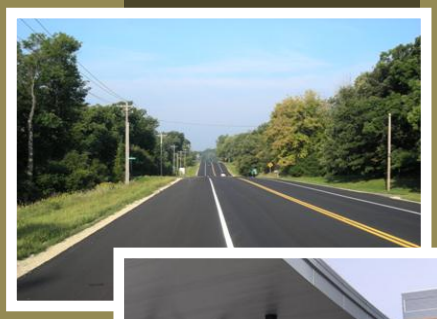

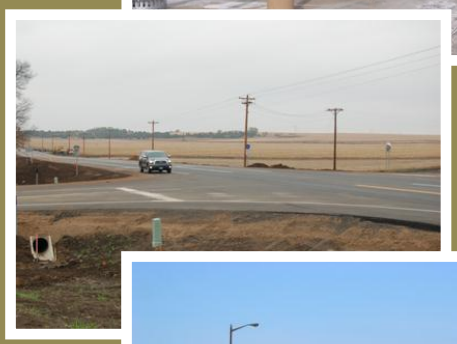

Dakota
COUNTY

2030 Transportation Plan

June 2012

Dakota COUNTY
transportation
we get you there

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Executive Summary

The *Dakota County 2030 Transportation Plan* (Plan) is a revision to a primary component of Dakota County's Comprehensive Plan *(DC2030)* adopted in 2008. *DC2030* 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 *DC2030* 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. *DC2030* 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.

Why an Update to the Transportation Plan?

The following were key reasons for updating the Transportation component of the Comprehensive 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 2009. Major findings, influences or considerations of this plan, DC2030, provided context to be incorporated into the Transportation Plan. These included:

- Incorporating the Dakota County Visioning work, including addition of the guiding principles of Sustainability, Connectedness, Collaboration, Economic Vitality and Growing and Nurturing People as Transportation Plan Principles. Supporting strategies and policies to implement these principles were applied.
- Recognizing context sensitive design and complete street philosophies in consideration of all modes of use and safety of all users.
- Considering and providing rationale of 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 and Regional Transportation Plans Updated

Two primary state and regional transportation plans were recently completed. These plans identified major findings, influences or considerations. The County used these plans as a basis of how the State's or the region's goals align with the County's Plan and how County policies and strategies best support State and regional transportation. These plans are:

- The Minnesota Department of Transportation 20-year statewide transportation plan (*Statewide Transportation Plan: 2009-2028, Your Destination…Our Priority)*
- The Metropolitan Council Transportation Policy Plan (*2030 Transportation Policy Plan)*

County Travel Demand Model Updated

The County 2030 Travel Demand Model was updated in 2010 for use by Dakota County and local communities to prepare and analyze the traffic impacts on potential land development or transportation scenarios. The model was a combination of both the 2005 Regional Model and a separate County model that includes greater detail with surrounding communities.

Completed County Transportation Studies Identified in the *Dakota County 2025 Transportation Plan*

As a result of recently completed studies identified in the *Dakota County 2025 Transportation Plan*, there is a better understanding of transportation needs with study findings incorporated into the Plan update. Many of these studies were adopted by the County in 2009 and 2010. These studies include:

- Dakota County Transit Plan
- East West Corridor Preservation Study Phase 2
- Regional Roadway System Visioning Study
- Rosemount / Empire / UMore Transportation System Study
- Hastings Area Roadway System Study
- Northwest Northfield Highway Corridor Study
- Farmington Area Transportation Study
- Cedar Avenue Transitway – Implementation Plan Update
- CSAH 28 Corridor Study – From Denmark Avenue to State Highway 149

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.
- Continued growth and demand for efficient transportation systems pose important challenges for the future.
- Estimates derived from the County's Travel Model (based on the region's model and future local land use) indicate that vehicle miles driven will grow by approximately 2 percent annually.
- System congestion has held steady with expansion investments recently and should continue into the short-term future.
- Traffic volumes at eight County highway-to-County highway intersections show operation approaching or exceeding capacity by 2030. Projected transportation revenues are inadequate to fund needed interchange projects and will require funding sources beyond current County highway funding sources.
- 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 needs.
- Land access needs continue to compete with transportation system mobility needs.
- It is anticipated that proposed investment on the regional transportation system are not adequate to address County growth. Outside of transit corridor implementation and some minor highway or bridge crossing improvements, the State and Region envision

very little investment to the regional transportation system within the county in the next 20 years.

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: Transit and Integration of Transportation Modes
- Goal 3: Preservation of the Existing System
- Goal 4: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity
- Goal 5: Replace Deficient Elements of the System
- Goal 6: Improvement and Expansion of Transportation Corridors

Plan Summary

Transportation Plan Principles

The Plan includes ten overarching principles that apply to all Plan goals. These include five guiding principles identified in *DC2030* and five principles specific to transportation. All of 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
- Public and Agency Involvement
- Context-Sensitive Design and Complete Streets

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

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 and implemented 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. 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 extremely 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.
- Development of the Capital Improvement Program.
- Identification of investment needs.
- Use of Plan strategies and policies.

Through this update of the Plan, it has been determined that over $1.253 billion will be required to meet the County's transportation needs over the 20-year plan period. Specific needs are identified and explained in detail in chapters throughout this plan document. $658 million of revenue is anticipated during this time. This results in 53 percent of the necessary anticipated revenues available to meet transportation needs in the next 20 years. In comparison, in 2004, the Transportation Plan identified $1 billion required to meet needs and $600 million anticipated resulting in 60 percent of the necessary anticipated revenues to meet needs.

The County envisions available revenues of approximately $33.4 million per year to invest towards transportation and approximately $11 million per year towards transit-specific transportation projects. These investments 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: Transit and Integration of Transportation Modes

This goal establishes Dakota County's role in coordinating and providing direction on the development of infrastructure and services for non-automobile modes of transportation. Rapid population growth and diversified transportation needs have prompted the County to adopt policies and strategies for the development and integration of a comprehensive transit system, bicycle and pedestrian network, and other non-automobile modes for people and freight to maximize the transportation system efficiently. The ongoing facilitation of these modes will contribute to the County's transportation networks by providing safe, timely, convenient, and efficient connections between communities, activity generators, and employment concentrations.

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

Activities

- Integration of transit into the *Dakota County 2030 Transportation Plan*
- Local and regional transit governance
- Transitway and facility planning
- Collaboration with transit partners
- Meeting the needs of transit dependent populations
- Technology implementation
- Travel Demand Management
- Integration of land use with transit services and facilities
- Integrating bicycle and pedestrian modes

CIP Investment Categories

- Cedar Avenue Transitway
- Bicycle Trails
- Transit Infrastructure

DCRRA CIP Investment Categories

- Cedar Avenue Transitway
- Robert Street Transitway
- Red Rock Transitway

Dakota County currently invests approximately $11 million per year towards projects to integrate transit and transportation modes. This entire investment is towards the integration of transit projects including study and implementation of transit corridors. Investments towards bicycle and pedestrian integration are identified within the Preservation Goal. In addition, the Parks CIP identifies approximately $0.5 million per year towards trail investments. No CIP investments are identified for other modes identified per this goal. However, the detailed information on trucking, railroads, commercial navigation, aviation and telecommunications will be considered in the development of CIP transportation projects and investments.

Future annual investments for this goal are anticipated to remain stable. However, future needs for the Robert Street Corridor and Red Rock Corridor require additional definition and, at present, represent a wide range of future investment need.

The following are the estimated annual CIP transit and integration of transportation modes investments over the plan period.

TOTAL

Average Yearly Transit and Integration of Transportation Modes Needs

Activity	2004 Plan	2005-2009 CIP	Future Needs 2011-2015	Future Needs 2016-2020	Future Needs 2021-2030
Transit - Cedar Ave	(a)	0.10 (b)	8.40	12.50	12.20
Transit - Robert St	n/a	n/a	1.60	(c)	(c)
Transit- Red Rock	0.02	0.02	0.03	(d)	(d)
DCRAA	0.18	0.18	1.00		
Bike & Ped Facilities	0.90	0.90	(e)	(e)	(e)
Other Modes	0.00	0.00	0.00	0.00	0.00
Totals	1.10	1.20	11.03	12.50	12.20

(a) At the time of the 2004 Plan, Dakota County was committed to completing the remaining corridor study phases that included environmental study, preliminary engineering, short-term transit improvements, final design and construction of Bus Rapid Transit in the corridor. Plans were to seek funding for future investments and to become federally authorized to set up eligibility for federal funding for future phases.

(b) $0.5 million was transferred from the Regional Railroad Authority 2006 budget to provide for local match of Federal ($3.2 million) and State ($17.6 million) funds for Cedar Avenue BRT Phase I activities.

(c) Total Robert Street Corridor needs are currently estimated between $111 million to $1.1 billion.

(d) Total Red Rock Corridor needs are currently estimated between $115 million to $128 million.

(c) & (d) Figures are based on 2011 CTIB Annual Fiscal Review and Capacity Estimates. Timing and funding sources, including potential County funding share for Robert Street and Red Rock Corridors are yet to be determined. These needs therefore will be identified separate from overall County transportation system needs.

(e) Investments for bicycle and pedestrian facilities are included within the Preservation category of the Transportation CIP and within the Parks CIP. Current County practice is to consider bicycle and pedestrian facility implementation as part of highway projects. Prior investments were identified through the now defunct Intermodal CIP.

Goal 3: Preservation of the Existing 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. 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
- Integration of Transit, Bicycle and Pedestrian Modes
- Pavement Management Program
- Gravel Maintenance, Resurfacing Efficiency and Conversion to Paved Highways
- Bridge Rehabilitation
- Traffic Safety and Operation including Pavement Markings, Guard Rails, Safety Edges, Culverts, Rumble Strips/Rumble Stripes and Signs
- Bicycle Trail Maintenance
- Winter Maintenance

CIP Investment Categories

- Paved Highway Surface
- Gravel Highway Surface
- Bridge Rehabilitation
- Traffic Safety and Operation
- Transit, Pedestrian and Bicycle Facilities
- Storm Sewer Maintenance

Dakota County currently invests approximately $4.2 million per year towards projects to preserve the existing system. Activities include highway surface preservation (including both bituminous and gravel), bridge rehabilitation, traffic control devices (traffic signals and durable pavement markings), bicycle trail and facilities and transit facilities preservation, and storm sewer preservation. Future annual investments for this goal are anticipated to rise as the transportation system ages and traffic volumes increase in the future. The following are the estimated annual CIP preservation needs and investments over the plan period.

TOTAL Average Yearly Preservation Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Bituminous	3.0	3.3	3.0	3.2 *	3.4 *
Gravel	0.4	0.5	0.6	0.6	0.6
Safety & Operation	0.2	0.3	0.3	0.3	0.3
Bike Trails	0.1	0.1	0.2	0.3	0.4
Storm Sewer	0.0	0.0	0.3	0.3	0.3
Totals	3.7	4.2	4.4	4.7	5.0

* To be verified based on PQI assessment later in 2010.

County Road Avg Yearly Preservation Investment Needs

	County Road Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Bituminous	0.8	0.8 *	0.8 *
Gravel	0.6	0.6	0.6
Safety & Operation	0.1	0.1	0.1
Bike Trails	0.1	0.1	0.2
Storm Sewer	0.1	0.1	0.1
Totals	1.7	1.7	1.8

* To be verified based on PQI assessment later in 2010.

Goal 4: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

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
- Identification of Best Access Location and Type
- Functional Classification
- Contiguous Plat Ordinance
- Permits for Activities in Right of Way

CIP Investment Categories

- Transportation System
- Access Management
- 10-Ton System
- Jurisdictional Classification
- Safety and Management
- Signal Projects
- Right of Way Preservation and Management

The current CIP investment for project to manage the existing system is approximately $7.9 million per year. Activities include access management, jurisdictional classification, safety and management, signal projects, right-of-way preservation and transit infrastructure. 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 investments over the Plan period.

Costs associated with access management are included with other project expenses in the CIP or are assumed at no cost.

TOTAL Average Yearly Management Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Access Mgmt	2.7	1.7	-	-	-
Jurisdictional Class.	0.3	0.5	0.3*	0.6*	0.4*
Safety & Mgmt	1.0	3.6	5.5**	5.5**	5.5**
Intersection Control	1.0	1.0	1.0	0.7	0.7
R/W Preservation	1.0	1.0	1.0	1.0	1.0
Totals	6.0	7.8	7.8	7.8	7.6

* Assumes staff recommended approach to turnbacks.
** Includes combination of Safety&Management AND Access Management.
Note: 10 Ton system implementation assumed at no cost.

County Road Avg Yearly Management Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Access Mgmt	-	-	-
Jurisdictional Class.	0.3*	0.6*	0.4*
Safety & Mgmt	1.4**	1.4**	1.4**
Intersection Control	0.0	0.0	0.0
R/W Preservation	0.3	0.3	0.3
Totals	2.0	2.3	2.1

* Assumes staff recommended approach to turnbacks.
** Includes combination of Safety&Mgmt AND Access Mgmt.
Note: 10 Ton system implementation assumed at no cost.

Goal 5: Replace Deficient Elements of the System

The emphasis of this goal is to address the transportation system elements that have deteriorated over time. The goal recognizes that even with proactive preservation of system elements replacement eventually becomes the most cost effective approach. Investments are to be made as transportation system elements age and deteriorate to the point where preservation techniques are no longer practical or cost effective.

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 Reconstruction
- Bridge Replacement
- Gravel Road Paving
- Traffic Signal Replacement

In the period 2005 to 2009, approximately $14.5 million per year was invested towards replacement related projects. This investment was higher than what was identified in the *Dakota County 2025 Transportation Plan* and higher than current needs. This is due to significant investments to replacement activities on CSAH 50 and CSAH 56 between 2005 and 2009. The following are the estimated annual CIP replacement needs and investments over the plan period.

TOTAL Average Yearly Replacement Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Highway Recon.*	2.4	12.5	5.0	12.4	8.7
Bridge**	0.8	0.0	0.3	0.1	0.3
Gravel Paving***	1.0	2.0	1.3	1.5	1.7
Signal Replacem.	-	0.0	0.2	1.5	1.4
Totals	4.2	14.5	6.8	15.5	12.1

* Additional safety and structural analysis to be completed
** Based on bridge ages. Replacement costs will also depend of Sufficiency Rating.
*** Assumes reconstruction and paving at 300+ ADT

County Road Avg Yearly Replacement Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Highway Recon.*	2.5	1.1	0.2
Bridge**	0.2	0.0	0.1
Gravel Paving***	1.0	1.2	1.4
Signal Replacement	0.0	0.0	0.0
Totals	3.7	2.3	1.7

* Additional safety and structural analysis to be completed
** Based on bridge ages. Replacement costs will also depend on Sufficiency Rating.
*** Assumes reconstruction and paving at 300+ ADT

Goal 6: Improvement and Expansion of Transportation Corridors

This goal directs the County to improve the existing transportation system to address emerging deficiencies to address capacity needs to best provide efficient connections. This goal applies to development of new transportation corridors, lane additions, interchanges and the transit system. The goal identifies current and future estimated expansion needs, defines measures and planned costs of investments, and measures for improvement and expansion of the system.

Between 1990 and 2000, Dakota County's population grew 29.3 percent, from 275,227 in 1990 to 355,904 in 2000. According to Metropolitan Council estimates as of 2010, the County's population grew 12.5 percent in the first decade of the 2000's to 400,675. Although, the growth rate is moderating, the County's population is estimated to increase to 520,010 (or 30 percent) by 2030.

Vehicle miles traveled prior to 2004 was growing at nearly five percent annually. However, in the years between 2004 and 2007 the vehicle miles traveled leveled off to an average rate of 2.4 percent increase (2007 was the latest year available for actual traffic data when preparing the update of the Dakota County Travel Demand Model). Current estimates derived from the County's Transportation Demand Model indicate that between 2010 and 2030 vehicle miles traveled is estimated to grow by 40 percent (2 percent annually).

County efforts to improve and expand the transportation system include lane additions or expansion, future County highway alignments, interchanges and overpasses, and the Cedar Avenue BRT. 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.

TOTAL Average Yearly Expansion Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Lane Addition	8.0	10.5	7.1	13.8	32.1
New Alignments	6.0	3.1	0.7	0.8	0.9
Interchanges	0.0	7.4	5.0	9.0	12.5
Future Studies	0.0	0.5	0.5	0.5	0.5
Totals	14.3	21.5	13.3	24.1	46.0

County Roads Avg Yearly Expansion Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Lane Addition	0.0	0.0	1.2
New Alignments	0.7	0.8	0.9
Interchanges	0.0	0.0	0.0
Future Studies	0.5	0.5	0.5
Totals	1.2	1.3	2.6

Implementation

Capital Improvement Revenue Summary
The following are the estimated annual CIP estimated investment needs over the plan period.

Goal		Actual Annual 2005-2009 CIP Investment	Estimated Annual CIP Investment Needs 2011-2015	2016-2020	2021-2030
Goal 1	Resources	$ 1.9	$ 3.2	-	-
Goal 2	Transit & Modes**	-	$ 11.0	$ 12.5	$ 12.2
Goal 3	Preservation	$ 4.2	$ 4.4	$ 4.7	$ 5.0
Goal 4	Management	$ 7.8	$ 7.8	$ 7.8	$ 7.6
Goal 5	Replacement	$ 14.5	$ 6.8	$ 15.5	$ 12.1
Goal 6	Expansion	$ 21.5	$ 13.3	$ 24.1	$ 46.0
	TOTAL	$ 49.9	$ 46.5*	$ 64.6	$ 82.9

* Total revenues for 2011—2015 are projected to be $32.9 million/year. The current Draft CIP averages $38.2 million/year. Additional state and federal funds will need to be identified to support the projects and timeframes in the Draft CIP.

** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-4128 million.

It is anticipated that the needs associated with preservation, management, replacement, and transportation alternatives goals through the plan period will be fully funded. The needs associated with the expansion goal can be fully funded from 2005 through 2014, with the exception of interchanges and the Cedar Avenue Bus Rapid Transit. These needs are anticipated to be approximately $10 million annually for interchanges. Cedar Avenue Bus Rapid Transit needs is estimated to be: $16 million from 2010 to 2014, and $12 million from 2015 to 2025. In the period 2015 to 2025, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

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:

Anticipated General Revenues	Annual Estimated Revenue
County Levy/County Program Aid	$5.2 million / $4.9 million
Wheelage Tax Funds	$1.7 million
Gravel Tax Funds	$0.2 million
County State Aid Highway (CSAH)*	$10.0 million
City Cost Share Participation	$7.0 million
Regional Railroad Authority Levy**	$1.6 million
	$25.7 million / $30.6 million

* Includes Flexible Highway Account and Leased Motor Vehicle Sales Tax Revenues
** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-4128 million.

Project Specific		Annual Estimated Revenue
Federal Aid		$5.0 million
State Trunk Highway Funds		$2.5 million
State Bridge Bond Funds		$0.2 million
		$7.7 million
	TOTAL	$33.4 million / $38.3 million

An estimated $46.5 million of annual CIP needs is anticipated with approximately $33.4 million of estimated annual revenue. Based on this scenario, it is anticipated that the needs associated with transit and mode integration, preservation, and management goals through the plan period can be fully funded. The needs associated with the expansion goal can be fully funded through 2015, with the exception of interchanges (approximately $10 million annually) and Cedar Avenue Bus Rapid Transit: $27 million from 2005 to 2010, $8.4 million from 2011 to 2015, $12.5 million from 2016 to 2020 and $12.2 million from 2021 to 2030. In the period 2016 to 2030, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

Investment Needs Summary

The *Dakota County 2030 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 2030. The Plan identifies available revenues of $30 million annually for the Transportation CIP to meet transportation needs.

Chapter 2

Introduction and Background

In 1997, the Dakota County Board of Commissioners adopted the vision of Dakota County as being recognized as a premier place in which to live and work. To achieve this vision for the County, the Board has adopted policies and allocated resources in order to achieve: 1) a vigorous sustainable economy; 2) safe, healthy, vital communities; 3) quality physical environment; and 4) efficient, effective, responsive government. The vision for the transportation system in Dakota County is the safe and efficient movement of people and goods.

The Dakota County 2030 Transportation Plan

Purpose of Plan

The *Dakota County 2030 Transportation Plan* (the Plan) is a document used by Dakota County, its partners and residents as a guide to maintain and improve the County's transportation system through 2030.

What It Is

The Plan is a component of the Dakota County Comprehensive Plan. The Plan covers the 20-year period from adoption by County Board in 2011 to 2030. The Plan is a document used by the County, its partners and residents as a guide to maintain and improve the transportation system, support land use goals and objectives and document transportation policies and strategies. It was developed in the context of regional, state and national transportation planning and funding policies and guidelines. The Plan supersedes the *Dakota County 2025 Transportation Policy Plan* that was adopted in 2004.

Why Important

The Plan provides the vision for the future transportation system, supports land use goals and objectives, and documents the County's transportation policies and strategies. The Plan identifies major transportation system investment needs and prioritizes these needs. Past versions of the Plan primarily focused on the roadway system.

In 2007, the County adopted a Transit Plan which prioritized action items and focused on transit influences and the future of transit in the County. At that time, the Transit Plan was incorporated into the DC 2030: Planning for the Future (the County's Comprehensive Plan). To further acknowledge the importance and high priority of transit as an integral piece of the overall transportation system within the County and the region, transit plan elements are now included within the Plan

The County also recognizes the continued importance of transportation mode integration. This includes a larger emphasis on the development of walking and bicycling as viable transportation modes within County.

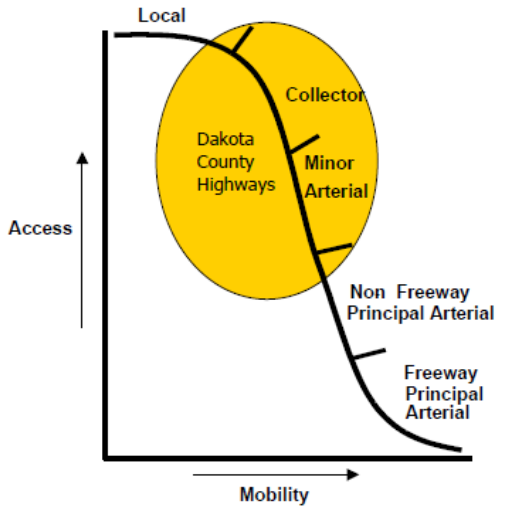
Dakota County Transportation System

The purpose of the transportation system in Dakota County 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 of the quality of life for its citizens. Transportation systems, both highway and transit, must safely, efficiently and effectively allow citizens 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 is made up of 320 miles of County State Aid Highways (CSAH) and 104 miles of County roads (CR). This is shown in Figure 1. The overall County system consists of 424 centerline miles of which approximately 359 miles (85 percent) are paved and 65 miles (15 percent) have a gravel surface. There are 1080 lane miles in the system. The County system also has 81 bridges, 250 traffic signals, and approximately 25,000 signs.

Role of the County Highway System

The majority of Dakota County highways fall into the functional classification category of minor arterial. The emphasis of minor arterials is on mobility with limited land access. Providing a balance between mobility and appropriate land accesses is a constant challenge. To ensure mobility continues to be emphasized, local supporting networks are essential to provide access to and from the County highway system and to handle local traffic. This relationship is illustrated in Figure 2.



Relationship Between Functional Classification and Mobility and Access

Figure 2

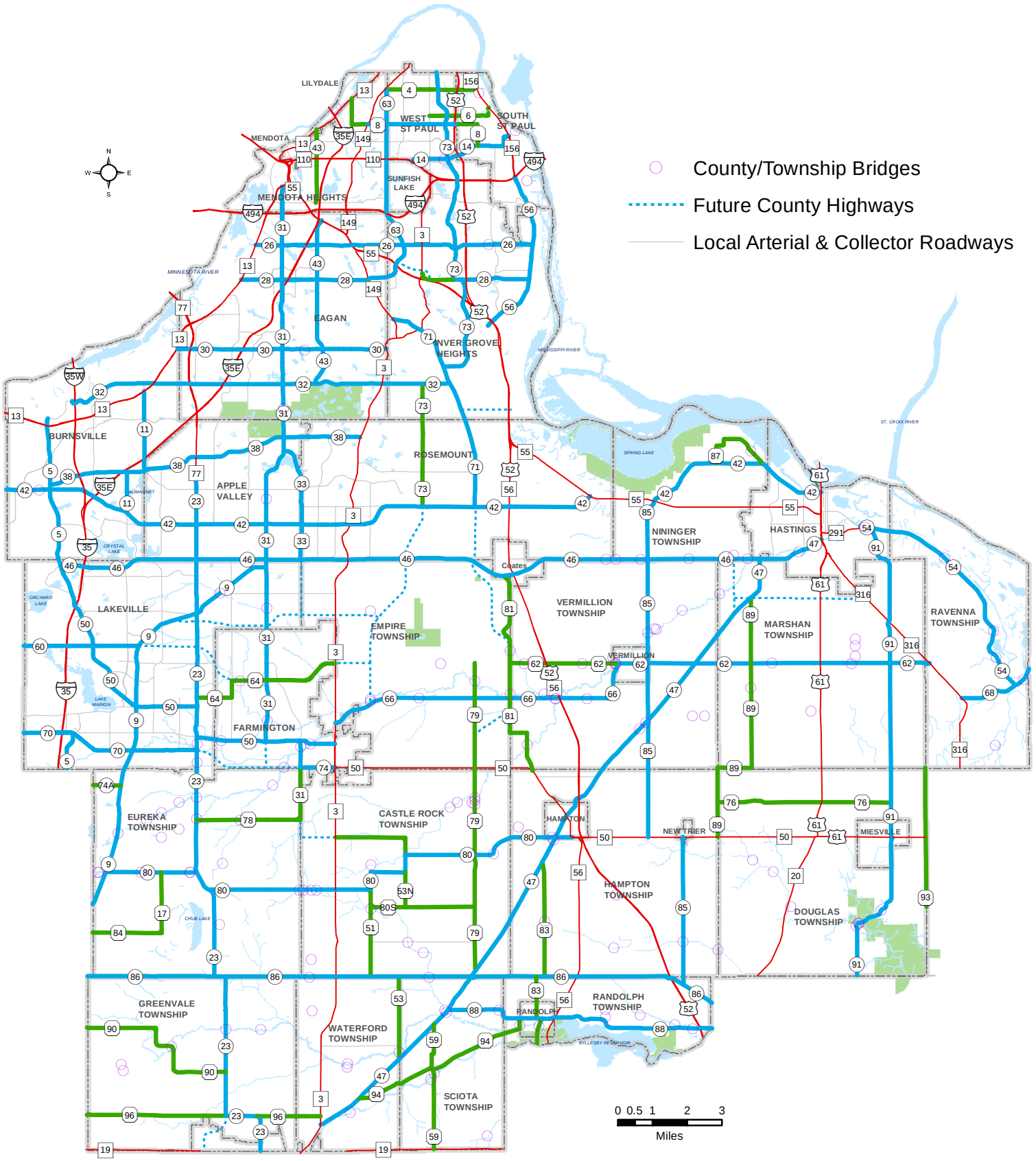
Role of Mn/DOT Trunk Highways and Local Streets

Mn/DOT freeways (such as I-494, I-35E, and I-35W) emphasis mobility for traffic, however, they provide no direct access to adjacent lands. The opposite is true for local residential streets that provide direct driveway access to homes and businesses, but do not work well for longer trips across the County.

Functional Classification of Highways

Functional highway classification is the grouping of highways by the character of the service that they provide. Highways are classified according to the relative importance for providing 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 Transportation System, 2011



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 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 18 miles of principal arterial highway (represents 4 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 212 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 180 miles of collector roadway (represents 42 percent of the County system).
- *Local*: Roadways connect streets and land parcels. The primary emphasis is on land access. The County has 14 miles of local roadway (represents 4 percent of the County system).

The following key reasons support 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 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 only serve one function are generally safer and tend to operate more efficiently.
- 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 30,000 miles of highways under jurisdiction of the 87 Minnesota counties. The county state aid 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 Mn/DOT Commissioner of Transportation. Dakota County has 320 centerline miles of state aid highways out of 424 total centerline miles for all county highways or approximately 75 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 highway system is shown in the following table.

County Highway Mileage by Type

	Miles	Miles Paved	Miles Gravel	Lane Miles
County State Aid Highways (CSAH)	320	309	11	867
County Roads (CR)	104	50	54	213
Total	424	359	65	1080

Table 1.

Integration of Modes

Transportation alternatives such as transit, bicycle, and pedestrian modes provide safe, timely, and efficient connects between communities, activity generators, and employment centers. The following are existing transportation alternative facilities:

- 145 miles of bike routes or paved shoulders.
- 290 miles of off-street bike trails.
- 4 transit stations located in Apple Valley, Burnsville and Eagan (two stations).
- 13 park and ride lots served by transit within the County capable of accommodating approximately 5,500 vehicles combined.
- 5 park and pool lots
- 7 miles of bus shoulder lanes on both sides of Cedar Avenue
- 2 miles of bus shoulder lanes in the northbound direction of I-35E
- 5 miles of HOV lanes on both sides of I-35W
- 4 transitways planned or under construction (Cedar Avenue Transitway, Interstate 35W Transitway, Red Rock Transitway and Robert Street Transitway)
- 85 miles of bikeways. County policy is to construct off-highway walkways and bikeways in conjunction with all County highway projects whenever appropriate.
- Funding with the Transportation CIP to fill gaps in the County trail system in partnership with cities.

Plan Development Progression

The issues and resultant principles, goals, policies, strategies, and performance measures were identified through several initiatives.

- County staff met with city engineers and city planners through a series of meetings to identify major issues and potential policy responses.
- County staff conducted a comprehensive review of existing plan policies.

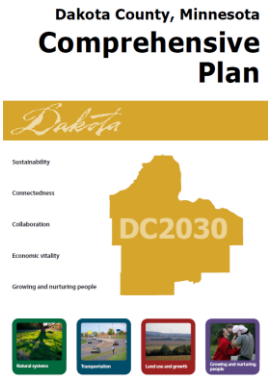
- Staff evaluated transportation-related survey responses and comments obtained during the development of the Comprehensive Plan.
- County Board of Commissioners participated in workshops in May 2010 and September 2010 to provide guidance on issues to be considered in this plan.
- Staff held a public open house in September 2010 to gain residents' ideas, comments, and issues.
- Staff provided the County Planning Commission with a summary of the update process in October 2010. The Planning Commission provided addition comment.

Throughout the development process, the Dakota County Physical Development Committee of the Whole provided update reviews and recommendations. At the policy development and review stages, special meetings were held with city engineers and planners.

Contributing Planning Activities

The following are key reasons for updating the Plan since the last version was adopted in 2004. 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.

DC2030: Planning for the Future



The County completed an update of its comprehensive plan which 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. Major findings, influences or considerations incorporated into the Transportation Plan include:

- Incorporates the Dakota County Visioning work, including guiding principles of Sustainability, Connectedness, Collaboration, Economic Vitality and Growing and Nurturing People as Transportation Plan Principles. Supporting strategies and policies to implement these principles were also applied.
- Recognizes context sensitive design and complete street philosophies in consideration of all modes of use and safety of all users.
- Considers and provides rationale of 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, recognition of the role of telecommunications and sustainability leadership by example.

The County Board adopted this plan on May 19, 2009 (Resolution Number 09-225).

Statewide Transportation Plan: 2009-2028, Your Destination…Our Priority

The Minnesota Department of Transportation (Mn/DOT) completed an update to its 20-year statewide transportation plan, *Statewide Transportation Plan: 2009-2028, Your Destination…Our Priority.* Major findings, influences or considerations incorporated into the Transportation Plan include:

- Mn/DOT identifies a total of $65 billion in transportation needs and only $15 billion in projected revenue. It is unlikely that future transportation funding will increase sufficiently to meet the unmet needs. Therefore, Mn/DOT'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).
- Identifies challenges including growth, aging and more diversified population, aging infrastructure and declining physical system conditions and concerns for energy and the environment.
- Identifies opportunities including new approaches to safety and congestion and increased interest in multimodal solutions.

2030 Transportation Policy Plan (TPP)

The Metropolitan Council adopted its *2030 Transportation Policy Plan (TPP)* in 2009. 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. Major findings, influences or considerations incorporated into the Transportation Plan include:

- Recognizes challenged mobility, increasing congestion, rising costs and tight fiscal constraints.
- Develops a highway vision that emphasizes preservation and directs investments to low-cost/high-benefit projects.
- Increases importance of alternatives to congested travel (HOV, HOT, bus-only shoulders and other transit advantages) to focus on maximizing the use of existing highway capacity, pavement and right-of-way for the system to perform better.
- Identifies few regional investments within Dakota County.
- Emphasizes a transit vision to double transit ridership by 2030 through expanded coverage and frequency, addition of express routes, increased transit centers and park-and-ride facilities and technological improvements. The transit vision recognizes the I-35W, Cedar Avenue, Red Rock and Robert Street Transitways.

Dakota County 2030 Travel Demand Model

The County 2030 Travel Demand Model was updated in 2010 for use by Dakota County and local communities to prepare and analyze the traffic impacts on potential land development or transportation scenarios. The model is a combination of both the 2005 Regional Model and a separate County model that includes greater detail with surrounding communities. Major findings, influences or considerations incorporated into the Transportation Plan include:

- Estimated vehicle miles traveled are growing at approximately 2 percent annually compared to 5 percent annually estimated from the previous model results.
- The model showed that overall congestion on the system will continue, however most capacity issues will occur closer to the end of the plan period rather than sooner as shown from previous model results.
- The model was developed so County staff could integrate new information and update results to examine affects to the system.

County Transportation Studies Identified in the *Dakota County 2025 Transportation Plan*

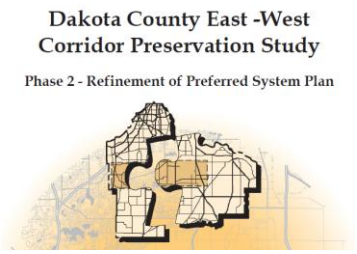
As a result of recently completed studies identified in the *Dakota County 2025 Transportation Plan*, there is a better understanding of the needs associated with the following studies. Many of these studies were adopted in 2009 and 2010:

- *Dakota County Transit Plan* – The *Dakota County Transit Plan* established a long-term vision for transit services and facilities in the county. The vision provides a framework for improving existing and future mobility needs within the county through comprehensive transit planning and innovative and progressive project development. Major findings, influences or considerations incorporated into the Plan include:

    - Integrated modes and provided alternatives that maximize the efficiency of the transportation with a vision to provide safe, timely and efficient connections between communities, activity generators and employment centers.
    - Provided another tool for seeking multi-modal solutions. The *Dakota County Transit Plan* is integrated into the Plan and will no longer be a stand-alone document.
    - Provided a centralized focus area that aided in the creation of the County's Office of Transit, development of a Regional Railroad Authority CIP and development of and participation in the County Transit Investment Board.
    - Action items are incorporated into the Plan as strategies and policies.

The County Board adopted this plan on March 18, 2008 (Resolution Number 08-110).

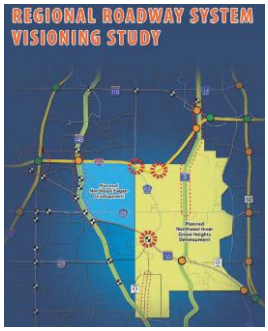
- *East West Corridor Preservation Study Phase 2* – The first phase of this study identified a preferred system plan to assess the transportation system needs for the Lakeville, Farmington and Empire Township communities. The study focused on east-west transportation system deficiencies and identified preservation corridors for future connections. The second phase focused on three east-west preservation corridor alignment segments for further assessment and definition. Major findings, influences or considerations incorporated into the Transportation Plan include:



    - Identified a location for a future County highway alignment (approximately 179th Street) between Highview Avenue to TH 3.
    - Identified a location for a future County highway alignment (CSAH 60/CSAH 64) between CSAH 9 and Flagstaff Avenue, and extended location east of Biscayne Avenue.
    - Identified a future County highway connection alignment of CSAH 70-CSAH 74 between Cedar Avenue and CSAH 31.
    - Identified a future County highway connection alignment of CSAH 31 south of CSAH 50.
    - Study recommendations identified as future County highway segments are shown on all Plan maps.

The County Board adopted this plan on August 28, 2007 (Resolution Number 07-391).

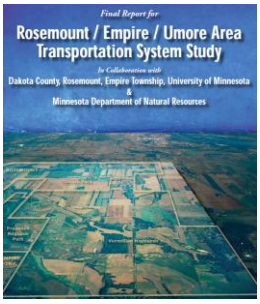
- *Regional Roadway System Visioning Study* – This study identified how the transportation system in Eagan, Inver Grove Heights and surrounding communities may need to change to address future growth planned in these communities. The study evaluated a number of roadway system improvement scenarios. Evaluations resulted in a long-term vision for roadway improvements, including lane additions and system interchange needs. This study did not identify construction timetables, or identify a specific funding plan for improvements. Major findings, influences or considerations incorporated into the Transportation Plan include:



    - Identification of key improvements to constitute a long term vision including:
        - Selected roadway expansion from 2 to 4 lanes and from 4 to 6 lanes on various roadway segments.
        - Selected roadway extensions.
        - Roadway realignments.
        - Interchange improvements on I-494.
        - Roadway improvements determined by actual traffic conditions.
        - New I-494 Interchange near Argenta Trail.
    - Concluded that additional studies will be required and the current study recommendations need to be put in a planning context for future study to include official environmental study and interstate access analysis requirements.

The County Board adopted this plan on August 10, 2010 (Resolution Number 10-391).

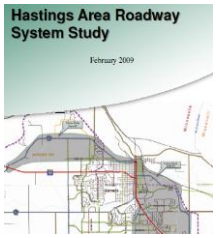
- *Rosemount / Empire / UMore Transportation System Study* – This study investigated the future needs associated with development of the UMore area and preservation of the Vermillion Highlands area. The study identified a transportation system that results in safe and efficient area travel; supports land use plans, is cost-effective, and allows for greater collaboration between agencies. Major findings, influences or considerations incorporated into the Plan include:



    - Identified a regional arterial road network system to be used by study partners and surrounding communities as land use and transportation plans are implemented.
    - Identified selected roadway expansion from 2 to 4 lanes on various roadway segments and 4 to 6 lanes on CSAH 42.
    - Identified a new alignment and expansion consideration on Biscayne Avenue and County Road 73 (Akron Avenue).
    - Identified a new alignment and expansion consideration on Blaine Avenue and County Road 81 (Clayton Avenue).
    - Implementation will be coordinated with development as it occurs.
    - Study recommendations identified as future County highway segments are shown on all Plan maps.

The County Board adopted this plan on April 6, 2010 (Resolution Number 10-175).

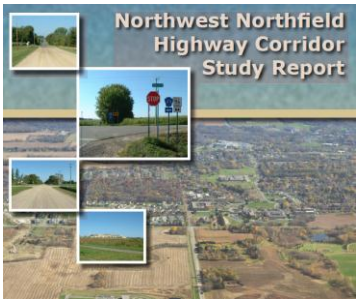
- *Hastings Area Roadway System Study* – This study identified a long-term vision for a system of collector and arterial roadways in the potential growth areas south and west of the city of Hastings that will provide for the future development of a safe and efficient system of roadways in the area. Major findings, influences or considerations incorporated into the Plan include:



    - Identification of a long-term vision for a system of collector and arterial roadways in the potential growth areas south and west of the city that would provide for the future development of a safe and efficient system of roadways in the Hastings area including:
        - A future north-south connection of CSAH 47 with Jacob Avenue;
        - A future east-west connection of CSAH 46 and 170th Street;
        - Incorporation of a route north of TH 55 and east of TH 61;
        - Incorporation of a route from TH 316 on the east side of Hastings to TH 61; and
        - Concluded that additional studies will be required to further define network specifics looking at minor arterial corridor options in eastern Hastings, principal arterial highway designations, and minor arterial corridor options in northern Hastings.
    - Recommended the preservation of right-of-way for major corridors consistent with County standards.
    - Study recommendations identified as future County highway segments are shown on all Plan maps.

The County Board adopted this plan on February 24, 2009 (Resolution Number 09-079).

- *Northwest Northfield Highway Corridor Study* – This study examined the need for existing and future transportation improvements in the area northwest of Northfield based on anticipated population growth and development. The study focused on Dakota County State Aid Highway (CSAH) 23 and Rice County CSAH 43 alignments. A future transportation network to link disconnected road system segments was identified to improve mobility. Major findings, influences or considerations incorporated into the Plan include:

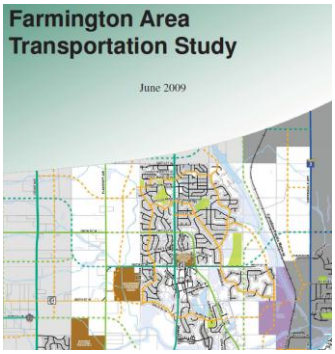


    - Identified a recommended preferred alignment based on the proximity to planned development by the City of Northfield and because it presents the greatest opportunity for diverting traffic from the existing CSAH 23/43 alignment. The future alignment included:
        - A connection of Garrett Avenue at North Avenue to CSAH 23 at CSAH 96 (320th Street) as a future new alignment and
        - A future study of connection of CSAH 23 (Foliage Avenue alignment) with CSAH 23 (Galaxie Avenue alignment) at CSAH 86 to address turning movements and the shared common section of CSAH 86 for CSAH 23 north-south through movements.
    - Recommended project development consideration to occur concurrent with the planned land development activities.

- Study recommendations identified as future County highway segments are shown on all Plan maps.

The County Board adopted this plan on January 20, 2009 (Resolution Number 09-038).

- *Farmington Area Transportation Study* – This study examined the roadway needs anticipated in the Farmington area due to residential and commercial development and the opening of the new Farmington High School. The study examined the short- and long-term transportation needs along area County highways and identified a safe and efficient roadway network and an access vision and implementation plan that supports existing and future land uses along these highways. Major findings, influences or considerations incorporated into the Plan include:



  - Identifies appropriate short-term improvements and a long-term vision to serve the traveling public in a safe and efficient manner in the northwest Farmington area including:
    - Evaluation of short-term traffic needs of the intersections impacted by the new Farmington High School and
    - Development of a long-term roadway vision for the area including CSAH 31 (Pilot Knob Road).

The County Board adopted this plan on September 8, 2009 (Resolution Number 09-430).

- *Cedar Avenue Transitway – Implementation Plan Update* – This update was conducted in light of regional changes to transitway development which impacted the timeframe and planning scope of the Cedar Avenue Transitway. Major findings, influences or considerations incorporated into the Plan include:
  - Updated planned service levels and ridership estimate.
  - Implementation schedule for expansion of service.
  - Implementation phases for capital investments in multi-modal access, operations and maintenance:
    - Stage 1: 2009-2012
      - Construction of runningway for transit service from 138th Street to Dodd Road.
      - Construction of Cedar Grove Transit Station, 140th Street Station, 147th Street Station, Apple Valley Transit Station and Lakeville Cedar Transit Station.
      - Expanded facility capacity for vehicle storage, maintenance and layover.
    - Stage 2: 2012-2020
      - Construction of runningway improvements between Mall of America and TH 77.
      - Construction of Glacier Way Station and 161st Street Station.
      - Construction of additional park & ride spaces near 140th Street Station.

        - Expansion of facility capacity for vehicle storage, maintenance and layover.
    - Stage 3: 2020-2030
        - Construction of Cliff Road Station, 195th Street Station and 215th Street Transit Station.
        - Expansion of Cedar Grove Transit Station, 147th Street Station and Lakeville Cedar Transit Station.
        - Expansion of facility capacity for vehicle storage, maintenance and layover.

The County Regional Railroad Authority adopted this plan on December 14, 2010 (Resolution Number 10-028).

- *CSAH 28 Corridor Study – From Denmark Avenue to State Highway 149* - Dakota County and the City of Eagan conducted a study to assess the corridor issues and develop a long-term access management approach for CSAH 28 from Denmark Avenue to TH 149. Primary study element recommendations included full signalized accesses, turn restrictions, driveway removals and partial accesses at locations throughout the corridor.

  The County Board adopted this study on August 28, 2007 (Resolution Number 07-390).

Dakota County 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.

Future year development assumptions maintain consistency with the municipal totals of the Metropolitan Council Regional Development Framework as of December 2008 plus development totals for Lakeville, Eagan and Inver Grove Heights as accepted by the Metropolitan Council as of November 2009. Future network capacity improvements were assumed consistent with the 2009 County Capital Improvement Plan and the Metropolitan Council Transportation Policy Plan as of June 2009. Additional detail on the modeling process, including comparison to regional model results, can be found in the Dakota County Travel Demand Model final report dated March 2010.

Trends Affecting the Transportation System

Transportation Revenues

Through this update of the Plan, it has been determined that over $1.253 billion will be required to meet Dakota County transportation needs over the 20-year plan period. Less than $658 million of revenue is anticipated during this time. This represents only 53 percent of the required need. Additionally, Mn/DOT's planned investment in state highways within the County is extremely limited over the planning period. This Plan intends to direct extremely limited transportation resources to priority needs of the system.

By Comparison: The Dakota County 2025 Transportation Plan identified a need of $1 billion to meet Dakota County transportation needs and $600 million of anticipated revenue representing 60 percent of the required need.

Recently, County State Aid Highway revenues have increased. However, County levy for County Road funding is expected to be reduced. In the future, the focus will be on how to fund the County Road system needs.

Growth

Continued growth and demand for efficient transportation systems pose important challenges for the future. According to Metropolitan Council estimates as of 2010, the County's population grew 12.5 percent in the first decade of the 2000's to 400,675. Although, the rate of growth is slowing, the County's population is estimated to increase to 520,010 (or 30 percent or 1.5 percent annually) by 2030.

By Comparison: Between 1990 and 2000, Dakota County's population grew 29.3 percent from 275,000 to 355,000.

Miles Traveled

The *Dakota County 2025 Transportation Plan* identified that vehicle miles traveled prior to 2004 was growing at nearly five percent annually. More residents were driving significantly more miles each year on County highways. The rate of increase was substantially faster than rate of population growth. The County experienced a 54 percent increase in miles driven from 1990-2000 compared to 29 percent growth in population in the same period.

System-wide in the last ten years between 2000 and 2009 the vehicle miles traveled has leveled off to an average rate of 1.5 percent increase annually. The vehicle miles traveled on County highways actually dropped by 4 percent annually since 2005 (the last five years). This is a trend documented nationwide. Several reasons identified nationally for this are reduction in miles traveled, higher gasoline prices, people choosing other modes of travel or alternatives to travel, people not driving alone, the downturn in the economy resulting in fewer unnecessary trips and recent increase in unemployment rates. Other factors affecting Dakota County's rate includes the slowing 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 2010 and 2030 vehicle miles traveled is estimated to grow by 40 percent (2 percent annually) compared to 30 percent 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 2025 Transportation Plan estimated vehicle miles traveled to increase five percent annually.

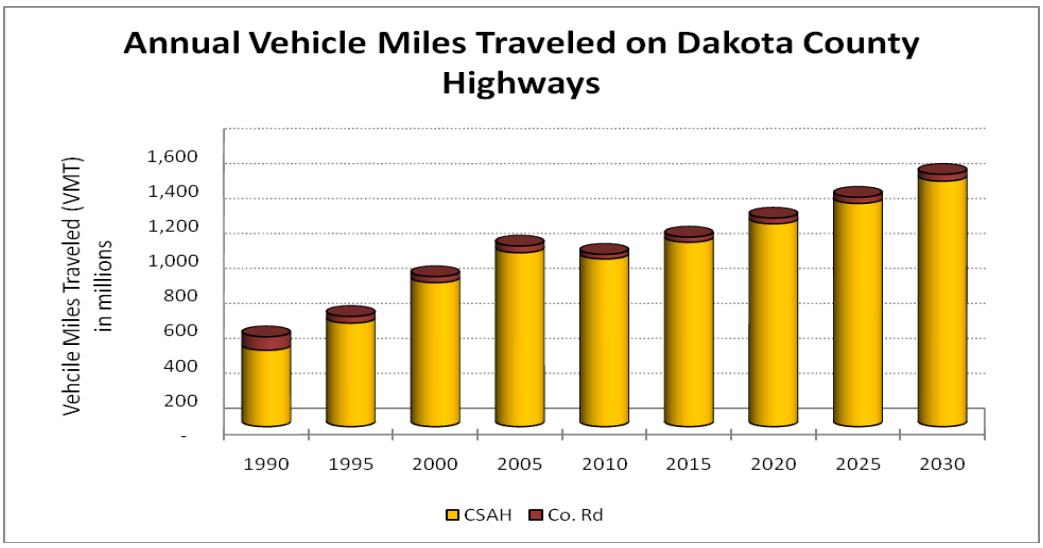


Figure 3

Highway Capacity Deficiencies

System congestion has held steady with expansion investments recently and should continue into the short-term future. This is a result of recent greater transportation investments than were planned and a slower economy resulting in less development demands than originally estimated.

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

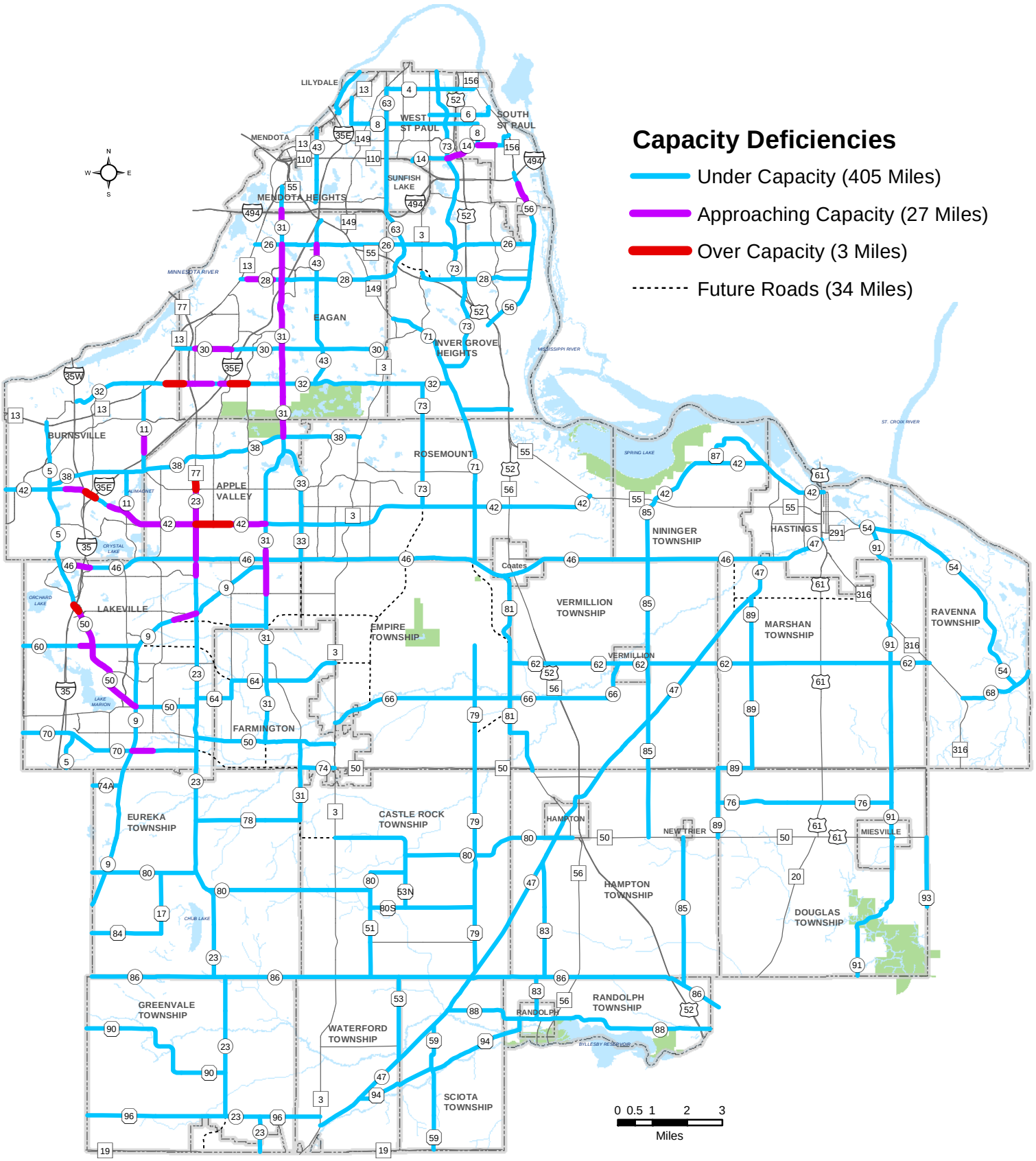
The following indicates the miles of County highway centerline approaching or over capacity by time period.

- 2000 = 31 miles
- 2007 = 42 miles
- 2030 = 109 miles (based on County Travel Demand Model results and assuming no further roadway improvements beyond 2012)

By Comparison: The Dakota County 2025 Transportation Plan estimated that 115 miles of County highway centerline would be approaching or over capacity by 2025.

Highway capacity deficiencies are shown in Figures 4 and 5. Average daily traffic volumes on County highways in 2007 and estimated for 2030 are shown in Figure 6. Highways shown as under capacity indicate that the traffic volume is less than 75 percent of the maximum highway capacity design. Highways shown as approaching capacity indicate that the traffic volume is greater than 75 percent of the maximum highway capacity design. Highways shown as over capacity indicate that the traffic volume is greater than the maximum highway capacity design.

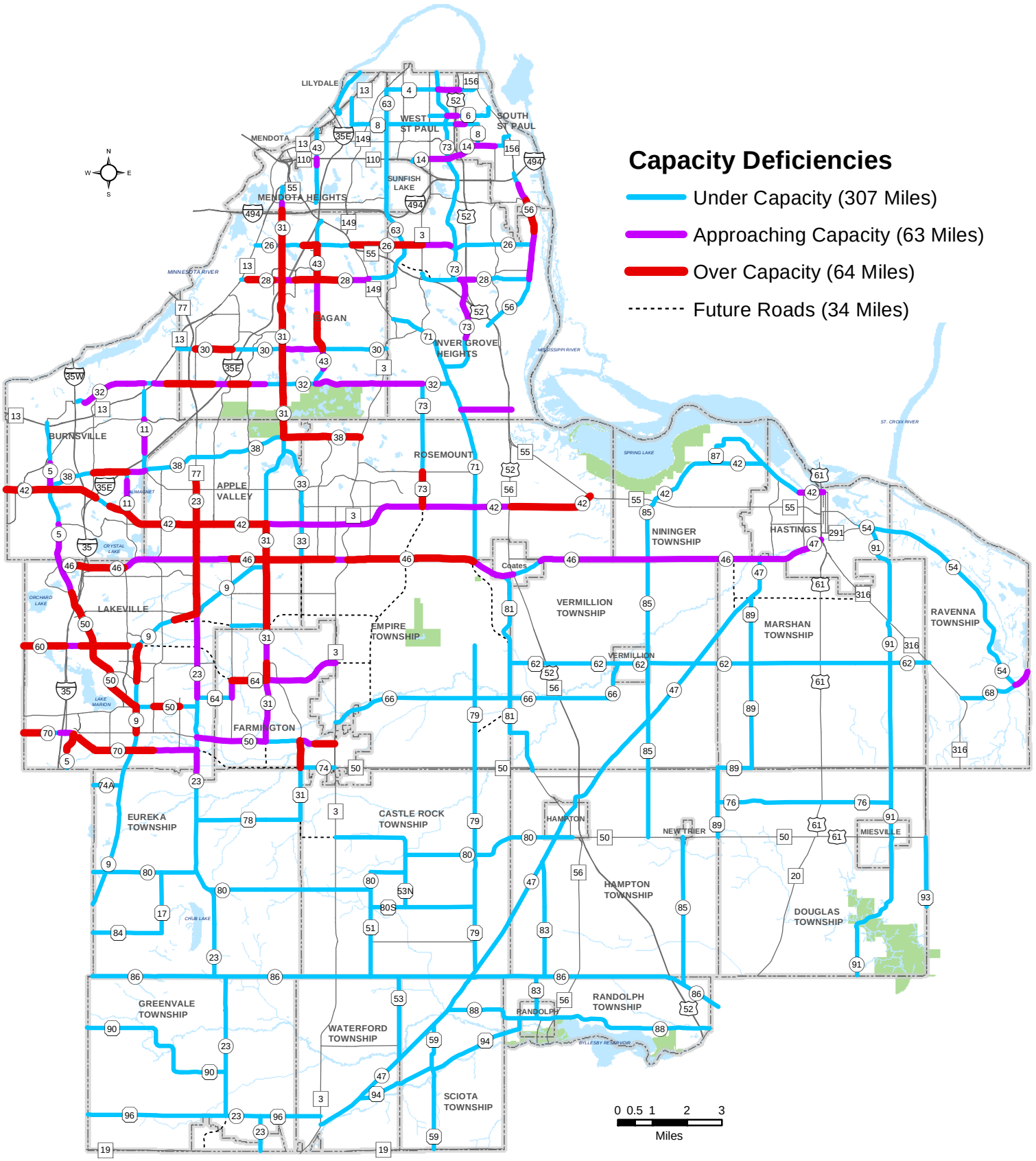
Dakota County Highway Capacity Deficiencies, 2007



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 4

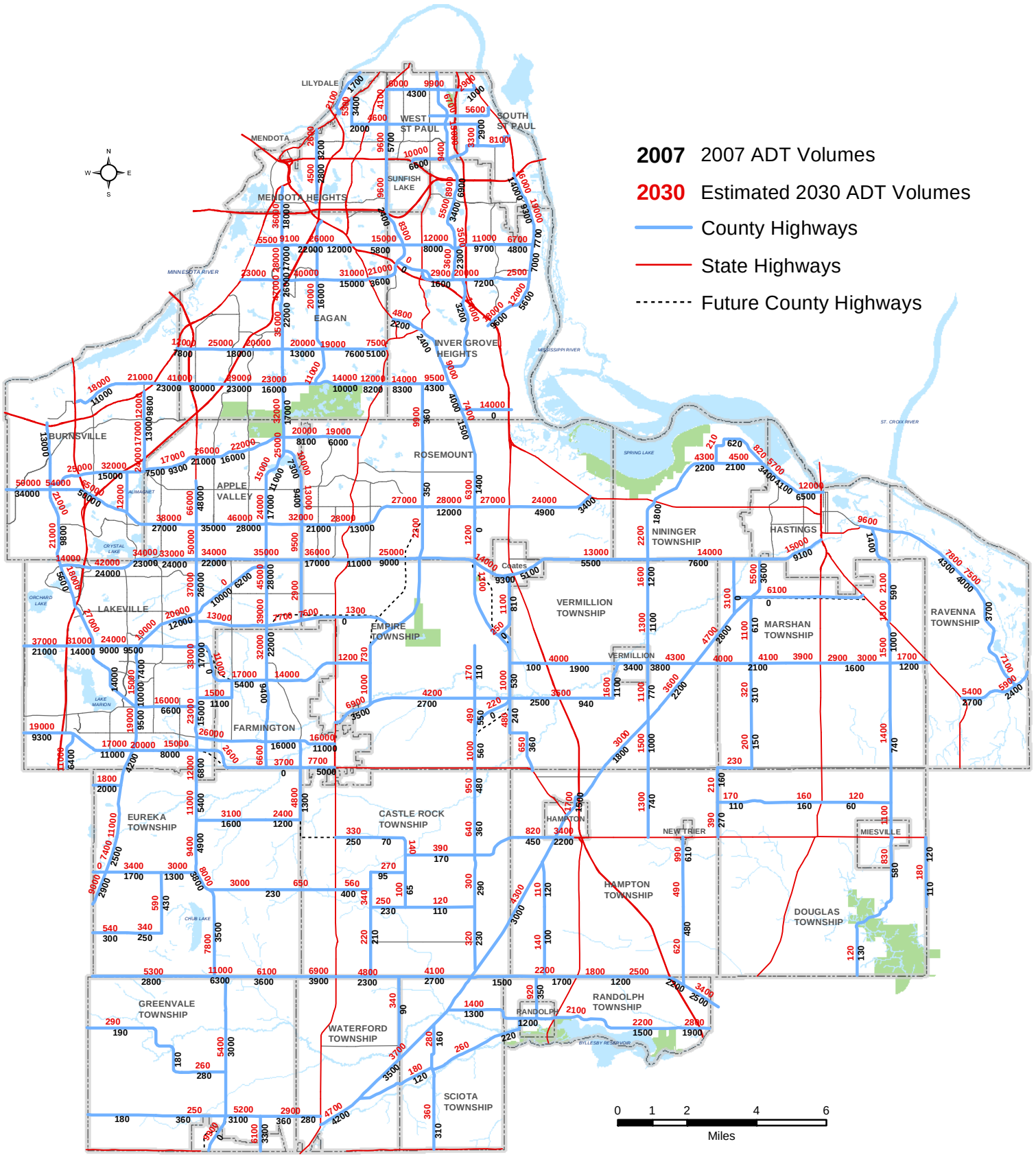
Dakota County Highway Capacity Deficiencies, 2030



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 5

Average Daily Traffic - County Highways, 2007/2030



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 6

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 are capable of operating safely and efficiently up to approximately 50,000 to 70,000 vehicles per day. Once the capacity threshold of an at-grade intersection is exceeded, the next step for improvement to mobility or safety is grade-separating the intersecting roadways.

The CSAH 23 (Cedar Avenue) and CSAH 42 intersection, with a volume of 73,000 vehicles daily is at 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, are 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 seven additional intersections show operation approaching or exceeding capacity by 2030. Intersection capacity is 50,000 to 70,000 vehicles per day depending upon the number lanes. The highest volume intersections are shown in Table 2. In addition, eight locations where County highways intersect trunk highways have been identified as needing construction or reconstruction of an interchange. These locations are identified within the Goal 6 chapter.

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.

High Volume Intersections

(Daily Volume Entering Intersection; County Highways Only)

Intersection	2000 ADT	2010 ADT	2030 ADT
CSAH 23 & CSAH 42	64,000	73,000	105,000
CSAH 23 & 140th Street	53,000	60,000	88,000
CSAH 28 & CSAH 31	54,000	55,000	84,000
CSAH 42 & Nicollet Avenue	65,000	64,000	83,000
CSAH 23 & 147th Street	48,000	55,000	80,000
CSAH 23 & CSAH 46	47,000	56,000	79,000
CSAH 5 & CSAH 42	54,000	50,000	77,000
CSAH 31 & CSAH 46	31,000	45,000	75,000
CSAH 42 & Aldrich Avenue	51,000	50,000	74,000
CSAH 42 & Burnhaven Drive	49,000	45,000	71,000
CSAH 31 & CSAH 42	35,000	41,000	70,000

Table 2.

System Condition

Overall, the condition of the system is better now than it was in 2004 when the *Dakota County 2025 Transportation* plan was adopted. Recent investments in bridge and pavement preservation and replacement have contributed to the better 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 2030. 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.

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 the mobility for highway users.

County highways serve a dual function of meeting through trip needs while also providing access to businesses and residents in the area. Congestion and collision problems arise from conflicts between traffic entering and existing facilities competing for gaps in highway traffic due to access located only along the highway or when residents' driveways or intersections are closely spaced. Travel demands on the County highway system are continually increasing with growth and frequent travel. The issue of serving through traffic with limited ability to improve the system versus providing adequate access to serve development is a competing highway purpose that challenges the County.

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 uses several access management techniques. The County uses access management policy and review of access needs through corridor studies, traffic review of specific development proposals and County Plat Commission review to identify the type and best location of access that should be permitted through the County system. Dakota County's access management plan involves requiring enough data for developments so the County can understand the impacts, operation needs, and improvements. The County can then stipulate the specific access spacing requirements for various highway types through the plat commission and/or specify the best location and requirements for access through the permit process.

Strategies to use access management techniques including design and planning the right number of access points and conflicting maneuvers will result in minimal delay, improved traffic movement, and an overall safer 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. The result of fewer access points, intersections and signals are positive features for the traveling public, businesses, and residents along the highway.

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 Mn/DOT's jurisdiction. However, Dakota County has 18 miles of principal arterials combined on 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. High volume intersections shown previously in Table 2 is an example of the challenges created when the proper balance between all highway functional classifications, including principal arterial highways, are not provided for the traveling public.

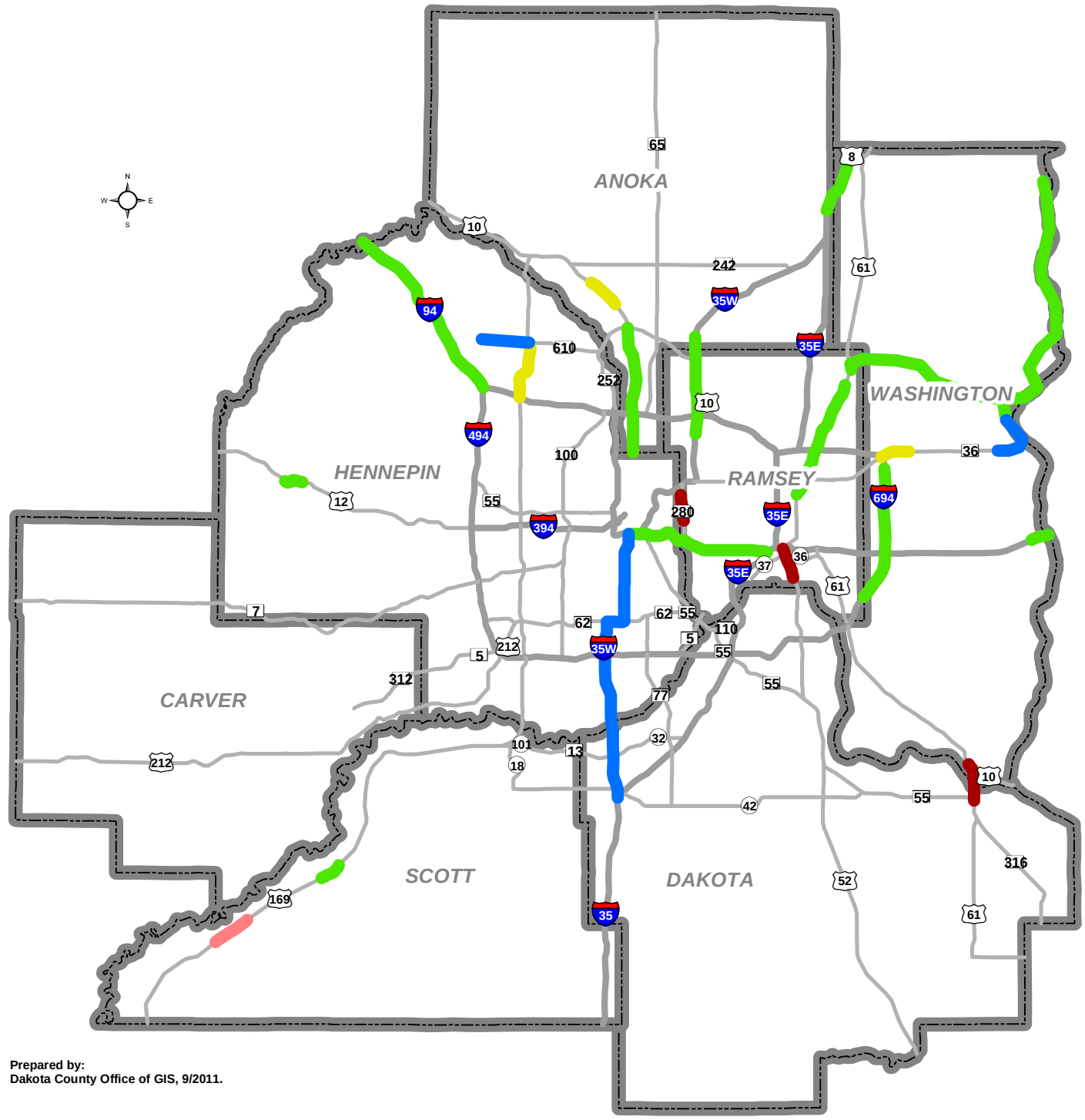
Dakota County is projected to have approximately 17 percent of the growth in the Twin Cities region. Proposed investments on the regional transportation system (state highways and regional transit) are not adequate to address this growth. Outside of transit corridor implementation and some minor highway improvements and bridge crossings, 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 100,000 to 120,000 new residents by 2030. (See Figure 7.)

Additional Key Trends

The following are additional key trends that have an effect in how the County addresses, plans for and prioritizes needs for the transportation system.

- The role of alternative modes of transportation, especially transit, is increasing to address congestion and changes in social and demographic needs including an aging population, more diverse population and transit dependent population.
- The American with Disabilities Act of 1990 (ADA) stipulates responsibilities to provide accessible pedestrian and public right of way facilities for persons with disabilities. Examples include improved transit access and transit service, sidewalk and street crossing accessibility for those with hearing, vision or mobility limitations and greater emphasis on designs for pedestrian ramps and other needs.
- Advancing communications play a role in replacing some vehicle trips. Faster and ever-present Internet connections allow for transfer of information quicker and often at less cost than a motor vehicle trip.
- Increasing energy costs have a role in reducing vehicle traffic volumes on roadways. Gasoline prices continue to rise resulting in transit, walking and bicycling becoming more popular choices of modes over vehicle use for travel.
- Sustainability initiatives seek to have lower impact on the environment than past practices. Sustainable transportation is tied to wise land use planning and reducing transportation needs.

Proposed Regional Highway Investments



Mn/DOT Metro District
20-Year Highway Investment Plan

Anticipated Projects

- Regional & Community Improvement
- Chapter 152 Bridge
- Infrastructure Preservation
- Mobility
- Traveler Safety

Dakota County 2030 Transportation Plan - Figure 7

- The County and cities have received resident requests for more trails to connect communities and provide for recreation in a natural setting while improving their health. The Comprehensive Plan identifies this through the Active Living initiative and greenways vision.
- All units of government are experiencing resource and funding constraints that have an effect on prioritization and implementation of transportation projects at all levels.
- The transportation system continues to age. Preservation, management and replacement needs will increase. This includes the addition of recently improved or expanded system components with the current existing needs in the future.
- Consideration of new directions identified in the County's Comprehensive Plan (*DC2030: Planning for the Future)* including:
    - Maximizing the value of transportation investments
    - Increasing transit advantages
    - Increasing transportation safety
    - Incorporating other County goals into transportation projects
    - Reducing demand for automobile transportation
    - Improving transportation for seniors
    - Encouraging active living
    - Creating an environmentally sensitive transportation system
    - Expanding telecommunications infrastructure planning for transportation system needs beyond 2030

Given these key trends and anticipated levels of increased demand on the current system, this Plan identifies goals, strategies, and policies to ensure effective transportation both in the present and the future.

2004-2010 Investments and System Accomplishments

The following are the transportation system accomplishments that have occurred since the adoption of the *Dakota County 2025 Transportation Plan.*

Transit

- The Transit Office was created, staff was hired, and a Transit Plan was developed.
- The Regional Railroad Authority CIP was created.
- The County Transit Investments Board grant process was created.
- The Transportation CIP includes investments of approximately $50,000 to $60,000 per year for isolated county transit activities.
- 3 transit facilities were developed resulting in transit stations in Apple Valley and Eagan and a park-and-ride in Lakeville.

Preservation

- 120 miles of bituminous overlays and other treatments occurred resulting in a pavement quality of 65 percent of lane miles in the good range in 2004 to 92 percent in the good range in 2008.
- 68 miles of gravel roadways were resurfaced using lime rock. All gravel roads have now been resurfaced.

Management

- 1 safety and management project resulting in new surface, turn lanes and signal on CR 8 in West St. Paul.
- 2 access management projects resulting in a new roundabout on CSAH 30 at Rahn Road in Eagan and access management on CSAH 42 in Burnsville.
- 1 right of way preservation and management project resulting in an improved at CSAH 47 and CSAH 86 in Castle Rock and Sciota Townships.
- 8 miles of jurisdictional transfer (from County to local jurisdiction) from CSAH's 24, 38, 58 and 63.

Replacement

- 2 bridge replacement projects resulting in a new bridge on Canada Avenue in Waterford Township and removal of the JAR Bridge in Inver Grove Heights.
- 4 highway reconstruction projects resulting in highway replacement on:
    - CSAH 26 in Inver Grove Heights
    - CSAH 56 (Concord Avenue) in Inver Grove Heights
    - CSAH 50 in Farmington
    - CSAH 74 in Farmington
- 2 highway reconstruction projects resulting in gravel road reconstruction to paved on:
    - County Road 79 in Castle Rock and Empire Townships and
    - County Road 96 in Greenvale and Waterford Townships

Improvement and Expansion

- 2 new alignment projects resulting in new highway segments on:
    - County Road 28 in Eagan and Inver Grove Heights
    - 195th Street in Farmington
- 2 lane additions/expansion projects on CSAH 31 in Apple Valley and CSAH 60 in Lakeville.
- 4 interchange projects at CSAH 46 and TH 52 in Coates, CSAH 50 and I-35 in Lakeville, CSAH 60 and I-35 in Lakeville, and CSAH 70 and I-35 in Lakeville.
- 1 overpass project on CSAH 47 over TH 52 in Hampton Township.

Average Annual Investments by Plan Goal

	Average Annually in $millions	
Activity	2004 Plan	2005-2009 CIP
Goal 1 - Resources	0.0	1.9
Goal 2 - Transit and Mode Integration*	0.9	0.8
Goal 3 - Preservation	3.7	4.2
Goal 4 - Management	6.0	7.9
Goal 5 - Replace	4.2	14.5
Goal 6 - Improvement and Expansion	14.3	21.5
Totals	29.1	50.8

* Transit and Mode Integration CIP projects were previously assigned to the now defunct Intermodal Section of the CIP.

The average annual investment during the plan period was approximately 75 percent greater than estimated in the previous Transportation Plan. One reason for this is during the plan period construction costs rose approximately 53 percent from 2004 levels. However, the primary reason for the investment increase was the County's commitment to transportation through additional 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 transit and mode integration goal funding estimate was relatively stable. Most projects identified within this goal were assigned to the defunct Intermodal Section of the CIP and included trail development, rehabilitation and replacement and general intermodal improvements. Several transit-related projects were developed using funding sources outside of the CIP including development of several park and rides and the beginning implementation stages of the Cedar Avenue BRT project.

The preservation goal funding slighting increased. 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 lead to a significant improvement to pavement quality conditions and gravel road conditions. 120 miles of bituminous overlays and other treatments have lead to the PQI going from 65% of lanes miles in the good range in 2004 to 92% in 2008. All 68 miles of gravel roads were resurfaced with lime rock. Lime rock holds it 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 increase approximately 30 percent than estimated in 2004. 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.

Replacement goal project activities were approximately 3 ½ times more than estimated in 2004. This was due primarily to the jurisdictional transfer of CSAH 56 in Inver Grove Heights and South St. Paul (transferred from MnDOT to County jurisdiction) and state turnback funds that were committed to reconstructing the facility. This significant goal investment increase resulted in greater highway reconstruction, bridge replacement and gravel road paving than originally estimated. 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.

Expansion goal project activities increase approximately 50 percent over the estimated figure in 2004. These investments resulted in 20 miles of lane miles added and 5 interchange and overpass projects.

Transportation Plan Format

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

Principle
Ten principles identified in this Plan are considered comprehensive and fundamental guidelines or assumptions that apply to all Plan goals.

Goal
Six goals identified in this Plan are intended to identify what the County is to accomplish or attain for a desired outcome for the transportation system.

Principles apply to all Plan 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 practice or procedures 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 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 directs Dakota County to develop the best transportation system to provide for 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 within this Transportation Plan.

Goal 2: Transit and Integration of Transportation Modes
This goal directs Dakota County in the development and integration of a comprehensive transit system and other transportation modes to maximize the efficiency of the transportation system by providing safe, timely, and efficient connections between communities, activity generators, and employment centers.

Goal 3: 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.

Goal 4: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

Safe travel on routes with minimal congestion 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 that optimize the capacity and safety of the existing transportation system must be pursued.

Goal 5: Replace 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. The County will replace deficient elements of the transportation system as they become structurally or functionally obsolete.

Goal 6: Improvement and Expansion of Transportation Corridors

The County will improve the existing transportation system to address emerging deficiencies to address capacity needs to best provide efficient connections for people to travel to work, to shop, and to one another by safe travel on routes with minimal congestion.

Summary

Dakota County uses the Transportation Plan as a guide to maintain and improve the County's transportation system from 2011 through 2020. This version of the plan recognizes the continued importance of transportation mode integration and identified transit and integration of transportation modes as a primary goal.

Updating of this Plan coincides with recent updates to state and regional transportation plans that address needs in the next 20 years. In addition, this Plan incorporates results of eight recently completed transportation studies that address an inadequate system of state highways and principal arterial highways within the county; anticipated land development; anticipated population growth; and overall transportation system needs.

This Plan also recognizes recent changes to trends that have occurred within the last several years that include limited transportation resources and the decreased growth rates of population and miles traveled. Newer trends that have emerged include the movement of providing sustainable transportation (including provisions for transit and supporting facilities) and addressing concerns with an aging transportation system and aging population.

In the past several years, the County increased its transportation investments to provide for a better system and allow for needed system improvements. These investments

have allowed the County to “catch up” in preservation needs (the County now has no structurally deficient bridges) and provide for significant gains in pavement quality. In the future, the County will continue to focus efforts in preserving the existing system because it is becoming even more difficult and more expensive to replace what is existing.

Chapter 3

Transportation Plan Principles

The Plan includes ten overarching principles that apply to all Plan goals. These include five guiding principles identified in *DC 2030: Planning for the Future* (Dakota County Comprehensive Plan) and five principles specific to transportation. All of these principles together guide the Plan policies and 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.

DC 2030: Planning for the Future - Comprehensive Plan 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 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, sand, bridge materials, concrete, asphalt, and roadbed materials.

- **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 Mn/DOT Standard Specifications for Construction will be encouraged and permitted.

- **Dakota County Energy Plan Transportation Strategies**
  Implement County Energy Plan 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 Farmland/Natural Areas guidelines.

PP.2 Wetland Mitigation Areas
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 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.

Implementation of the Sustainability principle is supported by the following policies identified in later document chapters: F.2, F.9, F.10, T.1, T.19, T.11, T.13 and M.10

Connectedness

This principle refers to land use patterns and multimodal transportation networks that allow people to easily move between neighborhoods, providing jobs near housing, 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 in order to optimize the use of, and minimize the need for, investments in the County and city transportation systems.

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

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

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.

Implementation of the Connectedness principle is supported by the following policies identified in later document chapters: F.15, F.16, F.17, T.1, T.8, T.9, T.13, T.14, T.15, T.16, T.17, T.18, T.19, 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 resources cannot keep pace with increasing transportation needs.

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

- **Transportation Advisory Board (TAB)**
  Provide input to the Metropolitan Council and Mn/DOT regarding County transportation issues via the Transportation Advisory Committee and Transportation Advisory Board.

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

- **Transportation Studies**
  Undertake studies when needed to address emerging transportation needs through cooperation, participation and initiation 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 County Transportation Plan with the Minnesota Department of Transportation Metro Division's Transportation System Plan and other applicable documents and studies.

- **Local Agencies**
  Coordinate with local agencies 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 project development and design details with other jurisdictions.

- **CONDAC & Mn/DOT**
  Participate in monthly coordinating meetings with the Coalition of Northern Dakota County Cities (CONDAC) and Mn/DOT 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.13, F.14, F.15, F.16, F.17, F.18, T.1, T.2, T.9, T.10, T.13, M.5, M.6, M.7, M.8, M.9 and M.11

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 ***strategy*** supports the economic vitality principle:

- **Evaluate Telecommunications**
  Consider the potential need for telecommunications conduit (i.e. fiber optics) or other infrastructure in County highway right of way with expansion and reconstruction needs.

Implementation of the Economic Vitality principle is supported by the following policies identified in later document chapters: F.3, F.11, T.10, T.13, M.3, M.4, M.11, M.12, IE.1, IE.2, IE.3 and IE.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:

- **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, the MVTA, DARTS, and other transit providers to develop strategies for transit.

- **Pedestrian and Bicycle System Connections**
  Identify and address prioritized pedestrian and bicycle system connection needs in the roadside trail and shoulder system independent of road projects where road improvements are not expected within five years.

Implementation of the Growing and Nurturing People principle is supported by the following policies identified in later document chapters: F.18, T.1, T.9, T.13, T.14, T.19, P.2 and M.8

Transportation-Specific Principles

Transportation Safety and Standards

Safety is a critical factor underlying in all transportation services and projects provided by Dakota County. Safety of the traveling public is the priority on the County transportation system. This principle refers to system development and operations as they pertain to all goals. The most notable activities are relevant to system design including design standards, traffic control devices, shoulders, trails, speed limits, and intersection lighting with consideration of all modes of transportation.

General safety/traffic operations information:
Safety issues are addressed, where possible, by implementing engineering solutions. 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 listed as contributing factors for the majority of crashes on the highway system.

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

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

- **Monitor Traffic Data**
  Regularly monitor traffic data and conduct engineering evaluations including analyzing annual collision data to identify high crash locations and conducting detailed safety studies for select locations with high crash rates.

- **Speed Studies**
  Provide input to Mn/DOT for speed studies to post speed limits as provided by Minnesota law

- **Project Analysis and Selection**
  Consider roadway segment crash rates as part of the process for project analysis and selection.

- **Towards Zero Deaths**
  Partner with Mn/DOT, 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 issues beyond implementing highway changes and alert them to driver behavior issues that may be attributing 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.

- **Traffic Control**
  Enact traffic control based on specified criteria.

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

- **Traffic Operations Policies and Practices**
  Develop and periodically update Transportation Department Operations Policy and Procedures practice documents for County Board adoption consideration. 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
    - traffic and traffic safety related practices

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

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 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 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 or when a city council requests a speed study by resolution.

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 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.5, F.14, F.16, F.18, P.1, P.3, P.4, P.5, P.6, M.7, M.8, M.10, M.11, M.12 and R.2

Transportation Planning

Transportation planning activities include the development of plans and studies that identify potential solutions to a transportation issue. A travel demand model is used to forecast future traffic projections to assist with 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 development integration 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 approximately every five years.

- **Travel Demand Model**
  Maintain a County Travel Demand Forecasting Model that is coordinated with the cities and the Metropolitan Council to ensure regional and local compatibility.

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.11, IE.1 and IE.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, and waste management within the transportation system. Federal and state requirements pertaining to this principle will be followed.

In recent years, the importance of transportation design that is sensitive to the surrounding environment has received increasing attention. The growing emphasis on aesthetically pleasing and environmentally sensitive projects has been exhibited at both the federal and state level through funding and design policies. Local governments are increasingly interested in inclusion of aesthetic elements with transportation improvements. Limited investment of transportation funds is supported to enhance the aesthetic character of highway corridors on major transportation improvement projects.

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

- **Avoid, Minimize, and Mitigate**
  Avoid highway and bikeway 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.

- **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).

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

PP.15 Environmental Regulations
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.

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 highway construction projects in conformance with MPCA permit requirements, and develop soil erosion control plans and practices for transportation projects.

Implementation of the Social, Economic and Environmental Impacts principle is supported by the following policies identified in later document chapters: T.13, P.3, P., P.6 and M.10

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 e-mail. In addition, staff will frequently meet with staff from local county communities and Mn/DOT regarding transportation planning documents, studies, and projects.

Key supporting actions include monthly participation at Coalition of Northern Dakota Cities (CONDAC) meetings, Mn/DOT coordination meetings, planning commission meetings and township officers meetings as needed; conducting open houses and public information meetings on studies and projects; 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 at the beginning and in conjunction with the 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 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 the news media. Selective use of cable TV and local publications will be made, including involving Commissioners through local media in their districts.
    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 (i.e. comment cards). Consider opportunities to use social media options for public comment.
    8. Responding to calls and email correspondence from the public regarding highways and intersections in 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 policy-making 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.

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 and transit providers 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, F.18, T.1, T.2, T.9, T.10, T.13, M.5, M.6, M.7, M.8, M.9 and M.11

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.

The complete streets principle seeks to safely and efficiently accommodate all transportation system users in appropriate contexts. Complete streets are defined as roadways designed and operated to enable safe, attractive and comfortable access and travel for all users including pedestrians, bicyclists, motorists and public transport users of all ages and abilities. Context varies by road segment, but can generally be described as rural, suburban and urban. Higher attention should be paid to more intense areas where higher pedestrian and bicyclist use is expected or desired.

In recent years, the importance of transportation design that is sensitive to the surrounding environment and roadway users has received increasing attention. 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.

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

- **Minimum Urban, Low-Speed, Highway Widths**
  Consider minimum widths for two-lane low speed highways in urban areas that are less than standard 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 multimodal and intermodal and ADA accessibility.

- **Mn/DOT Complete Streets Guidelines**
  Partner with Mn/DOT in assessing the benefits, cost and feasibility of establishing a complete streets policy in the state.

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

- **Vegetation in Right of Way**
  Where safe, plant native or appropriate vegetation in County right of way to help sequester carbon, shade pedestrians and manage runoff.

- **Safety Improvements**
  Design for safety of pedestrians and bicyclists on the road and trail system, including provision of clear zones for all users, attention to bikeway geometrics, incorporation and alignment of curb cuts and signage when appropriate.

- **County Greenways**
  Participate in greenway collaboration where greenways interact with the transportation system.

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.9, F.10, F.14, F.18, T.1, T.13, T.4, T.5, T.6, T.9, T.14, and M.11

Summary

The intent of the transportation plan principles and supporting strategies and policies are to assist the County in guiding and forming 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 *DC 2030: Planning for the Future* guiding principles and existing principles of the *Dakota County 2025 Transportation Plan.*

Chapter 4

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

This goal directs Dakota 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 and implemented in coordination with the state, adjacent counties, cities, townships, and other transportation partners through the goals and policies within this Transportation Plan.

Importance

Through this update of the Plan, it has been determined that over $1.253 billion will be required to meet transportation needs over the 20-year plan period. Specific needs are identified and explained in detail in chapters throughout this plan document. $658 million of revenue is anticipated during this time. This results in 53 percent of the necessary anticipated revenues available to meet transportation needs in the next 20 years. In comparison, in 2004, the Transportation Plan identified $1 billion required to meet needs and $600 million anticipated resulting in 60 percent of the necessary anticipated revenues to meet needs.

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 extremely limited transportation resources will be directed to priority needs of the 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 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.
- Development of the Capital Improvement Program.
- Identification of investment needs.
- Use of Plan strategies and policies.

Resources Issues

The following are general issues affecting directing resources for the County transportation system addressed in this plan.

Issue:
County funding sources to address transportation needs are anticipated to remain stable or perhaps decrease in the future while transportation needs on the County Road system continue to rise.

Issue:
An increase in the Wheelage Tax allowed through state statutes would provide much needed funding to address future transportation needs that are not eligible for State Aid funding.

Issue:
Under the current climate of budget concerns, the County's local partners have identified areas where, in the past, the city may have been entirely responsible or partially responsible for cost t participation. These areas of participation concern include cost participation for regional County highway expansion, County traffic signals, storm sewer maintenance, future County road segments, small safety projects, local roadway system development mitigating the County system and County highway street lighting.

Issue:
The SAFETEA-LU authorization expired September 30, 2009 and has been extended 7 times over the last 2 years. Existing program funding levels can no longer be supported without an increase in revenue. Realigning program size with existing revenues at the federal level could result in a reduction of up to 30% in highway and transit funding. This would directly affect federal funds available to meet transportation needs in Dakota County.

Issue:
Design engineering costs have remained relatively stable recently. Consultants may be hired to address peak workloads and unique, complex or highly technical projects.

Issue:
An area of concern is the need for adequate resources to conduct maintenance and operations priorities in the future. The current employee equivalent is relatively lean to conduct these activities and staff available equipment.

Addressing the Issues

The following are potential actions and revisions to the Plan to address these issues.

Overall Funding, County Funding/County Program Aid, Wheelage Tax

- Continue to lobby for transportation-funding packages that would increase funding, revise ways funds are allocated, allow for increases in the wheelage tax and provide funding for transit.
    - Increase state funding through gas taxes and registration fees.
    - Change the way state transportation funds are allocated to counties.
    - Allow counties to increase the wheelage tax from $5 to $10.
    - Use bonds for immediate construction of deferred and priority projects.

- Apply for CTIB grants for eligible transitways, park-and-rides, pedestrian and bicycle programs and other transitway purposes.

City Cost Participation

- Several new or revised cost participation policies have been included within the Plan. Specific policy language is identified later in this chapter. The cost participation policy revisions were made to ensure:
  - County and local investments demonstrate a good value for the public;
  - Investments maintain or strengthen partnerships;
  - Investments protect County interests; and/or
  - Policies appropriately reflect current practices.

  In general, all of the policy changes with this Plan are intended to maximize the overall value the public receives on the transportation system for the investments made. These new or revised cost participation polices will not significantly change County investments and some are just a reflection of existing County practice(s). For the policy additions or revisions where the cost implications can be estimated, the change in expected costs have been included in the investment targets presented in the Plan. The cost implications of the new or revised policies that could not be included in the investment targets may need to be assessed on a project-by-project basis through the yearly development of the 5-Year CIP.

Roundabout Cost Participation

- Roundabouts are a newer traffic control to move traffic safely and efficiently at intersections. In recognition of county and local investments that demonstrate a good value for the public, investments that maintain or strengthen partnerships and formalizes a current practice; the County will participate in design elements integral to the safe design and operation of a roundabout.

Transit and Transitway Funding

- With the increased role of transit as a priority mode of transportation, the County has committed to use transit investments as a tool to help meet the needs of residents, businesses and commuters through transit. To accommodate this, the County will participate in transit infrastructure improvements on highways (Policy F.1), and participate in the local share of regional transitway improvements and County Highway transit components. The County also levies CTIB sales tax and participates in CTIB.

Regional County Highway Expansion

- In instances where the highway is a principal arterial, future interchange needs are identified or where highway segments are designated for ½ mile full access spacing; the city's cost participation will be capped at a percentage less than other County Highways.

Traffic Signals Cost Participation

- In recognition of intersection control and safety and protecting County interests, the County will take a more proactive cost participation role in signal revisions for safety and required cost participation for existing signal replacement based on signal age and maintenance conditions in addition to roadway changes and signal upgrade needs.

Storm Sewer Cost Participation

- In recognition of protecting County interests, the County may cost participate in storm sewer system maintenance or reconstruction projects for items related to County highway infrastructure.

Future County Road Segments

- At the County's discretion, the County will participate in elements of constructing future County roadway segments to County standards when constructed by a city.

Small Safety Projects

- The County may participate up to 100 percent of certain projects that improve the safety of the transportation system in instances where improvements are not included in a larger project and where improvements provide specific safety improvements desired by the County.

Local Roadway System Development Mitigating County System

- The County will participate up to 55 percent of the costs of local roadways that directly mitigate impacts to the County system based on an engineering study and other factors presented in the policy.

Street Lighting

- In recognition of safety, the County may participate in street lighting installation, maintenance and utility costs of side stop controlled intersections based on specific safety and benefit criteria.

County Transportation Funding

The County recognizes that there is not one answer or one quick fix to transportation funding needs. Several funding sources are needed to meet the many and diverse needs of our transportation system. The County uses a variety of sources to fund transportation projects, operation, and maintenance activities.

The county's overall transportation needs continue to rise at a higher rate than anticipated revenues available to meet transportation needs. The following list describes current transportation funding sources.

County Road System

The County Road System includes 104 miles of County highways that typically accommodate lower volumes of traffic and provide a lower transportation function such as collector of local roads. The primary sources of funding for the maintenance, replacement and improvement of County Roads are the County levy (including County Program Aid), the wheelage tax and the gravel tax. These funding sources are particularly important because the County Road system is not eligible for State Aid funding. This means expected increases in State Aid revenues will not be able to address maintenance, replacement, and improvement needs along County Roads.

County Funding/County Program Aid

A primary source for funding the County Road System is property taxes (levy). Since the last Transportation Plan in 2004, levy increases through 2009 supported transportation investments as shown in Table 4-1. In 2010, to address County Program Aid (CPA) cuts in other areas, the County reduced the levy portion of transportation revenues 15% (Table 4-2). The risk of potential future CPA cuts by the State was also moved to the County CIP, and is shown together with County levy funds in Tables 4-1 and 4-2 as "County Funding". In 2011, County Funding was again reduced by $1.6M due to CPA cuts. However, overall County Funding in the CIP increased due to a $2.1M offset from the Operations budget to address all of the staff costs related to delivering capital projects. This was not an overall increase in County Funding to Transportation, but a shift in funds from the Operational budget to the CIP. The remainder of CPA funds shown in the CIP will be cut in 2012 ($1.5M) and 2013 ($1.8M). This source is therefore anticipated to level to approximately $5.0 million per year beginning in 2013.

Wheelage Tax

Beginning in 2007, a new revenue source brought funding for County Roads. Minnesota statutes (MS 163.051 Subd. 1) allows the County to collect a $5 tax on each motor vehicle housed in Dakota County, which vehicle owners pay with the annual renewal of state license tabs. The statute requires that revenues from the tax be used for road and bridge projects. In 2006, the Dakota County Board approved levying this tax starting in 2007 as a way to reduce general levy funds being used for transportation. The wheelage tax raises approximately $1.5 to $1.7 million per year for improvements on the County Road System. This tax helps to minimize property tax revenues needed to improve the County transportation system and directs 100 percent of the proceeds to County transportation projects.

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 anticipated to raise approximately $0.2 million per year for improvements on the County Road System.

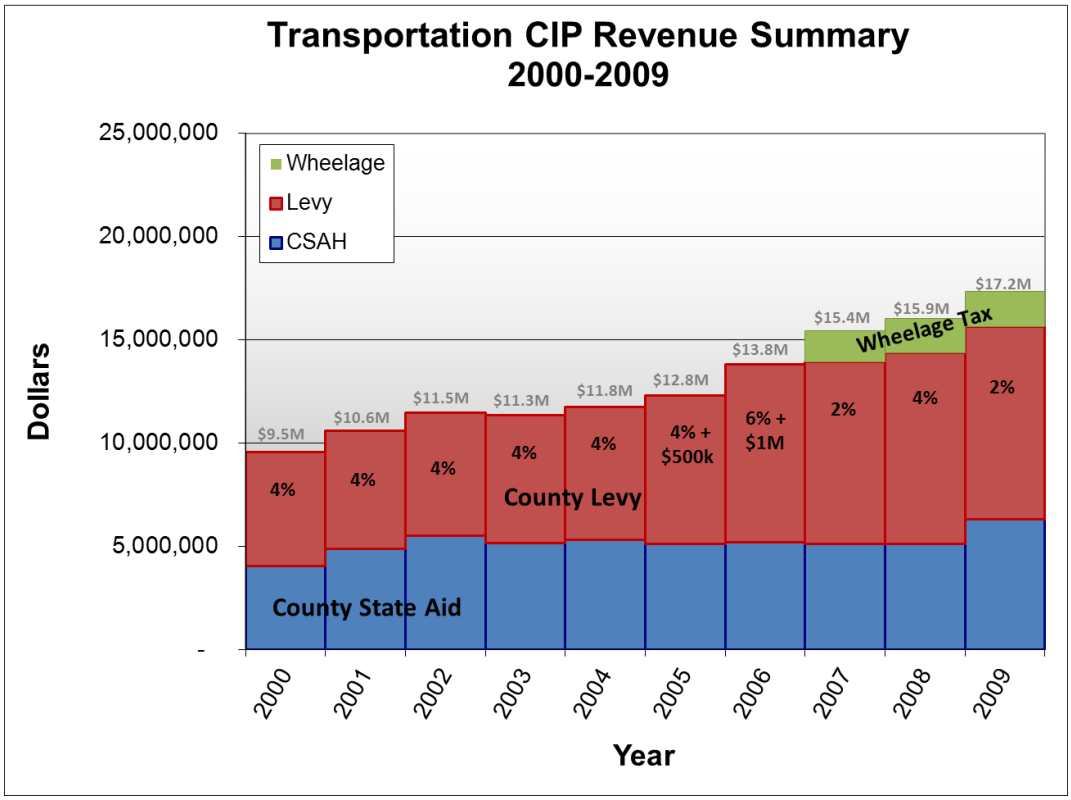


Table 3

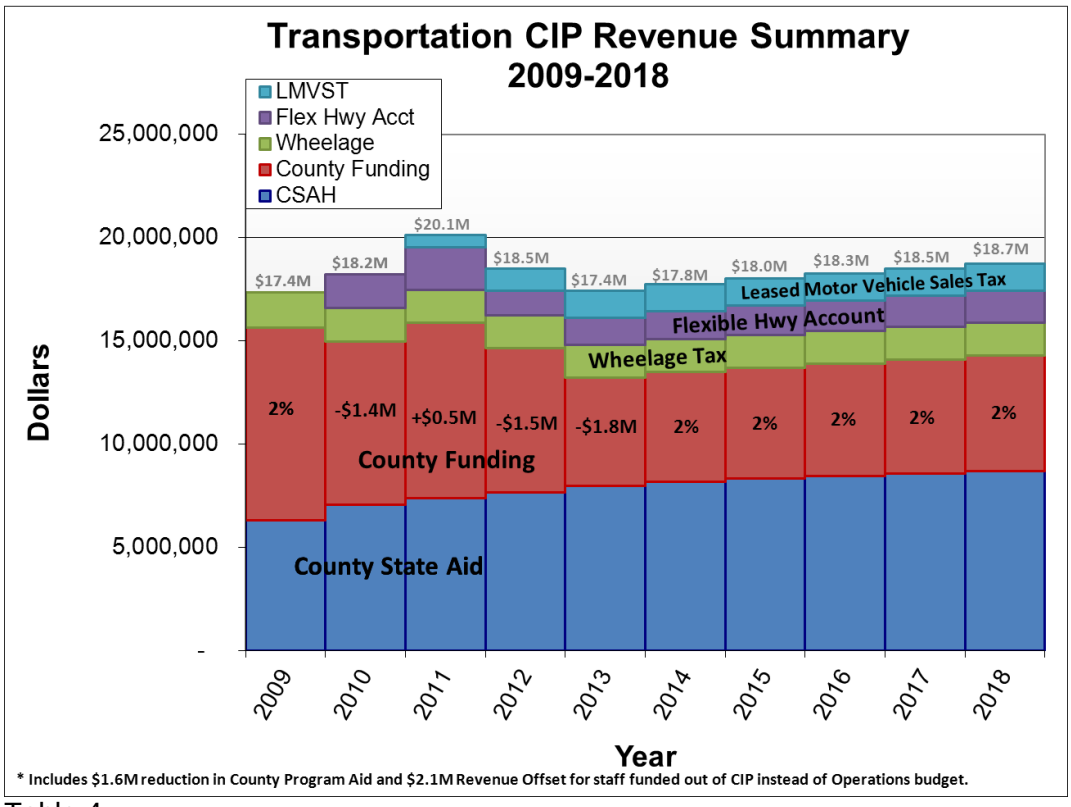


Table 4

County State Aid Highway System

Dakota County has 320 miles of County State Aid Highways (CSAH) out of 424 on the County system. County highways designated as CSAH 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.

Funding Summary

Funding is received annually from an apportionment from the HUTDF for the construction and maintenance of CSAH highways. Dakota County receives about 2.9 percent of the County State Aid Highway Fund, or over $12 million annually. This figure includes funds from the Flexible Highway Account, Minnesota statutes (MS 161.081, subd. 3) and Leased Motor Vehicle Sales Tax Revenues. Sixty percent of these funds, or about $7 million, are dedicated to the Transportation Capital Improvement Program for capital projects on CSAH routes. Forty percent of these funds, or about $5 million annually, is dedicated to maintenance and operation of CSAH routes.

Dakota County's annual apportionment of CSAH funding has increased significantly from approximately $8.9M in 2004 to $12.4M in 2011 (an increase of 0.4 percent of the total annual fund). This is due to a number of factors:

1. In 2006, the residents of Minnesota voted (by referendum) to constitutionally dedicate all Motor Vehicle Sales Tax (MVST) funds to transportation. Funds have been shifted from the General Fund to the HUTDF since 2007, and by 2012, 60% of all MVST funds will go toward the HUTDF (with the other 40% going to transit).
2. In 2008, the Legislature made a number of significant changes that increased the HUTDF as well. Fuel taxes were increased by 5¢ per gallon, and caps were removed from motor vehicle registration taxes.
3. As part of the 2008 changes made by the legislature, a new CSAH formula that distributes the money amongst the counties was enacted for the new money allocated to the CSAH Fund.

County State Aid Highway (CSAH) Funds

The state 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. The total HUTDF is distributed as shown in Figure 8. These CSAH funds can only be used for eligible road and bridge construction and maintenance on County State Aid Highways.

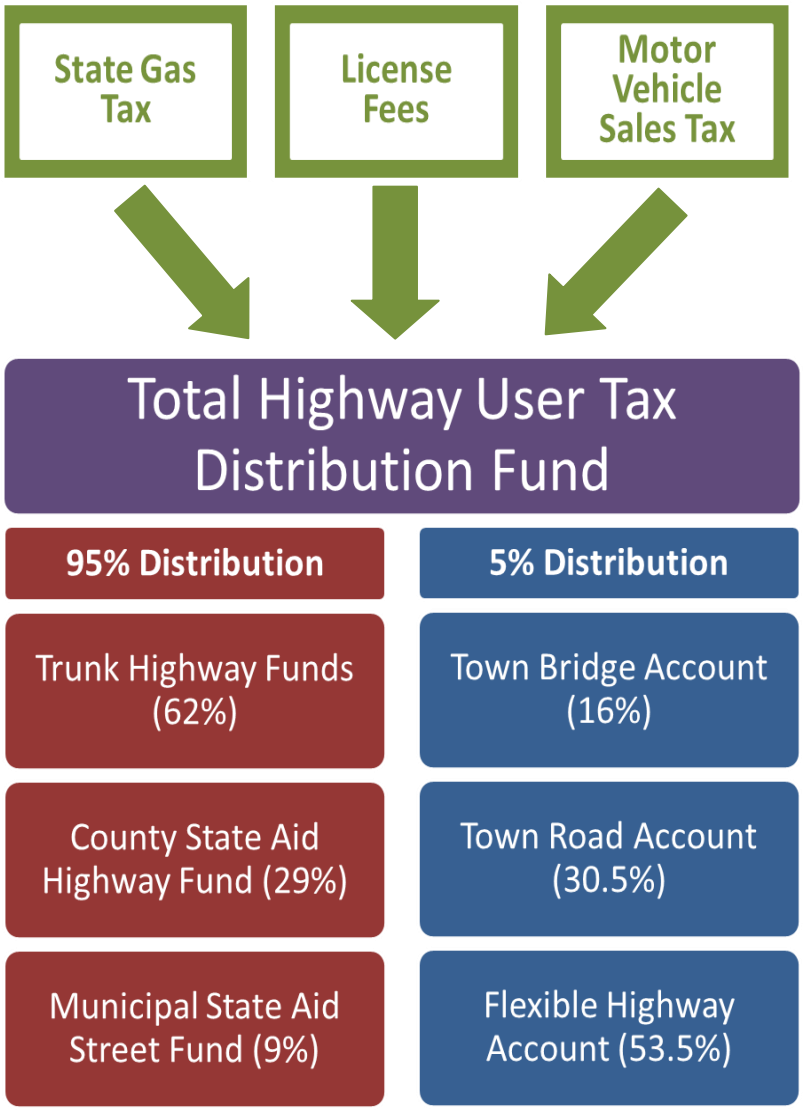


Figure 8.

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

For revenues collected prior to 2008, called the Apportionment sum:

- 10 percent is divided equally among all counties;
- 10 percent is divided according to total registered motor vehicles in each county;
- 30 percent is divided based on total lane miles on the County State Aid Highway system (compared to the total for all counties ; and
- 50 percent is divided based on the needs of the state aid highway system. This is defined as the total amount each county needs to improve all of their state aid highways to state aid standards.

For revenues collected after 2008 due to increased gas and license fees, called the Excess sum:

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

Flexible Highway Account

As shown in Figure 4-1, 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). The Commissioner of Transportation has discretion in distributing flexible highway account funds, but its use in recent years has been limited to trunk highway expenditures and "turnbacks" of trunk highways to counties or cities.

The 2008 legislation made two basic changes to the FHA. First, it reallocates a portion of the funds to seven metropolitan counties. That portion is termed the "excess sum," which essentially refers to recent increases in transportation revenue from the fuel tax, registration tax, and the motor vehicle sales tax.

The allocation of the excess sum is:

- in fiscal year 2010, 100 percent to metropolitan counties
- in fiscal year 2011 and after, 50 percent to metropolitan counties

The second change to the flexible highway account modifies the allowable uses to (1) eliminate funding for the trunk highway system, (2) allow funds to be used for "safety improvements on county highways, municipal highways, streets, or town roads," and (3) allow funds to go to routes of regional significance.

These changes are expected to increase funds available to state aid roadways in Dakota County by approximately $1.5M/year through 2018.

Leased Motor Vehicle Sales Tax

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. The 2008 legislation utilizes lease sales tax revenue from the general fund, phased in over a couple of years.

Starting in fiscal year 2010 (for taxable year 2009), there is an allocation to the lower income motor fuels tax credit created in the act. The amount allocated is as necessary to cover the tax credit, which accounts for about two-thirds of available lease sales tax revenue. After the phase-

in, the remainder of the allocation is divided 50 percent to the county state-aid highway fund for roads in the metropolitan area and 50 percent to greater Minnesota transit.

The funds distributed to metropolitan counties via the county state-aid highway fund are allocated separately from most state-aid dollars. The revenue does not go to Hennepin or Ramsey counties and must be distributed proportionally based on the population of each of the other five metropolitan counties. For Dakota County, this is estimated to add about $1.3M/year in CSAH revenue once fully in effect in 2013.

City Cost Participation

Cities, with populations greater than 5,000, participate in 45 percent of the cost of most county highway construction projects. The cost of city utilities is typically 100 percent city cost. City cost participation percentages vary in some instances for aesthetics, right-of-way acquisition, traffic signals, storm sewer system maintenance, transitways, future County road segments and street lighting. Specific cost participation policies are identified within this chapter. The County anticipates city cost participation to be approximately $7.0 million per year through 2015.

State Trunk Highway Funds

Mn/DOT's planned investment in state highways in Dakota County is extremely limited over the planning period. Even if available additional funding is received it would be limited because of distribution formulas.

As shown in Figure 4-1, the state Constitution directs 62 percent of the Highway User Tax Distribution Fund (HUTDF) to Mn/DOT for trunk highway purposes. These funds can only be used for highway and bridge work on trunk highways. The County works with Mn/DOT on cooperative projects where County and trunk highways intersect. Trunk highway funding is determined in accordance with Mn/DOT policy and priorities and is anticipated to be approximately $2.5 million per year through 2015 for Trunk Highways within Dakota County.

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 $0.2 million per year through 2015 for Dakota County local bridge and replacements.

Federal Aid

On August 10, 2005, the President signed into law the **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** (SAFETEA-LU). With guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion, SAFETEA-LU represents the largest surface transportation investment in our Nation's history. This authorization provides revenue from the federal motor fuel tax for various types of transportation improvements. The County has benefited from SAFETEA-LU funds through a couple of ways:

1. Federal funds requested directly through congressional representatives as part of annual appropriation of funds. These projects have traditionally been referred to as demonstration or high priority projects (HPP). Priority is given to projects or corridors that have been authorized directly in the federal transportation act. This type of funding mechanism has been substantially reduced over the past few years, and is not expected to be available in future years.
2. Projects are selected through the Area Transportation Partnership (ATP) project solicitation and review process administered by the Metropolitan Council. Federal aid funds can be available for up to $7 million per project through a competitive process. The

solicitation process typically occurs biannually. Federal funds received vary depending on selection process results.

The County anticipates approximately $5.0 million per year through 2015 for federally funded projects within the CIP.

Transit

Transportation CIP

Contained within Transportation CIP preservation section are modest investment amounts (approximately $60,000) dedicated for transit infrastructure preservation activities such as bus shelters, bus pull-outs, pilot projects and preservation of right-of-way.

Dakota County Regional Railroad Authority (RRA)

The RRA has powers granted by statutes to evaluate rail modes of transportation to reduce congestion, improve mobility and provide alternative forms of transportation. Several current activities are underway that are under the RRA oversight and are initiatives supported by various combinations of federal, state, county and local funds. These include:

- Cedar Avenue Bus Rapid Transit Phase I Activities consisting of project management and station implementation.
- Corridor Planning and Project Development for the Robert Street Corridor Transitway and Red Rock Commuter Rail.

Counties Transit Investment Board (CTIB)

Developed in 2008, the CTIB consists of membership from Anoka, Dakota, Hennepin, Ramsey and Washington Counties. The CTIB is responsible for advancing regional transit projects through funding from a quarter-cent sales tax and $20 a motor vehicle sales tax as permitted by the Legislature. The primary responsibility of the CTIB is to invest in and advance transit projects by awarding annual capital and operating grants. Dakota County anticipates receiving capital and operating planning funding through 2030 through this source.

OR

Another significant component of the 2008 legislation is new authority to impose a sales tax within the seven-county metropolitan area dedicated to certain transit purposes. The sales tax may be imposed within the seven-county metropolitan area, but participation is optional at the discretion of each county board. In order to take part, a county must enter into an agreement that forms a joint powers board, which is known as the Counties Transit Improvement Board (CTIB). It was established in March 2008 by Hennepin, Ramsey, Dakota, Washington, and Anoka counties. The board sets up the application procedures, decision-making process, timeline, and deadlines for awarding transit grants funded by the sales taxes.

The sales tax is generated from three sources:

1. a 0.25% sales tax
2. a 0.25% use tax
3. a $20 per motor vehicle excise tax

Revenue from the sales tax and any bonds is primarily distributed in the form of grants following the application process established by the CTIB. By state statute, CTIB grants can only be used for:

- capital improvements to transitways;
- operating assistance for transitways;
- capital costs for park-and-ride facilities;

- pedestrian and bicycle programs and pathways; and
- other transitway purposes, including planning and studies, engineering costs, environmental analysis, property acquisition, and construction.

Average annual net collections in 2009 and 2010 were approximately $90M. The Board is projecting $90M in collections for 2011 and 2012, and a yearly increase of 2% thereafter. Dakota County expects to receive funding from this source for both the Cedar Avenue Bus Rapid Transit corridor and the Robert Street corridor over the next 20 years.

Cedar Avenue Bus Rapid Transit (BRT)

Various sources of funding are in place for the development of the Cedar Avenue BRT. Revenue is secured for the design, right of way acquisition, utility work, construction, and station development of the corridor. Major sources include federal Congestion Mitigation and Air Quality (CMAQ), Federal Transit Administration, federal SAFETEA-LU HPP and Surface Transportation Program, CTIB, State Bonding, City of Apple Valley, City of Lakeville, Dakota County State Aid, Dakota County Regional Railroad Authority, and various transit-related sources and bonding mechanisms.

Transportation Funding Summary (2011-2015)
Expected Average Annual Revenues (Millions of Dollars per Year)

Source	CSAH Investment	County Road Investment	Transit/Transitway Investment
Federal	$5.0		$2.3
State			$1.7
Trunk Highway	$2.5		
Bridge Bonds	$0.2		
County State Aid Highway (CSAH)*	$10.0		
County Funds			
Levy	$0.6	$4.6	
Wheelage Tax		$1.7	
Gravel Tax		$0.2	
Regional Rail Authority Levy***			$1.0
City	$5.3	$1.7	
*Counties Transit Improvement Board (CTIB) ***			
Cedar Avenue			$5.6
Robert Street			$0.4
Totals	$23.6	$8.2	$11.0

* Includes Flexible Highway Account (FHA) and Leased Motor Vehicle Sales Tax (LMVST) Revenues

** Taken from CTIB's Transit Investment Framework. Assumes most expensive alternative (light rail) for Robert Street.

*** Total annual RRA estimated levey is $1.6 million of which operations is estimated as $600,000.

Table 5.

Unique Funding Sources

The five-year CIP investments will be oriented toward the annual needs identified in the Plan. Unmet needs such as interchanges, transitways, and expanded transit investments will need to be considered on a case-by-case basis with additional funding beyond anticipated revenue required to make investments in these areas.

Unique Funding Sources

Interchanges, transitways, expanded transit investments, and transit-operating costs are not included in the estimates in Table 6. These investments are expensive and are identified for case-by-case consideration. In order to fund these items and provide additional revenue for projects beyond 2015, unique funding sources will need to be considered.

These sources may include, but are not limited to:

- An increase in the levy for transportation to provide additional resources for future interchanges, transit infrastructure, and highway improvements and expansion needs.
- The use of the County fund balance most likely to provide additional resources for specific projects to address unmet transportation system needs.
- The use of bond proceeds. These proceeds could be used for future interchanges, transit projects, and right-of-way acquisition beyond what can be acquired through plat dedication. Because transportation needs grow over the Plan period, the use of bonds will be limited unless additional revenue is available to make bond payments.
- The pursuit and use of federal earmark funds for top priority transportation system needs identified in coordination with the County Board.
- The pursuit and use of state bond funds available for transportation system needs. These funds are most typically made available for bridges and other special programs of statewide significance.
- City and private funding for development driven investments to address transportation system needs directly necessitated by local land use development.
- Consideration of local option county taxes such as a sales tax on fuel, other sales taxes, or wheelage tax to assist in funding future interchanges, transit infrastructure, and highway improvement and expansion needs associated with anticipated County growth.

Identified Investment Needs

The *Dakota County 2030 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 2030. The Plan identifies available revenues of $32.9 million annually for the Transportation CIP to meet transportation needs.

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

Goal		Actual Annual 2005-2009 CIP Investment	Estimated Annual CIP Investment Needs 2011-2015	2016-2020	2021-2030
Goal 1	Resources	$ 1.9	$ 3.2	-	-
Goal 2	Transit & Modes**	-	$ 11.0	$ 12.5	$ 12.2
Goal 3	Preservation	$ 4.2	$ 4.4	$ 4.7	$ 5.0
Goal 4	Management	$ 7.8	$ 7.8	$ 7.8	$ 7.6
Goal 5	Replacement	$ 14.5	$ 6.8	$ 15.5	$ 12.1
Goal 6	Expansion	$ 21.5	$ 13.3	$ 24.1	$ 46.0
	TOTAL	$ 49.9	$ 46.5*	$ 64.6	$ 82.9

* Total revenues for 2011—2015 are projected to be $32.9 million/year. The current Draft CIP averages $38.2 million/year. Additional state and federal funds will need to be identified to support the projects and timeframes in the Draft CIP.

** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-4128 million.

Table 6.

It is anticipated that the needs associated with preservation, management, replacement, and transportation alternatives goals through the plan period will be fully funded. The needs associated with the expansion goal can be fully funded from 2005 through 2014, with the exception of interchanges and the Cedar Avenue Bus Rapid Transit. These needs are anticipated to be approximately $10 million annually for interchanges. Cedar Avenue Bus Rapid Transit needs is estimated to be: $16 million from 2010 to 2014, and $12 million from 2015 to 2025. In the period 2015 to 2025, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

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. 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 communities of the county and Mn/DOT to develop the Transportation CIP. The CIP process begins in late spring with adoption in December. The adopted CIP includes projects and funding sources for the following five years. Development of future Transportation CIPs will be closely based on direction from the Transportation Plan.

The overall Physical Development Division CIP represents approximately 10 percent of the entire County budget (17 percent in 2004). Within the CIP, transportation projects (including transit projects) account for approximately 80 percent of all CIP projects (75 percent in 2004). The remaining 20 percent consist of facility and parks.

For purposes of the Plan, Dakota County has assumed the following CIP resources will be available on an annual basis:

Anticipated General Revenues	Annual Estimated Revenue
County Levy/County Program Aid	$5.2 million / $4.9 million
Wheelage Tax Funds	$1.7 million
Gravel Tax Funds	$0.2 million
County State Aid Highway (CSAH)*	$10.0 million
City Cost Share Participation	$7.0 million
Regional Railroad Authority Levy**	$1.6 million
	$25.7 million / $30.6 million

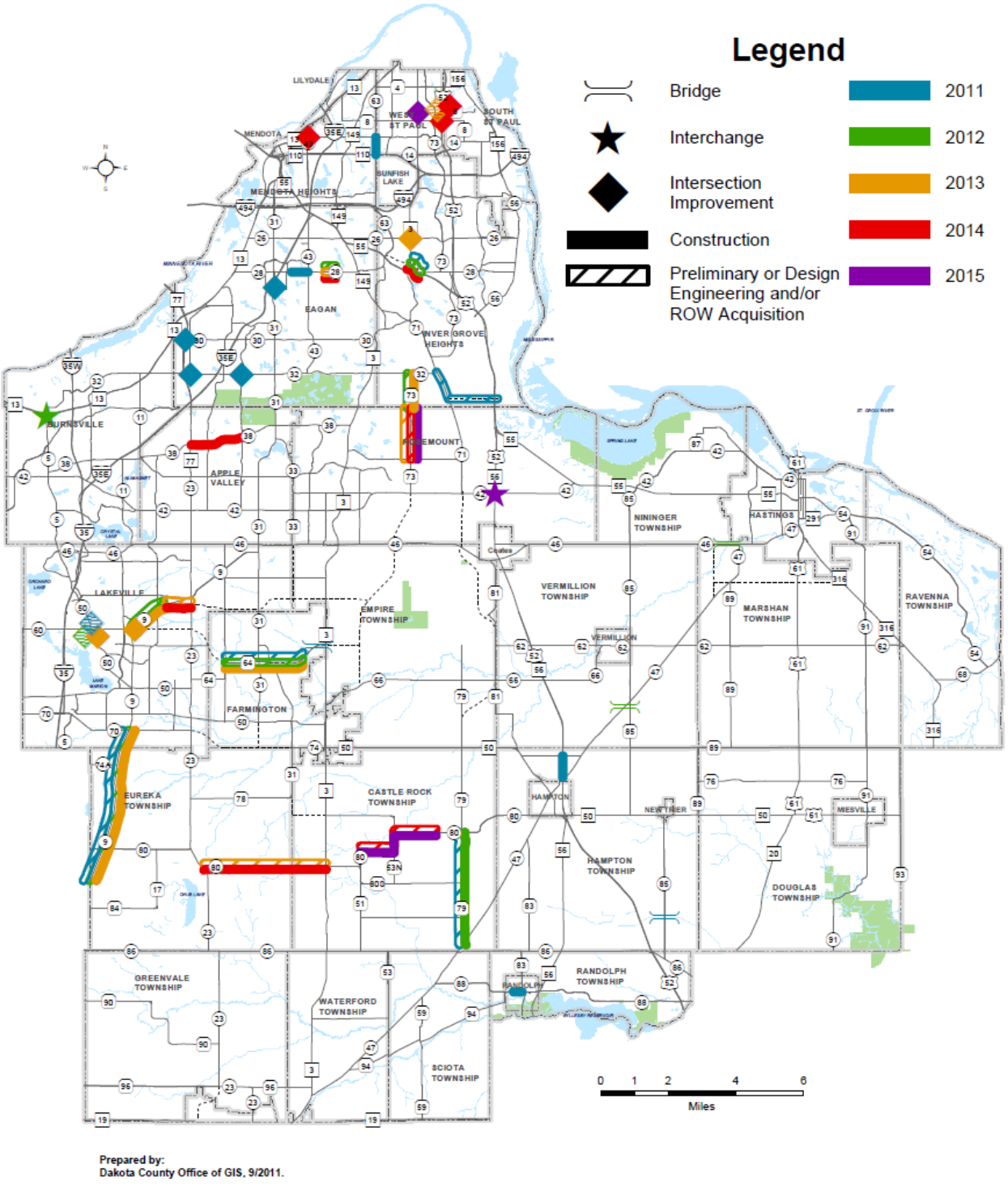
* Includes Flexible Highway Account and Leased Motor Vehicle Sales Tax Revenues
** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-4128 million.

Project Specific		Annual Estimated Revenue
Federal Aid		$5.0 million
State Trunk Highway Funds		$2.5 million
State Bridge Bond Funds		$0.2 million
		$7.7 million
	TOTAL	$33.4 million / $38.3 million

Table 7.

Transportation projects included in the current adopted Transportation CIP (2011-2015 Transportation CIP) are shown in Figure 9.
An estimated $46.5 million of annual CIP needs is anticipated with approximately $33.4 million of estimated annual revenue. Based on this scenario, it is anticipated that the needs associated with transit and mode integration, preservation, and management goals through the plan period can be fully funded. The needs associated with the expansion goal can be fully funded through 2015, with the exception of interchanges (approximately $10 million annually) and Cedar Avenue Bus Rapid Transit: $27 million from 2005 to 2010, $8.4 million from 2011 to 2015, $12.5 million from 2016 to 2020 and $12.2 million from 2021 to 2030. In the period 2016 to 2030, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

CIP 2011-2015



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 9

Personnel and Material Resources

For every transportation project, a proportional amount of staff and operating resources are required to plan, design, construct, and maintain that transportation project. A number of organizational changes have been made since the 2004 Transportation Plan to maximize resources, to allow for greater cross-functional coordination, to optimize staff sharing, and to help address current and future challenges Dakota County faces:

- Fleet moved from the Transportation Department to the Operations Management and Budget (OMB) Division.
- The Surveyor's Office moved to the Transportation Department.
- The Transit Office was created and moved into the Transportation Department.

The current transportation-operating budget is approximately $9 million annually. This budget supports a current compliment of 86 full time employees with seasonal employees equal to 5.4 full time transportation employees. These numbers include the Survey and Transit 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 these activities.

Program Development

Three permanent staff positions are currently assigned to the Program Section. 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 funding for projects, highway corridor planning studies, highway functional classification, public involvement programs, environmental documentation, local document review, plat review, and serves as liaison on regional transportation committees.

Design Engineering and Right of Way Acquisition

Nine permanent staff positions are currently assigned to tasks related to design engineering and right-of-way acquisition. These tasks usually are related to the design of a new highway or reconstruction of an existing highway and the acquisition of necessary easements to construct roadway improvement projects. The cost of design engineering a project is typically 8 percent to 12 percent of a construction project's total cost. The design engineering and right-of-way staff has a capacity of delivering approximately $15 million/year worth of projects. To deliver a $30 million annual CIP, engineering consultants and partnerships with other agencies will be necessary to undertake approximately half of the design work. Additional design engineering resources may be necessary to administer additional design work done by consultants and local agencies.

Traffic Engineering

Thirteen permanent staff positions are currently assigned to tasks related to traffic engineering, traffic operations and permitting. These tasks consist of right-of-way permitting, annual safety and mobility needs assessments, gathering and maintaining system traffic data, supporting planning studies, transportation project design, transportation project construction, and 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. To provide perspective on system traffic control needs, the staff provides some maintenance on approximately 250 signals

in the County and is directly responsible for maintaining 25,000 signs and necessary pavement markings for over 1000 lane miles.

Construction Engineering

Fourteen 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. Construction engineering staff has a capacity of delivering approximately $20 million/year worth of projects. To supplement construction engineering, seasonal employees, city staff, Mn/DOT, or a private consultant are hired. The cost of construction engineering by Mn/DOT 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

Thirty-one permanent staff positions are currently assigned to tasks related to system maintenance and operations. These tasks usually consist of snow and ice control, pavement patching, ditch cleaning, gravel highway grading, dust control, emergency repairs, mowing, debris removal, and sweeping. To provide perspective on these needs, staff typically plows 1,200 lane-miles of highway (including turn lanes) for each snow event using 26 pieces of equipment. 20,000 tons of sand and 12,500 tons of salt are used annually. The County also is responsible for inspection and maintenance of 83 bridges on the County system.

Transportation equipment fleet consists of 90 vehicles including snowplows, loaders, graders, signal boom trucks, and survey and construction pickups. The acquisition and replacement of vehicles is managed through a fleet development schedule and funded through the County CEP at approximately $590,000 annually.

Administration

Four permanent staff positions are currently assigned to administrative responsibilities of the transportation system. These responsibilities include CIP development and management, jurisdictional transfers, department management, application for federal and state funds, State-Aid system and needs administration, special studies and research, contracts and agreements, reception and communication activities, and the Adopt-a-Highway program.

Transit Office

Four permanent staff positions are currently assigned to the Transit Office. Staff works with the Metropolitan Council, the Minnesota Valley Transit Authority, the Minnesota Department of Transportation, the Counties Transit Improvement Board and cities and counties in the region to conduct comprehensive transit planning and innovative and progressive project development.

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.

Seasonal Employees

Seasonal employees are used to meet peak demands of seasonal work. These seasonal employees are equivalent to 5.43 full time staff positions. In the summer, seasonal employees are used to supplement construction engineering, highway signing and striping, traffic data collection, and fleet maintenance. In the winter, seasonal employees are used to supplement staff available to operate snow and ice equipment.

Other Staff

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

Resource Efficiency Efforts

In order to maximize the ability to staff the transportation system at minimal costs, efforts such as the following will be undertaken:

- Expand partnerships with Mn/DOT and local cities
- Use greater inter-department coordination 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
- Establish a contract gravel hauling program for gravel road resurfacing
- Increase number of contracted highway striping miles
- Increased life span of sign and signal materials
- Assure the County system consists of appropriate routes through jurisdictional transfers

Operations

$9 million per year is currently invested for maintenance and operation activities. Of these funds, approximately $2.6 million/year comes from the County levy, $4.2 million/year comes from the state through County State Aid allocations, and $2.79 million/year comes from other funding sources.

Historically, approximately $900,000 of engineering costs has been shown as an expense in the Transportation CIP and revenue in the Transportation Operating Budget. This approach did not recognize the full expense of engineering associated with CIP project delivery, of revenue sources from Cities, and County State Aid Highway construction revenue sources. Beginning in 2011, all engineering positions will be funded through the Capital Improvement Plan. The 2011 to 2015 CIP includes a total of approximately $3,200,000 to operations to account for all engineering staff. This change will allow the budgets to most accurately account for costs and revenues associated with engineering staff to deliver CIP projects. This accounting change increased county levy funds to the Transportation CIP and reduced county levy funds in the operating budget, yet have no net change in county levy funds budgeted for the Transportation department.

Operating (includes CEP)	Annual
County Levy	$2.60 million
County State Aid Highway Funds (CSAH)	$4.20 million
Other	$2.79 million
TOTAL	$9.59 million

This plan has determined that staffing and funding resources are approximately adequate to deliver the proposed $30 million annual CIP and operate and maintain the existing system. This assumes approximately one-half of the CIP projects are designed by consultants, 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 and traffic operation personnel. Additional vehicular equipment is also likely to be required to meet growth and increasing use of the system.

Strategies and Policies

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

Strategies

- **Advance Funding – County Funded**
  Advance fund a project in the approved CIP by agreement with the city or cities involved, with repayment according to the cost share schedule in policies when it has determined that a highway project is necessary and the city or cities involved are unable to cost share at the time designated in the CIP.

- **Advance Funding – City Funded**
  Allow a city or cities to advance fund a project in the approved CIP by agreement with the County with repayment according to the cost share schedule in policies 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.

- **Federal Highway and Transit Funding Support**
  Pursue Federal and State support and funding for County Board-identified high priority highway and transit projects through support for surface transportation act authorizations and appropriations.

- **Counties Transit Investment Board (CTIB)**
  Apply for CTIB grants for eligible transitway investment projects.

- **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 highways to address transportation needs necessitated by development.

- **Interchanges, Transit Stations & Transit Corridor Funding**
  Work to develop funding on a case-by-case basis for priority interchanges, transit stations, transit corridor improvements, and preservation/purchase of necessary right-of-way. Work with the County Board, state, regional, and local partners to determine priorities.

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

- **State Funding**
  Pursue increased state funding through increases in transportation user fees such as the gas tax.

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

- **Transportation Fund Allocation**
  Pursue changes in the way that state transportation funds are allocated to counties through increases in transportation user fees such as the gas tax.

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

- **Wheelage Tax**
  Pursue changes to the wheelage tax allowing counties to increase the amount from $5 to $10 per vehicle.

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

Policies

F.1 Cost Participation - Roadway

For cities with populations over 5,000, the County will participate up to 55 percent of the engineering and construction costs (after deducting federal and state cost participation amounts) 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.
6. Replace or adjust sanitary sewer, water, and storm sewer systems, if required due to construction.
7. Replace or adjust privately owned public utilities when utilities exist within privately held easements. .
8. 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.

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. Transit infrastructure improvements on highways, including bus pullouts, bus shelters, and all pedestrian facilities necessary to support transit.

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.

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 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-way

For cities with populations over 5,000, participate up to 55 percent of the cost of right of way for existing highways where right-of-way is required for:

1. The construction of items described in F.1, (1-10) and F.5 (Traffic Signals) 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.

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.5 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 participation after subtracting federal and/or State funds:

1. New Signal Installation, Operational Revisions and Signal Placement with highway projects – up to 55% County funds
2. Existing Signal Replacement due to signal age – up to the percentage of intersection approach legs under County jurisdiction.

F.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, then balance of the costs will be divided according to County policies.

F.7 Cost Participation for Populations Less Than 5,000

Pay costs for eligible construction and reconstruction (F.1, 1-8) for existing projects for cities with populations less than 5,000 and all townships.

F.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.
2. Mainline pipes and storm water treatment and mitigation facilities based on the County's share of contributing flows.
3. To be eligible for County participation, a system-wide storm water maintenance agreement between the County and local agency will be required to identify system-wide roles and cost responsibilities. These cost share agreements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
4. 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.9 Cost Participation for Multi-Use Trails and Sidewalks

Participate in the construction of trails and sidewalks along the County highway system up to 55 percent (less any applicable grants). Participate in the overlay or reconstruction of trails and sidewalks along the County highway system up to 55 percent (less any applicable grants), if the local unit of government is following an adopted Bikeway Trail maintenance agreement between the County and the local unit of government. 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 Cost Participation for Transitways

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.11 Tax Increment Financing (TIF) Costs

Subtract from the County eligible project costs, the costs of highway improvements or other highway costs (e.g. traffic controls), 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 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.13 Capital Improvement Program

Annually prepare and review the five-year transportation and regional rail authority CIP's.

F.14 Cost Participation – Roundabouts

Participate up to 55 percent of the costs for eligible engineering and construction items for roundabouts as described in Policy F.1.

Aesthetic elements of roundabouts 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 Cost Participation – Future County Road Segments

At County discretion, participate in the construction and engineering costs for constructing 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 Cost Participation – Small Safety Projects

The County may participate up to 100% 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 or expansion project, or permit request:

1. Median Closures or Modifications;
2. Access Closures or Modifications;
3. Intersection Street Lighting;

4. Turn Lanes or Channelization at the Intersection of Two County Roadways (including minor signal changes to accommodate improvement);
5. Guardrail Installation; and
6. ADA required safety improvements.

F.17 Cost Participation – Local Roadway System

The County may participate up to 55% 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 eliminates or significantly delays the need to expand the County highway system.

F.18 Street Lighting

Participate in the installation, 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. Intersection Street Lights at stop-controlled intersections with demonstrated safety benefit based on County evaluation – Participate up to 100 percent.
    b. Street Lights on Traffic Signals – Participation will be consistent with other improvements per Policy F.5.
    c. Integral Street Lights at Roundabout Intersections – Participate up to 55 percent.
    d. Street Lighting along High Priority County Transit Corridors – Participate up to 55 percent.

B. Maintenance and Utility Power Costs
    a. 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.)

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 and implemented 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. 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.

The County envisions available revenues of approximately $33.4 million per year to invest towards transportation and approximately $11 million per year towards transit-specific transportation projects. These investments 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.

Chapter 5

Goal 2:
Transit and Integration of Transportation Modes

This goal directs Dakota County in the development and integration of a comprehensive transit system, bicycle and pedestrian network, and other non-automobile modes for people and freight to maximize the efficiency of the transportation system by providing safe, timely, and efficient connections between communities, activity generators, and employment centers.

Importance
This goal establishes Dakota County's role in coordinating and providing direction on the development of infrastructure and services for non-automobile modes of transportation. Rapid population growth and diversified transportation needs have prompted the County to adopt policies and strategies for the planning and implementation of effective facilities and services for pedestrians, bicyclists, and transit riders. The ongoing facilitation of these modes will contribute to the County's transportation networks by providing safe, timely, convenient, and efficient connections between communities, activity generators, and employment concentrations.

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

Activities
- Integration of transit into the *Dakota County 2030 Transportation Plan*
- Local and regional transit governance
- Transitway and facility planning
- Collaboration with transit partners
- Meeting the needs of transit dependent populations
- Technology implementation
- Travel Demand Management
- Integration of land use with transit services and facilities
- Integrating bicycle and pedestrian modes

CIP Investment Categories
- Cedar Avenue Transitway
- Bicycle Trails
- Transit Infrastructure

DCRRA CIP Investment Categories
- Cedar Avenue Transitway
- Robert Street Transitway
- Red Rock Transitway

Transit and Integration of Transportation Modes Issues

The following are general issues affecting transit and integration of transportation modes addressed in this Plan.

Issue:
The existing Transit Plan is a stand-alone document.

Issue:
Development of transitways within Dakota County entails high degrees of interagency cooperation, as well as competition with other high priority projects across the nation.

Issue:
Highway congestion is anticipated to continue, especially during peak hours.

Issue:
Changing demographics are resulting in new and more specialized needs for transit service within the County.

Issue:
Funding concerns exist toward the planning and development of transitways.

Issue:
A key challenge is to positively influence and effectively coordinate an integrated transportation system that includes bikeways, regional trails and pedestrian facilities.

Issue:
A key challenge is to positively influence and effectively coordinate an integrated transportation system that includes other modes.

Issue:
Potential reductions in regional funding for transit may adversely affect ADA paratransit service through a reduced service eligibility area within Dakota County.

Addressing the Issues

The following are potential actions and revisions to the Plan to address these issues.

Transit Plan Integration

- Integrate the Transit Plan within the Transportation Plan so that it will no longer be considered a stand-alone document. The Transit Plan is now integrated within the Transportation Plan to provide for a more comprehensive document and demonstrates that transit activities are a major consideration in the way the County conducts planning for transportation investments for the future.
- Work with transit partners and local jurisdictions to positively influence and effectively coordinate transit services and transitways into an integrated passenger transportation network with highways, bikeways, regional trails and pedestrian facilities.

Transitways

- Continue Dakota County and DCRRA activities in planning and implementation efforts of transitway projects defined in the Metropolitan Council's Transportation Policy Plan and the long range vision of the Counties Transportation Improvement Board.
- Make Dakota County transitway projects a priority within regional development plans and cooperate with regional agencies on advancing transitway development at the state and national level.

Highway Congestion

- Cooperate in regional programs to manage peak travel demand and that provide transit advantages. Cooperate in regional efforts to expand the capacity and effectiveness of transit service.

Changing Demographics and Transit Dependent Populations

- Coordinate service providers and County government to understand emerging transit needs and form effective implementation for County residents including transit dependent populations (elderly, low-income families, households without a vehicle, youths and physically/mentally challenged).

Transit Funding Concerns

- Continue DCRRA dedications towards the planning and development of transitways within the County for the future implementation of transitways, and to leverage federal and regional funds for transitway implementation.
- Assist in the efforts of local elected officials and regional agencies to secure dedicated funding for transit operations and infrastructure.
- Pursue new and innovative approaches for stable, long term funding with an emphasis on regional partnerships.

A Transportation System to Include Other Modes

- Evaluate and develop the groundwork for improving networks for other modes within the transportation system to provide safe, timely, convenient and efficient connections. The County will continue to investigate potential of existing rail lines to host potential passenger rail movements.

A Transportation System to include Bicycles and Pedestrians

- Evaluate and develop the groundwork for improving pedestrian and bicycling networks within the transportation system, especially within transit or dense land use corridors, to provide safe, timely, convenient and efficient connections.

Background

Dakota County's growing role in the development of transit service and infrastructure has led to progress towards several goals and objectives stated in the *Dakota County 2025 Transportation Plan.* During the past five years, Dakota County Regional Railroad Authority and Dakota County have advanced transit goals and objectives through the following activities:

- Development of the Dakota County Office of Transit to provide a centralized focus area for transit goals and objectives.
- Adoption of the County's first Transit Plan in 2008 with prioritized action items and focuses on transit influence and transit future.

- Development of a Transit section of the Transportation Capital Improvement Program that identifies County transit investment activities beyond standard transportation improvements.
- Development of a Regional Railroad Authority Capital Improvement Program that specifically identifies funding sources for prioritized projects such as Cedar Avenue Transitway, the Red Rock Transitway and Robert Street Transitway planning activities.
- Enactment of a 0.25 percent County sales tax for use specifically for transit purposes through the Counties Transit Improvement Board.
- Participation in the Counties Transit Investment Board grant process that identifies capital and operating planning needs for 2009 to 2030.
- Final design of the Cedar Avenue Transitway, with construction scheduled for 2011-2012.
- Completion of the 2010 Cedar Avenue Transitway Implementation Plan Update.
- Completion of the Robert Street Feasibility Study and the initiation of the Robert Street Transitway Alternatives Analysis.
- Ongoing planning for the Red Rock Commuter Rail Transitway and member of the Red Rock Corridor Commission.
- Participation on the Minnesota High Speed Rail Commission.
- Ongoing technical assistance in transit-oriented development and station planning activities for Cedar Avenue and Red Rock Corridor Transitways.
- Ongoing development of the I-35W Transitway from Lakeville to downtown Minneapolis.
- Participation in the Metropolitan Council's regional 'Corridors of Opportunity' initiative.

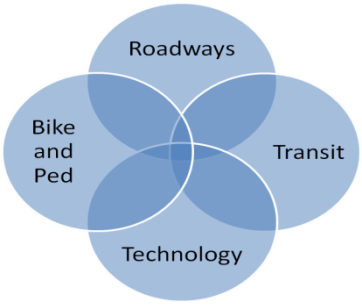
These accomplishments and the efforts described in this chapter are intended to expand transit as a viable travel mode to meet a wider range of needs and objectives, including job access, sustainable development, congestion mitigation, and improved mobility for all population groups within the County.

Integration of Transit into the Transportation Plan

The County adopted its first Transit Plan in 2008 which prioritized action items and focused on transit's influence and future role in Dakota County. This Transit Plan will no longer be a stand-alone document but rather will be incorporated within the County Transportation Plan. By doing so, the County acknowledges that transit is a growing priority and will be a component of all future decision making processes for the County's transportation system. Transit Plan elements will have greater visibility within the Transportation Plan and integrating transit better describes where Dakota County is in developing a comprehensive transportation system. The following considerations apply to the integration process:

Goals and Outcomes

- The Transit Plan will no longer be considered a stand-alone document. The Transit Plan is now integrated within the Transportation Plan to provide for a more comprehensive document and recognizes that transit activities are a major consideration in the way the County conducts planning for transportation investments for the future.
- To acknowledge that transit is a growing transportation priority and an important part of the overall transportation



system. Recent trends, review of demographics and increasing transit-dependent populations indicate that citizens want more transit services.
- To acknowledge the County's expanding role in transit and transit planning with an expectation of doing more and having a higher visibility.
- To comprehensively account for resources, costs and benefits.
- To measure effectiveness as a county transportation system element.
- To provide another tool for seeking multi-modal solutions to current and future transportation system issues.
- To support transit based solutions will all modes of transportation, especially bicycling and pedestrian facilities.
- To include a transit action plan identifying near-, mid- and long-term activities.

Integration Process

- Goals and action items of the Transit Plan are incorporated into this document.
- Restate the County's transit role and responsibilities identified in the Transit Plan including how the County will integrate transit considerations in planning, project development, maintenance and preservation priorities.
- The following are part of the integration process and will be activities conducted with each Transportation Plan update:
    - Update of transit market and demographic information.
    - Update information on priority transit corridors, regional transitways and county corridors.
    - Update the inventory of services, providers and facilities. Identify gaps and opportunities for coordination.
    - Identify emerging issues, needs and opportunities.
    - Provide financial forecasts.

The intended outcome of this integration process is a more fundamental consideration of transit service needs, operations, and access through all stages of planning and execution of transportation system improvements. Dakota County will reassess the relationship of transit to other modes and physical development to establish more effective planning and implementation practices as transit needs and services evolve.

Local and Regional Transit Governance

Dakota County and the Dakota County Regional Railroad Authority cooperate in regional activities for funding and advancing the development of major transit capital investments within the County. Given the range of potential investments and jurisdictions a single project can involve, these efforts typically require close and complex coordination with numerous regional, state, and federal agencies that are involved in planning, funding, service operation, or facility construction. Locally, Dakota County is responsible for leading cooperative efforts with numerous agencies and stakeholder groups to address more localized or near-term needs for transit service.

Dakota County

The following objectives identify the County's role in transit:

1. Provide assistance to the Dakota County Regional Railroad Authority in transitway planning and development.
2. Support service providers in identifying transit needs and solutions of the transit dependent population.
3. Work with local units of government to link transit service and land-use decision making.
4. Monitor and support use of technological advances and roadway design modifications to reduce travel demand and improve transit performance.
5. Secure dedicated regional, state and federal transit funding for capital investments that can improve the effectiveness of transit service.
6. Provide for specialized transit services for clients of Dakota County's Community Services Division
7. Allocate CIP funds dedicated for transit for infrastructure improvements that can increase the convenience or efficiency of transit service.

Dakota County's efforts towards these objectives are often undertaken on a regional level through cooperation with other bodies responsible for financing, developing, and operating transit service. Dakota County is regularly engaged with the following regional entities in the development of transit policy, service, and infrastructure:

Dakota County Regional Railroad Authority

The Dakota County Regional Railroad Authority (DCRRA) was established by Minnesota Statute §398A with broad powers to plan, acquire, construct, and operate railroads, including light rail transit (LRT). In addition to rail transit modes, the Authority was granted permission by the State Legislature (Special Session 1, Ch. 6, Section 90) to serve as the lead agency in all phases of the Cedar Avenue Transitway project to develop bus rapid transit (BRT) service, with the responsibility for planning, design, construction, oversight, and public involvement. The Statute also grants the DCRRA the ability to evaluate transportation solutions in areas under its jurisdiction with the intent to reduce congestion, improve mobility, and provide alternative forms of transportation.

The DCRRA consists of seven commissioners appointed by the Dakota County Board of Commissioners for terms of one year. Dakota County staff serves at the direction of the DCRRA board in the conduct of planning studies and transitway design work. DCRRA efforts are financed through an annual dedicated levy currently set at $1.64 million; the current levy limit is $19.8 million per year.

Regional Transit Governance

Metropolitan Council

The Metropolitan Council is the regional planning agency for the seven-county metropolitan area and is also designated as its Metropolitan Planning Organization. In this capacity, the Metropolitan Council is responsible for development of the regional Transportation Policy Plan, which defines future transportation needs and outlines policies and fiscally constrained improvements over a twenty year period. Specific to transit, the Transportation Policy Plan identifies major investments in capital and runningway improvements for the region's transit network and provides local oversight to planning processes in the Federal Transit Administration's New Starts program.

The Metropolitan Council operates Metro Transit, the region's largest provider of fixed-route transit service; service within Dakota County cover West St. Paul, South St. Paul, Mendota Heights and Inver Grove Heights. The Metropolitan Council also administers Metro Mobility ADA paratransit service and TransitLink paratransit service.

Suburban "Opt-Out" Service Providers

In addition to services operated by the Metropolitan Council, six individual transit agencies provide local and express service within suburban areas throughout the Twin Cities. Formation of these agencies was enabled by Minnesota Stat. 174.265, which allowed suburban communities to provide their own transit services in lieu Metro Transit service. Cities opting out of the Metro Transit service area are allowed to retain 90% of local taxes that are accrued towards transit service for service within their jurisdiction. This statute enables cities opting out of the Metro Transit service area to jointly form transit authorities and contract for service with private service operators. Presently, there are six opt-out authorities within the Twin Cities region; the Minnesota Valley Transit Authority in the sole opt-out authority within Dakota County, providing service to Eagan, Burnsville, Apple Valley and Rosemount. Lakeville was previously outside the transit taxing district. Lakeville became part of the transit taxing district in 2008 and is now served by the MVTA.

Counties Transit Improvement Board

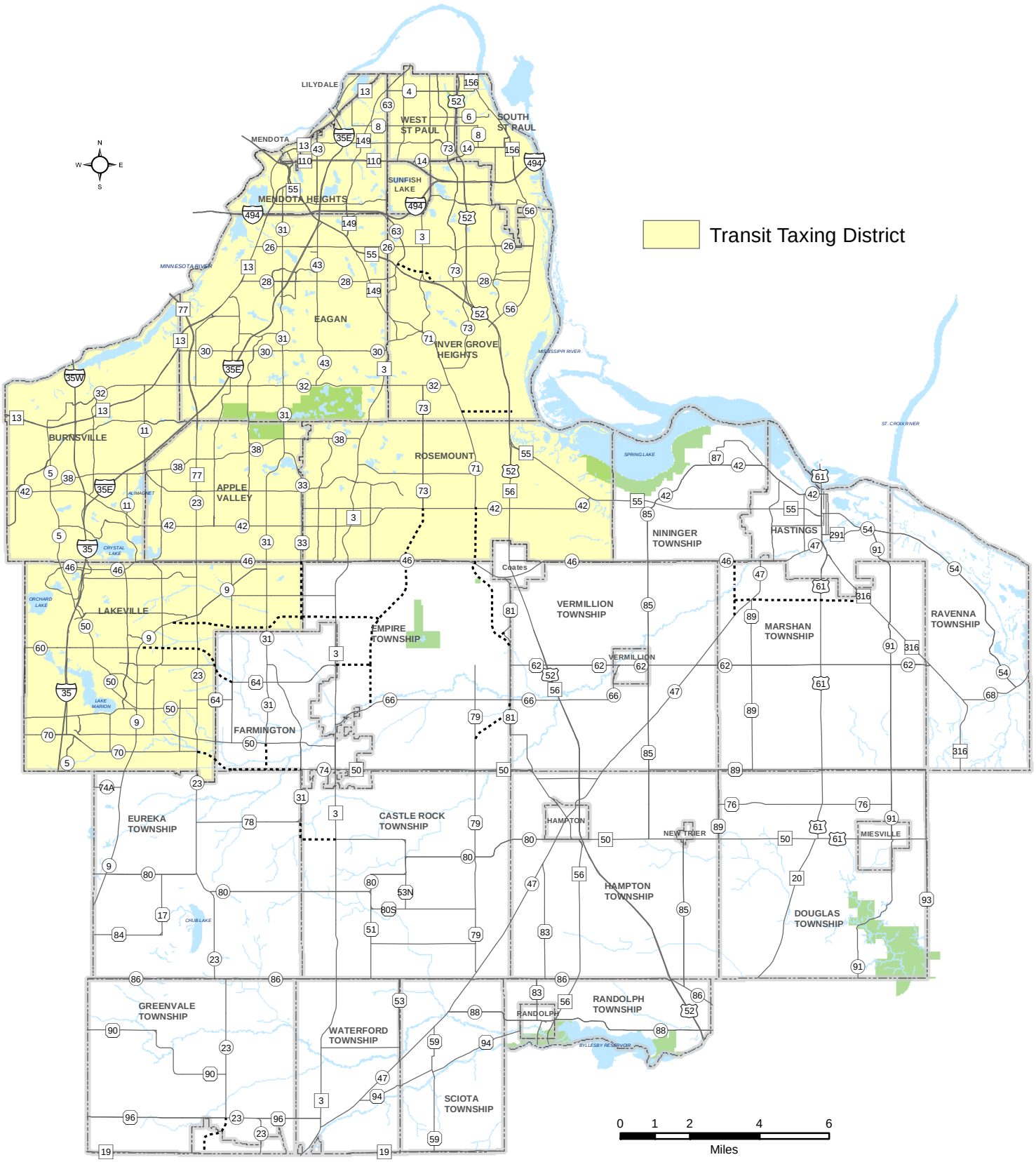
To supplement the funds available from state and federal sources, Dakota County participates on the Counties Transit Improvement Board (CTIB) to fund and operate regionally identified transitway projects. CTIB consists of representatives from Dakota, Hennepin, Ramsey, Washington, and Anoka Counties, and the chair of the Metropolitan Council. Funds for CTIB are raised through a quarter-cent sales tax and $20 excise tax on vehicle sales approved by the Minnesota Legislature in 2008. Dakota County is represented on the CTIB Board, Executive Committee, and Grant Evaluation and Ranking System (GEARS) Committee by elected officials from the County. CTIB policy allows for its funds to cover up to 30% of total costs of eligible transitway capital costs, with a required 10% match from the local project partner. Funding for operation and maintenance of eligible transitway service is provided at 75% of total cost.

State and Federal Entities

Funding for transit service operation and capital is drawn primarily from state and federal government. Federal funding for transit is currently determined through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This legislation establishes funding formulas for multiple categories of operations and capital expenses, including development of transitways. SAFETEA-LU legislation expired in September 2009, but has been continued through a series of short-term extensions. A reauthorization bill is currently being considered by Congress.

State funding for transit is set every two years by the State Legislature; additional state funding is received through a dedicated portion of the motor vehicle sales tax. Dakota County accesses state and federal funding programs through the Metropolitan Council, which functions as a regional administrator for the State of Minnesota, the FTA, and other federal agencies. Dakota County typically is responsible for reporting on both program progress and financial status. With limited funds available from state and federal resources, innovative projects that are eligible for funds from the widest range of programs possible will be the most successful.

Existing Transit Taxing District



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 10

Dakota County Strategies and Policies

Dakota County plays an important intermediary role in defining the needs of its expanding and evolving population for transit service, and developing appropriate and effective service solutions and physical investments in cooperation with transit operators, regional agencies, and stakeholders. These responsibilities extend to numerous County functions, including highway development and maintenance, delivery of social services, and development review.

The following strategies and policies apply to all investment categories under Goal 2.

The following ***strategies*** define the role of Dakota County and/or the Dakota County Regional Railroad Authority in development of transit services and infrastructure:

- **Transit Technical Committee**
  Establish a Transit Technical Committee comprised of transit providers, cities, and other stakeholders to monitor changing needs for transit services and evaluate measures for addressing them.

- **Transit – Stakeholders**
  Participate in or create new stakeholder groups to facilitate transit development in identified corridors.

- **Strive to meet Transit Needs in all Geographic Areas of the County**
  Encourage the operation of the transit system including regular route, ride sharing, paratransit services and facilities in a compatible and coordinated fashion.

- **Capital Improvement Program (CIP)**
  Identify and pursue improvements to transit facilities for inclusion into the five-year CIP.

- **County Role in Transit Investments**
  Reaffirm the County role in planning, coordination, and integration required between all transportation modes and facilities including transitways, commuter rail, bicycles, pedestrians, HOV lanes, HOV ramp by-pass lanes, and park-and-ride lots.

- **County Reviews - Transit Element**
  Comment regarding transit impacts and opportunities on regional plans and projects, EAW, EIS and AUAR reviews and plat applications.

- **Transportation Alternatives - Organizational Approaches**
  Develop comprehensive internal approaches to allow for open and cross-disciplinary communication in developing effective transit services and facilities; extend involvement to external organizations where appropriate, including area chambers of commerce and the Community Development Authority.

- **Transportation Alternatives – Modal Integration**
  Consider transit needs for accessibility, right-of-way, and operations during the planning and design of County highway projects, as well as pedestrian and bicycle facilities.

- **Transit Infrastructure**
  Provide appropriate infrastructure on all highways for transit operations and transit service access.

- **Plat Commission**
  Participate in the County plat review process to identify modifications to planned development that can enhance the effectiveness of transit services and facilities.

- **Transit Considerations in Planning**
  Include a transit work element in all transportation studies conducted by the County.

- **Explore County Resources**
  Employ the Office of Transit as a community resource for transit activities within the County with the intent to facilitate and coordinate programs that advance transit.

- **Secure Operating and Capital Funds**
  Identify County funding resources to support transit operations and facilities through short and long term commitments.

- **Respond to Changing Service Needs**
  Establish new services and facilities that are responsive to changing service needs or demographic patterns within Dakota County.

- **Planning, Design, and Construction**
  The DCRRA will assume appropriate leadership or collaborative roles in the development of light rail and commuter rail transitway investments within the County, and the Cedar Avenue Bus Rapid Transitway, as governed by applicable laws and rules.

- **Complete Major Transitway Projects**
  Timely complete major project development phases for all transitway projects within Dakota County

The following ***policies*** define the role of Dakota County in development of transit services and infrastructure:

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.

PERFORMANCE MEASURE: Continual growth in transit ridership within Dakota County consistent with the Metropolitan Council regional goal to double transit ridership from a base of 73 million in 2003 to 145 million by 2030.

Regional Transitways

Dakota County and the DCRRA are active in the planning and implementation of several transitway projects defined in the Metropolitan Council's Transportation Policy Plan and the long range vision of the Counties Transit Improvement Board. Transitways are becoming a growing part of this system, with four regionally defined within Dakota County: the Cedar Avenue Transitway, the I-35W Transitway, the Robert Street Transitway, and the Red Rock Transitway. Transitways offer riders faster and more reliable service through exclusive runningways, improvements in operating technology and rider information, and higher frequency service. These improvements are intended to provide residents and businesses with improved access to housing and employment through faster and more reliable transit service, both with the County and throughout the Twin Cities.

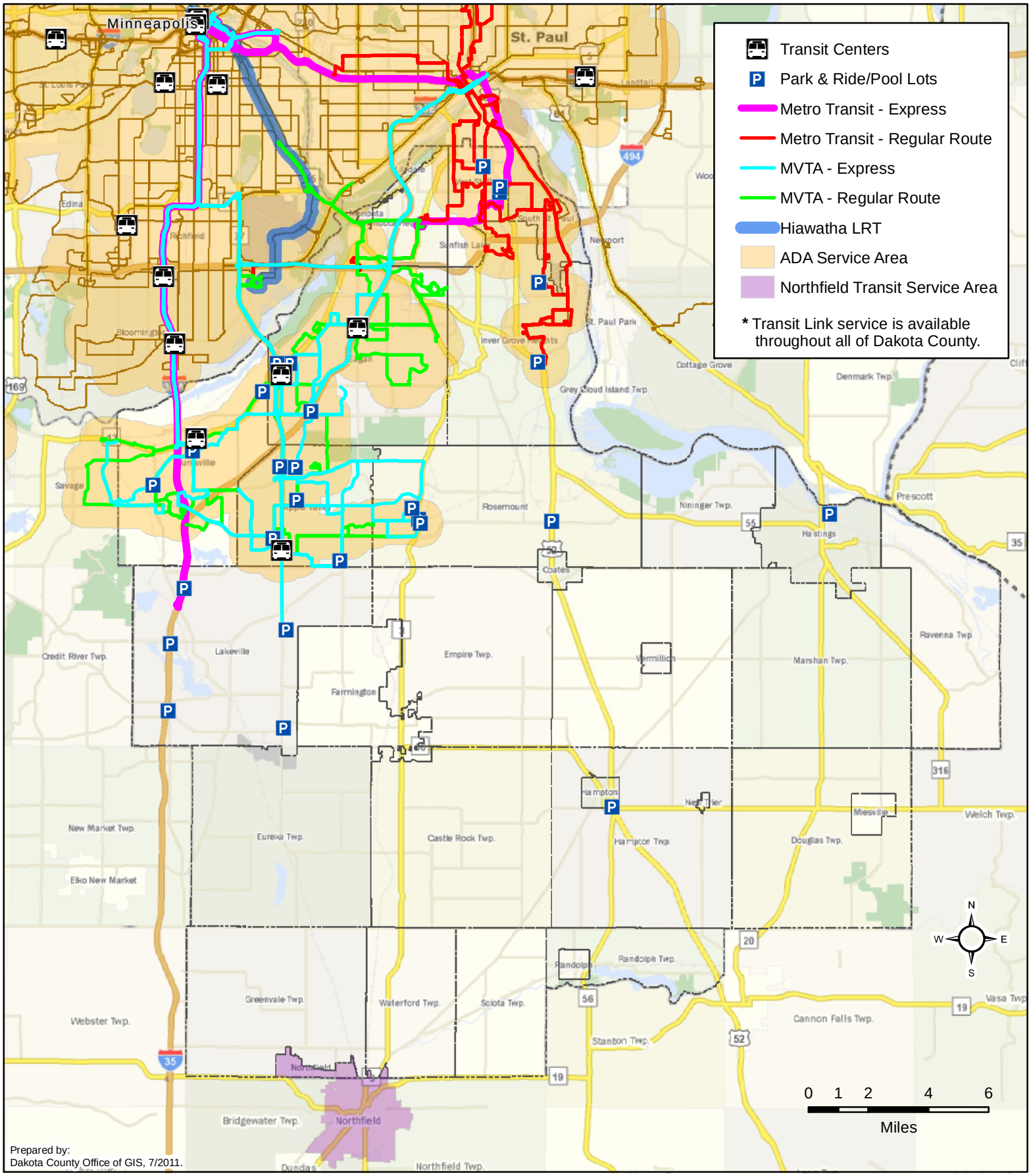
Cedar Avenue Transitway (Bus Rapid Transit) - The Cedar Avenue Transitway is located between the Mall of America/28th Avenue Park & Ride in Bloomington and CSAH 70 (215th Street) in Lakeville. The transitway is designed to provide local station-to-station service between 10 stations in the transitway, and to enhance and expand existing service to activity centers such as the Mall of America, Minneapolis-St. Paul International Airport, Fort Snelling/VA Hospital, the University of Minnesota, downtown Minneapolis, and downtown St. Paul.

Traffic congestion occurs regularly as approximately 100,000 vehicle trips per day are made in the Cedar Avenue transitway. In addition, the County's population is projected to increase by over 115,000 in the next 20 years. No future highway expansions are planned in the transitway.

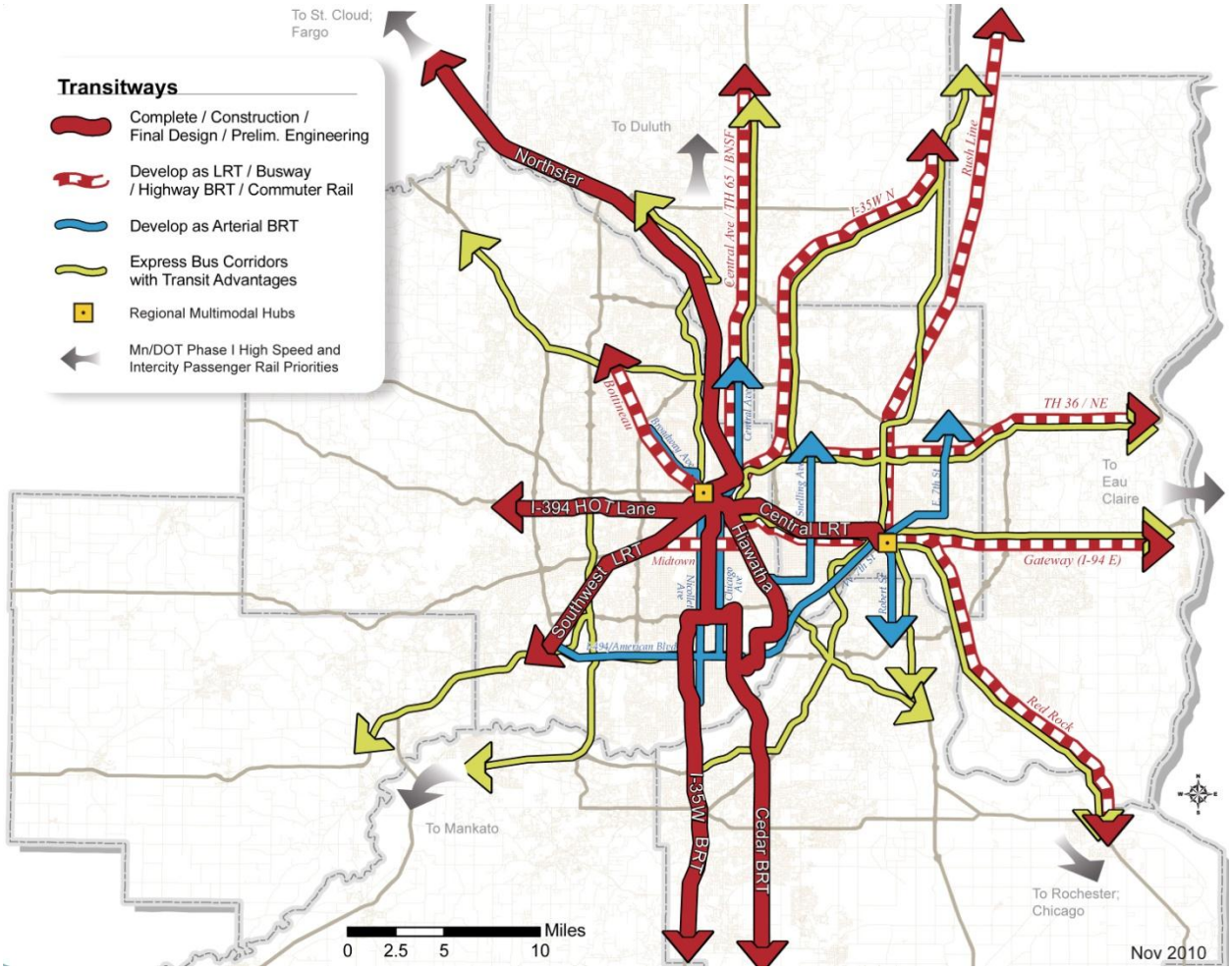
In response to these growing challenges, a Feasibility Study of the Cedar Avenue Transitway was undertaken in 2001 with funds from the State of Minnesota. The study concluded that both bus rapid transit and light rail transit were feasible modes for the transitway. Additional funds from the State and Metropolitan Council allowed for further planning work that included an environmental scoping study and alternatives analysis study.

The 2004 Alternatives Analysis determined BRT as the preferred transit mode; an implementation plan was created, and updated in 2010, with ridership projections, conceptual service plans and updated capital and operating cost estimates. Further changes, based on budget and operating constraints, have been made to this plan.

Existing Transit Service Areas, 2011

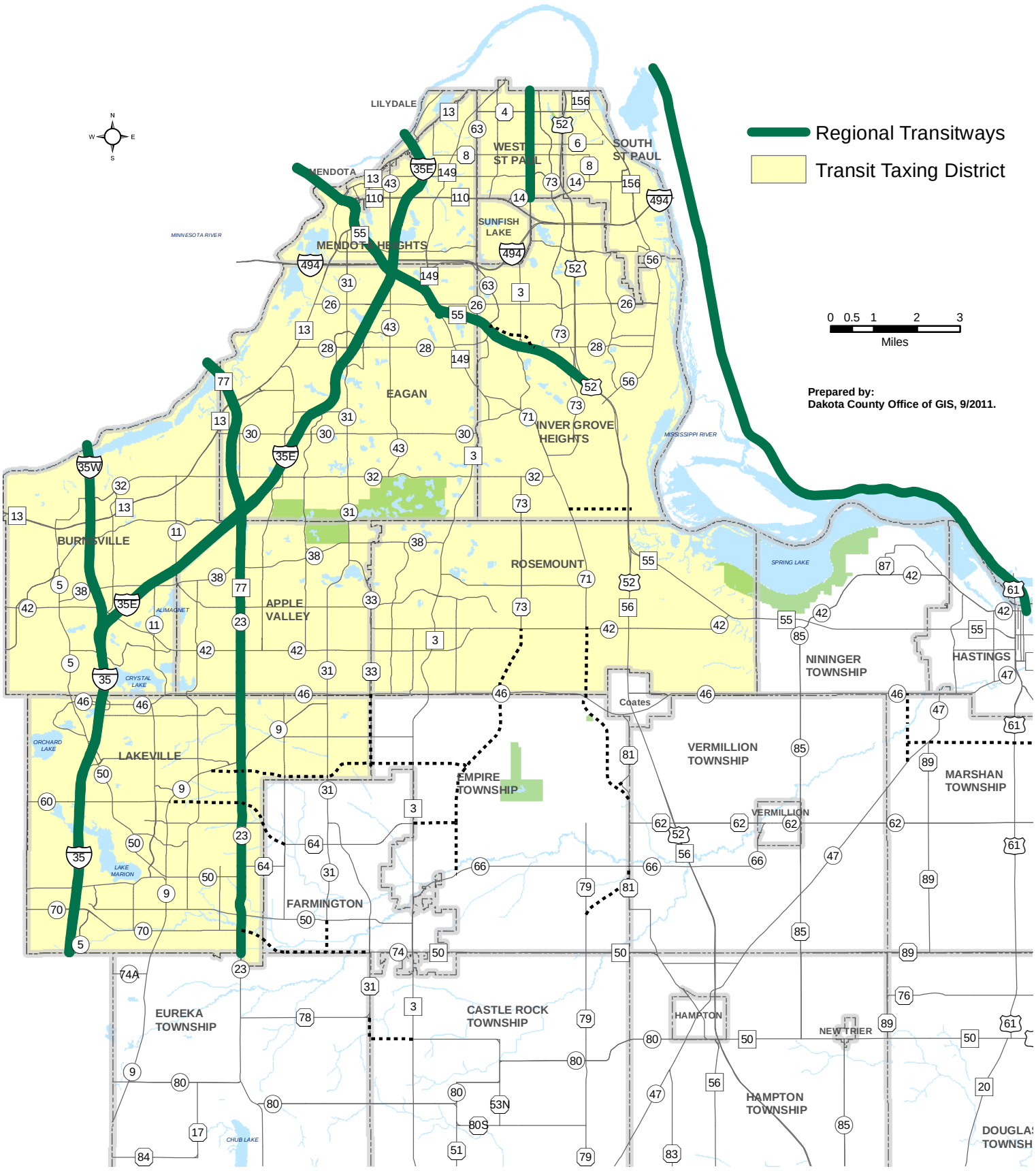


Dakota County 2030 Transportation Plan - Figure 11



Dakota County 2030 Transportation Plan – Figure 12

Regionally Defined Transitway and Service Improvements



Dakota County 2030 Transportation Plan - Figure 13

The focus of the transitway improvements is the construction of bus shoulder lanes from Dodd Road to 138th St. These lanes are intended to allow buses to operate outside of traffic congestion, providing faster travel times. Further reduction in travel times will be achieved through implementing transit signal priority and driver assist technologies, stations with level vehicle boarding, and more functional vehicle interiors. Construction of the bus shoulder lanes is expected to finish by fall 2012, with station-to-station BRT service to begin following the completion of construction.

The current implementation plan includes station-to-station service to operate between seven stations from the Mall of America/28th Avenue Park & Ride to the Apple Valley Transit Station, with some additional local service to increase accessibility to and from the transitway; additional express trips will be provided, with more express service added at later stages of development as demand warrants. Service will utilize existing transit stations, with the construction of new stations at 140th St. and 147th St. Anticipated station-to-station weekday service frequency for 2012 is 15 minutes for the entire transitway.

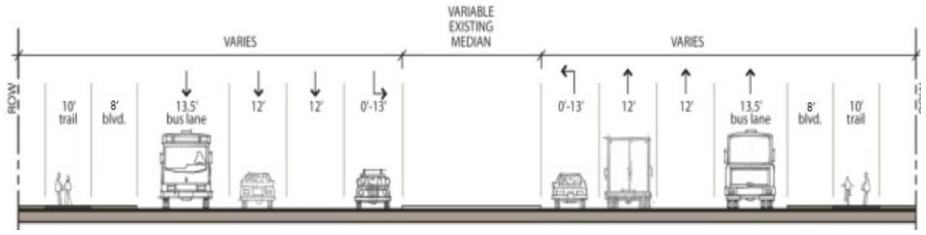
The 2010 Implementation Plan Update anticipates an initial ridership of 2,250 boardings per weekday for station-to-station BRT service. Express routes are expected to see a total increase of 1,500 boardings due to transitway improvements. In the past several years Dakota County has completed the final preparations needed to proceed with construction. In 2010, the County received a 'Finding of No Significant Impact' from the Environment Protection Agency on the proposed roadway and service improvements. Final design plans for construction were also completed in 2010, with the start of major construction beginning in spring of 2011.

Future anticipated steps in the development of the transitway include:

- 2011-2012: Construction of bus shoulder lanes from 138th St. to Dodd Road; construction of new stations at 140th St. and 147th St.

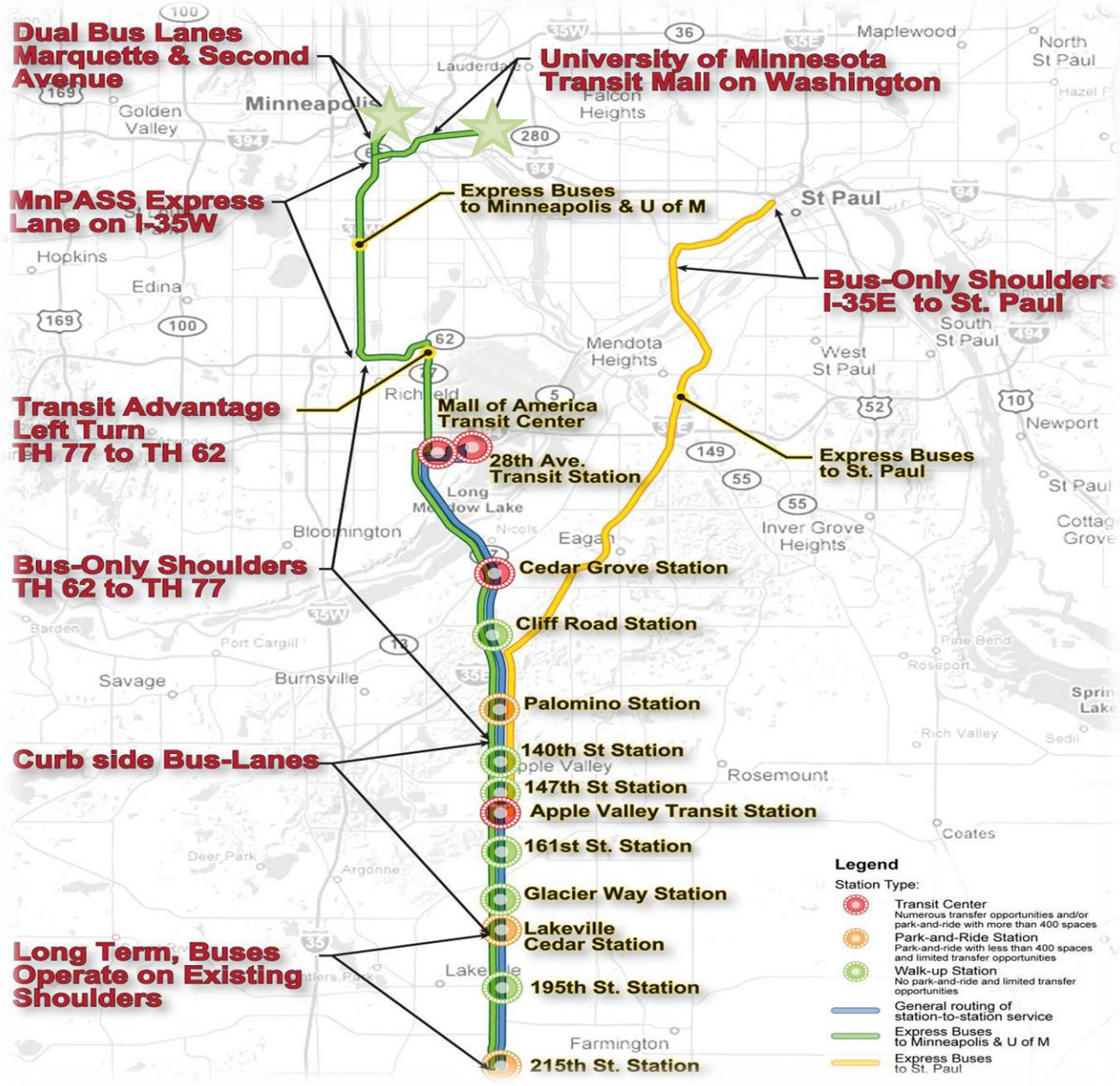
- Fall 2012: Introduction of station-to-station service between Mall of America/28th Avenue Park & Ride and Apple Valley Transit Station

- 2020-2030: Extension of station-to-station service to 215th St., as development and service demand warrants.



Cedar Avenue Transitway Ultimate Roadway Profile Figure 14

2030 Cedar Avenue Transitway Vision



Dakota County 2030 Transportation Plan – Figure 15

The 2011-2015 DCRRA CIP investment for development of the Cedar Avenue Transitway is $8.4 million per year. In the future, estimated annual CIP are expected to rise as the transitway nears completion. Estimated total investment for completion of the Cedar Avenue Transitway is $250 million with approximately $24 million County investment. The following are the estimated annual CIP investments for development of the Cedar Avenue Transitway:

Transportation CIP	RRA CIP
2011-2015 = $10.4 million	2011-2015 = $8.4 million
2016-2020 = $	2016-2020 = $12.5 million
2021-2030 = $	2021-2030 = $12.2 million

Interstate 35W Transitway (Bus Rapid Transit) - The Interstate 35W transitway extends from the Kenrick Park & Ride Facility in Lakeville north to downtown Minneapolis. Elements of the transitway, including new runningways and stations in both the shoulders and median of I-35W, are currently under construction or are completed and are intended to connect new and existing transit stations along I-35W with high frequency express and station-to-station service. This service is dependent upon station construction at Lake Street in Minneapolis and is anticipated to occur after 2015.

In Dakota County, station-to-station service will extend as far south as the Burnsville Transit Station; Express BRT service from the Kenrick Park & Ride with to the Lake Street Transit Station and downtown Minneapolis began in 2009.

Future steps in the development of the transitway include:

- After 2015: Start of station-to-station service between downtown Minneapolis and Burnsville Transit Station pending station development in Hennepin County.

Estimated investment for completion of the Interstate 35W Transitway is $93.3 million. It is anticipated that no County resources are required at this time.

Recent roadway improvements within the corridor included conversion of the High Occupancy Vehicle (HOV) lanes to High Occupancy Toll (HOT) lanes. The Urban Partnership Agreement, awarded to the Minnesota Department of Transportation and the Metropolitan Council in August 2007, converted existing HOV lanes to HOT lanes and extended those lanes in the northbound direction from Burnsville Parkway to downtown Minneapolis and in the southbound direction from 42nd Street to Burnsville Parkway. The entire stretch of those lanes was open and operational in October 2011.

Red Rock Transitway (Commuter Rail) -The Red Rock Transitway is identified as providing transit service on a dedicated right-of-way by the Metropolitan Council, with commuter rail designated as the long range service mode by both the Council and the Red Rock Corridor Commission. The proposed 30-mile route connects the City of Hastings through St. Paul (Union Depot) to downtown Minneapolis.

Mid-range plans consist of establishment of park & ride lots and express bus service within the transitway, as a means to establish consistent ridership; through its involvement in the Red Rock Corridor Commission, Dakota County is supportive of a park & ride in Hastings that is due

for completion in 2011. Station area planning for additional stations outside of the County is expected to be completed in 2011; commuter rail service is tentatively scheduled to begin in 2019.

The current DCRRA CIP investment for development of the Red Rock Transitway is $200,000. Total Red Rock Transitway needs are currently estimated at $115 million to $128 million. The timing and funding sources, including potential County funding share, are yet to be determined. Therefore, these needs will be identified in separate from overall County transportation system needs.

Robert Street Transitway - The Robert Street Transitway is designated as a major transit investment priority by the Dakota County Regional Railroad Authority, and is also identified by both CTIB and the Metropolitan Council as a priority for transitway investments. The area under study by the DCRRA is defined from downtown St. Paul south to Rosemount, and bounded on the west and east by Interstate 35E and the Mississippi River, respectively.

This north-south corridor is predominated by travel north into St. Paul, with maximum ADT in this corridor reaching 40,000 on Robert Street and 145,000 on U.S. 52. Dakota County's highest existing rates of transit usage occur in this study area within the cities of West St. Paul, South St. Paul, and Inver Grove Heights, where service frequency is generally higher than in other parts of the County.

A feasibility study was completed for the DCRRA in November 2008 that outlined existing transportation and demographic conditions in the local area. The study defined several potential investment options for different modes and alignments, with associated estimates for construction, operations, and performance. Near- and mid-term recommendations included steps to enhance and expand existing services and amenities, and conducting advanced planning work towards determining the most effective investment for the study area.

The DCRRA has dedicated $147,500 to jointly conduct an alternatives analysis with the Ramsey County Regional Railroad Authority that is compliant with the Federal Transit Administration's New Starts program; these funds were used as a match to a $1.18 million FTA grant awarded to the DCRRA in 2011. The alternative analysis is projected to be completed by late 2012/early 2013 with the determination of a locally preferred alternative that defines service mode, routing and operating characteristics. Later project development activities, including preliminary engineering and environmental assessment, can proceed following completion of the alternatives analysis. Future steps in the development of the transitway include:

- 2011-2013: Alternatives analysis and selection of locally preferred alternative
- 2013-2015: Environmental assessment and final design
- 2016-2018: Construction of transitway (dependent on mode)
- 2018-2019: Start of service (dependent on mode)

The current DCRRA CIP investment for development of the Robert Street Transitway is $1.6 million through 2015. Total Robert Street Transitway needs are currently estimated at $111 million to $1.1 billion. The timing and funding sources, including potential County funding share,

are yet to be determined. Therefore, these needs will be identified separate from overall County transportation system needs.

Dan Patch Commuter Rail – The Dan Patch Corridor is a proposed commuter rail line between downtown Minneapolis and Northfield, with intermediate stops in Dakota County. This line was identified by Mn/DOT as a candidate for commuter rail service in its 2000 Commuter Rail System Plan, with service planned to operate on existing track owned by Canadian Pacific. Further planning and design work for the Dan Patch Corridor was prohibited by the Minnesota Legislature in 2002.

The following ***strategies*** define actions Dakota County should pursue in the development of transitways within the County:

- **Provide Leadership in Transitway Planning and Development**
  Pursue planning and development of transitways in Dakota County as elements of the regional transitway system.

- **Effective Implementation**
  Construct transit facilities that provide a competitive time advantage on priority transitways.

- **Resource Allocation**
  Maximize county transit investment by focusing resources on priority transitways.

- **Regional and National Planning Implementation**
  Continue progress of Dakota County transitway projects through the defined stages of regional and national planning implementation programs

The following ***policy*** determines Dakota County's objectives in the development of transitways within the County:

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.

Fixed Route Transit and Paratransit Services

Transit service within Dakota County is generally categorized as regular route service or paratransit service. Regular route service includes those services that operate on a fixed route and schedule, and includes express service as well as flex service, which allows for some route deviation at a rider's request as a means to extend service coverage. Paratransit service provides specialized transportation to riders with needs that cannot be met with regular route service for reasons that often include accessibility or service parameters. These services are generally characterized by door-to-door trips that are pre-arranged through a reservation system. With the exception of contracted transportation services through its Community Service Division, Dakota County does not directly fund the operation of any transit service.

Transit Service Providers

Metro Transit - Fixed route service provider in Northern Dakota County, including Mendota Heights, Inver Grove Heights, West St. Paul, and South St. Paul. Metro Transit provides primarily local route service in this area, with several express routes in peak periods.

Minnesota Valley Transit Authority - Fixed route service provider for Burnsville, Eagan, Apple Valley, Rosemount and Lakeville. MVTA service consists of extensive express service, local routes, and specialized service including flex routing and reverse commute routes.

Northfield Transit - Dial-a-ride service operated by the city of Northfield for curb-to-curb trips within city limits. Trips are arranged through a reservation system.

Transit Link - Dial-a-ride service managed by the Metropolitan Council. Service is provided throughout Dakota County, with policies that emphasize providing access to existing fixed route service to complete trips whenever feasible.

Metro Mobility - Door-to-door paratransit service mandated by the Americans with Disabilities Act. Service eligibility is determined by physical or mental disability that prevents access to standard regular route service.

County-Contracted Transportation Services - Dakota County provides specialized transportation services through its Community Services Division. Trips are generally intended for important appointments related to the services that clients are receiving, such as doctor visits or job seeking, when no other mode of transportation is available. The

County contracts with the Community Action Council, and Neighbors, Inc. to operate the service; both agencies operate through the help of volunteer drivers.

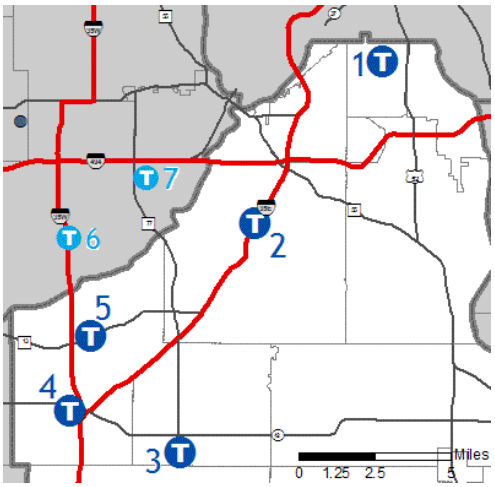


Figure 16

Transit Link Hubs for service in Dakota County:
1 – Signal Hills Transit Center
2 – Eagan Transit Center
3 – Apple Valley Transit Center
4 – Burnsville Shopping Center
5 – Burnsville Transit Center
6 – Bloomington South Transit Center
7 – Mall of America

The following ***strategies*** define Dakota County's objectives in advancing the availability and quality of transit service:

- **Collaborate With Transit Providers**
  Work with Metro Transit, Minnesota Valley Transit Authority, DARTS and other transit providers to improve strategies for transit.

- **Intermodal - Transfer Facilities**
  Participate in the development of intermodal transfer facilities; facilitate cooperation between transit providers and municipalities in identifying infrastructure considerations for maximizing the effectiveness of transfer facilities and other transit amenities.

- **Intermodal - Cooperation and Coordination**
  Participate with local agencies and transit advocacy groups in the study of possibilities for cooperation and coordination in community based transportation services.

- **Funding for Improved Services**
  Secure funding for improved service frequencies, service area coverage and infrastructure.

The following ***policies*** define Dakota County's objectives in advancing the availability and quality of transit service:

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.

Transit Facilities

Transit facilities establish a tangible presence of transit service in a community. Facilities include stop amenities, roadway improvements for improved operations, maintenance and storage facilities, and supporting infrastructure for bicycle and pedestrian access. While operation and maintenance of these facilities is typically a responsibility of service providers, Dakota County has an active role in cooperating with regional agencies and transit service providers in the planning, finance, and development of these facilities. The following facility types have been established in Dakota County or are currently in development:

Apple Valley Transit Station

Transit Centers - Transit centers serve as multiple focal points for transit services, enabling riders to access service or transfer between routes. These facilities provide climate controlled waiting areas, parking spaces, restrooms, and transit information.

Apple Valley Transit Station -The Apple Valley Transit Station opened in January 2010. This station features 750 surface and structured spaces, indoor climate-controlled waiting, restrooms and transit information. Buses pick up and drop off on Cedar Avenue, with riders crossing from the southbound drop off via the pedestrian overpass to get back to their cars.

Burnsville Transit Station - The Burnsville Transit Station has been operational since 1995. The station has 1,300 parking spaces in a parking structure. Amenities include a climate-controlled indoor waiting area, restrooms, public telephones, ATM and vending machines, and bicycle racks and lockers. The Burnsville Bikeway Project provides 3.9 miles of paved paths connecting the station to other Burnsville and Dakota County bicycle and pedestrian trails.

Eagan Transit Station - With an initial phase completed in 1999, and a second phase completed in 2003, the Eagan Transit Station has 750 parking spaces for MVTA riders. Amenities include a number of retail tenants on site, providing services such as dry cleaning and hairstyling, a climate-controlled waiting area, restroom, public telephones, vending machines, and bicycle racks and lockers.

Cedar Grove Transit Station - The Cedar Grove Transit Station was completed in 2010 as part of the Urban Partnership Agreement program, which aims to reduce congestion

on the I-35W transitway from downtown Minneapolis south to Dakota County. This station includes a 150 space open-air park & ride lot, climate controlled waiting area, bicycle lockers, and restrooms. The station currently serves a primary transfer point between local routes, but is planned to have increasing amounts of express service as the Cedar Avenue Transitway is developed. The properties surrounding this station are targeted by the City of Eagan for multi-use, transit oriented development in the near future.

Park & Ride Facilities - These facilities typically have limited facilities and are oriented towards express service commuters. These facilities can include lots constructed solely for transit use, jointly used with a business or institution, or leased to a service provider by a private owner. The Metropolitan Council has forecast a growing need for park & ride facilities within Dakota County over the next several decades.

Transit Station/Park & Ride	Location	Use	Capacity
Eagan Transit Station	3470 Pilot Knob Road, Eagan	380	679
Blackhawk Park & Ride	4565 Blackhawk Road, Eagan	330	367
Cedar Grove Transit Station	4035 Nicols Road, Eagan	25	120
Palomino Park & Ride	7510 Palomino Drive, Apple Valley	297	312
Rosemount Community Center	13855 Robert Trail, Rosemount	6	75
157TH St. Station	15450 Cedar Avenue, Apple Valley	33	258
Apple Valley Transit Station	15450 Cedar Avenue S., Apple Valley	750	768
Kenrick Avenue Park & Ride	16775 Kenrick Avenue South, Lakeville	271	750
Lakeville-Cedar Park & Ride	18040 Cedar Avenue South	18	191
Heart of the City Park & Ride	126th St. and Pillsbury Avenue, Burnsville	99	370
Burnsville Transit Station	100 E. Highway 13, Burnsville	1305	1376
West Saint Paul Sports Complex	1650 Oakdale, West St. Paul	60	100
Faith United Methodist Church	1530 Oakdale, West St. Paul	7	100
Hastings Park & Ride	*Expected opening in 2011*		
Inver Grove Heights Park & Ride	*Construction and opening TBD*		

Source: Metropolitan Council

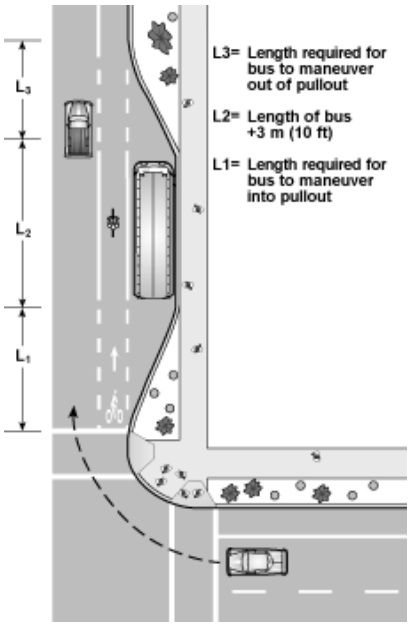
Table 8.

Metropolitan Council 2009 Park & Ride Demand Projections

Travel Corridor	2008 Utilization	2030 Demand	Funded Capacity	2030 Unmet Need
I-35W: South Metro	1,300	2,800	2,700	100
TH 77: South Metro	1,600	3,500	3,400	100
US 52/TH 55	1,000	2,100	1,700	400
I-35E: South Metro	400	900	600	300
Total	**4,300**	**9,300**	**8,400**	**900**

Table 9.

Transit Advantages – Transit Advantages is a term used by Mn/DOT and regional agencies to identify means of providing service efficiencies for transit on roads and highways in the Twin Cities Metropolitan area, including state and county highways within Dakota County. These advantages include strengthening road shoulders for bus use, providing park-and-ride lots and structures, and constructing high-occupancy vehicle lanes and ramp-meter bypasses. All of these facilities provide transit vehicles with time-saving opportunities over automobile travel and are used throughout the metropolitan area. Transit Advantages implementations include:



- Use of shoulder lanes for bus operations. Bus use of highway shoulders is intended to avoid

congestion in the mainline of traffic and, as such, is limited. Bus shoulder use is authorized by Minnesota Statute 169.306 which restricts use of shoulder lanes to when highway speeds drop below 35 mph, and speeds to a maximum of 35 mph, or 15 mph above highway speeds. Dakota County is involved in regional efforts to increase the amount of highway shoulders suitable for transit use.

- Use of high-occupancy vehicle lanes for bus operations. High occupancy vehicle lanes can improve travel times by allowing buses to avoid congestion. Dakota County currently has four lane-miles of HOV lane on I-35W. Future HOV lanes are planned to facilitate I-35W BRT operations using a center running shared bus and HOV lane.
- Ramp meter bypasses – Construction of ramp meter bypasses on 10 interchanges within Dakota County have allowed buses and high occupancy vehicles to skip ramp meter queues and reduce travel times. Currently, there are 10 freeway interchanges in Dakota County with ramp-meter bypasses (Table 3). According to Team Transit staff with the Minnesota Department of Transportation, there are no additional planned ramp meter bypasses in the region, including in Dakota County.

Ramp-Meter Bypasses

Travel Corridor	Location
I-35W	CSAH 32 (Cliff Road)
	TH 13
	CSAH 42
TH 77	TH 13
	CSAH 31 (Diffley Road)
	CSAH 32 (Cliff Road)
	Palomino Drive
I-35E	CSAH 32 (Cliff Road)
	CSAH 28 (Yankee Doodle Road)
	CSAH 26 (Lone Oak Road)

Maintenance and Storage - Maintenance and storage facilities for transit vehicles are a critical component of a large transit agency's capital program. These facilities provide security and shelter vehicles from the elements and can be a cost-effective means for agencies with large fleets of vehicles to ensure that their buses remain in good operating condition.

MVTA has two maintenance and storage facilities located in Eagan and Burnsville, and is currently in the design phase of a new maintenance facility to accommodate the additional vehicle required for service on the Cedar Avenue Transitway and other planned service expansions. DARTS has a maintenance facility in West St. Paul, where it provides maintenance on its vehicles and for specialized transit service providers on a contract basis. Metro Transit does not operate any maintenance and storage facilities within the County.

Transit Station/Stop Amenities – Facilities that provide safe and convenient access to transit service at established stops and stations are essential for maximizing ridership potential and meeting Dakota County's goal for expanding transit options. Dakota County is able to implement improvements along County highways that can improve access to transit services as well as the overall convenience of transit as a viable travel mode.

In the development and upkeep of both highways and transitways, Dakota County has the ability to include or expand facilities for pedestrians, bicycles, and automobiles to provide improved connections to all surrounding land uses from access points to transit service. Consideration to these improvements should extend out from existing facilities based on feasible maximum travel distances for a particular mode; federal policies consider pedestrian access improvements within one-half mile and bicycle access improvements within three miles of planned transitway facilities for funding through federal transit capital investment programs.

The following ***strategies*** define Dakota County's objectives in developing facilities for the use and operation of transit service:

- **Intermodal Transfer Facilities**
  Participate in the development of intermodal transfer facilities; facilitate cooperation between transit providers and municipalities in identifying infrastructure considerations for maximizing the effectiveness of transfer facilities and other transit amenities.

- **Maintenance and Storage Facilities**
  Cooperate with service providers within Dakota County to assess fleet maintenance needs and appropriate expansion of facilities; identify opportunities for shared maintenance and other efficiencies among service providers that can lower the costs of transit services.

- **Signage**
  Assist cities and service operators with the development and placement of signage to aid in intermodal access to transit services.

- **Pedestrian and Bicycle Access**
  Prioritize construction and maintenance of sidewalk and trails on both sides of County Roads within one-half mile of transit stations to maximize accessibility to service.

- **Shelters**
  Cooperate with cities and service operators to identify high volume stops where shelters may be effectively placed.

The following ***policies*** define Dakota County's objectives in developing facilities for the use and operation of transit service:

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.

Meeting Transit Needs of Transit Dependent Populations

The transit system should adequately serve the needs of the transit dependent population. The transit dependent population includes the elderly, low-income families, households without a vehicle, youths, and the physically/mentally challenged. The census defines the elderly population as 55 years of age and older, youths 18 years of age and under, and low-income individuals as those with incomes at or below 200 percent of poverty level. Ongoing weakness in the local and national economy along with generally rising oil prices may increase the number of transit dependent persons living in or traveling to Dakota County in the coming years.

Fixed-route transit services within Dakota County generally do not provide a level of service that is adequate for the needs of transit dependent persons, in terms of both geographic coverage and service frequency throughout the day. A number of the services described above aim to fill these gaps for residents who are in the greatest need for transit service, particularly for clients of Dakota County's Community Service Division.

The following ***strategies*** define actions Dakota County should pursue in improving services for transit dependent populations within the County:

- **Transportation**
  Link to and utilize available regional resources.

- **Stakeholders**
  Engage stakeholders that have representation of transit dependent populations to identify and facilitate needs for transit service and amenities.

- **Expand Service Parameters**
  Expand service parameters for qualified transportation dependent citizens through the County's Community Services Division.

The following ***policy*** supports efforts to meet the transportation needs of transit dependent populations within Dakota County:

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.

Regional Cooperation

Many efforts to develop transit service and infrastructure are best undertaken through a regional approach to match the scale of the issues faced and to employ the most appropriate solutions. Dakota County participates in regional efforts that consider and implement regional solutions to improve the responsiveness and efficiency of transit services.

Mobility Management and Transportation Service Coordination

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 affects access to employment, housing, government services, and medical facilities. As a result, providers of essential services geared towards elderly, low income, disabled 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 the most efficient manner possible.

Current County Commitment to Specialized Transportation

Dakota County is responsible for providing transportation to clients of its Community Services Division to necessary appointments when no other means of transportation is available to a client. Total transportation costs for the Division in 2009 totaled $1.03 million; included in this amount are staff reimbursements, contracted door-to-door transportation services, and bus pass purchases.

Mobility Management

While traditional fixed-route transit service will continue as the backbone of public transportation systems, demographic shifts, changing job markets, and suburban and exurban land use patterns require new approaches if transit is to remain a vital part of solving passenger transportation needs. These growing needs have prompted the County to explore internal and region-wide options for more efficient service delivery that is best geared towards existing needs. The adoption of mobility management techniques, market based service planning, and technological enhancements will become necessary to achieve a flexible system that can maximize existing resources.

Mobility management is an approach to service development and management 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 transit service providers to achieve connectivity for customers and efficiency for taxpayers through maximizing existing resources and programs; potential actions could include shared facilities, operations, and coordinated service policies. Finally, mobility management encompasses the design and management of the transportation infrastructure so the services developed can perform effectively and efficiently.

The scope of both transportation problems and their potential solutions may require mobility management efforts that extend beyond Dakota County and cooperation with other agencies for the most effective implementation. The Minnesota Department of Transportation and the Metropolitan Council play significant roles in funding for transit equipment. The Minnesota Department of Transportation recently completed the "Minnesota Coordination Action Plan: Towards a Coordination Framework for the Minneapolis/Saint Paul Metro Area", which identifies obstacles and potential remedies for increasing coordination in the region that apply directly to Dakota County.

Recommended actions include coordinating service provider policies to maximize geographic coverage and avoid duplicated services, and increasing awareness of both the availability of

existing services and how to utilize them. Dakota County is currently assessing existing practices and policies in its Community Services Division on the provision of client transportation to identify opportunities for improved internal processes and external coordination to lower overall transportation costs and provide more efficient transportation arrangements. Evolving needs for specialized transit service, due to changes in demographics, government programs, and individual service providers, will require continuous assessment of service design and policy. As both a consumer and coordinator of these services, Dakota County should participate in developing new policies, infrastructure investments, and operating arrangements consistent with mobility management principles to provide the most responsive demand management techniques, including reassessment of constraints based on geography, policy, or service provider.

The following ***strategies*** define actions Dakota County should pursue in support of implementing mobility management principles:

- **Identification of Transit Needs and Actions**
  Enlist County resources in identifying growing or unmet mobility needs; develop targeted plans to address needs with detailed actions and cost estimations.

- **Establish a Countywide Assessment Framework**
  Establish a countywide assessment framework to understand and adapt to evolving transportation needs for transit and specialized transportation services.

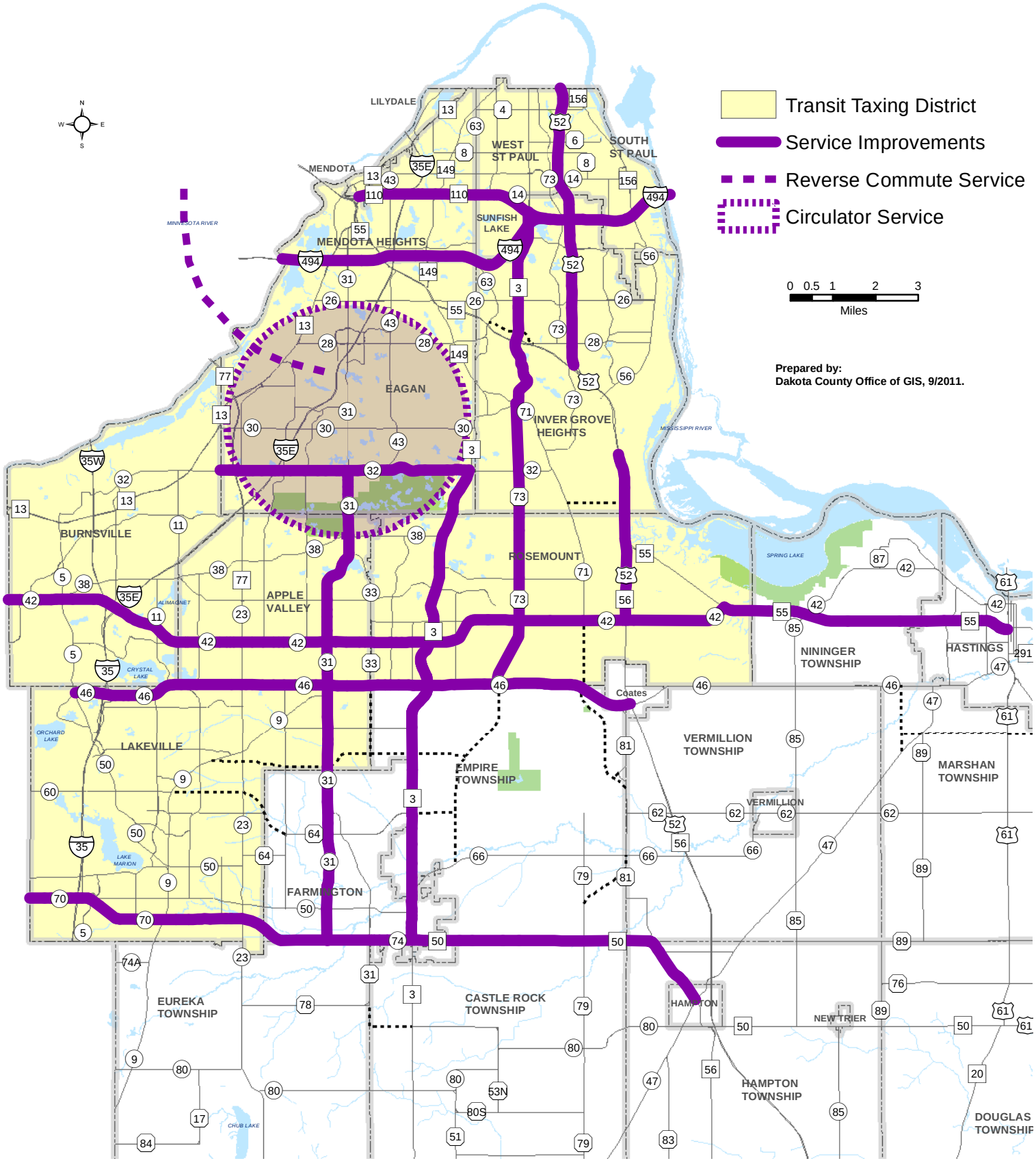
The following ***policy*** supports the development of a comprehensive transit service network through the use of mobility management principles:

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.

County-defined Transit Service Improvements

County-defined transit service improvements are shown in Figure 17. These service improvements address local needs not identified in regional plans. These improvements were identified during the development of the County's Transit Plan through analysis of regional travel trend data from the regional model and local government input. Implementation of these improvements is considered very long range and potentially would be undertaken by the local level of government. Implementation of these improvements requires a greater effort, with funding a definite question. In most cases these improvements address local needs.

County-defined Transit Service Improvements



Dakota County 2030 Transportation Plan - Figure 17

Technology Implementation

In many metropolitan areas, creative measures are in development between government units, citizens, and private businesses to offset the impacts of traffic congestion and maximize the capacity of existing transportation infrastructure. The use of technology to aid in operating efficiency and improve travel information for all transportation modes has proven effective in enhancing current resources and expanding travel options. Anticipated growth in travel demand in Dakota County and the Twin Cities metropolitan area coupled with little planned expansion in roadways will require the County to explore as many options as possible to extend existing resources and improve the efficiency of transit through technology and new cooperative efforts.

Advanced Public Transportation Systems

Advanced Public Transportation Systems (APTS) technologies describe a number of applications intended to improve the safety and efficiency of transit operations, or increase in the convenience of service to riders. Dakota County participates in regional efforts to integrate these technologies and develop standards for their use. The following are a number of the more common technologies currently in use.

Transit Signal Priority - Transit signal priority for transit vehicles entails the potential to alter traffic signal cycles to provide an early green or extend a green light to improve mobility for the transit vehicle. The change in cycle is prompted by the vehicle through an on-board transponder coordinating with the signal controller. . While providing improved travel times, implementation requires coordination with local government units to integrate with their traffic control systems and determine policies on use. This technology is planned for use along the Cedar Avenue Transitway south of 138th St. upon the completion of the bus shoulder lanes.

Traveler Information Systems - Traveler information systems consist of a range of communication techniques that can provide transit and traffic information at home, work, transit stations, or on board vehicles that can allow for travelers to make better trip decisions according to their needs. Travel information may include real-time schedule and congestion information delivered via internet, telephone, and variable message signs at transit stations or along roadways.

Real-time arrival data displayed at a transit station

Automatic Vehicle Location - Automatic vehicle location (AVL) systems provide a real time vehicle tracking to the transit operator using a number of available technologies. The intended benefits of AVL include tracking of schedule adherence, improved response capability to vehicle breakdowns and on-board emergencies.

Data generated from AVL systems can be used to enable other dynamic information systems and data collection systems, including real-time bus arrival information, on-board stop announcements, and automatic passenger counting devices.

Driver Assist Technologies - Driver assist technologies include a number of applications that aid drivers in operating buses safely and maintaining schedule adherence. The Minnesota Valley Transit Authority is beginning implementation of digital lane mapping and collision sensing and avoidance, with lane markings and vehicles and other objects projected onto a head-up display for operators. This technology is intended to aid drivers in operating buses safely on narrow bus shoulder lanes and in congested traffic conditions.

Electronic Fare Systems - Simple and fast fare transactions can improve the convenience of using transit, as well as operating efficiency, by eliminating the need for currency and speeding boarding times. All regional transit providers are now enabled to accept multiple types of fare media including magnetic strip cards and electronic stored value cards; ongoing efforts are encouraging greater numbers of riders to switch to electronic fare media increase benefits to both riders and service operators.

The following ***strategies*** define actions Dakota County should pursue to improve the effectiveness of transit service through implementation of technology and regional travel demand management efforts:

- **New Transit Technologies**
  Cooperate with transit providers on implementing technologies that improve the efficiency and effectiveness of transit service and facilities.

- **Improve Service Quality Through Technology**
  Implement technology to significantly improve service quality in terms of service speeds, reliability and safety.

The following ***policy*** defines Dakota County commitment to the use of technological applications in transit:

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.

Travel Demand Management

Increased construction costs and tightening budgets have forced local and regional governments to reassess expansion plans for transportation networks and focus more on managing demand volumes using existing infrastructure and resources. Within the Twin Cities metropolitan region, the Metropolitan Council has signaled a shift from expansion to management of existing transportation capacity through its 2030 Transportation Policy Plan. Policies to aid in managing travel demand and roadway capacity include Travel Demand Management (TDM) practices. The goal of TDM is to provide incentives that reduce the amount of congestion on roadways during peak travel periods through multiple cost effective methods including demand shifting, higher vehicle occupancies, and improved traffic information. Ultimately, use of TDM practices should keep peak traffic volumes under roadway design capacities, allowing local and state governments to defer costly expansion projects.

Locally feasible TDM practices include the following:

- Staggering work hours
- Telework centers
- Employer incentives programs for transit, carpooling, and telecommuting
- Formation of a transportation management organization (TMO)
- Intelligent Transportation Systems (ITS) implementations

TDM activities are often planned and executed through a transportation management organization (TMO), which is a collective effort of the public and private sectors to identify common transportation concerns and collectively address them. TMOs currently organized within the Twin Cities are typically funded through federal Congestion Mitigation Air Quality (CMAQ) funds, which are designated for programs aiming to relieve congestion and improve air quality on a local level; receiving CMAQ funds entails a mandatory 20 percent match from recipients. TMOs currently in operation typically develop programs to increase use of carpooling and transit, shift travel demand away from peak periods, and aid in communicating travel conditions to the public.

Several TDM projects are currently in implementation throughout the Twin Cities area, including on the I-35W transitway between Burnsville and downtown Minneapolis funded by an Urban Partnership Agreement grant. Improvements include two new park and ride stations, conversion of shoulder and HOV lanes into dynamically priced high occupancy toll lanes, dynamic signage for lane management and traffic information, and cooperative telework programs with programs with local employers.

The following ***strategies*** define Dakota County's approach to develop travel demand management techniques on a local and regional level:

- **Travel Demand Management**
  Identify opportunities to implement travel demand management measures through County led initiatives or through participation in a transportation management organization.

- **Cooperative Programs to Address Peak Demand**
  Develop cooperative programs between Dakota County, transit service providers, regional agencies and employers to offset travel demand and traffic congestion during peak hours.

The following ***policy*** supports Dakota County's participation in efforts to improve the effectiveness of transit service through implementation of technology and regional travel demand management efforts:

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.

Integration of Land Use with Transit Services and Facilities

The integration of land use with transit and other non-automobile modes of transportation allows for orderly growth and development that can expand residents' capability to substitute automobile trips with non-automobile modes. Recognizing the relationships between land use and multiple transportation modes can provide support for decision making on development that enhances the lives of County residents. Decisions made with consideration to transit service, for instance, can boost the effectiveness of the limited resources of transit service providers by placing a greater range and intensity of land uses where service and facilities already exist. Further, land use decisions that allow for integration of multiple transportation modes can aid in maximizing the capacity and design life of existing infrastructure. Through inclusive planning with developers, communities, and transit agencies, well-balanced and appealing transit supportive neighborhoods and corridors are achievable.

Key to accommodating use of non-automobile modes is design considerations into residential developments. Consideration of minimum density standards should be made to enable improved access to transit to the largest number of residents possible, and to increase the effectiveness of limited operating resources. Development plans should also include pedestrian/bicycle pathways that are maintained year round, are illuminated at night and are highly visible to ensure safe use.

In the case of commercial, office, and government projects, communities may require developments to support existing and future transit service by:

- Ensuring that all roadway geometrics, such as turning radii, pavement depths and road widths accommodate the range of transit vehicles in operating service.
- Locating transit stops/shelters or waiting areas near facility entrances that shelter transit users from heat, cold, and precipitation.
- Providing passenger amenities such as lighting, benches, bicycle facilities, and attractive landscaping that buffer pedestrians from fast moving traffic.
- Linking developments from 'door to door' with pedestrian/bikeway pathways
- Requiring automobile parking to be located in the rear or side of lots

A broad purpose of improvements to transit service and its relation to land use is establishment of a more sustainable transportation system for residents and workers is Dakota County. Increased usage of transit can reduce per capita vehicle emissions by reducing the number of vehicle is operation and reducing traffic congestion. Facility design of completed and planned facilities within the area has successfully incorporated sustainable design elements that reduce energy usage and lessen impact on air and water quality. The Minnesota Valley Transit Authority employs sustainable building practices into its facility designs; recent implementations include solar panels on the Burnsville Transit Station which provide up to 30% of the station's needs, use of recycled materials, geothermal heating, and native plants at the Cedar Grove Transit Center, and a passive heating system at the Apple Valley Transit Station.

Transit Oriented Development

TOD allows for a wider range of potential trips using non-automobile travel modes

Transit oriented development (TOD) describes compact, walkable development patterns that stress accessibility through transit service and other non-automobile modes of travel. TODs typically employ a wide and integrated mix of uses including housing, schools, offices, public services, shopping, and other commercial activities. The intended function of TOD is to provide safe, efficient, and convenient access between housing and everyday destinations via transit, walking, or bicycling. Dakota County and other local jurisdictions are able to influence land-use decisions through both specialized planning efforts and modification of routine planning processes. Dakota County staff is available to provide guidance to cities in applying TOD to specific contexts and needs including:

- Parking codes – Municipalities may allow for more flexible regulations that allow for shared parking between uses and maximum parking requirements. This in turn reduces the overall footprint of parking lots, and will have a positive effect on accessibility
- Multimodal infrastructure planning - Transit service is uniquely tied to pedestrian comfort and condition of pedestrian facilities. Dakota County and its cities can ensure prioritization of pedestrian facilities like sidewalks, pathways, street furniture and lighting nearer to transit services. In addition, planning and funding organizations can ensure multimodal facilities and services are co-located.
- Development review - Local development review processes of both municipalities and the County are the most effective point at which to consider transit supportive design and accommodations. Typically, a transit-oriented development 'checklist' is created to support review processes to ensure transit supportive criteria (e.g. density, road design, and access) are being met.
- Managed growth boundaries – Cooperative determination on limits to transit service areas can provide a level of certainty to communities and developers on transit service levels. This practice can benefit both developers considering TOD elements in their plans, as well as service providers in their allocation of scarce operating resources.

Current TOD Efforts in Dakota County

Corridors of Opportunity

The Corridors of Opportunity Initiative is a three-year regional effort lead by the Metropolitan Council to develop healthier and more sustainable communities, primarily through leveraging the expanding transitway system in the Twin Cities region. A component of the project is an evaluation of prospective opportunities and barriers for transit oriented development along the Cedar Avenue Transitway. Dakota County staff will work jointly with cities in the transitway and other stakeholder agencies to develop processes for leveraging BRT service and facilities into a

catalyst for transit oriented development with an emphasis on addressing infrastructure needs, regulatory hurdles, and concerns of developers and lenders. An important objective is addressing the differences between BRT and LRT as a development catalyst, and to form methods that are applicable to other BRT corridors under development.

Municipal Coordination on Transitway Projects

Dakota County can assist and positively affect land use planning and development efforts of its cities that are concurrent with major transitway investments. The County can assist through service on project committees, direct consultation, and coordinated construction that would aid the objectives of both the cities and the County. Current cooperative efforts are being conducted with the Cities of Apple Valley, Hastings, and West St. Paul.

Complete Streets

Complete Streets is an approach to roadway design that addresses accessibility and safety of all transportation modes as a fundamental consideration. Complete Streets has become broadly adopted by state and local governments in recent years, although no uniform guidelines or documentation exists for implementation. In practice, Complete Streets emphasizes safety and convenience of non-motorized transportation modes in the presence of motorized modes, with special consideration to appropriate modal segregation, intersection design, and integration with surrounding land uses. Use of Complete Streets concepts can substantially improve transitway and transit facility projects by improving the safety and accessibility to and from transit services. Transit service will also benefit through improved safety consideration to its specific operational needs.

The following ***strategies*** define actions Dakota County should pursue in integrating land use decisions with planned and existing transit services and infrastructure:

- **Transit - Provider/City Connection**
  Facilitate improved communication between service providers and municipalities on current and future service needs, and opportunities for transit oriented development.

- **Coordination with County Municipalities and Townships**
  Encourage coordination with cities, transit agencies, and the County on plan review processes that have potential to positively impact transit service by improving accessibility to services and facilitating improvements in transit operations.

- **Coordination with Local Transit Service Providers**
  Facilitate coordination of public and private entities with local transit service providers to establish near and long term expectations on service levels and maximize existing resources dedicated to transit service.

- **Sustainable Practices**
  Identify improvements to transit facilities and operations that lower net energy consumption and waste production for service providers.

- **Transitway Development Cooperative Programs**
  Develop cooperative programs with cities, transit providers and business communities to increase development along transitways.

The following ***policy*** supports integration of land use decisions with planned and existing transit services and infrastructure:

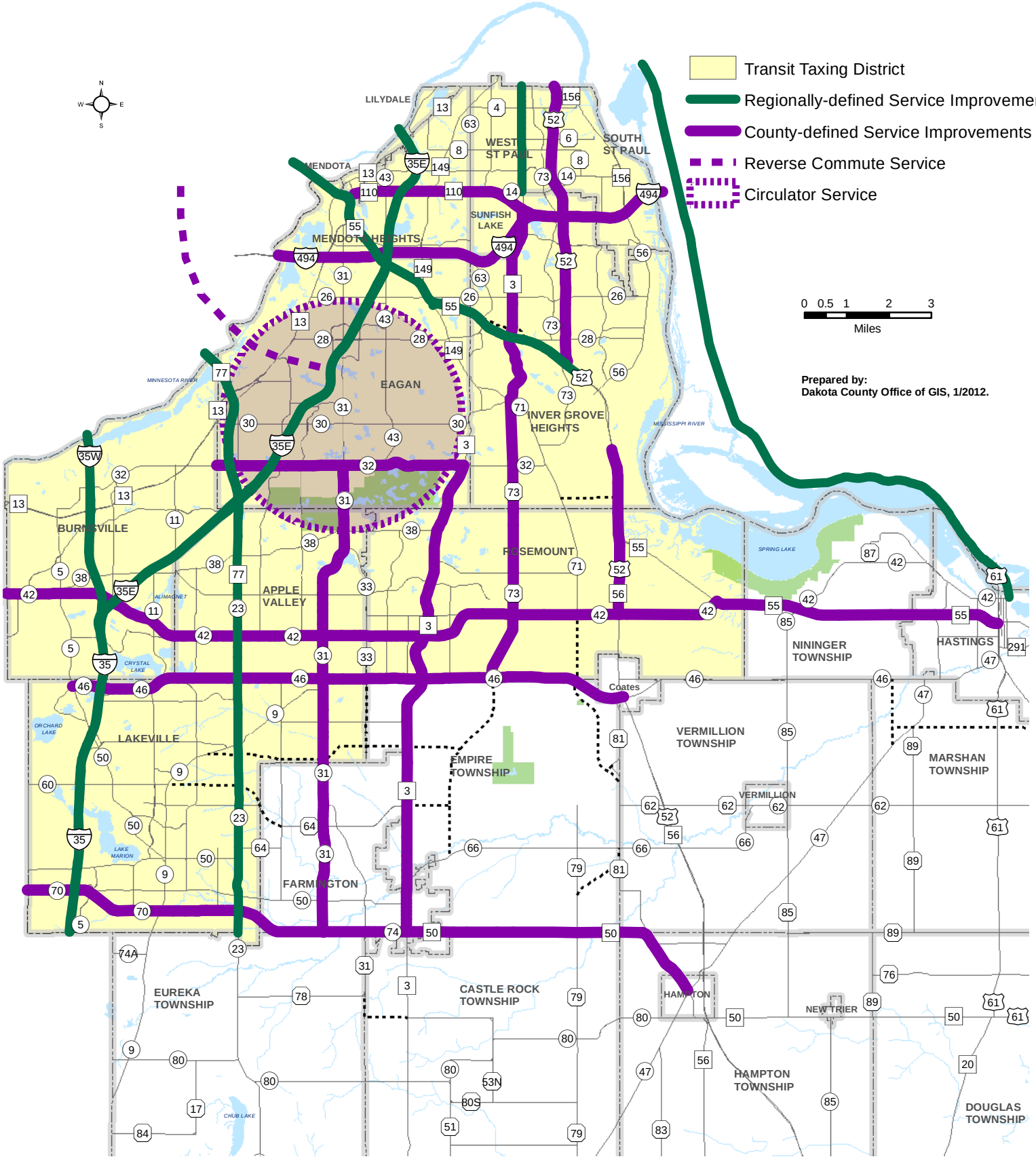
T.14 Link Land Use, Economic Development, Transit, and Transportation Decisions
Dakota County will coordinate with local communities and agencies to promote land use and economic development that support transit services and are compatible with community and regional planning goals.

Transit Summary

The 2030 Transportation Plan declares and supports transit activities as responsible actions to meet the growing mobility needs of current and future residents, business, employees and visitors. This document provides guidance to policy makers and to county and city planners, who have an active role in shaping Dakota County's future transportation system.
The purpose of Goal 2's Transit section is to establish a long-term vision for transit services and facilities in Dakota County and ensure there is measurable progress to achieving the vision through strategies, policies and near-, intermediate- and long-term actions that support mass transit as a viable transportation mode.

The County will continue to collaborate with its partners and citizens to conduct inclusive and comprehensive transit planning activities. The Dakota County Transportation Plan identifies transit related activities that will guide the County in its planning, public and private partnerships, and implementation to address transit issues in the future and to ensure that the County's vision and goals for transit are achieved.

Regional and County-defined Transit Service Improvements



Dakota County 2030 Transportation Plan - Figure 18

Transit Funding

The DCRRA dedicates $1.6 million towards the planning and development of transitways within the County for the future implementation of transitways, and to leverage federal and regional funds for transitway implementation. Dakota County Commissioners and staff actively participate on a regional level with service providers, municipalities, and other agencies on long range planning to provide direction on regional initiatives, and coordinate with service providers, riders, community organizations, and private interests on identifying and adapting to changing needs for transit service.

TOTAL Average Annual Integration Investment Needs

	Future Needs (in $millions)		
Activity	2011-2015	2016-2020	2021-2030
Cedar Ave Implementation	$ 8.40	$ 12.50	$ 12.20
Robert Street Corridor	$ 1.60	*	*
Red Rock Corridor	$ 0.03	**	**
DCRAA	$ 1.00		
	$ 11.03	$ 12.50	$ 12.20

* Total Robert Street Corridor needs are currently estimated between $111M to $1.1 B.
** Total Red Rock Corridor needs are currently estimated between $115 M to $128 M.

Figures are based on 2011 CTIB Annual Fiscal Review and Capacity Estimates

Timing and funding sources, including potential County funding share for Robert Street and Red Rock Corridors are yet to be determined. These needs therefore will be identified separate from overall County transportation system needs.

Currently, approximately $11 million per year is invested towards the integration of transit projects. Activities include study and implementation of transit corridors and transitways. Funding assumption partnership splits are as follows:

	Cedar Ave Implementation	All Other Transit Projects
Federal	30%	50%
State	30%	10%
CTIB	30%	30%
Local	10%	10%

Integrating Pedestrian and Bicycling Modes

The County will integrate pedestrian and bicycling modes to provide for safe, timely, and efficient connections between communities, activity generators and employment centers.

Importance

Walking and bicycling are forms of transportation when time and distance are compatible. Transit riders and drivers also begin and end their trips as pedestrians. The modes produce almost no pollution, require minimal infrastructure compared to other modes, are exceedingly affordable and benefit the walker or bicyclist with physical activity.

Dakota County's transportation system functions so well that driving even a short distance is often more attractive than walking or biking. The county's roads usually have enough capacity to allow faster speeds, making auto travel easy but making pedestrian or bicycle travel across or along these roads less attractive.

The key then is to lay the groundwork for improving bicycling and pedestrian networks and environments in the county, in close coordination with all other modes of travel.

Importance of Pedestrian and Bicycle Transportation

Separated bike and pedestrian facilities are an important element of a safe and efficient transportation system to serve all modes and users, particularly along the County's high-volume, high-speed facilities. Residents use these facilities for transportation and recreation. The basic needs for providing and improving these facilities are to provide continuous facilities and user safety. Bicycling and pedestrian transportation planning is increasingly important in the county for the following reasons:

Sustainability

Walking, biking and rolling (wheelchairs, scooters, strollers, etc.) are the most environmentally sustainable personal transportation modes. The federal Energy Information Administration estimates 2/3 of petroleum in the nation is used for transportation — non-motorized transportation modes use zero petroleum directly.

Demographic Shift

The average age of county residents is increasing. The number of people 65 and older is expected to more than triple between 2000 (26,250) and 2030 (86,000). Planning for trails, sidewalks and transit provides seniors with an alternative to driving a vehicle. A robust non-motorized transportation network can keep seniors connected to the rest of society. The County's Living Longer and Stronger initiative revealed mobility via multiple modes is a priority for seniors.

Active Living

The percentage of American adults who are obese nearly doubled between 1990 and 2010. Providing transportation options that also provide physical activity assist in addressing this concern. Therefore, supportive infrastructure and an enticing environment for pedestrians and bicyclists should be considered.

In 2006 Dakota County began partnering with its cities to address physical inactivity and its relationship to the transportation system. Efforts to date have included:

- Gap analysis, referenced in this chapter
- Pedestrian demand analysis
- Wayfinding on Cedar Avenue Transitway
- Wayfinding on Mississippi River Trail
- Wayfinding in the cities of Lakeville, Hastings, Eagan, Inver Grove Heights, Rosemount
- Bicycle and pedestrian master plans in West St. Paul, Apple Valley and Rosemount
- Commercial connections study in Eagan
- Greenway master planning
- Greenway Guidebook development
- Training for city and County staff
- Workshops with national experts
- Complete Streets education
- Public engagement

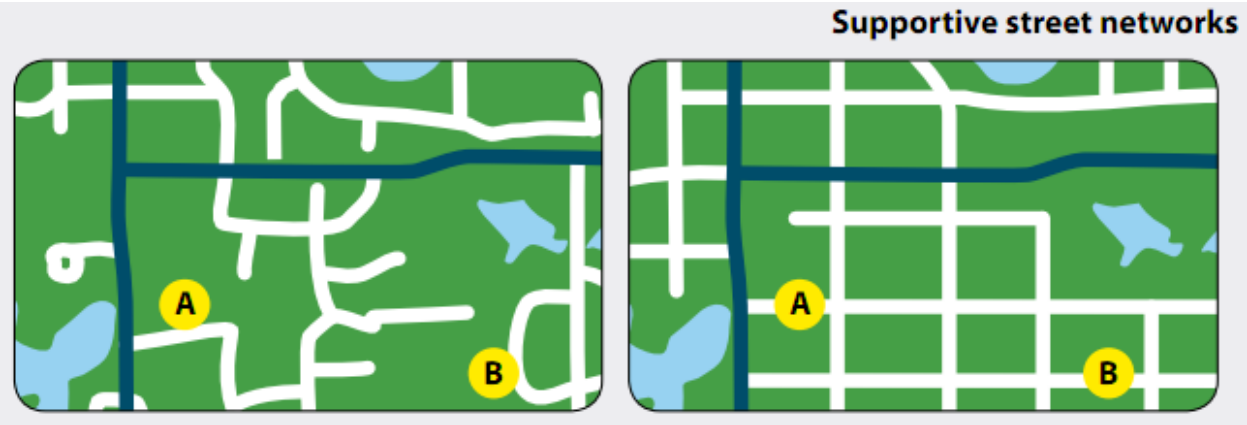
Social Justice

A non-motorized network and transit opportunities provides mobility for those who otherwise would have to rely on another person's private vehicle. These circumstances include age (too young or too old), financial ability to own a private vehicle, health conditions and personal choice.

Quality of Life

The Park System Plan survey of 2006 found that many respondents wanted more paved trail connections between parks and neighborhoods. A connected non-motorized transportation system provides recreation opportunities that improve quality of life and they provide transportation options that improve quality of life.

County Role in Pedestrian and Bicycle Travel



Pedestrian and bicyclists share destinations with motorists. Many of these destinations are on the County highway system, particularly commercial areas, schools, employment centers and regional parks. The County highway system is in many cases the most direct option for pedestrians and bicyclists; in some cases it is the only option. Most suburbanized areas of Dakota County lack a connected road network that would allow pedestrians and bicyclists to travel off the County system. This makes the County highway system the only choice.

Pedestrians and bicyclists also interact with vehicle traffic on County highways when crossing these corridors. Motorists, pedestrians, bicyclists and transit users all require safe crossings with as little delay as possible.

Crossing Highways

County highways are usually higher speed roads that provide for a balance between mobility and access. The function of mobility can conflict with pedestrian and bicyclist needs to cross these roads. Perceived and real safety discourages crossing of highways or traveling along them. Considerations to address these concerns include:

- Grade-separated crossings (bridges or tunnels). Traffic volumes forecast in this plan indicate more grade-separated crossing will be needed. These strategies should be evaluated as part of pedestrian and bicycle network needs when considering roadway improvement projects. Due to their expense, these measures should be used at targeted locations on the County system, such as on high-volume roads, at intersections with greenways and in areas of high pedestrian demand.
- Existing grade separations such as those for roads and waterway crossings should be considered and evaluated for pedestrian and bicycle networks, including the regional greenway system.

Moving Along Highways

Bicyclists and pedestrians use different facilities based on ability and type of movement. Type A riders travel over 15 mph and should operate in travel lanes and shoulders to improve safety for all users. Type B riders have less experience and generally are recreational riders who operate safely on roadside trails. Type C riders are children, who are safest on the trail network. Pedestrians require well-maintained multiuse trails and safe road crossings.

Potential system improvements to meet the needs of all bicycle riders, pedestrians, wheelchair users and motorists include:

Trail system improvements

- Inclusion of trail traffic in intersection design, especially sightline considerations
- Alignment of curb ramps to eliminate “jogs” at intersections and keep trail traffic parallel to travel lanes.
- Designing of curb ramps to be smoother and safer for trail users
- Inclusion of wayfinding where auto-oriented signage is insufficient (e.g., to indicate preferred routes and trail gaps)
- Facilitate and encourage trail connections from County trails to adjacent buildings and destinations, including through the plat review process.

Road system improvements

- Use of bicycle lanes to guide road users at intersections with right-turn lanes
- Inclusion of shoulders
- Signage and education such as “Share the Road”

Pedestrian Travel

To better develop opportunities for county residents to walk and bike for transportation and recreation, the County will need to work closely with local communities to improve conditions. The following should be considered when addressing pedestrian travel needs.

- Destinations — such as parks, schools, activity centers and trails.
- Networks — connections free of barriers such as railroads, busy roads, water bodies, hills, and isolated areas.
- Density — non-motorized transportation becomes more efficient and convenient in mixed-use areas.
- Safety — consider safety in infrastructure decisions.
- Security — consider security in infrastructure decisions.

Countywide Greenway System

The County has begun assembling corridors to establish its 200-mile system of regional greenways. These greenways are identified away from roadways, but in some cases they will share right of way with roads and in all cases they will cross County highways.

The greenway system as planned will require grade-separated crossings of County highways, often coinciding with waterway crossings. The road network should account

This high-quality non-motorized transportation system will supplement the current roadside trail network and in many places be preferred transportation corridors for bicyclists, pedestrians and wheelchair users. In addition to non-motorized transportation, the system will enhance recreation, water quality and habitat.

Complete Streets and Context-Sensitive Design

Mn/DOT is developing a complete streets policy that will impact the CSAH system Dakota County will follow this and associated policies. The County also will safely accommodate transportation system users regardless of what mode they have chosen.

Facilities will vary based on anticipated and observed demand, safety concerns, context and constraints. At the broadest level, context can be broken into three levels in Dakota County: urban (higher intensity, grid street network, commerce), suburban (within the MUSA but outside urban) and rural (outside the MUSA).

- Urban contexts — consider areas of high pedestrian and bicycle traffic demand when identifying future needs, including off-road trails, shoulders and bike lanes. In some cases it may be appropriate to separate bicycle and pedestrian facilities. Urban contexts include such places as transit-oriented development, commercial districts, schools, high-density residential, mixed use areas, greenway corridors and high employment districts.
- Suburban contexts — consider shared trail use needs and connections to greenways, parks, schools and activity centers. Suburban contexts include such places as areas of single-family housing within the MUSA.
- Rural contexts — consider paved shoulders to serve bicyclists. Rural areas include those outside the MUSA.

Network Connectivity

Dakota County has built more than 350 miles of multiuse trails within its right of way in the past 30 years. In that time, County policy evolved from building a trail on one side of highways to building a trail on both sides. Despite completing much of the system, critical gaps remain on the system. As part of the Active Living initiative described above, Dakota County and its partner cities identified these gaps, illustrated in Figure 18. Pedestrian demand was based on:

- Population density
- Employment density
- Presence of schools
- Presence of shopping
- Presence of poverty
- Traffic counts
- Posted highway speeds
- Number of travel lanes
- System connectivity
- Presence of transit

Issue:
A key challenge is to deliver an integrated transportation system of bikeways, regional trails and pedestrian facilities.

Addressing the Issues

The following is a potential action and revision to the Transportation Plan to address this issue:

A Transportation System to include Bicycles and Pedestrians
Evaluate and develop the groundwork for improving pedestrian and bicycling networks within the transportation system, especially within transit or dense land use corridors, to provide safe, timely, convenient and efficient connections.

General Strategies and Policies

The following ***strategies*** support integrating pedestrian and bicycling modes:

- **Provide for Continuity, Barrier Removal and Safety for All Users**
  Provide for continuous facilities, remove physical barriers and provide safe facilities for users of all modes

- **Create a countywide greenway system to support non-motorized transportation modes.**
  - Create an off-road trail hierarchy with attractive spine routes that function similarly to the highway system's arterials. The greenways vision identifies regional greenways that could serve this purpose.
  - Collocate greenway system and green infrastructure intersections with roadways to take advantage of existing grade separations where possible. Consider new separations where green infrastructure and pedestrian benefits justify them.
  - Support the Greenway Collaborative with a Greenway CIP to plan and fund the system.

- Connect city and County parks, new pedestrian-oriented development, schools, and existing pedestrian-scale areas (downtowns) with the greenway system.
- Use publicly owned land for greenways whenever possible.

- **Improve the pedestrian network in and near County right-of-way to enhance function and safety of the system.**
  - Prioritize barriers and gaps to overcome with preference for areas of high pedestrian activity that are dissected by high-traffic roads, railroads, missing trail segments or water features. The pedestrian demand analysis should inform this prioritization. Tools to address barriers may include bridges, tunnels and route realignment.
  - Evaluate in coordination with cities which County roads in urban areas lack pedestrian infrastructure and are not scheduled for expansion or reconstruction in a satisfactory timeframe to accommodate pedestrians and consider projects independently of road projects.
  - Evaluate conditions at County roadways and potential pedestrian centers, such as schools, senior-related land uses, transit stations, and County facilities.
  - Encourage local governments to install sidewalks on both sides of roadways or include other improvements as appropriate to provide supportive trail networks where pedestrian activity is expected or present.
  - Consider off-roadway trails on rural County roadways if the route would link portions of the countywide greenway system.
  - Prepare with the Greenways Collaborative a system plan and integrate the system in future County projects (e.g., when constructing a highway, grade the area of a potential greenway crossing to accommodate a grade separation)
  - In new construction and remodeling that changes County building footprints, link the facility into existing and future pedestrian and bicycle networks on all sides. Construct trails or sidewalks that follow expected pedestrian patterns.

- **Ensure adequate resources are planned for and allocated to trail maintenance.**
  - Resurface trails as needed consistent with trail maintenance agreements, and consider trail maintenance needs through the County's 5-Year Capital Improvement Program (CIP) process.
  - Explore use of the County's roadway pavement management system for trails.
  - Encourage cities to uphold maintenance agreements on roadside trails and keep them usable year-round.

- **Ensure safety of pedestrian facilities based on context.**
  - Follow Americans with Disabilities Act requirements and guidelines to make facilities accessible to all users.
  - Create or designate a pedestrian and bicycle transportation staff position in the County to participate in multidisciplinary transportation work teams and advance non-motorized transportation.
  - Investigate installation of signage for pedestrians and bicyclists.

- **Bicycle and Trail Facilities**

  Create bicycle and regional trails that form a framework to serve countywide needs (e.g. access to major County facilities, activity centers, employment centers and schools), and provide connections between municipalities and to adjacent counties

- **Bicycle and Trail Facilities in CIP**
  Consider inclusion of bicycle and trail facilities as part of Transportation CIP projects.

The following ***policies*** support integrating pedestrian and bicycling modes:

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 serve 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.

Bike trails in Dakota County are shown in Figure 19. Figure 20 illustrates gaps in the trail system. This map depicts gaps in the trail and sidewalk system by estimated pedestrian infrastructure demand. Pedestrian infrastructure demand was estimated from a combination of factors including residential density, employment density, shopping locations, schools, poverty, motor vehicle traffic volumes, posted speed limit, number of travel lanes, system connectivity and transit service. Segment gaps were assigned a high, medium or low demand value with an adjusted natural breaks method. Where gaps existed on both sides of a road, gaps were given a greater value. Areas outside the 2030 Metropolitan Urban Services Area were not evaluated.

Bicycle and Pedestrian Funding

Currently, no CIP investments for integrating pedestrian and bicycling modes are identified per this goal. However, investments for bicycle trails and facilities are identified within the Preservation Goal, the Transportation CIP and Parks CIP.

Preservation Goal
The current CIP investment for preservation of bicycle trails and facilities and transit facilities is $0.1 million per year. In the future, estimated annual CIP needs are expected to rise as recent installation of system elements begin to age. The following are the estimated annual CIP investments for preservation of bicycle trails and facilities and transit facilities projects over the plan period including estimated investments for County Roads.

- 2011-2015 = $0.2 ($0.1 for County Roads)
- 2016-2020 = $0.3 ($0.1 for County Roads)
- 2021-2030 = $0.4 ($0.2 for County Roads)
  (These investments are included in the Preservation Goal investment needs total.)

Transportation CIP

In addition, bicycle trails and facilities are often considered and implemented along County highways when a highway project is implemented. If a bicycle trail or facility is included with a highway project the trail or facility investment is added within the total highway project investment. If a bicycle trail or facility is not included with a highway project it is shown as a separate project within the CIP. For example, the 2011-2015 Transportation CIP identifies a bicycle/pedestrian trail construction project (not related to a highway construction project) in Randolph in 2011 for $300,000 and categorized under the Improvement and Expansion Goal.

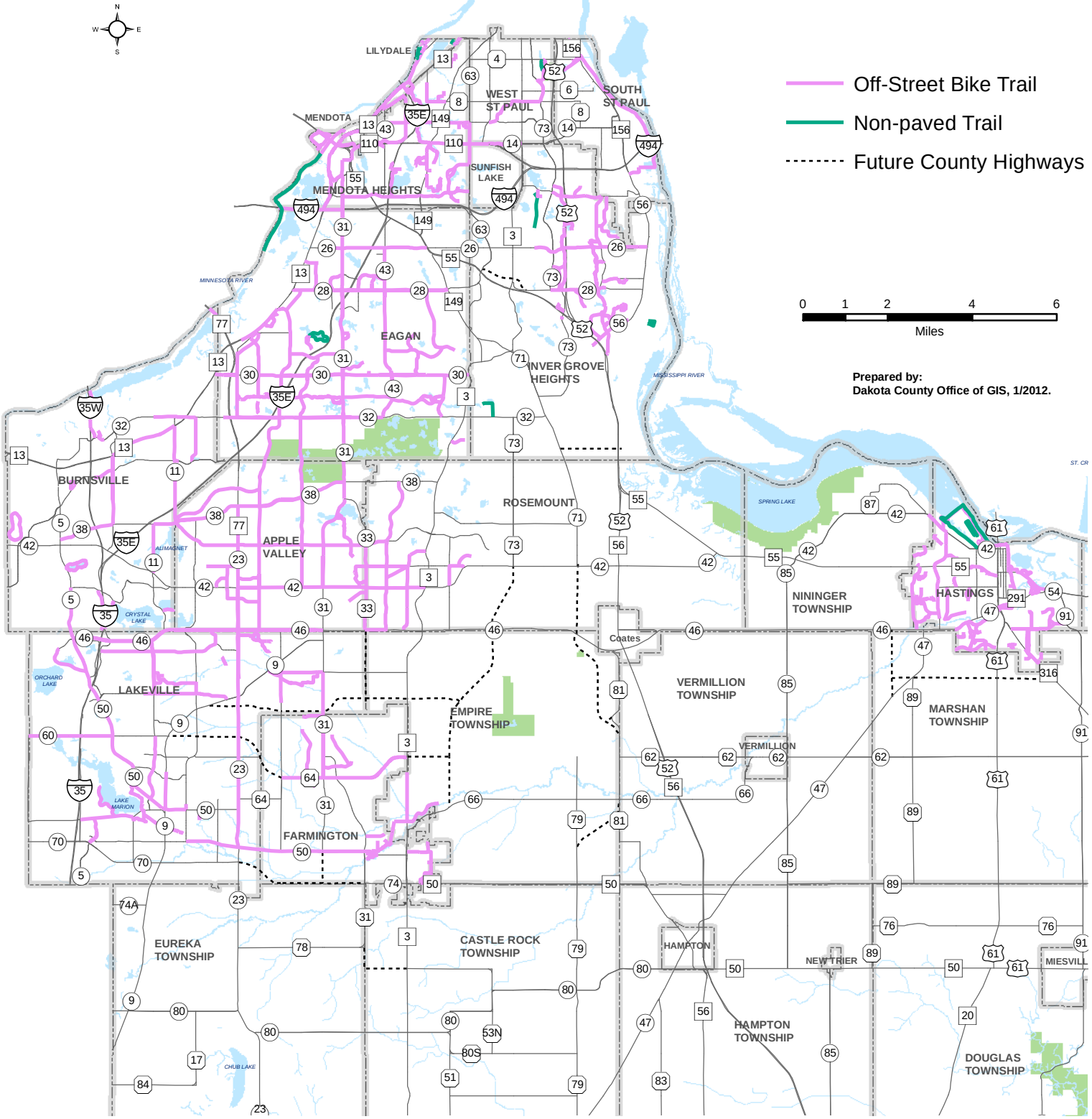
Also, the Transportation CIP includes a funding set-a-side for trail improvement and rehabilitation projects at various locations throughout the County. These projects include repairing deterioration, to prolong the life of a trail by overlaying deteriorated surfaces with an asphalt surface, and to provide connectivity on new sections of trail. This set-a-side is approximately $400,000 annually.

Parks CIP

The Parks Capital Improvement Program also identifies investments for the regional trail and greenway trail systems. The current Parks CIP investment for regional trails is comprised of Federal, State, Metro and County Investments. Specific activities include trail and greenway land acquisition, design and construction; signing implementation; and trailhead development. The current Parks CIP investment for regional and greenway trails is $0.5 million per year. (This investment is included in the Parks CIP and not within the Transportation Plan). The following shows have County investments are used to supplement and leverage other funding sources:

	Federal	State	Met Council Parks	County
Average annual investment	$1.1 million	$1.0 million	$1.0 million	$0.5 million

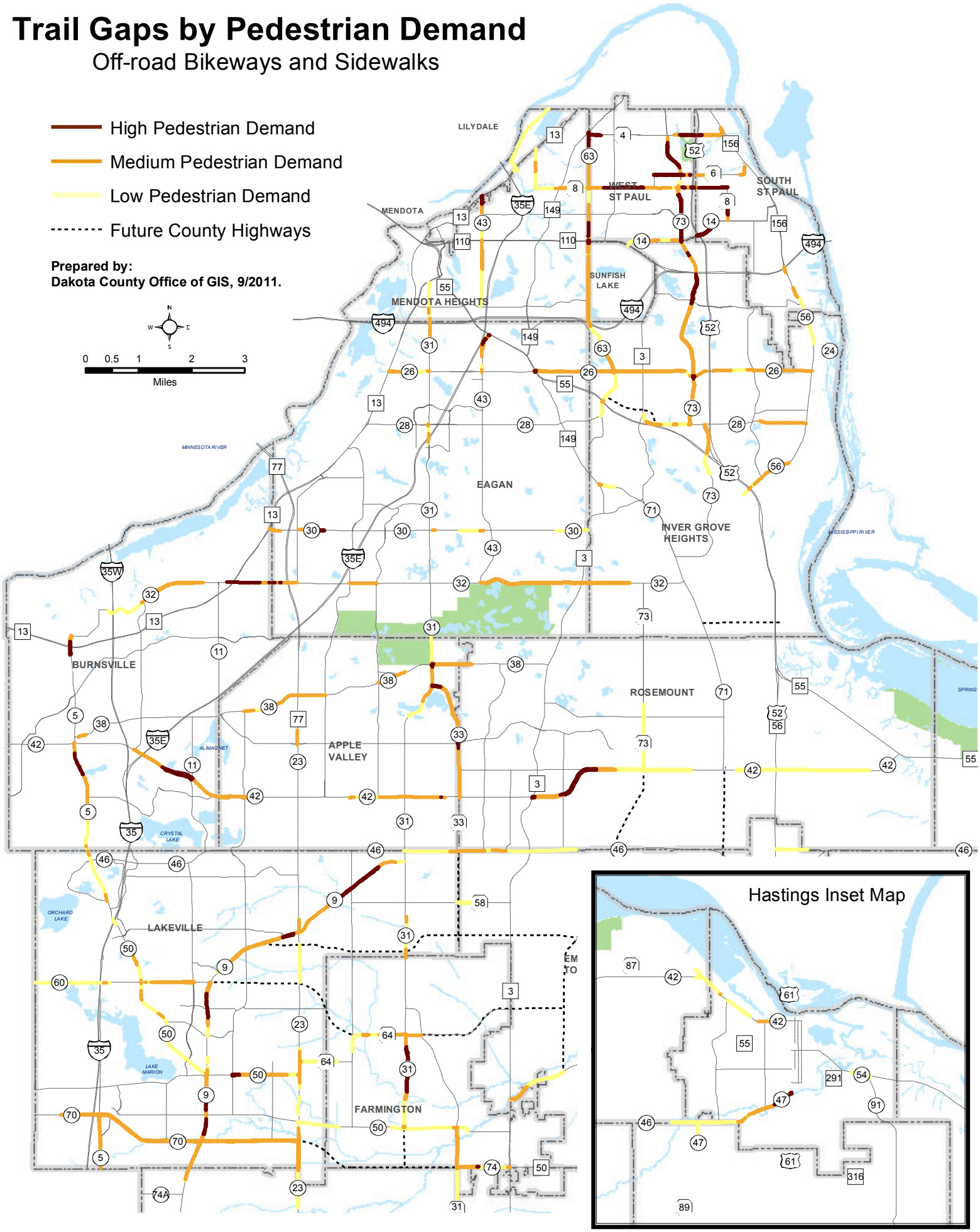
Bike Trails in Dakota County



Dakota County 2030 Transportation Plan - Figure 19

Trail Gaps by Pedestrian Demand

Off-road Bikeways and Sidewalks



Dakota County 2030 Transportation Plan - Figure 20

Other Modes

This section contains more detailed information on several elements of the county transportation system, including trucking, railroads, commercial navigation, aviation, and telecommunications.

Importance

The County does not participate directly in regulation or financing of some of these elements. However, the County recognizes their important role within the county and regional transportation framework. They provide transportation modes for people and goods and help to relieve pressure on the highway system.

Trucking

The movement of freight by trucks is very important to the economic vitality of the county and region. Trucks are the predominate mode for most regional and short-haul freight trips. Future economic competitiveness will depend in part on a transportation system that allows efficient movement of freight.

Three major truck terminals (terminals with over 1,000 trucks) are located within the county. These include facilities located in Eagan on CSAH 26 (Lone Oak Road) between I-35E and TH 55; in Inver Grove Heights south of TH 55; and in Burnsville west of I-35W and north of TH 13.

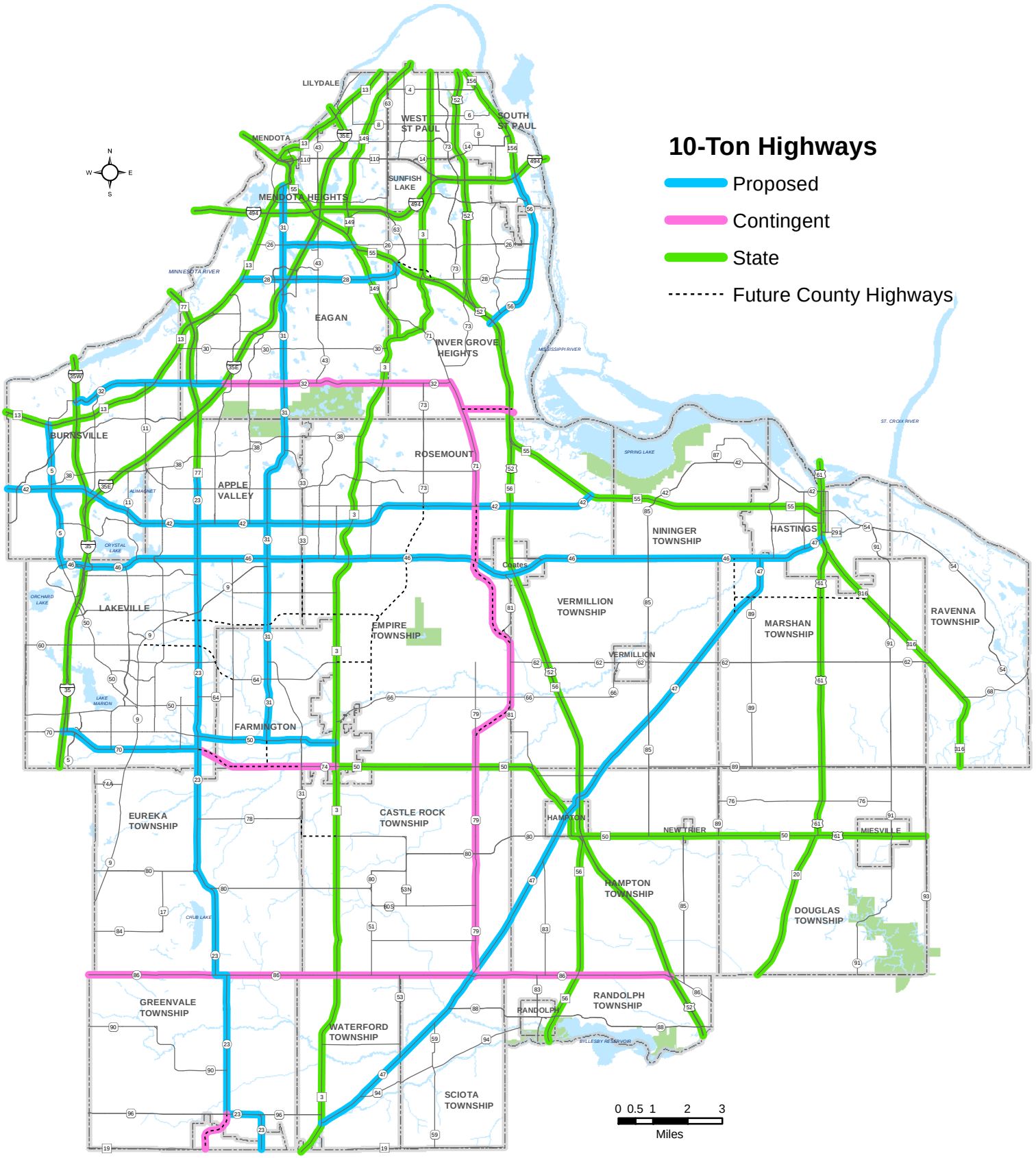
Airlake Industrial Park, along CSAH 70 in Lakeville, is the second largest industrial park by acreage in the Twin Cities metropolitan area and one of the major generators of truck trips in the region. In addition, Airlake Industrial Park includes Airlake Airport, performing reliever functions for the Metropolitan Airports Commission. Businesses in the industrial park are also served by both freight and short line regional service via CP Rail.

Minnesota weather conditions create special problems for truck freight transportation. Spring thawing and high moisture levels can make some roadbeds vulnerable to damage from repetitive truck use. Although Mn/DOT implemented a market artery system in 1989 to eliminate spring weight restrictions on state trunk highways that connect centers of population and commerce, spring weight restrictions continue to be an important issue on County highways.

Because of the high number of commercial operations (barge terminals, truck terminals, manufacturing operations, etc.), a number of state trunk highways and interstate highways exceed 3,200 truck trips per day. These highways are fed by the County highway system impacting the operations, maintenance and signalization (and in some cases the geometrics) of County highways.

To accommodate large numbers of trucks on the highways, this Plan identifies the implementation of a 10-ton system of County highways to facilitate efficient truck movements within the county. For routes off the proposed 10-ton system, highway structural and geometric design will be accomplished to appropriately serve truck traffic on the route. The 10-Ton County Highway system is shown in Figure 22. Proposed 10-ton system routes are those that meet technical criteria of policies M.6 and M.7 and require action through Township Boards, City Councils and/or County Board of Commissioners resolutions. Contingent 10-ton routes are identified as meeting the criteria identified in policy M.5 in the future. A route is identified as being contingent if the route is dependent upon future highway expansion or dependent upon infrastructure improvements to meet the criteria of policy M.5

10-Ton Highways



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Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 21

Railroads

Railroads are a significant element in the transportation system. They continue to play an important role in the movement of freight to and between ports and major urban areas. Railroads also have an impact on land use, the physical and social environment, and other components of the transportation system.

Two Class I rail carriers operate in Dakota County. Class I rail carriers are defined by exceeding approximately $350 million in annual operating revenues. These two carriers are the Canadian Pacific Railway and the Union Pacific Railroad. Progressive Rail, a short line railroad with several branch routes, also operates within the County and is based at the Airlake Industrial Park. Rail Lines, Aviation, Trucking and Barging Facilities are shown in Figure 23.

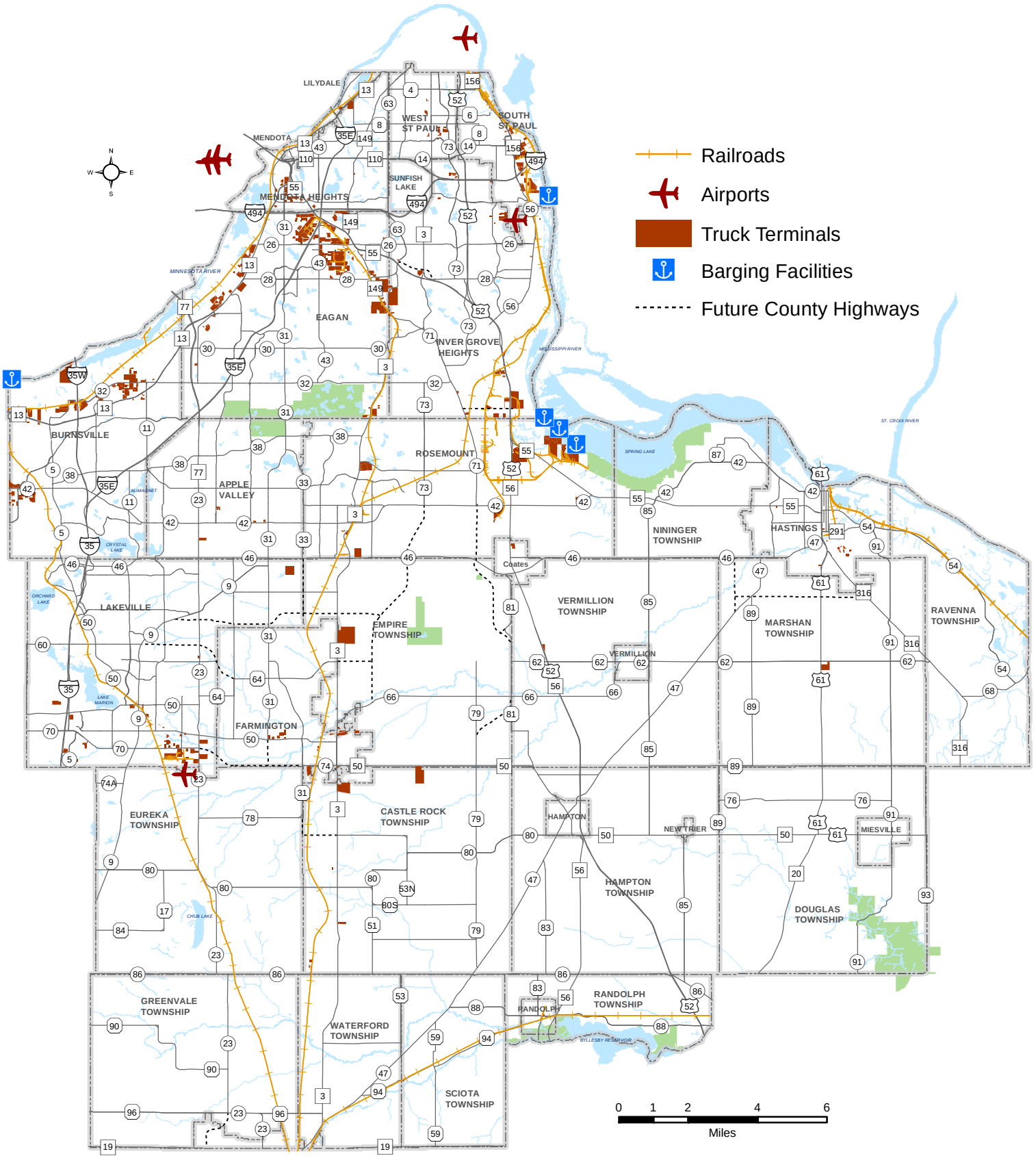
Intercity Passenger Rail

Dakota County anticipates having an ongoing collaborative role in state and federal planning processes for intercity passenger rail and high speed rail service. The Dakota County Regional Railroad Authority currently participates on the Minnesota High Speed Rail Commission, which advocates for the development of a high-speed rail connection between Minneapolis-St. Paul and Chicago as part of a larger Midwestern high-speed rail network. Planning work undertaken jointly by the Departments of Transportation in Minnesota and Wisconsin is currently determining the most feasible route alignment based on ridership potential, cost of improvements, and other physical constraints; several alternatives may route trains through Dakota County.

The Minnesota Comprehensive Statewide Freight and Passenger Rail Plan developed by Mn/DOT identifies intercity passenger rail service planned for a 'Phase I' implementation that would operate through Dakota County on existing freight rail infrastructure. Service between the Twin Cities and Mankato (Minnesota Valley Line) estimates four trips per day with a maximum speed of 79 mph, with total infrastructure improvement costs of $615 million per year and operating costs of $14.1 million. Service between the Twin Cities and Rochester (Rochester Rail Link) is planned for 8 trips per day with a maximum speed of 110 mph; total infrastructure and operating costs are estimated at $835.9 million and $28.9 million, respectively. No timeline is presently set for development of these services.

Figure 23

Rail Lines, Aviation, Trucking and Barging Facilities



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Dakota County 2030 Transportation Plan - Figure 22

Commercial Navigation

Commercial navigation continues to be an important part of the transportation system. Metropolitan Council estimates that nearly 1,000 jobs in the county were related to commercial navigation and that terminals handled approximately 16 percent of the region's river barge activity.

The following barge terminals operate within the County:

- Flint Hills Resources (Rosemount) – barge/truck operations, petroleum products
- U.S. Salt (Burnsville) – salt, de-icing products
- Savage Port Area (Savage, Scott County) – grain, salt, fertilizer
- Dakota River Terminal (South St. Paul) – bulk commodities
- C.F. Industries Pine Bend Terminal (Inver Grove Heights) – anhydrous ammonia
- C.F. Industries Warehouse (Rosemount) – bulk fertilizer

U.S. Salt in Burnsville generates about 400 truck trips a day in winter. The company brings salt upriver in summer and stores it for road use.

Aviation

Two airports in the county are part of the regional airports system. Both are reliever airports. They reduce congestion at the Minneapolis St. Paul International Airport and provide increased aviation access to nearby communities.

Airlake Airport - The Airlake Airport is under the jurisdiction of the Metropolitan Airports Commission (MAC) and is location in Lakeville and Eureka Township, west of CSAH 23 (Cedar Avenue) and south of CSAH 70 (215th Street). It is classified as a reliever airport with a 4,100-foot runway. It has approximately 66,000 annual landings and takeoffs. Approximately 140 aircraft are based at the airport which serves private and recreational purposes.

The MAC recently completed a comprehensive plan for the airport that includes the addition of 79 hangar spaces and runway extension to 5,000-feet by 2025. The proposed improvements

will necessitate the relocation of CSAH 23. An anticipated timeline for improvements has yet to be established.

South St. Paul Municipal Airport - The South St. Paul Municipal Airport is under the jurisdiction of the City of South St. Paul and is located north of CSAH 26 (Lone Oak Road) and west of CSAH 56 (Concord Boulevard). It is classified as a minor airport in the regional system with one 4,000-foot runway. It has approximately 53,000 annual landings and takeoffs. Approximately 225 aircraft are based at the airport which serves private and recreational purposes.

The following two metropolitan airports are outside Dakota County but have major effects on the county.

Minneapolis St. Paul International Airport (MSP) - MSP is under the jurisdiction of the MAC and is located in Hennepin County just north and west of Eagan and Mendota Heights. It is the international airport for the region and serves primarily scheduled air passenger and air cargo services.

St. Paul Downtown Airport (Holman Field) - The St. Paul Downtown Airport is under the jurisdiction of the MAC and is located south of the Mississippi River in St. Paul and just north of South St. Paul. It is classified as the primary reliever for Minneapolis St. Paul International Airport (MSP). It is expected to experience an increase in operations as MSP becomes for congested. Expansion of the St. Paul Downtown Airport has recently occurred, but expansion is limited by topographical and site constraints.

Seaplanes must operate in compliance with Minnesota Rules 8800.2600 and 8800.2700. Dakota County has seven public waters that permit seaplane operations. These include:

- Alimagnet Lake, in Apple Valley and Burnsville
- Byllesby Reservoir, in Randolph and Randolph Township
- Crystal Lake, in Burnsville and Lakeville
- Lake Marion, in Lakeville
- Wipline Seaplane Base on the Mississippi River
- Orchard Lake, in Lakeville
- St. Croix River, in Washington County (also shown under Dakota County per State Rules)

MSP Noise Contours

Noise Exposure Zone 1

Zone 1 occurs on and immediately adjacent to the airport property and can be generally described as having severe noise. It is projected to be subject to aircraft noise greater than 75 DNL. It is an area frequently affected by both takeoff and landing operations. In addition, the proximity of the airport operating area, particularly the runway thresholds, reduces the probability of relief resulting from future changes in the operating characteristics of either the aircraft or the airport.

Noise Exposure Zone 2

The noise impacts in zone 2 are generally sustained, especially close to the runway ends. Zone 2 exposed to aircraft noise of 70 to 75 DNL for takeoffs and landings. Based on the proximity of the affected area to the airport, the seriousness of the noise exposure is such that sleep and speech interface can be routinely expected. The noise intensity in this area is generally serious and oftentimes continuing. New development should be limited to uses that have been

constructed to achieve certain interior-to-exterior noise attenuation and that discourage certain outdoor uses.

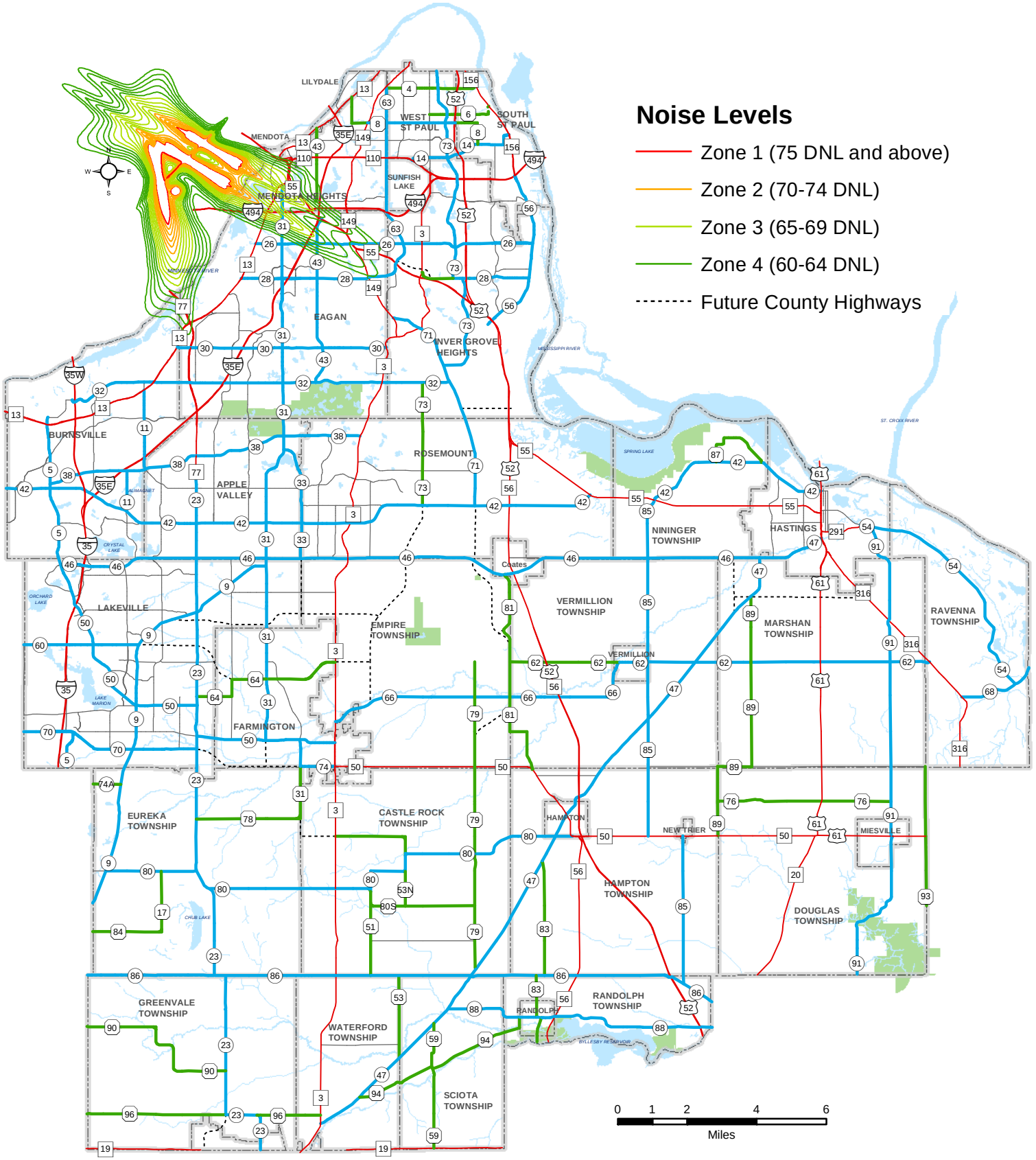
Noise Exposure Zone 3
Aircraft noise impacts in zone 3 can also be categorized as sustaining. However, the intensity is such that it should be considered significant, or somewhat less than serious. Zone 3 is exposed to aircraft noise of 65 to 70 DNL for takeoffs and landings. In addition to the intensity of the noise, the location of buildings receiving the noise must also be fully considered. Operational changes can provide some relief for certain uses in this area. Residential development may be acceptable if it is located outside areas that are exposed to frequent arrivals and departures, is constructed to achieve certain interior-to-exterior noise attenuation, and is restrictive as to outdoor use. Certain medical and education facilities that involve permanent lodging and outdoor use should be discouraged.

Noise Exposure Zone 4
Zone 4 is a transitional area where aircraft noise exposure might be considered moderate. It is exposed to aircraft noise 50 to 65 DNL. Noise exposure is predominately related to takeoffs. Land uses are likely to receive the most benefit from changes in operations. The area is considered transitional because potential changes in airport and aircraft operating procedures could lower or raise noise levels. At MSP, this noise zone includes the DHL 60 plus one-mile buffer zone to address this variability in noise impact and also allow implementation of additional local noise mitigation efforts as identified in this Plan or defined under state law.

Aircraft noise from operations at MSP is a serious concern for residents of northern Dakota County. The new Cedar north-south runway increased noise for a new group of people in northwestern Dakota County when it opened in 2005. The County will continue to monitor aircraft noise from operations at MSP to ensure compliance with current standards and regulations and encourage further noise reduction initiatives.

A recently completed study of airport needs resulted in a state-legislated decision to expand MSP to meet the major airport needs of the next 20 years and not build a new major airport in Dakota County as had been proposed as an alternative. If future discussions are ever held regarding the potential relocation of MSP, they will be monitored closely.

MSP Airport Noise Policy Area



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Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 24

Telecommunications

In today's information-based economy, a community's telecommunications infrastructure is as important as good roads, parks and other traditional physical infrastructure. Internet access has become a social and economic necessity. Individuals and businesses without broadband Internet access are at a great disadvantage in today's society and economy.

The unprecedented growth in telecommunications capacity and telecommunications applications requires communities to continuously assess and evaluate opportunities the change might have on government services and its residents. Recent trends in telecommunications include:

- Increasing digital divide between those who have access to advanced telecommunications and those who do not.
- Economic vitality of areas is becoming more dependent on employer and employee access to advanced telecommunications.
- Collaboration between public and private sectors is becoming critical to provide telecommunications infrastructure for all residents and businesses.

The County is collaborating with cities, schools and other public entities to build a fiber optic system that provides high speed, high capacity telecommunications for government use. This system referred to I-Net will complement the private fiber system by providing redundancy and added capacity.

The following ***strategy*** supports County efforts to maximize investments and benefits that telecommunications can bring to the county.

- **Consideration of *Guiding Principles for Dakota County Broadband Projects***
  Develop transportation projects in consideration of *Guiding Principles for Dakota County Broadband Projects*. This includes:
  - Collaboration for the development of fiber optic networks;
  - Development of a Commercial Network (C-Net) – To promote economic development;
  - Installing conduit along county highway and park projects; and
  - Wi-Max infrastructure development in conjunction with C-Net.

Land Use

The Plan considers land use as a significant factor in effective management of highway capacity. The following ***strategies*** support consideration and examination of land use when integrating transit and other modes:

- **Compatible Land Uses**
  Encourage local municipalities to plan development of land that is compatible with adjacent existing and planned transportation facilities and systems. This includes consideration of the County's Plat Review Needs map, transit-oriented development and development of supporting local street networks to reduce the reliance of primary access to County highways.

- **New Development and Adequate Transportation Facilities**
  In order to assure transportation facility adequacy, local municipalities are encouraged to ensure new subdivisions and zoning changes have adequate transportation facilities to support the new development.

- **Land Use Development**
  Monitor land use development and transportation facilities to enhance the relationship between land use and transportation planning, comprehensive plans and environmental documents for consistency with the Dakota County Comprehensive Plan.

Currently, no CIP investments for other modes are identified per this goal. However, the preceding information will be considered in the development of CIP transportation projects and investments.

Goal 2 Summary

The emphasis of this goal is that the County establishes a role in coordinating and providing direction on the development of infrastructure and services for non-automobile modes of transportation. This includes the development and integration of a comprehensive transit system, bicycle and pedestrian network, and other non-automobile modes for people and freight to maximize the transportation system efficiently.

Dakota County currently invests approximately $11 million per year towards projects to integrate transit and transportation modes. This entire investment is towards the integration of transit projects including study and implementation of transit corridors. Investments towards bicycle and pedestrian integration are identified within the Preservation Goal. In addition, the Parks CIP identifies approximately $0.5 million per year towards trail investments. No CIP investments are identified for other modes identified per this goal. However, the detailed information on trucking, railroads, commercial navigation, aviation and telecommunications will be considered in the development of CIP transportation projects and investments.

Future annual investments for this goal are anticipated to remain stable. However, future needs for the Robert Street Corridor and Red Rock Corridor require additional definition and, at present, represent a wide range of future investment need.

The following are the estimated annual CIP transit and integration of transportation modes investments over the plan period.

TOTAL

Average Yearly Transit and Integration of Transportation Modes Needs

Activity	2004 Plan	2005-2009 CIP	Future Needs 2011-2015	2016-2020	2021-2030
Transit - Cedar Ave	(a)	0.10 (b)	8.40	12.50	12.20
Transit - Robert St	n/a	n/a	1.60	(c)	(c)
Transit- Red Rock	0.02	0.02	0.03	(d)	(d)
DCRAA	0.18	0.18	1.00		
Bike & Ped Facilities	0.90	0.90	(e)	(e)	(e)
Other Modes	0.00	0.00	0.00	0.00	0.00
Totals	1.10	1.20	11.03	12.50	12.20

(a) At the time of the 2004 Plan, Dakota County was committed to completing the remaining corridor study phases that included environmental study, preliminary engineering, short-term transit improvements,
final design and construction of Bus Rapid Transit in the corridor. Plans were to seek funding for future investments and to become federally authorized to set up eligibility for federal funding for future phases.

(b) $0.5 million was transferred from the Regional Railroad Authority 2006 budget to provide for local match of Federal ($3.2 million) and State ($17.6 million) funds for Cedar Avenue BRT Phase I activities.

(c) Total Robert Street Corridor needs are currently estimated between $111 million to $1.1 billion.

(d) Total Red Rock Corridor needs are currently estimated between $115 million to $128 million.

(c) & (d) Figures are based on 2011 CTIB Annual Fiscal Review and Capacity Estimates.
Timing and funding sources, including potential County funding share for
Robert Street and Red Rock Corridors are yet to be determined.
These
needs therefore will be identified separate from overall County transportation
system needs.

(e) Investments for bicycle and pedestrian facilities are included within the Preservation category of the Transportation CIP and within the Parks CIP. Current County practice is to consider bicycle and pedestrian facility implementation as part of highway projects. Prior investments were identified through the now defunct Intermodal CIP.

Chapter 6

Goal 3:
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.

Importance

This is one of the most important Transportation Plan goals. 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. 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 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*
- *Integration of Transit, Bicycle and Pedestrian Modes*
- *Pavement Management Program*
- *Gravel Maintenance, Resurfacing Efficiency and Conversion to Paved Highways*
- *Bridge Rehabilitation*
- *Traffic Safety and Operation including Pavement Markings, Guard Rails, Safety Edges, Culverts, Rumble Strips/Rumble Stripes and Signs*
- *Bicycle Trail Maintenance*
- *Winter Maintenance*

CIP Investment Categories

- Paved Highway Surface
- Gravel Highway Surface
- Bridge Rehabilitation
- Traffic Safety and Operation
- Transit, Pedestrian and Bicycle Facilities
- Storm Sewer Maintenance

Preservation Issues

The following are general issues affecting preservation of the existing County transportation system addressed in this plan.

Issue:
The past Transportation Plan identified the mowing of county highway right of way including medians and boulevard on a monthly basis for safety. Many of the cities have taken it upon themselves to mow more frequently than County policy identifies for aesthetic reasons. Budget concerns have led cities to re-evaluate the frequency in which they mow.

Issue:
The past Transportation Plan identified that mailbox replacement will only occur when the mailbox was installed according to County guidelines and when hit by snowplowing equipment or activities.

Addressing the Issues

The following are potential actions and revisions to the Plan to address these issues.

Mowing Policy

- The revised policy identifies that the County will mow up to six times per year and emphasize that mowing occurs for safety reasons over aesthetics. (Policy P.4).

Mailbox Replacement

- The policy has been revised beyond just snowplowing activities to indicate that the County will replace the mailbox if damaged or removed by a County project or maintenance activity. (Policy P.5)

Highway Surface - Gravel

- The strategy addressing gravel conversion to bituminous has been revised to recognize the positive effects of the chloride-treated lime rock applications on gravel highway thresholds.

Paved Highway Surface

The County highway system consists of 424 centerline miles of which approximately 359 miles (85 percent) are paved and 65 miles (15 percent) have a gravel surface. To extend the useful life or reconstruction needs of highways, preservation techniques are applied.

By Comparison: In 2004, 440 centerline miles were identified of which approximately 350 miles (80 percent) were paved and 90 miles (20 percent) had a gravel surface.

The *Dakota County 2025 Transportation Plan* identified a performance measure that the County will aim to keep the Pavement Quality Index (PQI) of each principal and minor arterial highway between 3.1 and 2.8. A great amount of investment has been placed into the preservation category of the CIP within recent years, specifically in overlaying existing highways. Since adoption of the *Dakota County 2025 Transportation Plan*, the County doubled annual investment

in overlays from $1.5 million to $3.4 million, helping to reduce the proportion of poor or fair road quality from 35 percent of the system to 8 percent of the system.

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.

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 remain stable to meet the above performance goal. The following are the estimated annual CIP investments for highway surface improvements over the plan period including estimated investments for County Roads:

- 2011-2015 = $3.0 million ($0.8 million for County Roads)
- 2016-2020 = $3.2 million* ($0.8 million for County Roads)
- 2021-2030 = $3.4 million* ($0.8 million for County Roads)

* To be verified based on PQI assessment

Figure 25 shows pavement quality index results of the County paved system from 1999 to 2008. Recent investments and funds programmed for overlays were applied to improving the pavement quality.

By Comparison: In 2004, 65 percent of lane miles were classified as being good. In 2010, 85 percent of lane miles were classified as being good.

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.

- **Transit and Integration of Transportation Modes – Surface Conditions**
  Consider the needs of transit, bicycle and pedestrian facilities when evaluating highway pavement quality. This includes evaluation of pavement quality of bus pullouts, bus shoulders, bus rapid transit lanes, and bicycle and pedestrian trails.

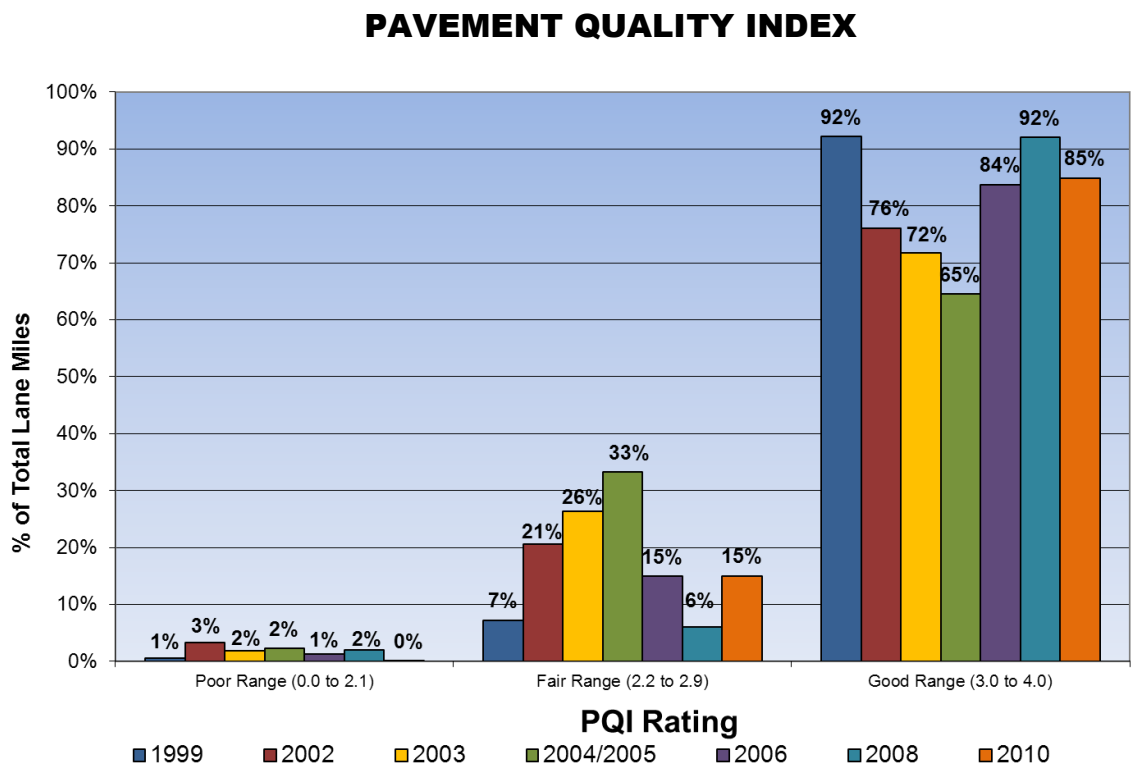


Figure 25.

Figure 26.

Pavement Management Program

Utilize a pavement management program for highways to guide the maintenance and preservation of the highway system including transit, bicycle and pedestrian facilities. Assess various 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.

Gravel Highway Surface

Beginning in 2004, the County started a program to resurface all gravel roads with lime rock aggregate material. By 2007, all miles of gravel-surfaced roads were converted to lime rock treated with 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 65 miles of gravel roads remaining, the long-term plan for gravel roads is to pave approximately 31 miles that will remain under County jurisdiction. However, not all will be paved within the 20-year Plan period. In addition, approximately 34 miles of these gravel roads are anticipated to be turned back to local jurisdiction in the future.

County Gravel Roads
(to Remain Under County Jurisdiction)

Road	Location	Length
CR 59	Sciota	3.5
CR 73	Inver Grove Heights, Rosemount	2.5
CR 78	Castle Rock	2.5
CR 79	Castle Rock, Empire	4.3
CR 80S	Castle Rock	1.0
CR 83	Randolph, Randolph Twp	0.5
CR 89	Douglas, Marshan	6.0
CR 96	Greenvale	4.0
CSAH 80	Castle Rock	4.0
CSAH 91	Douglas	3.1
	TOTAL	31.4

County Gravel Roads
(to Transfer to Local Jurisdiction)

Road	Location	Length
CR 51	Castle Rock	2.0
CR 53	Sciota	2.5
CR 53N	Castle Rock	0.5
CR 62	Vermillion Twp	1.1
CR 76	Douglas	5.0
CR 83	Hampton Twp	3.3
CR 84	Eureka	2.0
CR 87	Nininger	1.0
CR 90	Greenvale	5.1
CR 93	Douglas	2.0
CR 94	Randolph Twp, Sciota, Waterford	5.5
CSAH 80	Castle Rock, Eureka	3.7
	TOTAL	33.5

Details regarding the jurisdictional transfer of County roads are explained in Chapter 7 of this document.

The current CIP investment for preservation of gravel roadway surfaces is $0.6 million per year. In the future, estimated annual CIP needs are expected to remain stable. The following are the estimated annual CIP investments for gravel surface improvements over the plan period including estimated investments for County Roads:

- 2011-2015 = $ 0.6 million ($ 0.6 million for County Roads)
- 2016-2020 = $ 0.6 million ($ 0.6 million for County Roads)
- 2021-2030 = $ 0.6 million ($ 0.6 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**
  System-wide annual application of dust control chloride.

- **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 CSAH, 24 County Road). Bridges are rated according to a sufficiency formula based on several factors. A bridge must have a sufficiency rating of 80 or less to be eligible for federal funding. The average sufficiency rating for all County bridges is 92.4. Bridges are inspected every other year by certified County inspectors.

Since 2000, 11 County bridges have been replaced. The County has no bridges on the system that are structurally deficient (the deck, superstructure, or substructure are rated as poor, serious or critical). The County has two bridges that recently became functionally obsolete (the width does not meet standards in its ability to carry traffic) due to increased traffic counts.

In addition, there are four timber bridges on the County system that are past the design life of 50 years and will need to be replaced within the next ten years. Unlike concrete bridges, timber structures lose strength over time and do not lend themselves well to rehabilitation. Decay occurs as the wood ages and becomes brittle particularly in the substructure. Statewide three timber bridges have had wood piling failures due to decay in 2009 and 2010.

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. Currently the County has approximately 38 bridges (46 percent of all County bridges) that are 35 years in age or greater.

PERFORMANCE MEASURE: The County will have no bridges under its jurisdiction that are structurally deficient.

Costs associated with bridge rehabilitation are included with 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:

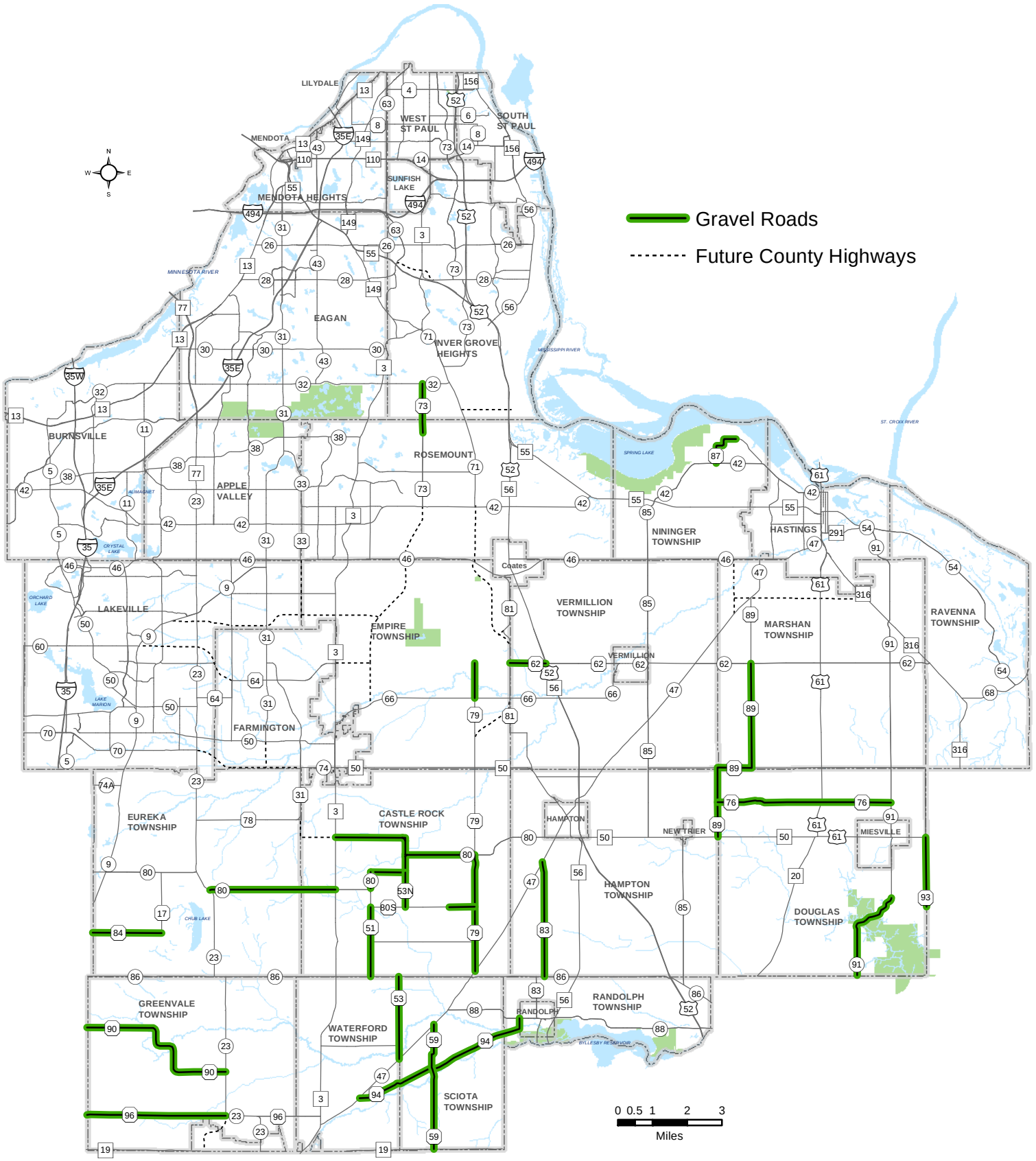
- **Bridge Rehabilitation Practices**
  Utilize bridge rehabilitation practices to maximize structure life. Bridge rehabilitation will be considered if a bridge is 35 years or older in age, shows deterioration or minor deficiency and is not eligible for federal or state replacement funds. Examples include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

- **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 Mn/DOT and federal requirements.

County Gravel Roads, 2011



Prepared by:
Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 27

Traffic 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.

To establish and maintain definition and practices concerning all aspects of maintenance, operations and right-of-way management, several policies, and procedures documents were developed. Following the adoption of the *2030 Dakota County Transportation Plan*, these individual documents will be incorporated into one document (*Transportation Operations Practices and Procedure Document*). This document will detail operation and maintenance practices and outline the application of various traffic safety and operation measures to ensure uniform definitions, consistent procedures and highlight best practices for the County highway system.

The current CIP investment for preservation of traffic safety and operation is $0.3 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:

- 2011-2015 = $0.3 million ($0.1 million for County Roads)
- 2016-2020 = $0.3 million ($0.1 million for County Roads)
- 2021-2030 = $0.3 million ($0.1 million for County Roads)

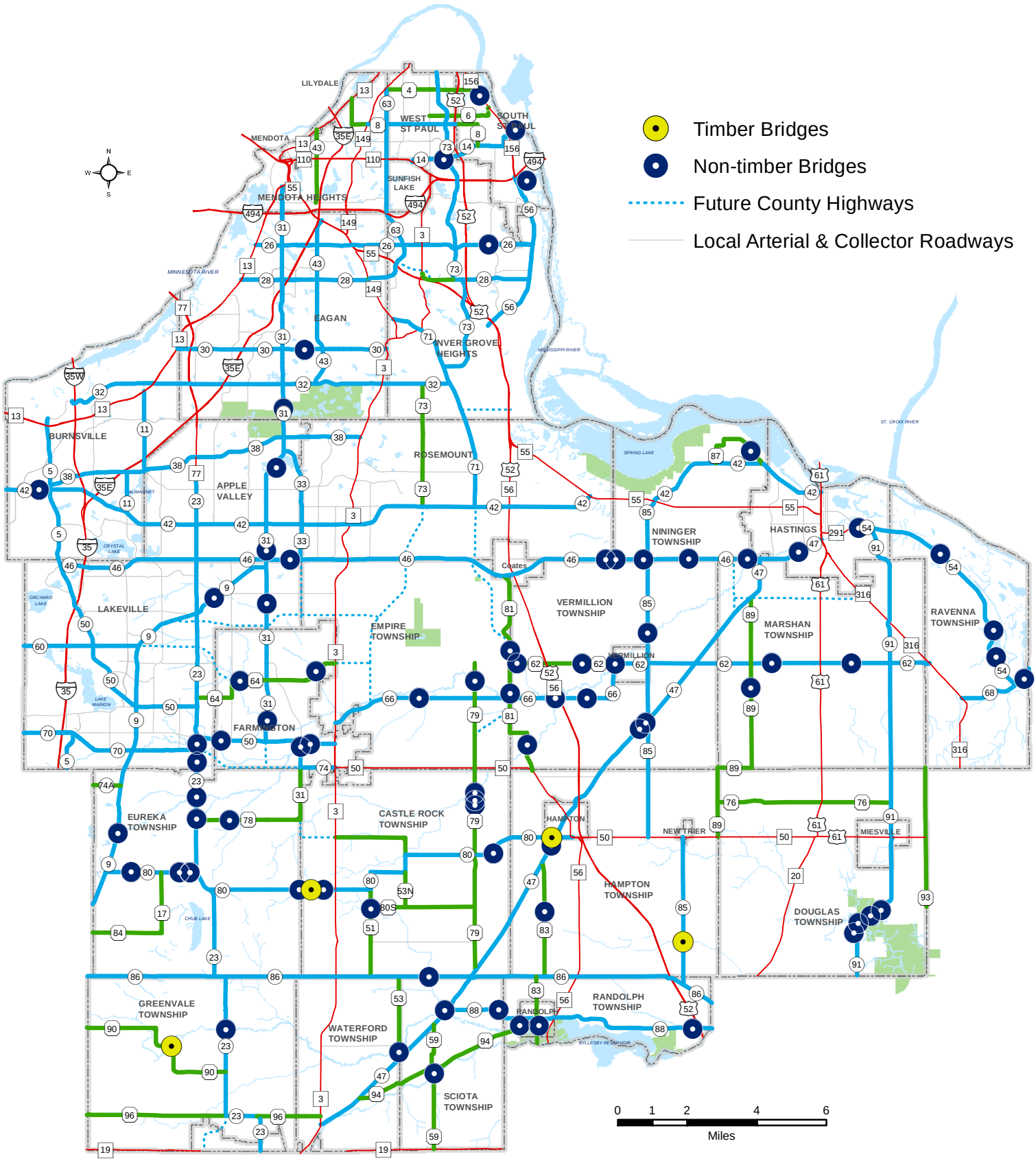
The following ***strategy*** support preservation of pavement markings:

- **Traffic Safety and Operation Infrastructure**
  The Transportation Department Operations Policy and Procedures practices document establishes and maintains uniform definition and practices for assessing, operating, maintaining and improving the County system based on requirement or best practices through the following:

    - Infrastructure Assessments – Conduct regular assessments of pavement markings, signs, guard rail and culverts throughout the County highway system. Document time frames and methods for conducting surveys or maintaining management systems to ensure the traffic safety, operation and maintenance elements are reviewed on a routine basis.

    - Procedures Documentation – Periodically update the Transportation Department Operations Procedures practice document for Board adoption. These documents cover maintenance activities, permits, traffic and traffic safety related practices to establish and maintain uniform definitions and practices for operation and design practices to improve on the County highway system.

Dakota County Bridge Inventory



Prepared by:
Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 28

- Rumble Strips and Safety Edges – County staff will review and implement new proven products or procedures to reduce costs or improve safety when applicable. Where practical, this includes implementation of safety edges (a tapered edge to aid drivers who have left the roadway to recover more easily than the traditional blunt edges). This also includes evaluation of rumble strips for use on rural section roadways at the time of resurfacing. Rumble strip evaluation will be considered for areas where run-off the road collisions occur. Latest design recommendations will be used to minimize noise and impact on bicyclists.

PERFORMANCE MEASURE: The County transportation system sign database will be completed by 2012. The County highway culvert inventory will be completed by 2013.

- Best Practices Review and New Technology Implementation – Establish best practices for operation and maintenance of the transportation system where applicable. Evaluate new system infrastructure products and assess benefits based on costs or improvement safety when appropriate. Incorporate proven strategies or methods into the Transportation Department Operations Policy and Procedures practices document to ensure consistency.

Transit, Pedestrian and Bicycle Facilities

Goal 2 directs the development and integration of a comprehensive transit system with all other passenger modes to maximize the efficiency of the transportation system. With policies and actions now in place for integration of transportation modes, infrastructure preservation becomes a growing concern.

Bus pullout, bus shoulder and bus rapid transit lanes are essential to the implementation of a successful transit system. Preservation evaluation of these lane surfaces are identified as a strategy under the Highway Surface – Bituminous section of this chapter.

Bicycle trails are a surface designated for the exclusive use of bicyclists and pedestrians separate from a highway. Bicycle trail preservation requests are eligible for funding through terms of the Bikeway Maintenance Agreement with the city to replace trails. The useful life of a bicycle trail is considered to be 15 to 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 trails and facilities and transit facilities is $0.1 million per year. In the future, estimated annual CIP needs are expected to rise as recent installation of system elements begin to age. The following are the estimated annual CIP investments for preservation of bicycle trails and facilities and transit facilities projects over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.2 million ($0.1 million for County Roads)
- 2016-2020 = $0.3 million ($0.1 million for County Roads)
- 2021-2030 = $0.4 million ($0.2 million for County Roads)

The following ***strategies*** support preservation of bicycle trails and facilities and transit 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**
  Develop a pavement management system to adequately anticipate and prioritize trail maintenance needs.

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

P.2 Bicycle Trail Resurfacing

Participate in trail resurfacing at end of useful pavement life for trails maintained in accordance with the Bikeways Trails Maintenance Agreement between the County and city.

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 relatively high 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:

- 2011-2015 = $0.3 million ($0.1 million for County Roads)
- 2016-2020 = $0.3 million ($0.1 million for County Roads)
- 2021-2030 = $0.3 million ($0.1 million for County Roads)

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

F.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.
2. Mainline pipes and storm water treatment and mitigation facilities based on the County's share of contributing flows.
3. To be eligible for County participation, a system-wide storm water maintenance agreement between the County and local agency will be required to identify system-wide roles and cost responsibilities. These cost share agreements are for actual repair and replacement projects and not for routine maintenance activities such as cleaning.
4. 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.

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. High priority will be given to preservation and rehabilitation projects that increase effective multimodal and intermodal accessibility and serve to enhance historic, scenic, recreational, and/or cultural resources.

- **Monitoring of Systems**
  Develop and maintain the following systems for the continuous monitoring of transportation facilities to identify highway and intersection improvement needs:
  - A traffic counting system that is compatible with the Mn/DOT system.
  - An accident data and analysis system that is compatible with Mn/DOT data.
  - A safety assessment rating system that can assist in needs prioritization.
  - Traffic signal management.
  - Pavement management.
  - Bridge inventory.

- **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 timely coordinate 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**
  Develop 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 highway surface maintenance 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. The County will:

1. Strive to remove sand before it goes into the storm sewer.
2. Rotate the order of sweeping among the cities.
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).
4. If additional assistance is needed, consider contracting with local municipalities.
5. 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 and rural ditches up to four times per year for safety, in accordance with Department of Natural Resources recommended wildlife and environmental regulations.

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 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.

P.7 Permit Coordination

Coordinate permit approval with cities prior to issuing permits to avoid possible city conflicts.

Goal 3 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 infrastructure useful lives. This includes evaluation and identification of bituminous highways, gravel-surfaced roads, bridges, pavement markings, transit facilities, pedestrian and bicycle facilities, and storm sewer preservation needs.

Dakota County currently invests approximately $4.2 million per year towards projects to preserve the existing system. Activities include highway surface preservation (including both bituminous and gravel), bridge rehabilitation, traffic control devices (traffic signals and durable pavement markings), bicycle trail and facilities and transit facilities preservation, and storm sewer preservation. Future annual investments for this goal are anticipated to rise as the transportation system ages and traffic volumes increase in the future. The following are the estimated annual CIP preservation needs and investments over the plan period.

TOTAL Average Yearly Preservation Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Bituminous	3.0	3.3	3.0	3.2 *	3.4 *
Gravel	0.4	0.5	0.6	0.6	0.6
Safety & Operation	0.2	0.3	0.3	0.3	0.3
Bike Trails	0.1	0.1	0.2	0.3	0.4
Storm Sewer	0.0	0.0	0.3	0.3	0.3
Totals	3.7	4.2	4.4	4.7	5.0

* To be verified based on PQI assessment later in 2010.

County Road Avg Yearly Preservation Investment Needs

	County Road Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Bituminous	0.8	0.8 *	0.8 *
Gravel	0.6	0.6	0.6
Safety & Operation	0.1	0.1	0.1
Bike Trails	0.1	0.1	0.2
Storm Sewer	0.1	0.1	0.1
Totals	1.7	1.7	1.8

* To be verified based on PQI assessment later in 2010.

Chapter 7

Goal 4:
Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

Safe travel on routes with minimal congestion 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 that optimize the capacity and safety of the existing transportation system must be pursued.

Importance

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

- Land Use
- 10-Ton Highways
- Identification of Best Access Location and Type
- Functional Classification
- Contiguous Plat Ordinance
- Permits for Activities in Right of Way

CIP Investment Categories

- Transportation System
- Access Management
- 10-Ton System
- Jurisdictional Classification
- Safety and Management
- Signal Projects
- Right of Way Preservation and Management

Management Issues

The following are general issues affecting management of the existing County transportation system addressed in this plan.

Issue:
The *Dakota County 2025 Transportation Plan's* access spacing guidelines provided more restrictive access criteria for some segments of undivided highways with relatively high volume.

Issue:
The *Dakota County 2025 Transportation Plan's* access spacing guidelines identified partial access requirements on principal arterial highways and high volume divided highways. There may be opportunities to have additional partial access at closer spacing for lower volume roadways.

Issue:
The *Dakota County 2025 Transportation Plan's* access spacing guidelines did not recognize corridor plans or identify opportunities on other public roads explicitly.

Addressing the Issues

The following are potential actions and revisions to the Plan to address these issues.

Access Management – Undivided Highways

- The Plan provides access spacing guidelines with consideration of speed as an element of allowing access on undivided highways. Access spacing guidelines were reduced for low-speed, higher volume roadways.

Access Management – Partial Access

- The Plan provides access spacing guidelines with greater flexibility for partial access (3/4 access or right-in/right-out access) on these high volume highways contingent on study.

Access Management – Guideline Considerations

- The Plan provides access spacing guidelines that recognize specific corridor access plans that may supersede guidelines and access should be provided from lower-function roadways when practical.

General Strategies and Policies

The following strategies and policies apply to all investment categories within the management goal.

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

- **Multi-Modal Transportation System**
  Develop a transportation system that appropriately integrates all modes to move people safely and efficiently.

- **Provide Mobility**
  Develop a transportation system that provides a high level of mobility and augments the regional transportation system.

- **System Connections**
  Connect County highways with local roadways, state highways and adjacent counties systems as appropriate.

- **Supporting Highway Networks**
  Encourage and work with local jurisdictions to develop supporting highway and local road networks.

- **Authorized Highway Uses**
  Determine authorized uses of a highway based on pavement structure and geometric design factors. This will include posting of load restrictions and designation of 10-ton routes.

- **Designation of New County Highway Corridors**
  Designation of County highway status requires a County Board resolution.

The following ***policies*** support management of the transportation system to increase system efficiency and safety and to maximize existing highway capacity:

M.1 Weight Restrictions
The county engineer may impose weight restrictions on highways to prevent significant structural deterioration.

Functional Classification

A highway functional classification system is a grouping of highways based on the type of trip it is predominantly intended to serve. It provides guidelines for planning a highway network for the 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 traffic problems. Functional classifications address the balance between the need for both mobility and access. Highways are generally classified into five main categories: local, collector, minor arterial, non-freeway principal arterial and freeway principal arterial. Local roads provide high levels of access and minimal mobility while principal arterials provide limited access with high mobility. Costs associated with management of the functional classification system are included with other project expenses in the CIP or are assumed at no cost. The functional classification of roadways in Dakota County is shown in Figure 30. The following table identifies functional classification revisions to the County system.

Functional Classification Revisions

Roadway	*Segment*	*Current Func Class*	*Future Func Class*	*Location*
Future CR 33	between CSAH 46 and 178th St	none	B-Minor Arterial	Lakeville
Future 178th St	between TH 3 and future CR 73	none	B-Minor Arterial	Empire Twp
CR 73	between CSAH 32 and CSAH 42	Collector	B-Minor Arterial	Rosemount
Future CR 73	between CSAH 42 and CSAH 66	none	B-Minor Arterial	Empire Twp
Future CSAH 71	between CSAH 42 and CR 81	none	B-Minor Arterial	Rosemount
CR 81	between future CSAH 71 & future CR 79	Collector	B-Minor Arterial	Empire Twp
Future CSAH 31	between CR 78 and 240th St	none	Collector	Castle Rock Twp
Future CR 78	between future CSAH 31 and TH 3	Local	Collector	Castle Rock Twp
Future CR 79	between CR 81 and TH 50	none	B-Minor Arterial	Empire Twp
CR 79	between TH 50 and CSAH 86	Collector	B-Minor Arterial	Castle Rock Twp
Future CSAH 23	between CR 96 and Rice County line	none	B-Minor Arterial	Northfield
Future CSAH 47	between CSAH 46 and CSAH 47	none	B-Minor Arterial	Marshan Twp
Future 170th St	between CSAH 47 and TH 316	none	B-Minor Arterial	Marshan Twp

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

- **Functional Classification - County**
  Consider functional classification in the design of highway projects. The functional classification issues should be considered and evaluated:

  1. A North-South Principal Arterial Study. A study for a possible north-south principal arterial in a corridor extending from I-494 to CSAH 86 (22 miles) between CSAH 23/TH 77 and TH 52. The distance between principal arterials TH 77 and TH 52/55 is approximately nine miles. Non-freeway principal arterial guidelines provide for spacing of principal arterial highways at three to six mile intervals in developing areas and two to three miles in fully developed areas. This area also includes the growing cities of Inver Grove Heights, Farmington, Lakeville, and Rosemount. The need for such a principal arterial has been recognized by the region through the Metropolitan Council's Metropolitan Highway System Investment Study (MHSIS) and their Transportation Policy Plan (TPP).

  2. An East-West Principal Arterial Study. A study for a possible east-west principal arterial corridor in an area extending from the western border with Scott County to TH 52 (a distance of about 16 miles) between 185th Street in Lakeville and CSAH 86. Non-freeway principal arterial guidelines provide for spacing of principal arterial highways at three to six mile intervals in developing areas and two to three miles in fully developed areas. This area also includes the growing areas of Lakeville, Farmington and Empire Township. The need for such a principal arterial has been recognized by the region through the Metropolitan Council's Metropolitan Highway System Investment Study (MHSIS) and their Transportation Policy Plan (TPP).

- **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 access controls on highways to protect 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 – 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, Mn/DOT, 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.

Access Management

Comprehensive Roadway System

The primary functions of the highway system are moving traffic in a safe and efficient manner while ensuring access to the local roadway system. . They provide:

- Mobility and continuity 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.

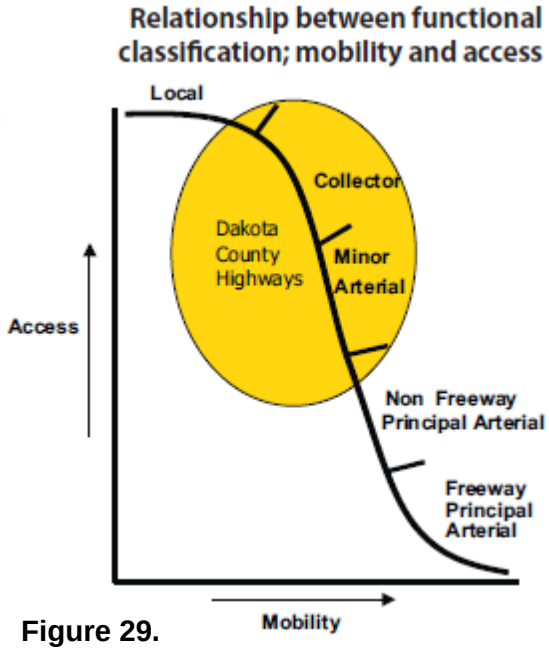


Figure 29.

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 major 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. 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.

System Planning:
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.

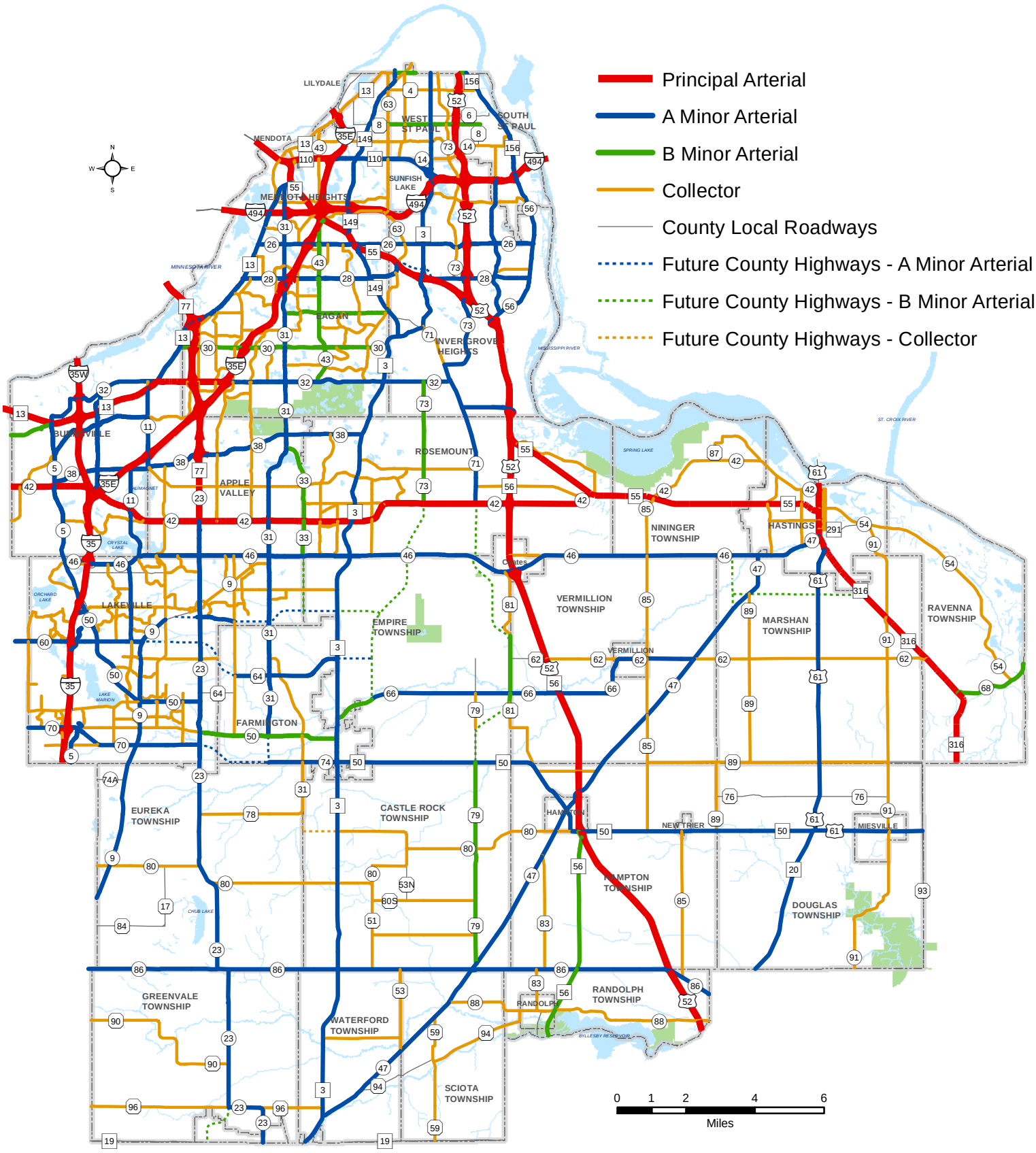
Difficulties Regarding Access Spacing Guidelines and Applying Access Management Techniques

- Full access intersections on high volume (4-6 lanes) highways eventually 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 restrict traffic flow and travel speed.
- Building additional lanes for high volume traffic without restricting signal spacing results in a costly highway system that does not yield the capacity benefits expected.
- Access (driveway or street connections) closer than 1,000 feet from major intersections make it difficult to accommodate turn lane tapers, storage areas and weaving activities.
- Left turns from main highways across two or three lanes require a design that provides good visibility. High volume and high-speed roadways may necessitate the removal or modification of partial access intersections when safety or operation is a concern.
- Minimum spacing needs to consider distance needed to develop standard turn lanes (1/8 mile spaced access does not allow back-to-back left turn lanes).
- 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 with development.

Many highways designated as minor arterials provide an emphasis on mobility while also providing limited access. As traffic volumes increase, it becomes difficult to balance between providing mobility and serving access.

Control of access is necessary to efficiently manage the highway system in a way that preserves or increases highway mobility and safety. Highway access control may be

Functional Classification



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Dakota County 2030 Transportation Plan - Figure 30

accomplished using a number of tools, including restricting median cuts or crossings, building grade-separated interchanges (e.g. bridges or tunnels, and restricting land access points.

Access Guidelines

Access guidelines are used to define appropriate access location on Dakota County highways. Dakota County's Access Guidelines are consistent with Mn/DOT's Access Guidelines for Principal Arterials. The access spacing associated with the guidelines is the County's long-term goal for the highway segment. These guidelines will typically be applied in conjunction with CIP projects, plat reviews, or safety or operational requirements.

Dakota County has developed Access Spacing and Access Configuration Guidelines and notes 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 10 on the following page.

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 in Dakota County requiring review of certain factors which are of countywide significance by the Dakota County Plat Commission and 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 seven factors of countywide significance. The primary factor is ingress and egress to and from County roads. The Dakota County Plat Commission uses the Access Guidelines shown in Table 10 to assist in determination of access location. Table 10, 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 31, 2030 ½ Mile Full Access Spacing Needs, takes into account 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 to maximize the operation, safety, and mobility of the system.

- **Access Management Investments**
  Invest in access management improvements in advance of development 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.

- **Reduce and Consolidate Accesses**
  Reduce and consolidate accesses to County highways in accordance with access guidelines to maximize operation, safety and mobility of the highway system. Drivers require sufficient time to address one potential set of conflicts before addressing the next. Separating conflict areas simplifies driving tasks and contributes to improved traffic operation and safety.

Table 10: Dakota County Access Guidelines (Spacing and Configuration)

Road Type (A)	Posted or Design Speed	Projected 2030 Average Daily Traffic	Full Movement Intersection	Partial Movement Intersection (B)
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
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.

(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.

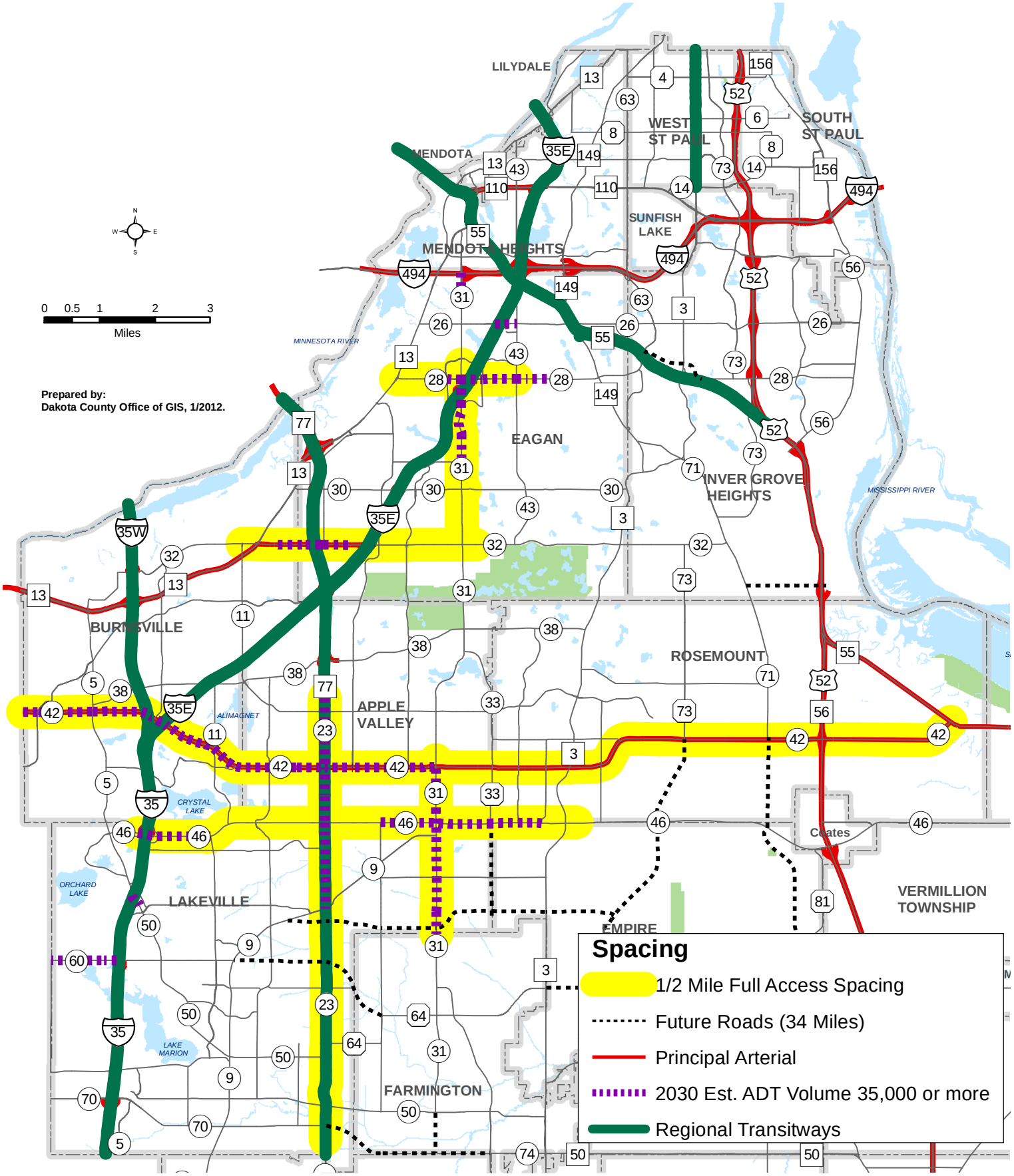
(D) Private street or driveway access requests will be considered based on engineering judgment and the following factors: location, distance from other driveways and intersections, alignment with other access points, easement/access rights that allow widespread usage and system connectivity, the potential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

2030 1/2 Mile Full Access Spacing Needs



Dakota County 2030 Transportation Plan - Figure 31

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

M.2 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.

10-Ton County Highway System

Dakota County will develop 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 are capable of carrying 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 9-ton standard. However, Minnesota Statutes governing 10-ton county highways have changed since adoption of the *Dakota County 2025 Transportation Plan*. Minnesota Statue §169.87 designates all county highways as 10-ton highways unless posted otherwise. Currently, all Dakota County highways are posted at 9-tons, and may be further reduced during spring load restrictions. This Plan identifies a proposed 10-ton system to respond to this change.

PERFORMANCE MEASURE: Develop and implement 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.

Costs associated with 10-Ton System implementation are included with other project expenses in the CIP or are assumed at no cost, as part of project development for other Plan goals.

Proposed 10-ton system routes are shown in Figure 33. Proposed routes are those that meet technical criteria of policy M.5 and M.6 and require action through Township Boards, City Councils and/or County Board of Commissioners resolutions. These account for approximately 132 miles of highway. Minnesota State Aid standards require 10-ton structural design for urban high-volume highways.

Contingent 10-ton routes account for approximately 29 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 dependent upon infrastructure improvements to meet the criteria of policy M.4. These include:

- CSAH 32/117th Street East alignment
  - Contingent upon a system connectivity study, access improvements and improvements to 117th Street East.
- 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 Union Pacific Railroad trestle over CSAH 86.

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

- **10-Ton County Highway System**
  To effectively address system demands, develop and implement a system of principal and minor arterial County highways on structurally adequate highways as a 10-Ton County Highway System. This system shall provide primary access routes for intensive concentrations of heavy industrial land uses to state highways or other 10-ton routes.

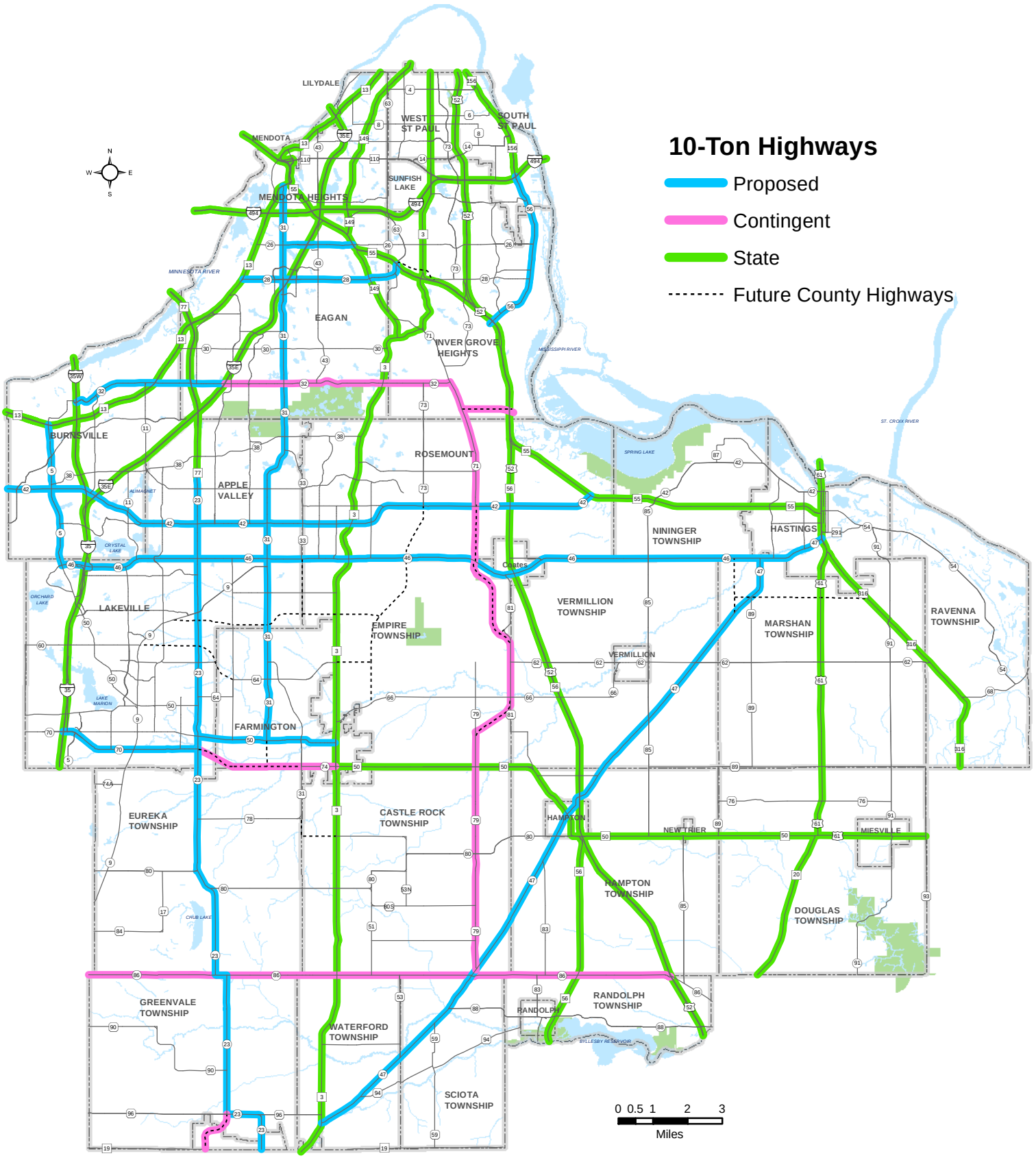
The following ***policies*** support management of 10-ton system implementation to increase system efficiency and safety and to maximize existing highway capacity:

M.3 10-Ton Routes - Plan Updates
With each plan update, adopt an updated network of potential 10-ton routes.

M.4 10-Ton Routes - Implementation
10-ton routes will be implemented consistent with 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 cities through a council resolution; and
- Board resolution.

10-Ton Highways



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Dakota County 2030 Transportation Plan - Figure 32

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 or county
Freeway Principal Arterial	=	state

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 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.

Mn/DOT Metro District has determined it will concentrate its resources on the principal arterial system. However, functional classification and jurisdictional classification do not always equate. In some cases, Mn/DOT 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 2030.

The current CIP investment for jurisdictional classification is $0.5 million per year. The following are the estimated annual CIP investments for jurisdictional classification over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.3 million ($0.3 million for County Roads)*
- 2016-2020 = $0.6 million ($0.6 million for County Roads)*
- 2021-2030 = $0.4 million ($0.4 million for County Roads)*

*Figures assume staff recommended approach to jurisdictional classification.

Fifty-eight 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

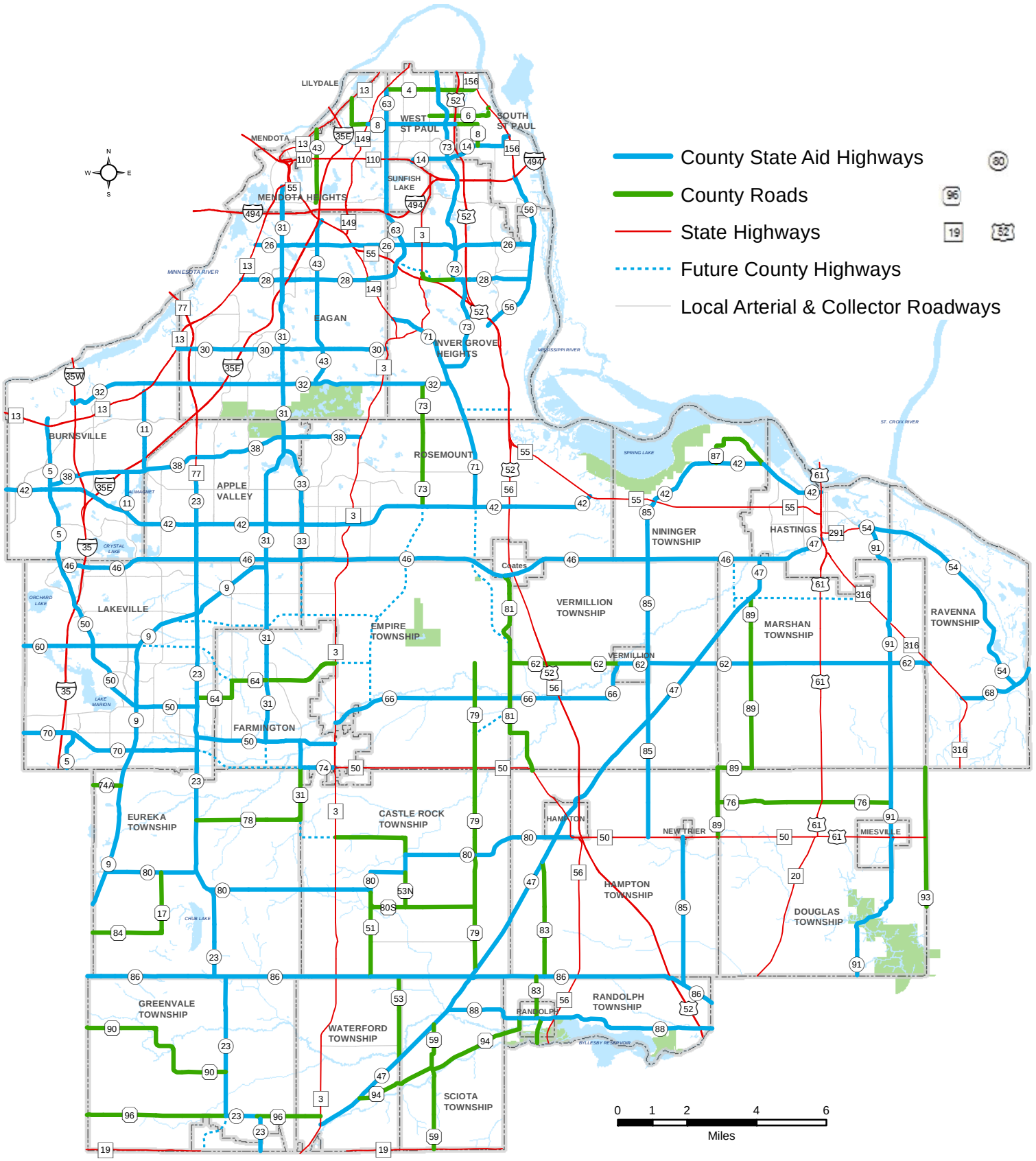
section. Additionally, some county highways have the potential for jurisdictional transfer to the state and some state routes have potential as jurisdictional transfers to the county. Limited jurisdictional transfer funding at the state level has limited activity in this area. The County's Jurisdictional Transfer Plan identifies approximately 3 miles of local roadways for transfer consideration to County jurisdiction over the plan period and approximately 58 miles (31 miles paved and 27 miles gravel) of County highways for transfer consideration to local jurisdiction over the plan period. This is shown in Figure 34. County staff analyzed and prioritized potential timing of jurisdictional transfers as shown in Figure 35. The identified recommendations depicted in Figure 35 are considered preliminary and are subject to the strategies and policies within this section prior to approval.

Jurisdictional classification transfer candidate highway segments were selected and prioritized based on the following factors.

- Highway segment length
- Capacity deficiencies
- Estimated 2030 Annual Daily Traffic volumes
- Year constructed
- Cost to repave and/or reconstruct segment

All of the above factors are also in consideration of Policy M.5 criteria. Also considered were how the overall system has changed or is anticipated to change based on recent study results. The time frames identified for transfer correspond with investment estimates required, availability of funding, ease of transfer/local willingness and opportunity for transfer.

Jurisdictional Classification



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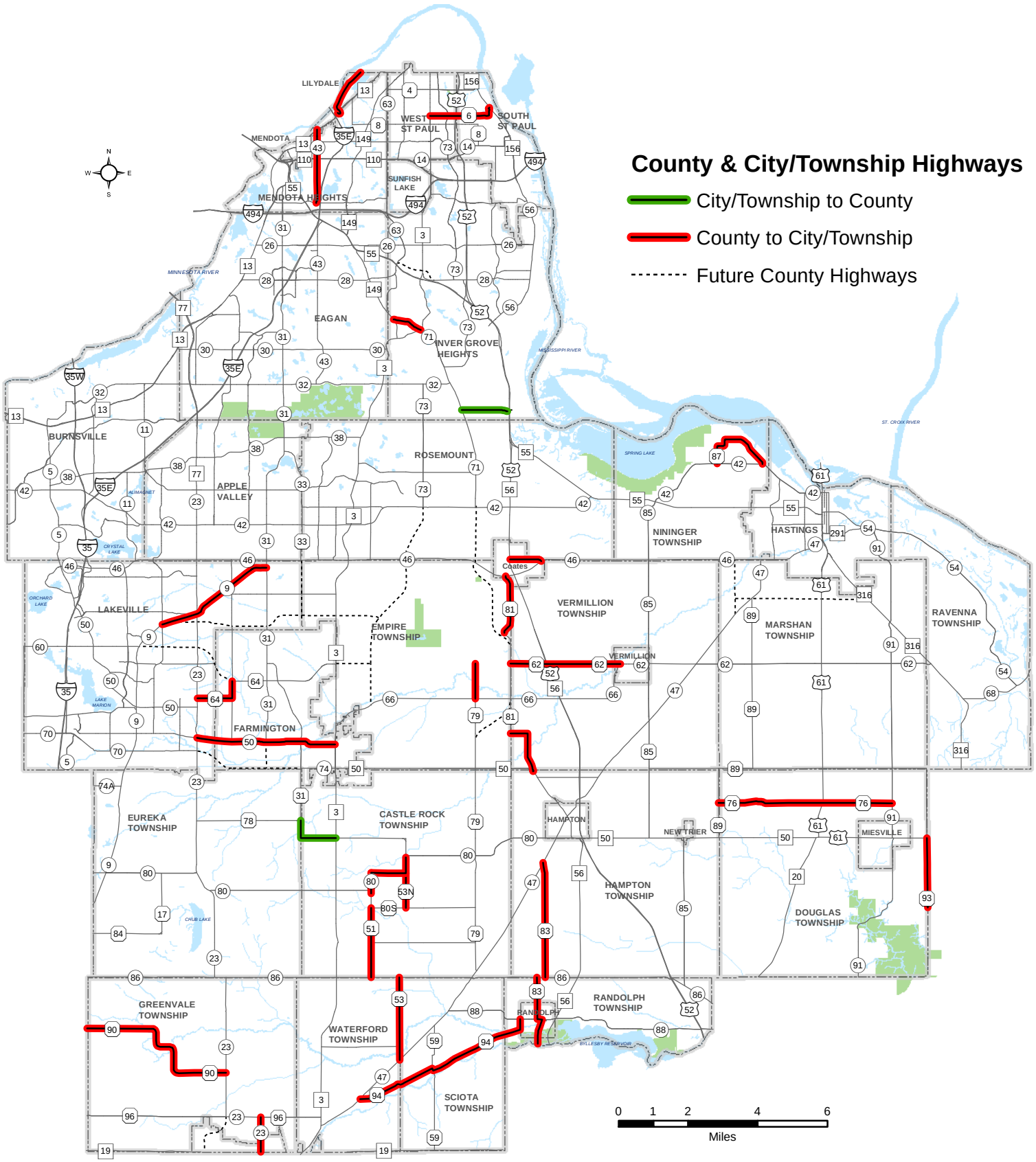
Dakota County 2030 Transportation Plan - Figure 33

County Jurisdictional Transfer Plan
Jurisdictional Issues



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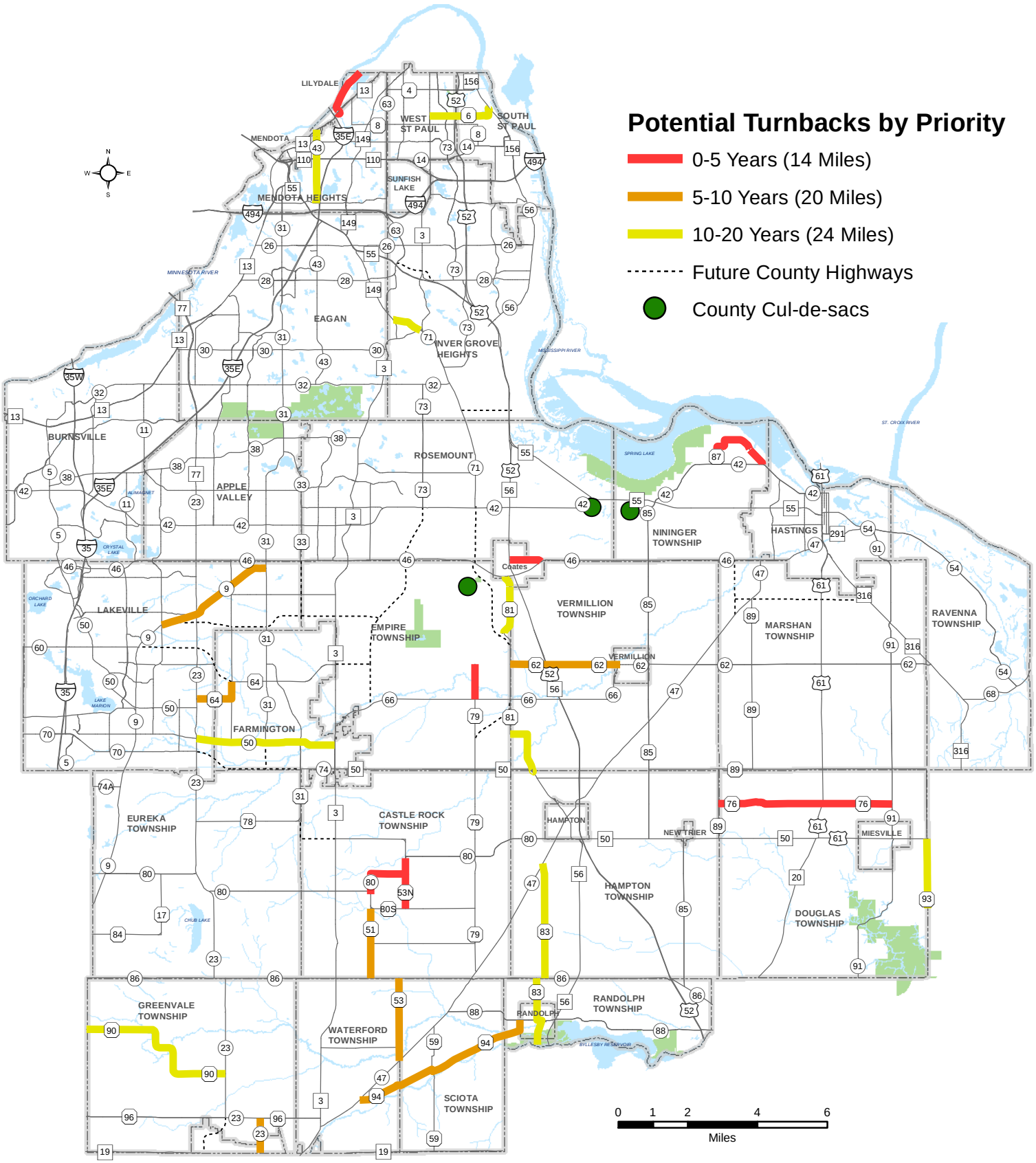
Dakota County 2030 Transportation Plan - Figure 34

County Jurisdictional Transfer Plan
Turnbacks by Priority



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Dakota County 2030 Transportation Plan - Figure 35

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

- County Road 45 (1.53 miles in Lilydale and Mendota Heights)
- County Road 48 (0.84 miles in Coates and Rosemount)
- County Road 53N (1.00 miles in Castle Rock Township)
- County Road 76 (5.00 miles in Douglas Township)
- County Road 79 (1.00 miles in Empire Township)
- County Road 80 (2.00 miles in Castle Rock Township)
- County Road 87 (2.20 miles in Nininger Township)

County staff also analyzed potential County and State highway jurisdictional issues. This is shown in Figure 36. The identified recommendations depicted in Figure 36 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 2030) and requires additional analysis before further consideration.

Figures 34, 35 and 36 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. Mn/DOT'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 37 reflects functional classification and jurisdiction for principal and minor arterials.

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 identify potential jurisdictional transfers.

- **Jurisdictional Classification - Pursue Jurisdictional Transfers**
  Pursue jurisdictional transfer of all highways identified on the adopted jurisdictional transfer map within the life of the Plan.

- **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 (State) County Screening Board has approved a highway for CSAH status.

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:

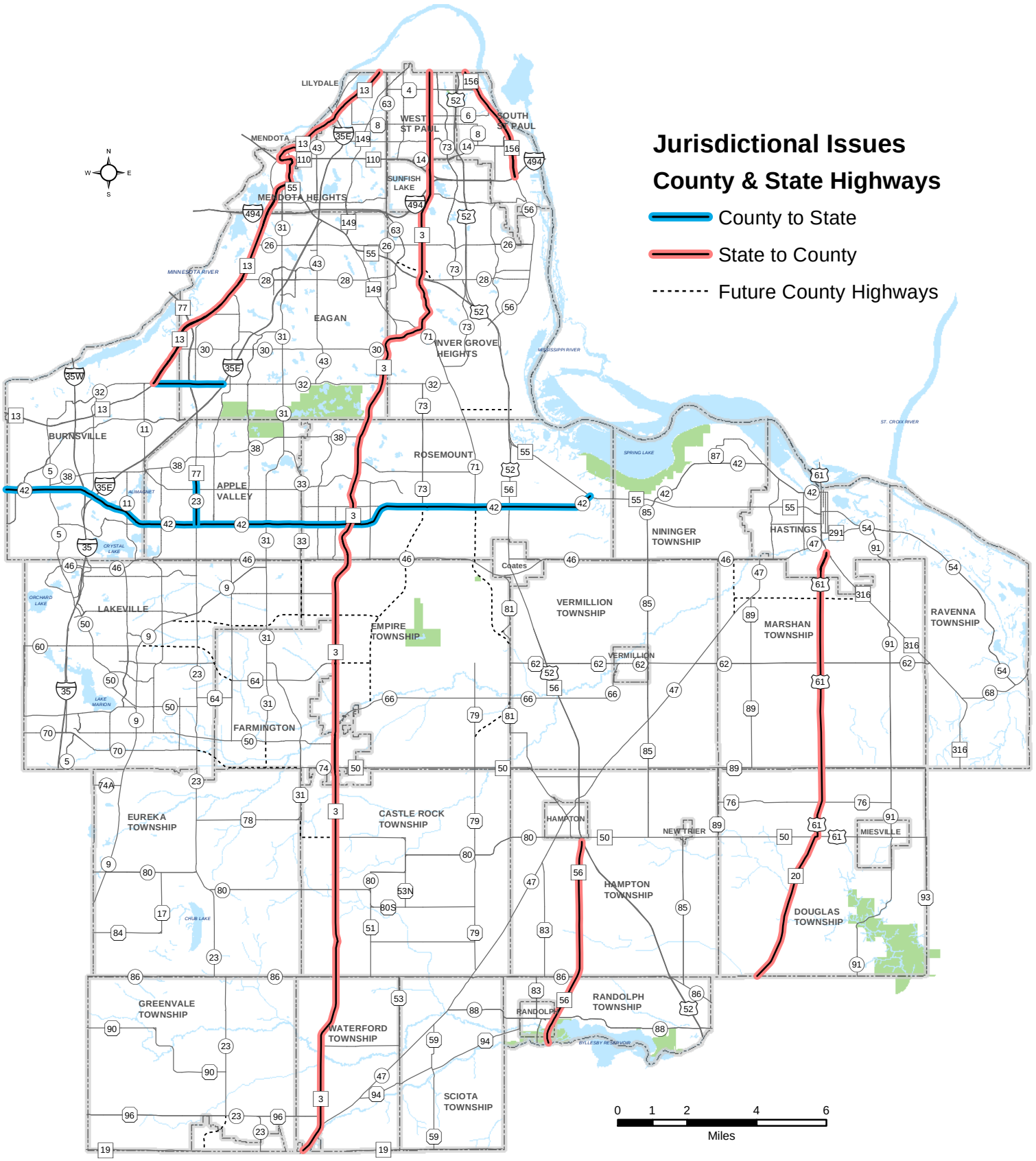
- Traffic volumes
- Functional classification
- Connections to major activity centers
- Connectivity to the metropolitan transportation system
- Goods movement function
- Economic impact
- Mobility versus land access
- Spacing between County highways
- Route continuity
- Connectivity to areas outside 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 Mn/DOT jurisdictional transfers on a case-by-case basis with County Board approval.
- If agreeable between county and city or township, provide financial payment for jurisdictional transfers based on need or highway improvement in lieu of making improvements.

Potential County and State Highway Jurisdictional Issues



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Dakota County 2030 Transportation Plan - Figure 36

Traffic Control Devices

The County will place and operate traffic control devices according to standards as stated in the Highway Traffic Regulation Act (MS Chapter 169) and 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 devise has appropriate uses based on traffic volumes and operating conditions. The following summarizes the main attributes and uses of each traffic control device.

- **Through-Stop:** Lower volume side roads intersecting a high volume highway are best managed with a side road stop from both a safety and overall delay perspective. Through-stop intersections have the lowest crash rate, the number of crashes in consideration of entering vehicle volume.
- **All Way Stop:** Typically, all way stops have a lower collision rate than traffic signals. However, all way stops may begin to break down at levels much below the levels a roundabout or a traffic signal can accommodate.
- **Roundabouts:** Roundabouts manage conflicting traffic through intersection geometry and signing, with traffic yielding before entering the roundabout. 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 typically lower overall crash rate and less maintenance than traffic signals. Roundabouts work well with roadways with similar traffic volumes on each intersecting roadway. The County has installed one roundabout at CSAH 30 and Rahn Road in Eagan and has other roundabouts at approaches with Trunk Highways.
- **Traffic Signals:** When justified based on traffic volumes and operation, traffic signals can be operated differently throughout the day to accommodate traffic fluctuations and can be coordinated with near-by signals to move platoons (groups of vehicles) through a corridor efficiently. High speed multi-lane corridors with major intersecting roadways often work well with signal operation. Most “before vs. after” studies document increases in the number and rate of crashes with signal installation.

Roundabouts have been shown to be an effective tool for intersection control, safety and other benefits. Roundabouts reduce:

- The number of serious injuries and fatal crashes;
- Congestion in peak hours and address traffic flow well during other traffic volume times.
- Pollution and fuel use with fewer stops and less idling;
- The need for signals requiring maintenance;
- In some cases, the required right-of-way for an intersection (compared to lanes needed for signalized intersections; and
- Vehicle noise from stops and starts.

The County has installed one roundabout at CSAH 30 and Rahn Road in Eagan and has other roundabout approaches with Trunk Highways. In the future, the County will evaluate the appropriate traffic control device at intersections case-by-case to determine the most appropriate traffic control.

Intersection Crash Rates by Traffic Control, Traffic Volume and Speed

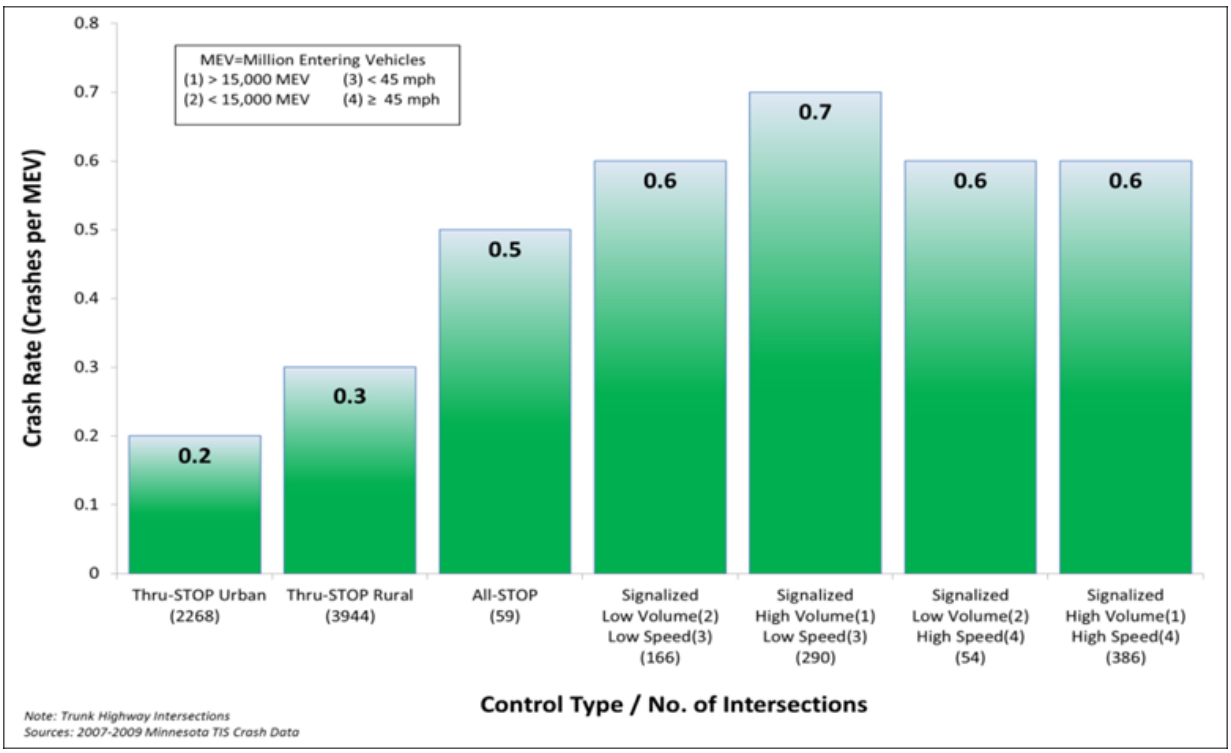


Table 11.

Roundabout Circulation and Benefits

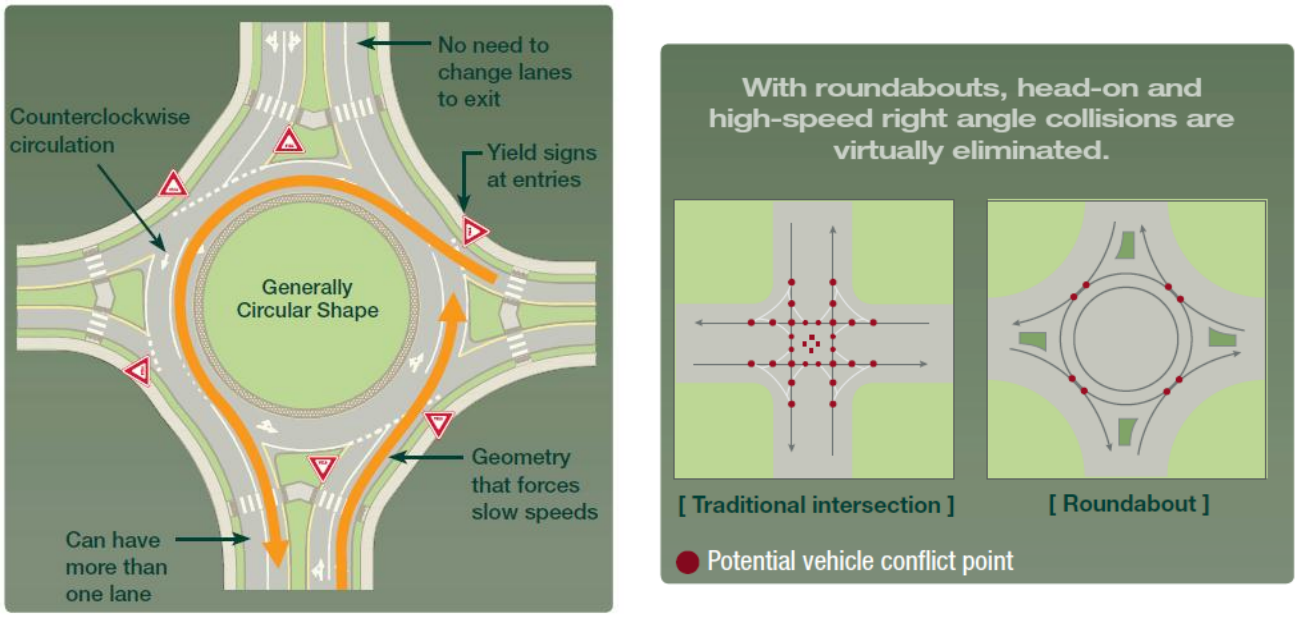
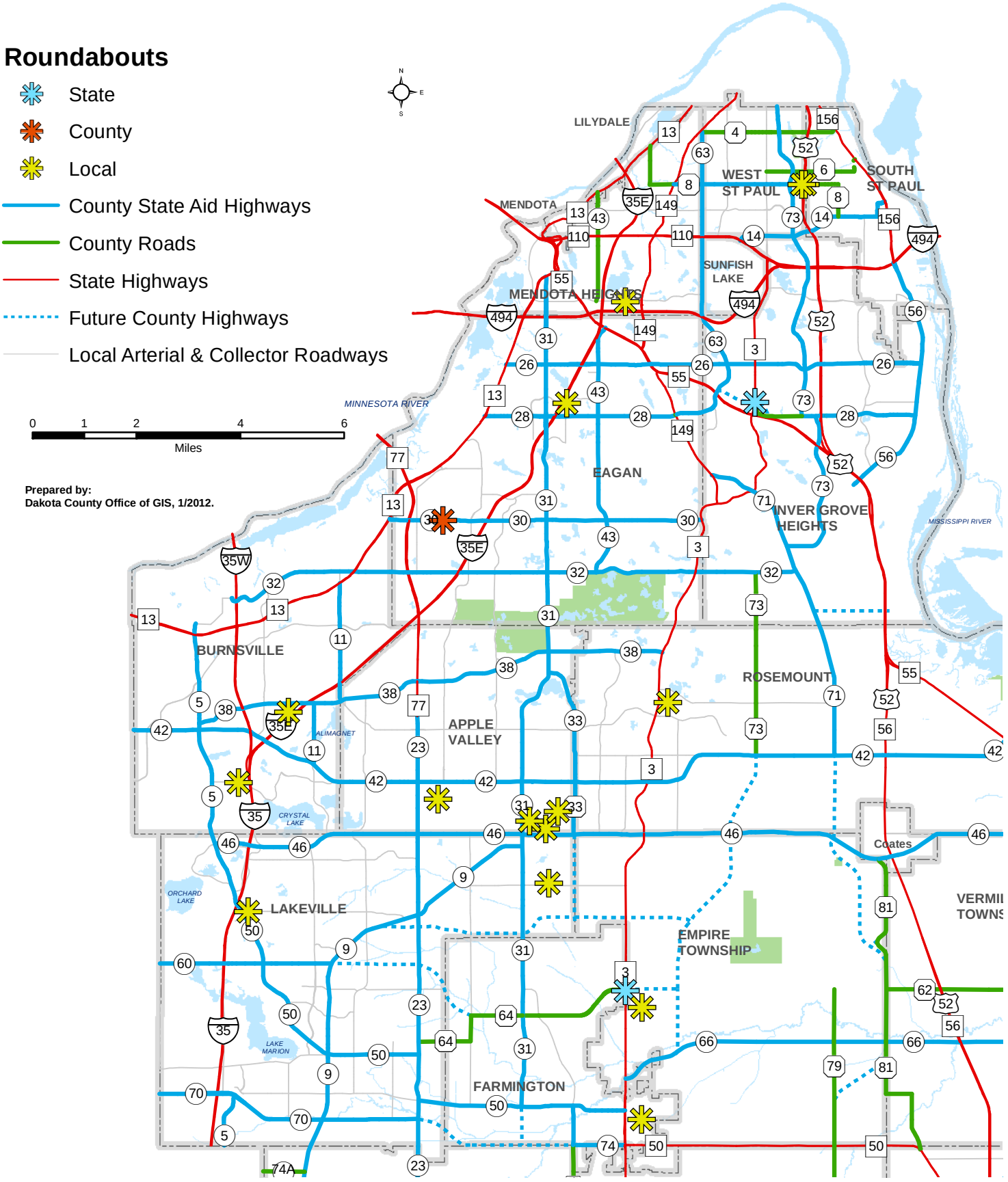


Figure 37.

Roundabouts Located Within Dakota County



Dakota County 2030 Transportation Plan - Figure 38

The following ***strategies*** support management of traffic control devices:

- **Intersection Traffic Control Study**
  The County will study or monitor intersections on a case-by-case basis to determine the most appropriate traffic control to install.

The following ***policies*** support management of traffic control devices:

M.7 Traffic Control Signals – City or State Maintenance Assistance

Provide maintenance assistance for traffic control signals under the jurisdiction of cities or the State. Maintenance assistance will be defined through agreements.

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.

Safety and Management

Dakota County continually monitors the safety and operation of the roadway system. As safety and operational issues arise, specific measures to remedy problems will be implemented as appropriate.

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:

- 2011-2015 = $5.5 million ($1.4 million for County Roads)*
- 2016-2020 = $5.5 million ($1.4 million for County Roads)*
- 2021-2030 = $5.5 million ($1.4 million for County Roads)*

*Figures include combination of safety and management and access management.

Intersection Traffic Control Projects

When installed under conditions that justify its use, traffic signalization or installation of roundabouts can help manage high volumes of traffic by interrupting extremely heavy flows to permit the crossing of minor movements that could not otherwise move safely through an intersection. Traffic signals can increase the traffic capacity of an intersection.

PERFORMANCE MEASURE: Traffic signals are installed or reconstructed to address operational demand when justified.

The current CIP investment for signal projects is $1.0 million per year. The following are the estimated annual CIP investments for signal projects over the plan period including estimated investments for County Roads:

- 2011-2015 = $1.0 million ($0 for County Roads)
- 2016-2020 = $0.7 million ($0 for County Roads)
- 2021-2030 = $0.7 million ($0 for County Roads)

The following ***strategy*** supports management of signal projects to increase system efficiency and maximize existing highway capacity:

- **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 ***policy*** supports management of signal projects to increase system efficiency and maximize existing highway capacity:

M.10 Intersection Traffic Control Changes
Install or remove intersection controls (such as traffic signals, roundabouts, stop signs, and channelization) based on a County engineering study that indicates the best measure for the safety and operation of an intersection. Installation is based on priority and availability of funds. Installation or removal of intersection traffic controls requires County Board approval.

Right-of-Way Preservation and Management

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. In the extreme case, projects may be canceled. 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.

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 requires 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 process outlined above. Dedicated right-of-way is then recorded at the County Recorder's Office.
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.

A plat needs map is developed in coordination with local units of government to identify future highway needs and associated right-of-way dedication necessary for future highway improvement and expansion.

The current CIP investment for right-of-way preservation and management is $1.0 million per year. This is in addition to 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:

- 2011-2015 = $1.0 million ($0.3 million for County Roads)
- 2016-2020 = $1.0 million ($0.3 million for County Roads)
- 2021-2030 = $1.0 million ($0.3 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 – Multiple Owners**
  Cooperate with others to develop multiple use agreements for highways or jointly owned right of way with private and public interests.

- **Right of Way – Standards**
  Follow standards for placement of utilities, trails, and other structures within highway right of way.

- **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 Mn/DOT and cities to develop official maps and acquire 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.11 Right-of-Way - Landscaping

By permit, allow low maintenance landscape plantings on highway right of way. Permittees will be responsible for maintenance.

M.12 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 #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.13 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.

Goal 4 Summary

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 strategies and policies address access management, the 10-ton County Highway system, functional classification, jurisdictional classification, traffic control devices, safety and management, traffic signal projects and right-of-way preservation and management as critical elements in managing the existing system.

The current CIP investment for project to manage the existing system is approximately $7.9 million per year. Activities include access management, jurisdictional classification, safety and management, signal projects, right-of-way preservation and transit infrastructure. 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 investments over the Plan period.

Costs associated with access management are included with other project expenses in the CIP or are assumed at no cost.

TOTAL Average Yearly Management Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Access Mgmt	2.7	1.7	-	-	-
Jurisdictional Class.	0.3	0.5	0.3*	0.6*	0.4*
Safety & Mgmt	1.0	3.6	5.5**	5.5**	5.5**
Intersection Control	1.0	1.0	1.0	0.7	0.7
R/W Preservation	1.0	1.0	1.0	1.0	1.0
Totals	6.0	7.8	7.8	7.8	7.6

* Assumes staff recommended approach to turnbacks.
** Includes combination of Safety&Management AND Access Management.
Note: 10 Ton system implementation assumed at no cost.

County Road Avg Yearly Management Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Access Mgmt	-	-	-
Jurisdictional Class.	0.3*	0.6*	0.4*
Safety & Mgmt	1.4**	1.4**	1.4**
Intersection Control	0.0	0.0	0.0
R/W Preservation	0.3	0.3	0.3
Totals	2.0	2.3	2.1

* Assumes staff recommended approach to turnbacks.
** Includes combination of Safety&Mgmt AND Access Mgmt.
Note: 10 Ton system implementation assumed at no cost.

Chapter 8

Goal 5:
Replace 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. The County will replace deficient elements of the transportation system as they become structurally or functionally obsolete.

Importance
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 Reconstruction
- Bridge Replacement
- Gravel Road Paving
- Traffic Signal Replacement

Replacement Issues

The following are general issues affecting replacement of the existing County transportation system addressed in this plan.

Issue:
The cost of gravel and associated road maintenance costs are a concern as the County's gravel roads age and accommodate higher volumes of vehicles.

Issue:
The County's aging signal system and replacement needs are a concern for the future.

Addressing the Issues

The following are potential actions and revisions to the Plan to address these issues.

Gravel Roads Maintenance Costs

- The County now uses lime rock in place of gravel for gravel road surfaces. Lime rock has proven to last longer and can accommodate a greater number of vehicles than gravel without substantial maintenance needs.

Signal Age and Replacement Needs

- County staff will evaluate alternatives to address County signal system aging issues including full or partial replacements.

Highway Replacement and Reconstruction

The County highway system consists of County State Aid Highways (CSAH) and County Roads (CR). The County will reconstruct 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 and operational improvements are also incorporated into reconstruction projects when appropriate. Even with proactive preservation, eventually highway replacement becomes the most cost-effective approach and introduces state of the art design, construction and operation. The County considers the general expected highway life to be 70 years. The current Dakota County highway system age is shown by highway segment in Figure 40.

Highway age will be one factor in considering reconstruction (replacement) needs of the highway. Additional analysis including assessment of safety and the structure of the individual highway segments will be conducted to better determine the actual replacement needs. Future prioritization and timing of projects will still be based on a number of factors per Plan policies.

The following are the estimated annual CIP investments for highway replacement over the plan period including estimated investments for County Roads:

- 2011-2015 = $5.0 million ($2.5 million for County Roads)*
- 2016-2020 = $12.4 million ($1.1 County Roads)*
- 2021-2030 = $8.7 million ($0.2 million for County Roads)*

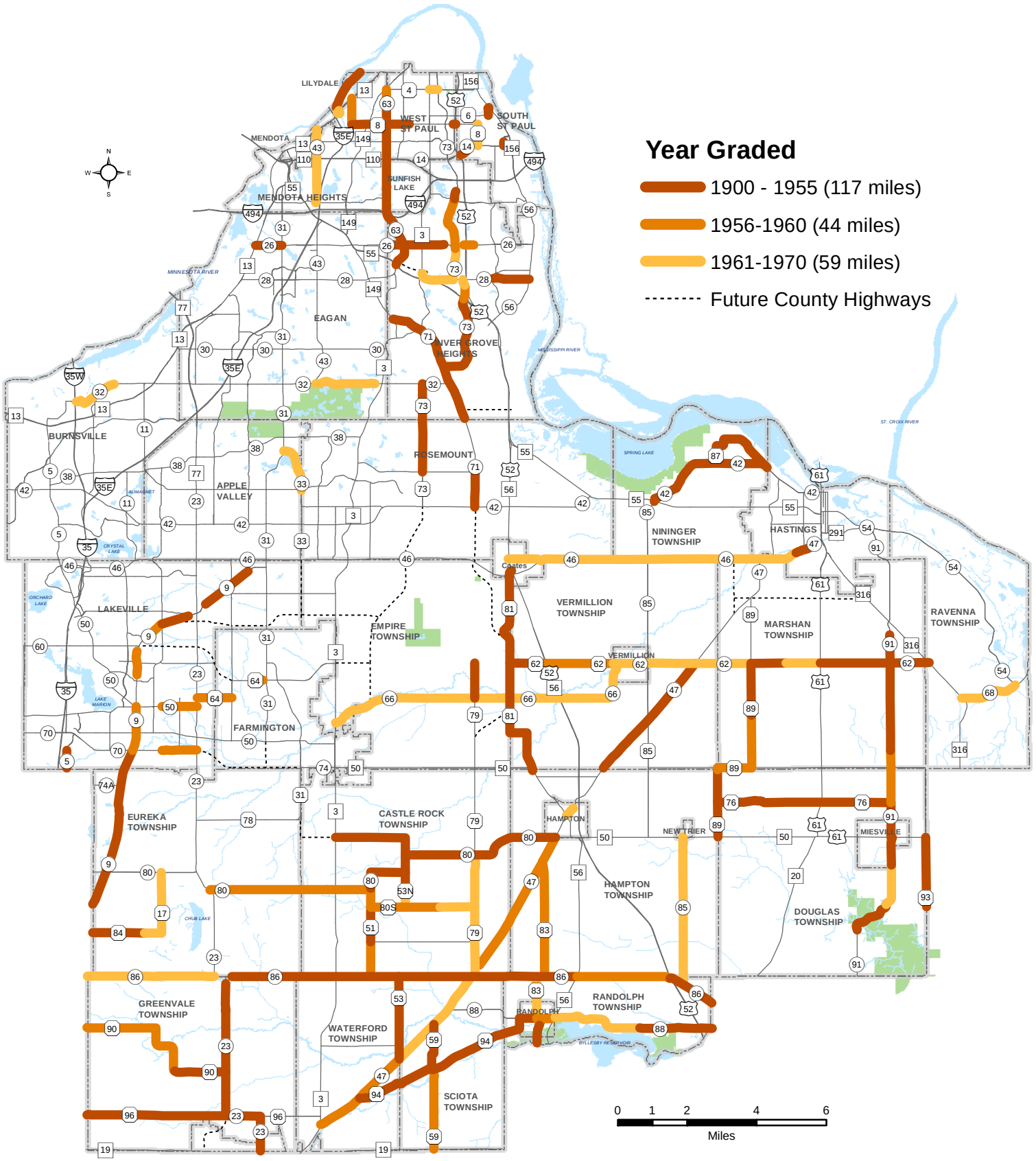
*Figures based on existing information. Additional safety and structural analysis to be completed.

The following ***policy*** supports replacement and reconstruction of deficient highway elements of the system.

R.1 Highway Replacement

Reconstruct highways or highway elements that have exceeded their useful life based on structural, functional, operational or safety factors.

Dakota County Road Age



Prepared by:
Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 39

Bridge Replacement

To monitor operation quality of bridges, the County conducts annual bridge inspection to determine the bridge sufficiency rating. As of 2010, the County had no structurally deficient bridges on the County highway system. This means that no bridges had poor, serious or critical ratings for the deck (roadway), the superstructure (beams and trusses) or the substructure (piers and abutments).

However, as bridges age over the plan period, bridge replacement investment will continue to be necessary. A bridge will be recommended for replacement or reconstruction if the rating is less than 80 and deficient in structural adequacy or functionally obsolete. As of 2010, the County had two bridges that were functionally obsolete because the bridge width is substandard for the amount of traffic they carry. These two bridges are located on CSAH 46 in Nininger Township (between Jacob Avenue and CSAH 47) and on CSAH 47 in Vermillion Township (between CSAH 85 and 210th Street).

In addition, there are four timber bridges on the County System that are past the design life of 50 years. These bridges will need to be replaced within the next ten years. These bridges include bridges on CSAH 80 in Eureka Township, on CSAH 80 in Hampton Township, on CSAH 85 in Hampton Township and CR 90 in Greenvale Township.

PERFORMANCE MEASURE: The County will have no bridges that are structurally deficient on the County highway system.

The following are the estimated annual CIP investments for bridge replacement over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.3 million ($0.2 million for County Roads)*
- 2016-2020 = $0.1 million ($0 County Roads)*
- 2021-2030 = $0.3 million ($0.1 million for County Roads)*

*Figures are based on bridge ages. Replacement costs will also depend of Sufficiency Rating.

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 safety reasons.

- **Bridge Replacement – Beyond 20-Year Needs**
  Anticipate traffic needs beyond 20-year ADT to determine bridge design elements.

- **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. Typically County staff will:

- Assist with pursuit and administration of State Bridge funding;
- Administer plan and specification submittal and review by the State; and
- Assist townships with selection and oversight of engineering consultants.

- **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.

Gravel Road Paving

The County currently has approximately 65 miles of gravel roads. This is compared to 90 miles in 2004 when the *Dakota County 2025 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 and Average Daily Traffic (ADT) count 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.

Since this Plan was last adopted in 2004, all of the County gravel roads have been resurfaced with 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 $2.0 million. The following are the estimated annual CIP investments for gravel road paving over the plan period including estimated investments for County Roads:

- 2011-2015 = $1.3 million ($1.0 million for County Roads)*
- 2016-2020 = $1.5 million ($1.2 million for County Roads)*
- 2021-2030 = $1.7 million ($1.4 million for County Roads)*

*Figures based on the assumptions that gravel road reconstruction and paving occurs when the ADT reaches a minimum of 300.

The following **strategies** support reconstruction of deficient gravel road elements.

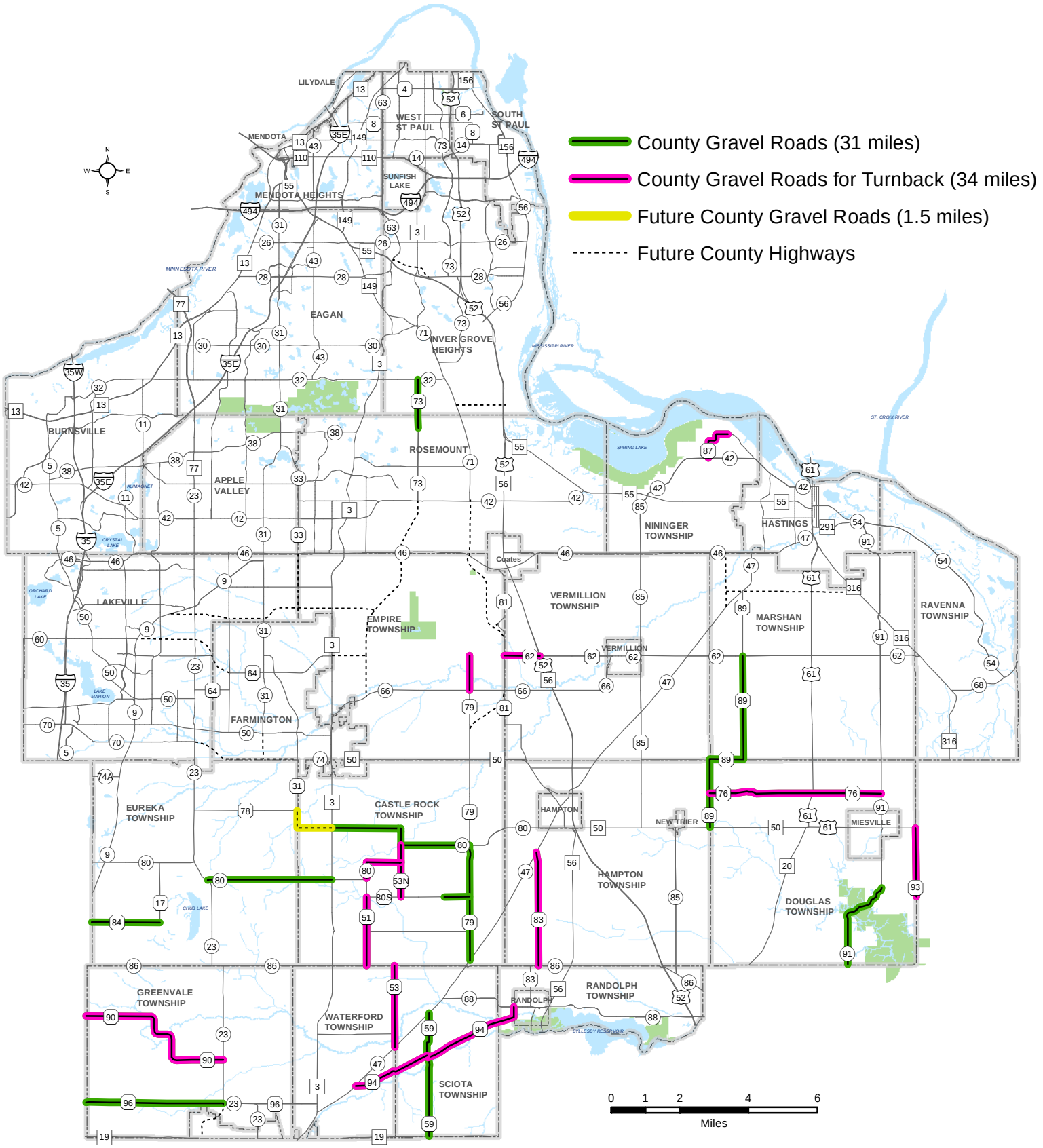
- **Project Inclusion in CIP**
  Gravel highway paving projects will be considered based on the identified factors to determine programming of gravel road paving projects in the CIP.

- **Gravel Road Paving Consideration**
  Gravel roads will be considered for reconstruction and pavement when the ADT is greater than 500 ADT unless other needs such as safety or jurisdiction transfer warrant consideration of a paved surface. Recent lime rock material application to gravel roads may allow for ADT's up to 500 without substantial increased maintenance. Therefore, a thorough evaluation will be conducted to determine the need and timing of gravel road paving to provide cost effective highways and increase mobility, safety and maintenance efficiency.

- **Gravel Conversion to Paved**
  Consider gravel highway reconstruction to bituminous surface at 300 to 500 ADT to minimize highway life cycle cost. Actual timing of conversion will be based on several factors including the following:
  - Safety considerations
  - Structural conditions of the Roadway
  - Funding availability (County State Aid/County Levy/Program Aid/City participation)
  - Location in relation to the Metropolitan Urban Service Area

Figure 40 depicts the future jurisdiction of County gravel roads. Approximately 31 miles of gravel roads are anticipated to remain under County jurisdiction. Approximately 34 miles of gravel roads currently under County jurisdiction are anticipated to be transferred to local jurisdictions. 1.5 miles of future County gravel road addition is anticipated with a connection of CR 78 between CSAH 31 and TH 3 in Eureka and Castle Rock Townships.

County Gravel Roads - Future Jurisdiction



Prepared by:
Dakota County Office of GIS, 1/2012.

Dakota County 2030 Transportation Plan - Figure 40

Traffic Signal Replacement

Dakota County has installed approximately 70 percent of all existing County intersection signals within a 15 year period through the year 2000. Though no consistent practices have been established regarding the best life span replacement plan for signals, preservation techniques can be applied to replace elements of the system and lengthen the overall life span of a traffic signal.

Over a period of time, signals will eventually require replacement consideration due to age. Mn/DOT replaces its signals about every 30 years. The County is currently evaluating several techniques to determine the longevity of the County signal system as it ages.

The current number of Dakota County traffic signals installed by year is shown in Figure 41.

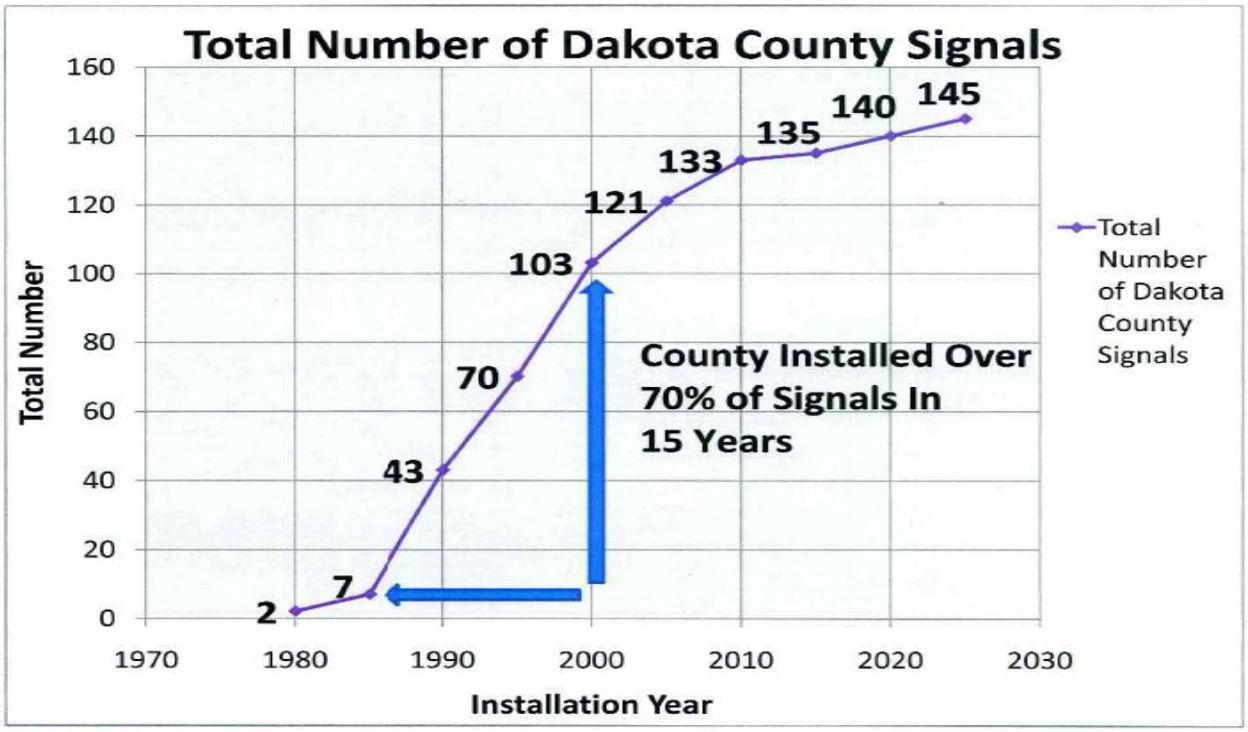


Figure 41.

In the mid 1980's the County only had seven traffic signals on the County system. As of 2010, that number is 133. In the future the focus will begin shifting from installing new signals to replacing existing signals.

The following are the estimated annual CIP investments for traffic signal replacement over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.2 million ($0 for County Roads)
- 2016-2020 = $1.5 million ($0 for County Roads)
- 2021-2030 = $1.4 million ($0 for County Roads)

The following **strategy** supports replacement and reconstruction of deficient highway elements of the system.

- **Traffic Signal Replacement**
  Evaluate alternatives to address County signal system aging issues including full or partial replacements 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.

Goal 5 Summary

The emphasis of this goal is to address the transportation system elements that have deteriorated over time. The goal recognizes that even with proactive preservation of system elements replacement eventually becomes the most cost effective approach. Replacement investments are focused on highway replacement and reconstruction, bridge replacement, gravel paving and traffic signal replacement. 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. In the period 2005 to 2009, approximately $14.5 million per year was invested towards replacement related projects. This investment was higher than what was identified in the *Dakota County 2025 Transportation Plan* and higher than current needs. This is due to significant investments to replacement activities on CSAH 50 and CSAH 56 between 2005 and 2009. The following are the estimated annual CIP replacement needs and investments over the plan period.

TOTAL Average Yearly Replacement Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Highway Recon.*	2.4	12.5	5.0	12.4	8.7
Bridge**	0.8	0.0	0.3	0.1	0.3
Gravel Paving***	1.0	2.0	1.3	1.5	1.7
Signal Replacem.	-	0.0	0.2	1.5	1.4
Totals	4.2	14.5	6.8	15.5	12.1

* Additional safety and structural analysis to be completed
** Based on bridge ages. Replacement costs will also depend of Sufficiency Rating.
*** Assumes reconstruction and paving at 300+ ADT

County Road Avg Yearly Replacement Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Highway Recon.*	2.5	1.1	0.2
Bridge**	0.2	0.0	0.1
Gravel Paving***	1.0	1.2	1.4
Signal Replacement	0.0	0.0	0.0
Totals	3.7	2.3	1.7

* Additional safety and structural analysis to be completed
** Based on bridge ages. Replacement costs will also depend on Sufficiency Rating.
*** Assumes reconstruction and paving at 300+ ADT

Chapter 9

Goal 6: Improvement and Expansion of Transportation Corridors

The County will improve the existing transportation system to address emerging capacity needs to best provide efficient connections for people to travel to work, to shop, and to one another by safe travel on routes with minimal congestion.

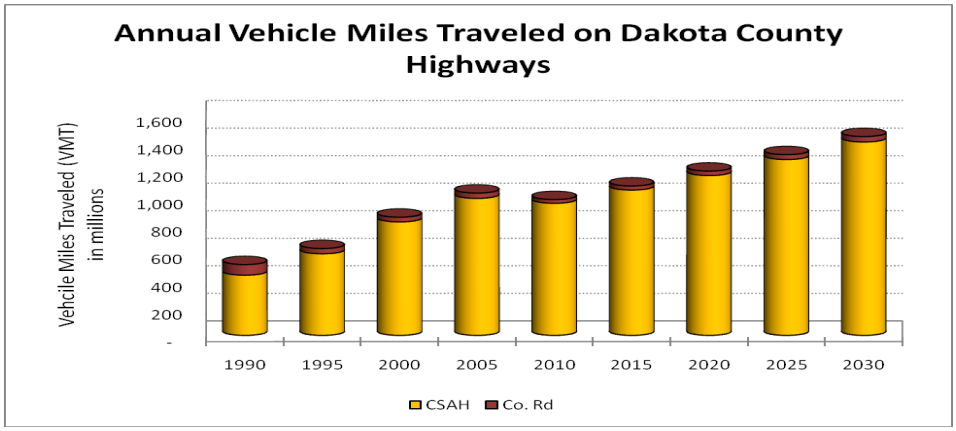
Importance

This goal applies to development of new transportation corridors, lane additions, interchanges and the transit system. The goal identifies current and future estimated expansion needs, defines measures and planned costs of investments, and measures for improvement and expansion of the system.

Between 1990 and 2000, Dakota County's population grew 29.3 percent, from 275,227 in 1990 to 355,904 in 2000. According to Metropolitan Council estimates as of 2010, the County's population grew 12.5 percent in the first decade of the 2000's to 400,675. Although, the growth rate is moderating, the County's population is estimated to increase to 520,010 (or 30 percent) by 2030.

Vehicle miles traveled prior to 2004 was growing at nearly five percent annually. However, in the years between 2004 and 2007 the vehicle miles traveled leveled off to an average rate of 2.4 percent increase (2007 was the latest year available for actual traffic data when preparing the update of the Dakota County Travel Demand Model). Current estimates derived from the County's Transportation Demand Model indicate that between 2010 and 2030 vehicle miles traveled is estimated to grow by 40 percent (2 percent annually).

Table 12.



In some cases, efforts to maximize the operation and efficiency of the existing system are not sufficient to meet traffic demand. In these situations, additional capacity must be added to the system to meet transportation needs within the planning period.

Significant highway expansion needs are expected for both Dakota County and Mn/DOT highways within the planning horizon.

This section applies to improvement and expansion of transportation corridors by:

- Lane additions/expansion
- New highway alignments
- Interchanges and overpasses
- Transit improvements (Cedar Avenue BRT)

It also applies to other major transit initiatives and future studies of emerging transportation needs. Proposed measures and strategies are presented under corresponding subsections. Corresponding policies are listed in the Appendix. Estimated needs include cost of corridor studies, preliminary engineering and environmental study, design/construction engineering, right-of-way acquisition and construction costs.

This section of the plan provides strategies for improvement and expansion of the existing transportation system. Improvement and expansion of the transportation system will be pursued through: Cedar Avenue BRT and the following CIP categories: lane additions and expansion, new alignments, interchanges and overpasses, and future studies.

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

Activities

- Work with other agencies to minimize or mitigate expansion needs.
- Coordinate improvements with development.
- Cedar Avenue Transitway planning.
- Conduct transportation studies to determine needs.

CIP Investment Categories

- Lane Additions/Expansion
- Future County Highway Alignments
- Future Studies
- Interchanges and Overpasses

Improvement and Expansion Issues

The following are general issues affecting improvement and expansion of the existing County transportation system addressed in this Plan.

Issue:
Lane additions and highway expansions require a very large investment to implement in comparison to the overall transportation funds available.

Issue:
Inadequate local and collector roadway system connections often result in more costly arterial improvement and expansion needs.

Issue:
The State has concentrated efforts to improve and expand State Trunk Highways and Interstate Highways within the I-494/I-694 beltway. However, the need for improvement and expansion outside the beltway remains and is not fully addressed at the state or regional level.

Addressing the Issues

The following are potential actions and revision to the Plan to address these issues.

Lane Additions and Highway Expansion

- 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.

Inadequate Local and Collector Roadway System Connections

- A new strategy is identified within this goal that encourages and supports local agencies in the development of local and collector street connections to minimize arterial highway expansion needs. The strategy also identifies the need to work with cities to take advantage of opportunities to address needs with development.

State Trunk Highways and Interstate Highway Improvement and Expansion Needs

- Dakota County will encourage and assist the Metropolitan Council and Mn/DOT in efforts to address Trunk Highway and Interstate Highway needs outside of the I-494/I-694 beltway.

Lane Additions/Expansion

A capacity deficiency exists when traffic exceeds the vehicular capacity of the highway. The acceptable capacity of the highway depends on location, geometrics, locations of major intersections, peak hour traffic volumes and traffic controls.

The highway's level of service is used to assign a value to the level of congestion and efficiency of the highway. The level of service is determined by the ration of the highway volume (traffic) to the established 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.

Level of service	Volume to capacity ratio
A	0.00 - 0.35
B	0.35 - 0.50
C	0.50 - 0.75
D	0.75 - 0.90
E	0.90 - 1.00
F	> 1.00

For two-lane to five-lane roads, the County will consider through-lane additions or highway corridor expansions based on anticipated levels of service of "D" or worse. This implies an anticipated traffic volume to highway capacity ratio of 0.75/1 (V/C = 0.75) or more. V/C is roadway volume divided

by the highway capacity. The anticipated traffic volume to highway capacity ratio is based on the County Travel Demand Model that determines traffic volume resulting from anticipated land use development. The traffic volume is compared to capacity. Each highway has a finite capacity that is the maximum number of vehicle that can be accommodated, including all its lanes.

Highway capacity deficiencies in 2007 are shown in Figure 42. Deficiencies for 2030 are shown in Figure 43. Highways shown as under capacity indicate that the traffic volume is less than 75 percent of the maximum highway capacity design (Levels of Service A, B and C). Highways shown as approaching capacity indicate that the traffic volume is greater than 75 percent of the maximum highway capacity design (Levels of Service D and E). Highways shown as over capacity indicate that the traffic volume is greater than the maximum highway capacity design (Level of Service F).

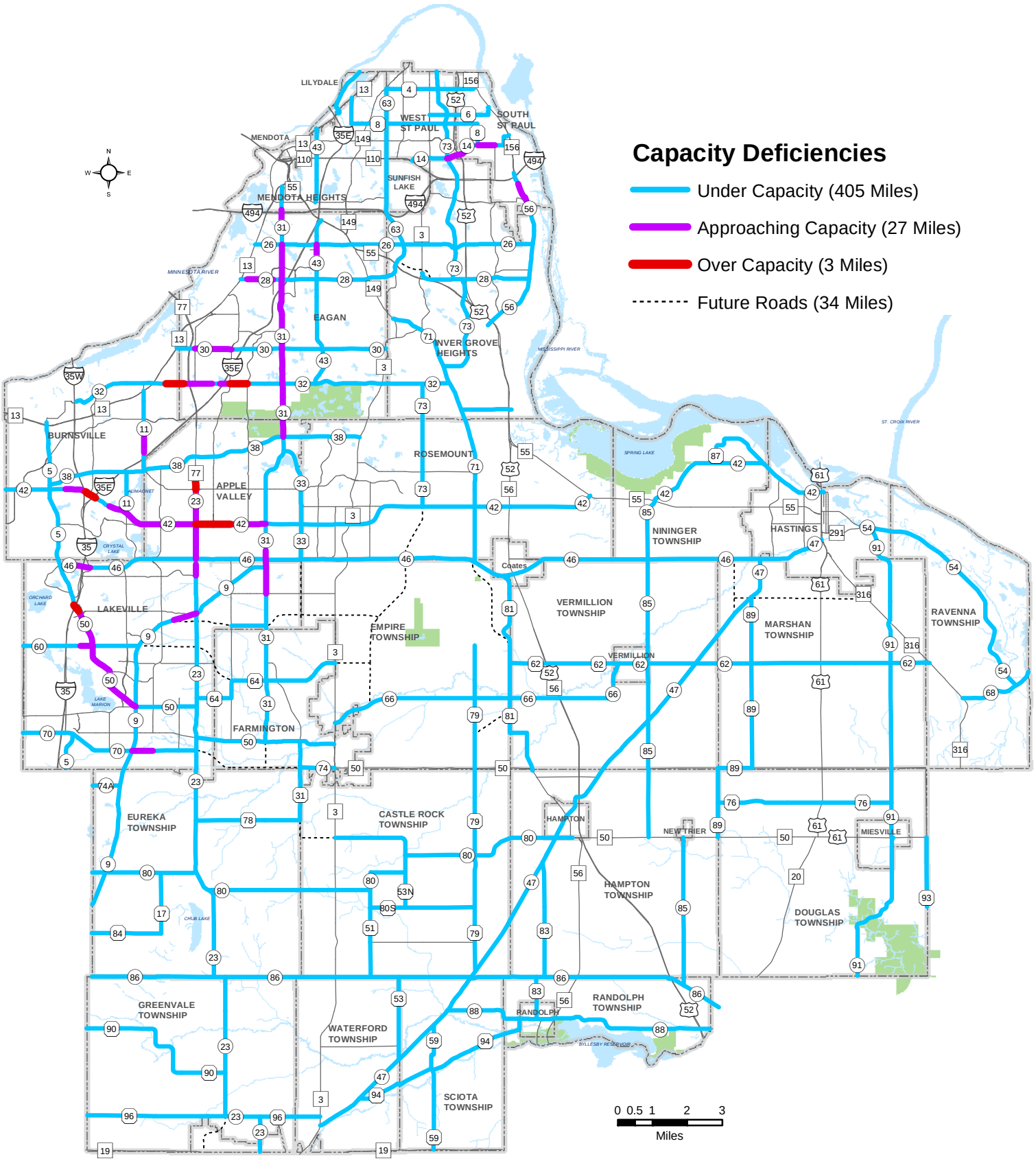
Expansion improvements, including addition of through-lanes, will be evaluated as a highway approaches 75 percent of traffic volume capacity. Expansion needs cannot be related directly to site-specific development in place of overall transportation system needs. In some instances, the rate of development may result in the volume-to-capacity ration reaching 75 percent 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, and life of the facility. As the overall needs of the transportation system exceed the funds available to address these needs, expansion projects may need to be delayed to ensure higher-priority projects on the system are funded.

The following are the estimated annual CIP investments for lane additions over the plan period including estimated investments for County Roads:

- 2011-2015 = $7.1 million ($0 for County Roads)
- 2016-2020 = $13.8 million ($0 for County Roads)
- 2021-2030 = $32.1 million ($1.2 million for County Roads)

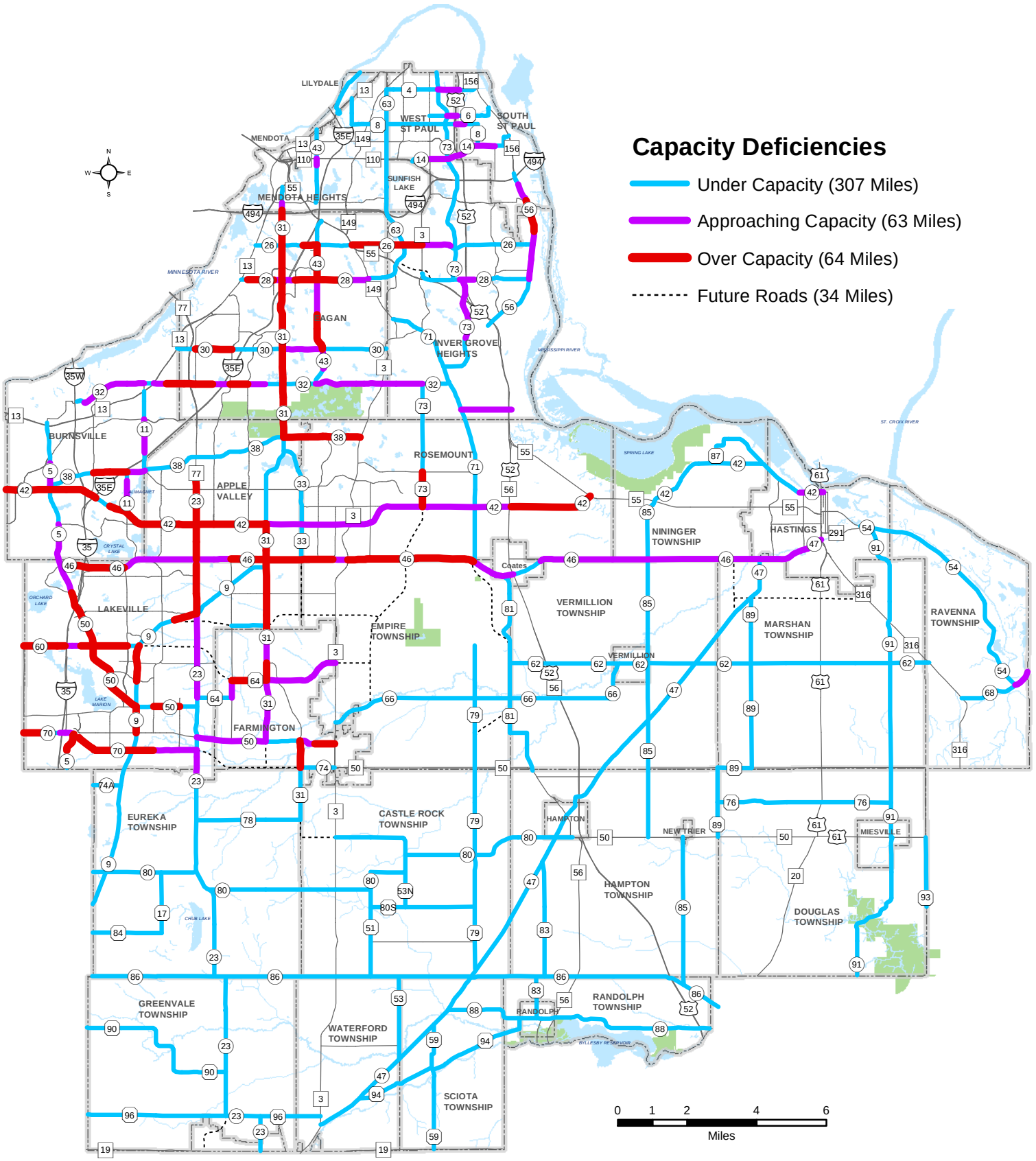
Dakota County Highway Capacity Deficiencies, 2007



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 42

Dakota County Highway Capacity Deficiencies, 2030



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Dakota County 2030 Transportation Plan - Figure 43

County Highways That Exceed 6-Lane Capacity

Currently, all highways on the County system contain at-grade intersections (County highways that 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. According to 2030 projections, the following highways will likely exceed six-lane divided highway capacity by 2030:

- CSAH 23 (TH 77 to CSAH 9 in Apple Valley and Lakeville)
- CSAH 28 (I-35E to west of Discovery in Eagan)
- CSAH 31 (I-35E to Duckwood Drive in Eagan)
- CSAH 32 (TH 13 to east of CSAH 31 in Burnsville and Eagan)
- CSAH 42 (Foliage Avenue to Scott County border in Apple Valley and Burnsville)

Fewer solutions are available to deal with this problem. Options include controlled access eight-lane facilities, conversion to a freeway design, expanded transit service, jurisdictional change, spot grade separations, development of reliever routes, increased use of transit alternatives and combinations of listed options. Determination of an appropriate solution will be made on an individual basis 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.

Dakota County's Identified Improvements and Expansions to the State Trunk Highway and Interstate Highway System

Highway system improvements and expansion needs for highways under Mn/DOT's jurisdiction are based on capacity deficiencies for the state system within the County. A significant number of deficiencies on the State Trunk Highway and Interstate Highway system highlight the concern and challenges with regional policies that provide for little improvement and expansion of roadway capacity outside of the I-494/I-694 beltway for the planning period.

The following Mn/DOT highways are forecasted to experience a capacity deficiency by 2030 assuming no additional highway improvements are made:

- TH 3 between I-494 and TH 50
- TH 13 between the Scott County border and CSAH 28
- TH 55
    - Between TH 149 North and TH 149 South
    - Between Inver Grove Heights and Hastings
    - At the Mendota Bridge
- TH 77
    - At the Cedar Avenue Bridge
    - Between CSAH 32 and 140th Street
- TH 149
    - Between Rich Valley Boulevard and TH 3
    - Between I-494 and TH 55
- TH 316 between Hastings and the Goodhue County border
- I-35E between CSAH 28 and the Ramsey County border
- I-35W
    - Between CSAH 42 and the Hennepin County border
    - At the I-35W Minnesota River Bridge
- I-494
    - Between South St. Paul and the Washington County border

The County will proactively assist and encourage Mn/DOT in addressing the above-identified Trunk Highway and Interstate Highway issues within the County.

The following ***strategies*** support improvement and expansion of transportation corridors through lane additions or expansion:

- **Right-of-way Land Use Changes and Platting**
  Encourage cities to consider right-of-way needs to support the future County highway system when authorizing 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 2030 as shown in Figure 43, but may permit local funding for these improvements if expansion needs are anticipated beyond 2030.

- **Minimize Arterial Expansion Needs**
  Encourage/support local agencies in the development of local and collector street connections 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 and transit alternatives are fully maximized before expansion options are considered.

- **State System Expansion Needs**
  Encourage and assist Mn/DOT in identifying and evaluating options to address Trunk Highway and Interstate Highway needs within the County.

- **Coordination with Development**
  Work with cities to take advantage of opportunities to address expansion needs on the system together with development as it occurs.

- **Transit Development**
  Encourage transit development as an alternative to single-occupant vehicle trips, further delaying the need for expansion.

Future County Highway Alignments

Capacity, safety and operational improvement of the highway system sometimes require that highways be built on new alignments or that existing highways be realigned. The following new county highway alignments have been identified through recent study for implementation during the Plan period:

East/West Alignments

- New County highway near 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* (A segment west of TH 3 has recently been developed within Farmington.)
- New County highway within the 215th and 220th Street alignments between CSAH 23 in Lakeville and TH 3 in Farmington.*
- Extension of CSAH 32 from CSAH 71 to TH 52 on the 117th Street alignment in Inver Grove Heights.
- Extension of CSAH 28 in Eagan to ½ mile east of TH 3 in Inver Grove Heights.
- Connection of CR 78 between CR 31 and TH 3 in Eureka Township.
- Extension of 170th Street East as a future County highway between TH 316 and CSAH 47 in Marshan Township.

*Refer to the *Dakota County East West Corridor Study* and the *Rosemount/Empire/UMore Transportation System Study* for details.

North/South Alignments

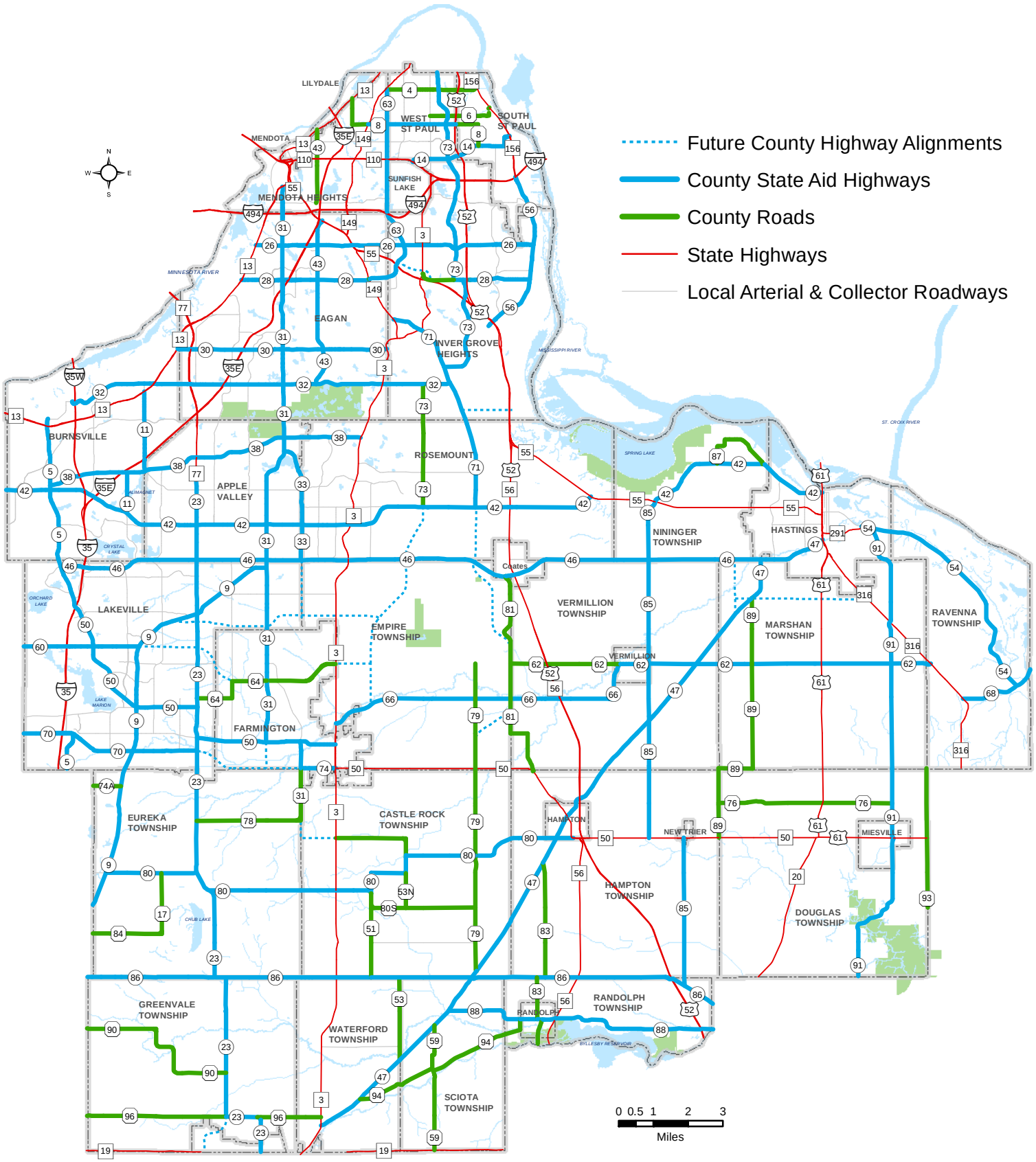
- Extension of CSAH 31 from CSAH 50 to the future east/west County highway (near the 220th Street alignment) in Farmington.
- Extension of CR 33 from CSAH 46 to 179th Street in Lakeville.
- Extension of CSAH 71 from CSAH 42 to connect with existing CR 81 in Rosemount and Empire Township.
- Extension of CR 81 from CSAH 66 to connect with existing CR 79 in Empire Township.
- Extension of CR 73 from CSAH 42 to CSAH 66 (along the Biscayne Avenue alignment) in Rosemount and Empire Township.
- New County highway on the Jacob Avenue alignment between CSAH 42 and CSAH 47 in Marshan and Nininger Townships.
- Realignment of CSAH 23 from CR 96 to TH 19 along the Garrett Avenue alignment in Greenvale Township.
- Dakota County may participate in the costs associated with upgrading local roadways to 10-ton standards for roadways identified as future County highways.

The existing CIP investment for new alignments is $3.1 million. The following are the estimated annual CIP investments for new alignments over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.7 million ($0.7 million for County Roads)
- 2016-2020 = $0.8 million ($0.8 million for County Roads)
- 2021-2030 = $0.9 million ($0.9 million for County Roads)

Future County Highway Alignments are shown in Figure 44.

County Transportation System
Future County Highway Alignments



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 44

The following ***policies*** support improvement and expansion of transportation corridors through new alignments.

IE.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.

IE.2 Right-of-Way - Standards
Follow standards for placement of utilities, trails, and other structures within highway right of way.

IE.3 Right-of-Way - 20-Year Needs Map
Develop a Countywide map based upon long-term system needs to identify 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.

IE.4 Future County Highway Alignments
Future County Highway alignments are identified through engineering studies adopted by County Board resolution.

Interchanges and Overpasses

Interchanges and high-capacity controlled intersections are nodes that connect the most important, heavily traveled, principal and minor arterial highway segments of the system. As traffic volumes increase, the need for an interchange to provide safe and efficient operation of opposing traffic grows in importance.

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.

The following locations are likely to have the need for interchanges in the future based on 2030 projected traffic volumes:

Dakota County Highway Intersections

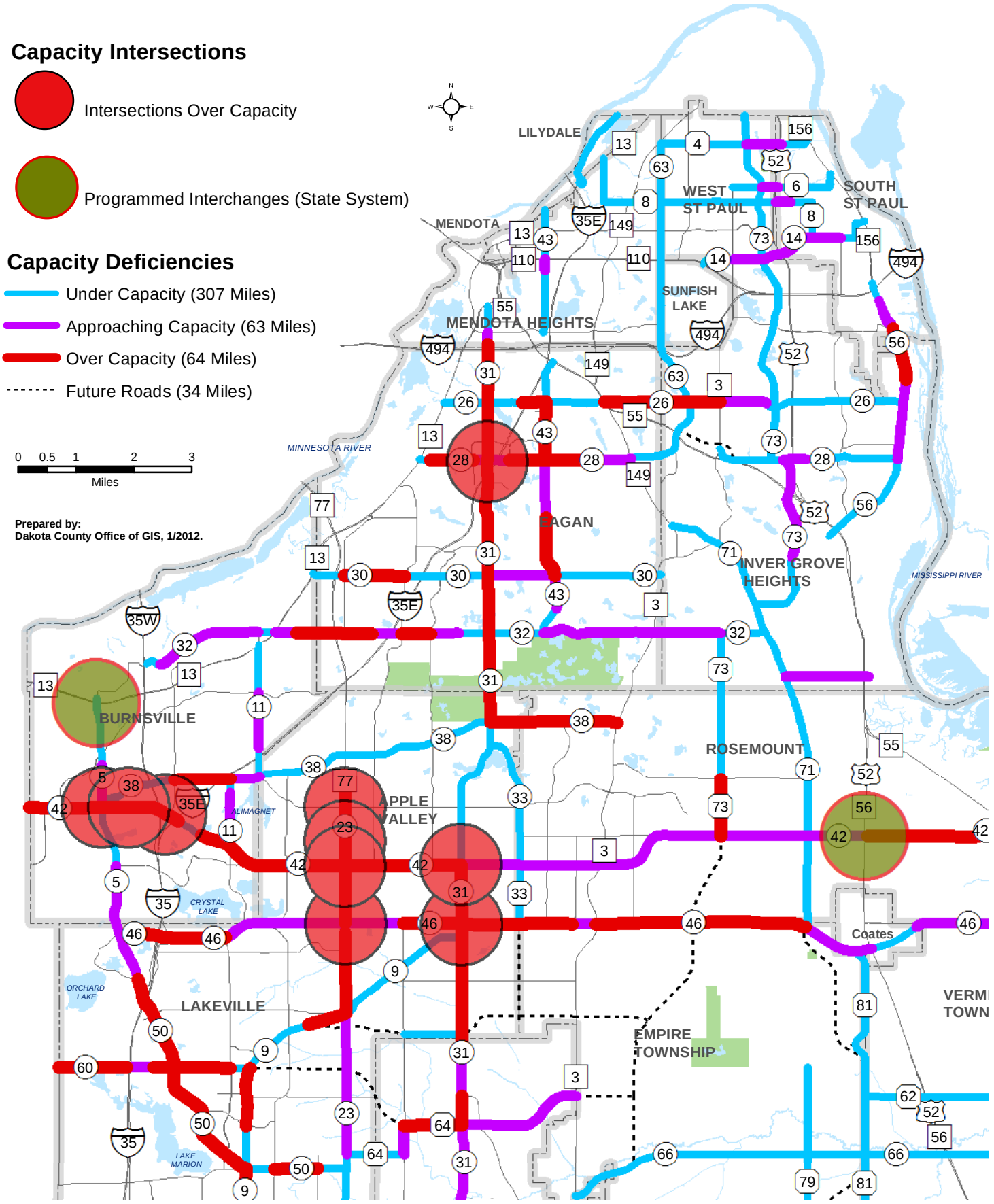
Intersections Exceeding 70,000 ADT in 2030

Intersection	2030 ADT	Cost (millions)
CSAH 23 & CSAH 42	105,000	$25
CSAH 23 & 140th Street	88,000	$25
CSAH 28 & CSAH 31	84,000	*
CSAH 42 & Nicollet Avenue	83,000	*
CSAH 23 & 147th Street	80,000	$25
CSAH 23 & CSAH 46	79,000	$25
CSAH 5 & CSAH 42	77,000	$25
CSAH 31 & CSAH 46	75,000	$25
CSAH 42 & Aldrich Avenue	74,000	*
CSAH 42 & Burnhaven Drive	71,000	$25
CSAH 31 & CSAH 42	70,000	$25
TOTAL		$200

* Installation of an interchange is highly unlikely due to excessive implementation costs associated with the intersection proximity to an existing interchange or future interchange need.

Intersections approaching and exceeding capacity are shown in Figure 45.

Intersections Approaching Capacity



Dakota County 2030 Transportation Plan - Figure 45

Mn/DOT and Dakota County Highway Intersections

- I-35 and CSAH 50 in Lakeville*
- TH 3 and CSAH 42 in Rosemount
- TH 13 and CSAH 5 in Burnsville
- TH 52 and CSAH 47 in Hampton Township*
- TH 55 and CSAH 28 in Inver Grove Heights*
- TH 52 and CSAH 66 in Vermillion Township
- TH 52 and CSAH 86 in Hampton and Randolph Townships
- TH 52 and CSAH 42 in Rosemount*

*Partial funding is proposed.

Costs and timing for interchange improvements varies significantly from one location to another. Investment for each interchange may range from $10 to $20 million or more. The County will cooperate with responsible jurisdictions to plan and implement the improvements. Because these interchanges are beyond anticipated highway revenue, the County plans to develop 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.

The existing CIP investment for interchanges and overpasses is $7.4 million. The following are the estimated annual CIP investments for interchanges and overpasses over the plan period including estimated investments for County Roads:

- 2011-2015 = $5.0 million ($0 for County Roads)
- 2016-2020 = $9.0 million ($0 for County Roads)
- 2021-2030 = $12.5 million ($0 for County Roads)

The following ***strategies*** support improvement and expansion of transportation corridors through interchanges and overpasses:

- **Interchange Construction**
  Construction of interchanges will be considered at existing capacity deficient interchanges, and at-grade intersections with entering volume of approximately 75,000 ADT, and to address sever safety and operational deficiencies.

- **Interchanges and Overpasses – Official Maps**
  Develop official maps or development agreements at future interchange locations in coordination with Mn/DOT and cities for preservation of future right of way beyond the 20-year Plat Review Needs Map.

New Mississippi River Crossing

The County conducted a sensitivity test during the update of the Travel Demand Model to determine the demand on a potential future Mississippi River crossing between Rosemount and Cottage Grove. The sensitivity test assumed an unconstrained capacity for the future bridge crossing with a reasonably fast speed to better understand the demand on the future bridge under ideal conditions. The alignment was assumed to connect 117th Street West in Dakota County to CR 19A in Washington County. The model assumed 2030 enhance land uses to determine travel demand. The modeling results are shown in Table 13.

New Mississippi River Crossing – 2030 Modeling Results

Location	2030 Traffic Volume WITHOUT New Crossing	2030 Traffic Volume WITH New Crossing	Difference
I-494 (Wakota)	170,000	152,000	-18,000
New Crossing	0	33,000	33,000
TH 61 (Hastings)	38,000	35,000	-3,000
Total	208,000	220,000	12,000*

* A new crossing therefore would replace 21,000 trips from existing crossings, while adding 12,000 new river crossing trips to the system.

** Rough estimate of river crossing of $100 million based on $50 million cost of Wakota Bridge structures and extensive roadwork associated with the new crossing.

Table 13.

The preceding table indicates sensitivity test findings. In conclusion, a future bridge in this location would primarily serve travel between Dakota and Washington counties and not serve many commuter trips to and from Minneapolis or St. Paul. In addition, the new river crossing would require capacity improvements to 117th Street, west of TH 52. Based on these findings and evaluation of other transportation system needs, no further study of a bridge crossing at this location will be conducted during the Plan period.

Cedar Avenue Bus Rapid Transit (BRT)

As a main connection between the southern suburbs and both downtowns of Minneapolis and St. Paul, Cedar Avenue is one of the most traveled roads in Dakota County. More than 155,000 vehicles travel it daily, and that is expected to almost double over the next 20 years as growth along the corridor continues.

Expanded transit service along Cedar Avenue is essential to meeting the needs of residents, businesses and commuters. In 2012, existing bus and express bus routes will be enhanced with the start of bus rapid transit (BRT) service on the Cedar Avenue Transitway. The intent of BRT is to provide service frequencies and travel speeds that are comparable to light rail transit, but with greater service flexibility, fewer land impacts, and lower development costs. Components of bus rapid transit service on Cedar Avenue will consist of shoulder lanes for the exclusive use of transit vehicles, additional transit station facilities to aid rider convenience and operating efficiency, and technological applications to improve service speed and reliability.

Traffic volumes on Cedar Avenue are characterized by very heavy use in peak periods. Transit service on the Cedar Avenue Transitway will address higher travel demand by adding scalable and high capacity service to and from major destinations to the north of Dakota County without adding to traffic volume on existing automobile lanes. According to immediate and long term plans, transitway service will include introduction of limited stop ‘station-to-station’ service with high service frequency throughout the day and additional express service operating directly from transitway stations to the downtowns and the University of Minnesota.

Future traffic volumes and resulting congestion will require additional changes to Cedar Avenue, specifically to access design. In the future, Cedar Avenue intersections at CSAH 42 and CSAH

46 should be replaced with grade separated interchanges to best handle anticipated turn volumes.

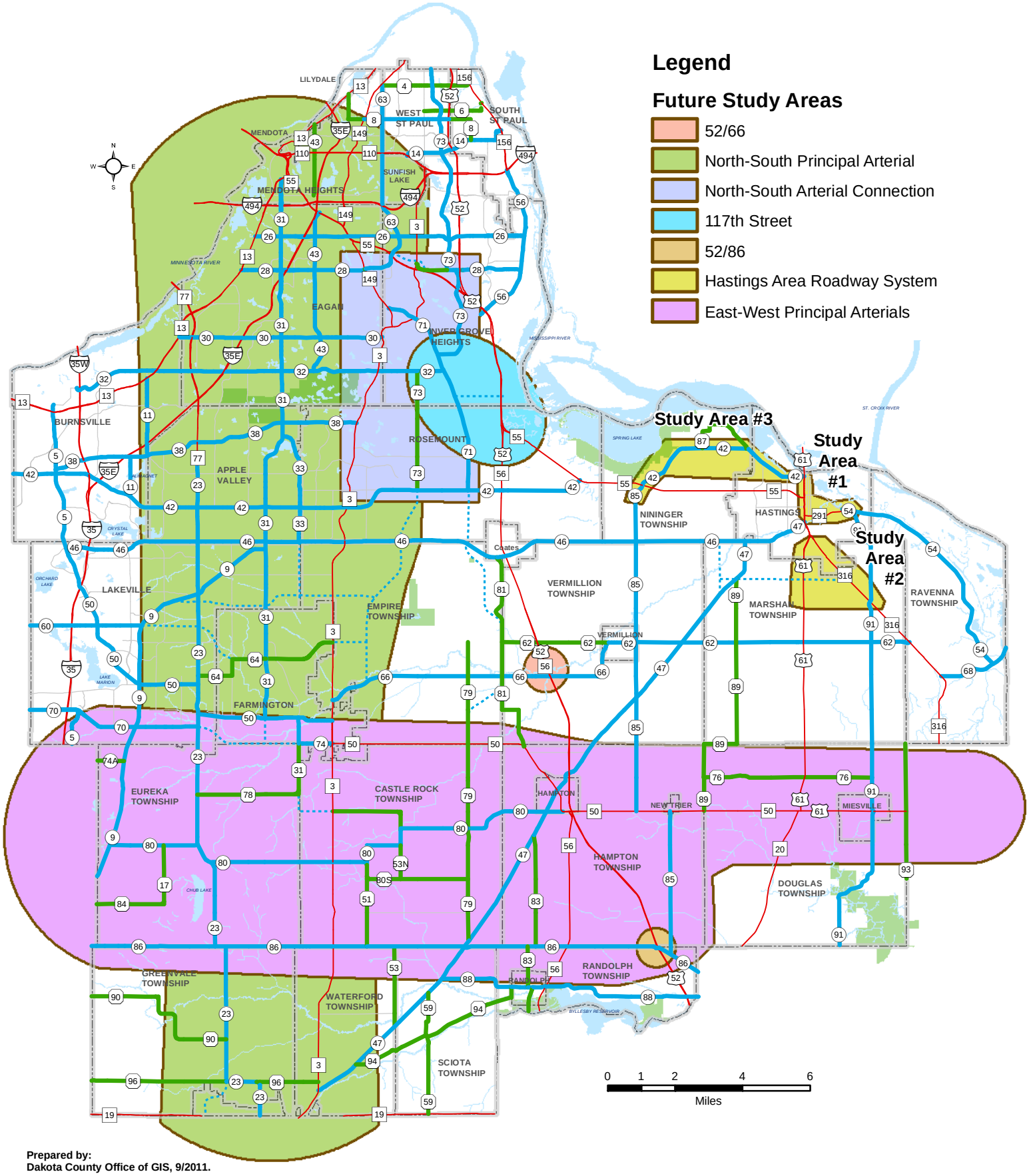
Future Studies

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. Future studies identified for analysis within the next five-year plan period are shown in Figure 46.

The following future studies are identified for analysis within the next five-year plan period.

- *North-South Arterial Connection*: Partner with Mn/DOT, City of Eagan, City of Inver Grove Heights and City of Rosemount to study the roadway system needs and implications of potential future connections between recommendations of the *Rosemount/Empire/UMore Transportation System Study* and the *Regional Roadway System Visioning Study.*
- *CSAH 32 to TH 52 Connection:* This study should include assessment of roadway alignment locations and improvements to extend CSAH 32 eastward to TH 52 to utilize the existing interchange at 117th Street. This study could occur simultaneously with the *North-South Arterial Connection Study.*
- *North-South Principal Arterial Assessment*: Partner with Mn/DOT and local jurisdictions to study and assess potential locations for a future designation of a Principal Arterial highway between TH 77/Cedar Avenue and TH 52.
- *East-West Principal Arterial Assessment:* Partner with Mn/DOT, the Metropolitan Council and local jurisdictions to study and assess potential locations for a future designation of Principal Arterial highways south of CSAH 42 within the County.
- *TH 52/CSAH 66 Interchange:* Partner with Mn/DOT and local jurisdictions to conduct a study to determine roadway alignments and the future interchange location.
- *TH 52/CSAH 86 Interchange:* Partner with Mn/DOT and local jurisdictions to conduct a 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.
- *State Aid Mileage Request:* Identify changes to the County State Aid Highway system.
- *Hastings Area Roadway System Study: Study Area #1, #2 and #3* – Work with local jurisdictions to identify the minor arterial corridor alignment and necessary safety and capacity improvements between the intersection of CR 54/91 and TH 61, to determine whether TH 61 to TH 316 or TH 61 to 170th Street to TH 316 should be designated and improved with design characteristics consistent with a principal arterial route and to identify an east-west minor arterial corridor alignment that should be preserved and developed as land use changes occur in the area.

Future Studies



Prepared by:
Dakota County Office of GIS, 9/2011.

Dakota County 2030 Transportation Plan - Figure 46

The following ***strategy*** supports improvement and expansion of transportation corridors through conducting future studies:

- **Emerging Transportation Needs**
  Consider emerging transportation needs to proactively direct system development and future investments.

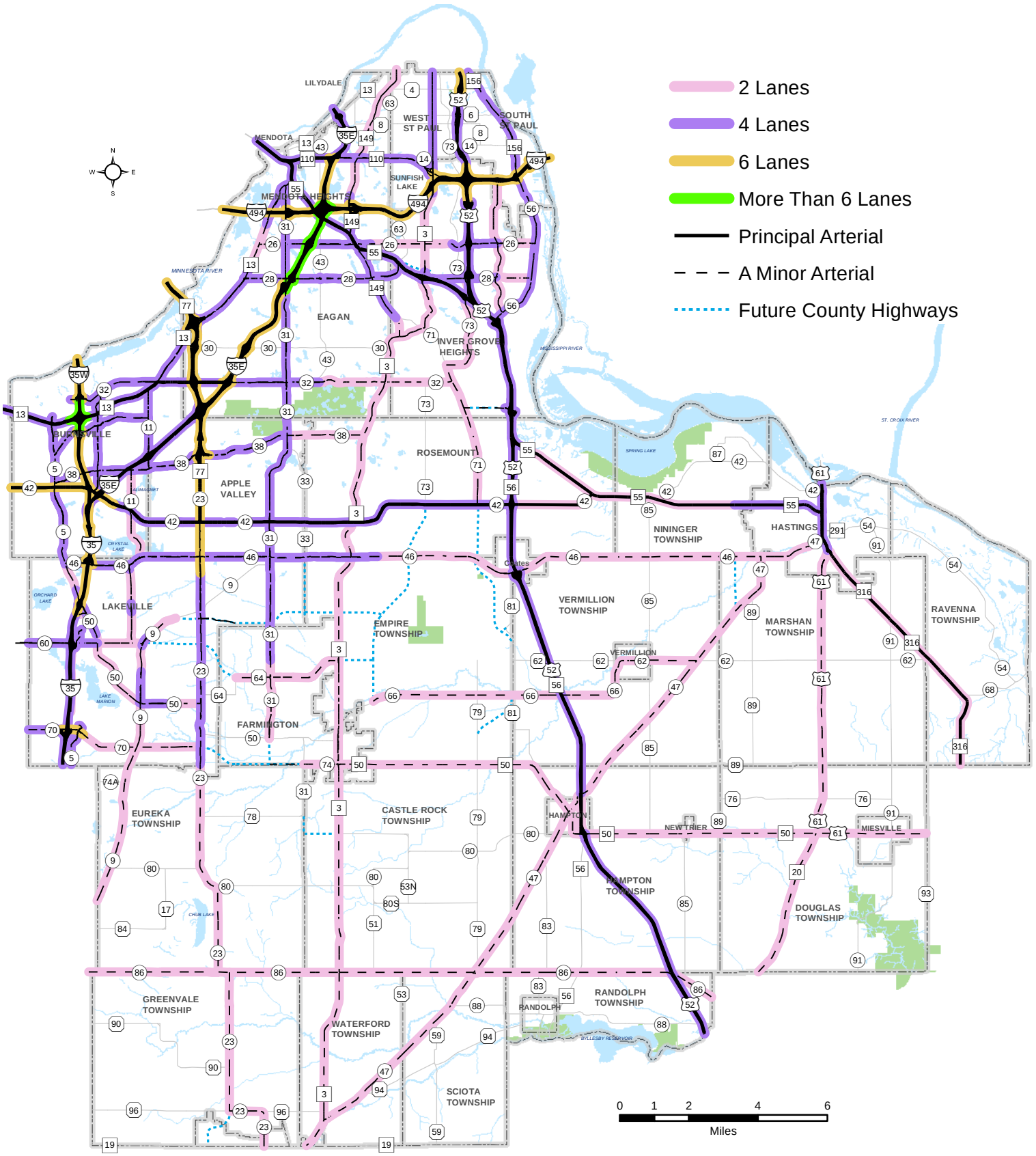
PERFORMANCE MEASURE: Complete all future studies by the end of the five-year plan period.

The existing CIP investment for future studies is $0.5 million. The following are the estimated annual CIP investments for future studies over the plan period including estimated investments for County Roads:

- 2011-2015 = $0.5 million ($0.5 for County Roads)
- 2016-2020 = $0.5 million ($0.5 for County Roads)
- 2021-2030 = $0.5 million ($0.5 for County Roads)

Figure 47 shows all principal and A-minor arterials and the existing number of lanes. Figure 48 shows all principal and A-minor arterials and proposed number of lanes. These maps were included per Metropolitan Council requirements for plan amendments. The existing number of lanes was determined by use of existing database information and aerial photography to confirm existing conditions. Needs for future lanes were determined by using the Dakota County Travel Demand Model and the Dakota County Plat Needs Map. Additional study and evaluation to determine roadway corridor vision and appropriate solutions will occur prior to future roadway expansion.

Existing Number of Lanes of Principal and A-Minor Arterials

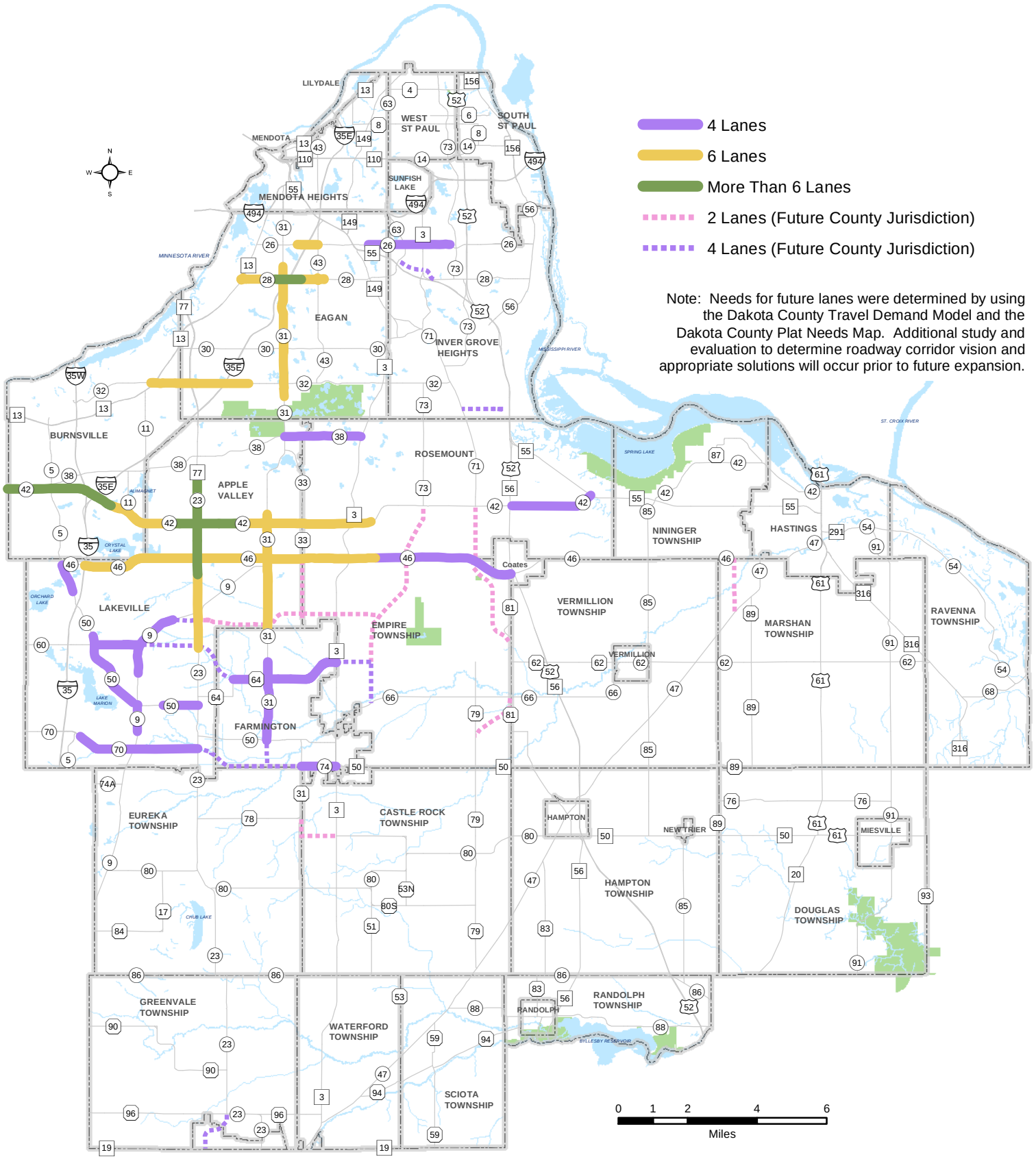


Prepared by:
Dakota County Office of GIS, 1/2012.

Note: Existing database and aerial photography were used to confirm existing conditions.

Dakota County 2030 Transportation Plan - Figure 47

Highway Expansion Needs



Prepared by:
Dakota County Office of GIS, 3/2012.

Note: 2030 Capacity Deficiencies and Plat Needs Map were used to determine future needs.

Dakota County 2030 Transportation Plan - Figure 48

Goal 6 Summary

This goal directs the County to improve the existing transportation system to address emerging deficiencies to address capacity needs to best provide efficient connections. County efforts to improve and expand the transportation system include lane additions or expansion, future County highway alignments, interchanges and overpasses, and the Cedar Avenue BRT. 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.

TOTAL Average Yearly Expansion Investment Needs

	2004	2005-2009	Future Needs		
Activity	Plan	CIP	2011-2015	2016-2020	2021-2030
Lane Addition	8.0	10.5	7.1	13.8	32.1
New Alignments	6.0	3.1	0.7	0.8	0.9
Interchanges	0.0	7.4	5.0	9.0	12.5
Future Studies	0.0	0.5	0.5	0.5	0.5
Totals	14.3	21.5	13.3	24.1	46.0

County Roads Avg Yearly Expansion Investment Needs

	Future Needs		
Activity	2011-2015	2016-2020	2021-2030
Lane Addition	0.0	0.0	1.2
New Alignments	0.7	0.8	0.9
Interchanges	0.0	0.0	0.0
Future Studies	0.5	0.5	0.5
Totals	1.2	1.3	2.6

Chapter 10

Implementation

Capital Improvement Revenue Summary

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

Goal		Actual Annual 2005-2009 CIP Investment	Estimated Annual CIP Investment Needs 2011-2015	2016-2020	2021-2030
Goal 1	Resources	$ 1.9	$ 3.2	-	-
Goal 2	Transit & Modes**	-	$ 11.0	$ 12.5	$ 12.2
Goal 3	Preservation	$ 4.2	$ 4.4	$ 4.7	$ 5.0
Goal 4	Management	$ 7.8	$ 7.8	$ 7.8	$ 7.6
Goal 5	Replacement	$ 14.5	$ 6.8	$ 15.5	$ 12.1
Goal 6	Expansion	$ 21.5	$ 13.3	$ 24.1	$ 46.0
	TOTAL	$ 49.9	$ 46.5*	$ 64.6	$ 82.9

* Total revenues for 2011—2015 are projected to be $32.9 million/year. The current Draft CIP averages $38.2 million/year. Additional state and federal funds will need to be identified to support the projects and timeframes in the Draft CIP.

** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-$128 million.

It is anticipated that the needs associated with preservation, management, replacement, and transportation alternatives goals through the plan period will be fully funded. The needs associated with the expansion goal can be fully funded from 2005 through 2014, with the exception of interchanges and the Cedar Avenue Bus Rapid Transit. These needs are anticipated to be approximately $10 million annually for interchanges. Cedar Avenue Bus Rapid Transit needs is estimated to be: $16 million from 2010 to 2014, and $12 million from 2015 to 2025. In the period 2015 to 2025, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

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:

Anticipated General Revenues	Annual Estimated Revenue
County Levy/County Program Aid	$5.2 million / $4.9 million
Wheelage Tax Funds	$1.7 million
Gravel Tax Funds	$0.2 million
County State Aid Highway (CSAH)*	$10.0 million
City Cost Share Participation	$7.0 million
Regional Railroad Authority Levy**	$1.6 million
	$25.7 million / $30.6 million

* Includes Flexible Highway Account and Leased Motor Vehicle Sales Tax Revenues
** Investment needs beyond 2015 only include Cedar Avenue Implementation. Total Robert Street Corridor needs are currently estimated between $115 million -$1 billion. Total Red Rock Corridor needs are currently estimated between $115 million-$128 million.

Project Specific	Annual Estimated Revenue
Federal Aid	$5.0 million
State Trunk Highway Funds	$2.5 million
State Bridge Bond Funds	$0.2 million
	$7.7 million
TOTAL	$33.4 million / $38.3 million

An estimated $46.5 million of annual CIP needs is anticipated with approximately $33.4 million of estimated annual revenue. Based on this scenario, it is anticipated that the needs associated with transit and mode integration, preservation, and management goals through the plan period can be fully funded. The needs associated with the expansion goal can be fully funded through 2015, with the exception of interchanges (approximately $10 million annually) and Cedar Avenue Bus Rapid Transit: $8.4 million from 2011 to 2015, $12.5 million from 2016 to 2020 and $12.2 million from 2021 to 2030. In the period 2016 to 2030, additional unmet expansion needs for countywide lane additions have been identified at $20 million annually.

Investment Needs Summary

The *Dakota County 2030 Transportation Plan* identifies six major goals in which resources are required for transportation purposes. Current investments, anticipated needs, and proposed investments are identified within these goals through 2030. The Plan identifies available revenues of $33 million annually for the Transportation CIP to meet transportation needs.

Appendix A

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 Farmland/Natural Areas guidelines. (Was Policy PP.19 in previous Plan)

PP.2 Wetland Mitigation Areas
Create wetland mitigation areas in compliance ~~to comply~~ with local, state and federal permits ~~by using the Dakota County Soil and Water Conservation District for wetland delineation~~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. (Was Policy PP.22 in previous Plan)

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. (Was Policy PP.25 in previous Plan)

PP.4 On-Site Sewage Treatment
When appropriate, properly install, maintain, or permanently seal 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. (Was Policy PP.26 in previous Plan)

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.

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PP.6 Paved Shoulders~~, and~~ Trails and Bike Lanes
Include paved shoulders or trails as a regular component of highway improvements on both sides of the highway where ~~possible~~practical. Prioritization of bike lanes or shoulder improvements will be made in consideration of an identified system.

PP.7 Design and Construction Standards
Use Mn/DOT, AASHTO, ~~s~~State ~~a~~Aid, and Federal Aid standards~~, and ADA requirements~~ as appropriate in the design and construction of highways~~, including the placement of utilities, bikeways, bus pullouts, and other structures within highway right of way.~~ (Was Policy PP.4 in previous Plan)

PP.8 Traffic Control Devices Design and Operation

Design and operate traffic control devices on the highway and on adjacent trail systems according to standards as stated in the Highway Traffic Regulation Act (MS Ch. 169) and Minnesota Manual on Uniform Traffic Control Devices (MNMUTCD). (Was Policy PP.4 in previous Plan)

PP.9 Speed Limits

Speed limits will be posted on highways as provided by Minnesota law. The County Engineer is authorized to request 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 or when a city council requests a speed study by resolution. (Was Policy PP.7 in previous Plan)

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 resolution. (Was Policy PP.13 in previous Plan)

PP.11 Temporary Traffic Controls

The County Engineer is authorized to establish, maintain, and remove temporary traffic controls ~~including stop signs, work zone speed limits, highway closings and detour routes, and traffic signals~~ as necessary to allow safe and efficient progress of authorized highway projects, or for emergency situations. (Was Policy PP.14 in previous Plan)

PP.12 CIP

Annually prepare and review the five-year Transportation CIP. (Was Policy PP.1 in previous Plan)

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PP.13 CIP Resolution

Annually r~~R~~equire a city council or township board resolution that requests and supports inclusion of a proposed project in the Transportation CIP. (Was Policy PP.2 in previous Plan)

PP.14 Transportation Plan Consistency

Prioritization and selection of Transportation CIP projects will ~~be~~ consider~~ed based on~~ consistency with the Transportation Plan ~~direction~~ and with Plan investment goals. (Was Policy PP.3 in previous Plan)

PP.15 Environmental Regulations

Evaluate environmental effects of projects and adhere to guidelines, licenses, and permits as required by local, county, state and federal regulations. (Was Policy PP.20 in previous Plan)

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 ~~as established by the U.S. Environmental Protection Agency.~~and to state water quality standards in accordance with Mn Rules Chapter 7050 and Mn Statute 115.03. (Was Policy PP.21 in previous Plan)

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. (Was Policy PP.23 in previous Plan)

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~~r~~ and hazardous materials regulations. (Was Policy PP.24 in previous Plan)

PP.19 Storm Water Pollution Prevention Plan ~~Erosion Control Plan~~
Prepare a~~n Erosion Control~~ Stormwater Pollution Prevention Plan (SWPPP) for highway construction projects in conformance with MPCA permit requirements, and ~~work with SWCD to~~ develop soil erosion control plans and practices for transportation projects. (Was Policy PP.27 in previous Plan)

PP.20 State and Federal Requirements
Adhere to state and federal requirements in soliciting comments regarding construction of the transportation network. (Was Policy PP.29 in previous Plan)

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. (Was Policy PP.30 in previous Plan)

PP.22 Capital Improvement Program - Agency Involvement
Involve affected units of government and transit providers in the annual development of the CIP. (Was Policy PP.31 in previous Plan)

PP.23 ~~Construction Projects~~Multi-Disciplinary Work Teams
Solicit input from and involve all interested parties in the planning and design of ~~construction~~ transportation projects to properly reflect community and environmental values.~~ on the highway system.~~ (Was Policy PP.32 in previous Plan)

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.

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The following Policies that appeared in the previous Plan have been removed from this version as the Policy is identified in County procedures documents, State Statutes, or other regulatory documents.

~~**PP.8 Intersection Street Light Installation on Traffic Signals**~~
~~Participate in the installation costs of streetlights attached to traffic signals on highways in same ratio as cost share of traffic signal installation. The County does not participate in maintenance and utility costs for streetlights.~~

~~**PP.9 Intersection Street Light for Safety**~~
~~Participate up to 50 percent in street light installation at non-signalized intersections with demonstrated safety benefit. Participation is based on actual collision data from the State~~

(reportable collisions) and engineering study by the County. The County does not participate in maintenance and utility costs for streetlights.

PP.10 Street Lighting

By permit, allow continuous street lighting and lighting at intersections of County highways at the local agency's expense.

PP.11 Lighting Operation and Maintenance

Dakota County does not participate in maintenance, operation, or any associated costs for streetlights installed along County highways or at intersections.

PP.12 Minimum Urban, Low-Speed, Highway Widths

Minimum width for two-lane highways in urban areas (with speed limits of 35 mph or less and projected 20-year ADT of 10,000 or less) is 18 feet from face of curb to face of curb for one-way and 32 feet for two-way highways without parking. Minimum lane width is 11 feet. Minimum turn lane width is 12 feet. Minimum highway width including parking is 36 feet from face of curb to face of curb.

PP.15 Speed Limit Study

The County Engineer is authorized to request that Mn/DOT perform traffic studies to determine the reasonable and safe speed limits on highways where it is determined by the County Engineer that conditions have sufficiently changed to warrant a study or when city council action has requested a speed study.

PP.16 Construction Standards

Conform to Mn/DOT Construction Standards, State Aid and Federal Aid Construction Standards during project management, as appropriate.

PP.17 Paved Shoulders

Construct paved shoulders on both sides of highways as a regular component of highway improvements.

PP.18 Mailbox Standard

Mailboxes adjacent to highways that are disturbed by construction, or have been documented as a safety hazard, will be replaced with a conforming mailbox in accordance with Minnesota Statute 169.072.

PP.28 Aesthetics

On replacement and expansion projects, 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, not to exceed the local cost share for aesthetics. Aesthetics may include items such as:

- Landscaping,
- Plantings,
- Decorative pavements, or
- Surface treatments.

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. The County will not participate in additional right-of-way solely for aesthetic enhancements only. The local agency is responsible for maintenance of all aesthetic elements. The County reserves the right to remove non-maintained aesthetic elements and recover County aesthetic investment and removal costs from the local agency. Local agencies that do not adequately maintain aesthetic elements will be ineligible for County aesthetic funding.~~

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

Policies

F.1 Cost ~~Share~~ Participation - Roadway

For cities with populations over 5,000, the County will participate up to 55 percent of the engineering and construction costs of the following ~~on~~ cost-shared items for projects included in the adopted CIP:

1. Highway construction items.
2. Mitigation required by 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. Replace or adjust sanitary sewer, water, and storm sewer systems, if required due to construction.
7. Replace or adjust privately owned public utilities when not performed at the expense of the utility.
8. Eligible water pollution control best management practice items based on the County's share of contributing flows and meeting National Urban Runoff Protection (NURP) standards such as outlet structures, sedimentation basins and ponds, and temporary erosion control.
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. Transit infrastructure improvements on highways, including bus pullouts, bus shelters, and all pedestrian facilities necessary to support transit.

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.

F.2 Cost ~~Share~~ Participation - Aesthetic

~~On reconstruction and expansion projects, p~~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, ~~or~~ surface treatments, or decorative fencing. The County will not participate in aesthetics on preservation 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. (Also as Policy PP.28.)

F.3 Cost ~~Share~~ Participation - Right-of-way

For cities with populations over 5,000, participate up to 55 percent of the cost of right of way for existing highways where right-of-way is required for:

1. The construction of items described in F.1, (1-10) and F.5 (Traffic Signals) provided city land use decisions have supported right of way needs in the corridor. ~~The construction of items described in F.1, (1-7) and F.5 (Traffic Signals) provided city land use decisions have supported right of way needs in the corridor. County cost share of less that 55 percent will be determined by the County Engineer and approved by the County Physical Development Division Director.~~
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.

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 ~~Share~~ 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.5 Cost ~~Share~~ Participation – Traffic Signals

Traffic signals on County highways (including construction costs for attached streetlights, interconnection, pre-emption, etc.) will be eligible for ~~up to 50 percent County funds~~ the following County participation after subtracting federal and/or ~~Mn/DOT normal share~~ State funds:

1. New Signal Installation, ~~and~~ Operational Revisions and Signal Placement with highway projects – up to 55% County funds

~~Signal Revisions for Safety – up to 100% County funds~~

2. Existing Signal Replacement due to signal age – up to the percentage of intersection approach legs under County jurisdiction.

F.6 Cost ~~Share –~~ 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, then balance of the costs will be divided according to County policies.

F.7 Cost Participation for Populations Less Than 5,000

Pay costs for eligible construction and reconstruction (F.1, 1-8) for existing projects for cities with populations less than 5,000 and all townships.

F.8 Cost Participation for ~~NURP~~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.
2. Mainline pipes and storm water treatment and mitigation facilities ~~NURP ponds/basins maintenance~~ based on the County's share of contributing flows.
3. To be eligible for County participation, 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.

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F.9 Cost Participation for ~~Bikeways~~Multi-Use Trails and Sidewalks

~~Share the costs (less any applicable grants) for~~Participate in the overlay or reconstruction ~~on~~of ~~bikeways~~trails and sidewalks along the County highway system up to ~~at~~ 55 percent ~~County/45 percent local~~(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 Cost Participation for Transitways

~~On the basis of individual agreements approved by the Board of Commissioners, share in the costs of transit and transit-related improvements where it can be demonstrated that:~~

~~a. The project proposed is likely to delay or eliminate the need to expand an existing highway to more than four lanes~~

~~b. The costs of the alternative in which the County would share are less than costs to the County if the highway would be expanded~~

~~c. The proposed project is consistent with the priorities of Dakota County~~

~~d. The project is consistent with or would encourage development consistent with the land use policies of the Dakota County Comprehensive Plan~~

~~e. The project is located within 1/2 mile of the County highway affected.~~

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.11 Cost Participation for Expansion**~~

~~Participation in expansion projects during the plan period is limited to those segments that are identified as having capacity deficiencies by year 2025 on Figure T-6. Those projects driven by preservation or replacement projects will use 20-year traffic forecasts to determine appropriate design standards.~~

F.11 Tax Increment Financing (TIF) Costs

Subtract from the County eligible project costs, the costs of highway improvements or other highway costs (e.g. traffic controls), 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 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.13 Capital Improvement Program ~~CIP~~

Annually prepare and review the five-year transportation and regional rail authority CIP's.

~~**F.15 CIP - Intermodal**~~

~~Annually prepare and review a five-year CIP for intermodal projects to be included in the CIP.~~

F.14 Cost Participation – Roundabouts

Participate up to 55 percent of the costs for eligible engineering and construction items for roundabouts as described in Policy F.1.

Aesthetic elements of roundabouts 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 Cost Share Participation – Future County Road Segments

At County discretion, participate in the construction and engineering costs for constructing 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 Cost Share Participation – Small Safety Projects

The County may participate up to 100% 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 or expansion project, or permit request:

1. Median Closures or Modifications;
2. Access Closures or Modifications;
3. Intersection Street Lighting;
4. Turn Lanes or Channelization at the Intersection of Two County Roadways (including minor signal changes to accommodate improvement);
5. Guardrail Installation; and
6. ADA required safety improvements.

F.17 Cost Share Participation – Local Roadway System

The County may participate up to 55% 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 eliminates or significantly delays the need to expand the County highway system.

F.18 Street Lighting

Participate in the installation, 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. Intersection Street Lights at stop-controlled intersections with demonstrated safety benefit based on County evaluation – Participate up to 100 percent.
   b. Street Lights on Traffic Signals – Participation will be consistent with other improvements per Policy F.5.
   c. Integral Street Lights at Roundabout Intersections – Participate up to 55 percent.
   d. Street Lighting along High Priority Transit Corridors – Participate up to 55 percent.

B. Maintenance and Utility Power Costs
   a. 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.)

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.

~~**IM.2 Transit Funding – Dedicated Source State Level**~~

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. ~~Support the creation of a separate, dedicated fund for transit and related transportation needs at the state level.~~

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~~IM.6~~ Meet the Transit Needs of the Transit Dependent Population

Dakota County will cooperate with relevant agencies and stakeholders to identify and advance~~work with other agencies to bring about the region's transit priorities by supporting~~: 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~~IM.9~~ Bicycle~~Bikeways~~ and Trail~~s~~ Facilities ~~–~~within County Right of Way

Require the approval for design and location of bicycle and trail facilities ~~bikeways~~ within County highway right-of-way.

T.16~~IM.10~~ Bicycle~~Bikeways~~ and Trail~~s~~ Facilities ~~–~~Signs

Traffic controls and signage on bicycle and trail facilities~~bikeways~~ will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices.

T.17~~IM.11~~ Bicycle~~Bikeways~~ and Trail~~s~~ Facilities ~~–~~ Maintenance

Local governments are required to provide maintenance through terms of the County Bikeway~~s~~ Trails -Maintenance Agreement. If not addressed through the trail maintenance agreements, snow removal is at the discretion of the local government.

T.18~~IM.12~~ Bicycle~~Bikeways~~ and Trail Facilities Construction

Construct off-highway bicycle and trail facilities ~~bikeways~~ 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.

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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.

The following policies were removed from the document as they no longer apply or consist of policies that have been combined into more comprehensive policies.

~~**IM.1 Intermodal - CIP**~~

~~Identify intermodal projects such as bike facilities and transit facilities to include into a five-year Intermodal CIP.~~

~~**IM.3 Transit Funding - Dedicated Source Federal Level**~~

~~Support a renewed commitment to transit at the federal level, especially as set forth in the Transportation Equity Act for the 21st Century (TEA-21).~~

~~**IM.4 Dakota County Regional Railroad Authority**~~

~~The Dakota County Regional Railroad Authority (DCRRA) acts as the primary body for transit discussion and transit decision-making for the Board of Commissioners. The DCRRA will continue as a strong voice in regional transit planning and participate on the Metro Transitways Development Board and the Transportation Advisory Board (TAB) for the discussion of transit issues in the region.~~

~~**IM.5 Transit Alternatives Funding**~~

~~Dakota County will actively seek federal, state, and regional funds to incorporate transit alternatives in the transportation system.~~

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Goal 3: Preservation of the Existing System

P.1 ~~P.8~~ Bridge Inspection and Maintenance

Perform inspection and maintenance of bridges in compliance with Mn/DOT and federal requirements.

P.2 ~~P.16~~ Bicycle Trail Resurfacing

Participate in trail resurfacing at end of useful pavement life for trails 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. ~~and as otherwise necessary during the non-snow and ice season.~~ County highway segments will also be swept in the non-snow season as determined necessary by the County based on debris.

The County~~department~~ will:

1. Strive to remove sand before it goes into the storm sewer.
2. Rotate the order of sweeping among the cities.
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).
4. If additional assistance is needed, consider contracting with local municipalities.
5. 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 ~~once a month, if needed,~~ and rural ditches up to four times per year for safety, in accordance with Department of Natural Resources recommended wildlife and environmental regulations.

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 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.~~Replace mailboxes with a standard size mailbox only when the box was installed at the proper height and location and when actually hit by snowplowing equipment. The Transportation Department also will replace mailboxes damaged by snow coming off the plow when the mailbox has been installed on a swing or pivot support according to drawings available from the Transportation Department.~~

P.6 Drainage Cleaning

Clean drainage ditches, gutters, and storm sewer inlet grates.

P.7 Permit Coordination

Coordinate permit approval with cities prior to issuing permits to avoid possible city conflicts.

The following policies were removed from the document as they are identified in County procedures documents, State Statutes, or other regulatory documents or they no longer apply.

~~**P.1 Traffic Data**~~

~~Traffic data as appropriate will be made available on a cooperative basis to all levels of government for all highways.~~

~~**P.2 Permit Responsibility**~~

~~Damage caused by utility work or other permitted operations will be the responsibility of the permittee.~~

~~**P.9 Traffic Signal Operation and Maintenance**~~

~~Operation and maintenance of traffic signals excluding the attached streetlights at intersections with highways including:~~

1. ~~Clean, paint and relamp traffic control signals.~~
2. ~~Maintain signal controller, hardware, and emergency vehicle preemption systems at signalized intersections with County highways, except those with trunk highways.~~

~~**P.10 Traffic Control Signals – City Maintenance Assistance**~~ **(now contained in M.7)**

~~Provide maintenance assistance for traffic control signals under the jurisdiction of cities with the County as follows:~~

- ~~Maintenance activities shall occur after the County and have entered into a joint powers agreement. The County for any costs encountered. The agreements shall include, but not be limited to, the following:~~
    1. ~~The County will respond to requests for assistance subject to the limitation imposed by availability of manpower, equipment, and replacement parts, and the condition of the highway system.~~
    2. ~~The County may discontinue maintenance of traffic signals if the County determines that it is no longer feasible. Such termination of maintenance shall be effective no later than one year after the date of written notice.~~
    3. ~~All costs incurred by the County in conjunction with the maintenance services provided shall be reimbursed and shall take into account direct labor, fringe benefits, overhead, equipment costs, and materials.~~
    4. ~~Any maintenance activity that requires outside contracting shall be coordinated and ordered by the city. The County may assist in inspection of.~~
    5. ~~Arrangements shall provide for any and all liability issues in such a way that the County is compensated for increased liability to the County and/or County employees.~~

~~**P.11 Traffic Control Signals – State Maintenance Assistance**~~ **(Now combined with P.9)**

~~Provide maintenance assistance for traffic control signals under the jurisdiction of the state within the County as follows:~~

- ~~Maintenance activities shall occur after the County and the state have entered into a joint powers agreement. The County shall be reimbursed by the state for any costs encountered. The agreements shall include, but not be limited to, the following:~~
    1. ~~The County will respond to requests for assistance subject to the limitation imposed by availability of manpower, equipment, and replacement parts and the condition of the County transportation system.~~

2. The County may discontinue maintenance of state traffic signals if the County determines that it is no longer feasible. Such termination of maintenance shall be effective no later than one year after the date of written notice to the state.
3. All costs incurred by the County in conjunction with the maintenance services provided shall be reimbursed by the state and shall take into account direct labor, fringe benefits, overhead, equipment costs, and materials.
4. Any maintenance activity that requires outside contracting shall be coordinated and ordered by the state. The County may assist in inspection of such activity.
5. Arrangements with the state shall provide for any and all liability issues in such a way that the County is compensated for increased liability to the County and/or County employees.

P.12 Traffic Control Signals – Transit Priority (Combined with M.8)

Work with transit providers, cities, and the state to evaluate the use of priority timing of signal systems for transit vehicles along specific corridors.

P.13 Traffic Control Signal Operations, Maintenance, and Energy Costs (Combined with M.9)

1. Dakota County assumes a portion of the financial responsibility of energy costs for traffic signal operation, not including the street lights attached to the traffic signals (which is covered under Policy PP.8), at all intersections with County highways. The County's participation is based on the number of County approaches entering each intersection in proportion to the total number of intersection approaches.
2. Dakota County is not financially responsible for the energy costs of all other approaches entering the intersection (i.e., local or state) or street light energy costs for the intersection.
3. Dakota County is responsible for cleaning, and painting of traffic signals, and relamping of traffic signalsfor replacement of LED indications (not including the attached street lights) at all intersections with County highways.
4. Dakota County is responsible for maintenance and operation of the signal controller and hardware (including emergency vehicle preemption and transit signal priority systems) at all intersections with County highways, excluding intersections with trunk highways. The County may enter into agreement to have the State operate and maintain the County signal when mutually beneficial (usually when the County has one or more signals in a large coordinated system that include State signalized intersections).

P.14 Gopher State One Call

Participate in the "Gopher State One Call (GSOC)" system for traffic signal facilities as required by Minnesota law.

P.15 Bicycle Kiosk Maintenance

County will maintain bike trail kiosks through the Intermodal CIP.

Goal 4: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

M.1 Weight Restrictions
The county engineer may impose weight restrictions on highways to prevent significant structural deterioration.

M.24 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 ~~spacing~~ guidelines through the plat approval process, in conjunction with construction projects, or as required by safety and operation of the highway.

M.36 10-Ton Routes - Plan Updates
With each plan update, adopt an updated network of potential 10-ton routes.

M.47 10-Ton Routes - Implementation
10-ton routes will be implemented consistent with 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 cities through a council resolution; and
- ~~Receipt of comment through public hearing;~~
- Board resolution.~~; and~~
- ~~Approval by Commissioner of Transportation as required by statute.~~

M.58 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 areas outside the region

M.69 Jurisdictional Transfers ~~- Improvements~~
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 Mn/DOT jurisdictional transfers on a case-by-case basis with County Board approval.
- If agreeable between county and city or township, provide financial payment for jurisdictional transfers based on need or highway improvement in lieu or making improvements.

M.7~~P.10~~ Traffic Control Signals – City or State Maintenance Assistance

Provide maintenance assistance for traffic control signals under the jurisdiction of cities or the State. Maintenance assistance will be defined through agreements. ~~within the County as follows:~~

~~- Maintenance activities shall occur after the County and the affected city have entered into a joint powers agreement. The city shall reimburse the County for any costs encountered. The agreements shall include, but not be limited to, the following:~~

~~1. The County will respond to requests for assistance subject to the limitation imposed by availability of manpower, equipment, and replacement parts, and the condition of the highway system.~~

~~2. The County may discontinue maintenance of city traffic signals if the County determines that it is no longer feasible. Such termination of maintenance shall be effective no later than one year after the date of written notice to the city.~~

~~3. All costs incurred by the County in conjunction with the maintenance services provided shall be reimbursed by the city and shall take into account direct labor, fringe benefits, overhead, equipment costs, and materials.~~

~~4. Any maintenance activity that requires outside contracting shall be coordinated and ordered by the city. The County may assist in inspection of such activity.~~

~~5. Arrangements with the cities shall provide for any and all liability issues in such a way that the County is compensated for increased liability to the County and/or County employees.~~

M.8~~P.12~~ 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~~P.13~~ 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 ~~Dakota County assumes a portion of the financial responsibility of energy costs for traffic signal~~

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~~operation, not including the street lights attached to the traffic signals, at all intersections with County highways. The County's participation is~~ based on the number of County and city approaches entering ~~each~~ the intersection. ~~in proportion to the total number of intersection approaches.~~

2. ~~Dakota County is not financially responsible for the energy costs of all other approaches entering the intersection (i.e., local or state) or street light energy costs for the intersection.~~

~~2~~3. The County ~~Dakota 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. ~~and relamping of traffic signals (not including the attached street lights) at all intersections with County highways.~~

3. The city is responsible for power costs of attached street lights in accordance with Policy F.18

~~4. Dakota County is responsible for maintenance and operation of the signal controller and hardware at all intersections with County highways, excluding intersections with trunk highways. The County may enter into agreement to have the State operate and maintain the County signal when mutually beneficial (usually when the County has one or more signals in a large coordinated system that include State signalized intersections).~~

M.103 ~~Traffic Signal Installation~~Intersection Traffic Control Changes

~~Transportation Department staff will i~~Install or remove ~~permit installation of traffic signals~~intersection controls (such as traffic signals, roundabouts, stop signs, and channelization) based on a County engineering study that indicates ~~a traffic signal is justified~~the best measure for the safety and operation of an intersection. Installation is based on priority and availability of funds. Installation or removal of intersection ~~T~~traffic ~~signal installation~~controls requires County Board approval.

M.115 Right-of-Way - Landscaping

By permit, allow low maintenance landscape plantings on highway right of way. Permittees will be responsible for maintenance.

M.126 Contiguous Plat Ordinance

The Plat Commission ~~is required to~~ 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 #108. ~~by:~~

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.

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7. Land use impact on development of County road system.

~~1. Requiring traffic projections for proposed developments.~~

~~2. Requiring internal highway diagrams.~~

~~3. Requiring the official highway name/number on maps.~~

~~4. Requiring development adjacent to highways to follow access spacing guidelines prior to plat approval.~~

~~5. Requiring right-of-way dedication for plats adjoining highways according to the Contiguous Plat Ordinance and the approved right-of-way dedication guidelines. Dakota County will:~~

~~a) Follow right-of-way dedication guidelines in making these determinations and consider features such as topography, obstacles, inclusion of trails, major intersection geometric, site distance, roadside safety clear zones, snow removal storage, and other design characteristics that could influence with width of right of way; and~~

b) ~~Initiate coordination with affected cities to determine how right of way may be most effectively obtained.~~

M.13 Right of Way Permits (was M.17 through M.25)

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.

The following policies were removed from the document as they are identified in County procedures documents, State Statutes, or other regulatory documents or they no longer apply.

~~**M.3 Land Use Development - Inventory**~~

~~Monitor land use development and transportation facilities to enhance the relationship between land use and transportation planning. A land use inventory for will be maintained in conjunction with cities and townships.~~

~~**M.5 Access Spacing Guidelines - Cost Sharing**~~

~~Participate according to cost share policies in construction of local roadways necessary to directly mitigate physical or operational impacts associated with consolidation of existing access to meet access spacing guidelines. These costs 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;~~

~~2. Costs associated with improvements necessary to adequately accommodate County highway traffic detoured onto a local roadway during County highway construction; and~~

~~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.~~

~~**M.10 Jurisdictional Transfer - Agreements**~~

~~Work in coordination with local governments to execute agreements prior to official revocation of the highway by County Board resolution.~~

~~**M.11 Jurisdictional Transfer - Mn/DOT**~~

Consider potential Mn/DOT jurisdictional transfers on a case-by-case basis with County Board approval.

M.12 County compensation to locals for jurisdictional transfers

If agreeable between county and city or township, provide financial payment for jurisdictional transfers based on need for highway improvement in lieu of making improvements.

M.14 Signal Justification

Signal Justification is determined in accordance with County signal ranking analysis.

M.17 Permit Process - As-Built Drawings

Require that permittees submit as-built drawings as part of the permit process.

M.18 Permit Process - Adopt-A-Highway Program

Require a permit for participation in the Adopt-A-Highway program.

M.19 Permit Process - Fees

Require fees, where applicable, prior to issuing permits.

M.20 Permit Process - County Right-of-Way

Require a permit for any work within the right of way.

M.21 Permit Process - Access

Require a permit before constructing an approach or access connection, such as a driveway, street, or field entrance to the highway system.

M.22 Permit Process - Utilities

Require a permit before installation of any utilities within the highway right of way.

M.23 Special Activities

Require approval by the County Engineer for special activities impacting the highways. Requests must be made in writing to the County Engineer.

M.24 Permit Process - Insurance Certificate

Require permit applicants to provide an insurance certificate that names Dakota County as additional insured for projects that involve work to the highway or work in the right of way. Requests for permits for residential property will be approved when the owner shows evidence of home insurance.

M.25 Permit Process - Overweight and Oversized Loads

Require a permit for all overweight and oversized loads traveling on County highways.

Goal 5: Replace Deficient Elements of the System

R.1 Highway Replacement
Reconstruct highways or highway elements that have exceeded their useful life based on structural, functional, operational or safety factors.

R.2~~R.1~~ Bridge Inspections
Perform inspections of County bridges in accordance with applicable laws and rules.

Goal 6: Improvement and Expansion of Transportation Corridors

IE.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.

IE.2 Right-of-Way - Standards
Follow standards for placement of utilities, trails, and other structures within highway right of way.

IE.3 Right-of-Way - 20-Year Needs Map
Develop a Countywide map based upon long-term system needs to identify 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.

IE.4 Future County Highway Alignments
Future County Highway alignments are identified through engineering studies adopted by County Board resolution.

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Appendix B

Policy Conversions

Plan Principles

Transportation Plan Policy Conversion Chart

Old-to-New

Old #	*Policy*	*New #*	*Reason*
PP.1	CIP	PP.12	Reorganization
PP.2	CIP Resolution	PP.13	Reorganization
PP.3	Transportation Plan Consistency	PP.14	Reorganization
PP.4	Design and Construction Standards	PP.7	Reorganization
PP.5	Traffic Control Devices Design and Operation	PP.8	Reorganization
PP.6	Paved Shoulders, Trails and Bike Lanes	PP.6	Reorganization
PP.7	Speed Limits	PP.9	Reorganization
PP.8	Intersection Street Light Installation on Traffic Signals	removed	(a)
PP.9	Intersection Street Light for Safety	removed	(a)
PP.10	Street Lighting	removed	(a)
PP.11	Lighting Operation and Maintenance	removed	(a)
PP.12	Minimum Urban, Low Speed, Highway Widths	removed	(a)
PP.13	Parking Restrictions	PP.10	Reorganization
PP.14	Temporary Traffic Controls	PP.11	Reorganization
PP.15	Speed Limit Study	removed	(a)
PP.16	Construction Standards	removed	(a)
PP.17	Paved Shoulders	removed	(a)
PP.18	Mailbox Standards	removed	(a)
PP.19	Cultural and Natural Resources	PP.1	Reorganization
PP.20	Environmental Regulations	PP.15	Reorganization
PP.21	NURP/NPDES	PP.16	Reorganization
PP.22	Wetland Mitigation Areas	PP.2	Reorganization
PP.23	Solid Waste Management	PP.17	Reorganization
PP.24	Hazardous Wastes and Materials	PP.18	Reorganization
PP.25	Well and Water Supply	PP.3	Reorganization
PP.26	On-Site Sewage Treatment	PP.4	Reorganization
PP.27	Storm Water Pollution Prevention Plan	PP.19	Reorganization
PP.28	Aesthetics	removed	(a)
PP.29	State and Federal Requirements	PP.20	Reorganization
PP.30	Minnesota Data Practices Act	PP.21	Reorganization
PP.31	Capital Improvement Program-Agency Involvement	PP.22	Reorganization
PP.32	Multi-Disciplinary Work Teams	PP.23	Reorganization

(a) Policy is identified in County procedures documents, State Statutes, or other regulatory documents.

Transportation Plan Policy Conversion Chart

New-to-Old

New #	*Policy*	*Old #*	*Reason*
PP.1	Cultural and Natural Resources	PP.19	Reorganization
PP.2	Wetland Mitigation Areas	PP.22	Reorganization
PP.3	Well and Water Supply	PP.25	Reorganization
PP.4	On-Site Sewage Treatment	PP.26	Reorganization
PP.5	Surface Water Drainage System Design	new	new policy
PP.6	Paved Shoulders, Trails and Bike Lanes	PP.6	Reorganization
PP.7	Design and Construction Standards	PP.4	Reorganization
PP.8	Traffic Control Devices Design and Operation	PP.5	Reorganization
PP.9	Speed Limits	PP.7	Reorganization
PP.10	Parking Restrictions	PP.13	Reorganization
PP.11	Temporary Traffic Controls	PP.14	Reorganization
PP.12	CIP	PP.1	Reorganization
PP.13	CIP Resolution	PP.2	Reorganization
PP.14	Transportation Plan Consistency	PP.3	Reorganization
PP.15	Environmental Regulations	PP.20	Reorganization
PP.16	NURP/NPDES	PP.21	Reorganization
PP.17	Solid Waste Management	PP.23	Reorganization
PP.18	Hazardous Wastes and Materials	PP.24	Reorganization
PP.19	Storm Water Pollution Prevention Plan	PP.27	Reorganization
PP.20	State and Federal Requirements	PP.29	Reorganization
PP.21	Minnesota Data Practices Act	PP.30	Reorganization
PP.22	Capital Improvement Program-Agency Involvement	PP.31	Reorganization
PP.23	Multi-Disciplinary Work Teams	PP.32	Reorganization
PP.24	Manage the Adopt-a-Highway Program	new	new policy

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

Transportation Plan Policy Conversion Chart

Old-to-New

Old #	*Policy*	*New #*	*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	F.4	
F.5	Cost Participation - Traffic Signals	F.5	
F.6	Cost Participation Involving Federal and State Funds	F.6	
F.7	Cost Participation for Populations Less Than 5,000	F.7	
F.8	Cost Participation for Storm Sewer System Maintenance	F.8	
F.9	Cost Participation for Multi-Use Trails and Sidewalks	F.9	
F.10	Cost Participation for Transitways	F.10	
F.11	Cost Participation for Expansion	removed	
F.12	Tax Increment Financing (TIF) Costs	F.11	reorganization
F.13	Township Allotment Fund	F.12	reorganization
F.14	Capital Improvement Program	F.13	reorganization
F.15	CIP - Intermodal	removed	no longer applies

Transportation Plan Policy Conversion Chart

New-to-Old

New #	*Policy*	*Old #*	*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	F.4	
F.5	Cost Participation - Traffic Signals	F.5	
F.6	Cost Participation - Involving Federal and State Funds	F.6	
F.7	Cost Participation for Populations Less Than 5,000	F.7	
F.8	Cost Participation for Storm Sewer System Maintenance	F.8	
F.9	Cost Participation for Multi-Use Trails and Sidewalks	F.9	
F.10	Cost Participation for Transitways	F.10	
F.11	Tax Increment Financing (TIF) Costs	F.12	reorganization
F.12	Township Allotment Fund	F.13	reorganization
F.13	Capital Improvement Program	F.14	reorganization
F.14	Cost Participation - Roundabouts	new	new policy
F.15	Cost Participation - Future County Road Segments	new	new policy
F.16	Cost Participation - Small Safety Projects	new	new policy
F.17	Cost Participation - Local Roadway System	new	new policy
F.18	Street Lighting	new	new policy

Transit and Integration of Transportation Modes

Transportation Plan Policy Conversion Chart

Old-to-New

Old #	*Policy*	*New #*	*Reason*
IM.1	Intermodal - CIP	removed	no longer applies
IM.2	Secure Dedicated and Reliable Funding Sources	removed	under T.2
IM.3	Transit Funding - Dedicated Source Federal Level	removed	under T.2
IM.4	Dakota County Regional Railroad Authority	removed	no longer applies
IM.5	Transit Alternative Funding	removed	under T.2
IM.6	Meet the Transit Needs of the Transit Dependent Pop.	T.10	moved to this goal
IM.7	Bicycle and Trail Facilities	removed	moved to strategies
IM.8	Bicycle and Trail Facilities in CIP	T.15	moved to strategies
IM.9	Bicycle and Trail Facilities within County Right of Way	T.16	moved to this goal
IM.10	Bicycle and Trail Facilities Signs	T.17	moved to this goal
IM.11	Bicycle and Trail Facilities Maintenance	T.18	moved to this goal
IM.12	Bicycle and Trail Facilities Construction	T.19	moved to this goal

Transportation Plan Policy Conversion Chart

New-to-Old

New #	*Policy*	*Old #*	*Reason*
T.1	Support Flexible and Expandable Transit Services	new	new policy
T.2	Secure Dedicated and Reliable Funding Sources	IM.2	moved to this goal
T.3	Transit Signage	new	new policy
T.4	Streetscape Improvements	new	new policy
T.5	Transitway Development	new	new policy
T.6	Improve Operating Conditions	new	new policy
T.7	Coordinated Service Delivery	new	new policy
T.8	Account for Evolving Transit Facility Needs	new	new policy
T.9	Pull-outs	new	new policy
T.10	Meet the Transit Needs of the Transit Dependent Pop.	IM.6	moved to this goal
T.11	Develop Cost Effective and Efficient Transit Solutions	new	(b)
T.12	Effective Use of New Technologies	new	new policy
T.13	Regional Cooperation	new	new policy
T.14	Link Land Use, Economic Development, Transit	new	(b)
T.15	Bicycle and Trail Facilities within County Right of Way	IM.9	moved to this goal
T.16	Bicycle and Trail Facilities Signs	IM.10	moved to this goal
T.17	Bicycle and Trail Facilities Maintenance	IM.11	moved to this goal
T.18	Bicycle and Trail Facilities Construction	IM.12	moved to this goal
T.19	Complete Streets	new	new policy

(b) Identified as a goal within Transit Plan. Now identified as a policy with 2030 Transportation Plan.

Preservation of the Existing System

Transportation Plan Policy Conversion Chart

Old-to-New

Old #	*Policy*	*New #*	*Reason*
P.1	Traffic Data	removed	(a)
P.2	Permit Responsibility	removed	(a)
P.3	County Highway Sweeping	P.3	reorganization
P.4	Mowing Policy	P.4	reorganization
P.5	Mailbox Replacement	P.5	reorganization
P.6	Drainage Cleaning	P.6	reorganization
P.7	Permit Coordination	P.7	reorganization
P.8	Bridge Inspection and Maintenance	P.1	reorganization
P.9	Traffic Signal Operation and Maintenance	removed	(a)
P.10	Traffic Control Signals - City Maintenance Assistance	M.7	reorganization
P.11	Traffic Control Signals - State Maintenance Assistance	removed	combined with M.6
P.12	Traffic Control Signals - Transit Priority	M.8	reorganization
P.13	Traffic Control Signal Operations, Maintenance & Energy	M.9	reorganization
P.14	Gopher State One Call	removed	(a)
P.15	Bicycle Kiosk Maintenance	removed	no longer applies
P.16	Bicycle Trail Resurfacing	P.2	reorganization

(a) Policy is identified in County procedures documents, State Statutes, or other regulatory documents.

Transportation Plan Policy Conversion Chart

New-to-Old

New #	*Policy*	*Old #*	*Reason*
P.1	Bridge Inspection and Maintenance	P.8	reorganization
P.2	Bicycle Trail Resurfacing	P.16	reorganization
P.3	County Highway Sweeping	P.3	reorganization
P.4	Mowing Policy	P.4	reorganization
P.5	Mailbox Replacement	P.5	reorganization
P.6	Drainage Cleaning	P.6	reorganization
P.7	Permit Coordination	P.7	reorganization

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

Transportation Plan Policy Conversion Chart

Old-to-New

Old #	*Policy*	*New #*	*Reason*
M.1	Weight Restrictions	M.1	
M.2	New Corridors	removed	now strategy
M.3	Land Use Development - Inventory	removed	readily available
M.4	Access Spacing Guidelines - Local Streets and Drives	M.2	reorganization
M.5	Local Roadway System - Cost Sharing	removed	identified in Goal 1
M.6	10-Ton Routes - Plan Updates	M.3	reorganization
M.7	10-Ton Routes - Implementation	M.4	reorganization
M.8	Jurisdictional Classification - Potential Jurisdictional Tr.	M.5	reorganization
M.9	Jurisdictional Transfers	M.6	reorganization
M.10	Jurisdictional Transfer - Agreements	removed	combined with M.8
M.11	Jurisdictional Transfer - Mn/DOT	removed	combined with M.8
M.12	County Compensation to Locals for Jurisdictional Tr.	removed	combined with M.8
M.13	Intersection Traffic Control Changes	M.10	reorganization
M.14	Signal Justification	removed	combined with M.9
M.15	Right of Way - Landscaping	M.11	reorganization
M.16	Contiguous Plat Ordinance	M.12	reorganization
M.17	Right of Way Permits	M.13	reorganization
M.18	Permit Process - Adopt-A-Highway Program	removed	(a)
M.19	Permit Process - Fees	removed	(a)
M.20	Permit Process - County Right-of-Way	removed	(a)
M.21	Permit Process - Access	removed	(a)
M.22	Permit Process - Utilities	removed	(a)
M.23	Special Activities	removed	(a)
M.24	Permit Process - Insurance Certificate	removed	(a)
M.25	Permit Process - Overweight and Oversized Loads	removed	(a)

(a) Policy is identified in County procedures documents, State Statutes, or other regulatory documents.

Transportation Plan Policy Conversion Chart

New-to-Old

New #	*Policy*	*Old #*	*Reason*
M.1	Weight Restrictions	M.1	
M.2	Access Spacing Guidelines - Local Streets and Drives	M.4	reorganization
M.3	10-Ton Routes - Plan Updates	M.6	reorganization
M.4	10-Ton Routes - Implementation	M.7	reorganization
M.5	Jurisdictional Classification - Potential Jurisdictional Tr.	M.8	reorganization
M.6	Jurisdictional Transfers	M.9	reorganization
M.7	Traffic Control Signals - City or State Maintenance Asst.	P.10	reorganization
M.8	Traffic Control Signals - Transit Priority	P.12	reorganization
M.9	Traffic Control Signal Operations, Maintenance & Energy	P.13	reorganization
M.10	Intersection Traffic Control Changes	M.13	reorganization
M.11	Right of Way - Landscaping	M.15	reorganization
M.12	Contiguous Plat Ordinance	M.16	reorganization
M.13	Right of Way Permits	M.17-25	reorganization

Replace Deficient Elements of the System

Transportation Plan Policy Conversion Chart

	Old-to-New				New-to-Old		
Old #	*Policy*	*New #*	*Reason*	*New #*	*Policy*	*Old #*	*Reason*
R.1	Bridge Inspections	R.2	reorganization	R.1	Highway Replacement	new	new policy
				R.2	Bridge Inspections	R.1	reorganization

Improvement and Expansion of Transportation Corridors

Transportation Plan Policy Conversion Chart

	Old-to-New				New-to-Old		
Old #	*Policy*	*New #*	*Reason*	*New #*	*Policy*	*Old #*	*Reason*
IE.1	Right-of-Way Acquisition - Hwy Const./Plat Dedication	IE.1		IE.1	Right-of-Way Acquisition - Hwy Const./Plat Dedication	IE.1	
IE.2	Right-of-Way Acquisition - Standards	IE.2		IE.2	Right-of-Way - Standards	IE.2	
IE.3	Right-of-Way - 20-Year Needs Map	IE.3		IE.3	Right-of-Way - 20-Year Needs Map	IE.3	
				IE.4	Future County Highway Alignments	new	new policy

Appendix C

Public Participation

The public participation section includes news releases announcing the public open house, public review comments and responses.

Brandt Richardson
County Administrator
www.dakotacounty.us

Gail Plewacki
Communications Director

Sharon Madsen
Communications

651-438-4235

News Release

FOR IMMEDIATE RELEASE
Contact: Scott Peters, Transportation Department, 952-891-7027

October 5, 2011

Have a say in the future

Comment period for Dakota County's Draft 2030 Transportation Plan is open

Have your say on what the County's transportation system will look like over the next 20 years. The draft Dakota County 2030 Transportation Plan is open for public review and comment through Dec. 5, 2011.

The Plan guides the County's existing transportation network and addresses future need. This Plan updates the 2004 Transportation Plan to

- identify future County transportation needs
- provide cost estimates and sources of funding for existing and future transportation needs
- include a 20-year investment plan based on expected revenues and priority transportation needs
- examine goals, principles, strategies and policies to support transportation needs and investments.

Local communities and citizens worked with the County to develop the plan. The final plan will become a part of the County's Comprehensive Plan—DC2030: Planning for the Future—that was adopted by the County Board of Commissioners in May 2009. The Plan integrates transit and other transportation modes, goal-specific issues, fact comparisons to the previous Plan, policy revisions, updated performance measures, recently completed planning activities, and system investments and accomplishments. The Plan also identifies investment needs over the next twenty years.

The 60-day comment period runs from Oct. 5 to Dec. 5, 2011. A copy of the Plan is posted on Dakota County's website at www.co.dakota.mn.us, search *2030 Transportation Plan* and at all Dakota County Library branches. Comments may be emailed to Scott Peters at scott.peters@co.dakota.mn.us or mailed to

Scott Peters, Transportation Department, Dakota County Western Service Center, 14955 Galaxie Ave., Apple Valley, MN 55124.

Public comments will help guide the finished Plan which will be finalized in winter 2012. For more information contact Scott Peters, Senior Transportation Planner by email or at 952-891-7027.

-30-

Brandt Richardson
County Administrator
www.dakotacounty.us

Gail Plewacki
Communications Director

Tim Mozey
Communications
651-438-4244

News Release

FOR IMMEDIATE RELEASE
Contact: Scott Peters, Dakota County Transportation, 952-891-7027

Sept. 2, 2010

The future of transportation

Dakota County seeks feedback on 2030 Transportation Plan update

Residents are invited to learn about and comment on revisions to the *Dakota County Transportation Plan* at an open house Wednesday, Sept. 22. The open house is from 4 to 7 p.m. in room 1920 on the first floor of the Western Service Center, 14955 Galaxie Ave. in Apple Valley.

The open house will focus on strategies to address transportation conditions within the county. County residents are encouraged to come and provide comment on existing conditions and future needs. The event is free and anyone can attend any time during the open house. No formal presentation is planned.

The transportation plan is part of *DC2030,* Dakota County's Comprehensive Plan (www.co.dakota.mn.us/Departments/OPA/Reports/DC2030.htm). An update of the transportation plan allows the County to analyze future impacts on transportation systems, re-examine the county's overall transportation needs, and reevaluate transportation strategies, policies and measures.

County staff will be available to explain the goals, strategies, policies and measures of the plan; provide information on existing and future conditions; answer questions; and collect comments.

Maps, exhibits and handouts will be available. More information about the Dakota County Transportation Plan is available on the Dakota County website at: www.co.dakota.mn.us/EnvironmentRoads/Reports/Road/2030TransportationPlan.htm. For more information, contact Scott Peters, Dakota County Transportation Department, 952-891-7027.

-30-

Public Review Period Comments Received From:

City of Apple Valley
City of Burnsville
City of Eagan
City of Lakeville
DARTS
Hastings citizen
Metropolitan Council
Minnesota Department of Transportation Metropolitan District

Dakota County 2030 Transportation Plan

December 2011

Public Review Comments and Responses

Comments Pertaining to the Entire Document

- Map Streets and Highways – The Local Planning Handbook requires that comprehensive plans should include principal and A-minor arterial maps that shows existing and proposed number of lanes. Maps showing the current and proposed lanes are not included.

  A map showing this data will be inserted into the Plan document.

Chapter 1: Executive Summary

No comments. Chapter was developed summarizing all chapters after the public comment period.

Chapter 2: Introduction and Background

- 2-5: Integration of Modes

  It states there are two (2) miles of bus shoulders on both sides of I-35E. However, there are only two miles (2) of bus shoulders in the northbound direction only, on I-35E in Dakota County.

  The text will be revised to properly identify the bus shoulder mileage and direction on I-35E.

- 2-7 to 2-11: County Transportation Studies Identified in the *Dakota County 2025 Transportation Plan*

  Add Yankee Doodle Road (CSAH 28) Corridor Study

  The "CSAH 28 Corridor Study – From Denmark Avenue to State Highway 149" will be included.

- 2-13: Forecasted Traffic Volumes

  There is a reference to average daily traffic volumes in 2007 and estimates for 2030, which are depicted in Figure 6. There is no narrative on how traffic forecasts were developed.

  A narrative on how the forecasts were developed will be inserted into the Plan document.

- 2-17: Figure 6 – Average Daily Traffic – County Highways, 2007-2030

  The ADT volume for CSAH 38 (McAndrews Road) between Nicollet Avenue and CSAH 11 is projected to increase from 15,000 to 32,000. This is a very large increase by

percentage and volume. These projections would put this section of roadway as being the third most heavily used in the City by 2030, behind CSAH 42 and CSAH 32 (east of TH 13). The 2030 projected volume is also very close to the projected volumes for several of the County Highways that are projected to exceed 6-lane capacity. Given the existing conditions along this roadway, an increase in traffic volumes to the projected level would have significant impacts. Further discussions should occur between the County and the City to determine the factors contributing to this increase and possible mitigation.

The Dakota County Travel Demand Model accurately reflects the City's comprehensive plan, which includes the potential for further development in the area of the medical campus. General trip assumptions are made by the model based on land use changes expected per the City's Guide Plan. If future land use changes in the area are different from what is currently assumed in the City's Comprehensive Plan, this will affect future traffic volumes. Also, there is general trip growth along CSAH 38 due to the demands on CSAH 42 and the inability to expand that roadway any further. As CSAH 42 becomes more congested, CSAH 38 is one of the few routes that provide a viable alternative. The County will work with the City in the future on potential mitigations if volumes grow on CSAH 38 as indicated by the model.

- 2-19: Projected Regional Transportation Investments

  The City of Lakeville encourages the future reconstruction of Interstate 35 to a six-lane facility and requests Dakota County's support in requesting the MnDOT propose funding to improve this regional route.

  The primary focus of the Transportation Plan is the County's transportation system. The Plan does not evaluate, identify or request improvements to the State system via this Plan. County staff will work together with City staff and MnDOT in in assessing needs and potential opportunities to improve I-35 in future years.

- 2-23: Average Annual Investments by Plan Goal
  - 1st paragraph – The construction cost rising 70 to 90 percent seems to be very high.

    The text will be revised to show from 2004 to 2010 construction costs increased by 53 percent (based on the MnDOT Highway Construction Index)

  - Last paragraph – Change gravel road paving to gravel road resurfacing.

    The term "paving" refers to changing gravel roads to a bituminous surface. The term "resurfacing" refers to keeping the road as gravel or the same surface.

Chapter 3: Transportation Plan Principles

- 3-4: Evaluate Telecommunications
  Include an example for telecommunications conduit (i.e. multimode fiber optics).

  This can be included.

- 3-6: Monitor Traffic Data
  Typo occurs.

  Text will be corrected.

- 3-6: Safety or Operational Issues
  Consider adding: Acquire/put into operation Adaptive Traffic Management System Software to address issues on capacity deficient/high volume components of system.

  This section refers to general traffic safety and operations. It is not intended to provide this level of detail.

- 3-10: Public Comment and Input Opportunities
  Consider revising #7 to: Provide opportunities for public comment through social media and traditional methods.

  The text will be revised.

- 3-11 & 3-12: Context-Sensitive Design and Complete Streets
  Several typos.

  Text will be corrected.

- 3-11 to 3-12: Context-Sensitive Design and Complete Streets
  As the County develops comprehensive complete streets guidelines, input and cooperation with Cities is essential. These guidelines would likely have significant impact on the City systems and operations.

  The text has been revised to include local government input and cooperation as a major component in the development of complete streets.

- 3-12: Minimum Urban, Low-Speed, Highway Widths
  The Plan identifies context-sensitive principles as "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." However, it is suggested that minimum widths for two-lane low speed highways in urban areas is being considered. Minimum street widths do not allow for flexibility and balance between the

above mentioned objectives. Therefore it is recommended that the minimum street widths not be implemented.

The intention here is to help meet economic, social and environmental objectives. Depending on the context, the County may be required to meet certain minimum widths to meet safety objectives and funding requirements. This strategy replaces language that had specific design details identified in the previous Plan.

- 3-12: Lower-Impact Road Design
  To achieve lower-impact road design, there are a number of tools that may be utilized. Curb and gutter, as stated, does not necessarily prohibit the use of low-impact road designs. Likewise, the use of ditches and swales does not guarantee low-impact roads. It is recommended that strategy be revised to encourage the consideration of various low-impact design strategies, including infiltration, as opposed to stating the low impact design means ditches and swales.

  The strategy will be revised to "Road Design and Infiltration" and will emphasize infiltration.

Chapter 4: Goal 1: Limited Resources are Directed to the Highest Priority Needs of the Transportation System

- The City of Lakeville recognizes the importance of maintaining and improving a comprehensive regional transportation system, and the challenges in identifying funding to meet these needs. However, the current 55/45 county/city cost participation split inappropriately places responsibility on municipalities for funding regional transportation improvements in situations where the improvements are not proportionately caused by the surrounding development. The current cost share formula prohibits the City of Lakeville's ability to fund local transportation improvements necessary to maintain and improve a comprehensive local transportation system. The City of Lakeville requests consideration of a cost participation formula where all future county highways, county highway expansions and transitways constructed above city collector street standards are considered regional transportation improvements, in line with Policies F.10 and F.15, and funded 100% by Dakota County.

  The overall 55/45 policy has served the citizens of Dakota County well in that the County transportation system was improved as needed over the years of exploding growth in a way that ensured safety and efficiency along many of our highest volume roadways. This has resulted in substantial local and regional benefits. Even the most regional transportation facilities on the County system serve a large amount of trips that are local in nature.

  Through the development of the 2030 Transportation Plan, all of the cost participation policies were reviewed and discussed with our City partners, and a number were revised to allow for more County cost participation in the future.

Policies regarding storm sewer repair/replacement, safety improvements, and future County roadways have been revised in this manner.

- 4-21: F.1 - Cost Participation – Roadway sub. 8. (and)
  4-22: F.3 - Cost Participation – Right-of-way
  - The City of Burnsville has adopted storm water treatment regulations for projects occurring within the city, as required by state and federal regulations. As County projects within the city would not be exempt from these regulations (or other local government agency requirements), the County's cost participation should include best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements. The City requests Policy F.1 include cost participation to meet all applicable storm water treatment requirements.

    Policies F.1 and F.3 will be revised to include recognition of best management practices and systems necessary to meet all local, county, state or federal storm water treatment requirements.

  - F.1, sub. 8 – Revise National Urban Runoff Protection (NURP) to National Pollution Discharge Elimination System (NPDES).

    The text will be revised.

- 4-22: F.3 - Cost Participation – Right-of-way
  sub. 1 & 3 – Reference to F.1 should be consistent with F.1 subsections. Revise NURP to NPDES.

  The text will be revised.

- 4-23: F.8 - Cost Participation for Storm Sewer System Maintenance
  The City (Burnsville) in general is very supportive of this proposed change as it recognizes that storm sewer catch basins in county road are catching storm water runoff primarily from county right of way and roads.
  - A major expense associated with storm water treatment systems and receiving waters is removal of accumulated sediment in the water bodies. As the County roadways have the potential to contribute a significant amount of sediment to these water bodies, the County should participate in the cost of removal of sediment to ensure the proper function of the water body. The City requests that Policy F.8 identify cost participation for sediment removal of water bodies based on contributing flows.
  - The City (Apple Valley) appreciates that the County is developing a maintenance policy that provides some equity and shared responsibility for maintaining portions of drainage infrastructure that serves the County Highway System. Please add the following statement to subsection 1 of Policy F.8: "The County

will conduct routine inspections and develop repair lists for roadway catch basins and pipes connecting catch basins to mainline pipes along the county highway system." Add the following statement to subsection 4: "The County's CIP will identify specific locations of anticipated resurfacing/overlay projects over the five year planning period."

The policy is not intended to cover routine maintenance procedures. As potential repairs are identified, the County will work with the City on determining what the proper repairs will be. The County will continue to work with the Cities on identifying future overlay corridors with enough advanced notice to properly prepare for storm sewer repair needs. These types of procedures are more detailed than would typically be included in Transportation Plan text.

- The City of Burnsville's storm sewer system consists of a network of pipes, ponds, structures and facilities. Identifying the contributing flows to each part of the system would be a very large undertaking. Please clarify to what extent the County's cost participation is intended. Will pipes, ponds, structures and facilities further downstream from a County road be eligible for cost participation if runoff from the County road is routed to it?

  The primary intent of this policy is to provide a mechanism for County cost participation for storm sewer infrastructure directly related to the County roadway infrastructure. Facilities downstream would typically be eligible based on contributing flows. This is not an unusual method for calculating cost participation and is currently used with all state aid-eligible projects.

- Can Dakota County explain how general maintenance of storm sewer inlets and lead pipes will be completed? It seems that if the structures and pipes are essentially 80% owned by Dakota County that Dakota County would be the primary agency in maintaining these facilities.

  The change in the cost participation policy was not intended to change current general roles and responsibilities. The cities are best positioned with staff and equipment for routine maintenance. How to handle major repairs will be addressed in the storm sewer system repair/maintenance agreements between the County and City.

- <u>4-23: F.9 - Cost Participation for Multi-Use Trails and Sidewalks</u>
  Suggested text revisions.

The text will be revised to "…if the local unit of government is following an adopted Bikeway Trail maintenance agreement between the County and the City."

- 4-25: F.18 - Street Lighting
    - Sub. B.a, and B.b – Consider street lighting at roundabouts as eligible for up to 100 percent participation in place of no participation. (Basically remove Sub. B.b and add roundabouts to B.a)
    - Please add additional text to describe why the County would participate in up to 100 percent of the cost for street lights at stop-controlled intersections, but not participate in street lights at traffic signals. The policy should also specify the agency responsible for maintenance and power costs for street lighting mounted on traffic signals at the intersection of two county highways (all four legs under county jurisdiction).

      Street lighting at signals and roundabouts was discussed with the city partners as we developed the Plan. Policy F.18 shares responsibility between the cities and the County throughout the life of signals and roundabouts, and is intended to reflect the benefit the cities and the County receive from these traffic control devices. This approach was favored over splitting all of the operations and maintenance costs related to signals and roundabouts. There are a number of items the County is fully responsible for that are not split with the cities, including pavement markings, signing, all signal operations equipment, regular maintenance checks, etc.

      The policy for the installation costs at stop-controlled intersections changed with this Plan consistent with the new policy for Small Safety Projects (F.16). Signals and roundabouts have a safety element, but also maximize system capacity and efficiency, so they are treated differently than intersection street lighting that is separate from the traffic control device itself.

Chapter 5: Goal 2: Transit and Integration of Transportation Modes

- The City of Lakeville encourages consideration of extending station-to-station service and expanding reverse commute service to 215th Street prior to 2020 to serve the First Park Lakeville and Airlake Industrial Park campuses, as well as the Airlake Airport.

  Dakota County will include Lakeville in the future decision making process regarding extension of station-to-station service. It is expected that this work will be directed by the Cedar Avenue Transitway Implementation Plan Update, as well as an assessment of development and economic activity along the transitway to gauge when demand for service may warrant an extension of service.

- 5-6: Suburban "Opt-Out" Service Providers
  It states that Lakeville is an "opt-out" community. To the best of Burnsville's knowledge Lakeville is not an "opt-out" community.

  The text will be revised to best describe Lakeville's status. Lakeville was previously outside the transit taxing district. It became part of the transit taxing district in 2008. Lakeville is now served by MVTA.

- 5-13: Figure 11 – Existing Transit Service Areas, 2011
  The map shows the 35W corridor as a Metro Transit corridor, but not an MVTA corridor. MVTA operates many buses on the 35W corridor north of TH13.

  The County agrees that MVTA buses use I-35W. However, the intent of the map is to identify the primary provider within the corridors that provide the local and regional transit services provided to County residents. The map will be revised to include the 35W corridor as a MVTA express corridor.

- 5-18: Interstate 35W Transitway (Bus Rapid Transit)
  Our understanding is that this service has been pushed back several years. It may be more appropriate to State that Bus Rapid Transit in this corridor is under consideration for implementation in 2015 or later. One key hurdle will be how the MVTA and Metro Transit cooperate to operate the services because both operate buses on the corridor.

  The text will be revised to state that service is scheduled to begin after 2015 pending station development in Hennepin County.

- 5-19: Robert Street Transitway
  Typo in last paragraph.

  Text will be revised.

- 5-21: Collaborate With Transit Providers
  The official name of our organization is DARTS. Please make this change wherever DARTS is mentioned in the plan.

  Text will be revised

- 5-22: T.7 – Coordinated Service Delivery
  The key player in such coordination activities will be the Metropolitan Council, which dictates the operating parameters of the highest volume of paratransit service in the county. We believe attention in this area will be increasingly important as the landscape for funding and operations of Metro Mobility, the primary paratransit service, continues to change. As the Dakota County Metro Mobility provider, we are seeing a significant increase in ridership. Any potential system-wide funding cuts could threaten the current

level of Metro Mobility service within the county, which would require all agencies to work together proactively to fill resulting gaps. We are particularly concerned about the potential redefining of the Metro Mobility service area in a way that would allow service only to people inside the federally defined ADA service area. Transit Link, the general public dial-a-ride service, may be a resource for some of those riders if threat were to occur, but Transit Link ride request already exceed capacity on a daily basis and Transit Link service (curb to curb) is not adequate for some disabled riders. Although this ADA service area restriction is not, to our knowledge, currently planned, it is an option that would have significant ramifications for Dakota County residents who rely on special transportation.

This item will be included within the "Issues" section of this chapter and will state that reductions in regional funding for transit may adversely affect ADA paratransit service through a reduced service eligibility area within Dakota County.

- 5-25: Transit Advantages
  It states "Present Mn/DOT design guidelines have been established restricting use of shoulder lane to when highway speeds drop below 35 mph, and speeds to a maximum of 35 mph, or 15 mph above highway speeds." Please revise language to reflect that bus shoulder use is authorized by Minnesota Statute 169.306, not MnDOT design guidelines.

  The text will be revised to identify Minnesota Statute.

- 5-35: Transit Oriented Development
  The City of Lakeville is interested in pursuing transit-orient development (TOD) principles and guidelines, but suggests a greater emphasis and explanation to be included in the plan as to how TOD can be successfully integrated into a developing community such as Lakeville.

  Dakota County staff is available to provide guidance to cities in applying TOD to specific contexts and needs.

- 5-41: Moving Along Highways
  Suggest removing 4th bullet - "Maintain trails to bare pavement in winter in high demand areas through Bikeway Maintenance Agreements." Question regarding 6th bullet and if easement acquisition is required or how maintenance is enforced.

  Text is listed as potential trail system improvements to meet the needs of all bicycle riders, pedestrians, wheelchair users and motorists. The improvements are worth identifying to meet the needs of users. The County recognizes the identified concerns. The 4th bullet will be removed. The trail maintenance agreements note snow removal at the discretion of the cities.

The 6th bullet will be revised from "facilitate" to "support".

- 5-45: T.18 – Bicycle and Trail Facilities Construction
  Is the "Bikeways Maintenance Agreement" the same as the "Bikeway Trail Maintenance Agreement"? What about winter maintenance?

  Text will be revised to "County Bikeway Trails Maintenance Agreement". The trail maintenance agreements note snow removal at the discretion of the cities.

- 5-46: Figure 19 – Bikeways in Dakota County (and)
  5-47: Figure 20 – Bike Trails Along County Roads
  - These figures show city streets that have on-street bike paths where we do not have designated bike lanes. Is a bike lane a roadway where bikes and automobiles share the same lane? If yes, is there any reason to show a street having a bike lane if it does not have a significant shoulder or designated bike lane?

    The "On-Street Bike Route" designation on Figure 19 will be removed. Figure 20 will be removed from the document.

  - The existing trail segment along CSAH 60, west of Interstate 35 appears to be missing from Figure 19. The bike lane along Ipava Avenue, north of CSAH 60 should be removed from Figure 20.

    Figure 19 will be revised. Figure 20 will be removed from the document.

- 5-47: Figure 20 – Bike Trails Along County Roads
  Show shoulders on the frontage roads along CSAH 30 between Nicols Road and Rahn Road.

  Figure 20 will be removed from the document.

- 5-48: Figure 21 – Trail Gaps by Pedestrian Demand
  Please provide or define the criteria and demonstrate determination.

  Text describing the categories and determination will be included.

- 5-50: Figure 22 – 10-Ton Highways
  - Are the ten ton routes identified year-round 10-ton routes or are they reduced during the spring thaw period?

    The criteria for the 10-Ton County Highway System are described in detail in Chapter 7. They will be year-round 10-ton routes.

  - Remove CSAH 26 between TH 13 & CSAH 31. (Also p.7-13, Figure 33)

This segment will be removed from the map.

- Add CSAH 5 between TH 13 and i-35 as a proposed 10-ton route.

  This segment will be added to the map.

- 5-58: Incompatible Land Uses
  The paragraph seems to insinuate that cities and property owners are responsible for mitigating county transportation vs. property owners land use rights. We believe Dakota County should be the primary governmental unit negotiating the issues when the issue is between Dakota County transportation corridors and private land use issues. Clearly when the issue surrounds City vs. property owner rights, the City would be governmental unit discussing with the land owner.

  The paragraph will be removed.

Chapter 6: Goal 3: Preservation of the Existing System

- 6-2: Preservation Issues
  Include "Timely coordination with city/township staff regarding repairs or adjustments of public utility systems in conjunction with County highway projects." Add to Policy and Strategies as well.

  Text under the strategy "Utilities Adjustments" will be revised to include this.

- 6-8: Traffic Safety and Operation
  There is mention of a document entitled "Transportation Operations Practices and Procedure Document." MnDOT is interested in further discussion on how this may affect its infrastructure.

  This document details the County's operation and maintenance practices and is specific to the County highway system only. The document was adopted in 2007 and addresses how the County maintains the traffic elements of the system that the County is responsible for. This document will be updated following adoption of this Transportation Plan.

- 6-11: P.2 – Bicycle Trail Resurfacing
  Reference "official" title of agreement.

  The text will be revised to reference Bikeways Trails Maintenance Agreement.

- 6-11: Storm Sewer Maintenance
  - Remove text identifying that local jurisdictions are responsible for inspection and maintenance (first sentence). Revise cost participation amount from 80 percent to 100 percent.

- The last paragraph on page 6-11 states, “Storm sewer construction inspection and maintenance is the responsibility of local jurisdictions.” This statement is incomplete and/or not factually correct for the entire highway system.

  Policy F.8 – Cost Participation for Storm Sewer Maintenance is identified in Chapter 4 and appears in Chapter 6 for reference convenience. This policy was developed in cooperation with the City Engineers subgroup that assisted in developing this Plan. During development of this Plan this information was shared with CONDAC periodically. Staff is comfortable with the policy as developed.

  Some of the water that ends up in the storm sewer systems that directly drain the County roadway originates off of the County right-of-way. The text will be revised to state “mainly” in the first sentence of the last paragraph.

- Identify that County maintenance costs participation includes routine maintenance activities. Current text is opposite of P.6.

  P.6 is a general county-wide policy. How it is accomplished varies between cities and townships.

- 6-12: F.8 – Cost Participation for Storm Sewer System Maintenance
  Sub. 1 - revise from “80 percent” to “100 percent”. Sub. 3 revise from “replacements” to “agreements” and include routine maintenance. Sub. 4 revise from “County” participation to “local”, add “local” to CIP and revise from approved by “County” to “City”.

  Policy F.8 – Cost Participation for Storm Sewer Maintenance is identified in Chapter 4 and appears in Chapter 6 for reference convenience. This policy was developed in cooperation with the City Engineers subgroup that assisted in developing this Plan. During development of this Plan this information was shared with CONDAC periodically. Staff is comfortable with the policy as developed.

  Some of the water that ends up in the storm sewer systems that directly drain the County roadway originates off of the County right-of-way. This is why the policy is not 100 percent. Replacements will be changed to agreements. This policy is not intended to cover routine maintenance. Sub. 4 is worded appropriately as a County policy (it is not intended to be a local policy).

- 6-12: Monitoring of Systems
  Add Adaptive Traffic Management System after Traffic signal optimization

The text will be revised from "Traffic Signal Optimizations" to "Traffic Signal Management". Specific types of management systems are not typically addressed in the Transportation Plan.

- 6-13: Maintenance Reimbursement
  Include snow plowing trails if the County requires trails to be winter maintained.

  The strategy identifies that reimbursement is for normal County costs that the County would otherwise do on its own. The County only maintains the regional trails in the winter.

  The "Maintenance Agreement for Bikeway Trails" between the County and each city addresses this issue for trails along the County roadway system. It states that snow removal is at the discretion of the city.

- 6-13: P.3 – County Highway Sweeping
  Include right-of-ways with sweeping of all County highways with urban sections.

  The language is appropriate as-is. The County will work directly with local agencies to coordinate sweeping activities.

- 6-13: P.4 – Mowing Policy
  - Some county roads are the main thoroughfares through highly developed retail areas. In those areas, aesthetics should be as important as safety reasons for mowing. We don't believe a one policy for all situations works here. On rural county roads, aesthetics may not matter as much, in fact, taller grasses may be more aesthetic in rural areas. Long grass and weeds in the boulevards and medians along CSAH 42 or CSAH 23 is not acceptable for areas like these where the look of the roadway impacts the feel of large retail areas. Dakota County as a whole benefits greatly by these retail areas.

    The main intent of the mowing policy is safety. The mowing policy is consistent with the policy adopted in 2004 for the "Dakota County 2025 Transportation Plan" in which medians and boulevards in non-rural areas will be mown up to six times per year (between May and October). Local government units are welcome to mow more frequently if they feel necessary for aesthetic purposes.

  - Include "in compliance with local ordinances" – Eagan has a maximum height of 8" for grass & weeds.

    The main intent of the mowing policy is safety. Local ordinances may have other intentions, including aesthetics. Local government units are welcome to mow more frequently if they feel necessary for aesthetic purposes.

Chapter 7: Goal 4: Management to Increase Transportation System Efficiency, Improve Safety and Maximize Existing Highway Capacity

- Policies in Chapter 7 do not supersede existing maintenance agreements with MnDOT. The signal operations, maintenance, and energy costs must abide by State cost and maintenance policy or delegate to the city.

  Text will be revised to identify that existing maintenance agreements remain in effect for signal operations, maintenance and energy costs. Future maintenance agreements will abide by policies approved within this plan.

  This text has been used in past plans and don't suggest they supersede MnDOT agreements. They simply state what County policy is when the County works with State and local partners.

- 7-4: Functional Classification – County
  Should CSAH 86 be CSAH 46.

  The southern border considered for the study of an east-west principal arterial corridor in the area is CSAH 86.

- 7-6: Figure 31 – Functional Classification
  The City's Transportation Plan identifies the segment of CSAH 9, south of CSAH 70 as a B-Minor Arterial.

  Prior to Federal Funding applications in 2009, the County requested several functional classification revisions per Met Council guidelines and process. CSAH 9, south of CSAH 70 was revised from a B-Minor Arterial to an A-Minor Arterial (Connector).

- 7-9: Table 10 – Dakota County Access Guidelines
  Access spacing must consider a balance between mobility, local access to the transportation system, land uses and the character of economic development in a given location. Table 10 should not be the basis for removal of existing access points to the detriment of existing commercial and industrial land uses. The plan should also provide for flexibility in allowing partial movement intersections at 1/8 miles spacing for all divided highways.

  We agree that effective access management provides a balance between access and mobility needs. That said, safety is also a critical objective of access management. Existing access to the County roadway system is reviewed as problems are identified, improvements are considered, or as opportunities arise. When we review existing access, the Access Guidelines do consider 1/8 mile partial access for divided highways with less than 35,000 ADT or if the access improves the overall safety and/or efficiency of the transportation system.

- 7-11: Figure 32 – 2030 ½ Mile Full Access Spacing Needs
  The figure doesn't appear to agree with Table 10.

  Table 10, Dakota County Access Guidelines, is a guide to the spacing and configuration of access locations in general based on 2030 traffic projections and posted or design speeds. Figure 32 (now Figure 31), 2030 ½ Mile Full Access Spacing Needs, takes into account the future transitways and adopted studies as well. Both the table and the map are used together as guides in determining access. Text will be included in the Access Guidelines notes to identify this.

- 7-11: 10-Ton County Highway System
  Does the County wish to show any local 10 Routes? The City has at least 2 routes that are posted 10 ton year round.

  Figure 33 was intended to show County 10-Ton routes and how they provide connectivity to the State system. The County recognizes that city routes are important to the 10-Ton system as well, but did not intend to show all of them on this map.

- 7-15: Figure 34 – Jurisdictional Classification
  Wescott Road (B Minor Arterial) is missing, not showing Collector routes

  Staff will verify that Eagan's local arterial and collector roadways are shown on Figure 34.

- 7-18 to 7-21: Figure 37 - Potential County and State Highway Jurisdictional Issues
  - The City (Burnsville) is very concerned about the implications of CSAH 42 changing jurisdiction from the County to the State. CSAH 42 is a vital corridor in the City. Several items of concern are raised by a jurisdiction change. The area around Burnsville Center is the largest retail area south of the Minnesota River. Therefore the maintenance of this corridor to ensure adequate access, safety and aesthetics are of great importance to the City and we feel Dakota County may share these feelings more than MnDOT. The plan states that "Ideally, principal arterial highways should be under state jurisdiction and minor arterial highways under county jurisdiction." The City is concerned that the Dakota County plan states that principal arterial highways would ideally be under state jurisdiction. The statement that a transfer "likely (would) not be considered in the next 20 years does help state that the Dakota County is not supportive of this.

  - Figure 37 identifies the potential transfer of jurisdiction of County State Aid Highway 42 from the County to MnDOT. The Transportation Plan provides minimal background information as to the purpose of the transfer, the benefit, or the potential disadvantages of transferring a key transportation corridor to the State.

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 2030) and requires additional analysis before further consideration. Additional text will be added to better explain the County's intentions regarding CSAH 42.

- The Potential County and State Highway Jurisdictional Issues (Figure 37) seems to indicate that more miles of roadway will be transferred from the State to the County than from the County to the State. The equitability of this transfer for Dakota County residents should be considered as it seems the County would be taking on more infrastructure than it is transferring to the State.

  The intent of this figure is to identify all potential jurisdictional transfer possibilities between the County and the State considering a roadway's function and the types of connections that are made. The equitability of number of miles transferred between jurisdictions will be one factor considered as these jurisdictional transfers occur

- 7-21: Roundabouts
  Minor text revisions.

  Text will be revised to remove "less" from the description.

- 7-24: M.7 - Traffic Control Signals – City or State Maintenance Assistance
  This section states the County may discontinue the agreement for maintenance with cities, but does not address that cities may discontinue a signal maintenance agreement, which is what the actual agreement states.

  This policy will be revised with specifics regarding agreements move to a procedures document in place of the Transportation Plan. The agreements allow either party to terminate.

- 7-24: M.9 – Traffic Control Signal Operations, Maintenance, and Energy Costs
  - Policy states that "Dakota County assumes a portion of the financial responsibility of energy costs for traffic signal operation, not including the street lights attached to the traffic signals." MnDOT believes that street lights are an integral part of the signal system and are needed for the safe operation of the signal (providing intersection lighting, intersection delineation, and pedestrian safety.)

This cost sharing policy recognizes that each agency has a share of signal maintenance and energy costs. The policy will be revised to emphasize that the County and City will share operation, maintenance and energy costs of traffic signal systems in an equitable and efficient approach between partners to recognize mutual interests. Sub. 3 states "Dakota County is responsible for cleaning and painting of traffic signals (when applicable) and for replacement of LED indications (not including the attached street lights) at all intersections with County highways." Replacement should be clarified to include when LED indication is faulty (includes working but dim) or when useful service life is exceeded.

Replacement means when replacement is necessary based on agreements and the County's practice documents. Further clarification to this level of detail is not provided within the Transportation Plan.

- 7-26: Traffic Signal Coordination
  Add Adaptive Traffic Management System Software to the end of the text. (Also shown on p.3-6, Traffic Operations Policies and Practices).

  This strategy reflects intent to manage traffic signal systems as appropriate to maximize system efficiency. Adaptive traffic management is a specific tool that may be considered along with other tools and coordination concepts to ensure system efficiency. The Plan is not intended to provide this level of detail.

Chapter 8: Goal 5: Replace Deficient Elements of the System

- 8-3: Figure 40 – Dakota County Road Age
  CSAH 43, south of TH 55 was partially reconstructed/regraded in 2005. What is the purpose of this exhibit?

  The County considers the general expected highway life to be 70 years. Highway age will be one factor in considering reconstruction (replacement) needs of the highway. The purpose of this figure is to indicate highway age and associated locations throughout the county.

  This segment of CSAH 43 will be removed from the map. The northern 1,000' and southern 500' feet of this segment consisted of only mill and overlay. The middle 1,800' of the segment consisted of a full reconstruction project.

Chapter 9: Goal 6: Improvement and Expansion of Transportation Corridors

- 9-7: Dakota County's Identified Improvements and Expansions to the State Trunk Highway and Interstate Highway System
  One of the key transportation challenges for Apple Valley involves the limited capacity of State Trunk Highway 77 between Apple Valley and the I-494 corridor. The Minnesota Department of Transportation is leading a process to identify and evaluate options for increasing the capacity of the corridor, with involvement from Dakota County and the cities of Apple Valley, Eagan and Bloomington. The transportation plan should reference this process and describe local strategies for supporting capacity improvements along Trunk Highway 77

  The current strategy, "State System Expansion Needs", will be revised to include identifying and evaluating options to address capacity needs.

- 9-7: Dakota County's Identified Improvements and Expansions to the State Trunk Highway and Interstate Highway System
  - TH 55
    - Revise to "Between TH 149N and TH 149S"
  - TH 149
    - Revise to "Between Rich Valley Boulevard and TH 3"
    - Add "Between I-494 and TH 55"
  - I-494
    - Remove "At the Wakota Bridge…"

  Revisions will be verified and included.

- 9-11: Interchanges and Overpasses
  - Several intersections along CSAH 42 in Burnsville are identified as likely having the need for interchanges in the future based on 2030 projected traffic volumes. These include: CSAH 42 & Nicollet Avenue, CSAH 42 & CSAH 5, CSAH 42 & Aldrich Avenue, and CSAH 42 & Burnhaven Drive. Based upon funding availability and the need for access where the intersections exist now, it seems unlikely that any of the interchanges are feasible for the next 20 years. If that is true, it may be wise to have a statement like this in the plan. The proposed plan shows the CSAH 5/CSAH 42 and the CSAH 42/Burnhaven Drive as possibilities and dismisses the CSAH 42/Nicollet Avenue and CSAH 42/Aldrich Avenue due to excessive costs. Of these 4 intersections, the City has the most interest in the CSAH 42/Nicollet Avenue intersection due to its location between I-35W and I-35E, that it is not located in front of Burnsville Center and the fact that this area has by far the most traffic of the four intersections.

Page 9-11 states, "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. Page 9-12 states, "Installation of an interchange is highly unlikely due to excessive implementation costs associated with the intersection proximity to an existing interchange or future interchange need." This is identified for CSAH 42 and Nicollet Avenue and CSAH 42 and Aldrich Avenue.

- 9-12: Dakota County Highway Intersections
  Chapter 9 provides cost estimates for construction of interchanges at various intersections along the county system. The cost estimates appear to be significantly too low for intersections along CSAH 23 based on the extensive impact to adjacent properties.

  This section includes further text that identifies costs and timing for interchange improvements varies significantly from one location to another. Investment for each interchange may range from $10 to $20 million or more. The County will cooperate with responsible jurisdictions to plan and implement improvements.

- 9-14: New Mississippi River Crossing
  It may be worth noting in the plan that MnDOT has notified the City of Burnsville and Dakota County that it plans on reconstructing the I-35W/Minnesota River Bridge in 2020. If this project takes on other subprojects, the Dakota County transportation system could be affected.

  The purpose of the Transportation Plan is as a guide to maintain and improve the County's transportation system through 2030. Specific details regarding such a construction project are usually developed and identified through agreements once projects are authorized using the Transportation Plan as a guide.

- 9-17: Figure 46 – Future Studies
  The N-S Arterial Connection shaded area should extend north to include I-494.

  The intent of the area shown for the future North-South Arterial Connection is to show the area in between two recently completed studies: "Rosemount/Empire/UMore Transportation Study" and the "Regional Roadway System Visioning Study". The exact study parameters will be determined at the time of study project scoping and will most likely include some geographical areas of the aforementioned studies.

- 9-18: North-South Arterial Connection
  Remove the last sentence referring to assessment of the CSAH 32 extension at 117th Street as it is shown as a separate study on Figure 46.

Assessment of roadway alignment locations and improvements to extend CSAH 32 eastward to TH 52 to utilize the existing interchange at 117th Street will be shown as a separate study. Text will be revised to identify that this study could coincide simultaneously or be included with the "North-South Arterial Connection" study.

Chapter 10: Implementation

No comments.

Appendix A: Policy Revisions

- Ensure the use of identical language throughout the Plan and Appendix A

The final version of Appendix A will provide final Plan policy language in comparison to previous language.

General Comments

- Concern with traffic volumes, speeds, lack of shoulders, truck traffic and pedestrian safety on CSAH 46/47 near TH 61 in Hastings

County staff will continue to work with the City of Hastings on future improvements in the area and notify local and county law enforcement regarding vehicle speed on the highway.