

March 2017



# Dakota County

## East-West Transit Study

FINAL REPORT



Kimley»Horn





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# Executive Summary

East-west transit connectivity has come up frequently as an important topic as each transitway is studied in Dakota County. As one nears the center of the Twin Cities Metropolitan Area, the range of transit service options and coverage is much greater than it is within and through Dakota County. With the primarily north-south orientation of the METRO Red, Orange, and Blue Lines as well as the north-south orientation of the planned Robert Street and Red Rock Corridors, all existing and planned transitway service in the area is largely designed to provide frequent service into the downtown cores of Minneapolis or Saint Paul. However, many residents lack reliable options to connect to transit centers, major destinations, and employment opportunities within and surrounding Dakota County. Developing improved east-west service to provide a more comprehensive network for Dakota County, its cities, and the surrounding counties is critical to support these growing communities.

## Purpose of Study

The Dakota County East-West Transit Study (East-West Transit Study) was needed to address existing and emerging needs for east-west oriented transit in the county. The East-West Transit Study looked for opportunities to improve the quality of fixed route transit service in Dakota County and improve connections to the regional transit system by identifying and evaluating potential transit corridors. Recommendations were developed to improve connections to employment, improve mobility to and from areas adjacent to the county, and expand the range of travel options for transit-dependent populations.

### Stakeholder Engagement Strategies

- **Regional agencies, counties, and local entities have completed a total of 34 plans, studies, and projects that have or may have an influence on transit service in the study area. Most projects and plans reviewed are supportive of expanding transit service in Dakota County.**

## Study Area Characteristics

The study area included the cities of Mendota Heights, West St. Paul, South St. Paul, Mendota, Lilydale, Sunfish Lake, Inver Grove Heights, Eagan, Burnsville, Apple Valley, Rosemount, Coates, Hastings, Lakeville, and Farmington and the townships of Nininger, Marshan, Vermillion, Ravenna, and Empire. The East-West Transit Study also considered transit options that extended outside the study area or the county if there were logical or compelling destinations or connections.

Study area characteristics were reviewed and analyzed in order to better understand the demographics, travel patterns, development patterns, and infrastructure within the study area that may inform the need for transit.

### Demographics

The highest concentrations of minority residents live in the northern and western parts of the study area. The areas with the highest percentage of people with low incomes (living under 185 percent of the poverty line) are in South St. Paul, West St. Paul, and Burnsville. Most of those living in the study area have access to a personal vehicle, and most speak English very well.

**Figure 0.1: Composite Map of Study Area Characteristics** ▼



## Travel and Development Patterns

The western and northern parts of the study area include a variety of residential, commercial, and institutional land uses and have higher population and employment density than the largely agricultural eastern and southern parts of the study area. Important destinations and regional job and activity centers are more common in the northern and western part of the study area.

## Infrastructure

Some study area communities, such as Hastings, South St. Paul, and West St. Paul, feature traditional street grid patterns with connected sidewalk systems. Other communities within the study area, such as Apple Valley, Burnsville, and Eagan, feature more suburban style street patterns that are supplemented with a fairly consistent network of shared-use trails, approximately one-mile apart along major thoroughfares.

Interstate 35E, as well as Highway 52, MN-13, MN-77, MN-55 are key regional corridors that serve the study area. Metro Transit and the Minnesota Valley Transit Authority (MVTA)

operate 35 local and express transit routes throughout the study area.

## Stakeholder Engagement

The goal of the public engagement efforts for the East-West Transit Study was to engage the public and stakeholders in identifying and evaluating existing and future east-west oriented transit needs. A Public Involvement Plan (PIP) was developed to clarify the goals and objectives for public outreach and engagement.



The East-West Transit Study engaged stakeholders through communications materials, public and stakeholder meetings, and committee workshops. Stakeholder input helped determine corridor extents, was used to evaluate corridors, and influenced the corridor recommendations.

Key themes identified multiple times in the engagement process included the desire for transit service along County Road 42, a direct connection to the METRO Blue Line, connections to colleges and other educational institutions, and existing transit service modifications.

## Travel Demand Analysis

Evaluation of the travel demand potential for east-west corridors in Dakota County was performed using a variety of survey and GPS-based data sources in order to assess current travel patterns within the study area.

Using four distinct datasets based on current, observed travel in the Twin Cities region, the East-West Transit Study determined the number of potential transit trips by corridor residents, workers, and visitors as well as the number of transit trips beginning and ending within a half-mile of each corridor.

## Evaluation Framework

A set of project goals and evaluation measures was created to assess and prioritize the east-west corridors identified by a Technical Advisory Committee (TAC) comprised of local government agencies and transit service operators. Goals and corresponding measures were developed based on previous county transportation plans and studies and refined based on input from the policymaker workgroup (PWG), the TAC, the Steering Committee, and the public.

The goals for the East-West Transit Study were to identify east-west corridors that:

- Improve mobility for transit dependent populations
- Are cost-effective and efficient

- Maximize regional transit connectivity
- Maximize transit ridership
- Respond to present and future travel patterns are supported by existing and planned land use
- Improve access to employment, institutions, and services
- Incorporate safe, convenient, and multimodal access and facilities

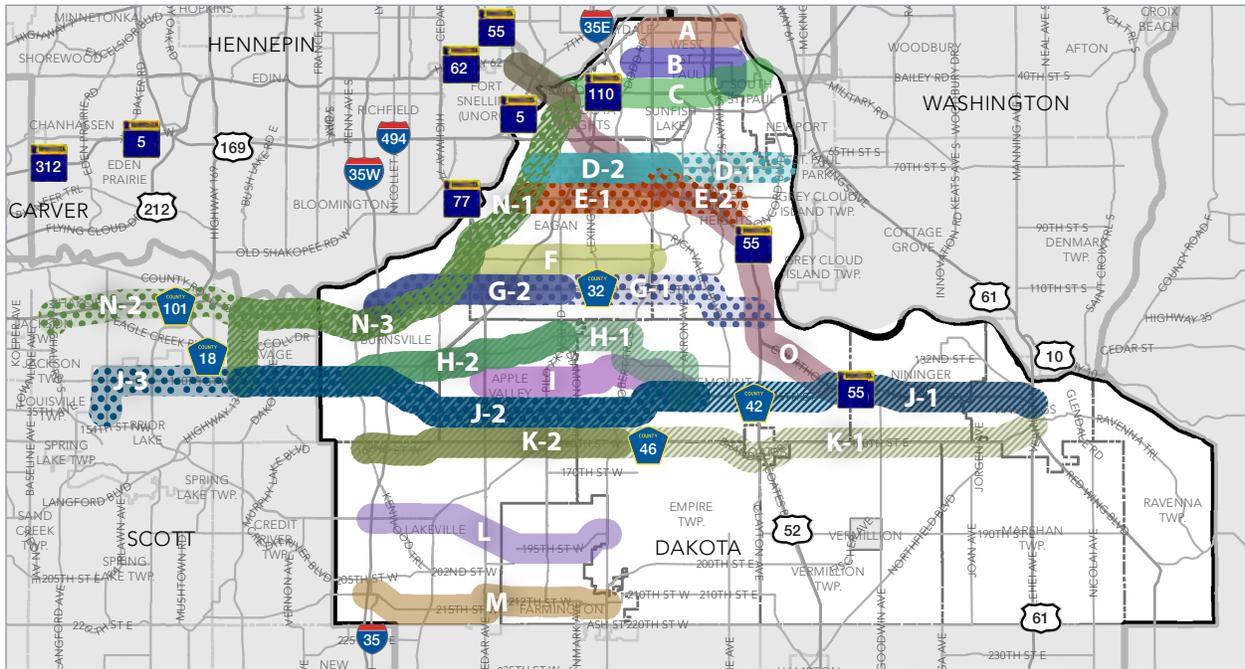
## Corridor Evaluation

The TAC identified the following corridors for assessment using the goals and measures developed in the evaluation framework:

- Butler Avenue (CSAH 4)
- Wentworth Avenue (CSAH 8)
- MN-110
- Lone Oak Road (CSAH 26)
- Yankee Doodle Road (CSAH 28)
- Diffley Road (CSAH 30)
- Cliff Road (CSAH 32)
- McAndrews Road (CSAH 38)
- 140th Street/Connemara Trail
- County Road 42
- County Road 46
- 185th/195th Streets (CSAH 60/64)
- 215th/212th Streets (CSAH 70/50)
- MN-13
- MN-55

After reviewing the initial corridor evaluation results, TAC members and project staff suggested evaluating revised extents for several corridors that served both transit-supportive and non-transit-supportive areas. 25 unique corridor segments were evaluated (**Figure 0.2**).

**Figure 0.2: Corridor Segments Evaluated** ↘



No corridors scored high across all goals. However, based on an average of all goals, the following corridors scored medium-high:

- Butler Avenue
- Yankee Doodle Road between MN-13 and Lone Oak Road
- Cliff Road between I-35W and I-35E
- County Road 42 between MN-13 and DCTC

There are several best practices in land use, policy and design that can be employed by developers, cities, and counties throughout the study area to better support transit in a suburban context, including:

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development policy
- Promote corridor transit-supportive site design
- Create inviting streetscapes and travel ways
- Cultivate and leverage partnerships in reviewing and approving development plans

## Recommendations

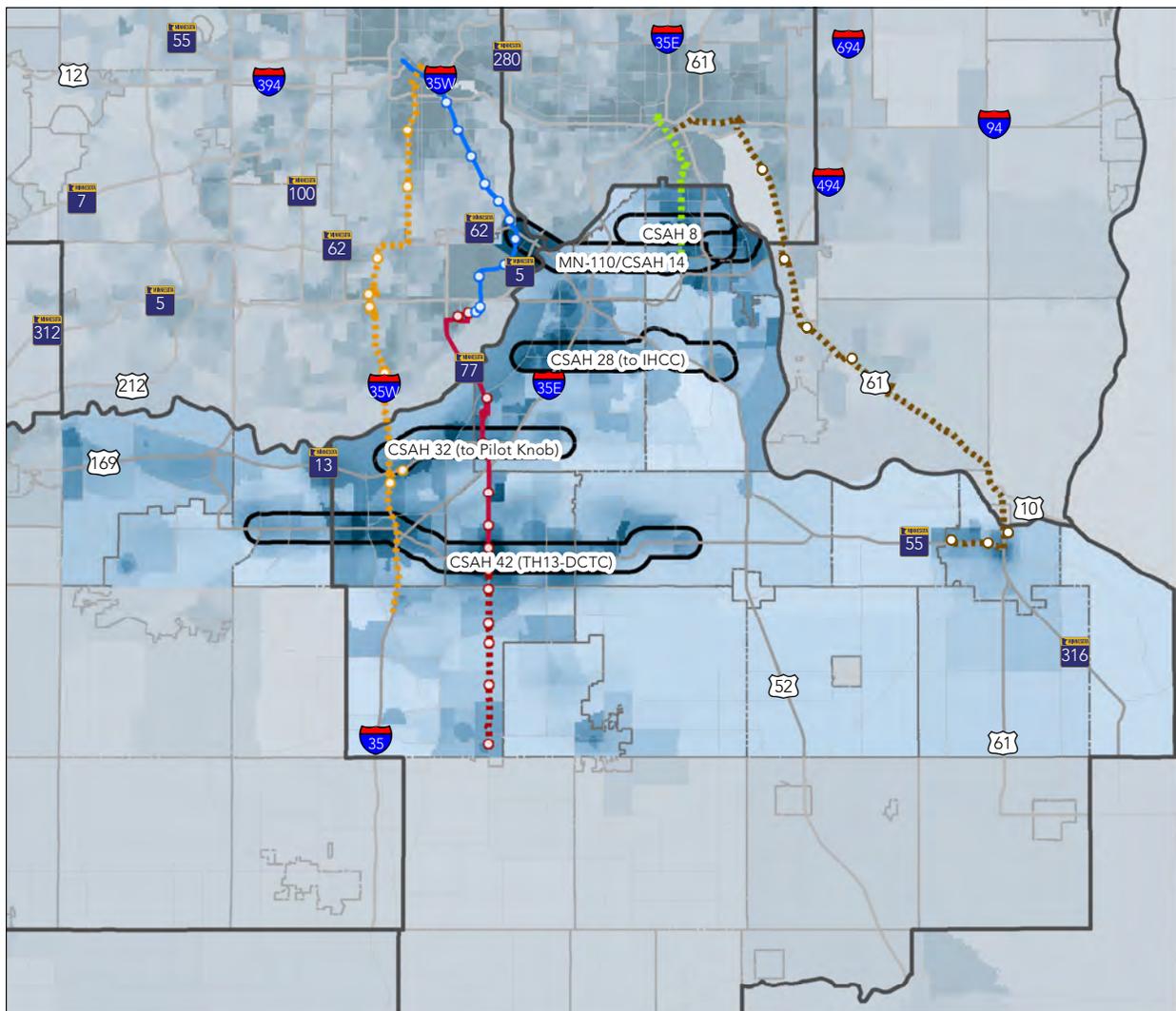
### Recommendations for All Corridors

Successful transit routes are typically those which serve regions with higher employment, residential, and commercial density, with a variety of destinations and land uses, connected by robust pedestrian and bicycle network that provides comfortable and convenient access to and from transit stations. These considerations are especially critical in a suburban context where decades of designing for automobiles has made connections by bike and walking more challenging.

### Corridor Recommendations Overview

After reviewing the corridor evaluation results and considering local knowledge and input from the public, the TAC, the PWG, and the Steering Committee all made recommendations as to which corridors should be considered further by the service

**Figure 0.3: Corridors Recommended for Further Consideration**



January 2017



0 2.75 5.5 Miles

providers for new or improved local, fixed-route bus service or flex route service. Based on the recommendations of the committees, five corridors were categorized as currently warranting further consideration and ten were categorized as not warranting further consideration at this time.

The five corridors recommended for further consideration include:

- **Wentworth Avenue** is recommended for further consideration of additional frequency along existing parallel routes
- **MN-110** is recommended for further consideration in coordination with the implementation of the Red Rock, Gold Line, or Robert Street transitways
- **Yankee Doodle Road** is recommended for further consideration to directly connect the many regional and local destinations and attractions throughout the corridor
- **Cliff Road** is recommended for further consideration to provide a new connection between the future Orange Line and the Red Line stations and

to serve the existing population and employment density within the corridor.

- **County Road 42** is recommended for further consideration to serve the local destinations and respond to public feedback

More-so than other corridors considered in this study, these five corridors are conducive to transit or fill a mobility need by making transitway connections, serving local destinations, and having regional destinations or movements. In addition, these corridors also have intermittent transit-supportive land-uses and at least moderate walkability.

All other corridors considered in this study were either predominately low-density residential, undeveloped, or heavily auto-oriented. These features are key barriers to the successful implementation of transit service at this time. Should these corridors shift and take on more transit-supportive development patterns, transit service could be considered at that time.



# Background and Context





# Background and Context

## Purpose and Need for the Study

### Purpose and Need

East-west connectivity has come up frequently as an important topic as each regional transitway is studied in Dakota County. As one nears the center of the Twin Cities Metropolitan Area, the range of transit service options and coverage is much greater than it is within and through Dakota County. With the primarily north-south orientation of the METRO Red, Orange, and Blue Lines as well as the north-south orientation of the planned Robert Street, Riverview, and Red Rock corridors, all existing and planned transitway service in the area is largely designed to provide frequent service into the downtown cores of Minneapolis or Saint Paul. However, many residents lack reliable options to connect to transit centers, major destinations, and employment opportunities within and surrounding Dakota County. Developing improved east-west service to provide a more comprehensive network for Dakota County, its cities, and the surrounding counties is critical to support these growing communities.

The Dakota County East-West Transit Study (East-West Transit Study) was needed to address existing and emerging needs for east-west oriented transit in the county. The East-West Transit Study looked for opportunities to improve the quality of fixed route transit service in Dakota County and improve connections to the regional transit system. Recommendations were developed to improve connections to employment, improve mobility to and from areas adjacent to the county, and expand the range of travel options for transit-dependent populations.



### Study Area

The study area (**Figure 1.1**) included the cities of Mendota Heights, West St. Paul, South St. Paul, Mendota, Lilydale, Sunfish Lake, Inver Grove Heights, Eagan, Burnsville, Apple Valley, Rosemount, Coates, Hastings, Lakeville, and Farmington and the townships of Nininger, Marshan, Vermillion, Ravenna, and Empire. The East-West Transit Study also considered transit options that extended outside the study area or the county if there are logical or compelling destinations or connections.



## Project Committee Structure

The East-West Transit Study was commissioned and funded by Dakota County. Project committees included the Technical Advisory Committee (TAC), Steering Committee, and Policymaker Work Group (PWG). The TAC and Steering Committee met regularly to discuss project progress and to ensure a consistent project implementation. The project team used these opportunities to further communicate with project stakeholders, both to share information and gather input.

The project management and organizational structure is illustrated in **Figure 1.2**.

### Technical Advisory Committee (TAC)

The TAC consisted of technical staff from Dakota County Physical Development and Community Services divisions, Minnesota Valley Transit Authority (MVTA), Metro Transit, Minnesota Department of Transportation (MnDOT), Metropolitan Council, study area municipalities and townships, and adjacent counties. The TAC aided in the technical analysis including, but not limited to, development and execution of an evaluation process, review of evaluation results and deliverables, and review of project team recommendations. Information

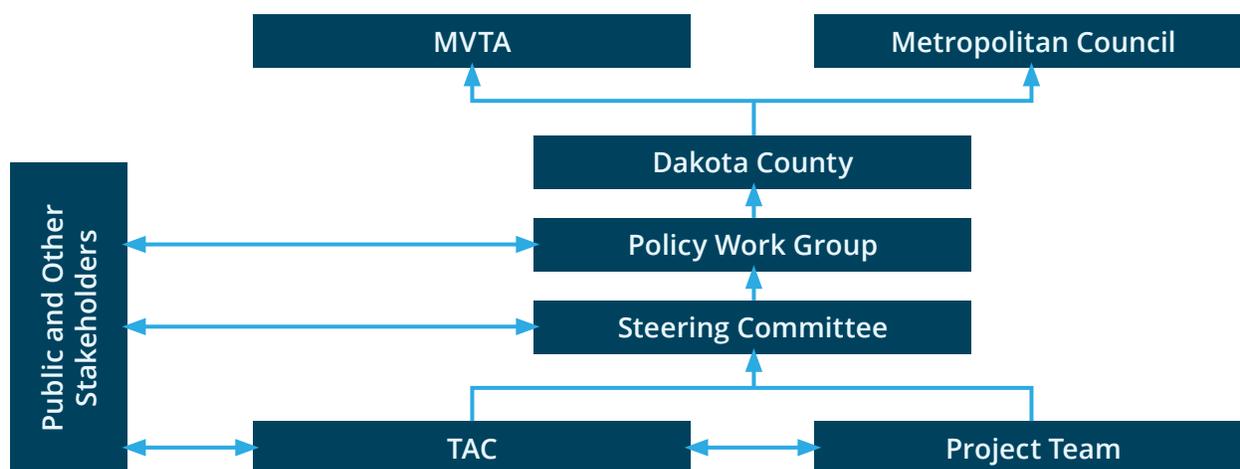
and recommendations from the TAC and project team were brought to the Steering Committee. TAC meetings were held every two to four weeks throughout the project.

### Steering Committee

The Steering Committee consisted of senior staff from Dakota County, MVTA, Metro Transit, and Metropolitan Council. The Steering Committee supervised the development of the study goals and processes, addressed policy considerations related to the study, and assisted county staff in providing direction on project management. Feedback from the Steering Committee was brought to the PWG. Steering Committee meetings were held every other month.

### Policymaker Work Group

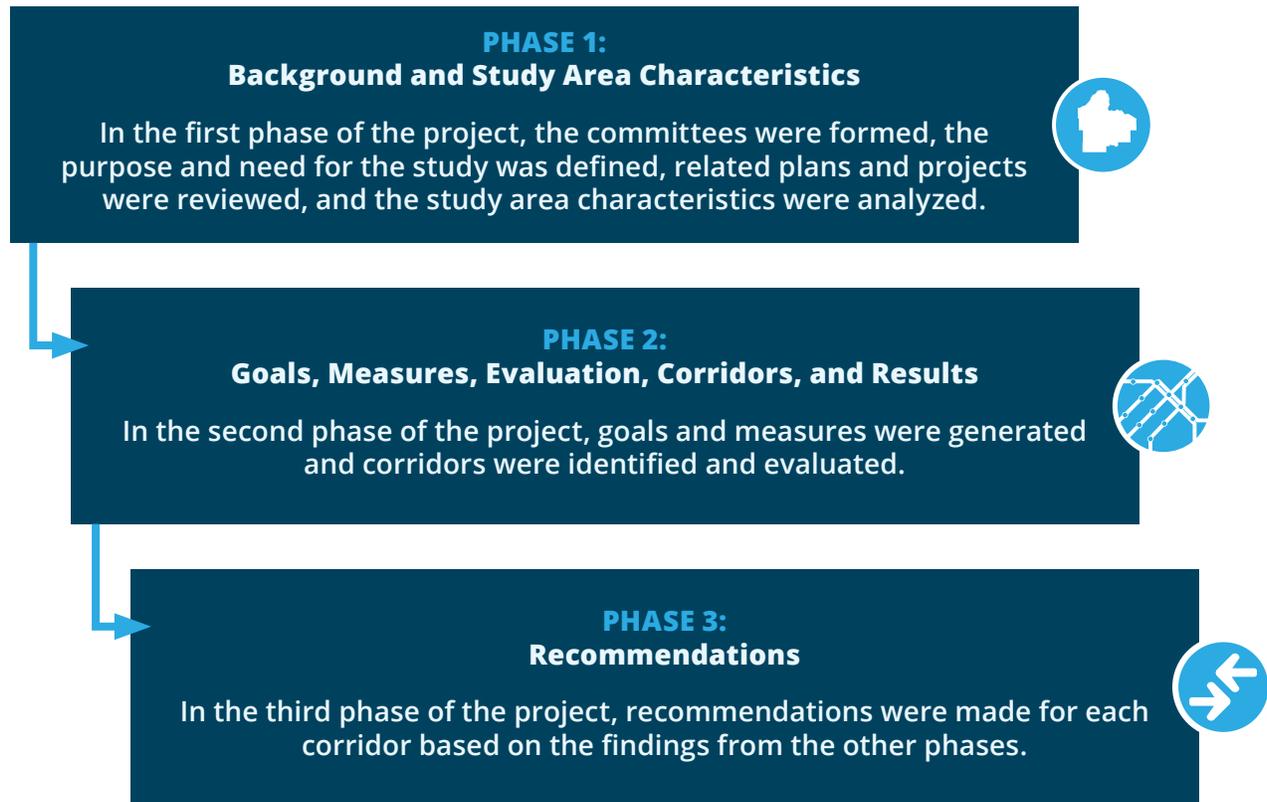
The PWG consisted of elected officials in the study area and adjacent jurisdictions and regional stakeholders including chambers of commerce, educational institutions, and groups representing citizen interests. The work group aided in forming study goals, identifying needs for service improvements, and reviewing the evaluation and recommendations. Feedback from the PWG, along with the input from other committees, was brought forward to Dakota County, MVTA, and Metro Transit for further consideration. Three PWG meetings were held during the project.



**Figure 1.2: Project Management and Organizational Structure** ↗

## Schedule

The East-West Transit Study occurred over approximately one year from April 2016 – February 2017 and can generally be described in three phases.



Committee input and public engagement occurred throughout the project.



## Report Outline and Appendices

This report documents the information gathered, analyzed, and produced for the East-West Transit Study. The report is split into eight chapters with six supporting technical appendices.

Phase of Project	Chapter	Page Number	Technical Appendix
<b>1</b>	1. Background and Context	1	-
	2. Related Projects and Plans	9	A. Summary of Related Project and Plans Technical Memo
	3. Study Area Characteristics	15	B. Study Area Characteristics Technical Memo
<b>All</b>	4. Stakeholder Engagement	23	C. Engagement Materials Documentation
<b>2</b>	5. Evaluation Framework	31	D. Evaluation Framework Technical Memo
	6. Travel Demand Analysis	35	E. Travel Demand Analysis Technical Memo
	7. Corridor Evaluation	37	F. Corridor Evaluation Results Technical Memo
<b>3</b>	8. Recommendations	41	-

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# Related Projects and Plans





# Related Projects and Plans

## Introduction

Regional agencies, counties, and local entities have completed a total of 34 plans, studies, and projects that have or may have an influence on transit service in the study area. For each project or plan reviewed, the following is summarized:

- Purpose and background
- Findings
- Impact on the East-West Transit Study

## Plans and Projects Reviewed

Most projects and plans reviewed are supportive of expanding transit service in Dakota County. In numerous instances, the documents provided information on specified planned transit routes.

**Table 2.1** lists the projects and plans that were reviewed, as well as a summary of the impact of each on the East-West Transit Study.

**Table 2.1: Summary of Impacts of Related Projects and Plans on the East-West Transit Study ▼**

Project/Plan	Year Published	Impact on the East-West Transit Service Study
<b>Cedar Avenue Transitway Implementation Plan Update</b>	2015	<ul style="list-style-type: none"> <li>■ Recommended stations that would provide more options for connections with east-west transit service.</li> <li>■ Policymaker workshops suggested that east-west transit and bicycle/pedestrian connections are desired.</li> </ul>
<b>Robert Street Transitway Alternatives Analysis</b>	2015	<ul style="list-style-type: none"> <li>■ East-west connector route was eliminated from consideration because ridership forecasts showed it produced too little ridership to implement.</li> <li>■ If the Robert Street Transitway is constructed, it would provide additional opportunities for connections with east-west transit service.</li> </ul>
<b>Orange Line Bus Rapid Transit Project Plan Update</b>	2014	<ul style="list-style-type: none"> <li>■ The METRO Orange Line is planned to end in Burnsville; an east-west transit corridor could connect to the Orange Line at this location.</li> </ul>
<b>METRO Orange Line Planning and Implementation</b>	2015	<ul style="list-style-type: none"> <li>■ An east-west transit corridor could connect to the Orange Line at either of the stations proposed as part of the extension.</li> </ul>
<b>Red Rock Alternatives Analysis Update</b>	2014	<ul style="list-style-type: none"> <li>■ The recommended BRT alignment would serve Hastings; an east-west transit corridor could connect to the Red Rock Corridor at this location.</li> </ul>

Project/Plan	Year Published	Impact on the East-West Transit Service Study
<b>Red Rock Implementation Plan</b>	2016	<ul style="list-style-type: none"> <li>▪ The recommended BRT alignment would serve Hastings, and express service to Hastings was included as a potential interim recommendation. An east-west transit corridor could connect to the Red Rock Corridor and/or express service in Hastings.</li> </ul>
<b>Metro Transit Service Improvement Plan 2015-2030</b>	2015	<p>The Service Improvement Plan evaluated the following in the study area:</p> <ul style="list-style-type: none"> <li>▪ A new express route (Route 367) with weekday peak period service from Hastings to downtown Minneapolis via the Newport Transit Station</li> <li>▪ New suburban limited stop route (Route 419) along the I-494 Corridor from Woodbury Theater to the Northern Dakota County Service Center, stopping at Woodwinds Health Campus, Newport Transit Station, and 5th Avenue S in South St. Paul</li> <li>▪ Add Route 68 to the Hi-Frequency Network from 14th Street &amp; Jackson in Saint Paul to 5th Avenue &amp; South Street in Inver Grove Heights</li> <li>▪ New local route (Route 412) between the Northern Dakota County Service Center and Inver Hills Community College</li> <li>▪ New local route (Route 418) between the Northern Dakota County Service Center and the METRO Blue Line Fort Snelling Station</li> <li>▪ New express route (Route 451) from the West St. Paul Sports Center Park &amp; Ride to downtown Saint Paul</li> <li>▪ New express route (Route 453) from Inver Grove Heights to downtown Saint Paul via Route 68 routing in Inver Grove Heights to Upper 55th to Highway 52; establish a new park-and-ride lot at Highway 53 and Upper 55th</li> <li>▪ New express route (Route 455) between Kenrick Avenue Park &amp; Ride in Lakeville and downtown Saint Paul</li> </ul>
<b>Thrive MSP 2040</b>	2014	<ul style="list-style-type: none"> <li>▪ East-west transit service in Dakota County is not specifically mentioned.</li> <li>▪ Many of the plan's goals are supportive of maintaining and expanding transit service throughout the Twin Cities region.</li> </ul>
<b>Highway Transitway Corridor Study</b>	2014	<ul style="list-style-type: none"> <li>▪ One corridor evaluated, the I-35E South Corridor, is in the study area for the East-West Transit Study and would extend from Lakeville to downtown Saint Paul.</li> </ul>



Project/Plan	Year Published	Impact on the East-West Transit Service Study
<b>2040 Transportation Policy Plan (TPP)</b>	2015	<ul style="list-style-type: none"> <li>▪ There were not any east-west transit improvements identified in Dakota County under the Current Revenue Scenario or the Increased Revenue Scenario.</li> <li>▪ The METRO Red Line Stage 2 and the METRO Orange Line, both of which provide north-south service to Dakota County, are included in the Current Revenue Scenario.</li> <li>▪ The TPP developed guidelines for service design and performance which may affect the service planning and implementation of east-west transit service in Dakota County.</li> </ul>
<b>2030 Transit Master Study</b>	2008	<ul style="list-style-type: none"> <li>▪ Two east-west corridors were evaluated, but neither was recommended for further study.</li> </ul>
<b>Metropolitan Council Title VI Program</b>	2014	<ul style="list-style-type: none"> <li>▪ Any new transit corridors would need to meet the service standards and policies outlined in the Metropolitan Council’s Title VI Program.</li> </ul>
<b>Northern Scott County Transit Analysis</b>	2015	<ul style="list-style-type: none"> <li>▪ One near-term recommendation included establishing an east-west connection south of the Minnesota River that links Burnsville to Northern Scott County, either on County Road 42 or McColl Road.</li> </ul>
<b>MVTA Service Improvement Projects</b>	2014	<ul style="list-style-type: none"> <li>▪ MVTA’s planned improvements should be considered when identifying existing and emerging needs for transit service in Dakota County.</li> <li>▪ The plan includes expansion of local routes to Rosemount Transit Station and to areas not currently served, as well as connections to the METRO Red Line.</li> </ul>
<b>MVTA Title VI Plan</b>	2013	<ul style="list-style-type: none"> <li>▪ MVTA will analyze any corridors identified by Dakota County for transit service enhancements for Title VI impacts as part of MVTA’s existing route planning processes.</li> </ul>
<b>Dakota County Human Services Research and Transportation Planning: Strategic Action Plan</b>	2014	<ul style="list-style-type: none"> <li>▪ East-west connectivity is not specifically mentioned in the study, but the recommended actions are supportive of expanding transit service in the county.</li> </ul>
<b>An Analysis of Client Transportation Efficiency</b>	2012	<ul style="list-style-type: none"> <li>▪ East-west connections were not specifically mentioned, but the barriers to efficiency that were identified should be considered when identifying potential corridors for east-west transit service.</li> </ul>
<b>Dakota County Transportation Coordinating Collaborative</b>	Ongoing	<ul style="list-style-type: none"> <li>▪ East-west connectivity was not specifically mentioned in the survey summaries, but the Dakota County Transportation Coordinating Collaborative’s efforts are supportive of expanding transit and transportation access.</li> </ul>

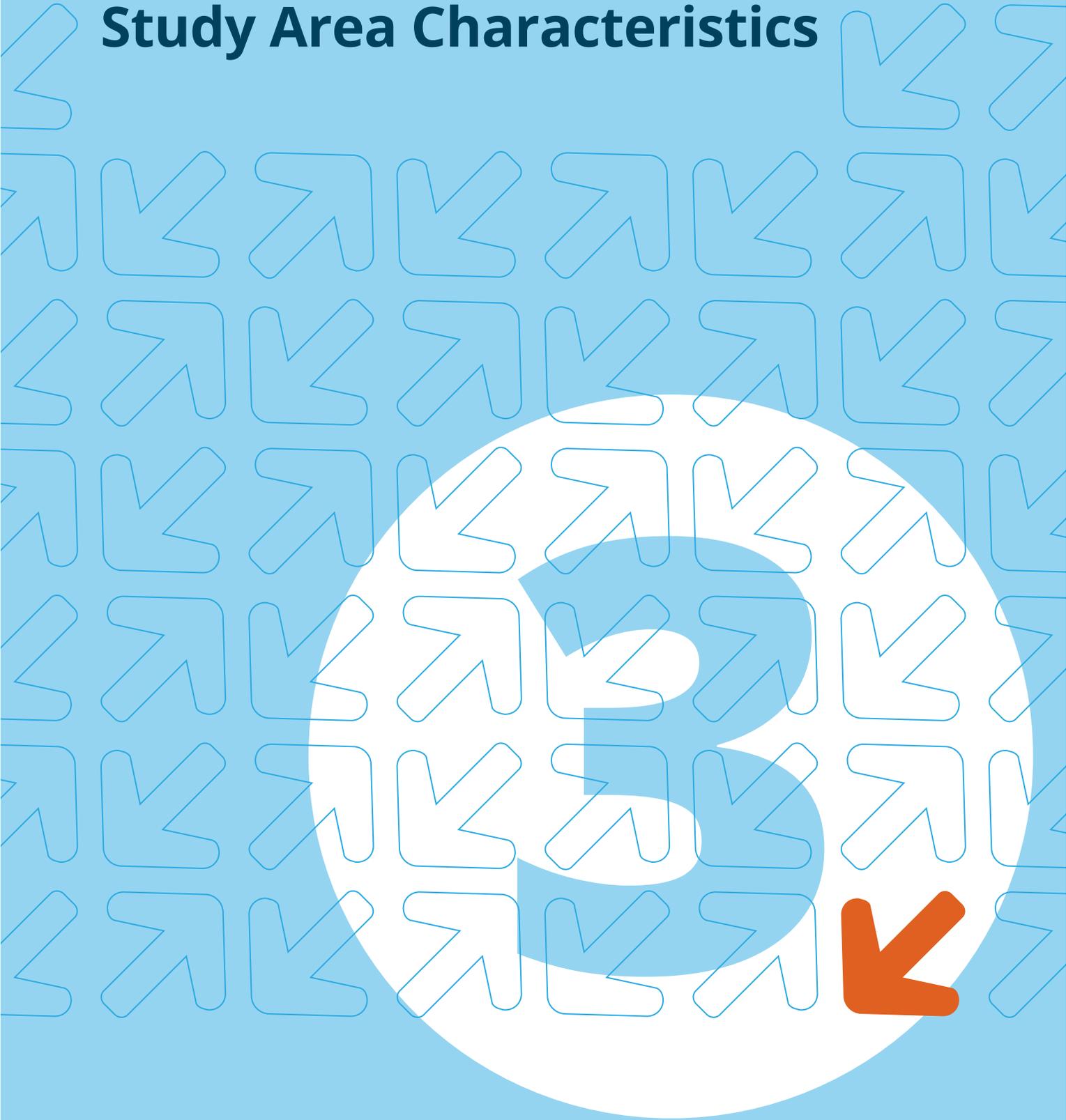
Project/Plan	Year Published	Impact on the East-West Transit Service Study
<b>Scott County Unified Transit Management Plan</b>	2005	<ul style="list-style-type: none"> <li>The plan does not propose specific east-west connections but identifies improved east-west connections between Scott and Dakota Counties as a longer-term need.</li> </ul>
<b>Apple Valley 2030 Comprehensive Plan</b>	2009	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan's goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Burnsville 2030 Comprehensive Plan Update</b>	2015	<ul style="list-style-type: none"> <li>One strategy outlined for the city council to consider when implementing the transportation plan is to work with cities and counties south of the Minnesota River to lobby for transportation funding for south of the river projects including east-west improvements between the counties.</li> </ul>
<b>Eagan 2030 Comprehensive Plan Update</b>	2010	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan's goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Farmington 2030 Comprehensive Plan</b>	2011	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan's goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Hastings 2030 Comprehensive Plan</b>	2010	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan's goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Inver Grove Heights 2030 Comprehensive Plan</b>	2010	<ul style="list-style-type: none"> <li>East-west transit service on MN-110 and Yankee Doodle Road (CSAH 28) is specifically identified as a goal.</li> <li>Other plan goals also are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Lakeville 2008 Comprehensive Land Use Plan</b>	2008	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan's goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Lilydale 2008 Comprehensive Plan</b>	2008	<ul style="list-style-type: none"> <li>Other than adding a connection to the existing MVTA route along MN-110, east-west transit service in Dakota County is not specifically mentioned in the comprehensive plan.</li> <li>The plan's goals are generally supportive of expanding transit service to serve growing community needs.</li> </ul>

Project/Plan	Year Published	Impact on the East-West Transit Service Study
<b>Mendota 2030 Comprehensive Plan Update</b>	2010	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan.</li> <li>Mendota’s goals are focused on improving connections to existing service rather than developing new transit routes.</li> </ul>
<b>Rosemount Transit Plan</b>	2008	<ul style="list-style-type: none"> <li>Specifically identified east-west transit service on CSAH 42 as desired by residents.</li> <li>The plan is supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>South St. Paul 2030 Comprehensive Plan</b>	2010	<ul style="list-style-type: none"> <li>The plan specifically mentions working on new or improve transit service with Dakota County and other cities.</li> <li>The plan’s goals are supportive of expanding transit service, particularly to serve existing and planned transitways.</li> </ul>
<b>West St. Paul Comprehensive Plan</b>	2009	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan’s goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Empire Township 2030 Comprehensive Plan</b>	2009	<ul style="list-style-type: none"> <li>East-west transit service in Dakota County is not specifically mentioned in the comprehensive plan, but the plan’s goals are supportive of expanding transit service to serve growing community needs.</li> </ul>
<b>Ravenna Township Comprehensive Plan</b>	2009	<ul style="list-style-type: none"> <li>The conclusions of this plan do not acknowledge any plans for fixed-route transit service.</li> <li>Any recommendations for additional transit service in this area would need to be reviewed with township staff and officials.</li> </ul>
<b>Dakota County Rural Collaborative Comprehensive Plan</b>	2009	<ul style="list-style-type: none"> <li>The conclusions of this plan do not acknowledge any plans for fixed-route transit service.</li> <li>Any recommendations for additional transit service in this area would need to be reviewed with township and city staff and officials.</li> </ul>

Additional information on the plans, studies, and projects described is found in the **Related Plans and Projects Technical Memo**.

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# Study Area Characteristics





# Study Area Characteristics

## Introduction

Study area characteristics were reviewed and analyzed in order to better understand the demographics, travel patterns, development patterns, and infrastructure within the study area that may inform the need for transit. Specifically, the geographic datasets below were used to understand and summarize study area characteristics.

The study area characteristics provided a basis for evaluating corridors within the study area and making recommendations for these corridors.

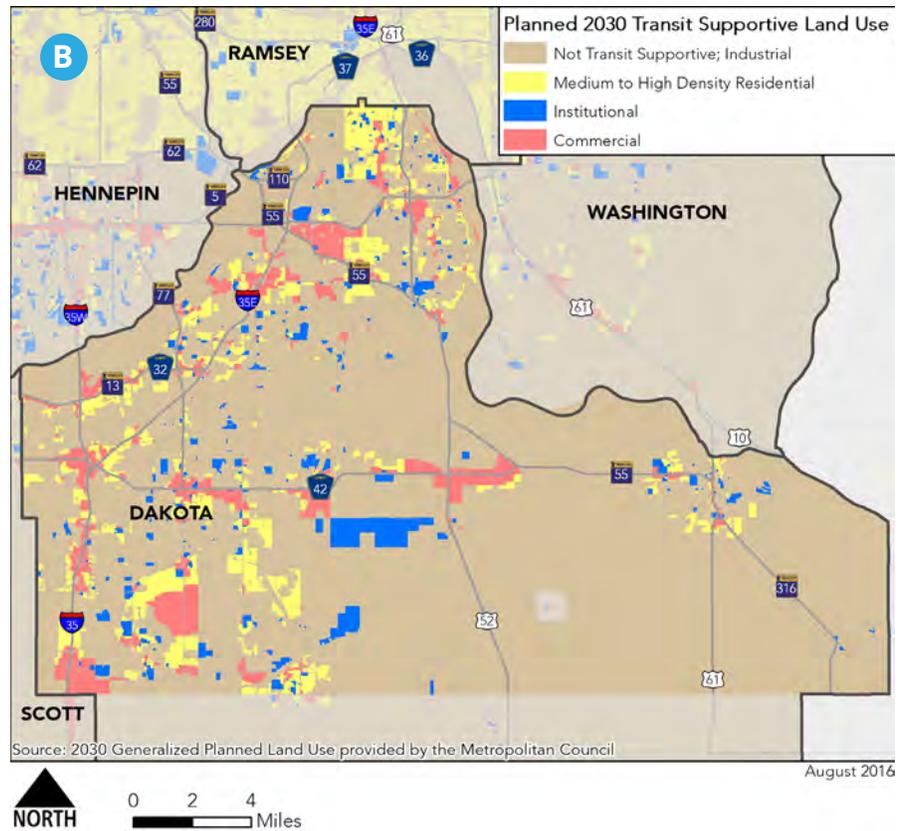
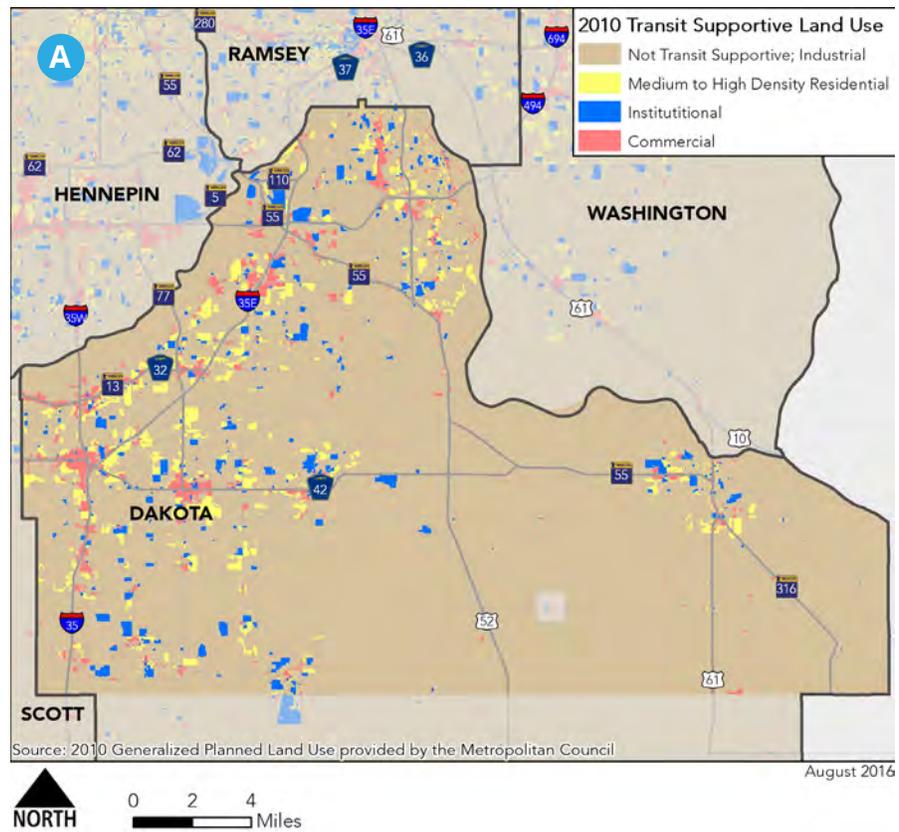
For more on the study area characteristics, refer to the **Study Area Characteristics Memo**.

Geographic Datasets	
	<p><b>Current and Planned (2030) Land Uses</b></p> <ul style="list-style-type: none"> <li>The cities' comprehensive plans detail the current and forecasted land use in the study area</li> </ul>
	<p><b>Current and Forecasted (2040) Population and Employment</b></p> <ul style="list-style-type: none"> <li>Regional forecasts were analyzed in the study area</li> </ul>
	<p><b>Income and Economic Characteristics</b></p> <ul style="list-style-type: none"> <li>Income and economic characteristics provide indicators of potential transit demand</li> </ul>
	<p><b>Demographic Information</b></p> <ul style="list-style-type: none"> <li>Demographic data provides indicators of potential transit demand</li> </ul>
	<p><b>Travel Patterns and Destinations</b></p> <ul style="list-style-type: none"> <li>Where are people currently traveling and could they make these trips via transit?</li> </ul>
	<p><b>Transportation Facilities</b></p> <ul style="list-style-type: none"> <li>What facilities exist in the study area today to support transit?</li> </ul>

## Land Use

The western and northern parts of the study area include a variety of residential, commercial, and institutional land uses (A). Additional commercial, institutional, and medium and high density residential uses are forecasted for this area by 2030 (B).

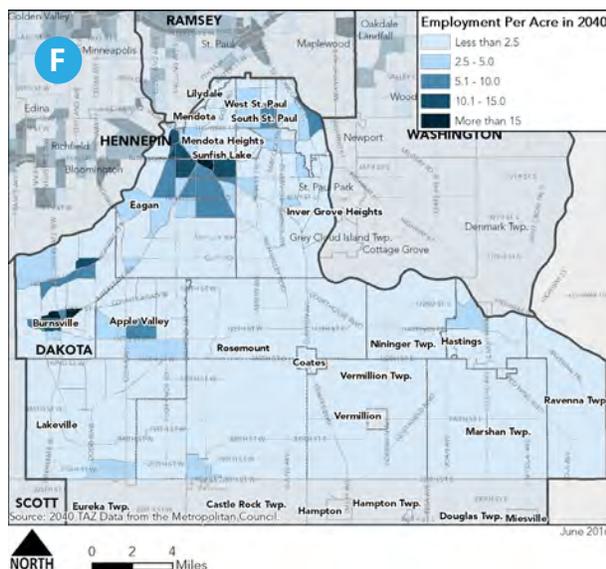
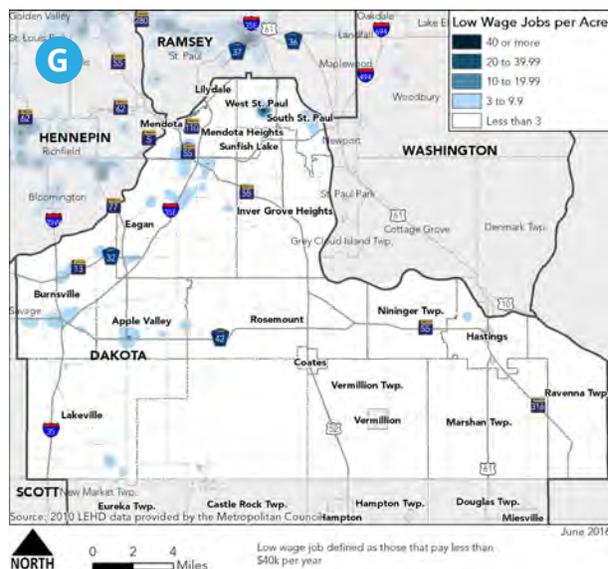
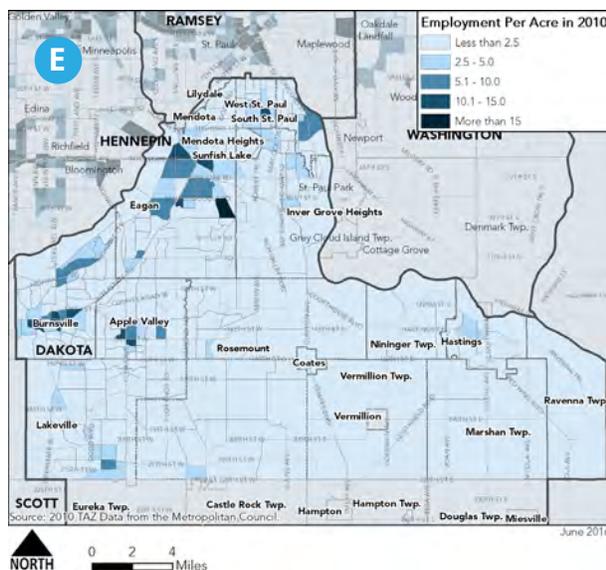
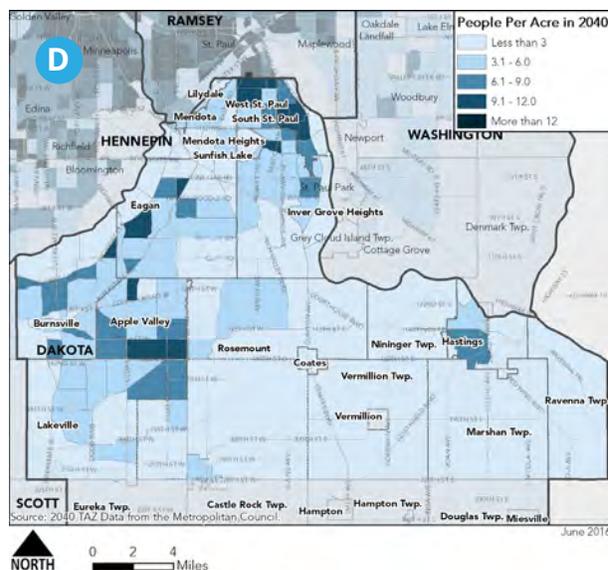
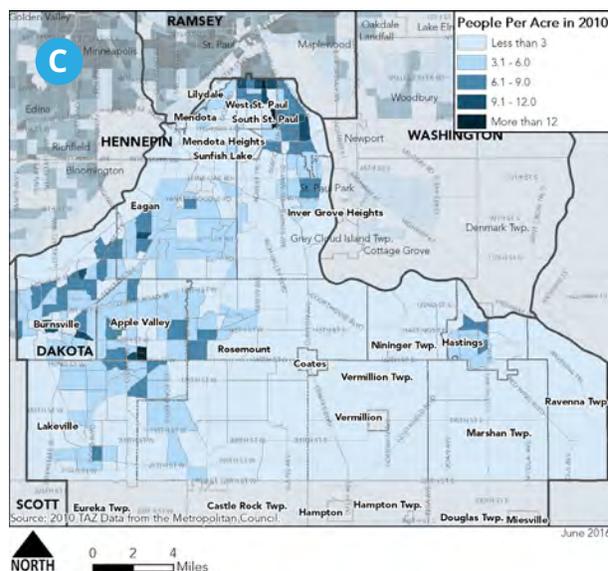
The eastern and southern parts of the study area, except in and around Hastings, are largely comprised of agricultural uses. These land use patterns are forecasted to remain through 2030.



## Population and Employment Density

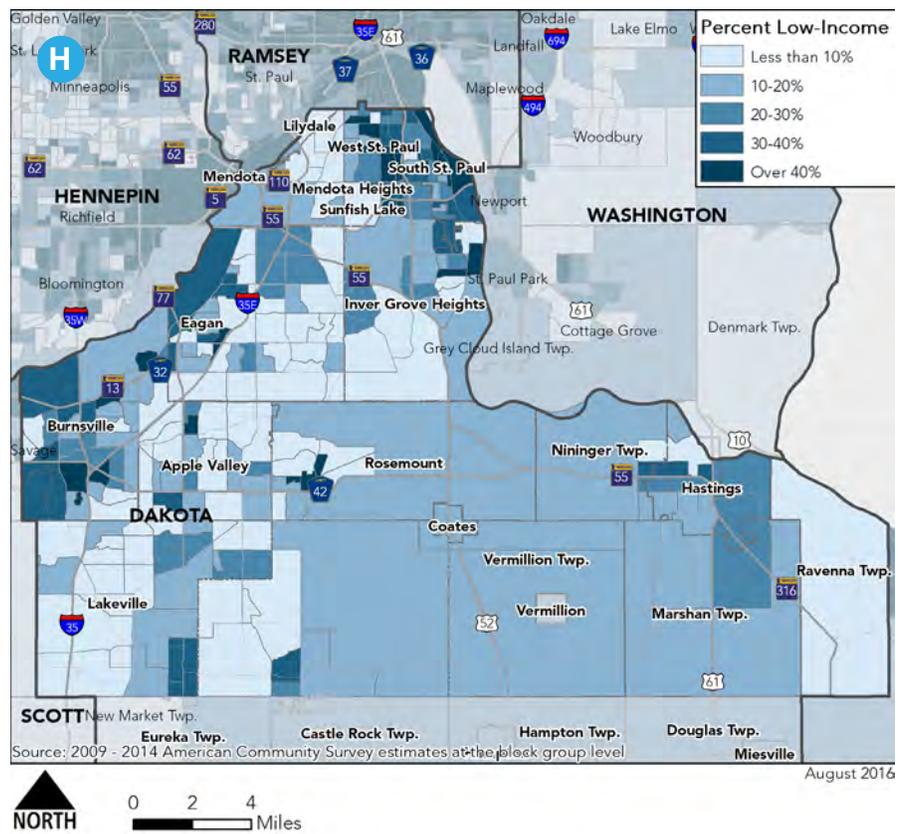
Consistent with study area land use characteristics, population density is higher in the western and northern parts of the study area, while the eastern and southern parts of the study area are more sparsely populated (C). The more densely populated parts of the study area expected to increase through 2040 (D), particularly in the far northern parts of the study area and in Eagan, Apple Valley, and Hastings.

Employment density tracks closely population density in the study area. The highest employment density exists in Burnsville,



northern Eagan, West St. Paul, and South St. Paul along the primary transportation corridors (E). While most of the study area currently has employment densities of less than 2.5 jobs per acre, the pockets of higher employment density in Eagan and Burnsville are forecasted to increase in density through 2040 (F).

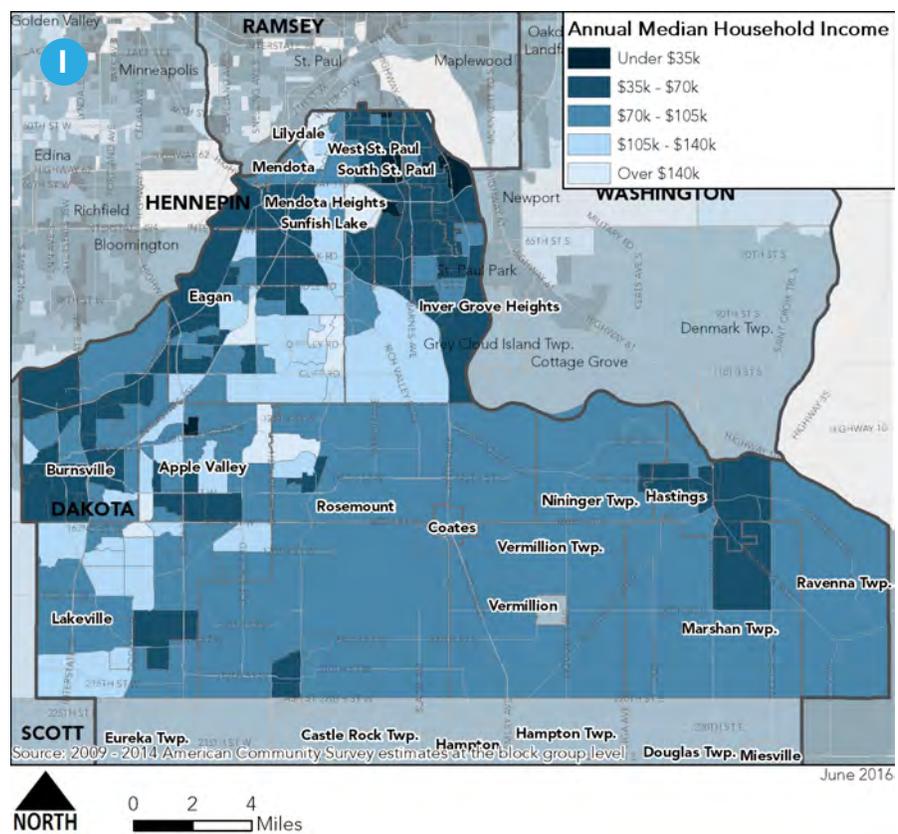
Low wage jobs are concentrated near Cedar Avenue and County Road 42 in Burnsville, along the 35E Corridor, and in West St. Paul and South St. Paul (G).



## Income and Economic Characteristics

According to data from the American Community Survey, the areas with the highest percentage of people with low incomes are in South St. Paul, West St. Paul, and Burnsville (H).

The median household income across the study area is approximately \$80,000, with the largest concentration of lower median income households in South St. Paul, West St. Paul, and Burnsville (I). This pattern is consistent with the prevalence of people with low incomes in these areas.

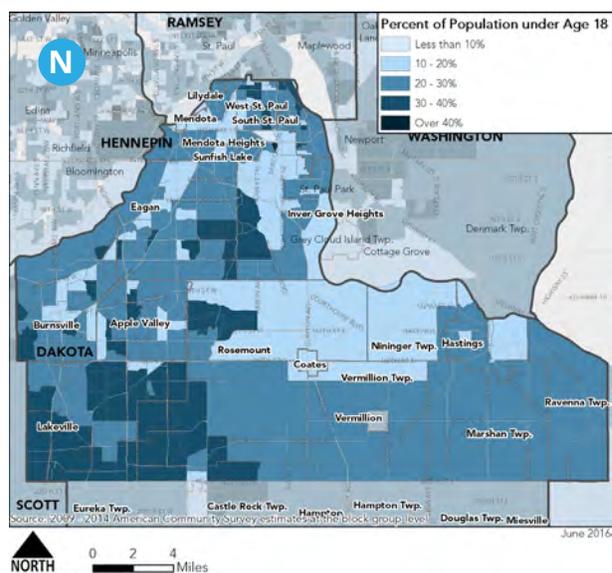
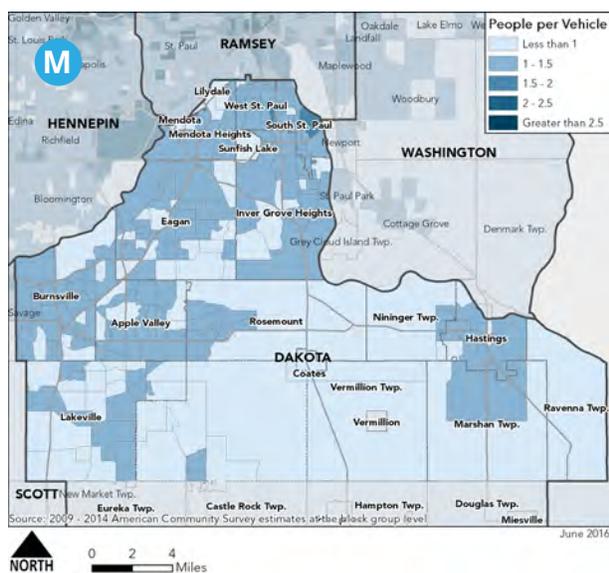
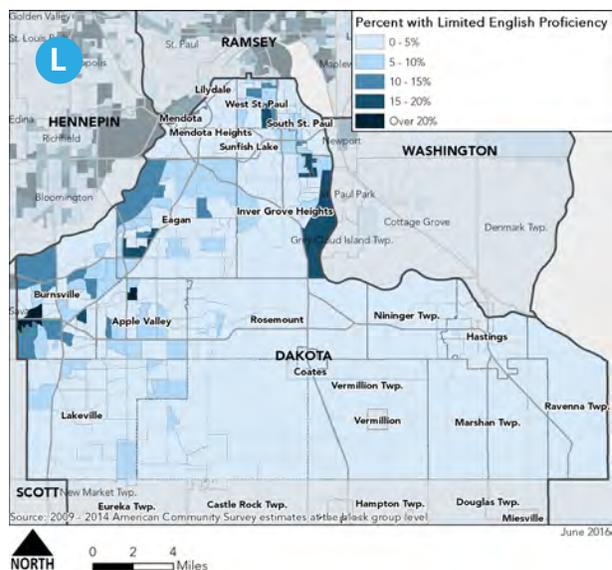
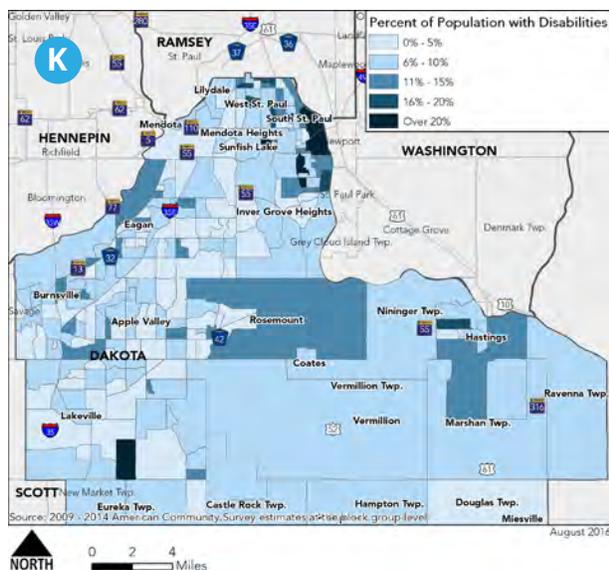
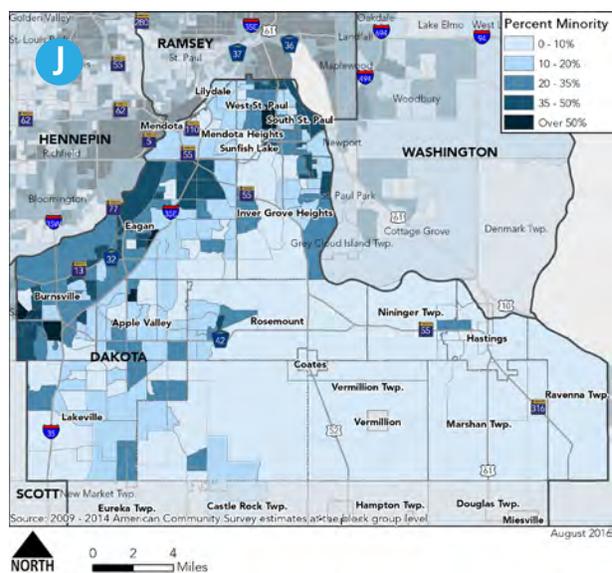


## Demographic Information

The highest concentrations of minority residents live in the northern and western parts of the study area (J).

Rates of people with disabilities across the study area are generally low, with most census blocks having rates of less than 10 percent. The highest rates of those living with disabilities are in Inver Grove Heights and South St. Paul (K).

Most of those living in the study area speak English very well. There are, however, some concentrations of people with limited English proficiency in Burnsville, Eagan, West St. Paul, and Inver Grove Heights (L).

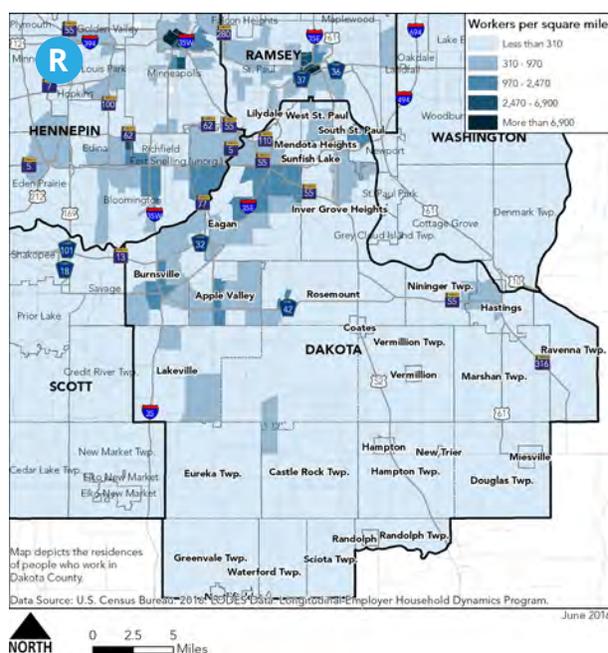
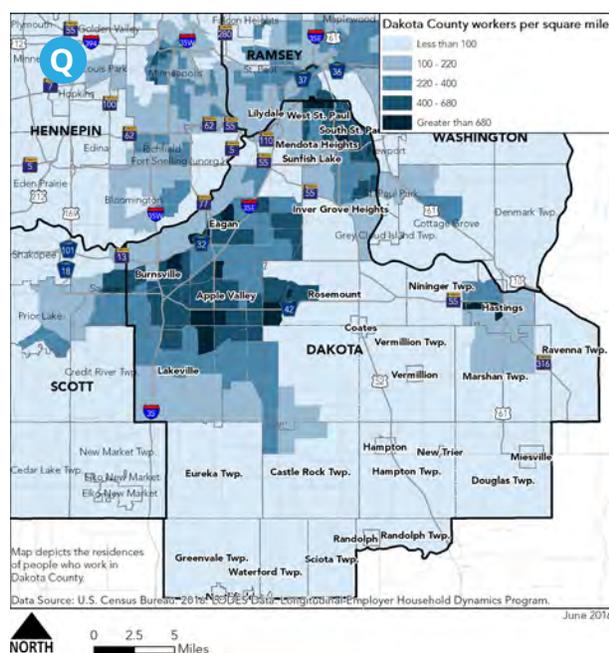
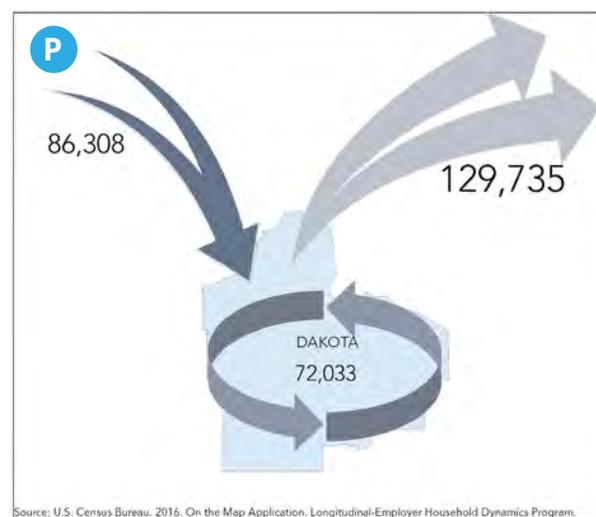
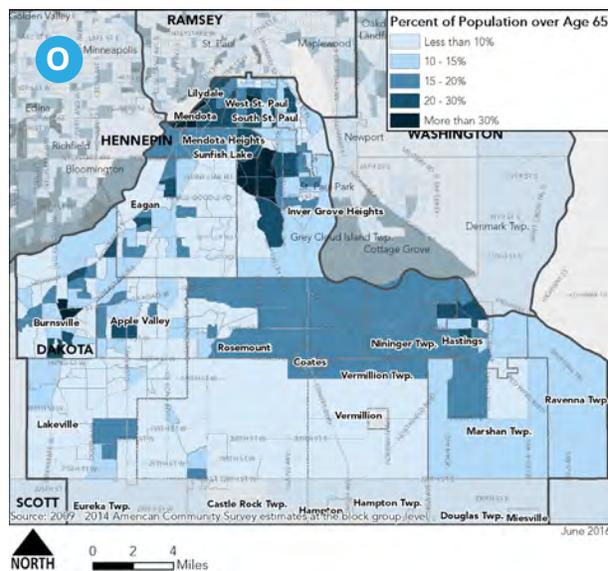


Most of those living in the study area have access to a personal vehicle. Only two census block groups within the study area (one in West St. Paul and one in South St. Paul) have more than 1.5 driving aged adults per vehicle (M).

Higher concentrations of youth (under age 18) live in Lakeville, Rosemount, Apple Valley, Eagan, West St. Paul, South St. Paul, and Inver Grove Heights (N), while higher concentrations of residents over the age of 65 are found in western Inver Grove Heights, Hastings, Mendota, and Lilydale (O).

### Travel Patterns and Destinations

Residents of the study area work across the Twin Cities region. Additionally, the study area attracts employees and visitors from other parts of the Twin Cities. Nearly 130,000 Dakota County residents commute to other counties for employment, while more than 86,000 people from other counties commute to Dakota County for employment (P). A significant number of Dakota County residents (slightly more than 72,000) also work within the county, and over half of those working in Dakota County have a commute that is less than 10 miles (Q). Common places of employment for Dakota County residents include downtown Saint Paul, downtown Minneapolis, Edina, Bloomington, Eagan, and MSP Airport (R).



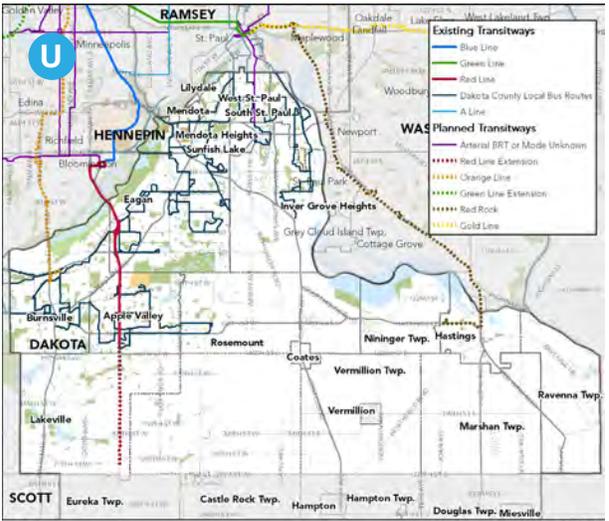
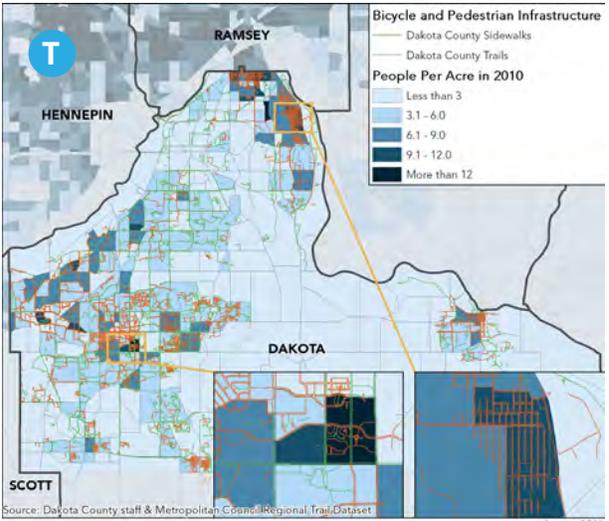
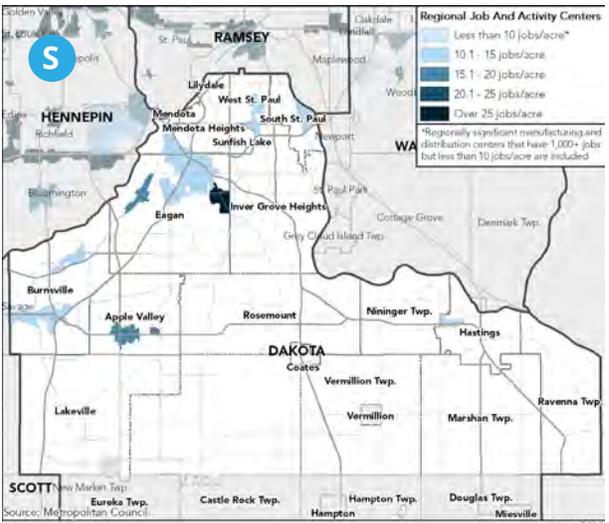
Important destinations and regional job and activity centers are more common in the northern and western part of the study area. Approximately 15 percent of the total number of regional job and activity centers identified by the Metropolitan Council are located within the study area (S). Several higher education or training institutions also are located in the study area including:

- Inver Hills Community College
- Dakota County Technical College
- Brown College
- Minnesota WorkForce Center
- Saint Mary's University of Minnesota
- Argosy University
- Rasmussen College

**Transportation Facilities**

Interstate 35E, as well as Highway 52, Minnesota 13, Minnesota 77, Minnesota 55 are key regional corridors that serve the study area. Some study area communities, such as Hastings, South St. Paul, and West St. Paul, feature traditional street grid patterns with connected sidewalk systems (T). Other communities within the study area, such as Apple Valley, Burnsville, and Eagan, feature more suburban style street patterns that are supplemented with a fairly consistent network of shared-use trails, approximately one-mile apart along major thoroughfares.

Metro Transit and the Minnesota Valley Transit Authority (MVTA) operate 35 transit routes throughout the study area. The METRO Red Line is a bus rapid transit (BRT) line that operates on MN-77/Cedar Avenue between the Mall of America in Bloomington and the Apple Valley Transit Station. The METRO Orange line is another BRT line planned within the study area and will operate on Interstate 35W between downtown Minneapolis and Burnsville with a possible extension to Lakeville. An extension of the METRO Red Line to Lakeville is also planned. Other planned transitways in the study area include the Robert Street Corridor in the northern part of the study area and the Red Rock Corridor between Hastings and downtown Saint Paul along Highway 61 (U).



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# Stakeholder Engagement





# Stakeholder Engagement

## Purpose and Approach

The East-West Transit Study involved outreach and coordination with the public (including those that travel within the county for work, residence, or play), businesses, civic organizations, and others interested in the project.

A detailed decision-making process, communication strategy, and potential stakeholder list was created at the onset of the project. It can be found in the Public Involvement Plan (PIP) within Item 1 of **Appendix C**. The implementation of that plan is detailed below.

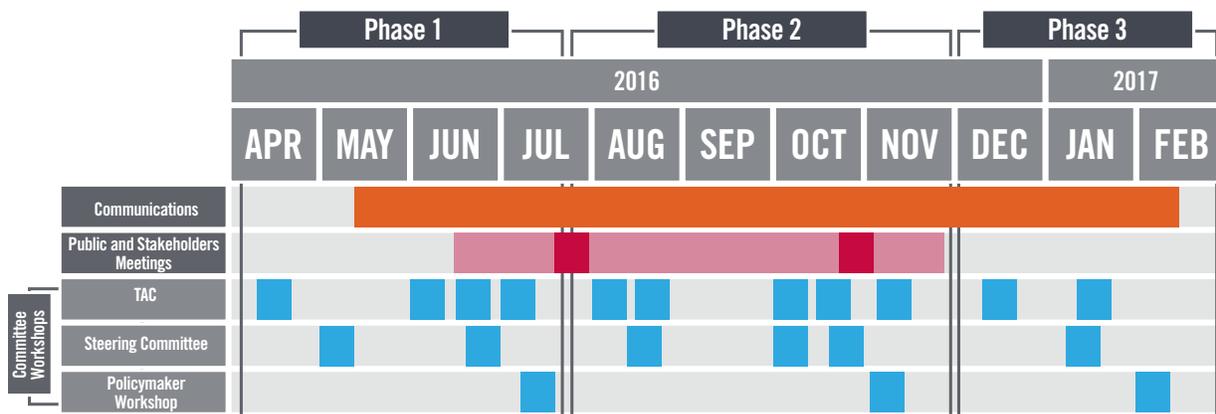
The goal of the public engagement efforts for the East-West Transit Study was to engage the public and stakeholders in identifying and evaluating existing and future east-west oriented transit needs. The East-West Transit Study catalogued all comments and suggestions and incorporated these into the project in many ways. Stakeholder input helped determine corridor extents, was used to evaluate corridors, and influenced the corridor recommendations.

## Stakeholder Engagement Strategies

The East-West Transit Study used a wide range of strategies to engage the public and gather input. The specific techniques that were used for the East-West Transit Study fall into three primary categories: communications, public and stakeholder discussions, and committee meetings. All three strategies were utilized throughout the project.

**Table 4.1:** Public Engagement Strategies ▼

Stakeholder Engagement Strategies	
<b>1</b>	<b>Communications</b>
▪	Online engagement (website, email updates)
▪	Comment database
▪	Flyers and handouts
<b>2</b>	<b>Public and Stakeholder Discussions</b>
▪	Open houses
▪	High activity bus stop outreach
▪	Targeted outreach meetings
<b>3</b>	<b>Committee Meetings</b>
▪	Technical Advisory Committee (TAC)
▪	Policymaker Work Group (PWG)



## Communications

The study employed the following methods to facilitate and maintain communications throughout the course of the project.

### Online Engagement

#### WEBSITE

The project website was the central location for all project documentation, news, and updates. The website was available in eight languages: English, Spanish, Somali, Hmong, Lao, Vietnamese, Arabic, and Russian. The East-West Transit Study used the project website to disseminate information about the project, gather feedback, and to host project documentation. The website was periodically updated throughout the project and utilized during public meetings.

#### PROJECT CONTACT DATABASE AND EMAIL UPDATES

Contact information was collected throughout the project from those interested in getting updates on the East-West Transit Study. Email addresses were collected on the project website and at public events. Email updates were periodically sent to project stakeholders to keep them updated on project progress and upcoming meetings and events.

#### Comment Database

All comments received through the website, by email, by phone, or at public events were recorded and categorized in a comment database that was shared with project team members. All comments received throughout the projects are available in Item 8 of **Appendix C**.

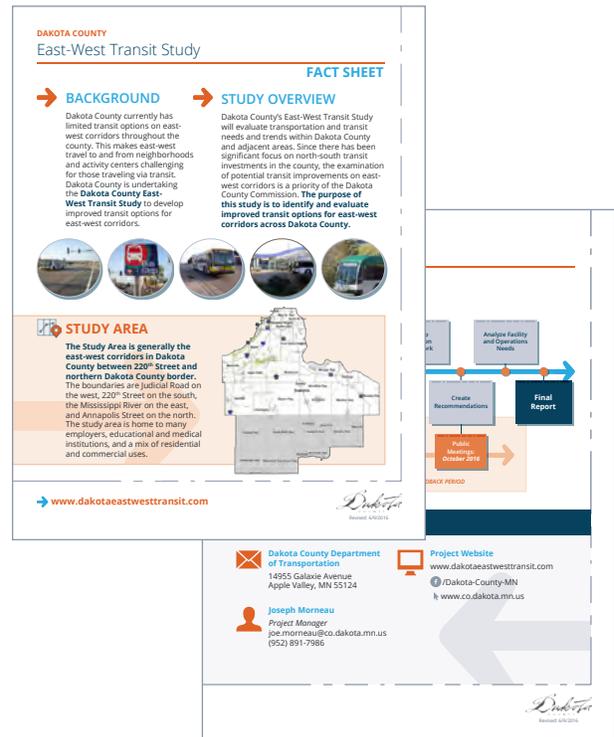
#### Business Cards and Handouts

Business cards were created for the project to direct people to the project website to provide input and learn more about the project. These were especially effective while interacting with the public at transit centers or bus stops, where people had limited time available to talk or learn about the project. Project staff distributed 1,000 business cards throughout the duration of the project.



**Figure 4.1:** East-West Transit Study business cards were distributed to promote the website and inform passerby about the projects ➔

Handouts were made throughout the project to inform the public and stakeholders about the project in a concise, graphical manner. Handouts were distributed at public and stakeholder meetings, policymaker workshops, during bus stop outreach, and at policymaker workshops.



**Figure 4.2:** Project handouts were used to communicate project findings in a concise manner ➔

## Public & Stakeholder Meetings

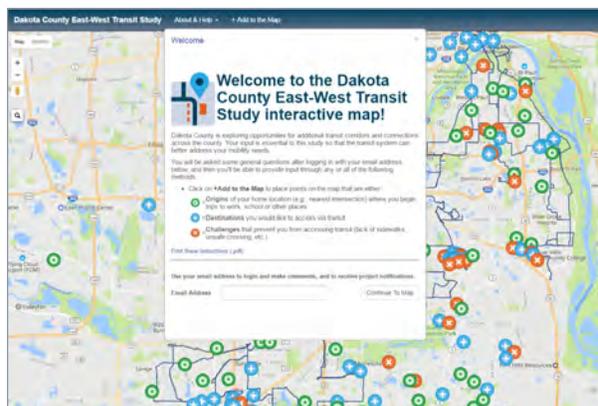
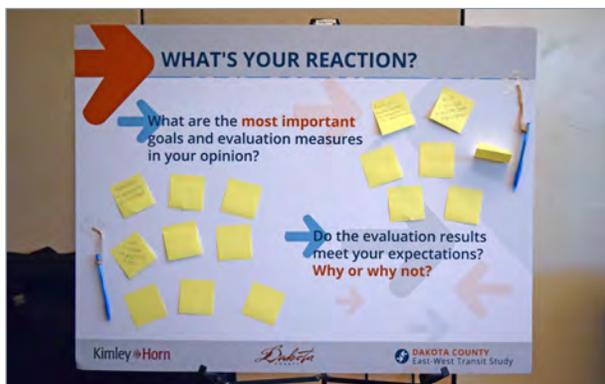
A primary component of engagement in the East-West Transit Study was discussions with the public. All were welcome to give input throughout the study.

### Open Houses

The East-West Transit Study conducted two rounds of open houses. The meetings were advertised through press releases distributed by Dakota County staff, TAC members, flyers, email notifications, city websites, social media, and announcements at transit stations and on buses. Each round of open houses had both in-person meetings and opportunities for online engagement that mirrored the in-person activities. A full summary of the open house activities, comments, and findings is available in Item 2 and 3 of **Appendix C**.

- Receive input on study goals
- Solicit public feedback on key study area characteristics
- Understand existing transit challenges and opportunities

Open House Round 1 had three interactive stations at which participants could learn about the study and provide comments and recommendations. Project staff were available to guide activities and answer questions. An online interactive map was available for people to provide information regarding destinations to which they would like to travel via transit and challenges that currently make accessing transit difficult.



### OPEN HOUSE ROUND TWO

A second round of open houses were held in the middle phase of the study. The purpose of this round of engagement was to:

- Receive input on the evaluation results for all corridors
- Understand which corridor(s) interest the public most and/or for which they would like to pursue more transit options.

### OPEN HOUSE ROUND ONE

The first round of open houses were held in the beginning phases of the East-West Transit Study. The purpose of this first round of Open Houses was to:

Open House Round 2 had three interactive stations where participants could provide their reactions to evaluation results and indicate which corridors they would ride transit along. Project staff were available to guide activities and answer questions.

The website saw an increase in activity surrounding Open House Round Two.

Approximately 70 people visited the website during the week of the open houses and spent an average of six minutes on the website, reviewing and understanding the project materials.

### HIGH-ACTIVITY BUS STOP OUTREACH



The project team conducted additional outreach with transit users at four of the highest-activity bus stops in West St. Paul and South St. Paul during one morning rush hour following the second round of open houses.

The purpose of this activity was to spatially balance the results from Open House Round 2 and to receive additional feedback on the evaluated corridors and corridor travel needs. The notes taken by staff from these meetings is available in Item 4 of **Appendix C**.

### Targeted Outreach Meetings

Project staff met with specific stakeholders throughout the county that either requested a meeting, serve people who are transit dependent, or are a regional destination or job center (see Table 2 for a complete list).

These meetings were conducted to understand people’s specific needs and how the East-West Transit Study could potentially address those needs. Through 16 of these meetings, the project team learned that there is a wide variation of transit needs throughout the county:

- Large corporate campuses with set schedules desire circulators or express service
- Organizations that work with seniors discussed the benefit of circulator services for these populations

- Higher education institutions in the county expressed that inadequate transportation options affect student attendance and retention

Most of the discussions from these meetings concurred that extending the geographic reach of transit, including along east-west corridors in the county, would be beneficial to their employees, clients, or students.

Meeting notes from these targeted meetings are available in Item 5 of **Appendix C**.

**Table 4.2: Agencies or Organizations Reached through Targeted Outreach Meetings** ▾

Agency or Event
Dakota County Transportation Coordinating Collaborative
Hastings Transportation Option Advisory Board
Inver Hills Community College
Independent School District 191 Senior Center
Apple Valley Senior Center Education and Service Committee
Living Longer and Stronger Committee
Eagan MarketFest
Rosemount Leprechaun Days
Responsible Owners and Managers Association
Dakota County Technical College
Uponsor
Dakota County Employment and Economic Assistance
United Technologies Corporation
Inver Hills Community College*
Dakota County Technical College* (DCTC)
Thomson Reuters

*\*In addition to a discussion on general transportation needs and challenges, the Inver Hills Community College and Dakota County Technical College targeted stakeholder meetings included the map activity from Open House Round 1 where students identified origins, destinations, and challenges related to transit. These results have been combined with the map results from the other activities as shown in **Figure 4.3**.*

## Committee Workshops

In addition to public meetings and targeted outreach meetings, regularly scheduled meetings with the project committees were held to gather input from staff and policymakers from municipalities, counties, and transit service providers in and around the study area (see the Background and Context chapter for more details on the project committees).

### POLICYMAKER WORKSHOP #1: GOALSETTING AND TRANSIT NEED IDENTIFICATION

The purpose of the first workshop held with policymakers was to discuss potential project goals and identify transit needs throughout the county. Summaries of the policymaker workshops are available in Item 6 and 7 of **Appendix C**.

The input provided by the PWG in this workshop was used to identify goals, measures, and key destinations to guide corridor evaluation in the next phase of the Study.

### TAC WORKSHOP #1: CORRIDOR IDENTIFICATION

The TAC provided input to further the project from both a technical and a local-knowledge standpoint. Although regular meetings occurred with the TAC to keep them updated on the project, there were two workshop-style meetings in which they provided formal input to the project.

The first workshop with the TAC occurred in mid-August following the first round of open houses and the first policymaker workshop. In this workshop, TAC members were split into small groups to mark-up a county map with potential corridors for evaluation based on:

- The findings from previous engagement efforts to date (open houses, online engagement, targeted stakeholder meetings, and the policymaker workshop)
- The study area characteristics
- Their local knowledge



The input provided by the TAC in this workshop was used to generate corridors for evaluation in the next phase of the Study.

### POLICYMAKER WORKSHOP #2: CORRIDOR RECOMMENDATIONS

At the second policymaker workshop, policymakers were asked to react to the corridor evaluation results and to make initial recommendations regarding corridors for further consideration.

In conjunction with the input from the TAC in their second workshop, the input provided by the PWG in this workshop was used to generate recommendations for corridors and identify which corridors should be considered further by the service providers.

### TAC WORKSHOP #2: CORRIDOR RECOMMENDATIONS

At the second TAC workshop, members generated land use and infrastructure recommendations by corridor based on the corridor evaluation results, the results of second round of open houses, and the suggestions from the PWG.

In conjunction with the input from the PWG in their second workshop, the input provided by the TAC in this workshop was used to generate recommendations for corridors and identify which corridors should be considered further by the service providers.

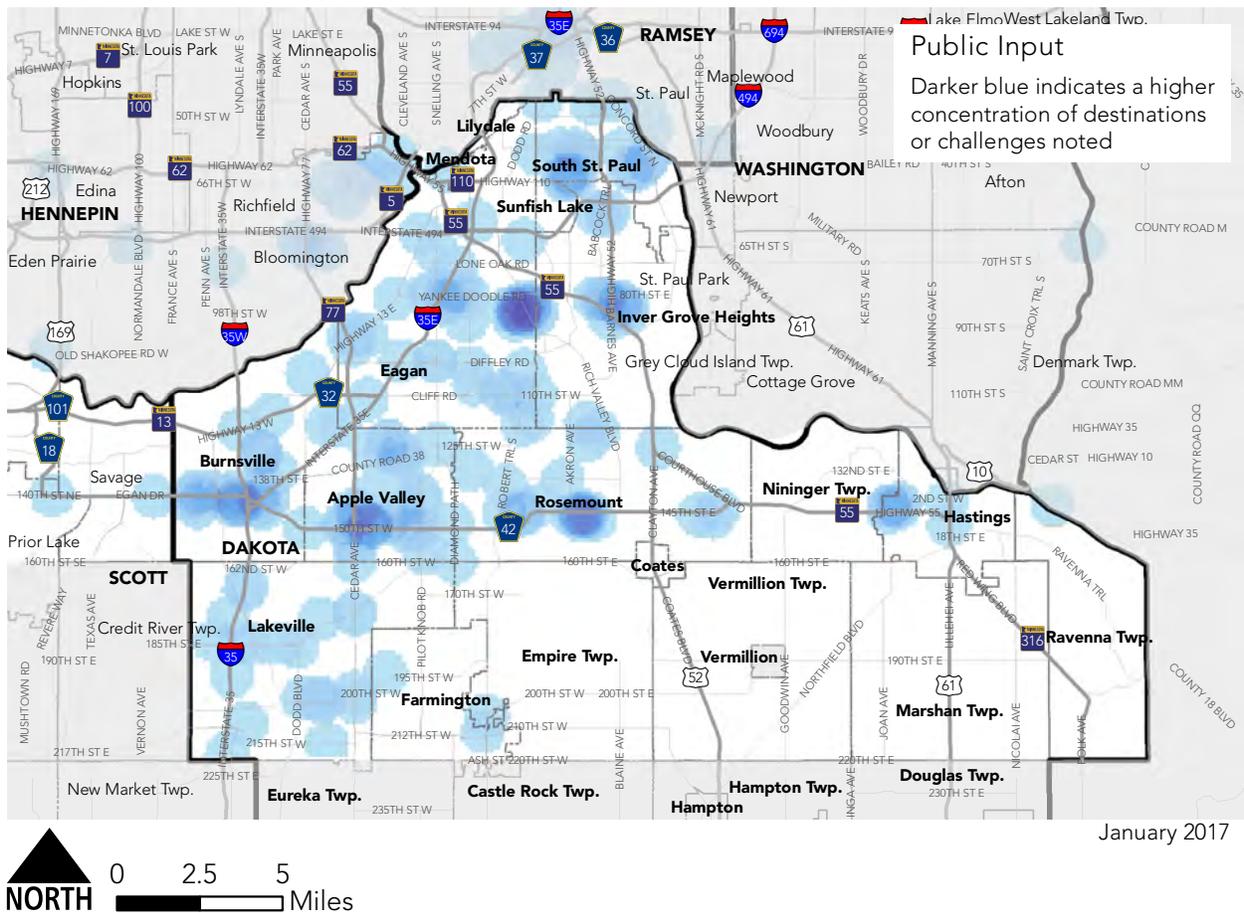
# What We Heard: Themes and Overall Findings

The engagement process for the East-West Transit Study was cumulative. Results and findings from each engagement effort informed the next phase of the project. Therefore, most of the findings from this engagement process have already been discussed and utilized. In addition to helping the project move from one stop to the next, the engagement process resulted in a significant collection of comments and ideas on which to base recommendations for this study and future projects.

This section summarizes the key themes heard from all the engagement activities throughout the duration of the project.

While many of these themes and ideas have been incorporated into the project and recommendations, some of these themes are applicable outside of this project. Comprehensive plan updates, other transit studies, service improvement plans, station area plans, and other land use or transportation-related plans can use the information gathered from this study to create recommendations relative to their scope.

A compilation of all the destinations and challenges noted throughout the project is shown in **Figure 4.3**. This figure shows the concentration of locations noted at Open Houses, via the interactive online map, and by policymakers or at targeted stakeholder meetings.



**Figure 4.3:** Destinations and challenges noted through public engagement efforts of the project occur throughout the study area, with the highest concentrations along Yankee Doodle Road and County Road 42. ↗

## County Road 42

County Road 42 was identified multiple times in the engagement process.

- The public identified 36 transit destinations along County Road 42 in Open House Round One
- The public voted for County Road 42 as a corridor they would utilize transit along from Open House Round Two
- Policymakers identified County Road 42 for further consideration in Policymaker Workshop #2
- The TAC identified County Road 42 for further consideration in TAC Workshop #2
- DCTC students and staff noted transit service is highly desired
- Several online comments mentioned increasing the density or adding transit along County Road 42
- “County Road 42 service would facilitate my access to Fairview Clinic in Rosemount, Risen Savior Church, Unwind Yarn Shop, Roasted Pear Restaurant, and Great Harvest Bakery. Thanks for your consideration!”

## Connection to the METRO Blue Line

A need for a direct connection to the METRO Blue Line, and the regional transit connections that it provides, was noted as a desire throughout the engagement process.

- During the engagement effort at high-activity bus stops, many people noted that traveling between West St. Paul or South St. Paul and Bloomington is time-consuming today. The Mall of America and the airport were common destinations for these Route 62, Route 68, and Route 75 transit riders
- During multiple meetings and workshops, the TAC and the PWG noted that the Fort Snelling Park & Ride is a frequent destination of their constituents

## Academic Connections

Colleges and other educational institutions were frequently cited as transit destinations.

- UTC noted that several dozen employees are enrolled at the University of Minnesota for continuing education or advanced degrees. Improved express service to Minneapolis and/or Orange Line extension to the Burnsville Center would be a benefit to them
- “Thanks for considering a much-needed service for DCTC students and possibly staff”
- “Need bus service from Eagan High to Cedar Grove Transit Station”
- “I currently work at Dakota County Technical College. Our students desperately need to have public transportation options out to our site. This really impacts their educational success.”

## Existing Transit Service Modifications

East-west cross-town transit service as a compliment to existing service is desired in the north-central part of Dakota County without requiring a transfer in downtown Saint Paul.

- Several comments were received during Open House Round One regarding traveling within West St. Paul and Inver Grove Heights without going to downtown Saint Paul
- Online comments during Open House Round Two noted that there are few options to travel between Eagan and Inver Grove Heights without travelling through downtown Saint Paul

Several people requested increased frequency and/or weekend service for existing routes.

- “We sure could use later routes, more weekend accessibility and east-west

[transit] on Cliff as far as Lexington or at least Pilot Knob, even across on the Red Line. Diffley further too!"

- "I would like to think that at some point in time a return to more frequent 420 availability and, perhaps, weekend service may be justified to some extent."
- "I need weekend busing on weekends for route 442 from Apple Valley to the FedEx on Aldrich near Burnsville Center"

## Appendix Items

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- **Item 1:** Public Involvement Plan
- **Item 2:** Public Engagement Round 1 Summary
- **Item 3:** Public Engagement Round 2 Summary
- **Item 4:** Meeting Notes and Comment Forms from High-Activity Bus Stop Outreach
- **Item 5:** Meeting Notes and Takeaway Summary from Targeted Stakeholder Outreach Meetings
- **Item 6:** Policymaker Workshop 1 Summary
- **Item 7:** Policymaker Workshop 2 Summary
- **Item 8:** Comment Database



# Evaluation Framework





# Evaluation Framework

## Introduction

A set of project goals and evaluation measures was created to assess and prioritize the east-west corridors identified by the Technical Advisory Committee (TAC). The evaluation measures defined are quantitative and provide direction on which corridors may be best suited for further consideration of new or improved transit service.

Goals and measures were developed based on previous county transportation plans and studies and refined based on input from the policymaker workgroup (PWG), the TAC, the Steering Committee, and the public.

## Goals and Measures

The goals and measures for the East-West Transit Study are presented in **Table 5.1**.

**Table 5.1: East-West Transit Study Goals and Measures**

Measures	Datasets
<b>1 Goal 1: Identify east-west corridors that improve mobility for transit dependent populations</b>	
<ul style="list-style-type: none"> <li>Low-income population prevalence</li> <li>Vehicle availability</li> <li>Low-wage job proximity</li> <li>Disabled population prevalence</li> </ul>	<ul style="list-style-type: none"> <li>2014 American Community Survey (ACS) 5-year estimates</li> <li>2014 ACS 5-year estimates</li> <li>2010 Longitudinal Employer-Household Dynamics (LEHD) Data (compiled by the Metropolitan Council)</li> <li>2014 ACS 5-year estimates</li> </ul>
<b>2 Goal 2: Identify east-west corridors that are cost-effective and efficient</b>	
<ul style="list-style-type: none"> <li>Operational costs</li> <li>Capital costs</li> </ul>	<ul style="list-style-type: none"> <li>This goal was deferred in this study and will be measured by service providers for the corridors given further consideration</li> </ul>
<b>3 Goal 3: Identify east-west corridors that maximize regional transit connectivity</b>	
<ul style="list-style-type: none"> <li>Transitway connections</li> <li>Local transit route connections</li> </ul>	<ul style="list-style-type: none"> <li>2040 Transportation Policy Plan Current Revenue Transitways</li> <li>Metro Transit and Minnesota Valley Transit Authority (MVTA) route data</li> </ul>

## 4 Goal 4: Identify east-west corridors that maximize transit ridership

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>Existing population density (2010)</li> <li>Forecasted population density (2040)</li> <li>Existing job density (2010)</li> <li>Forecasted job density (2040)</li> <li>Intersection density</li> </ul> | <ul style="list-style-type: none"> <li>2010 Transportation Analysis Zone (TAZ) data</li> <li>2040 TAZ projections</li> <li>2010 TAZ data</li> <li>2040 TAZ projection</li> <li>NCompass Technologies Street Centerline data</li> </ul> |
|--|--|

## 5 Goal 5: Identify east-west corridors that respond to present and future travel patterns

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>Daily trips by all modes</li> <li>Daily trips by transit</li> <li>Potential daily transit trips by corridor residents</li> <li>Potential daily transit trips by corridor workers and visitors</li> </ul> | <ul style="list-style-type: none"> <li>INRIX travel data</li> <li>On-Board Survey</li> <li>INRIX, Home Interview Survey</li> </ul> |
|---|--|

## 6 Goal 6: Identify east-west corridors that are supported by existing and planned land use

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>Current transit-supportive land use prevalence</li> <li>Planned transit-supportive land use prevalence (2030)</li> <li>Current building-to-parcel ratio</li> </ul> | <ul style="list-style-type: none"> <li>2010 Generalized Land Use from the Metropolitan Council</li> <li>2030 Generalized Planned Land Use from the Metropolitan Council</li> <li>2015 Dakota County, Hennepin County, and Scott County parcel data</li> </ul> |
|---|---|

## 7 Goal 7: Identify east-west corridors that improve access to employment, institutions, and services

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>Regional activity and job center connections</li> <li>Key institution connections</li> <li>Opportunities for last-mile connections</li> </ul> | <ul style="list-style-type: none"> <li>Activity centers defined by the Metropolitan Council</li> <li>Institutions identified by engagement findings and local research</li> <li>Activity centers defined by the Metropolitan Council</li> </ul> |
|--|---|

Measures	Datasets
<p><b>8 Goal 8: Identify east-west corridors that incorporate safe, convenient, and multimodal access and facilities</b></p>	
<ul style="list-style-type: none"> <li>▪ Crossing opportunities per mile</li> <li>▪ Sidewalk and trail density</li> <li>▪ Sidewalk and trail coverage</li> </ul>	<ul style="list-style-type: none"> <li>▪ Aerial images</li> <li>▪ 2016 Dakota County, Hennepin County, and Scott County sidewalk and/or trail data</li> </ul>

For more detailed information on the evaluation framework, including the specific ways in which each of the evaluation measures were calculated, please see the **Evaluation Framework Memo**.

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# Travel Demand Analysis





# Travel Demand Analysis

## Introduction

Evaluation of the travel demand potential for east-west corridors in Dakota County was performed using a variety of survey and GPS-based data sources in order to assess current travel patterns within the study area. The intent of the travel demand analysis was to understand at a high level the travel market in each corridor as a basis for comparison, not to establish ridership forecasts for future transit service as that was beyond the scope of this study.

## Data Sources

The selected datasets are based on current, observed travel in the Twin Cities region. The datasets have some significant overlap regarding the types of trips being described. This allows the analysis to include more than one independent data source, which strengthens the confidence in the results. The data sources used include:

- Year 2010 Home Interview Survey (HIS)
  - Includes 79,236 observed trips within the region
  - Data includes trip purpose, mode, and time
- Year 2015 INRIX Trip Data
  - Includes 2,596,977 passenger vehicle trip observations within the region
  - Information was collected from GPS-enabled devices
- Year 2010 Transit On-Board Survey
  - Survey of approximately 9 percent of all transit trips taken as part of the Travel Behavior Inventory
  - Data includes information about boarding and alighting locations, trip purpose, and other trip details such as ingress and egress modes

- Year 2014 Longitudinal Employer-Household Dynamics (LEHD)
  - Includes 1,743,166 home to work trips
  - Organized by census block group

### Additional Data Sources Information

- The Year 2010 Home Interview Survey and Year 2010 Transit On-Board Survey are conducted by the Metropolitan Council and cover the Twin Cities region.
- The Home Interview Survey is a consolidated set of trip diaries collected from a sample of the Twin Cities population.
- The 2010 Transit On-Board Survey includes a sample of trips taken on fixed-route transit in the region.
- The Year 2015 INRIX data is a third party dataset purchased by MnDOT and includes full path information for trips.

## Analysis Methodology

The evaluation was conducted per the following procedure:

- Preliminary investigations were conducted related to workers by work location, worker trip flows, desire lines related to home-based work trip flows and total trip flows, location of trip origins, transit trip desire lines, major auto trip desire lines, and desire lines to the rest of the region
- Flow maps and several other measures were used as inputs into the selection of an initial set of 16 east-west corridors
- Trip ends were defined for each corridor, as well as for trips ends with one mile of existing transit service (the transit service area) using trip end information from the INRIX, HIS, and on-board survey data

- Trip observations and expanded trips (where available) were summed to represent the following travel markets:
  - Trips entirely within each corridor
  - Trips starting in each corridor and destined for an area that is within the regional transit service area
  - Trips starting in each corridor and destined to the entire region (all trips from each corridor)
  - Trips starting in the regional transit service area and destined for each corridor
  - Trips destined for each corridor, regardless of origin (all trips to each corridor)

- Potential transit trips by corridor residents (corridor productions)
- Including minor adjustments using INRIX data
- Potential transit trips by corridor workers and visitors (corridor attractions)
- Including minor adjustments using INRIX data

## Data Application

### Year 2010 Home Interview Survey

The HIS dataset was summarized for all home-based trips, including trips made by corridor residents (productions) as well as trips made to the corridor from residents living outside the corridor (attractions). Productions from each corridor draw on data from 1,032 surveyed households within the study area. Attractions to the corridor are based on data from 10,362 surveyed households around the entire region.

Given the small sample size for a regional database (the survey covers 0.75 percent of the region’s population), for very small areas the sample may not be representative of the population. For all home-based trips, each corridor typically included several hundred observations, allowing for a reasonable estimate for corridor trip productions and attractions. For trips to and from transit-accessible destinations (trip end within the transit service area), some corridors included less than one hundred observations. Given this sample size, INRIX data was used to perform small corrections to the percentage of all home-based trips to and from transit-accessible areas. The HIS data was therefore used for the following evaluation measures:

### Year 2015 INRIX Data

In the fall of 2015, MnDOT purchased a large dataset from INRIX—a third party supplier of travel data. This data is collected from a sample of GPS-enabled devices on vehicles. The dataset was collected from all sampled vehicles for a three-month timeframe that included September-November of 2015.

The sample is much larger than HIS data and includes approximately 288,000 observations of trips that started within the study area and 286,000 observations of trips that ended within the study area. Although the dataset includes a large number of observations, the data can only be used to make relative comparison because no expansion factors are available to convert observations to total trip estimates.

For the purposes of this study, absolute trip numbers are not necessary, and the INRIX data provides a method to estimate the relative number of trips that currently begin and end within each corridor. INRIX data was therefore used for the following evaluation measure:

- Daily trips per day beginning and ending within a half-mile of each corridor (relative comparison)

### Year 2010 Transit On-Board Survey

The on-board survey included 963 observed origins and 644 observed destinations within the study area. Although expansion factors can be used to estimate total trips based on observations, most corridors included very few observations (less than 10) of the number of intra-corridor transit trips (transit trips that

begin and end within each corridor). Given this limited number of observations, using the data in the study area has a high degree of uncertainty. Although trips are reported per acre for each corridor, the intra-corridor transit trips should be used for relative comparison only given the high degree of uncertainty. The On-Board survey was used for the following evaluation measure:

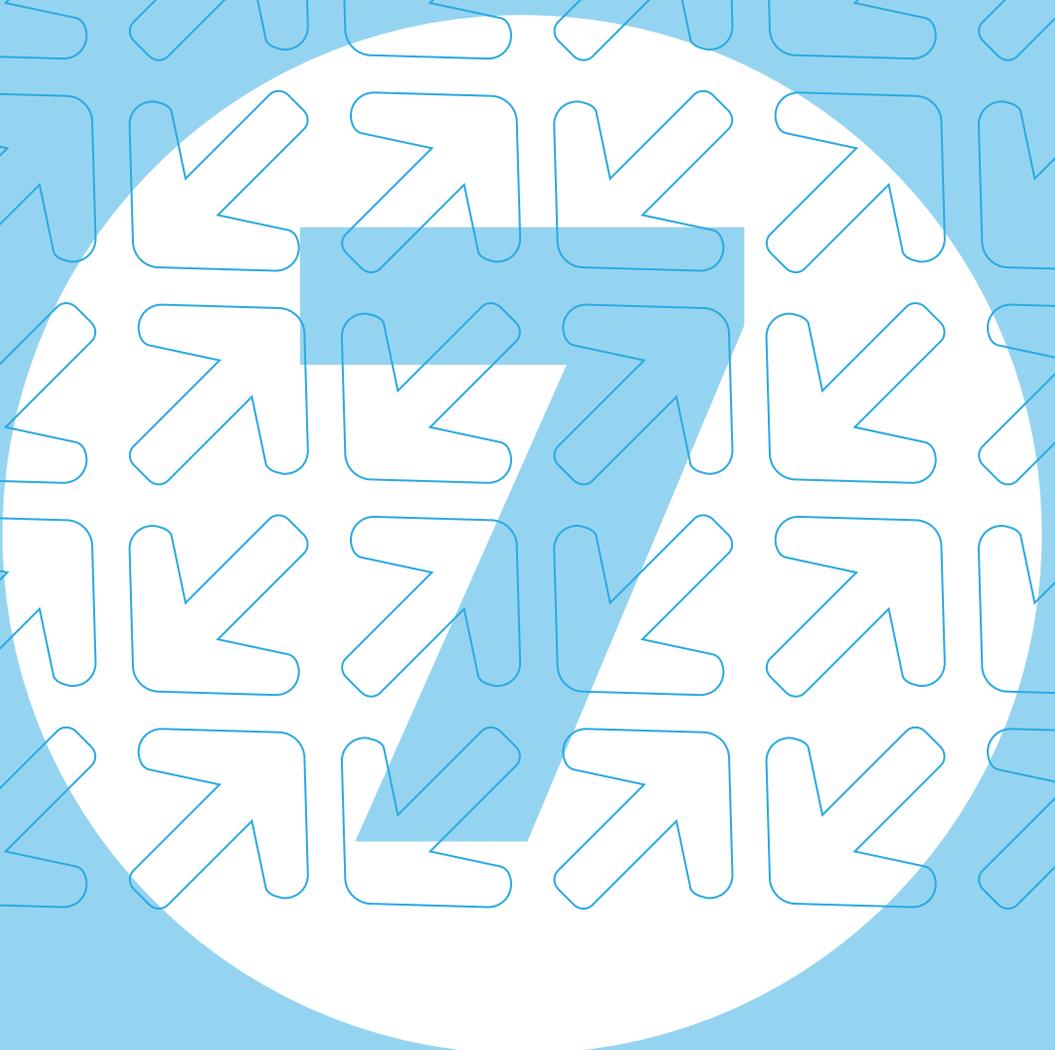
- Transit trips per day beginning and ending within a half-mile of the corridor

### **Year 2014 Longitudinal Employer-Household Dynamics**

The LEHD dataset is not a sample, but rather an inventory of all workers in the region. At the zone level, it is therefore relatively accurate with regard to location of both home and work. It does not include mode information, however, and focuses exclusively on work trips. For this analysis, LEHD data was not used as an evaluation measure, but was used as an input to the development of initial desire line maps that were used to assist with corridor initial corridor identification.

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# Corridor Evaluation





# Corridor Evaluation

## Introduction

The goals and measures for this study were developed based on previous county transportation plans and studies and refined based on input from Dakota County staff, policymakers, the Technical Advisory Committee (TAC), the Steering Committee, and the public. Additional information on the study goals and measures can be found in the Evaluation Framework Technical Memo.

The TAC identified the following corridors for evaluation:

- Butler Avenue (CSAH 4)
- Wentworth Avenue (CSAH 8)
- MN-110
- Lone Oak Road (CSAH 26)
- Yankee Doodle Road (CSAH 28)
- Diffley Road (CSAH 30)
- Cliff Road (CSAH 32)
- McAndrews Road (CSAH 38)
- 140th Street/Connemara Trail
- County Road 42
- County Road 46
- 185th/195th Streets (CSAH 60/64)
- 215th/212th Streets (CSAH 70/50)
- MN-13
- MN-55

## Scoring

The corridors identified by the TAC were evaluated using the evaluation measures documented in the Evaluation Framework Memo. A buffer area of ½ mile around each proposed route was assumed for evaluation, since service planning of an exact route was not included in this study. Additionally, results for each measure were normalized based

on the length of the route or area contained within the buffer to compare corridors of varying lengths more effectively.

For each measure, corridors received a score of one, two, three, four, or five. This score was determined based upon the best and worst performing corridors for the measure, with four equal breakpoints established within this range. The score for the remaining corridors for each measure were then determined based upon their performance compared to these breakpoints.

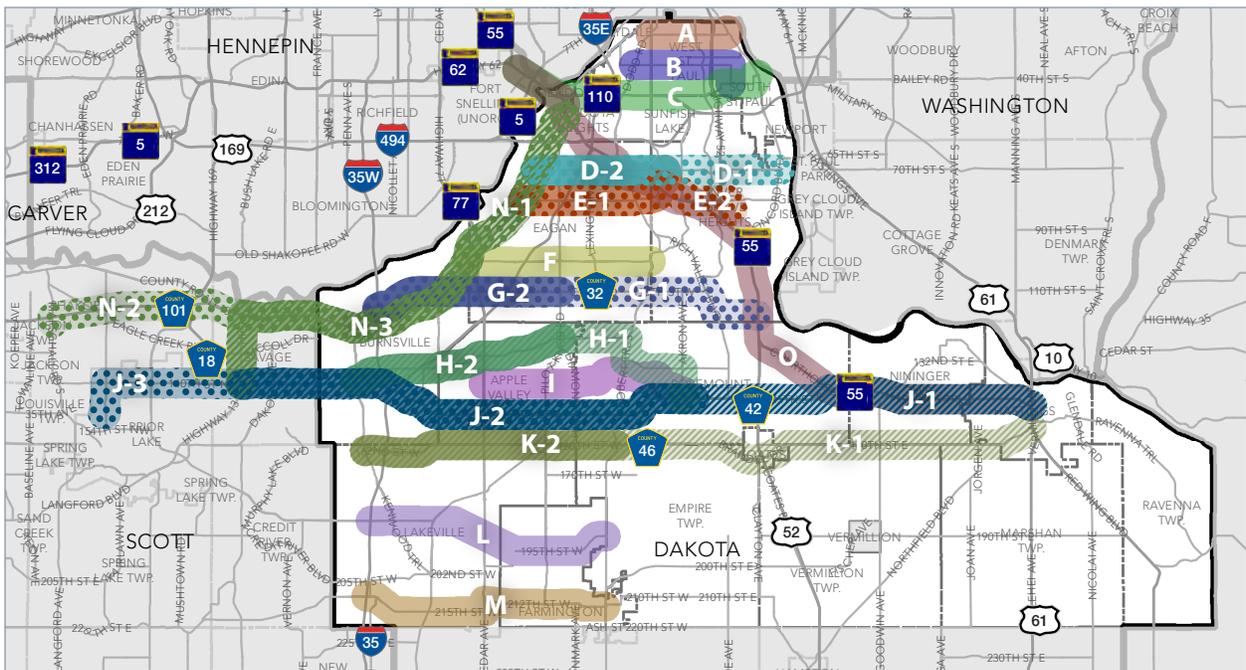
The measures for each goal were then averaged into a single goal score, assuming equal weighting for each measure. The scores for each of the goals were then combined into an overall score for each corridor.

Upon review of the initial scoring system, members of the TAC determined that Butler Avenue (CSAH 4) and Wentworth Avenue (CSAH 8)—two corridors that are more urban in nature as compared to the suburban development pattern that prevails in the other corridors—were often outliers and tended to skew the evaluation results. To address this, the TAC decided to disallow either of these corridors from setting the high or low scores for the scoring range.

## Corridor Segmentation

After reviewing the initial corridor evaluation results, TAC members and project staff suggested evaluating revised extents for several corridors that served both transit-supportive and non-transit-supportive areas. In some cases, it was anticipated that shortened corridors with more concentrated service in higher density areas may perform better than longer corridors that extend into low density areas. 25 unique corridor segments were evaluated. These segments included:

- **A:** Butler Avenue between Delaware Avenue and Concord Street
- **B:** Wentworth Avenue between Dodd Road and Southview Boulevard
- **C:** MN-110 between Fort Snelling Station and Concord Street
- **D-1:** Lone Oak Road between MN-13 and Concord Street
- **D-2:** Lone Oak Road between MN-13 and Argenta Trail
- **E-1:** Yankee Doodle Road between MN-13 and Lone Oak Road
- **E-2:** Yankee Doodle Road between MN-13 and Inver Hills Community College (IHCC)
- **F:** Diffley Road between MN-13 and Robert Trail
- **G-1:** Cliff Road between I-35W and MN-55
- **G-2:** Cliff Road between I-35W and Pilot Knob Road
- **G-3:** Cliff Road between I-35W and I-35E
- **H-1:** McAndrews Road between County Road 5 and Akron Avenue
- **H-2:** McAndrews Road between County Road 5 and Pilot Knob Road
- **I:** 140th Street/Connemara Trail between Cedar Avenue and Akron Avenue
- **J-1:** County Road 42 between MN-13 and Vermillion Street
- **J-2:** County Road 42 between MN-13 and Dakota County Technical College (DCTC)
- **J-3:** County Road 42 between Mystic Lake Drive and DCTC
- **K-1:** County Road 46 between Kenwood Trail and Vermillion Street
- **K-2:** County Road 46 between Kenwood Trail and Robert Trail
- **L:** 185th/195 Streets between I-35 and Chippendale Avenue
- **M:** 215th/212th Streets between I-35 and Chippendale Avenue
- **N-1:** MN-13 between Country Road 42 and MN-110
- **N-2:** MN-13 between the Marschall Road Park & Ride and MN-110
- **N-3:** MN-13 between Country Road 42 and Cedar Avenue
- **O:** MN-55 between Fort Snelling Station and Vermillion Street



**Figure 7.1: Corridor Segments Evaluated** ↗

## Goal Summaries

Brief summaries of the evaluation results by goal are provided below. For more details on the corridor evaluation results and how corridors performed on each evaluation measure, refer to the **Corridor Evaluation Technical Memo**.

### Goal 1 Identify east-west corridors that improve mobility for transit dependent populations

The MN-110 and Wentworth Avenue corridors scored high on Goal 1. Both corridors performed well on all four Goal 1 measures. Corridors that performed in the medium range tended to score well on the measures for people with low incomes per acre and people with disabilities per acre but often had higher vehicle availability and serve fewer low-wage job concentrations.

### Goal 2 Identify east-west corridors that are cost-effective and efficient

Without planning-level transit service plans, cost estimates and ridership forecasts cannot be reliably estimated. Efficiency of service and cost-effectives will be measured by transit service providers in the future, using, in part, the results of this analysis to identify the post promising corridors.

### Goal 3 Identify east-west corridors that maximize regional transit connectivity

The Cliff Road corridor between I-35W and I-35E and the Butler Avenue corridor scored high on Goal 3. Overall, the number of transit trip connections per mile served as the key differentiator within this Goal as very little variation was observed in the number of transitway connections between the various corridors.

### Goal 4 Identify east-west corridors that maximize transit ridership

No corridor scored high on Goal 4. Results suggest that the selected corridors tend to

serve either areas with high job density or areas with high population density, but not both. Corridors that scored highest were typically those that are well-connected and scored well on intersection density in addition to either job density or population density.

### Goal 5 Identify east-west corridors that respond to travel patterns

The County Road 42 corridor between MN-13 and DCTC was the only corridor to score high on Goal 5, performing well on all four measures. For the remaining corridors, potential transit trips by corridor residents per acre and potential transit trips by corridor visitors and workers per acre were typically the key differentiators.

### Goal 6 Identify east-west corridors that are supported by existing and planned land use

Several corridors scored high on Goal 6, including Yankee Doodle Road between MN-13 and Lone Oak Road, County Road 42 between MN-13 and DCTC, Cliff Road between I-35W and I-35E, Yankee Doodle Road between MN-13 and IHCC, and Cliff Road between I-35W and Pilot Knob Road. These corridors scored well on all three measures for Goal 6. The percent of land planned to be transit-supportive and the building-to-parcel ratio were the primary differentiators between the remaining corridors.

### Goal 7 Identify east-west corridors that improve access to employment, institutions, and services

No corridor scored high on Goal 7. Lone Oak Road between MN-13 and Argenta Trail and Yankee Doodle Road between MN-13 and Lone Oak Road performed well on regional activity and job centers per acre and key institutions per acre, achieving a medium-high rating for Goal 7.

**Goal 8** Identify east-west corridors that incorporate safe, convenient, and multimodal access and facilities

The 140th Street/Connemara Trail corridor scored well on all three measures for Goal 8. The measures with the most variability among corridors were sidewalk and trail density and sidewalk and trail coverage. The corridors that had very few crossing opportunities per mile typically scored the lowest for this goal.

**Corridor Evaluation Summary**

No corridors scored high across all goals. However, based on an average of all goals, the following corridors scored medium-high:

- Butler Avenue
- Yankee Doodle Road between MN-13 and Lone Oak Road
- Cliff Road between I-35W and I-35E
- County Road 42 between MN-13 and DCTC

The scores for each of the corridor segments by goal and the overall score for each corridor are shown in **Figure 7.2**.

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
A	Delaware Ave	Butler Ave (CSAH 4)	Concord St	High							
B	Dodd Rd	Wentworth Ave (CSAH 8)	Southview Blvd	High							
C	Fort Snelling Station	MN-110	Concord St	High							
D-1	MN-13	Lone Oak Rd (CSAH 26)	Concord St	High							
D-2			Argenta Trl	High							
E-1	MN-13	Yankee Doodle Rd (CSAH 28)	Lone Oak Rd	High							
E-2			Inver Hills Community College	High							
F	MN-13	Diffley Rd (CSAH 30)	S Robert Trl	High							
G-1	I-35W	Cliff Rd (CSAH 32)	MN-55	High							
G-2			Pilot Knob Rd	High							
G-3			I-35E	High							
H-1	County Rd 5	McAndrews Rd (CSAH 38)	Akron Ave	High							
H-2			Pilot Knob Rd	High							
I	Cedar Ave	140th Connemara Trl	Akron Ave	High							
J-1	Highway 13	County Road 42 (CSAH 42)	Vermillion St	High							
J-2			Dakota County Technical College	High							
J-3			Mystic Lake Dr	High							
K-1	Kenwood Trail	County Road 46 (CSAH 46)	Vermillion St	High							
K-2			St. Robert Trl	High							
L	I-35	185th/195th St (CSAH 60/64)	Chippendale Ave	High							
M	I-35	215th/212th St (CSAH 70/50)	Chippendale Ave	High							
N-1	Trunk Highway 13 & CR-42	MN-13	MN-110/55/13 Interchange	High							
N-2			Marschall Road Park-and-Ride	High							
N-3			Cedar Ave	High							
O	Fort Snelling Station	MN-55	Vermillion St	High							

**Figure 7.2: Corridor Evaluation Results by Corridor Segment**

# Recommendations





# Recommendations

## Introduction

With the results of the corridor evaluation, the project team held two workshops to begin making recommendations for the east-west corridors studied as part of the project. One workshop was held with policymakers, and another was with the project Technical Advisory Committee (TAC). This chapter includes an overview of the recommendations developed and discussed by these project team members.

In general, many corridors would benefit from additional transit-supportive land use and development patterns. To make east-west corridors more transit-supportive, it is recommended that jurisdictions promote development adjacent to the roadway that incorporates both transit-supportive residences and destinations. These developments could include higher density residential as well as institutional and commercial developments that provide employment, shopping, education, and commerce.

Several corridors would also benefit from additional or improved pedestrian infrastructure to allow for safe and convenient access to transit. New or improved pedestrian crossings, additional sidewalk coverage along key corridors, and improved sidewalk coverage connecting to existing or proposed transit stops are needed in many areas to improve pedestrian access.

Each corridor has a unique set of opportunities and challenges with regard to transit potential. Corridor-specific recommendations therefore focus on land use, development, and infrastructure improvements that would benefit each individual corridor. Based on a planning-level evaluation process, several corridors have many transit-supportive features or land



use patterns already in place, and therefore warrant further consideration for new or modified transit service in the near term.

### Recommendations for All Corridors

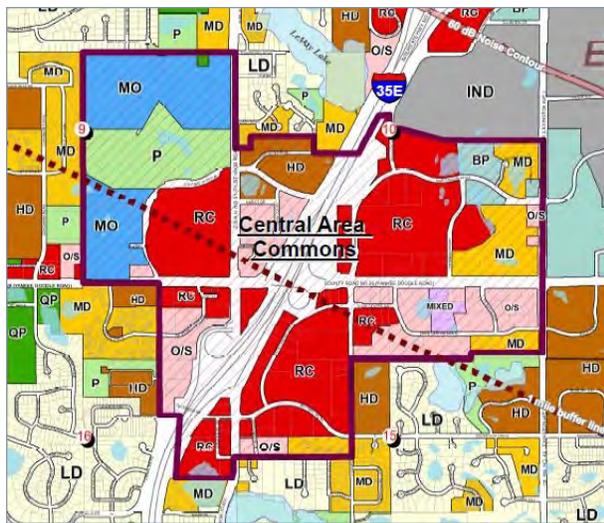
Successful transit routes are typically those which serve regions with higher employment, residential, and commercial density, with a variety of destinations and land uses, connected by robust pedestrian and bicycle network that provides comfortable and convenient access to and from transit stations. These considerations are especially critical in a suburban context where decades of designing for automobiles has made connections by bike and walking more challenging.

There are several land use, policy, and design best practices that can be employed by developers, cities, and counties throughout the study area to better support transit in a suburban context.

## Review Planned Land Uses in Transit Corridors

One of the most important steps that cities can take to support transit is to review land uses planned for existing and planned transit corridors. The upcoming required updates to local comprehensive plans within the study area offers communities the opportunity to evaluate and, if needed, modify planned future land uses along specific corridors in order to guide transit-supportive development patterns.

While corridor land uses will be driven in part by site constraints and market dynamics, communities desiring improved transit service should strive for clusters of development that blend residential, retail, commercial, and industrial destinations that offer a variety of employment, housing, cultural, and other amenities.



**Figure 8.1:** Future land use map, Central Park Commons, Egan ↗

## Promote Corridor Transit-Supportive Development Policy

Once sites have been identified and prescribed for specific land uses, there are policy mechanisms that cities can employ to promote transit-supportive development. Examples of such policies include:

- Prescribe maximum lot sizes to increase density
- Reduce or eliminate off-street parking requirements
- Encourage shared parking arrangements between land uses, especially when the peak parking demand times between adjacent land uses are offset
- Create zoning overlay districts to require density or other transit-supportive characteristics
- Implement form-based zoning along transit corridors to establish a cohesive built environment and physical form that supports convenient access to transit
- Offer financial, schedule, or other incentives such as increased density allowances in exchange for additional affordable housing, investments in public space improvements or pedestrian and bicycle amenities, or the protection of environmental and historical resources

**Figure 8.2:** Shared parking at Heart of the City in Burnsville ↘



## Promote Corridor Transit-Supportive Site Design

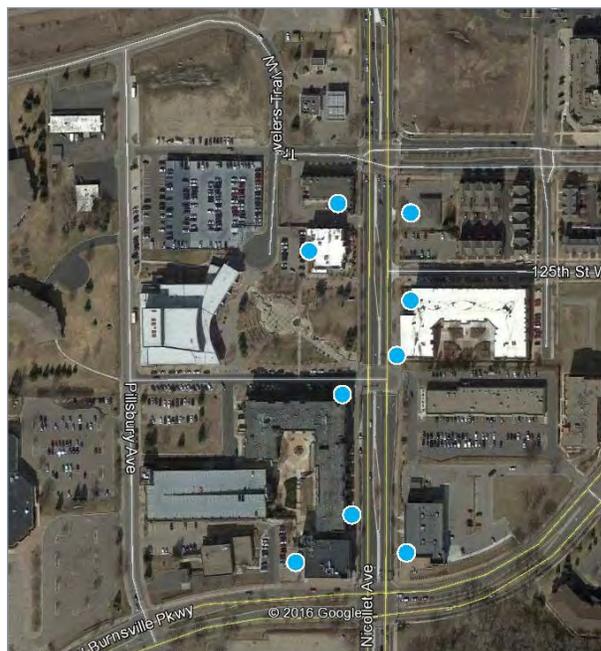
Guiding transit-supportive land uses on a given site is only part of the process. Designing buildings, parking, circulation, and access that prioritize pedestrians is essential for transit to be successful. Communities should work with developers and transit service providers on a thorough and comprehensive site planning and design review process to configure buildings and parking in a manner that prioritizes pedestrian access.

Some examples of site-specific design guidance include:

- Creating building entrances that are visible and oriented toward the street, permitting pedestrians and bicyclists convenient access
- Restricting off-street parking in front yard setback areas, thereby directing parking to be placed behind or on the side of buildings and improving the aesthetic streetscape experience for pedestrians
- Require ample bicycle parking near building entrances
- Provide direct and comfortable walkways from the street to building entrances, including safe and highly visible facilities to cross access driveways and parking areas



**Figure 8.3:** Large surface parking lots result in long, meandering access to building entrances as shown along County Road 42 in Burnsville ↗



**Figure 8.4:** Building entrances adjacent to the street allows for convenient pedestrian access, shown here at Heart of the City in Burnsville ↗

## Create Inviting Streetscapes and Travelways

Orientation of buildings and relocating parking lots can create a more inviting streetscape for pedestrians and bicyclists connecting to and from transit service. Additional elements that may improve multimodal access to transit include:

- Wide sidewalks of at least 8-feet with a landscaped buffer between pedestrians and traffic
- Street trees, benches, trash cans, transit stops and shelters, and other amenities to make traveling on foot more comfortable
- High visibility marked crosswalks, signage, and signals to draw attention to pedestrians at crossing locations
- Pedestrian refuge islands, curb extensions, reduced turning radii, and other features that shorten crossing distances and moderate traffic speeds at key intersection and crossing locations
- On-street bicycle facilities, such as bike lanes, or off-street shared-use paths

## Cultivate and Leverage Partnerships in Reviewing and Approving Development Plans

Cities and counties should collaborate with developers, residents, neighborhood and business organizations, and transit providers to review and collaborate on development proposals. Collaboration leads to creative solutions and stakeholder support and buy-in, increasing the likelihood of project success.

### Implementation Responsibility

Each agency typically has the authority to at least one component of these recommendations, but partnerships will be necessary to achieve these goals. Each high-level recommendation is shown in **Table 8.1** with a check mark indicating the agency (or agencies) that must be involved to implement the recommendation.

**Figure 8.5: Mid-block crossing in Oregon** ↘



**Figure 8.6: Site planning and positioning of land uses** ↘



**Table 8.1: Recommendation implementation by responsible agency** ↘

Recommendation For All Corridors	City	County	MnDOT	Service Provider
Review Planned Land Uses in Transit Corridors	✓			
Promote Corridor Transit-Supportive Development Policy	✓			
Promote Corridor Transit-Supportive Site Design	✓			
Create Inviting Streetscapes and Travelways		✓	✓	
Cultivate and Leverage Partnerships in Reviewing and Approving Development Plans	✓	✓	✓	✓

## Corridor Recommendations Overview

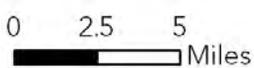
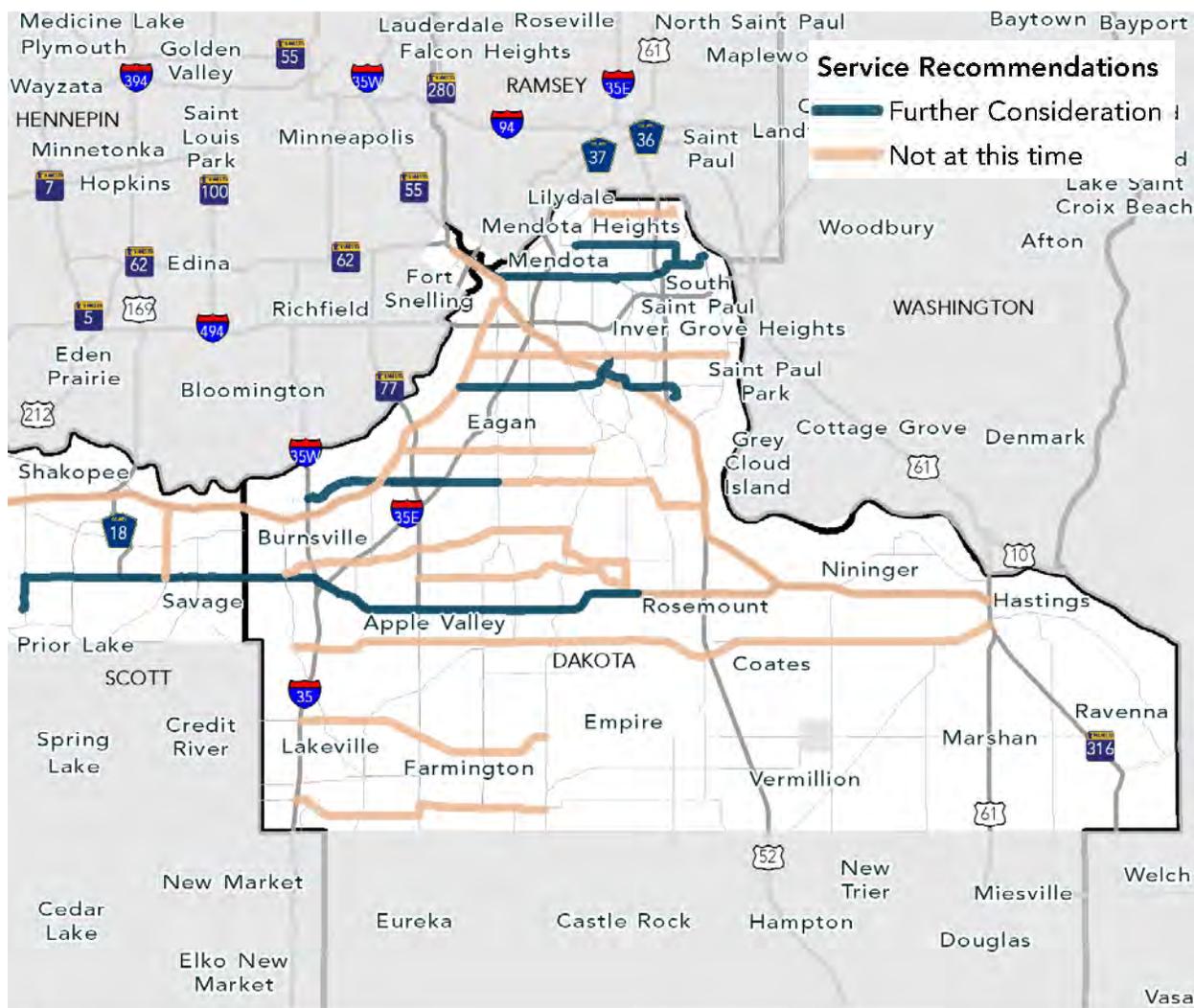
After reviewing the corridor evaluation results (see the Corridor Evaluation Memo) and considering local knowledge and input from the public, the TAC, the PWG, and the Steering Committee all made recommendations as to which corridors should be considered further by the service providers for new local, fixed-route bus service or flex route service.

Based on the recommendations of the committees, the corridors were placed into two categories as shown in **Table 8.2**.

**Table 8.2: Categorization of corridor recommendations**

Further Consideration 	
Wentworth Avenue	Cliff Road
MN-110	County Road 42
Yankee Doodle Road	
Not at This Time 	
Butler Avenue	County Road 46
Lone Oak Road	185th/195th Streets
Diffley Road	215th/212th Streets
McAndrews Road	MN-55
140th Street/Connemara Trail	MN-13

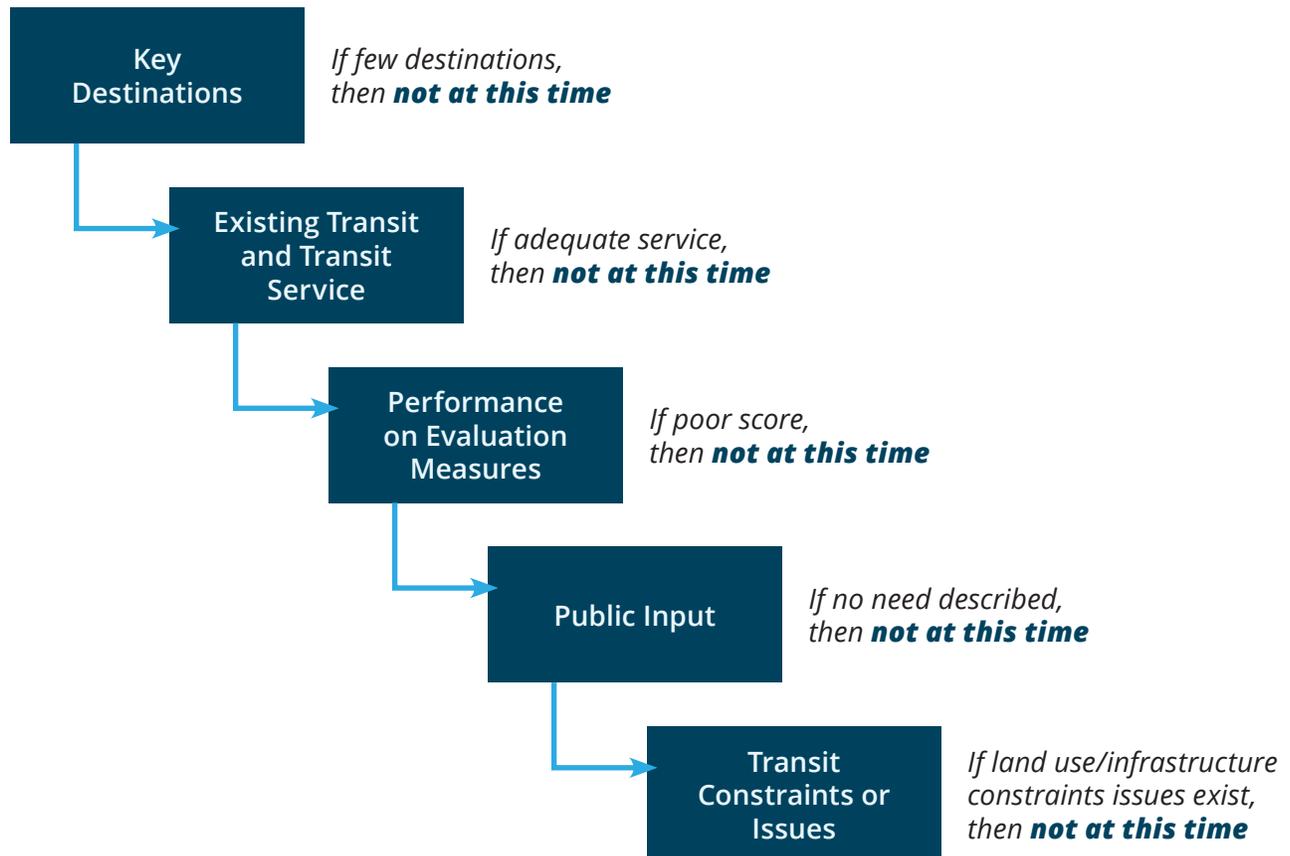
**Figure 8.7: Corridors recommended for further consideration**



## Development Of Recommendations

No single characteristic determined whether a corridor was recommended to advance for further consideration. Instead, several factors were considered including:

- **Key Destinations.** Are there many local, regional, or transit-supportive destinations in the corridor today? Are there significant transit-supportive developments confirmed for the corridor?
- **Existing Transit and Transitway Service.** What transit exists along the corridor today? Is this service adequate for the land uses, destinations, and travel patterns observed? Are there existing or future transitways that the corridor would connect?
- **Performance on Evaluation Measures.** Did the corridor perform well based on the project goals and evaluation measures?
- **Public Input.** Did the public indicate a desire for more transit along this corridor? Did any of the formal committees (TAC, Steering Committee, or PWG) request further consideration?
- **Transit Constraints or Issues.** Are there land use or infrastructure constraints that may pose significant challenges moving forward?



# Corridors Recommended for Further Consideration

Five corridors are recommended for further consideration:

- 1 Wentworth Avenue
- 2 MN-110
- 3 Yankee Doodle Road
- 4 Cliff Road
- 5 County Road 42

In addition to these three key characteristics, the five corridors recommended for further consideration also have intermittent transit-supportive land-uses and at least moderate walkability. The corridors all scored well on the evaluation measures, indicating that they may be among the strongest candidates for transit service of the evaluated corridor. The specifics of each corridor relative to its key destinations, current service patterns, land use and infrastructure recommendations are detailed on the following pages.

Both the Policymaker Work Group (PWG) and the Technical Advisory Committee (TAC) indicated that these corridors should be considered further because they, more-so than other corridors considered in this study, have many of the following characteristics that are conducive to transit or fill a mobility need:

- Make transitway connections
- Serve local destinations
- Have regional destinations or movements

It should be noted that these recommendations are based on an evaluation amongst the candidate corridors in Dakota County without budget, operating, or capital constraints. Corridors recommended for further consideration will be evaluated through each transit agency’s established review process which will be a system-wide comparison and may include different evaluation measures.

CORRIDOR	Transitway Connections <i>Does the corridor create a connection with a current or planned transitway?</i>	Local Destinations <i>Are there many smaller employers, a mix of land uses, and other transit-supportive local destinations?</i>	Regional Destinations <i>Are there large, regional employers or destinations in the corridor that warrant east-west transit?</i>
Wentworth Avenue		➔	
MN-110	➔		
Yankee Doodle Road		➔	➔
Cliff Road	➔	➔	
County Road 42	➔	➔	➔

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 RECOMMENDED FOR FURTHER CONSIDERATION:

## Wentworth Avenue (CSAH 8)

### Evaluation Criteria Scoring

The Wentworth Avenue corridor scored medium overall, ranking 5th of 25 evaluated corridor segments. Its worst score was on Goal 7 (improve access to employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
B	Dodd Rd	Wentworth Ave (CSAH 8)	Southview Blvd								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
West St. Paul Sports Complex			Committees
Wentworth Library			Public (Open House)
Target			Public (Online)
Southview Mall			Public (Online)
South St. Paul Farmers Market			Public (Online)
Downtown South St. Paul businesses			Public (Online)
Dodge Nature Center			Committees

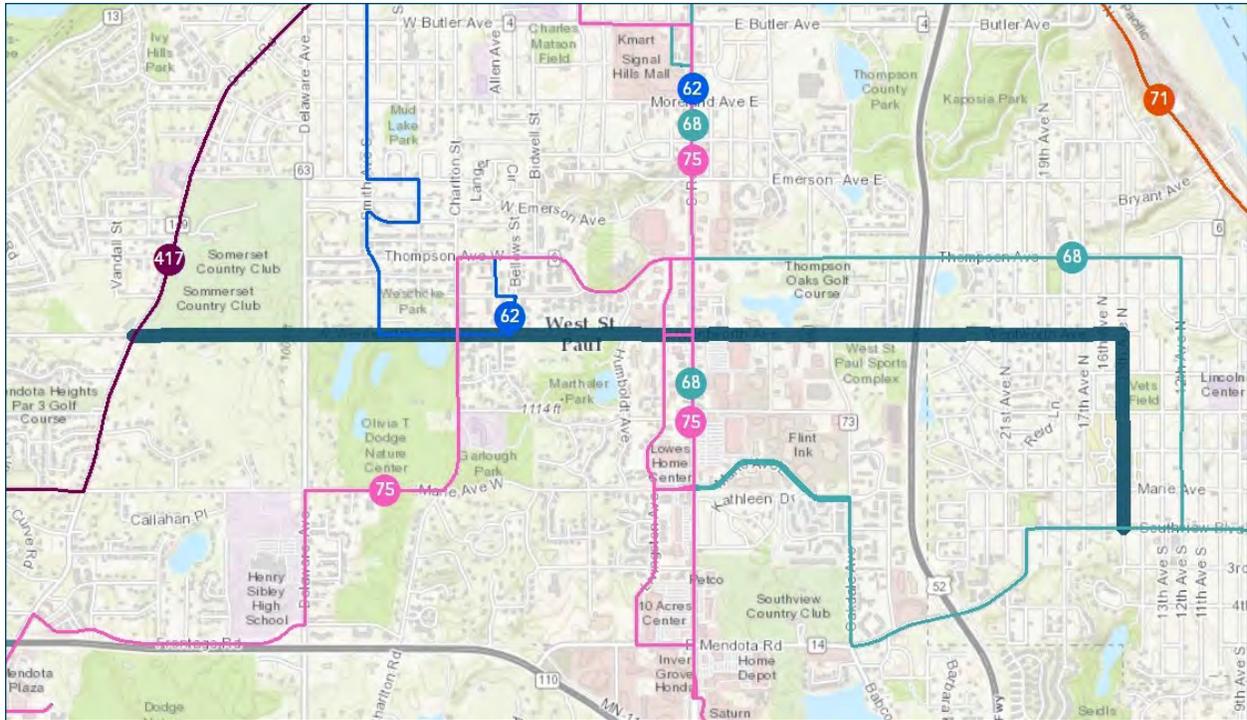
### Existing Transit Along Corridor

There are two transit routes that provide service near Wentworth Avenue today.

- **Route 68** travels on Thompson Avenue between Robert Street and 12th Avenue, covering **1.3 miles** over **31 trips** per day
- **Route 75** travels on Thompson Avenue between of Robert Street and Wentworth Avenue, covering **1 mile** over **15 trips** per day

Several other routes intersect Wentworth Avenue and are shown in **Figure 8.8**.

**Figure 8.8: Existing local transit routes on or near Wentworth Avenue** ↘



## Land Use and Development Recommendations

The Wentworth Avenue corridor is largely residential, with retail and commercial concentrations at Robert Street, which bisects the corridor. Any future development along this corridor is likely to occur at Robert Street. Consider multifamily or another more intense development at this intersection in order to increase density and potentially improve its access to employment, institutions, or services.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- ➔ City of Mendota Heights
- ➔ City of West St. Paul
- ➔ City of South St. Paul

## Infrastructure Recommendations

The cities along the Wentworth Avenue corridor could improve conditions for transit users by extending sidewalks on both sides of Wentworth Avenue along the length of the corridor. Constructing a complete sidewalk network around the corridor and adding crossing opportunities would also improve access to transit, especially on the western end of the corridor.

The City of West St. Paul has indicated that a trail is being built between Delaware Avenue and Livingston Avenue.

**CORRIDOR-WIDE RECOMMENDATIONS:**

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

**IMPLEMENTATION RESPONSIBILITY:**

- Dakota County
- Cities
- Metro Transit

## Further Consideration

The corridor is served today by transit routes on Thompson Avenue. Further consideration is recommended for increasing the frequency of those routes. The corridor has several transit-supportive characteristics, including:

- Many transit-dependent residents
- Several transit connections
- Existing and forecasted population density
- High intersection density

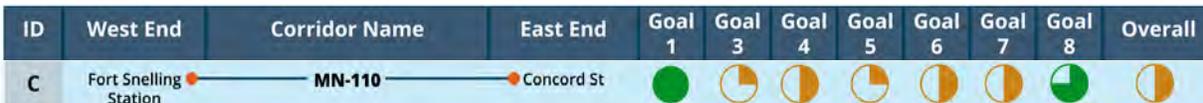
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 RECOMMENDED FOR FURTHER CONSIDERATION:

# MN-110

## Evaluation Criteria Scoring

The MN-110 corridor scored medium overall, ranking 9th of 25 total corridor segments. Its best score was on Goal 1 (transit dependency), and it scored lowest on Goal 3 (regional transit connectivity) and Goal 5 (travel patterns).



Key Destinations	Local Destination	Regional Destination	Who identified this destination?
	<i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	<i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	
Mendota Plaza	✓		Committees
Neighbors, Inc.	✓		Public (Online)
Retail & government offices near MN-110 & Mendota Road	✓		Public (Online)
Southview Mall	✓		Public (Online)
South St. Paul Farmer's Market	✓		Public (Online)
Dodge Nature Center		✓	Committees
Fort Snelling Park & Ride (with connection via the METRO Blue Line to the airport and the Mall of America)		✓	Committees, Public (Open House)

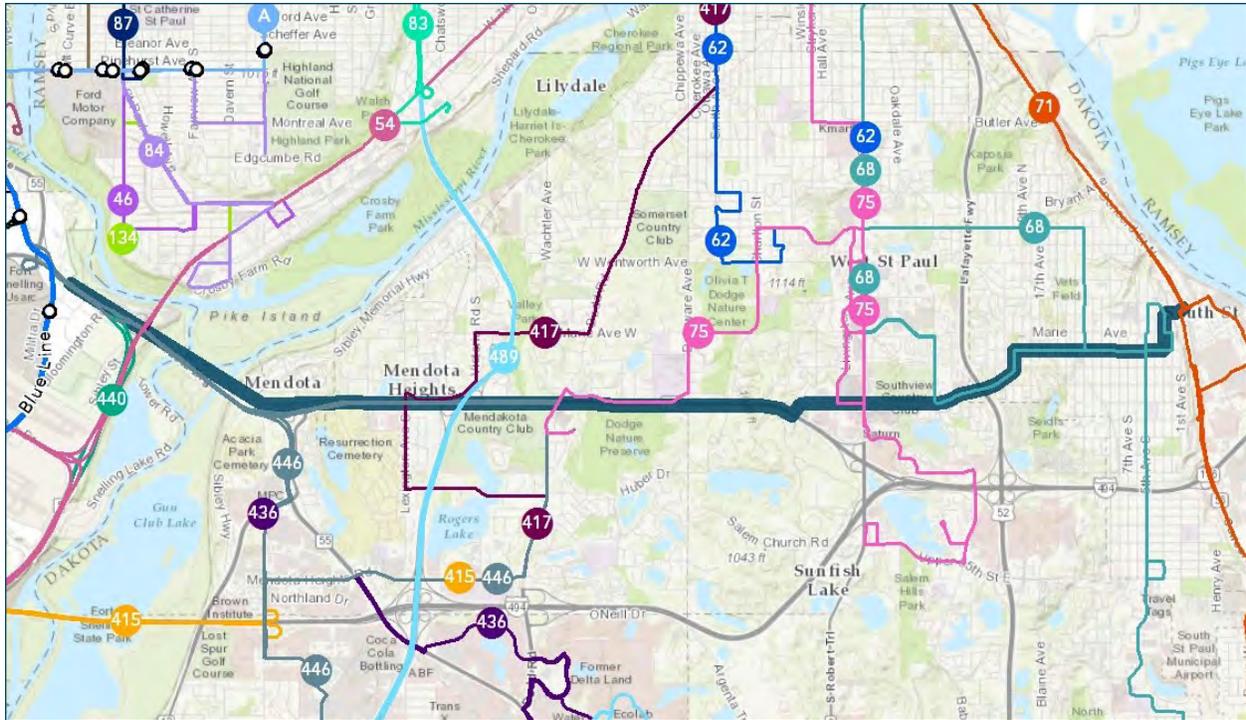
## Existing Transit Along Corridor

The local transit routes operating on MN-110 include:

- **Route 68** travels on Southview Boulevard between Oakdale Avenue and 2nd Avenue S, covering nearly **2 miles** over **104 trips** per day
- **Route 75** travels between Delaware Avenue and Dodd Road, covering **1.0 mile** over **15 trips** per day
- **Route 446** travels between MN-55 and Dodd Road, covering **2.0 miles** over **2 trips** per day

Several other local routes intersect the corridor and are shown in **Figure 8.9**. The METRO Blue Line's Fort Snelling Station is located at the western end of the corridor and provides a direct connection to downtown Minneapolis.

**Figure 8.9: Existing local transit routes on or near MN-110**



## Land Use and Development Recommendations

MN-110 passes through several regional destinations, local attractions, and employment centers. It connects the Fort Snelling Park-and-Ride with several government centers and local destinations on the eastern side of Dakota County. It is an efficient and direct route across the County. While the corridor is largely built-out, as redevelopment occurs, it should follow the recommendations from West St. Paul's Robert Street Renaissance Plan.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Minneapolis
- City of Mendota
- City of Mendota Heights
- City of Sunfish Lake
- City of West St. Paul
- City of South St. Paul
- City of Inver Grove Heights

## Infrastructure Recommendations

The largely highway-oriented nature of the MN-110 corridor limits access to businesses and creates pedestrian crossing challenges. Crossing distances along the corridor are long (nearly 150 feet in some areas). Pedestrian crossing improvements, such as crossing refuges and signal timing enhancement for pedestrians are recommended at key crossing locations along the corridor. A tunnel is currently planned under MN-110 at Dodd Road by the parks department. This tunnel will connect regional trails on both sides of MN-110 and will greatly improve pedestrian access in the area.

**Figure 8.10: MN-110 and Dodd Road Intersection**



### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Hennepin County
- Cities
- MnDOT
- Metro Transit
- MVTA

## Further Consideration

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This corridor connects many existing and future transitways (such as the Blue Line, the Robert Street Corridor, the Red Rock Corridor, and the Gold Line). Further consideration is recommended for the MN-110 corridor due to these transitway connections and the following characteristics:

- Many transit-dependent residents and workers
- Several signalized crossing opportunities per mile
- Density of surrounding sidewalks

There are two caveats to this recommendation:

- Further consideration is not recommended prior to the implementation of at least one of the eastern transitways (Red Rock or Gold Line)
- Due to the highway nature of the corridor, this corridor would likely only be a transfer point for riders. Thus, further consideration is only recommended for peak-period or limited stop service



 RECOMMENDED FOR FURTHER CONSIDERATION:

# Yankee Doodle Road (CSAH 28)

## Evaluation Criteria Scoring

The Yankee Doodle Road corridor scored medium-high overall, ranking 2nd of 25 total corridor segments. Its best score was on Goal 6 (existing and planned land use), and its lowest score was on Goal 3 (regional transit connectivity).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
E-1		Yankee Doodle Rd (CSAH 28)	Lone Oak Rd								
E-2			Inver Hills Community College								

Key Destinations	Local Destination	Regional Destination	Who identified this destination?
	<i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	<i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	
Thomson Reuters			Committees & Public (Online)
Blue Cross and Blue Shield Offices			Committees
Inver Hills Community College			Committees & Public (Online)
Argosy University			Committees
Rasmussen College			Committees
UPS Campus			Committees & Public (Online)
Inver Grove Heights Community Center			Public (Online)
Retail areas at I-35E & Yankee Doodle Road (Eagan Town Center & Eagan Promenade)			Public (Online)

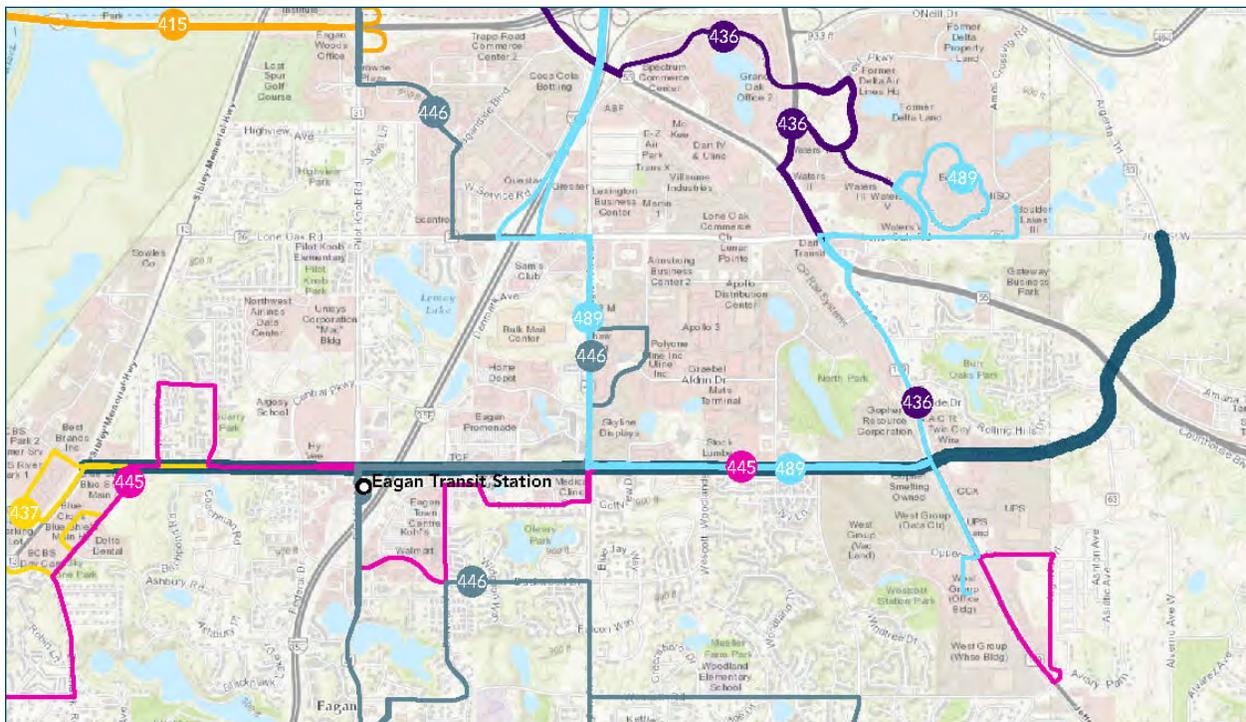
## Existing Transit Along Corridor

The local transit routes operating on Yankee Doodle Road include:

- **Route 437** travels between MN-13 and Pilot Knob Road, covering **1.2 miles** over **10 trips** per day
- **Route 445** travels between Blue Cross Road and Dodd Road, covering **3.5 miles** over **37 trips** per day
- **Route 446** travels between Pilot Knob Road and Lexington Avenue, covering **1.0 miles** over **35 trips** per day
- **Route 484** travels between Blue Cross Road and Pilot Knob Road **1.0 miles** over **9 trips** per day

Several other routes travel near or intersect the corridor and are shown in **Figure 8.11**.

**Figure 8.11: Existing local transit routes on or near Yankee Doodle Road** ↘



## Land Use and Development Recommendations

The Yankee Doodle Road corridor serves several regional destinations and contains a relatively consistent stretch of residential and commercial land. The corridor provides access to Blue Cross and Blue Shield on the west end of the corridor, Thomson Reuters, and UPS in the middle of the corridor, and Inver Hills Community College on the east end of the corridor. Many of the students of Inver Hills Community College work at the Mall of America or the Twin Cities Premium Outlets.

However, while the diversity of land uses is beneficial for efficient transit service, the development patterns are very auto-oriented, with large parking lots that set the buildings back far from Yankee Doodle Road. This creates an unwelcoming pedestrian environment and makes access to fixed-route transit service challenging. Adjusting auto-oriented development patterns with decreased set-backs, shared parking, and encouraging mixed-use buildings will start to make the corridor more transit-oriented.



**Figure 8.12:** This cluster of retail at Yankee Doodle Road and Lexington Avenue highlights how far the buildings are set back from the roadways in the Yankee Doodle Road Corridor. This development pattern creates an unwelcoming pedestrian environment for transit users, because they are required to walk through large parking lots to get to their destination. ↗

An area with high development potential in the corridor is the ten acres of undeveloped property at the existing UPS site. When this land redevelops, a mixed-use development with a well-connected pedestrian environment could improve the effectiveness of transit-service in the corridor.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Eagan
- City of Inver Grove Heights

## Infrastructure Recommendations

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There is a break in sidewalk connectivity at the Argenta Trail/Yankee Doodle/MN-55 interchange today. As this interchange is reconstructed, it is recommended that sidewalks are included in the design and that the sidewalks connect to the existing infrastructure on both sides of the interchange. If, as the interchange moves forward, there is additional development in the area, ensure that pedestrian connectivity is maintained throughout these new developments.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MnDOT
- MVTA

## Further Consideration

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Further consideration is recommended for new or improved transit service on Yankee Doodle Road for the following reasons:

- Many regional and local destinations and employers throughout the corridor
- Many transit-dependent workers and residents
- Current and planned transit-supportive land uses
- Realistic opportunities for incremental improvements to the pedestrian environment



RECOMMENDED FOR FURTHER CONSIDERATION:

# Cliff Road (CSAH 32)

## Evaluation Criteria Scoring

The Cliff Road corridor scored medium-high overall, ranking 4th of 25 total corridor segments. It scored well on Goal 3 (regional transit connectivity) and Goal 6 (existing and planned land use), and its lowest score was on Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
G-1		Cliff Rd (CSAH 32)	MN-55								
G-2			Pilot Knob Rd								
G-3			I-35E								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Flint Hills Resources			Committees
Lebanon Hills Regional Park			Committees & Public (Online)
Heart of the City (Burnsville)			Committees
360 Communities (Food Shelf)			Committees

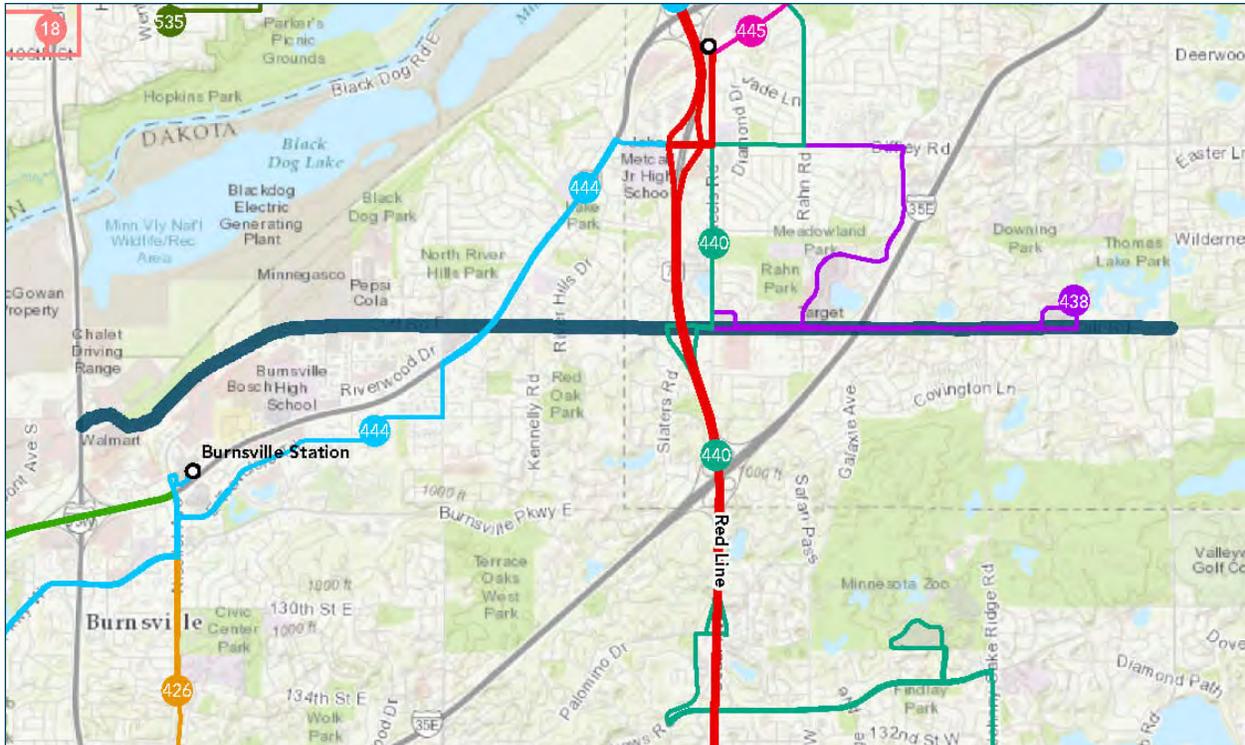
## Existing Transit Along Corridor

The local transit routes operating on Cliff Road include:

- **Route 438** travels between Nicols Road and Thomas Lake Road, covering **2.0 miles** over **24 trips** per day

Several other routes intersect the corridor and are shown in **Figure 8.13**.

**Figure 8.13: Existing local transit routes on or near Cliff Road** ↘



## Land Use and Development Recommendations

The western end of the Cliff Road corridor in Burnsville is largely industrial, with a few other uses and destinations, such as a retail area (near Heart of the City and the Burnsville Transit Station) at MN-13 and at I-35W. Moving east through Eagan, the corridor transitions to more commercial and residential uses until it reaches the 1.5 miles of Lebanon Hills Regional Park. East of the park, through Inver Grove Heights, the corridor is primarily low-density residential or undeveloped until it reaches Flint Hills Resources near US-52.

Outside of these existing land use patterns, there is limited development potential in the currently undeveloped areas of this corridor as most of that area is protected river, park, or wetlands.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

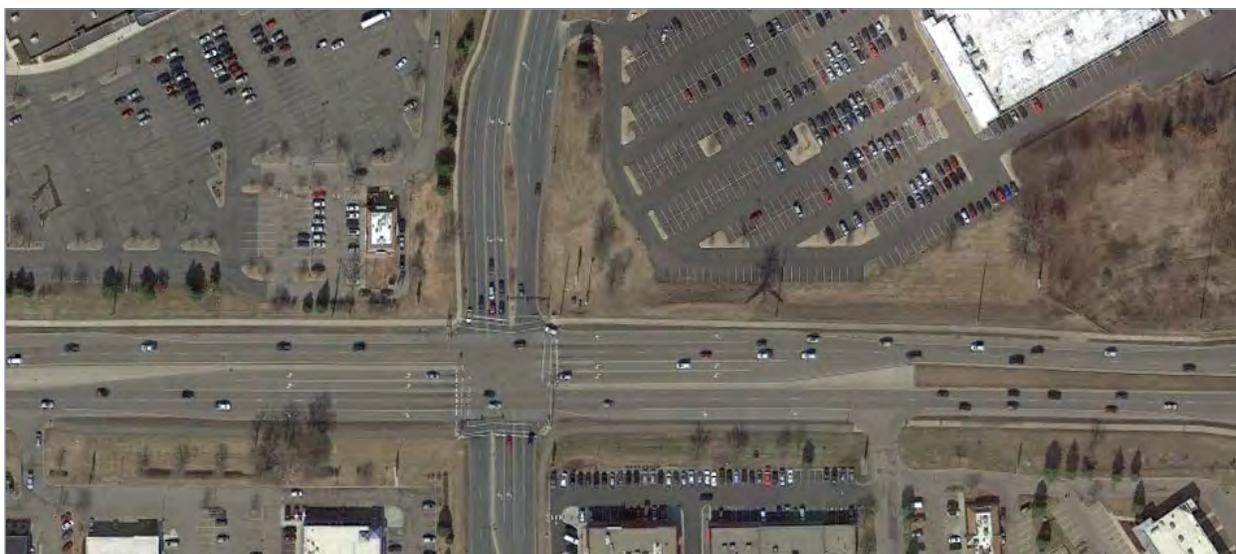
### IMPLEMENTATION RESPONSIBILITY:

- City of Burnsville
- City of Eagan

## Infrastructure Recommendations

The trail coverage along Cliff Road alternates between the north and south sides of the road, and, outside of the stretch between I-35E and Cedar Avenue, there is rarely a trail on both sides of the roadway. The main north-south roadways have a one-sided sidewalk connection with Cliff Road, but very few of the neighborhoods have sidewalks that provide pedestrian connectivity to Cliff Road. Completing this network, both along Cliff Road and to the adjacent neighborhoods, would improve transit viability in this corridor.

Additionally, ensuring that all legs at the key intersections have sidewalk connections to destinations will help transit users. For example, the intersection of Cliff Road and Cliff Lake/Rahncliff Road has retail destinations at all four corners, but there is only one direct pedestrian connection (on the southeast corner). Pedestrians getting off the bus at either of the other three corners would have to either walk a block out of their way to reach their destination through a parking lot, or cut through the grass (or snow) to more directly reach their destination. Adding pedestrian connections between the major intersections and the surrounding developments will make a more pleasant and viable transit experience.



**Figure 8.14:** Intersection of Cliff Road & Cliff Lake/Rahncliff Road ↗

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

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While both ends of corridor have strong transit termini, the physical barrier of Lebanon Park in the center poses a challenge to transit through the entire corridor. Further consideration for transit on the west-end of the corridor is recommended given the unique opportunity to connect the Orange Line (and the Red Line at a future Cliff Road station).

In addition to these transitway connections, transit along Cliff Road would serve:

- Transit-dependent workers
- Local and regional destinations
- A mix of current and planned transit-supportive land uses



RECOMMENDED FOR FURTHER CONSIDERATION:

# County Road 42 (CSAH 42)

## Evaluation Criteria Scoring

The County Road 42 corridor scored medium-high overall, ranking 3rd of 25 total corridor segments. It scored well on Goal 3 (regional transit connectivity) and Goal 6 (existing and planned land use), and its lowest score was on Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
J-1		County Road 42 (CSAH 42)	Vermillion St								
J-2			Dakota County Technical College								
J-3											

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Dakota County Western Service Center			Committees, Public (Online)
Cap Agency (Rosemount)			Public (Online & Open House)
Burnsville Center			Committees, Public (Online)
Retail and commercial concentration near I-35E & I-35W			Public (Online & Open House)
Dakota County Workforce Center (Burnsville)			Public (Online & Open House), Committees
Retail and commercial concentration near Cedar Avenue			Public (Online & Open House)
MRCI Worksource (Rosemount)			Public (Open House)
South of the River Education Center			Committees
Dakota County Judicial Center (Hastings)			Public (Online)
Fairview Health Campus (Burnsville)			Public (Online)
Dakota County Technical College			Public (Online & Open House), Committees
UTC Aerospace Systems			Committees
Wings Financial			Committees

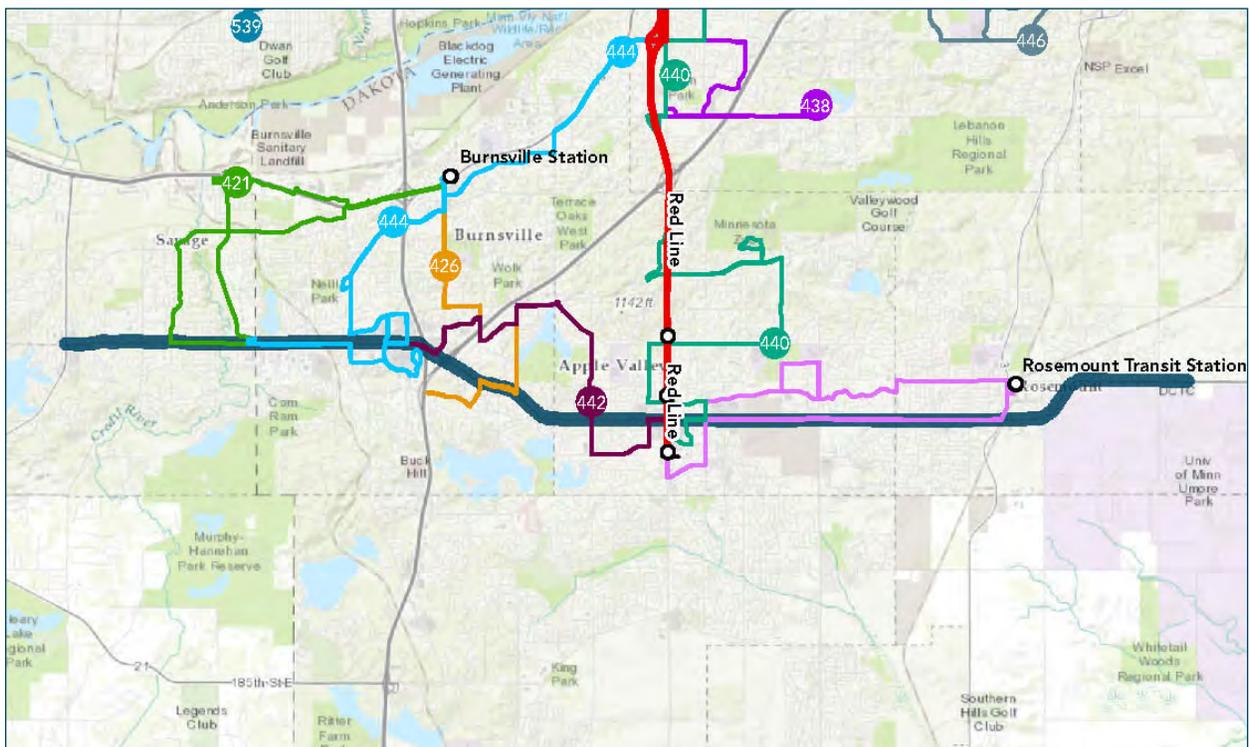
## Existing Transit Along Corridor

The local transit routes operating on County Road 42 include:

- **Route 421** travels between Huntington Avenue and Vernon Avenue, covering **1.0 miles** over **12 trips** per day
- **Route 444** travels between Huntington Avenue and Aldrich Avenue, covering **2.1 miles** over **39 trips** per day

Several other routes intersect the corridor (**Figure 8.15**), including the Red Line on Cedar Avenue. Route 420 and Route 442 provide service parallel to Route 420. Route 420 travels along County Road 42, but it does not make stops on County Road 42.

**Figure 8.15:** Existing local transit routes on or near County Road 42



## Land Use and Development Recommendations

The County Road 42 corridor passes through a variety of transit-supportive land uses and higher-density areas and has several potential redevelopment opportunities.

- Burnsville Center is a potential redevelopment opportunity in the corridor. When it does redevelop, it is recommended that there is direct access to transit facilities for pedestrians and consistent pedestrian and bicycle connections throughout the site
- The Fischer Mine development will include a new mixed-use business campus along the corridor
- Mystic Lake in Scott County is intensifying development and has shown a willingness to support transit via a circulator to the Marschall Road Transit Station
- The Kelley Park/Legacy Park area along Galaxie Avenue approximately one-half mile east of the Apple Valley Transit Station presents another redevelopment opportunity

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Rosemount
- City of Apple Valley
- City of Burnsville
- City of Savage
- City of Prior Lake

## Infrastructure Recommendations

As Burnsville Center redevelops, it is recommended that the redevelopment integrate transit operations, specifically space for bus layover and driver facilities, to allow for efficient transit service to surrounding areas. This area will be a critical connection point between local transit service and the future Orange Line Extension.

County Road 42 is a high-volume road, and several transit-specific infrastructure improvements are recommended:

- Construct bus pull-out lanes or dedicated transit lanes to ensure that automobiles and transit vehicles operate together smoothly while passengers board and alight
- Construct large, visible shelters and waiting areas at stops so that riders have the space and facilities they need to wait for the bus safely
- Consider Transit Signal Priority (TSP) at minor intersections so that the bus can remain on schedule without causing delay to the other automobiles using County Road 42

While several segments of County Road 42 have trails on both sides of the corridor, ensuring that this pedestrian and bicycle network is fully connected where there is transit service is important. For instance, the segment between I-35E and Cedar Avenue is missing a trail on either side of the roadway. Completing the trail network along the corridor and improving pedestrian crossings in this area will improve pedestrian access to transit.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Scott County
- Cities
- MVTA

### Further Consideration

County Road 42 is recommended for further consideration for east-west transit service due to several factors, including:

- Many local and regional destinations throughout corridor
- Some existing high-density areas
- Connections to the Red Line and Orange Line Extension
- The public and the technical committees identified County Road 42 as a high potential transit corridor at several points during engagement

Due to the contiguous development patterns, the corridor from TH 13 to Dakota County Technical College (DCTC) is recommended for further consideration in the near term. In the longer term, extensions of the corridor may warrant further consideration as the undeveloped land between Mystic Lake and TH 13 as well as between DCTC and Hastings develops.



# Corridors Not Recommended for Further Consideration

The corridors that are not recommended for further consideration at this time have at least one feature that is extremely challenging for fixed-route transit. These corridors could perhaps become more transit-supportive

following major land use or infrastructure changes, and at that time, they could then be considered for transit operations.

CORRIDOR	Land Use Constraint	Infrastructure Constraint
Butler Avenue	✘	
Lone Oak Road	✘	
Diffley Road	✘	
140th Street/ Connemara Trail	✘	
185th/195th Streets	✘	
215th/212th Streets	✘	
McAndrews Road		✘
County Road 46		✘
MN-55		✘
MN-13		✘

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## Butler Avenue (CSAH 4)

The Butler Avenue corridor is not recommended for further consideration because of the prevalence of low-density residential land.

### Evaluation Criteria Scoring

The Butler Avenue corridor scored medium-high overall, ranking 1st of 25 total corridor segments. It scored well on Goal 3 (regional transit connectivity), and its lowest scores were on Goal 5 (travel patterns), Goal 6 (existing and planned land use), and Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
A	Delaware Ave	Butler Ave (CSAH 4)	Concord St								

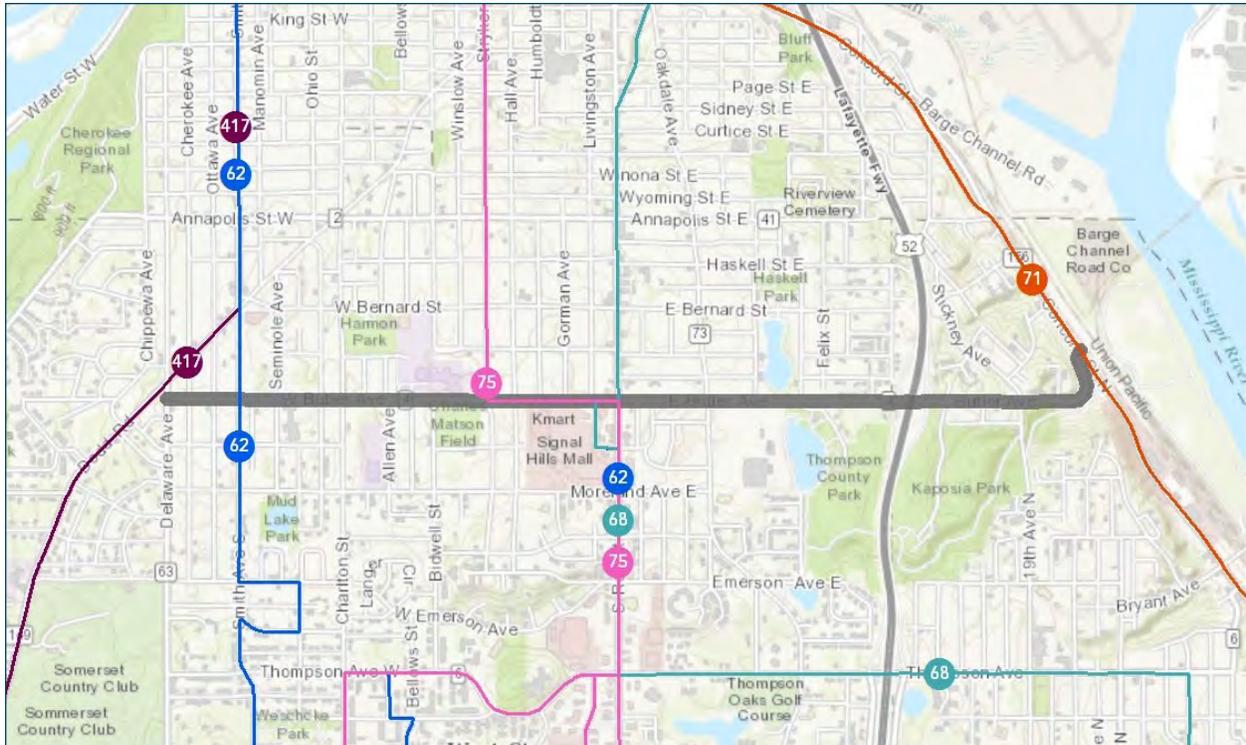
Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Community of Saints Church			Public (Online)
Signal Hills Shopping Center			Committees
Commercial concentration at Dodd Road & Smith Avenue			Committees

### Existing Transit Along Corridor

Route 75 is the only local transit route operating on Butler Avenue, and it operates on Butler Avenue for less than a half mile. No existing local transit service operates directly along the corridor for a more significant length. However, Thompson Avenue (approximately 3/4th mile south of Butler Avenue) has parallel service via Routes 68 and 75.

Several other routes intersect the corridor and are shown in **Figure 8.16**.

**Figure 8.16: Existing local transit routes on or near Butler Avenue** ↘



## Land Use and Development Recommendations

The Butler Avenue corridor runs through a primarily residential area in an established neighborhood of West St. Paul. A market study completed in 2014 (which included the areas of both the Butler Avenue and the Wentworth Avenue Corridors) concluded that adding office and retail land uses will be challenging without market intervention. If new retail development is to occur, it is most viable at the intersection of Wentworth Avenue and Robert Street, which is outside of the Butler Avenue corridor. Some multi-family development on Robert Street was deemed viable in the short-term due to low vacancies, favorable demographics, and rising rents. The Signal Hills Shopping Center at Butler Avenue and Robert Street is likely the highest opportunity location to add density to this corridor. Higher density development, such as multi-family housing, is a key need to allow for cost-effective transit service within the corridor.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

→ City of West St. Paul

## Infrastructure Recommendations

Increasing the number of crossing opportunities and completing the sidewalk network are the primary infrastructure recommendations in this corridor.

Crosswalks across Butler Avenue are missing west of Smith Avenue. Adding a safe crossing would provide improved access to those living near Dodd Street. Most of the intersections north of and adjacent to Signal Hills lack marked crossings or signals. Adding an additional crossing at Humboldt Avenue, Gorman Avenue, or Livingston Avenue when the site redevelops would help provide safer and improved access from Butler Avenue.

The north side of Butler Avenue currently has a more complete sidewalk network than the south side of the street. Completing the pedestrian network between Sperl Street to the eastern end of the corridor on the south of the Butler Avenue would make transit more viable for those users. Adding sidewalks on Butler Avenue west of Smith Avenue where they are absent today will also help improve transit access.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- Metro Transit

## Further Consideration

Further consideration is not recommended for the Butler Avenue corridor at this time.

One of the most significant constraints for east-west transit service along Butler Avenue is that the corridor consists primarily of single-family residential land uses. Since the area is largely residential, there is a lack of local or regional destinations that generate transit demand. The service that exists on Thompson Avenue, and that intersects this corridor in the north-south direction at several points, is likely adequate for those living, working, or visiting within this corridor at this time.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## Lone Oak Road (CSAH 26)

The Lone Oak Road corridor is not recommended for further consideration because of the prevalence of low-density residential land.

### Evaluation Criteria Scoring

The Lone Oak Road corridor scored medium-low overall, ranking 17th of 25 total corridor segments. It scored well on Goal 7 (employment, institutions, and services), and its lowest score was on Goal 3 (regional transit connectivity) and Goal 5 (travel patterns).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
D-1	MN-13	Lone Oak Rd (CSAH 26)	Concord St								
D-2			Argenta Trl								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Commercial concentration and higher-density apartments east of I-35E			Public (Online)
Delta Airlines offices			Committees
Unisys			Committees
New Vikings training facility to be located off Interstate 494 at Dodd Road & Lone Oak Parkway			Committees

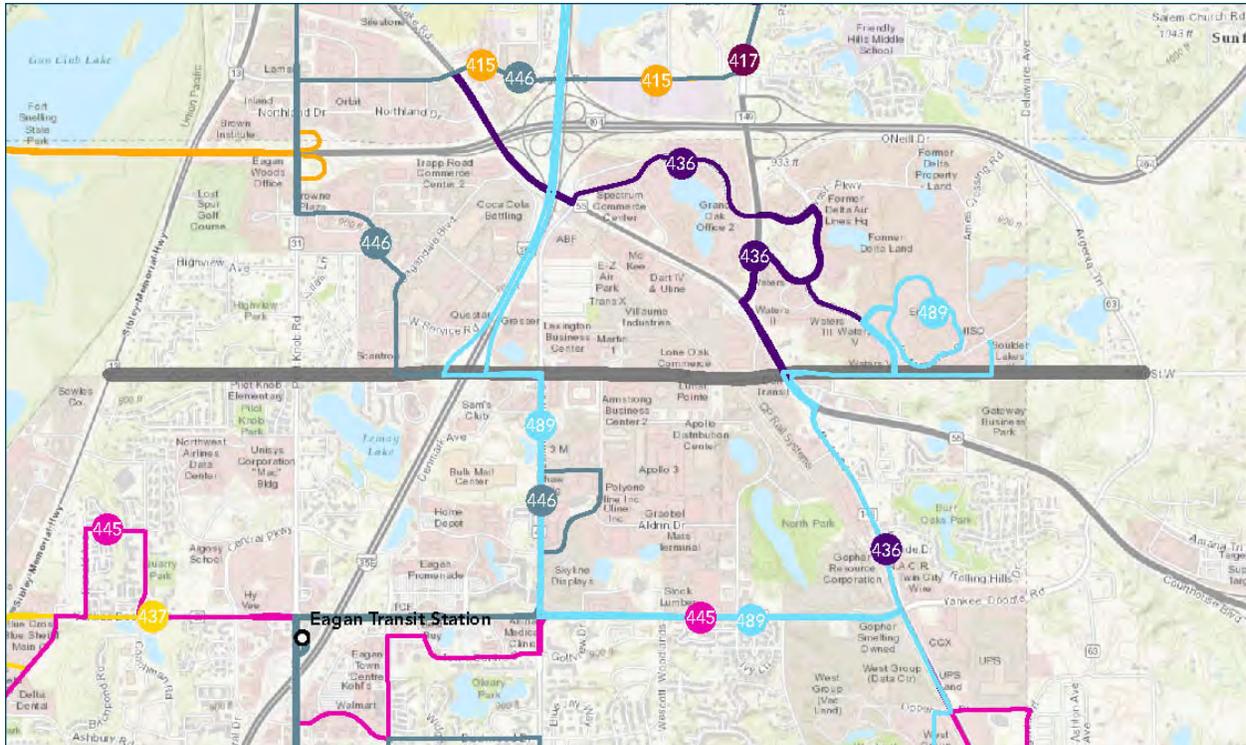
### Existing Transit Along Corridor

The local transit routes operating on Lone Oak Road include:

- **Route 436** travels between MN-55 and Ames Crossing Road, covering **0.8 miles** over **2 trips** per day
- **Route 489** travels between MN-55 and Ames Crossing Road, covering **0.8 miles** over **6 trips** per day

Several other routes intersect the corridor and are shown in **Figure 8.17**.

**Figure 8.17: Existing transit service on or near Lone Oak Road** ↘



## Land Use and Development Recommendations

The Lone Oak corridor is bookended on either end by low-density residential land use (Eagan on the west and Inver Grove Heights on the east). There is a manufactured home park that likely houses a transit dependent population on the east side of the corridor. Between these termini of single and multi-family homes are two distinct development patterns: big-box warehousing and other services dominates between I-35E and MN-55, and approximately 3 miles of largely undeveloped land prevails between MN-55 and the Inver Grove Heights border. Developing this large expanse of undeveloped land will be key to allow for cost-effective fixed-route transit service to operate in the corridor.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- ➔ City of Eagan
- ➔ City of Inver Grove Heights

## Infrastructure Recommendations

There is sidewalk on the northern side of Lone Oak Road in Inver Grove Heights. Adding sidewalk on the southern side of the corridor would improve access to those living along the corridor.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

Further consideration is not recommended for the Lone Oak Road corridor at this time.

Although both residential ends of the corridor are transit-supportive, particularly the manufactured home area on the eastern edge of the corridor in Inver Grove Heights, there are not enough destinations throughout the corridor to warrant transit service in a solely east-west direction. Additionally, the destinations on the west side of the corridor are already served by transit. In the future, additional connections from the higher-density or low-income housing to regional destinations may justify further consideration.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## Diffley Road (CSAH 30)

The Diffley Road corridor is not recommended for further consideration because of the prevalence of low-density residential land.

### Evaluation Criteria Scoring

The Lone Oak Road corridor scored medium overall, ranking 11th of 25 total corridor segments. It scored well on Goal 4 (maximize transit ridership), and its lowest score was on Goal 3 (regional transit connectivity).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
F	MN-13	Diffley Rd (CSAH 30)	S Robert Trl								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Commercial concentration at I-35E			Public (Online)
Commercial concentration east of Pilot Knob Road			Public (Open House)
Twin Cities Premium Outlets			Public (Online), Committees

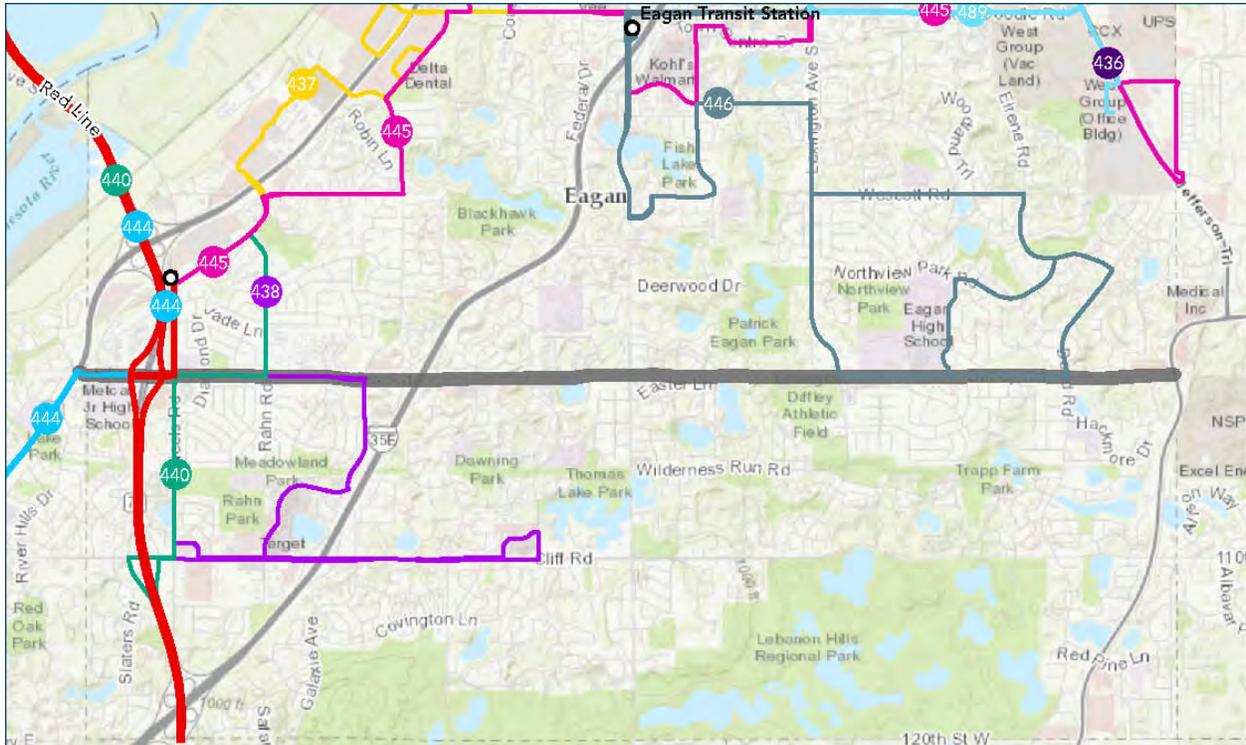
### Existing Transit Along Corridor

The local transit routes operating on Diffley Road include:

- **Route 446** travels between Lexington Avenue and Braddock Trail, covering **0.6 miles** over **32 trips** per day

Many routes intersect the corridor, most prominently the Red Line on Cedar Avenue. Several routes operate for less than one-half mile on the western end of Diffley Road (**Figure 8.18**).

**Figure 8.18: Existing local transit routes on or near Diffley Road** ▾



## Land Use and Development Recommendations

The Diffley Road corridor currently primarily serves single-family residential areas. The key non-residential regional destinations (the Twin Cities Premium Outlets and an industrial job center) are on the west end of the corridor. Increasing the diversity of land uses by adding additional destinations in the residential area would make transit more viable in this east-west corridor.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

→ City of Eagan

## Infrastructure Recommendations

The Cedar Alternative High School, a multi-family residential development, and single family homes are located between Nicols Road and Rahn Road. This segment of Diffley Road has intermittent sidewalks, alternating between the north and south side of the road. Constructing a complete sidewalk length on both sides of the road in this area, separate from the frontage road, will improve the pedestrian environment for transit users along this corridor. The Diffley Road corridor generally has good trail coverage along the roadway in all other areas.

There is little sidewalk connectivity between the trail that runs along the length of Diffley Road and the adjacent neighborhoods. Adding sidewalks to these neighborhoods will improve pedestrian access to the corridor.

**CORRIDOR-WIDE RECOMMENDATIONS:**

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

**IMPLEMENTATION RESPONSIBILITY:**

- Dakota County
- City of Eagan
- MVTA

## Further Consideration

Further consideration is not recommended for Diffley Road at this time.

The current service to the Cedar Grove Station and adjacent areas along Diffley Road appears adequate for this largely residential corridor.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## McAndrews Road (CSAH 38)

The McAndrews Road corridor is not recommended for further consideration because of its prevalent automobile orientation.

### Evaluation Criteria Scoring

The McAndrews Road corridor scored medium overall, ranking 7th of 25 total corridor segments. It scored well on Goal 4(maximize transit ridership), Goal 6 (existing and planned land use), and Goal 8 (multimodal facilities). Its lowest score was on Goal 3 (regional transit connectivity) and Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
H-1	County Rd 5	McAndrews Rd (CSAH 38)	Akron Ave								
H-2			Pilot Knob Rd								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Burnsville Center			Public (Online), Committees
Fairview Health Campus (Burnsville)			Public (Online), Committees
CAP Agency			Public (Online)
Minnesota Zoo			Public (Online), Committees
Dakota County Technical College			Online, Committees, Open House

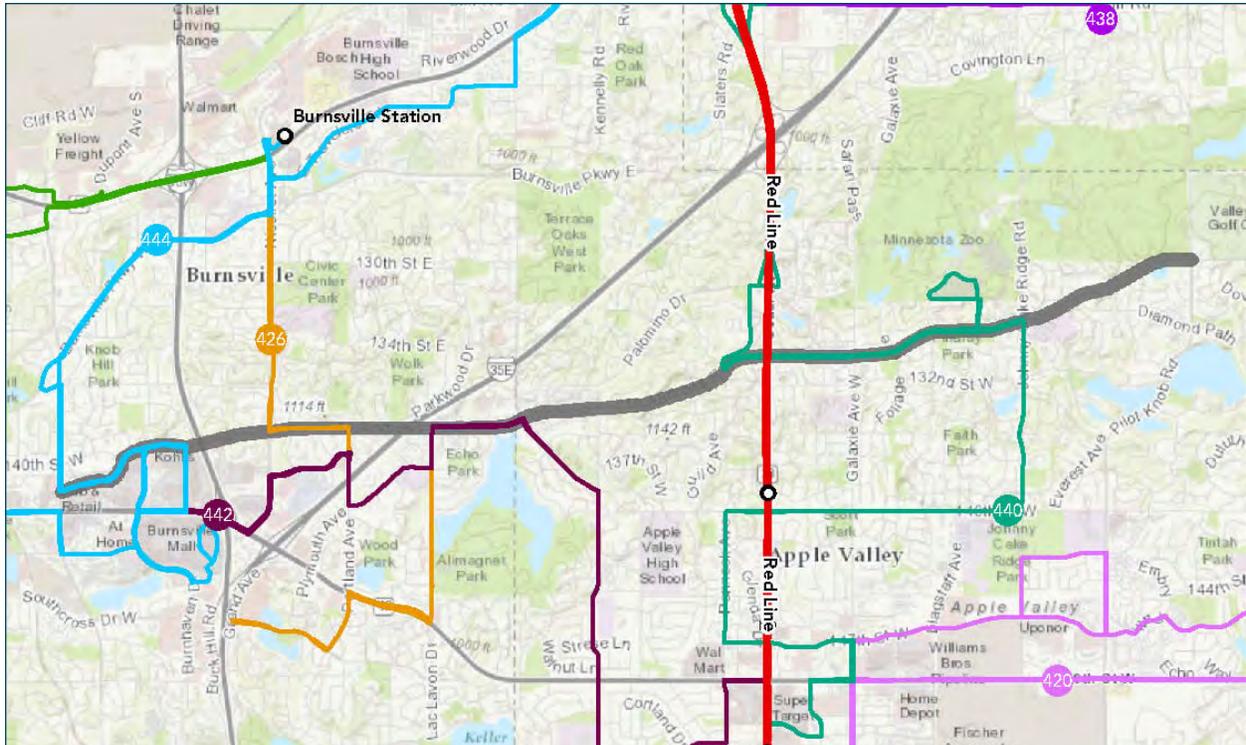
### Existing Transit Along Corridor

The local transit routes operating on McAndrews Road include:

- **Route 440** travels between Pennock Avenue and Johnny Cake Ridge Road, covering **1.8 miles** over **22 trips** per day
- **Route 444** travels between County Road 5 and Aldrich Avenue, covering **0.8 miles** over **65 trips** per day

The Red Line intersects the corridor but does not have a station at McAndrews Road. The Route 426 and Route 442 each operate for less than one-half mile through the corridor (**Figure 8.19**).

**Figure 8.19: Existing transit service on or near McAndrews Road** ↘



## Land Use and Development Recommendations

The McAndrews Road corridor terminates on the western end in Burnsville in the Burnsville Center area. Travelling east towards Apple Valley, the corridor passes through multiple office developments and a large area of residential homes, including a low-income population near Palomino Drive and Cedar Avenue. In Rosemount, the corridor passes through more single-family homes and undeveloped land, terminating on the east near Dakota County Technical College.

The most likely opportunity for redevelopment is near Burnsville Center. As this area redevelops, a higher density mix of transit-supportive land uses would improve transit potential in the corridor. As development emerges within the currently undeveloped areas, development patterns with a mix of land uses that are oriented toward the desired stop locations with minimal setbacks would improve the potential for cost-effective transit service.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- ➔ City of Apple Valley
- ➔ City of Burnsville

## Infrastructure Recommendations

Although there are many key destinations within a half-mile of McAndrews Road, the road itself is largely auto-oriented with two lanes in each direction, turn lanes at most intersections, and high automobile speeds (speed limit of 50). The linear coverage of trails along CSAH 38 is fairly consistent; however, there are very few crossings along the corridor. There are also few connections to the trail from the adjacent neighborhoods or noted destinations. Increasing pedestrian crossing opportunities and trail connections in this corridor are key needs to begin to improve pedestrian connections to transit.



**Figure 8.20:** With a center median and wide shoulders, McAndrews Road operates like a divided highway with long pedestrian crossing distances and high-speed traffic. ↗

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

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Further consideration is not recommended for the McAndrews Road corridor at this time.

Although one terminus of this corridor is transit-supportive, the auto-oriented nature of the McAndrews Road corridor is not conducive to transit. Therefore, further consideration is not recommended at this time. However, there are two specific transit needs in this corridor that remain:

- The Palomino area includes a large, transit-dependent population that needs to be connected to the regional transit system. Connecting this area to the future Palomino Red Line Station would provide access to the recommended future service in the County Road 42 corridor and other regional destinations
- The Burnsville Center area may redevelop and, given the addition of an Orange Line station in the future, warrants further transit consideration from a regional perspective

Further consideration is recommended for service to these two areas.



**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## 140th Street/Connemara Trail

The 140th Street/Connemara Trail corridor is not recommended for further consideration because of the prevalence of low-density residential land.

### Evaluation Criteria Scoring

The 140th Street/Connemara Trail corridor scored medium-low overall, ranking 14th of 25 total corridor segments. It scored well on Goal 8 (multimodal facilities), and its lowest score was on Goal 3 (regional transit connectivity) and Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
I	Cedar Ave	140th Connemara Trl	Akron Ave								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Dakota County Technical College			Public (Online), Committees
Uponor			Committees

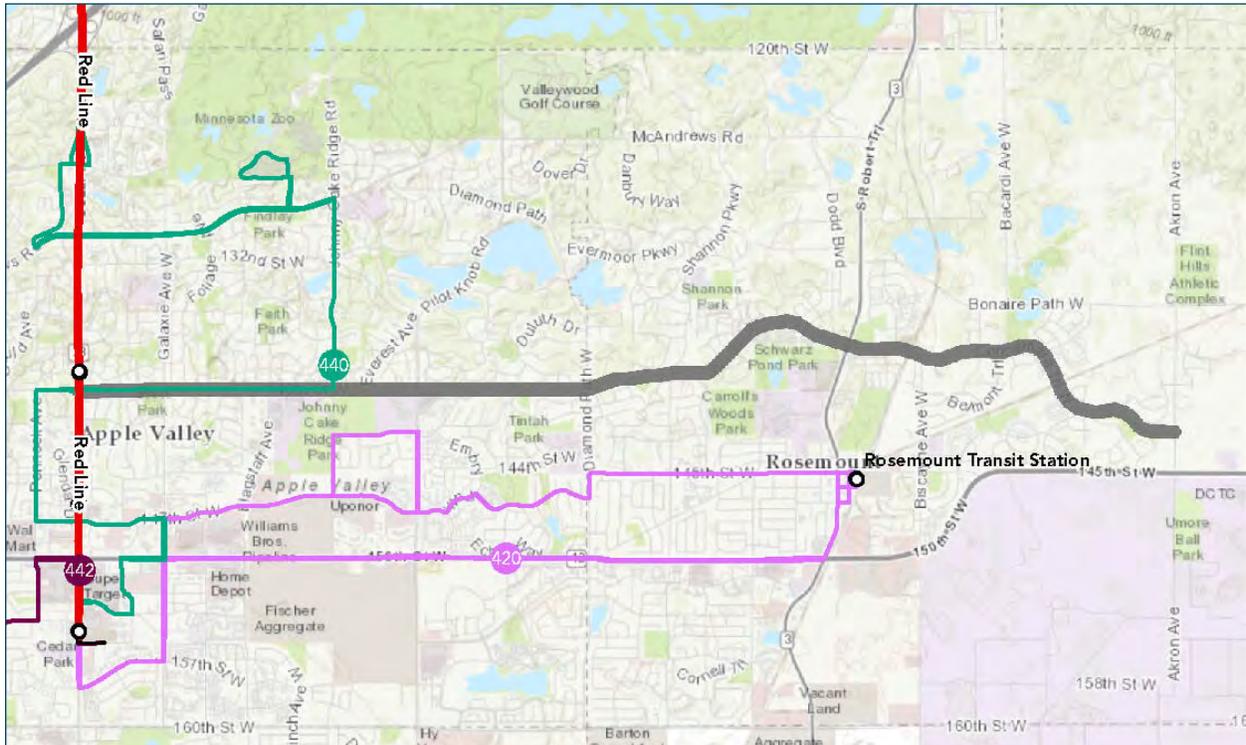
### Existing Transit Along Corridor

The local transit routes operating on 140th Street/Connemara Trail include:

- **Route 440** travels between Cedar Avenue and Johnny Cake Ridge Road, covering **1.5 miles** over **37 trips** per day

The Red Line on Cedar Avenue intersects the corridor with a station at 140th Street. The Route 420 provides parallel service south of the corridor via 147th Street (**Figure 8.21**).

**Figure 8.21: Existing local transit routes on or near the 140th Street/Connemara Trail** ↘



### Land Use and Development Recommendations

The 140th Street/Connemara Trail corridor is largely residential with several parks and schools throughout. The Apple Valley Par 3 golf course and the intersection of 140th Street and Cedar Avenue are the most likely redevelopment opportunities in the near future.

#### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

#### IMPLEMENTATION RESPONSIBILITY:

- ➔ City of Apple Valley
- ➔ City of Rosemount

## Infrastructure Recommendations

Due to the well-connected pedestrian network currently available surrounding the 140th Street/Connemara Trail corridor, no infrastructure recommendations are provided at this time.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

Further consideration is not recommended for the 140th Street/Connemara Trail corridor at this time.

While redevelopment could add density to this corridor, it is unlikely to occur in the short-term. Additional service to this residential area is not warranted at this time.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## County Road 46 (CSAH 46)

The County Road 46 corridor is not recommended for further consideration because of its prevalent automobile orientation.

### Evaluation Criteria Scoring

The County Road 46 corridor scored low overall, ranking 24th of 25 total corridor segments. It scored well on Goal 4 (maximize transit ridership), and its lowest score was on Goal 7 (employment, institutions, and services).

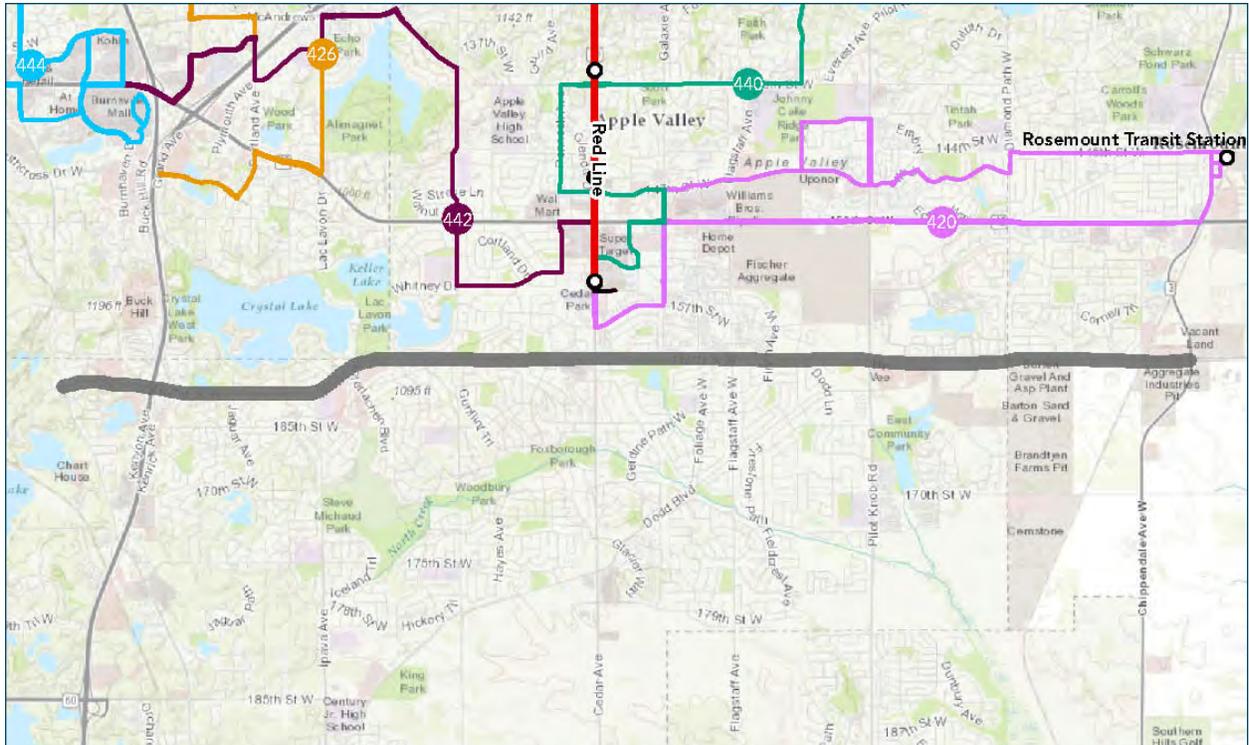
ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
K-1	Kenwood Trail	County Road 46 (CSAH 46)	Vermillion St.								
K-2			St. Robert Trl								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Commercial concentration north of Pilot Knob Road			Public (Online)
Multifamily developments between Cedar Avenue and Galaxie Avenue			Committees

### Existing Transit Along Corridor

No local transit routes operate along County Road 46 corridor today (**Figure 8.22**).

**Figure 8.22: Existing local transit routes on or near County Road 46** ↘



## Land Use and Development Recommendations

County Road 46 is surrounded by primarily residential land uses with pockets of small commercial development and undeveloped or agricultural land. Some multi-family residential developments exist in the corridor between Cedar Avenue and Galaxie Avenue, but the area largely has single-family homes. The intersection of Pilot Knob and County Road 46 offers the most promising development opportunity, but higher density development has not been identified as a priority in this area at this time.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- ➔ City of Apple Valley
- ➔ City of Lakeville
- ➔ City of Rosemount

## Infrastructure Recommendations

Additional pedestrian crossings along County Road 46, east of Cedar Avenue, would make this corridor more inviting for pedestrians.

**CORRIDOR-WIDE RECOMMENDATIONS:**

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

**IMPLEMENTATION RESPONSIBILITY:**

- Dakota County
- Cities
- MVTA

## Further Consideration

Further consideration is not recommended for the County Road 46 corridor at this time.

The auto-oriented nature of the County Road 46 corridor with high traffic speeds and little pedestrian infrastructure is not conducive to transit, and, therefore, the corridor is not recommended for further consideration at this time.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## 185th/195th Streets (CSAH 60/64)

The 185th/195th Streets corridor is not recommended for further consideration, because it is primarily undeveloped land.

### Evaluation Criteria Scoring

The 185th/195th Streets corridor scored low overall, ranking 25th of 25 total corridor segments.

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
L	I-35	185th/195th St (CSAH 60/64)	Chippendale Ave	○	○	○	○	○	○	○	○

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
Medical clinics and retail area west of I-35	✔		Public (Online), Committees

### Existing Transit Along Corridor

No existing local transit routes operate along or near the corridor today.

## Land Use and Development Recommendations

Much of the 185th/195th Streets corridor is presently undeveloped. As development occurs, transit-oriented patterns are recommended to ensure that the sites are compatible with any transit that may serve the area in the future. In 2015, construction on 400 acres of multi-family residential began within the 185th/195th Streets corridor. A connection is recommended between these higher density residences and the employment at I-35 and 185th Street. Lakeville is considering this undeveloped area for future planned development in its update to their Comprehensive Plan.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Lakeville
- City of Farmington

## Infrastructure Recommendations

As the road network develops in this corridor, it is recommended that pedestrian elements are included in the design. A roadway with pedestrian infrastructure is more viable for transit operations in the future.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

Further consideration is not recommended for the 185th/195th Streets corridor at this time.

Consideration for transit should be reconsidered when the roadway network is more built out and the area is more fully developed with local and regional destinations and with pedestrian and bicycle infrastructure.

**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**

## 215th/212th Streets (CSAH 70/50)

The 215th/212th Streets corridor is not recommended for further consideration, because it is primarily undeveloped land.

### Evaluation Criteria Scoring

The 215th/212th Streets corridor scored low overall, ranking 22nd of 25 total corridor segments. It scored highest on Goal 6 (existing and planned land use).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
M	I-35	215th/212th St (CSAH 70/50)	Chippendale Ave								

Key Destinations	Local Destination	Regional Destination	Who identified this destination?
	<i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	<i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	
Existing Lakeville Industrial Park (Air Lake)			Committees
Large Grocers (Hy-Vee)			Committees
M-O-M Brands Offices (Malt-O-Meal)			Committees

### Existing Transit Along Corridor

No existing local transit routes operate along the corridor today.

## Land Use and Development Recommendations

Much of the 215th/212th Streets corridor is presently undeveloped. As development occurs, transit-oriented development patterns are recommended to ensure that the corridor is compatible with transit service.

The 215th/212th Streets corridor already has a strong office and industrial land use presence. A continued mix of uses along the corridor is recommended to support potential future transit service. As residential development continues, smaller lot sizes, and higher-density development is recommended.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Lakeville
- City of Farmington

## Infrastructure Recommendations

The 215th/212th Streets corridor may be a terminus for future Red Line Extension. As such, ensuring that future roadway designs are transit-friendly and pedestrian-friendly will help improve the potential for transit in the corridor. As the road network develops, continuous sidewalks and well-marked crosswalks are recommended.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Cities
- MVTA

## Further Consideration

Further consideration is not recommended for the 215th/212th Streets corridor at this time.

Consideration for transit should be reconsidered when the roadway network is more built out and the area is more fully developed.

**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**  
**MN-55**

The MN-55 corridor is not recommended for further consideration because of its prevalent automobile orientation.

**Evaluation Criteria Scoring**

The MN-55 corridor scored low overall, ranking 23rd of 25 total corridor segments. It scored best on Goal 7 (employment, institutions, and services).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
0	Fort Snelling Station	MN-55	Vermillion St	○	○	○	○	○	🟡	○	○

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
MRCI Worksource (Rosemount)	✓		Public (Open House)
Inver Grove Heights Community Center	✓		Public (Online)
Inver Hills Community College		✓	Public (Online), Committees
Dakota County Judicial Center (Hastings)		✓	Public (Online)
Patterson Companies		✓	Committees
Brown College		✓	Committees
Flint Hills Resources		✓	Committees

**Existing Transit Along Corridor**

Local transit routes operating on MN-55 include:

- **Route 436** travels between Hiawatha Avenue and Dodd Road, covering **5.4 miles** over **8 trips** per day.

Several other routes travel near or intersect the corridor, including the Blue Line at the Fort Snelling Park & Ride (**Figure 8.23**).



## Infrastructure Recommendations

The largely highway-oriented nature of the MN-55 corridor limits access to business and creates pedestrian crossing challenges. For fixed-route local transit routes to function effectively, bus pull-out lanes or dedicated transit lanes are recommended to ensure that automobiles and transit vehicles operate together smoothly while passengers board and alight. Pedestrian improvements are also recommended at key crossing locations to create a more welcoming environment for passengers. Partnership with Zip Rail planning efforts in the corridor is recommended to leverage improvements together to improve the pedestrian environment and access to transit.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Hennepin County
- Cities
- MVTA
- Metro Transit
- MnDOT

## Further Consideration

Further consideration is not recommended for the MN-55 corridor at this time.

While there are many regional destinations in the MN-55 corridor, the corridor itself is very long, and the destinations are spread apart, making transit service between the destinations challenging. A few routes already serve these destinations today.

Additionally, the corridor is a state highway with high traffic speeds and little pedestrian infrastructure. Significant pedestrian infrastructure improvements would be necessary to connect passengers from transit to the destinations along the corridor. As redevelopment occurs, such as land use changes at the MN-55 & Yankee Doodle Road interchange, this corridor may warrant further consideration.

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**✘ NOT RECOMMENDED FOR FURTHER CONSIDERATION:**  
**MN-13**

The MN-13 corridor is not recommended for further consideration because of its prevalent automobile orientation.

**Evaluation Criteria Scoring**

The MN-13 corridor scored medium overall, ranking 12th of 25 total corridor segments. It scored well on Goal 1 (transit dependency) and Goal 6 (existing and planned land use), and its lowest score was on Goal 8 (multimodal facilities).

ID	West End	Corridor Name	East End	Goal 1	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Overall
N-1	Trunk Highway 13 & CR-42	MN-13	MN-110/55/13 Interchange								
N-2	Marschall Road Park-and-Ride										
N-3	Trunk Highway 13 & CR-42		Cedar Ave								

Key Destinations	Local Destination <i>Smaller employers, mixed-use area, and other local destinations that define the corridor. These destinations are not necessarily unique to this corridor.</i>	Regional Destination <i>Large, regional employers or destinations in the corridor. These destinations are unique in the region.</i>	Who identified this destination?
The Open Door Pantry			Public (Online)
360 Communities (Food Shelf)			Committees
Eagan Resource Center			Committees
Heart of the City (Burnsville)			Committees
Shutterfly Offices			Public (Open House)
Blue Cross and Blue Shield Offices			Committees
Brown College			Committees
Twin Cities Premium Outlets			Committees

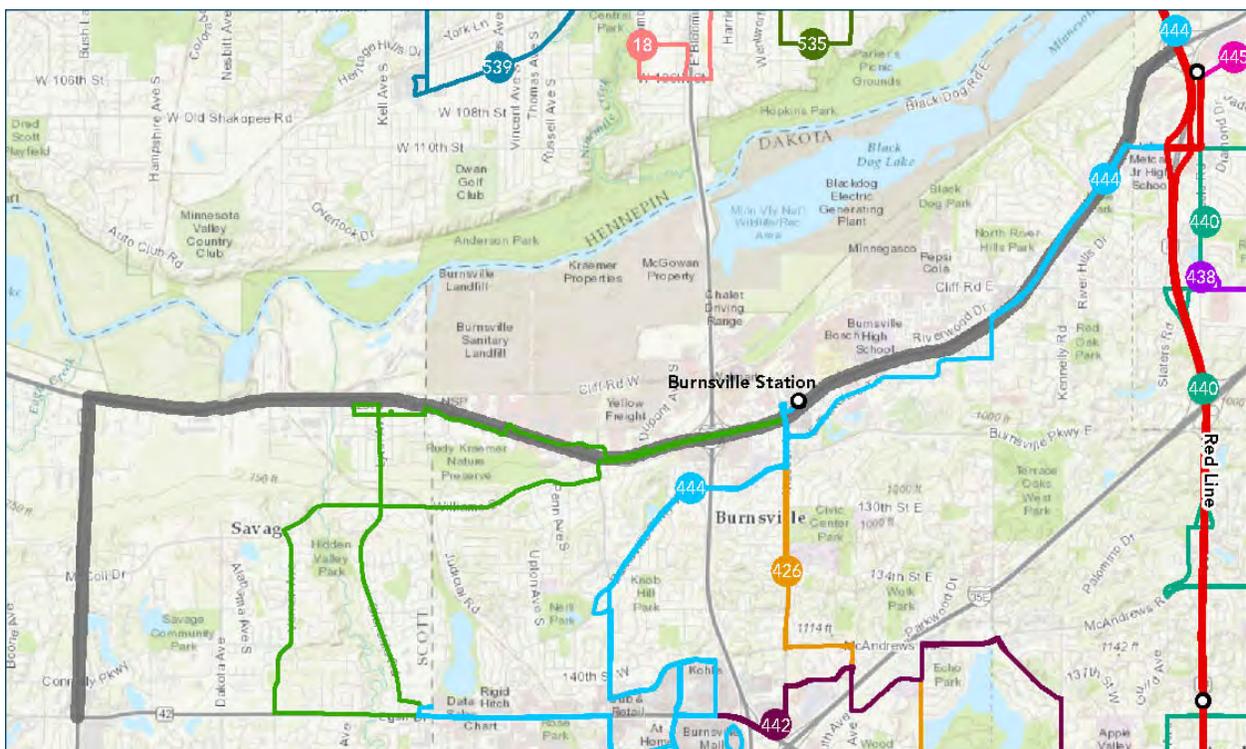
## Existing Transit Along Corridor

The local transit routes operating on MN-13 include:

- **Route 421** travels between County Road 5 and Nicollet Avenue, covering **1.4 miles** over **12 trips** per day
- **Route 444** travels between County Road 11 and Diffley Road, covering **1.6 miles** over **65 trips** per day
- **Route 437** (north of the map in **Figure 8.24**) operates parallel to MN-13 connecting Cedar Grove Transit Station with Egan Transit Station

Several other routes intersect the corridor, including the Red Line at the Cedar Grove Transit Station.

**Figure 8.24: Existing local transit routes on or near MN-13** ▼



## Land Use and Development Recommendations

MN-13 passes through several regional destinations, local attractions, and employment centers. There are several additional development opportunities including:

- There have been discussions of potential development at the northwest quadrant of MN-77 and MN-13 in Eagan
- Heart of the City in Burnsville is expected to increase in density with improved connectivity to a nearby Orange Line station
- Development is expected to increase in the East Cliff Business Center

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide land use recommendations as well. See the Recommendations for All Corridors section for more specifics on implementation. These recommendations include:*

- Review planned land uses in transit corridors
- Promote corridor transit-supportive development

### IMPLEMENTATION RESPONSIBILITY:

- City of Mendota
- City of Mendota Heights
- City of Eagan
- City of Burnsville
- City of Savage
- City of Shakopee
- City of Prior Lake

## Infrastructure Recommendations

The highway nature of the MN-13 corridor limits access to business and creates pedestrian crossing challenges. A recommendation from the TAC is to study freight movement through the corridor to determine the primary purpose of the corridor. Understanding this regional purpose should guide how to distribute right-of-way between the conflicting modes.

If transit is to move forward, pedestrian improvements are recommended at transit stop locations and connecting passengers to destinations on the corridor. Consider deviating from MN-13 at key destinations that are more pedestrian oriented. For instance, 12th Avenue streetscape improvements between Cliff Road and MN-13 could make this a viable stop location in the future.

### CORRIDOR-WIDE RECOMMENDATIONS:

*There are several corridor-wide infrastructure recommendations as well. See the Recommendations For All Corridors section for more specifics on implementation. These recommendations include:*

- Promote corridor transit supportive infrastructure
- Partnerships in reviewing and approving development plans
- Create interesting and inviting streetscapes and travelways

### IMPLEMENTATION RESPONSIBILITY:

- Dakota County
- Hennepin County
- Scott County
- Cities
- MVTA
- Metro Transit
- MnDOT

## Further Consideration

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Further Consideration by service providers is not recommended at this time.

Although true fixed-route transit along the entire corridor does not exist today, several routes do operate on at least portions of MN-13. Further consideration of existing routes is recommended to ensure that all destinations in the corridor are being served.



## Conclusion

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After taking into account several data inputs, five corridors are recommended for further consideration. These corridors include:

- Wentworth Avenue is recommended for additional frequency along existing parallel routes
- MN-110 is recommended for further consideration in coordination with the implementation of the Red Rock, Riverview, Gold Line, or Robert Street transitways
- Yankee Doodle Road is recommended for further consideration to directly connect the many regional and local destinations and attractions throughout the corridor
- Cliff Road is recommended for further consideration to provide a new connection between the Orange Line and the Red Line
- County Road 42 is recommended for further consideration to serve the local destinations and respond to public feedback

All other corridors considered in this study were either predominately low-density residential, undeveloped, or heavily auto-oriented. These features serve as key barriers to the successful implementation of transit service at this time. Should these corridors shift and take on more transit-supportive development patterns, transit service could be considered at that time.

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