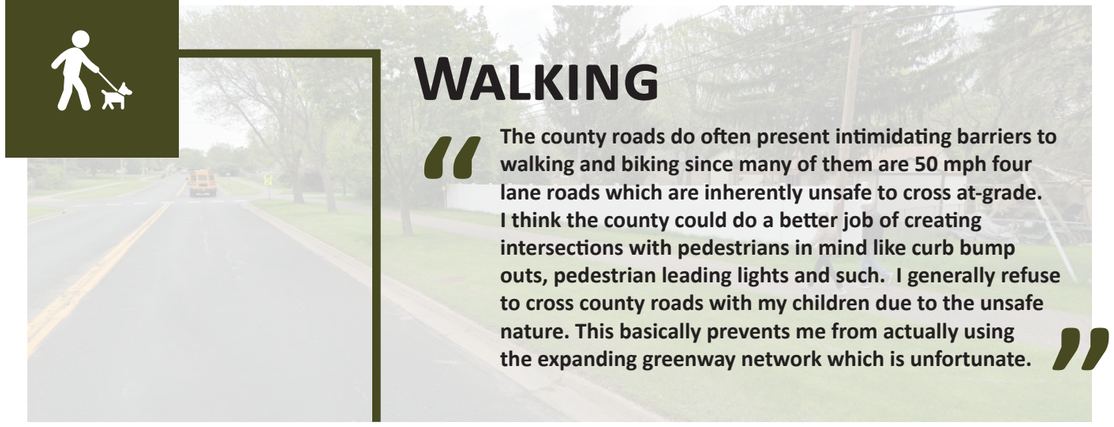
- **Enhance safety at Dakota County intersections.** People reported unsafe crossings for walkers, bikers and drivers near important destinations such as schools and housing.
- **Crossing high traffic roads is unsafe.** Many people reported they are concerned about getting into a crash at roads without intersection control to aid cross traffic.
- **Decrease speeding.** People reported the speed limits in some areas are too high.
- **Improve the transportation system now rather than being reactive.** Some people are frustrated because they don't think existing safety issues will be addressed in a timely manner.
- **Improve pedestrian and bicyclist safety.** Many people reported their main safety concerns are the lack of pedestrian and bicyclist infrastructure on roads and drivers not stopping for pedestrians at crosswalks.



Pavement Condition

> **"Potholes. As always. I know it's hard in MN. But that is my only complaint. All the roads/paths we travel are safe. Lucky to live in a good neighborhood."**

- **Fix potholes and faded pavement markings.** Some roads showed up multiple times indicating a critical need for rehabilitation.
- **Improve snow removal on roads, sidewalks and trails.** People reported that roads, sidewalks and trails need to be plowed more regularly.

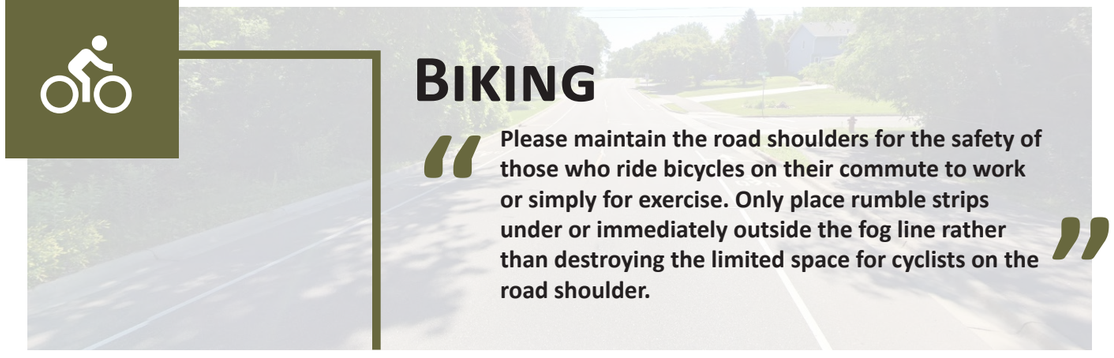


Walking

> **The county roads do often present intimidating barriers to walking and biking since many of them are 50 mph four lane roads which are inherently unsafe to cross at-grade. I think the county could do a better job of creating intersections with pedestrians in mind like curb bump outs, pedestrian leading lights and such. I generally refuse to cross county roads with my children due to the unsafe nature. This basically prevents me from actually using the expanding greenway network which is unfortunate.**

Create safe walking environments near schools and areas with housing and retail. Many people said that the county should make it more comfortable to walk and bike. Sidewalks or trails were commonly suggested near schools.

Improve pedestrian safety with more sidewalks and better pedestrian crossings on Dakota County roads. Most comments about walking expressed safety concerns due to the lack of pedestrian infrastructure. Many people are looking for pedestrian facilities that provide a physical buffer between walkers and vehicle traffic.

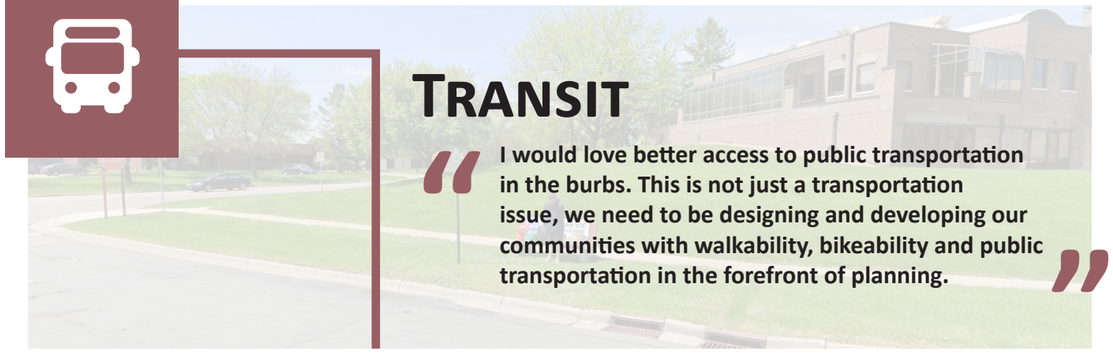


Biking

> **Please maintain the road shoulders for the safety of those who ride bicycles on their commute to work or simply for exercise. Only place rumble strips under or immediately outside the fog line rather than destroying the limited space for cyclists on the road shoulder.**

Improve bicyclist safety by constructing wider shoulders and more bike lanes or paths along Dakota County roads. Many people want bicycle facilities that provide a physical buffer from vehicle traffic.

Prioritize bicycle connections to the existing off-road bike trails and greenways. People want to bike on the Dakota County trails and greenways, but don't feel safe accessing them on bike.



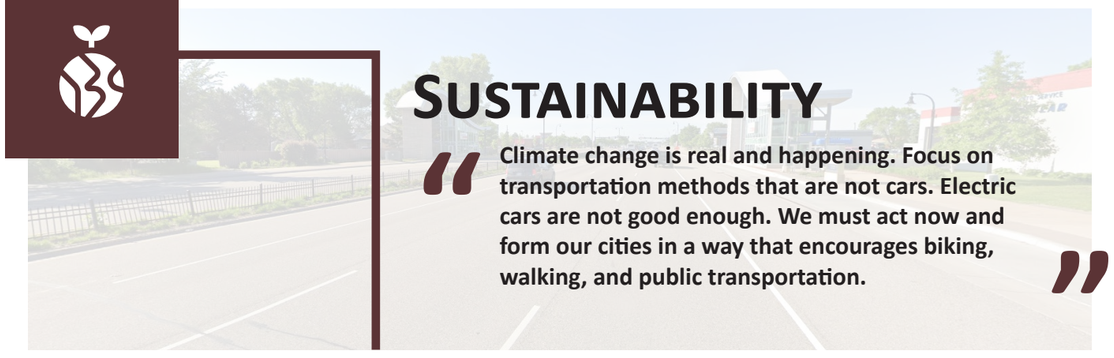
Transit

> **I would love better access to public transportation in the burbs. This is not just a transportation issue, we need to be designing and developing our communities with walkability, bikeability and public transportation in the forefront of planning.**

Make new transit routes and expand existing travel options. More than half of survey respondents said they would like to see more investments in bus service. People want to add more bus routes that connect to key destinations and want more flexible dial-a-ride and curb-to-curb services.

Establish more frequent service on existing bus lines in Dakota County. The lack of regularly scheduled bus service except during weekday rush hours makes it challenging for people to use transit.

There is a mix of support and opposition to light rail in Dakota County. People who support light rail say they would prefer the service over taking the bus, and people who are opposed to light rail said it is not worth the investment.



Sustainability

> **Climate change is real and happening. Focus on transportation methods that are not cars. Electric cars are not good enough. We must act now and form our cities in a way that encourages biking, walking, and public transportation.**

Invest in creating viable, environmentally sustainable transportation options in Dakota County. People said Dakota County should be studying, planning for, and promoting transportation options like electric vehicles and multimodal transportation.

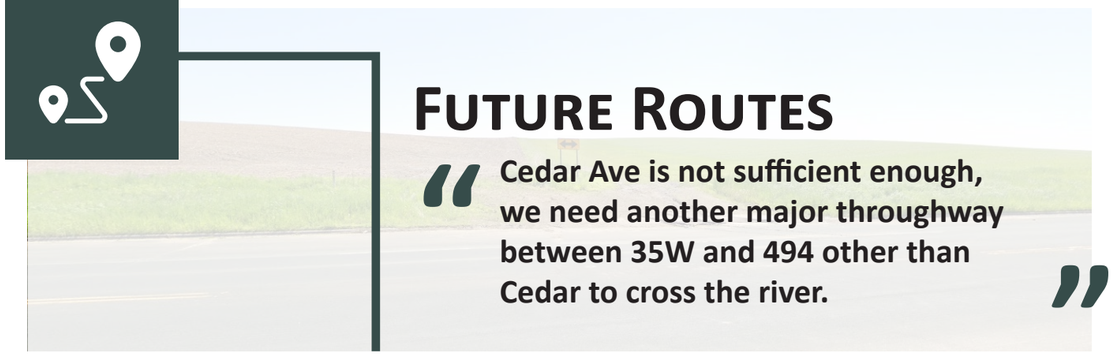
Increase mixed-use development and density in Dakota County to lessen the need for car ownership. People said they would like to be located closer to jobs, shopping and entertainment so that they can walk, bike or take public transportation to get to where they need to go.

Traffic Congestion

"We have a terrible traffic problem and they are building close to 2,000 more homes and apartments in the next few years."

Traffic congestion is a concern, especially as Dakota County continues to grow and develop. A number of people expressed concerns that traffic will only get worse as Dakota County continues to grow.

Decrease congestion on Dakota County roads since it is a safety issue for all users, including pedestrians and bicyclists. People said that congestion results in frustrated drivers that impact other users.

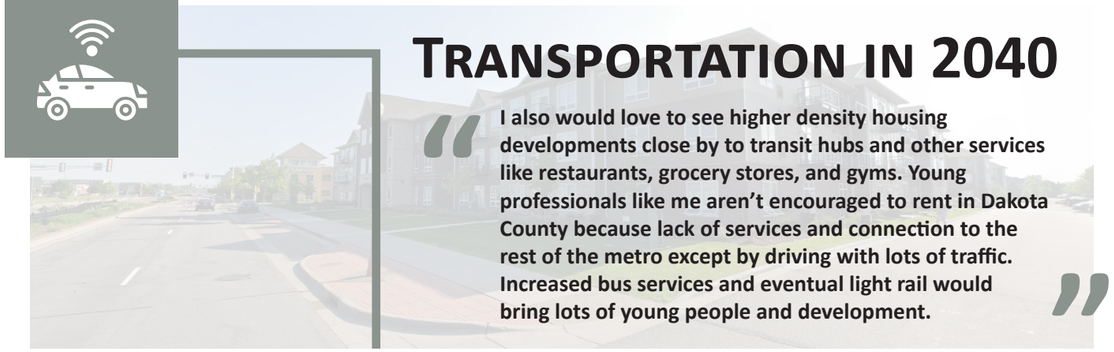


Future Routes

"Cedar Ave is not sufficient enough, we need another major throughway between 35W and 494 other than Cedar to cross the river."

Establish more driving and transit routes in Dakota County. People want more options when driving and taking the bus.

Create new and safe pedestrian and bicyclist connections. Many recommendations for future routes were for new trails or sidewalks for pedestrians and bicyclists.



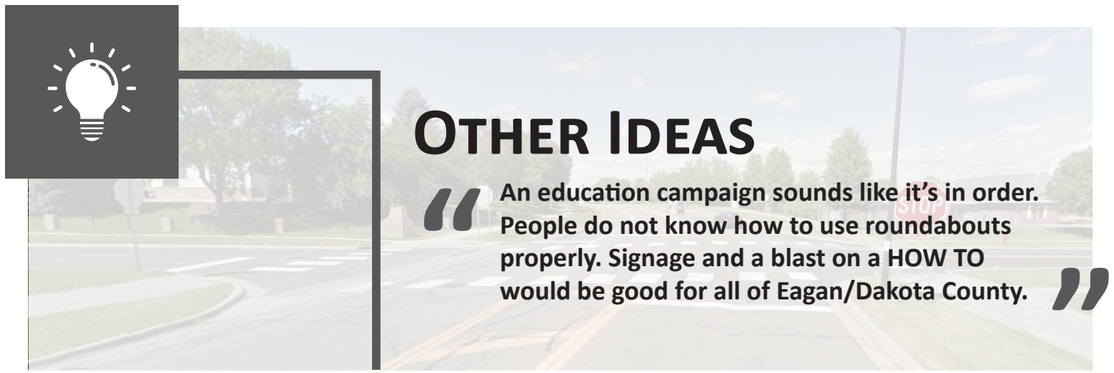
Transportation in 2040

"I also would love to see higher density housing developments close by to transit hubs and other services like restaurants, grocery stores, and gyms. Young professionals like me aren't encouraged to rent in Dakota County because lack of services and connection to the rest of the metro except by driving with lots of traffic. Increased bus services and eventual light rail would bring lots of young people and development."

Create more transportation options in the future. When asked which methods of travel they would prefer, people said they would like to walk, bike, take light rail, and/or take more frequently scheduled buses.

Anticipate travel to be less car-centric in the future. People said the county should plan for more density and more interest in walking, biking and transit to travel to jobs, shopping and entertainment in Dakota County.

Plan for innovative, emerging technology in transportation. People suggested studying and planning for autonomous vehicles as well as bike-sharing and ride-hailing services.



Other Ideas

"An education campaign sounds like it's in order. People do not know how to use roundabouts properly. Signage and a blast on a HOW TO would be good for all of Eagan/Dakota County."

Generate accessible information about existing transportation services and projects. People said information can be shared with their communities through community leaders, by posting information in community spaces and by attending community events.

Produce more education opportunities for drivers. People said specific topics could cover how to use roundabouts and how to watch out for pedestrians and bicyclists.

Most mentioned corridors

People are concerned about safety along county roads for all users. Most comments about specific roads expressed concerns for walkers, bikers and drivers who travel along and try to cross busy roads. Walkers and bikers want more protection from vehicles, including for people who are traveling to and from bus stops. Many people want to see poor driver behavior and speeding decrease, especially near schools, residential neighborhoods, parks and other important destinations. The map below shows the corridors most frequently mentioned as a problem.

Lexington Ave

People said Lexington Ave has unsafe crossings and that the speed limit is too high in residential areas.

Yankee Doodle Rd

Comments about Yankee Doodle Rd said people drive too fast, there is too much traffic congestion, and/or traffic flow needs to improve.

Co Rd 42

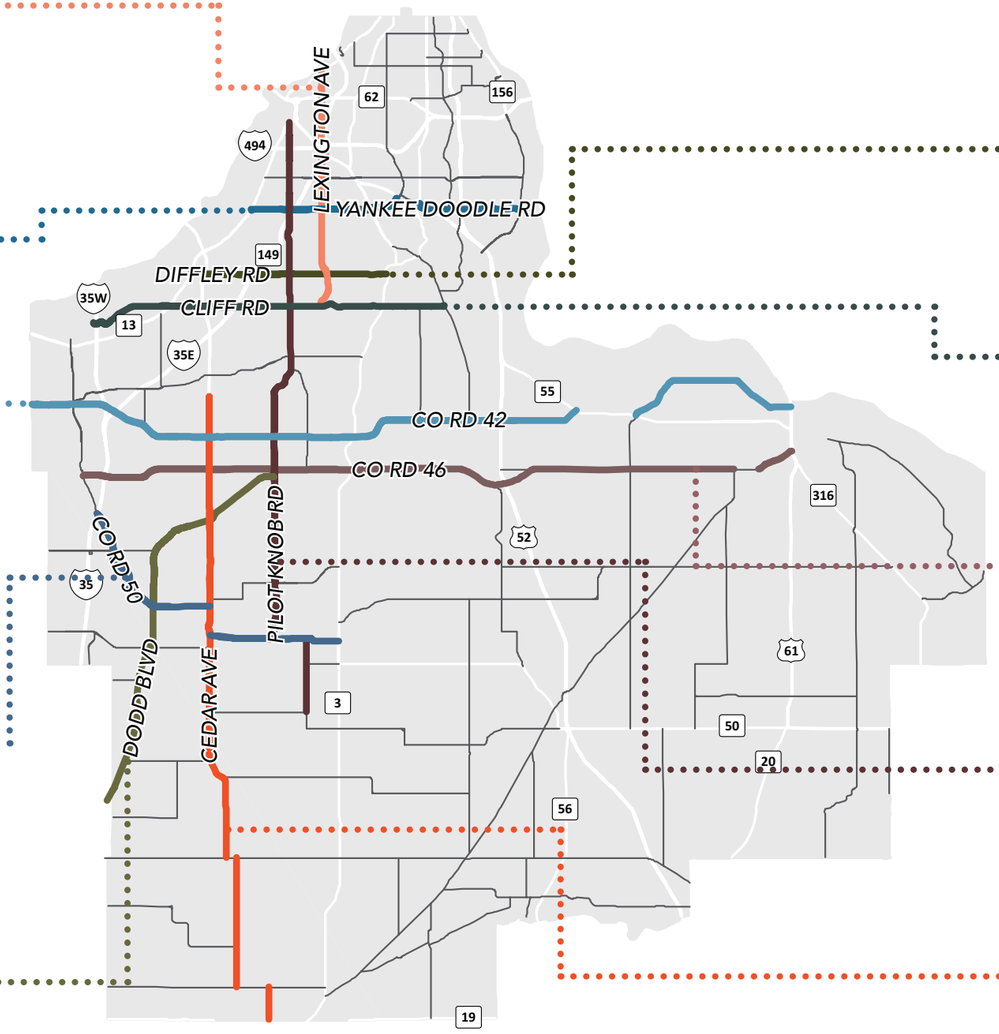
Many people reported dangerous intersections at I-35, Pilot Knob Rd, and Cedar Ave. A number of people are also concerned about traffic congestion and pedestrian and bicyclist safety.

Co Rd 50

People are concerned about crossing Co Rd 50, especially at the CR 50 and Flagstaff Ave intersection. Some people suggested lowering the speed limit or adding more enforcement.

Dodd Blvd

Most comments about Dodd Blvd described either traffic congestion or safety concerns for pedestrians and bicyclists. Some people suggested more sidewalks, wider shoulders, and safer crossings.



Diffley Rd

Most comments about Diffley Rd recounted safety concerns at intersections for pedestrians, bicyclists, and drivers and said that traffic congestion is a big issue.

Cliff Rd

Most comments about Cliff Rd described pedestrian and bicyclist safety issues. People suggested adding sidewalks and safer crossings.

Co Rd 46

People said crossing Co Rd 46 is unsafe and recommended adding sidewalks, bike lanes, and crosswalks.

Pilot Knob Rd

Most people reported speeding as an issue on Pilot Knob Rd and suggested lowering speed limits near residential areas. Many also stated pedestrian and bicyclist conditions are unsafe.

Cedar Ave

People said there is growing traffic congestion on Cedar Ave and recommended improving traffic flow. There were also a number of comments about unsafe conditions on Cedar Ave for pedestrians and bicyclists.

Most mentioned intersections

People said safer crossings are needed at intersections on county roads for all users. People want to prioritize intersection improvements to make it easier for pedestrians, bicyclists and drivers to cross busy roads, especially those located near important destinations like schools. These are the intersections on county roads that people talked about most often.

Pilot Knob Rd & I-35E

A number of people reported that there have been many crashes at the intersection of Pilot Knob Rd and I-35 and that it is dangerous to cross.

Diffley Rd & Daniel Dr

People said the intersection at Diffley Rd and Daniel Dr needs to be safer to cross for students walking and biking to Northview Elementary School.

Diffley Rd & Lexington Ave

People expressed concern for pedestrians and bicyclists using this intersection to get to and from the park, the shopping center, and Northview Elementary. They reported drivers run red lights and encroach on crosswalks.

Cedar Ave & 140th St

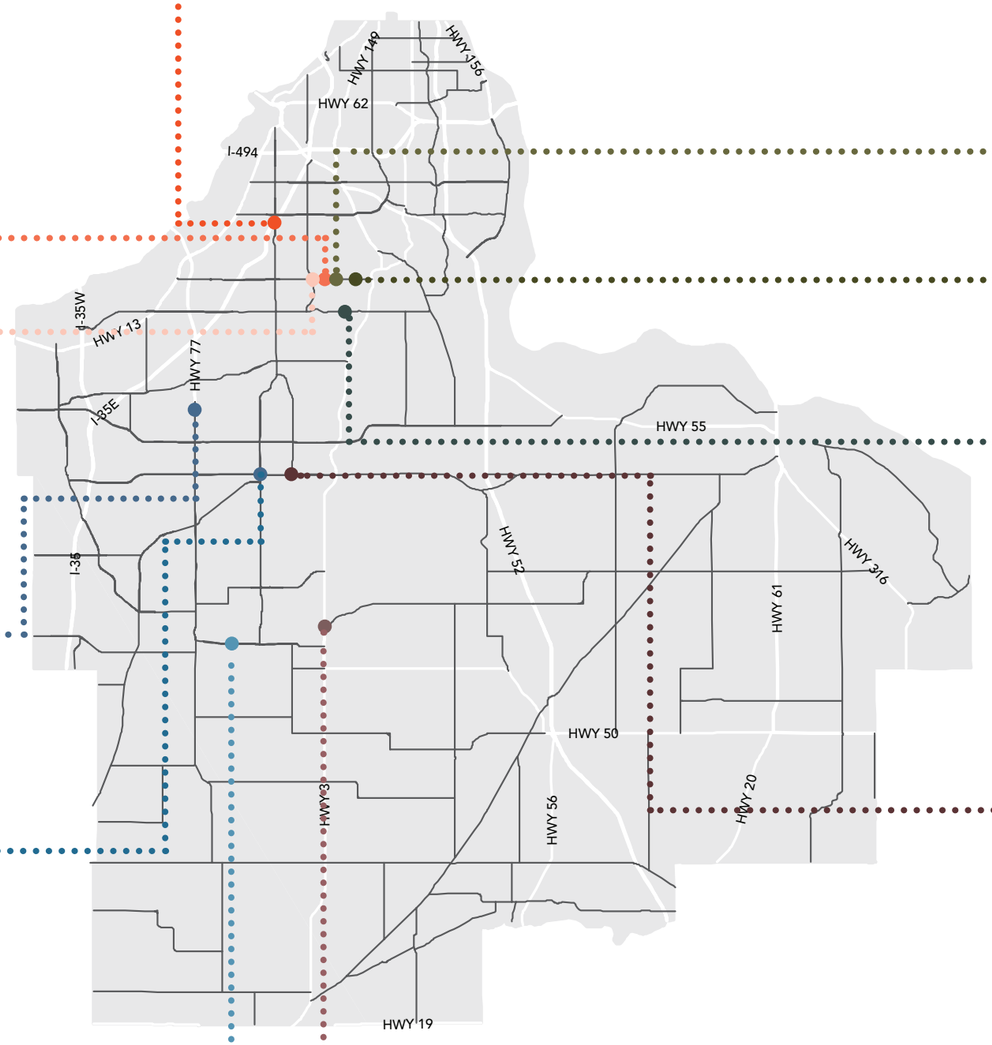
People reported that it is unsafe to cross the intersection at Cedar Ave and 140th St. They said that drivers run the red light and that a “no turn on red” sign is needed.

Pilot Knob Rd & Co Rd 46

Many people reported crashes at the Pilot Knob Rd and Co Rd 46 intersection. They said that the right turn lanes from northbound Pilot Knob Rd to eastbound Co Rd 46 and eastbound Co Rd 46 to southbound Pilot Knob Rd get backed up.

Co Rd 50 & Flagstaff Ave

Many people said the intersection at Co Rd 50 and Flagstaff Ave is dangerous, especially with traffic from Farmington High School before and after the school day.



Diffley Rd & Braddock Trl

People reported drivers run through red lights or don’t yield for pedestrians at the Diffley Rd and Braddock Trl intersection.

Diffley Rd & Dodd Blvd

People said that drivers regularly run through stop signs and don’t yield to pedestrians and bicyclists in the crosswalks at Diffley Rd and Dodd Rd. People recommended more enforcement.

Cliff Rd & Dodd Blvd

Many people reported the intersection at Cliff Rd and Dodd Rd is unsafe due to poor sightlines for drivers.

Co Rd 46 & Diamond Path

Many people reported it is difficult to make a left turn or cross Co Rd 46 at Diamond Path due to the speed of traffic on Co Rd 46. Some people recommended increased traffic control.

Co Rd 66 & Hwy 3

A number of people reported that the intersection at Co Rd 66 and Hwy 3 is unsafe to cross due to the amount of traffic on Hwy 3.

For more information, visit:

www.dakotacounty.us

and search 2040 transportation plan

Prepared for:

Dakota County transportation we get you there

Prepared by:

ZAN ASSOCIATES