Minnesota Intercity Bus Study

2014

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EXECUTIVE SUMMARY

The *Minnesota Intercity Bus Study* reviews and evaluates Minnesota's existing intercity bus network, determines changes and improvements based on needs and service gaps, and provides policy recommendations to meet intercity bus needs. Intercity bus service is defined as regularly scheduled, fixed route, limited stop service for the general public that connects places not in close proximity and makes meaningful connections to the larger intercity network.

This study is meant to guide Minnesota Department of Transportation (MnDOT) staff in their continuing effort to improve the state's intercity bus program, and to provide thorough service and policy analysis for interested stakeholders, including service providers and the public. The study is divided into six chapters, summarized below.

Introduction and Policy Context

Chapter 1 presents the policy context affecting MnDOT's ability to maintain and improve its intercity bus services, mainly the Federal Transit Administration (FTA) Rural Area Formula Program (S. 5311). The S. 5311(f) subsection provides assistance to states for intercity bus operations. Fifteen percent of the annual S. 5311 apportionment must be used to support intercity bus service unless the governor of the state certifies that all rural intercity bus needs are adequately met. In Minnesota, Jefferson Lines is the major S. 5311(f) program subrecipient, as well as Land to Air Express and Rainbow Rider Transit. Other intercity bus carriers in Minnesota that operate without public subsidy include Greyhound Lines, Megabus, and Northfield Lines.

The rapid growth of intercity bus travel through curbside buses such as Megabus and BoltBus is a major industry trend in recent years. Curbside buses have influenced traditional terminal companies to lower fares, update vehicles (e.g. free wireless Internet), and expand service to stay competitive. Marketing is another important element of curbside service, and is an area for the MnDOT intercity bus program to pursue.

Inventory of Existing Intercity Bus Services

Chapter 2 provides an inventory of existing intercity bus services, documenting S. 5311(f) subsidized versus unsubsidized services, frequency, and communities served. Using S. 5311(f) operating data, it analyzes farebox recovery, passenger boardings, revenues, and costs by route. The busiest stops across the state in SFY 2013 were in major cities where multiple routes converge: the Twin Cities, Duluth, and Rochester.

A comparison of intercity service over time reveals that Minnesota's coverage twenty years ago was more extensive than that provided by the current network. However, changes have also occurred in recent years that have added to the statewide network. Carriers implemented new subsidized services and increased some frequencies. The northeastern portion of the state, the Mankato – Rochester corridor, and the University of Minnesota, Morris stand out as gaining intercity coverage. Airport shuttles and commuter bus services also play a role in providing connections to and from rural areas. In addition, local public transit has the potential to play a feeder role for intercity bus. An evaluation of possible intercity bus and local transit connectivity shows that almost three quarters of non-urban stops along S. 5311(f) routes could allow for at least weekday transfers.

Population Characteristics and Need for Intercity Bus Service

Chapter 3 includes a statewide demographic analysis of intercity transportation needs. It compares the current Minnesota intercity bus network with locations that are potentially in need of service, based on population characteristics and potential destinations. Much of the current network service appears to be responsive to identified need; residents and trip generators in places like Virginia, Hibbing, Grand Rapids, and Morris are now connected to the intercity network. However, other locations like International Falls, Lake City, New Ulm, Red Wing, Thief River Falls, and Two Harbors stand out as lacking service. These places have potential intercity bus need, but not necessarily the demand to sustain new or reinstated service. The demographic findings therefore are one of several components informing the study's ultimate recommendations.

Preferences of Intercity Travelers

Chapter 4 presents surveys of current intercity bus passengers and other long-distance travelers in Greater Minnesota. Survey findings revealed that price is the number one reason that passengers choose intercity bus, followed by the unavailability of a personal vehicle. Nearly nine in ten passengers would consider using intercity buses again in the future. On the other hand, there is relatively little awareness of Minnesota's available intercity bus services by long-distance travelers overall. Long-distance travelers who are not current intercity bus users cited more routes/destinations, greater frequency, and less travel time as desired improvements.

Program Overview and Network Evaluation

Chapter 5 reviews the history of the S. 5311(f) program in Minnesota and the current program status. The FY 2013 estimated net operating deficit for the program was $1,998,600, roughly fifty percent federal funding, forty percent state funding, and 10 percent local funding. The chapter then details performance measures for the intercity bus program under categories of availability, awareness, and efficiency. It evaluates existing routes and proposes benchmarks for the future, based on whether the route has an origin or destination in the Twin Cities. The chapter then considers network expansion and evaluates potential route segments with the same performance measures. This analysis highlighted the extensive coverage of the current intercity bus network. Thus, the chapter also explores the possibility of strengthening or creating local transit connections at existing intercity stops. Done in a targeted manner, this strategy could complement limited expansions to the intercity network.

Recommendations

The last chapter describes a range of policy considerations and recommended changes to achieve an improved statewide intercity bus network. Minnesota has a high level of intercity bus coverage, but many potential passengers are unaware that intercity bus is an available option. Based on input from the study's technical advisory committee, this study recommends the following (in priority order):

1. Maintain the coverage of the current network,

2. Increase marketing and information efforts to raise awareness and usage,

3. Support intercity bus infrastructure by providing capital funding for vehicles, amenities, and passenger facilities, and

4. Allow limited service expansion, focusing on improved connectivity with local transit.

Based on current and anticipated levels of federal funding, maintaining the coverage of the existing network should be feasible in Minnesota, though this may require increased state participation over time.

Chapter 1

INTRODUCTION AND POLICY CONTEXT

The *Minnesota Intercity Bus Study* reviews and evaluates Minnesota's existing intercity bus network, determines changes and improvements based on needs and service gaps, and provides policy recommendations to meet intercity bus needs. It explores how the Minnesota Department of Transportation can improve the state's current intercity bus service and better evaluate S. 5311(f) funding applications.

As an update of the April 2010 study, this study contains six chapters. Chapter 1 presents an introduction to intercity bus service, as well as an overview of the policy context affecting MnDOT's ability to maintain and improve those services. The second and third chapters provide an inventory of existing intercity bus services and describe changes in intercity transportation needs, respectively. Chapter 4 presents surveys of current intercity bus riders and the general public in Greater Minnesota, and Chapter 5 details performance measures and an evaluation of existing and potential routes. Chapter 6 describes a range of policy considerations and recommended changes to achieve an improved statewide intercity bus network. This study is meant to guide MnDOT staff in their continuing effort to improve the state's intercity bus program, and to provide thorough service and policy analysis for interested stakeholders, including service providers and the public.

What is Intercity Bus?

Intercity bus service is regularly scheduled bus service for the general public. It operates with limited stops over fixed routes, connects communities not in close proximity, has the capacity to carry passenger baggage, and makes meaningful connections with the national intercity network.

Intercity service providers do not have to run full-size motor coaches over hundreds of miles to be part of the intercity bus network. Smaller public and private operators can supplement the core network by feeding it with shorter hauls. However, MnDOT does not consider most local public transit to be intercity bus, unless the service was designed expressly to connect to other intercity services. It also does not consider commuter

service, charters, or tour services to be intercity bus. Even though these buses often travel between cities, they do not typically make meaningful connections to the national intercity bus network.

As discussed in more depth in Chapter 2, intercity bus services in Minnesota are provided by Greyhound Lines, Jefferson Lines, Land to Air Express, Megabus, Northfield Lines, and Rainbow Rider Transit. Figure 1-1 depicts current intercity bus services by provider, as well as existing intercity rail. Since 2010, Greyhound has reduced its service coverage in Minnesota, while Megabus has maintained its coverage and increased its frequency. Jefferson Lines instituted a mix of service changes, adding frequency and new subsidized routes/stops while discontinuing others. Land to Air Express, Northfield Lines, and Rainbow Rider Transit also instituted new services since 2010.

Policy Context

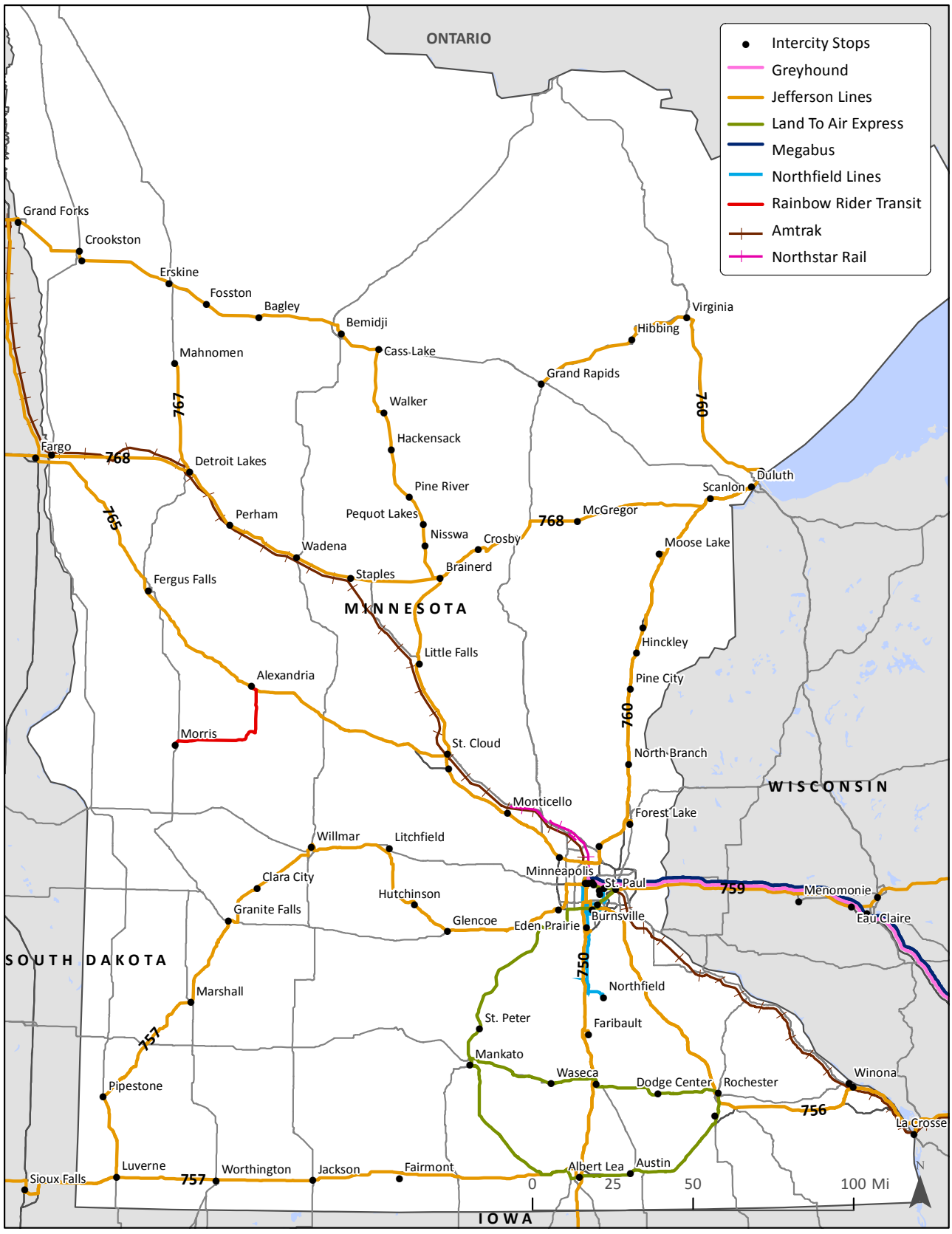
The 2010 study presented a great deal of background regarding the context and history of federal and carrier policies in effect at that time. Changes have been instituted since then, though the basic outlines of the Minnesota program remain the same. Minnesota has implemented a number of the previous study's recommendations with regard to the use of Federal Transit Administration (FTA) S. 5311(f) funding for rural intercity bus service. Chapter 2 presents the various changes that have been made to the statewide network.

FEDERAL FUNDING FOR INTERCITY SERVICES—S. 5311(F)

FTA S. 5311(f) funds are the only federal funding source for intercity bus operations. Used by MnDOT since 1997, S. 5311(f) provides assistance to states to develop or maintain rural intercity bus services, including those services connecting rural areas with urban services and the national intercity bus network. S. 5311(f) is a subsection of FTA's S. 5311 formula grant allocation program for small urban and rural areas under 50,000 in population. The amount provided is based on each state's non-urbanized population.

Fifteen percent of the annual S. 5311 apportionment must be used to support intercity bus service through the S. 5311(f) component of the program unless the governor of the state certifies that all rural intercity bus needs are adequately met. A partial certification is also possible, if the needs utilize less than the full 15 percent. In the case of certification, the funding reverts to the overall S. 5311 program for use on other rural transit projects. Minnesota's federal FY 2013 S. 5311 apportionment under MAP-21 was $15,256,471. Fifteen percent of this annual apportionment was $2,288,471.

Figure 1-1: Existing Intercity Bus and Rail Services by Provider



Many federal programs have a maximum allowable percentage of federal funds. For S. 5311(f), the maximum amount of federal funding for an operating assistance project is 50 percent of the net operating deficit (operating cost less fare and other revenue). The maximum allowable share of federal funding for a capital project (such as a new bus) is 80 percent of the project cost. The remaining costs for either type of project must be provided with non-federal funds as a match.

A unique aspect of the S. 5311(f) program is that FTA guidance allows a rural intercity operating assistance project to include both a route segment requiring operating assistance and an unsubsidized connecting segment that does not require assistance. The costs and revenues of both segments are included in the project, but FTA guidance allows 50 percent of the costs of the unsubsidized segment to be counted as match for the federal operating funds used on the segment requiring subsidy. These costs represent the value of the capital provided by the operator of the unsubsidized segment, which is their in-kind contribution to the project. This funding method is known by several different terms—it is referred to here as in-kind match. At the state level, Minnesota has utilized the in-kind match method extensively to fund many rural intercity services. Minnesota also now permits the use of S. 5311(f) funding for capital projects such as vehicle purchases.

CARRIER POLICIES

The following section describes the carrier policies that impact federal funding under the S. 5311(f) program. More information on the services provided by each Minnesota carrier is included in Chapter 2. The federal policy context for S. 5311(f) and other relevant programs is described in more detail in Appendix A.

JEFFERSON LINES

Jefferson Lines, headquartered in Minneapolis, has been the major S. 5311(f) program subrecipient in Minnesota since Greyhound Lines left the program in 2005. A family-owned firm with a long history in the state, Jefferson Lines has worked to maintain an intrastate network for Minnesota by using the available S. 5311(f) funding and its own funds (as local match) to operate local intercity bus services, which stop in many of the state's small towns. This traditional intercity bus service contrasts with an emerging approach that would have shifted the service to interstate highways, bypassing small towns.

Jefferson schedules most of its Minnesota services to operate in the daylight hours, either as morning outbound trips from the Twin Cities (arriving

at the endpoints in late afternoon and evenings) or morning inbound trips (arriving in the Twin Cities in the afternoon and evening periods). This contrasts with other possible scheduling approaches that might focus on interstate connections but serve Minnesota in the middle of the night. Jefferson's approach to schedules exemplifies the carrier's focus on Minnesota needs.

Another important element of Jefferson Lines' policies is the carrier's continued willingness to provide the local match required to obtain S. 5311(f) operating assistance. The 2010 study documented Jefferson's provision of local match in the absence of state operating funding, a policy that was close to unique in the industry. Few private carriers are willing to apply for such funding without a public source (state or local) for the 50 percent non-federal share of the operating deficit, as it implies a loss on every mile operated. Jefferson Lines also recently applied to MnDOT for available capital funding for vehicles. This occurred when the state program had additional funding from the American Recovery and Reinvestment Act of 2009 (though capital funding had been used for maintenance).

It should also be noted that Jefferson Lines has a history of working with local transit providers regarding stops, feeder services, etc., and with local governments to obtain community support for ticket sales and its S. 5311(f) applications. It utilizes a traditional network of bus stations, commission agents, and rural stops, though it has a web presence and offers online ticketing.

LAND TO AIR EXPRESS (BLUE EARTH BLUE SKY LLC)

Originally an airport limousine service, Land to Air Express was purchased by Blue Earth Blue Sky LLC in early 2009 and now also operates scheduled service eligible for S. 5311(f) funding. Though separate legal entities, Blue Earth Blue Sky LLC (dba Land to Air Express) and Jefferson Lines share an owner. Jefferson Lines integrates Land to Air routes and tickets into its website. More information on Land to Air services is included in Chapter 2.

GREYHOUND LINES

Greyhound is the only national network of scheduled intercity bus service, and it performs a critical function in linking smaller regional services around the country. It is a private operator owned by FirstGroup PLC of the United Kingdom. Greyhound provides service on only one route in Minnesota, but it does have a number of explicit policies regarding coordination with other services. Greyhound is a potential applicant to the S. 5311(f) program, and is also a potential provider of in-kind miles.

Although Greyhound has discontinued most of its rural services to focus on limited-stop services between larger urban areas, the firm still shows interest in receiving traffic from rural areas. Greyhound's approach involves increasing its coordination with smaller regional intercity carriers and with public transit providers, who could operate services connecting rural areas to Greyhound stops. Greyhound will provide in-kind match to these operators, provided the firms and services meet certain criteria. Greyhound has developed a manual outlining this overall coordination approach, which is available online.

The firm offers several ways to coordinate on ticketing and information. These include a role for the rural connecting carrier as a formal interline partner, as a commission agent, or simply allowing Greyhound terminal access with no joint ticketing. If a connecting carrier wishes to be included in Greyhound's national schedules and telephone/Internet schedule information system, it must be an interline partner.

MEGABUS

Megabus is another intercity carrier providing intercity service in Minnesota. Megabus is a brand for scheduled express services operated by firms owned by or affiliated with Coach USA, the U.S. subsidiary of Stagecoach PLC of the United Kingdom. The Megabus brand and service pattern originated in the United Kingdom, and is now used for services provided in the United States, Canada, and Western Europe.

The Megabus service model differs from the more traditional intercity bus service model in that its services operate as express services, with few if any intermediate stops. For the most part its stops are large urban areas and university towns. Most ticketing and information is provided via the Internet, but Megabus also operates a call center and takes ticket reservations over the phone. Megabus does not use bus stations unless required. Passengers are picked up and dropped off at curbside locations. Often the curbside sites are chosen to facilitate local transit connections, but Megabus generally does not operate into public intermodal terminals or stations operated by other carriers. Megabus offers on-board Wi-Fi and power plugs for use by passengers.

Megabus sells a set number of tickets on a given trip at a very low price (typically these are purchased by persons well in advance), with the fares rising as the date of the service nears. With its fare system developed in this way, it generally does not offer interline tickets with other intercity bus carriers—and in some cases does not even interline with itself, requiring passengers continuing on other Megabus schedules to make separate

reservations and purchase separate tickets.[1] It is not a member of the National Bus Traffic Association (NBTA), as described in Appendix A.

A major Megabus expansion took place when Coach USA purchased a number of firms that had been owned by Coach America, which went into liquidation in 2011. Some of those firms had been S. 5311(f) operators, and that was the first involvement of Megabus with the S. 5311(f) program. Megabus has indicated a desire to participate in the program and provide in-kind miles to other operators, specifically rural feeders. However, it is not clear how the lack of interline ticketing, common stations, and schedule connectivity with other carriers would meet the program's requirements for a meaningful connection with the national intercity network. Megabus also has shown interest in providing service at or to public transit facilities in some locations.

Intercity Bus Trends

The rapid growth of intercity travel through curbside buses such as Megabus is a major development in the industry. The following section discusses curbside bus characteristics and the typical curbside rider, as well as implications for rural intercity services like those provided under Minnesota's S. 5311(f) program. In particular, most curbside buses have robust marketing campaigns, a potential area of opportunity for MnDOT.

Curbside buses are those that pick up and drop off passengers at the curb of city streets, rather than serving bus terminals. The distinct characteristics of curbside bus service include the absence of ticket counters and waiting rooms, online ticket sales, greatly discounted fares, free wireless Internet, and express service.[2] The origin of curbside buses may be traced to Chinatown buses, which began in the late 1990's as transportation for immigrants between the Chinatowns of major cities. The inexpensive fares and frequent service soon attracted a broader ridership, prompting "corporate curbside buses" to enter the market to compete with Chinatown buses.[3]

1 The Coach USA subsidiaries that operate Megabus offer interline ticketing for some services. Thus, it may be possible for a Megabus customer to obtain an interline ticket, though this is not advertised online.

2 Schwieterman, J., L. Fischer, C. Ghoshal, P. Largent, N. Netzel, and M. Schulz. "The Intercity Bus Rolls to Record Expansion: 2011 Update on Scheduled Motor Coach Service in the United States." *Intercity Bus Research*. Chaddick Institute for Metropolitan Development, DePaul University, 2011.

3 Klein, Nicholas and Andrew Zicter. "Everything But the Chickens: Cultural Authenticity Onboard the Chinatown Bus." *Urban Geography* (2012): 46-63.

The two major corporate curbside bus providers in the U.S. are Megabus (owned by Stagecoach Group) and BoltBus (jointly owned by Greyhound and Peter Pan). The rise in intercity bus travel due to the popularity of curbside buses, especially since the onset of corporate curbside service, has influenced traditional terminal bus companies to lower their fares, update their vehicles, and expand service to stay competitive.[4]

WHO USES CURBSIDE BUSES AND WHY

College students and young professionals paved the way on curbside buses, but the service has since become more mainstream, with retirees, business travelers, and women among a new wave of riders. Several studies have identified that curbside bus riders are young, well educated, and digitally connected (subject to seasonal variation). Compared to traditional intercity bus riders, curbside riders have higher household incomes, are more likely to be Caucasian, are more likely to be traveling for pleasure, and often have never taken traditional intercity buses. However, more demographic overlap may exist between traditional and curbside riders in the Midwest than national studies would suggest.

Passengers use curbside intercity bus service because of its affordability, Wi-Fi access and power outlets, ease for medium distance trips, and convenient online ticketing. New riders are also drawn to curbside buses due to social influence.[5] Marketing is another important element of curbside service. Curbside carriers' marketing strategies include brightly colored branding, social media, targeted Internet ads, press coverage, student ambassadors on college campuses, and stop signage. Megabus also has an application for smart phones, which customers can use to purchase tickets or track buses in real time.

Curbside buses can introduce riders to other intercity bus services, potentially expanding the overall market. However, the new riders are likely to expect similar service attributes, which may not all be possible on subsidized S. 5311(f) routes making local stops in many small towns. Appendix B provides additional information on the rise of curbside buses. For reference, it also includes a number of other recent publications addressing the intercity bus industry, including Transportation Research Board documents.

4 Schwieterman, J., L. Fischer, S. Smith, and C. Towles. "The Return of the Intercity Bus: The Decline and Recovery of Scheduled Service to American Cities, 1960-2007." *Intercity Bus Research*. Chaddick Institute for Metropolitan Development, DePaul University, 2007.

5 Scott, M., A. Wicks III, and E. Collins. "Curbside Intercity Bus Industry: Research of Transportation Policy Opportunities and Challenges." Institute for Public Administration, University of Delaware, 2013.

Chapter 2

INVENTORY OF EXISTING INTERCITY BUS SERVICES

This chapter presents an overview of Minnesota's existing intercity bus services. There are three broad categories of service—traditional intercity bus service; long commuter express routes operated by public transit operators; and intrastate services operated between outlying towns and the Minneapolis-St. Paul Airport (MSP). This inventory will be compared to the intercity transportation needs discussed in the next chapter to identify gaps and develop alternatives for improved and expanded service.

Intercity Bus Services

Intercity bus services are provided by Greyhound Lines, Jefferson Lines, Land to Air Express, Megabus, Northfield Lines, and Rainbow Rider Transit. Current intercity routes are summarized in Table 2-1. Figures 2-1 displays routes subsidized by S. 5311(f) and those that operate independently without subsidy. Figure 2-2 displays service frequency.

GREYHOUND LINES

Greyhound Lines currently operates only one route in Minnesota. This route runs between Minneapolis and Chicago, stopping at the Hawthorne Transportation Center where it connects to Jefferson Lines. Seven trips depart Minneapolis daily. This is an increase in service from five round trips per day during the 2010 study. However, the route no longer stops in St. Paul. Greyhound Lines' one round trip per day between Minneapolis and Duluth was discontinued, and is currently served by Jefferson Lines. The Minneapolis–Dallas service was also truncated, and now has its northern terminus in Kansas City.

JEFFERSON LINES

Jefferson Lines added new subsidized routes and stops since 2010 (Grand Rapids–Duluth, Brainerd–Duluth) while discontinuing others (Minneapolis–La Crosse via Red Wing). It also increased some frequencies to daily round trips (Minneapolis–Sioux Falls via Glencoe).

Table 2-1: Service Frequency of Minnesota Intercity Buses

Provider	Table	Schedule	Route	RTs / week	S. 5311(f) Program Status	Minnesota Places Served
Greyhound	304	4700s, 4900s	Minneapolis - Chicago	56	Unsubsidized	Minneapolis
Jefferson Lines	750	801/806; 805/802; 803/804	Minneapolis - Kansas City	21	Unsubsidized	Minneapolis, St. Paul, MSP Airport, Burnsville, Faribault, Owatonna, Albert Lea
	756	965/966	Minneapolis - Milwaukee	7	Subsidized	Minneapolis, MSP Airport, Rochester, Winona
	757	925/926	Minneapolis - Sioux Falls	7	Subsidized	Minneapolis, Eden Prairie, Glencoe, Hutchinson, Litchfield, Willmar, Clara City, Granite Falls, Marshall, Pipestone, Luverne
	757	701/702	Minneapolis - Sioux Falls - Rapid City - Billings	7	Unsubsidized	Minneapolis, Burnsville, Owatonna, Albert Lea, Fairmont, Jackson, Worthington, Luverne
	759	915/916	Minneapolis - Milwaukee	7	Unsubsidized	Minneapolis, St. Paul
	760	906/911	Minneapolis - Duluth	7	Subsidized	Duluth, Cloquet, Moose Lake, Sandstone, Hinckley, Pine City, North Branch, Forest Lake, Blaine, Minneapolis, St. Paul, MSP Airport, Bloomington
	760	907/912; 910/909	Minneapolis - Duluth	7	Unsubsidized	Duluth, St. Paul, Minneapolis, MSP Airport, Bloomington, Burnsville
	760	919/920	Virginia - Grand Rapids	7	Subsidized	Grand Rapids, Hibbing, Virginia
	760	300s	Minneapolis - Burnsville	14	Unsubsidized	Minneapolis, St. Paul, Burnsville
	762	927/928	Fargo - Minneapolis	7	Unsubsidized	Brainerd, St. Cloud, Monticello, Maple Grove, Minneapolis
	762	927/928	Fargo - Minneapolis	7	Subsidized	Crookston, Erskine, Fosston, Bagley, Bemidji, Cass Lake, Walker, Hackensack, Pine River, Pequot Lakes, Nisswa, Brainerd
	765	933/948; 938/941; 934/935	Minneapolis - Fargo - Billings - Missoula	21	Unsubsidized	Minneapolis, St. Cloud, Alexandria, Fergus Falls, Moorhead
	767	679/680; 677/678	Detroit Lakes - Mahnomen	6	Unsubsidized	Detroit Lakes, Mahnomen
	768	929/930	Duluth - Brainerd - Fargo	5	Subsidized	Duluth, Cloquet, McGregor, Aikin, Crosby, Brainerd, Staples, Wadena, Perham, Detroit Lakes, Moorhead
Land to Air	n/a	234/235	Mankato - Rochester	7	Subsidized	Mankato, Albert Lea, Austin, Rochester
	n/a	236/237; 238/239	Mankato - Rochester	14	Subsidized	Mankato, Waseca, Owatonna, Dodge Center, Rochester
	n/a	501-506; 511-516; 701-703; 711-713	Mankato - Minneapolis	36	Unsubsidized	Mankato, St. Peter, MSP Airport, St. Paul, Minneapolis
Megabus	n/a	n/a	Minneapolis - Chicago	48	Unsubsidized	Minneapolis, St. Paul
Northfield Lines	n/a	n/a	Northfield - Twin Cities	31	Unsubsidized	Northfield, Bloomington, MSP Airport, St. Paul, Minneapolis
Rainbow Rider	n/a	n/a	Morris - Alexandria	9	Subsidized	Morris, Starbuck, Glenwood, Alexandria

Figure 2-1: Subsidized S. 5311(f) vs. Non-Subsidized Intercity Bus Services

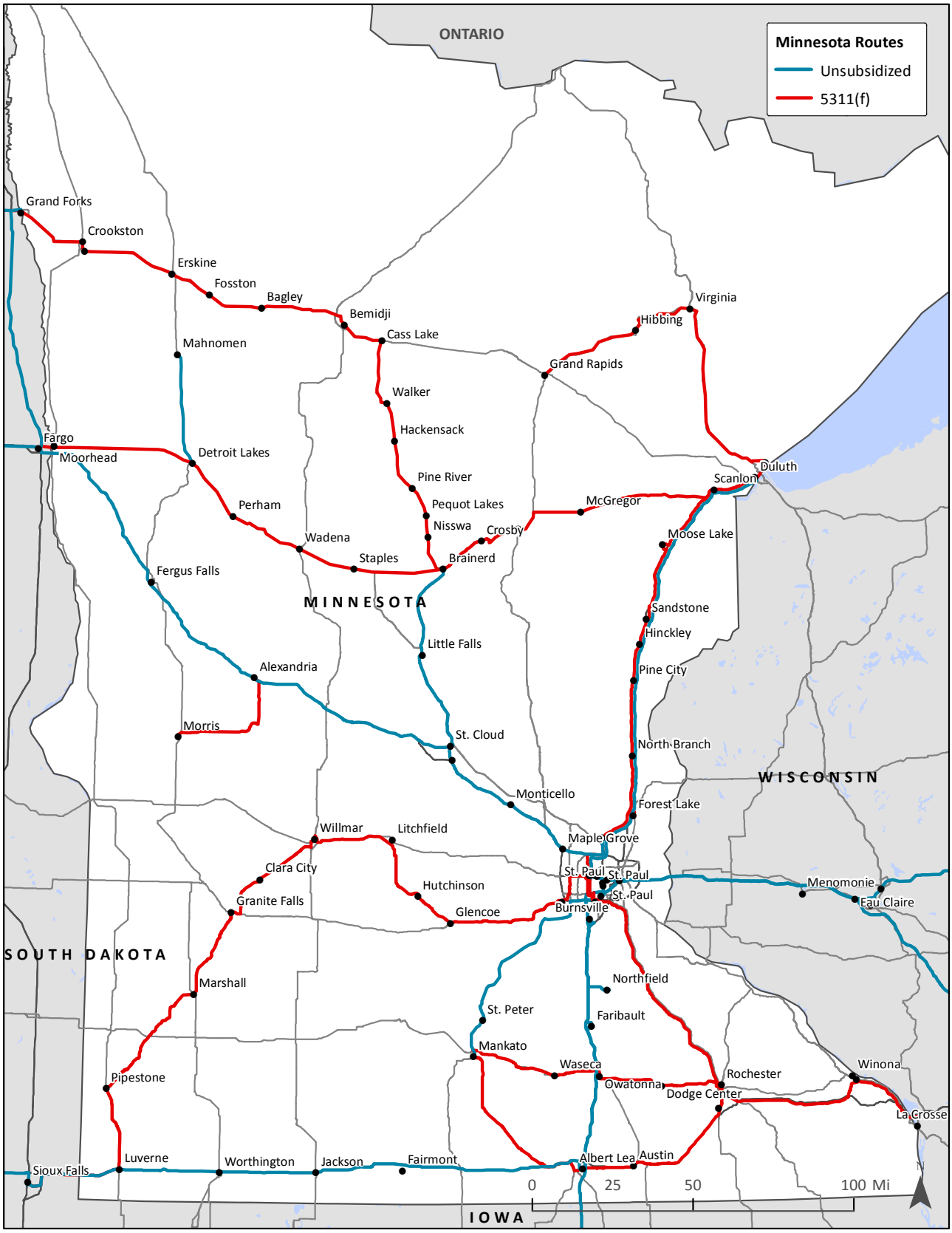


Figure 2-2: Frequency of Existing Intercity Bus Services

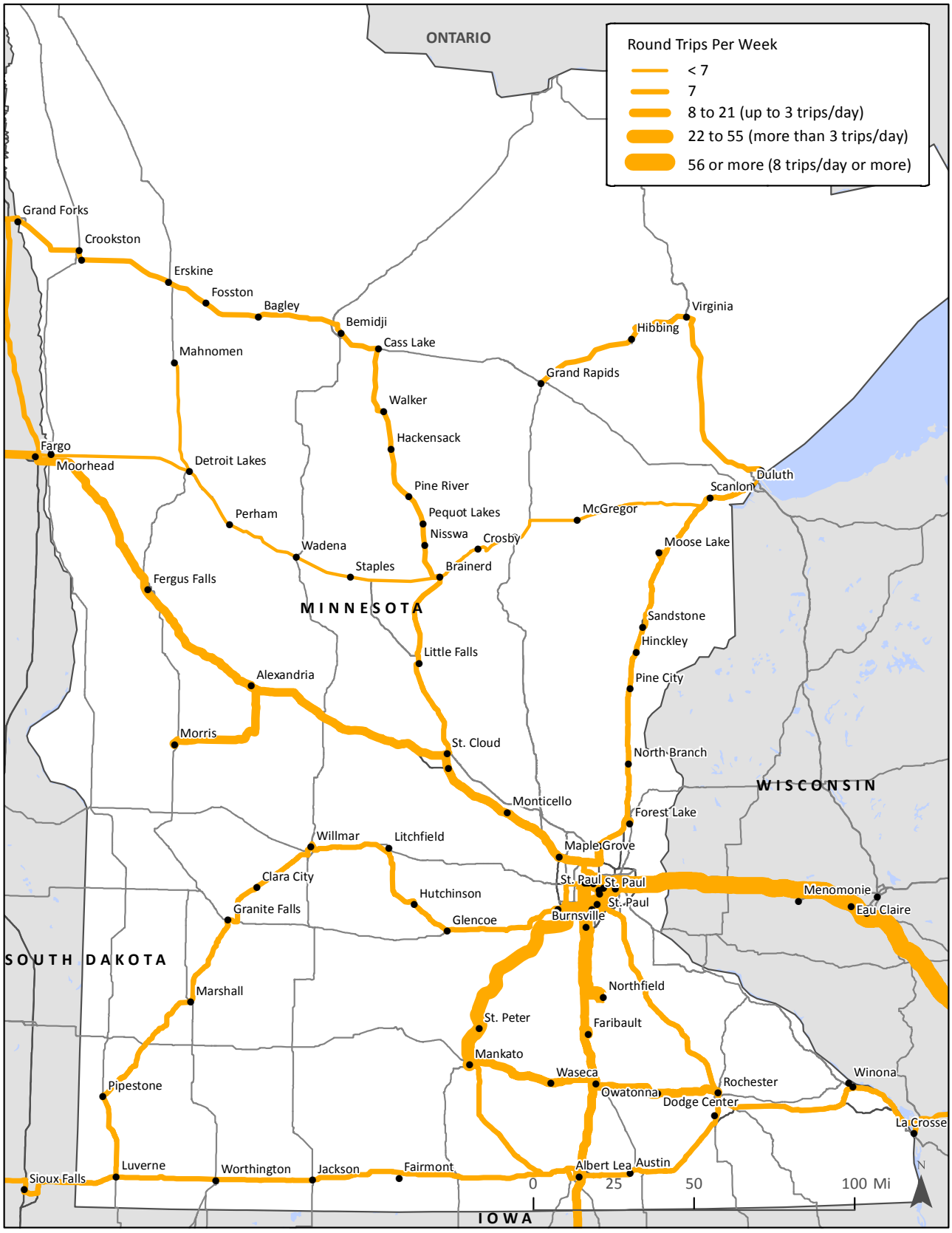


TABLE 750, MINNEAPOLIS-DES MOINES-KANSAS CITY

Jefferson Lines provides three round trips per day from Minneapolis to Kansas City (a fourth round trip was cancelled as of August 2013). This route no longer serves Northfield. It is not subsidized.

TABLE 756, MINNEAPOLIS-MILWAUKEE (ROCHESTER-WINONA-LA CROSSE)

This table includes schedules 965/966. The service operates one round trip daily between Minneapolis and Milwaukee and is funded through S. 5311(f). Additional service on Fridays and Sundays from Minneapolis to Madison via La Crosse was discontinued as of May 2013. Schedule 923/924, new since 2010, was also cut. Previously, this service made one round trip daily between Minneapolis and Rochester, via Hastings, Red Wing, and Lake City. Service to Red Wing is still possible (one round trip daily) on Amtrak's Empire Builder.

TABLE 757, MINNEAPOLIS-SIOUX FALLS-RAPID CITY-BILLINGS

This table includes two distinct services. Schedule 925/926 runs between Minneapolis and Sioux Falls. It is subsidized through S. 5311(f) and was recently expanded from four days per week to daily. The route no longer stops in St. Cloud or Paynesville. Schedule 701/702 operates one round trip daily, traveling along I-35 rather than US 169 as in the 2010 study. The route no longer serves St. Peter, Mankato, or Madelia. It is not subsidized.

TABLE 759, MINNEAPOLIS-GREEN BAY-MILWAUKEE

This service operates one round trip daily with Minnesota stops at the University of Minnesota, the St. Paul Amtrak Station, and St. Paul's Union Station. It continues on to Eau Claire, Green Bay, and Milwaukee. This service is not subsidized by S. 5311(f).

TABLE 760, DULUTH-MINNEAPOLIS

This table includes several schedules. The 906/911 makes multiple local stops daily between Duluth and St. Paul/Bloomington. New since May 2013, one round trip per day also operates between Grand Rapids and Duluth (919/920). Both these routes are subsidized. Table 760 also includes unsubsidized routes. The 300's operate short runs between Minneapolis, St. Paul, and Burnsville. The 910/909 and 912/907 provide express-like service between Duluth and the Twin Cities. These schedules are not subsidized. The 910/909 had been subsidized in FY 2013; it was restructured and stops at Mora and Cambridge were discontinued.

TABLE 762, FARGO-GRAND FORKS-MINNEAPOLIS (BEMIDJI- BRAINERD- ST. CLOUD)

Schedules 927/928 connect Fargo, Grand Forks, and Minneapolis via Brainerd and St. Cloud with one round trip per day. Only the Grand Forks to Brainerd portion of this route is subsidized. It is a restructuring of the Fargo–Grand Forks–Wadena bi-directional loop that previously ran three days a week. The service no longer serves Park Rapids.

TABLE 765, MISSOULA-BILLINGS-MINNEAPOLIS (FARGO-BISMARK-ST. CLOUD)

This table includes routes that link Minneapolis and Fargo, North Dakota (via Alexandria on I-94) with additional service continuing to Montana. Three round trips daily occur between Fargo and Minneapolis. Schedules 934/935, 948/933, and 934/935 are all unsubsidized.

TABLE 767, DETROIT LAKES-MAHNOMEN

This service, new since the 2010 study, operates on Highway 59. It makes two round trips per day three times per week (Mon./Thurs./Fri.). It is not subsidized by S. 5311(f).

TABLE 768, FARGO-BRAINERD-DULUTH

New since the 2010 study (schedules 929/930), Jefferson Lines also provides service with stops between Duluth and Fargo. This service makes five round trips per week (not Tues. or Wed.) and is subsidized by S. 5311(f).

LAND TO AIR EXPRESS (BLUE EARTH BLUE SKY)

Land to Air Express operates both subsidized and unsubsidized services in Minnesota. The former run between Mankato and Rochester. Schedule 235/234 operates one round trip per day via Albert Lea. Schedules 237/236 and 239/238 operate two round trips per day via Owatonna. The unsubsidized service, billed as an airport shuttle, covers a route previously served by Jefferson Lines. Schedules 501/506 and 511/516 operate six round trips per weekday between Mankato and MSP Airport. Three round trips operate on weekends and holidays. The schedules can be found online at www.landtoairexpress.com/southern-mn-connection.

MEGABUS

Megabus provides between five and eight round trips daily between Minneapolis and Chicago. This is an increase in service since the 2010 study, when four daily trips departed

from Minneapolis and three returned from Chicago. Outbound from Minneapolis, buses leave between 7 a.m. and 11:45 p.m. Inbound trips arrive between 6:20 a.m. and 11:35 p.m. The Minneapolis Megabus stop is located downtown, and the St. Paul stop is located at the Midway Shopping Center. The Minneapolis-Chicago route travels via either Madison or Milwaukee. Schedules are online at http://us.megabus.com/.

NORTHFIELD LINES

Northfield Lines, Inc. is a private company that provides motor coach, charter, and shuttle services. Among these services is a daily intercity bus route (Northfield Metro Express) that travels between Northfield and the Twin Cities. Though partially oriented toward commuters, the route does provide some opportunity to make connections to the intercity network. This study considers it intercity bus as, with some changes, it could become eligible for S. 5311(f) funding.[1] Most importantly, the route means that Northfield and the surrounding area do have some form of intercity bus service available.

Stops on the Metro Express include several universities and colleges in Northfield and the Twin Cities, as well as the Mall of America and MSP Airport. This unsubsidized route operates five trips daily, Monday through Friday. Two trips are offered each weekend day and on holidays. An extra late night trip is offered on Fridays and Saturdays.

RAINBOW RIDER TRANSIT

Rainbow Rider Transit is a public transit system serving six counties in west central Minnesota. In addition to demand response service and a volunteer driver program, Rainbow Rider launched intercity bus service between Morris and Alexandria in August 2013. The route operates three round trips per day, Friday to Sunday, and is subsidized through S. 5311(f). It offers a connection to Jefferson Lines in Alexandria.

Commuter Bus Service

Several commuter bus routes were discussed in the 2010 study due to their length and coverage outside of the Twin Cities urbanized area. Changes have occurred in the time since, including some additional services. Documenting commuter bus service is important for this study because of the interplay between commuter routes and intercity bus. A

1 As a fixed-route, fixed-schedule provider, Northfield Lines is a viable candidate in comparison to other entities. Most airport shuttles are demand response with advanced reservations required, and do not have schedules with designated stops. Commuter services generally have a schedule and route, but operate peak only and do not allow for a connection to the intercity network or serve the same terminals.

location that appears to have unmet intercity bus needs may be well served by commuter routes; suggesting new intercity service or increased frequencies in those locations would likely be duplicative. The following list (not exhaustive) identifies many current commuter bus services:

- Maple Grove Transit: serves Maple Grove to/from Minneapolis.
- Metro Transit: multiple routes serving Forest Lake, Lake Elmo, Maplewood, Oakdale, Oak Park Heights, and Stillwater.
- Minnesota Valley Transit Authority: multiple routes serving Apple Valley, Bloomington, Burnsville, Cedar Grove, Eagan, Lakeville, Rosemount, and Savage.
- Northstar Link: serves St. Cloud and Big Lake.
- Plymouth Metro Link: serves Plymouth to/from Minneapolis.
- Rochester City Lines: multiple routes serving Austin/Dexter; Bloomington/Inver Grove/Hampton; Byron; Cannon Falls; Chatfield; Chester; Hayfield/Dodge Center/Kasson; Kellogg; Lake City/Oak Center/Zumbro Falls/Reinke's Corners; LeRoy/Grand Meadow; Owatonna/Claremont; Pine Island; Plainview/Elgin/Viola; Preston/Fountain; Spring Valley/Racine/Stewartville; St. Charles/Dover/Eyota; Wabasha; Winona/Stockton/Utica/Lewiston; and Zumbrota.
- Southwest Transit: serves Chanhassen, Chaska, and Eden Prairie to/from Minneapolis.
- Shakopee Transit and Prior Lake Laker Lines: serves Prior Lake and Shakopee to/from Minneapolis.

S. 5311(f) Operational Data

As part of this analysis, Jefferson Lines provided passenger counts by stop for its S. 5311(f) routes, as well as for Land to Air Express. The information provides a snapshot of intercity bus passenger boarding activity throughout the state in SFY 2013. Table 2-2 summarizes the top fifteen highest ridership stops on subsidized routes, and Figure 2-3 displays ridership by stop. Both consider ridership to be the total activity at a given stop, or the sum of boardings and alightings. Note that the data reflect service provided from July 2012 through June 2013. Some routes have been terminated and others have been launched since the end of this time frame.

Activity by stop ranged from over 29,000 at the Hawthorne Transportation Center to as low as single digits at Concordia College in Moorhead. However, this minimum is likely due to passengers using the MN State University stop (annual activity of 1,039) about a mile away. Average activity was 1,948 per stop, and about half of the stops had 500 or more annual boardings and alightings. Many of the busiest stops were in locations where multiple routes converge: the Twin Cities, Duluth, Rochester, and Fargo.

Table 2-3 presents operating data for those routes funded under S. 5311(f) in FY 2013. As discussed, some of these routes have been terminated, restructured, or expanded for FY 2014. Farebox recovery, or the comparison of revenue per mile and cost per mile, varied widely. It ranged from 77 percent on Jefferson Lines' Duluth to Minneapolis I-35 route, to only 5 percent on the recently launched Duluth to Grand Rapids route. Average farebox recovery overall was 44 percent. Unsurprisingly, the Rochester–Minneapolis via Red Wing route with a farebox of 7 percent was not extended in FY 2014. Red Wing is served by Amtrak, and had almost 10,000 Amtrak boardings at that station in 2013. The Duluth–Minneapolis via Mora route was also terminated, despite its relatively high farebox recovery. This was due to low ridership at the intervening stops of Mora and Cambridge.

Compared to data collected in the last study, total passenger boardings on S. 5311(f) subsidized routes dropped, from 98,000 in CY 2008 to about 56,000 in FY 2013. However, this reflects the fact that some of the most productive S. 5311(f) routes became self-sustaining and no longer needed subsidy. Minnesota revenues fell slightly over the same period ($1,215,729 to 1,140,636), and costs increased slightly ($2,047,901 to 2,615,607).

Stop	Boardings + Alightings
Hawthorne Transportation Center, Minneapolis	29,152
Duluth Jefferson Lines Depot	14,235
Wadena	8,729
UM-Duluth Bookstore	7,151
Rochester City Lines Bus Stop	6,534
St. Paul Union Depot	5,937
Fargo, ND	5,924
Milwaukee, WI	5,717
La Crosse, WI	4,047
UW- Madison Chazen Museum	3,795
UM- Minneapolis Ontario St.	3,189
MSP International Airport	3,037
Sioux Falls, SD	2,244
Mall of America	2,029
Albert Lea	1,964

Table 2-2: Greatest Total Passenger Activity on S. 5311(f) Subsidized Routes

Figure 2-3: FY13 Total Ridership by Stop, S. 5311(f) Only

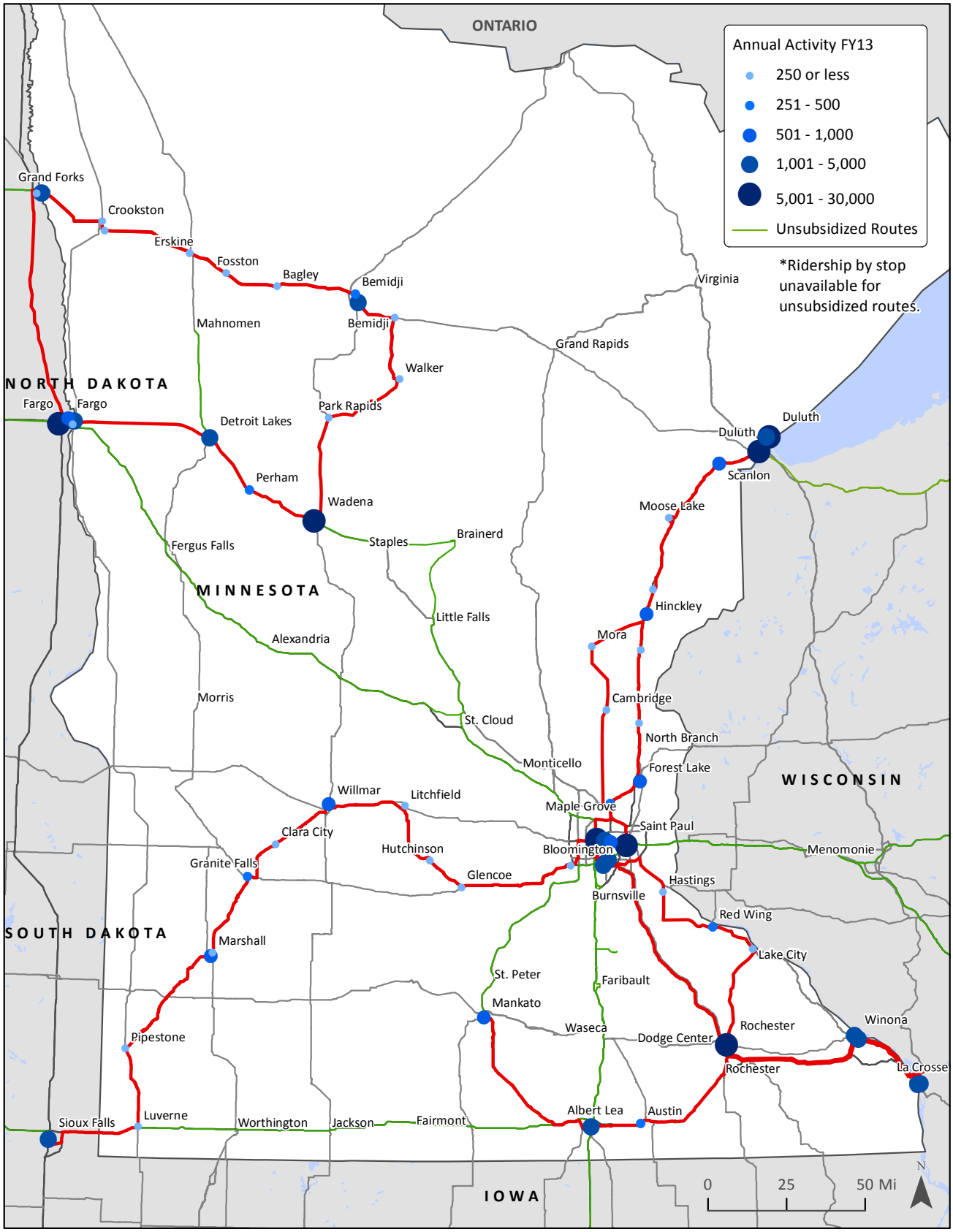


Table 2-3: S. 5311(f) Operating Data by Route, Minnesota SFY 2013

Provider	Schedule Number	Route	Total Miles (MN)	Passengers	Passenger Miles	Total Revenue (MN)	Total Costs (MN)	Fare Box Ratio	SFY14 Status/ Other Notes
Jefferson Lines	906	Duluth to Minneapolis	65,682	5,683	915,752	$156,994	$204,865	77%	
	909	Minneapolis to Duluth	65,940	3,734	481,872	$84,208	$205,742	41%	
	910	Duluth to Minneapolis via Mora	66,203	4,967	692,175	$121,119	$206,518	59%	Converted to unsubsidized express route
	911	Minneapolis to Duluth via Mora	72,216	6,654	944,781	$164,933	$225,407	73%	Converted to unsubsidized express route
	929	Wadena to Fargo	37,068	3,364	293,031	$51,311	$115,697	44%	Restructured*
	930	Fargo to Wadena	36,312	3,442	293,982	$51,710	$113,332	46%	Restructured*
	932	Minneapolis to Milwaukee	63,000	8,386	1,665,609	$124,597	$196,700	63%	
	935	Milwaukee to Minneapolis	63,525	7,470	1,317,485	$99,539	$198,333	50%	
	919	Duluth to Grand Rapids	4,625	55	4,807	$778	$14,432	5%	Launched May 2013**
	920	Grand Rapids to Duluth	4,875	141	8,533	$1,374	$15,176	9%	Launched May 2013**
	923	Rochester to Minneapolis via Red Wing	41,484	614	50,306	$8,782	$129,887	7%	Terminated
	924	Minneapolis to Rochester via Red Wing	40,716	648	53,313	$9,419	$127,583	7%	Terminated
	925	Minneapolis to Sioux Falls	60,984	1,991	358,469	$63,106	$191,003	33%	Expanded to 7 RT/wk
	926	Sioux Falls to Minneapolis	61,661	2,260	446,674	$78,799	$193,037	41%	Expanded to 7 RT/wk
	927	Fargo via Bemidji (south)	45,717	2,166	339,052	$46,623	$142,994	33%	Restructured, 7 RT/wk
	928	Fargo via Bemidji (north)	45,892	2,096	291,378	$40,070	$143,482	28%	Restructured, 7 RT/wk
Land to Air	232	Owatonna to Mankato	16,744	189	8,561	$1,865	$25,747	7%	Extended to Rochester
	233	Mankato to Owatonna	16,744	303	13,677	$3,007	$25,747	12%	Extended to Rochester
	234	Rochester to Mankato	45,500	1,095	73,442	$16,090	$69,963	23%	
	235	Mankato to Rochester	45,500	1,049	74,516	$16,313	$69,963	23%	
TOTAL			900,388	56,307	8,327,415	$1,140,636	$2,615,607	44%	

*Wadena to/from Fargo is now served by a restructured 929/930 between Duluth and Fargo.
**Data for Jefferson Lines' 919/920 only includes 2 months reported.

Service Comparison Over Time

Analyzing historical intercity service coverage is one method to help determine possible network improvements. Figure 2-4 depicts Minnesota's current intercity bus network in comparison to coverage in 1995.

Past intercity bus coverage was more extensive than current coverage, including connections between Willmar and Moorhead along the western edge of the state, between Wadena and Sauk Centre via Highway 71, and between Duluth and Cass Lake via Highway 2. Service also ran between Minneapolis and Winona via Highway 61, and between Minneapolis and Grand Rapids via Highway 169. The southern portion of the state surrounding New Ulm, Madelia, and Windom also had extensive coverage in 1995 that is no longer in place.

As noted above, changes have also occurred between 2010 and 2013. Greyhound reduced its service coverage, concentrating entirely on the I-94 corridor (along with Megabus). Jefferson Lines reorganized its routes, discontinuing service to Hastings, Red Wing, Lake City, Mora, Cambridge, Park Rapids, Madelia, Paynesville, and Northfield. Customers can no longer ride between Walker and Wadena on Highway 71, St. Cloud and Willmar on Highway 23, or Mankato and Fairmont on Highway 15.

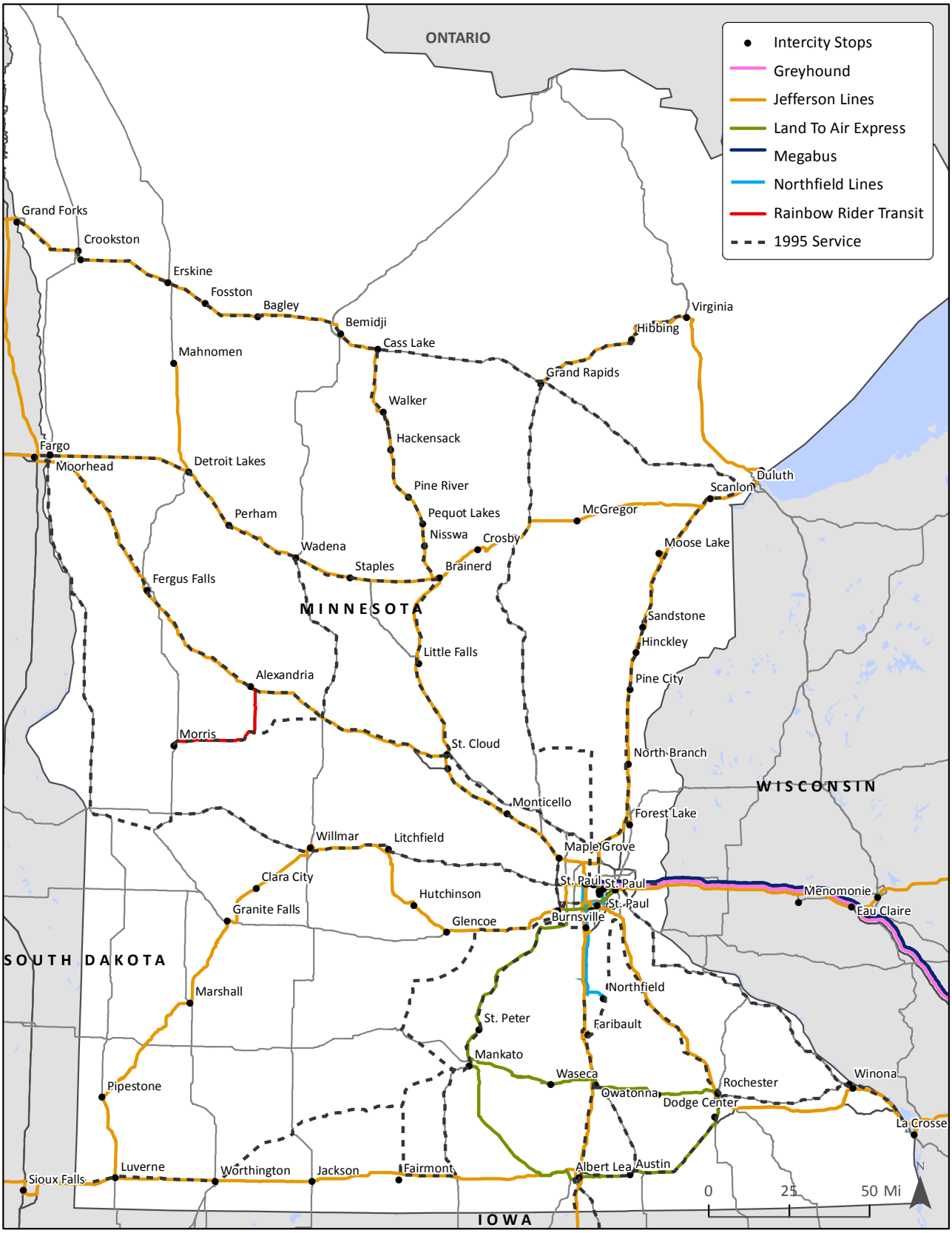
That said, Jefferson Lines also implemented new subsidized services and increased frequencies on some of its routes. The northeastern portion of the state in particular benefited from new service between Grand Rapids, Duluth, and Brainerd. Land to Air Express now provides subsidized service between Mankato and Rochester. Rainbow Rider is another new recipient of S. 5311(f) funding, meeting a need identified in the 2010 study.

This comparison over time suggests some possibilities for service in areas that have lost significant coverage or frequency. However, further analysis of potential demand is necessary before reinstating any now-defunct route segments (see Chapter 5).

Airport Shuttles

Multiple providers operate between MSP Airport and smaller cities in Greater Minnesota and western Wisconsin. In general, these operators are intrastate, with no intercity bus interline ticketing. They typically use smaller vehicles such as vans or minibuses, have higher fares than traditional intercity buses, and usually require reservations (particularly for airport trips). Airport shuttles are relevant because they offer service to and from rural

Figure 2-4: Existing and Historical Intercity Bus Services



areas. The operators are potential S. 5311(f) program participants and/or coordinating partners; however, their services would have to be fixed route, fixed schedule with meaningful connections to the intercity network in order to be eligible. An example of an airport shuttle as a S. 5311(f) program participant is Bay Runner Shuttle, which serves the Baltimore Washington International Airport in Maryland.

Appendix C summarizes airport shuttle providers as of December 2013, based on the MSP Airport website: http://www.mspairport.com/GroundTransportation/van-and-shuttle-services.aspx.

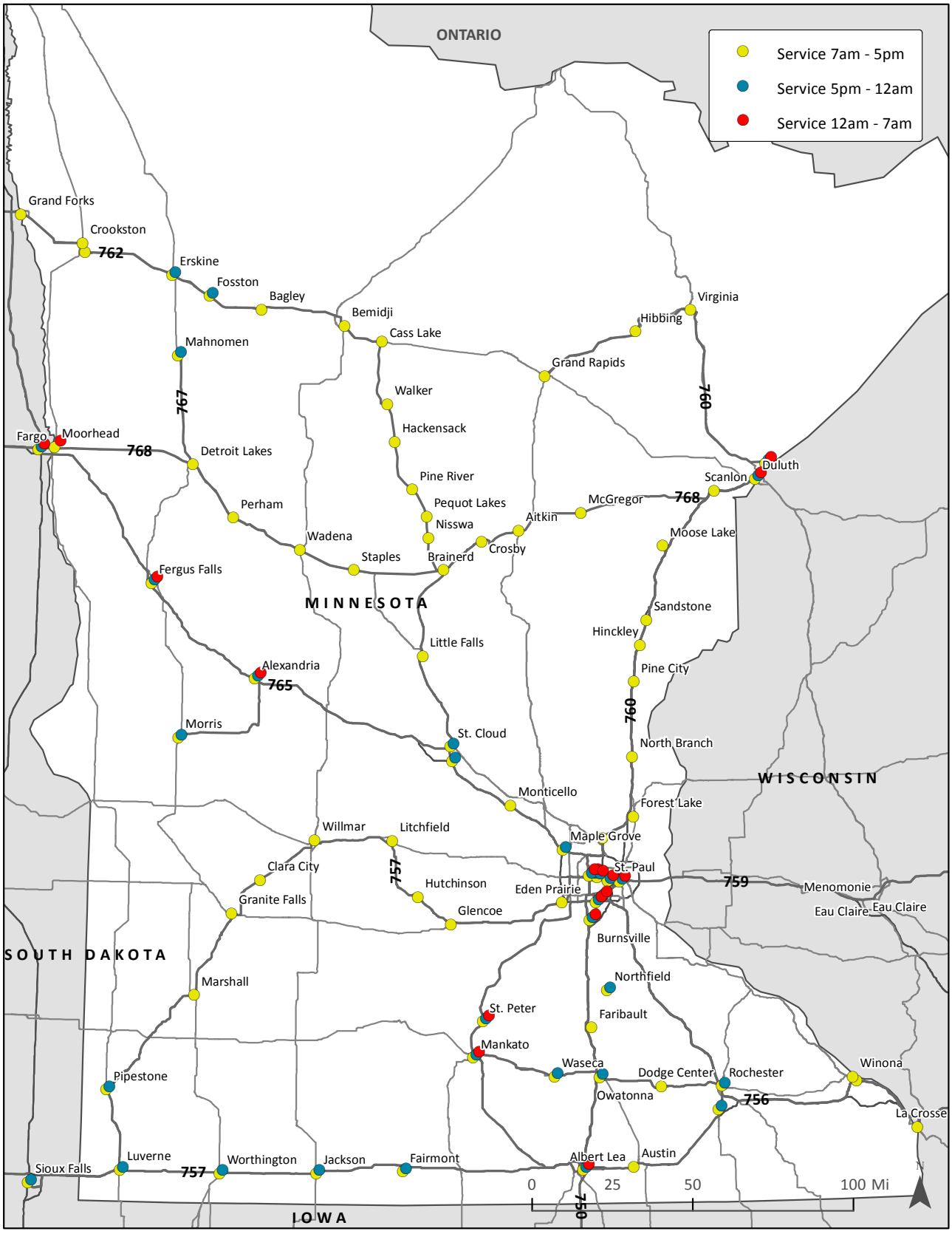
Potential Feeder Services

Local and regional public transit services can potentially act as feeders to the intercity network. These services are available at almost all of the intercity bus stops in Minnesota, however, the level of service varies greatly throughout the state. In rural areas, service may be on a subscription basis, provided on certain days of the month only. In the Twin Cities, Metro Transit, Minnesota Valley Transit Authority, and other transit systems provide higher frequency, fixed route service to intercity stops. Appendix D lists local transit providers whose service areas overlap with intercity stops in Minnesota.

The feasibility of transferring between intercity and local services in part depends on the movement of intercity buses by time of day. Unlike other states, where intercity service can occur in the middle of the night, every stop in Minnesota is served in at least one direction (inbound or outbound to/from the Twin Cities) at sometime between 7 a.m. and 5 p.m. In fact, very few stops do not have daytime service in both directions: Worthington, Jackson, and Fairmont only have inbound service in the evening, and outbound service reaches Crookston, Erskine, and Fosston slightly after 5 p.m. In addition, many stops along I-94, I-35, and Highway 169 have inbound and outbound service during the day, in the evening, and at night. This is indicative of the quality of intercity bus service in Minnesota. See Figure 2-5 for service to intercity stops by time of day.

Despite daytime service, transfers between local systems and the intercity network also depend on schedule timing. Many of the more rural public transit systems in Minnesota operate as demand response or dial-a-ride, minimizing this issue. The service span (days and times) of local providers is another consideration. Table 2-4 summaries the potential connectivity between intercity bus and local transit at each non-urban stop along current S. 5311(f) routes. Each cell in the table includes the intercity bus schedule numbers for that stop. These schedule numbers can be referenced in Table 2-1, and on the websites of Jefferson Lines and Land to Air Express. Schedule numbers in black indicate that

Figure 2-5: Service to Minnesota Intercity Stops by Time of Day



passengers could potentially connect to local transit. Schedule numbers in red indicate that the local system's service span does not cover the intercity bus arrival/departure time. Shaded rows indicate that no local transit system serves the intercity stop at all.

Though only a handful of stops (e.g. Austin, Cloquet, and Duluth) allow the opportunity to connect to/from an intercity bus and a feeder system for every trip on every day, almost three quarters of the stops allow for this on weekdays, or on weekdays and Saturdays. The analysis highlights that the intercity network currently has viable connectivity to local public transit, particularly Monday to Friday. However, an opportunity exists for the strategic expansion of local feeders. This could include additional weekend service, corresponding to times when much intercity bus travel occurs. Additional analysis to determine the feeder potential of local providers is included in Chapter 5.

Table 2-4: Potential Feeder and S. 5311(f) Route Connectivity at Subsidized Stops

Non-urban stops on S. 5311(f) routes	Potential for Feeder Connectivity						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Aikin	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Albert Lea	234, 235	234, 235	234, 235	234, 235	234, 235	234, 235	234, 235
Alexandria	NA	NA	NA	NA	RR 4 trips, RR 2 trips	RR 6 trips	RR 6 trips
Austin	234, 235	234, 235	234, 235	234, 235	234, 235	234, 235	234, 235
Bagley	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Bemidji	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Brainerd	927, 928, 929, 930	927, 928	927, 928	927, 928, 929, 930	927, 928, 929, 930	927, 928, 929, 930	927, 928, 929, 930
Cass Lake	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Clara City	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Cloquet	906, 911, 929, 930	906, 911	906, 911	906, 911, 929, 930	906, 911, 929, 930	906, 911, 929, 930	906, 911, 929, 930
Crookston	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Crosby	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Detroit Lakes	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Dodge Center	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239
Duluth	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930	906, 911, 919, 920, 929, 930
Erskine	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Fosston	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Glencoe	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Glenwood	NA	NA	NA	NA	RR 3 trips, RR 3 trips	RR 6 trips	RR 6 trips

Red schedules: no overlap with feeder system service. Black schedules: potential connectivity. Shaded rows: no existing feeder system.
NA = no S. 5311(f) service scheduled. RR = Rainbow Rider Transit (no schedule numbers). *Selected days of the month only.

Non-urban stops on S. 5311(f) routes	Potential for Feeder Connectivity						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Grand Rapids	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920
Granite Falls	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Hackensack	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Hibbing	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920
Hinckley	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911
Litchfield	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Luverne	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Mankato	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239
Marshall	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
McGregor	929, 930	NA	NA	929*, 930*	929, 930	929, 930	929, 930
Moorhead	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Moose Lake	906, 911*	906, 911	906, 911	906, 911	906, 911*	906, 911	906, 911
Morris	NA	NA	NA	NA	RR 5 trips, RR 1 trip	RR 2 trips, RR 4 trips	RR 1 trip, RR 5 trips
Nisswa	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
North Branch	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911
Owatonna	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 239	236
Pequot Lakes	927, 928	927, 928	927, 928	928	927, 928	927, 928	927, 928
Perham	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Pine City	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911
Pine River	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Pipestone	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926
Rochester	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239	234, 235, 236, 237, 238, 239
Sandstone	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911	906, 911
Staples	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Starbuck	NA	NA	NA	NA	RR 3 trips, RR 3 trips	RR 6 trips	RR 6 trips
Virginia	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920	919, 920
Wadena	929, 930	NA	NA	929, 930	929, 930	929, 930	929, 930
Walker	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928	927, 928
Waseca	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239	236, 237, 238, 239
Willmar	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926	925, 926

Red schedules: no overlap with feeder system service. Black schedules: potential connectivity. Shaded rows: no existing feeder system.
NA = no S. 5311(f) service scheduled. RR = Rainbow Rider Transit (no schedule numbers). *Selected days of the month only.

Chapter 3

POPULATION CHARACTERISTICS AND NEED FOR INTERCITY BUS SERVICE

This chapter examines the extent to which Minnesota's current intercity bus network meets potential public need for intercity connections. It determines areas of high relative need based on the density and percentage of potentially transit-dependent populations. It identifies places that are likely to be intercity bus destinations: educational institutions, medical centers, correctional facilities, commercial airports, and military installations.

By overlaying the existing bus network with origin areas of higher relative need and potential destination points, the analysis reveals key intercity connections and gaps. Much of the current network appears to be responsive to identified need. Since the 2010 study, residents of places like Grand Rapids, Hibbing, Morris, and Virginia are now connected to the intercity network. Conversely, locations like International Falls, Lake City, New Ulm, Red Wing, Thief River Falls, and Two Harbors stand out as lacking service. Chapter 5 provides further analysis of these potential intercity stop candidates, as well as possible local/regional transit feeders.

Demographic Analysis

The need for any type of transit service, including intercity bus service, depends upon the size and distribution of an area's population and on the demographic and economic characteristics of that population. Potentially transit-dependent population segments may require transit service to meet mobility needs (as an alternative to the private automobile) due to characteristics such as age, income, or automobile availability. Using data from the 2010 Census and the 2007-2011 American Community Survey (ACS), the following potentially transit-dependent population segments of the Minnesota population were selected:

1. Young adults (persons 18 to 34): enlisted military personnel, college students, and other young adults often do not have access to an automobile. Research suggests that individuals in this age range make up the bulk of intercity bus ridership.

2. Elderly (persons 65 and above): advancing age can mean diminished ability or desire to drive (particularly on a long trip) and a need for access to medical facilities on a regular basis.
3. Persons living below poverty: persons that typically lack the economic means to own or operate a vehicle, or a vehicle perceived as capable of a long trip.
4. Autoless households: persons without access to a car must rely on alternative transportation.

These factors were chosen in part because of national data regarding intercity bus passenger characteristics.[1] [2] Passengers are most likely to be traveling for pleasure or personal business, have relatively low annual household incomes, and fall within the 18 to 35 age bracket. These characteristics are also supported by Greyhound's 2004 annual report to the Securities and Exchange Commission (the last such report provided before the firm was merged into Laidlaw Transit). The average customer travels to visit friends or relatives and has an annual income below $35,000. These individuals may own automobiles that they think are reliable enough for a trip, but they travel by bus because the costs of a bus trip are lower than driving alone.

It should be noted that this analysis focuses mainly on the likely ridership for "traditional" intercity bus services, i.e. persons with higher transportation need characteristics. These are also persons likely to need local public transit. It does not fully address potential markets of "choice" riders—those who have a vehicle available, could drive or fly, and could choose to take transit or not. Research on choice riders is included in Appendix B.

METHODOLOGY

The first step in the needs analysis involved extracting block group level American Community Survey and Census 2010 data for the overall population and for each of the four needs categories (young adults, older adults, persons living below poverty, and autoless households). For each block group, the four categories were combined into aggregate measures of transportation need: 1) the density of potentially transit-dependent persons, and 2) the percentage of potentially transit-dependent persons.

1 U.S. Department of Transportation. Bureau of Transportation Statistics. 2001 National Household Travel Survey, preliminary long-distance trip file.

2 Fischer, Lauren and Joseph Schwieterman. Who Rides Curbside Buses? A Passengers Survey of Discount Curbside Bus Services in Six Eastern and Midwestern Cities. DePaul University. August 2011. http://las.depaul.edu/chaddick/docs/2011-2012_Reports/Who_Rides_Curbside_Buses_-__A_Passenger_.pdf

While transit service is often prioritized for areas that contain block groups with higher densities of potentially transit-dependent persons (ranking 1), it is also important to look at the percentage of the population with transit-dependent characteristics (ranking 2). Substantial percentages of transit-dependent populations indicate a high proportion of people who may need transit, though spread out over large and primarily rural areas.

The density and percentage of transit-dependent persons were mapped on a scale of "very low" to "very high." This scale is based on the average for the state overall. For more details on methodology, see Appendix E.

RESULTS

It is important to recognize that identifying areas of high relative transit need is not the same as forecasting demand (ridership). Mapping the density and percentage of transit-dependent persons can highlight potential demand. However, rural areas especially may not have the density to support unsubsidized intercity bus service. Such areas may be candidates for rural feeder services, particularly as part of local rural transit operations.

DENSITY OF TRANSIT-DEPENDENT POPULATIONS

While a concentration of block groups with high relative need is clustered around the Twin Cities, areas with high or very high need are also spread throughout the state, mainly along major highways. With some exceptions, almost all of these areas are currently served by the intercity network. The block groups with high relative need (outside of the Twin Cities urbanized area) that are not currently served include:

- Region 1: Thief River Falls
- Region 2: Park Rapids
- Region 3: International Falls, Ely, Two Harbors, Silver Bay City
- Region 6W: Benson
- Region 7E: Princeton, Cambridge
- Region 7W: Melrose, Buffalo
- Region 8: Windom
- Region 9: New Ulm, Le Sueur
- Region 10: Kasson, Red Wing, Lake City

Figure 3-1 displays the density of transit-dependent populations statewide. Appendix E displays this information by Minnesota Economic Development Region.

PERCENTAGE OF TRANSIT-DEPENDENT POPULATIONS

Figure 3-2 shows relative level of need based on the percentage of potentially transit-dependent persons. Block groups with very high need are found in the Twin Cities, but also scattered throughout much more rural areas. Like the 2010 distribution, this includes the north central portion of the state and the southeastern corner. In some cases these block groups correspond to those identified as having a high density of transit-dependent persons.

Areas that are not currently served by the intercity bus network with the highest relative percentage of need include (west to east): Twin Valley, Sleepy Eye, New Ulm, Onamia, International Falls, Red Wing, Aurora, and Two Harbors. Some of these locations have had intercity stops in the past, and they may not warrant reinstated service. New Ulm, for example, had minimal intercity bus ridership, possibly due to the city's robust volunteer driver program.

OVERALL POPULATION DENSITY

Another component of the demographic analysis is the overall distribution of population in the state. Figure 3-3 illustrates the overall population density of each block group in relationship to the existing intercity network. As in 2010, the majority of the population in the state is located in the Twin Cities area, and along major roads (I-94, I–35, I-90, US 169, US 52, US 10, Route 371). Places with the highest population densities correspond closely to those areas described above as having the highest relative transit dependence by density.

AUTOLESS HOUSEHOLDS

Households without at least one personal vehicle are more likely to depend on the mobility offered by transit and/or intercity bus than those households with access to a car. Although autoless households are reflected in both transit dependence measures, displaying this group separately is another way to illustrate the origins of potential intercity bus riders. As seen in Figure 3-4, places with a very high relative number of autoless households that are not served by the current intercity network include Roseau, Two Harbors, and the International Falls area in northern Minnesota. Closer to the Twin Cities, the greatest

Figure 3-1: Density of Transit Dependent Populations

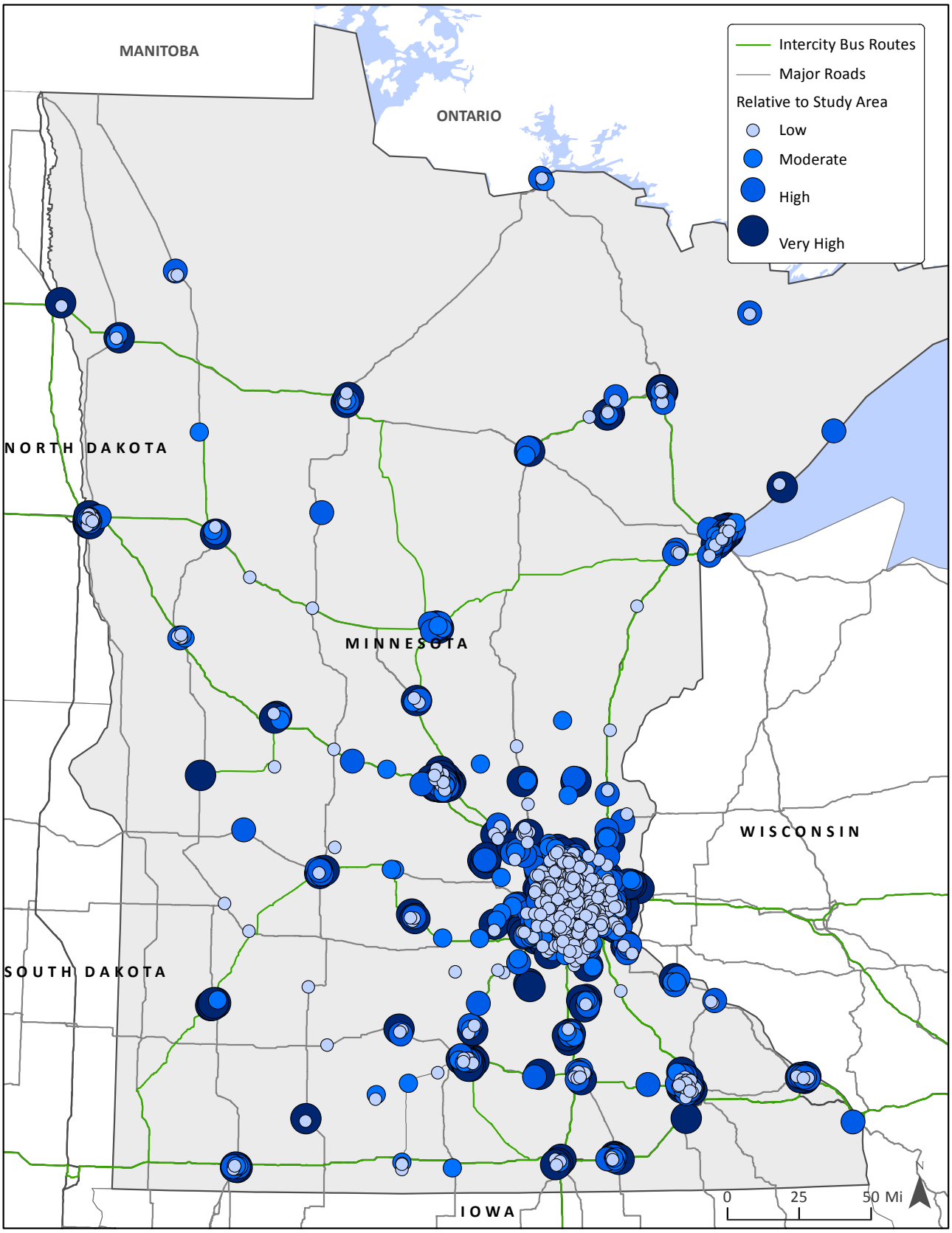


Figure 3-2: Percentage of Transit Dependent Populations

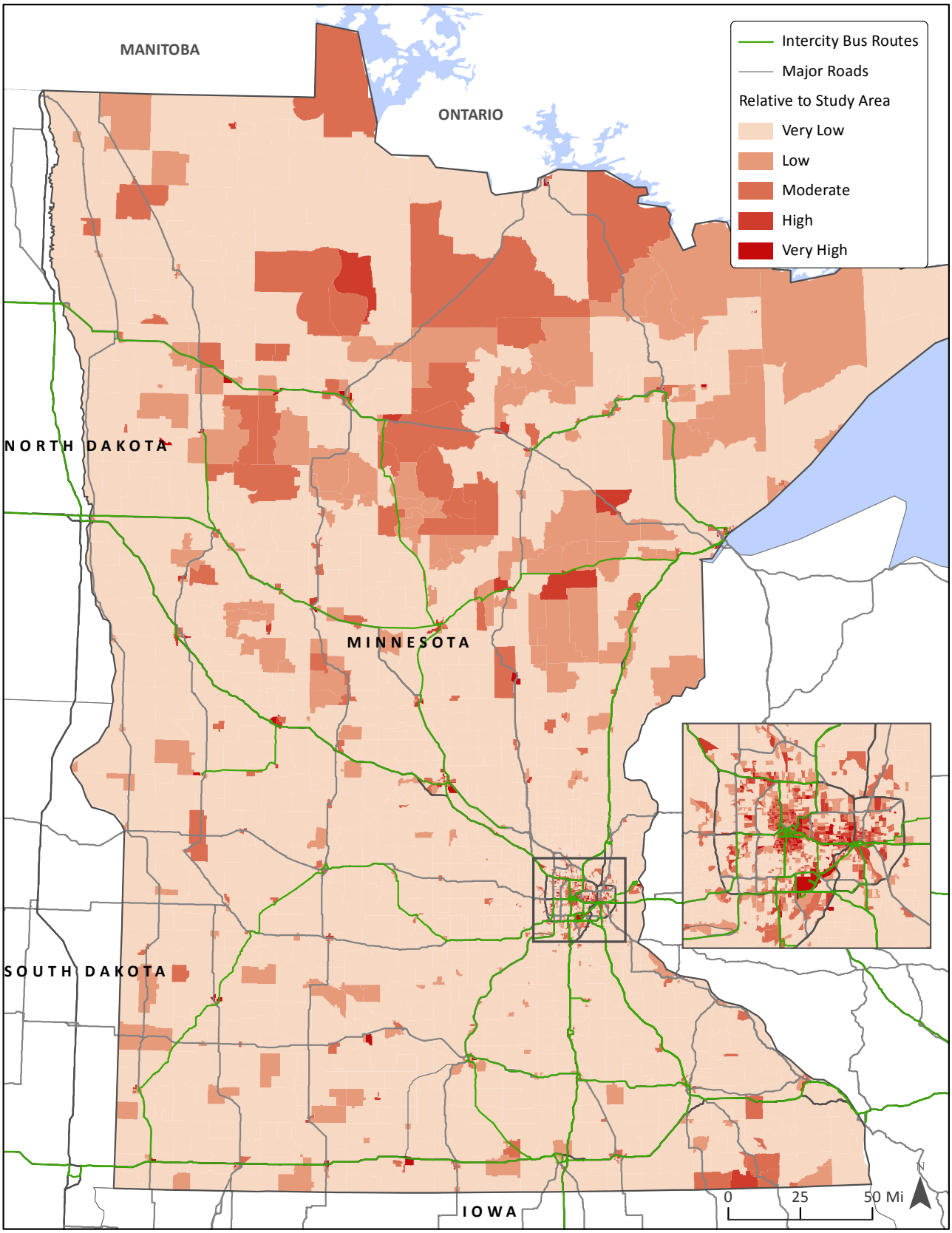


Figure 3-3: 2010 Minnesota Population Density

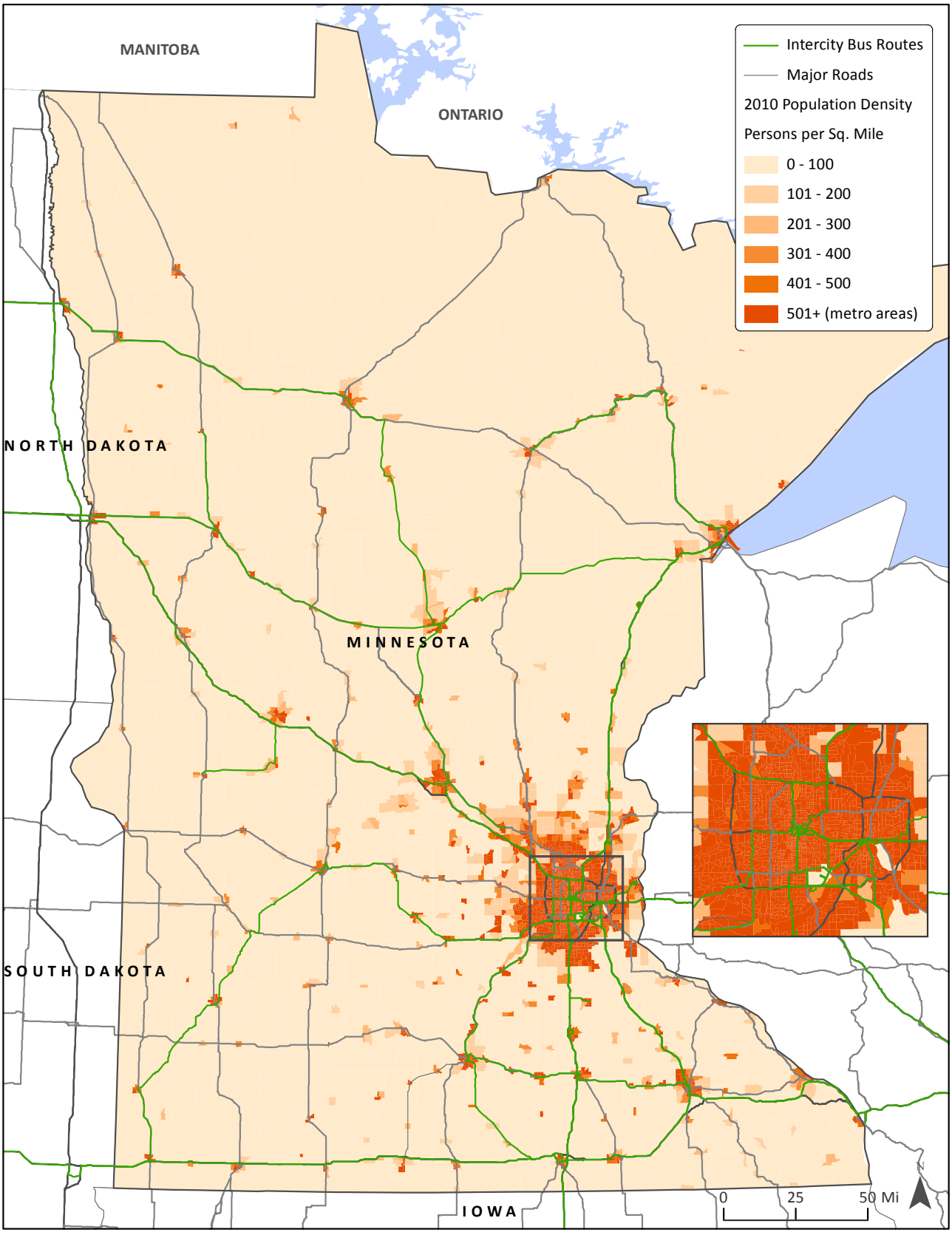
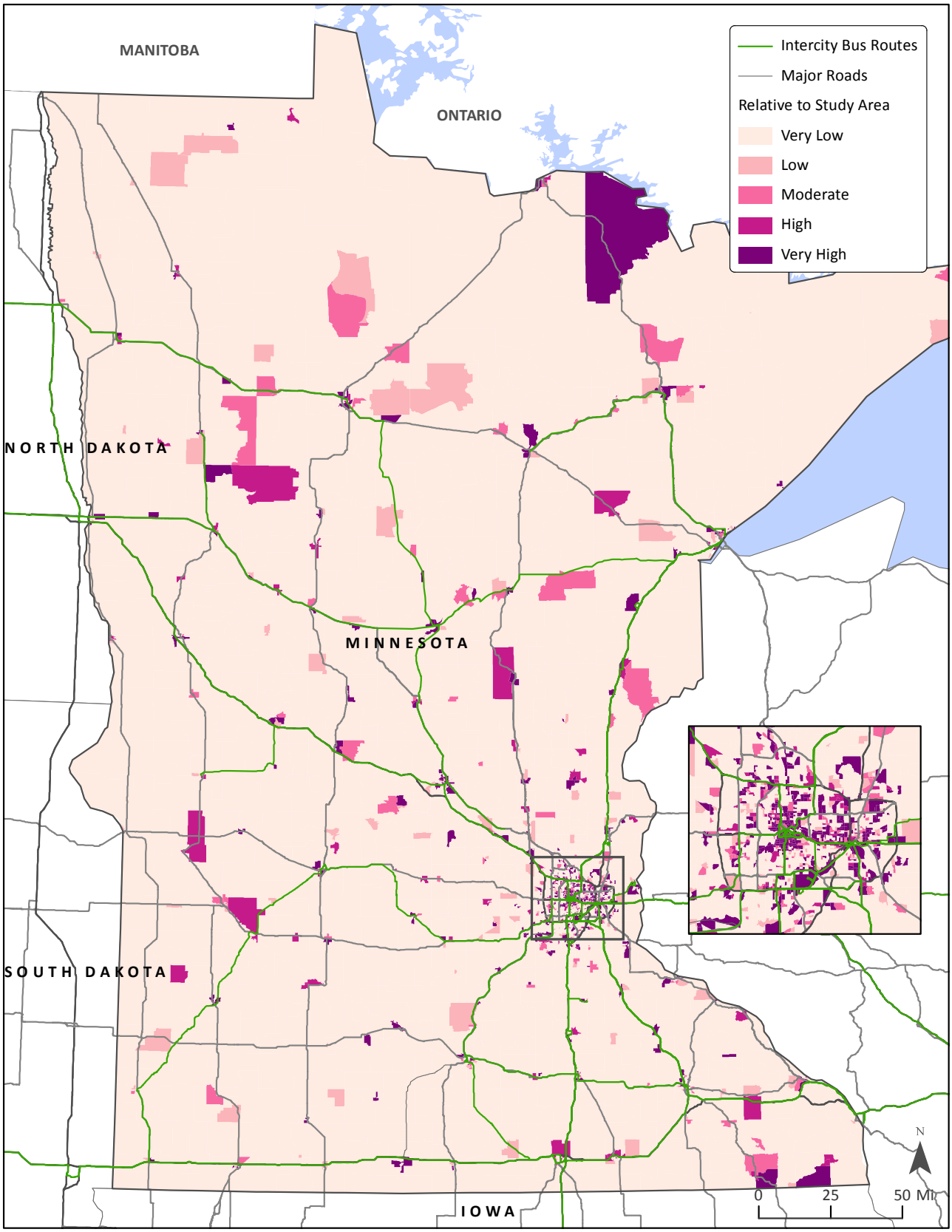


Figure 3-4: Relative Number of Autoless Households



numbers occur near Onamia, New Ulm, Sleepy Eye, Lake City, Canton, and Harmony. The latter two places may in part correspond to Fillmore County's large Amish population.

Destinations/Facilities

The analysis of demographic data addressed the potential origin areas for intercity trips, but another consideration is whether or not the current routes serve the places that are likely to be attractors of intercity bus ridership. These include colleges and universities, military bases, major medical centers (with 40 or more beds), correctional facilities, and commercial airports. These destinations are mapped in Figure 3-5 and listed along with their locations in Appendix E.

As expected, the vast majority of destinations are clustered in the Twin Cities or in towns and cities along major interstates. Minnesota's major destinations have remained relatively consistent in recent years. As in 2010, most are currently served by the intercity bus network. Explained in more detail in Chapter 5, 10 to 25 miles is a reasonable distance for residents to access the intercity network, thus the use of 10 and 25 mile buffers around each intercity stop. The majority of Minnesota's educational facilities are within ten miles of the nearest intercity service point. White Earth Tribal and Community College, Hibbing Community College, Itasca Community College, Mesabi Range Community and Technical College, Riverland Community College, and the University of Minnesota Morris gained service since the 2010 study. The study specifically cited need for service to Morris, as the institution has on-campus residents and is over two hours by car from the nearest commercial airport.

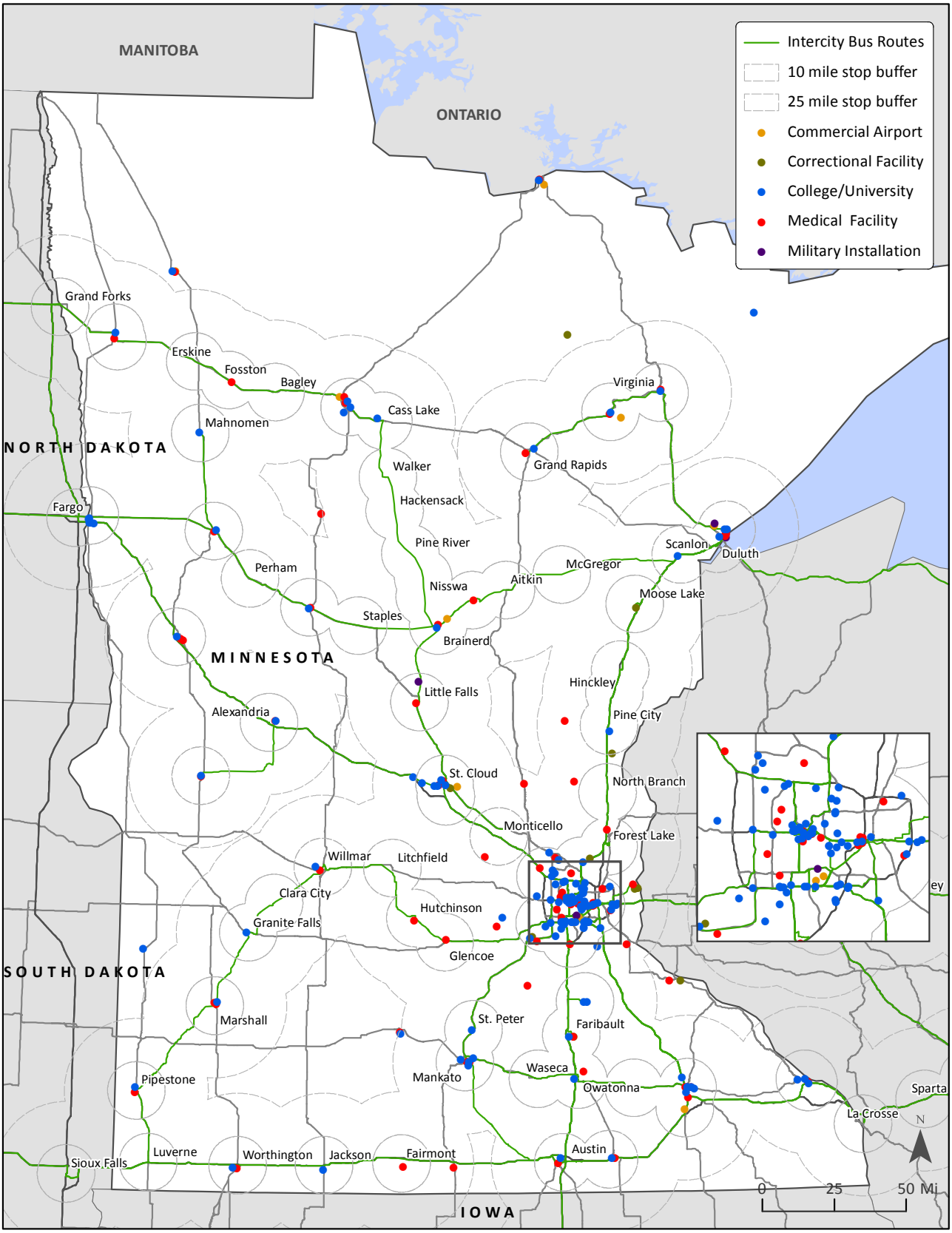
Those colleges and universities that are located more than ten miles from intercity service but less than 25 miles include:

- Crown College in Saint Bonifacius (enrollment 1,198)
- Martin Luther College in New Ulm (enrollment 777)
- Saint John's University in Collegeville (enrollment 2,010)

A number of educational facilities are more than 25 miles from the nearest intercity service point. These include:

- Minnesota West College in Canby (multiple campus enrollment 3,364)
- Northland College in Thief River Falls (enrollment 3,958)
- Rainy River Community College in International Falls (enrollment 376)

Figure 3-5: Minnesota Major Trip Generators



- Vermilion Community College in Ely (enrollment 781)

Although medical trips make up a small percentage of intercity bus trips, the ability for patients (especially Medicaid recipients) to travel from rural areas to major medical facilities is often a policy consideration for maintaining bus services. This analysis defines major medical facilities as those with 40 or more licensed beds, as well as the Minnesota Department of Health District Offices. Most major medical facilities in Minnesota currently have intercity bus service available, though several are located more than 25 miles from the nearest stop. This was the case in 2010 (e.g. facilities in International Falls and Thief River Falls). However, some facilities lost or gained intercity connections due to Jefferson Lines' adjustments. St. Joseph's Area Health Services in Park Rapids and the Mayo Clinic Health System in Red Wing lost service within 25 miles; Stevens Community Medical Center in Morris, University Medical Center Mesabi in Hibbing, Grand Itasca Clinic and Hospital in Grand Rapids, and Essentia Health Virginia all gained service within 10 miles.

As in the case of hospitals, demand from correctional facilities accounts for a small percentage of intercity bus trips. However, the ability to make trips between rural towns and correctional facilities may be crucial to families, released inmates, and employees. This analysis considered Minnesota Department of Corrections facilities only, not local or regional facilities. With the exceptions of Togo and Red Wing, all the correctional facilities in Minnesota are within 10 miles of an intercity bus stop. Intercity bus service is also accessible within ten miles of Minnesota's major military installations. Finally, all the major commercial airports have intercity bus service within ten miles, except for International Falls and Thief River Falls. MSP has intercity bus service directly to the Lindbergh Terminal. Expanded service through Jefferson Lines since the 2010 study also offers access within ten miles of the Range Regional Airport in Hibbing.

Unmet Needs Identified in Coordinated Plans

Another part of the needs analysis involved reviewing Minnesota's Coordinated Public Transit-Human Services Transportation Plans. Developed in 2006, these plans were updated across the state in 2011. The requirement for coordinated planning resulted from the 2005 SAFETEA-LU highway and transit funding legislation. MAP-21 continued the coordinated transportation planning requirements for S. 5310 recipients. A coordinated public transit-human services plan identifies the transportation needs of individuals with disabilities, seniors, and people with low incomes; provides strategies for meeting those local needs; and prioritizes transportation services for funding and implementation.

Minnesota's coordinated public transit-human services transportation plans (developed by Minnesota Economic Development Region) were reviewed to determine if the assessment processes identified any needs for long-distance services, including potential needs for intercity bus service from rural areas. Since S. 5310 is now the major focus of the coordinated transportation plans, the absence of identified intercity bus needs may not indicate a lack of needs. Similar to the 2006 coordinated plans, intercity bus services were not detailed specifically. However, several plans did identify the need for long distance services that would cross jurisdictional boundaries and connect with local transit systems. Specific references to unmet intercity bus needs and/or recommended projects included the following:

- The East Central Regional Development Commission (Region 7E) cited "regional travel opportunities" as a potential project for implementation. This project would improve service by connecting local transit to intercity providers like Jefferson Lines.

- The Southwest Regional Development Commission (Region 8) listed "customer travel training" as a potential project, including teaching targeted populations to make connections between local transit systems and Land to Air Express.

- The Region 9 Development Commission noted the shift in service from Jefferson Lines to Land to Air in the Mankato area. Under potential projects, the plan included "corridor services" between counties and towns that connect with existing feeders. Another project was creating a "hub for public and private transportation providers" (including Land to Air) in Mankato that would be a station and a maintenance facility.

Chapter 4

PREFERENCES OF INTERCITY TRAVELERS

In order to better understand the role of intercity bus in meeting the state's rural mobility needs and to determine potential program improvements, this study included surveys of both intercity bus passengers and of long-distance travelers in general. The onboard survey involved interviewing current intercity bus passengers during their trip. The household survey was a mixed methodology study (phone interviewing and online interviewing) designed to reach adults who have traveled on a trip of 75 miles or more (one-way) using any mode during the past year. Both survey efforts were conducted by WBA Research. Appendices F, G, and H present additional details, including a breakdown of the routes and regions surveyed and copies of the interview questions. Appendix F also describes the statistical interpretation of the survey results.

Survey Findings Among Intercity Travelers

Q: WHO IS SERVED BY INTERCITY BUS?

When considering who intercity buses can serve, two populations should be considered—those who use intercity buses already and those who may use them in the future (i.e., potential customers). According to the household survey, the typical adult Minnesotan traveler is approximately 46 years of age, employed and white, with a median household income of $63,000 per year and 50 percent having a college degree. Travelers—i.e. those who reported having taken a trip of 75 miles or more within the U.S. or Canada in the last year—are more likely to be female than male (65 percent vs. 35 percent). This contrasts with data from the National Household Travel Survey, in which women take only 43 percent of all long-distance trips.

Typical intercity bus passengers are about 40 years of age and more likely male (58 percent). They have a high school degree and perhaps some college and make a median income of $28,000 per year. More than half (55 percent) are not employed, though many (17 percent) are students. Still, about two in ten (18 percent) live below the

poverty line. Two-thirds (66 percent) are white, while about two in ten (19 percent) are African-American.

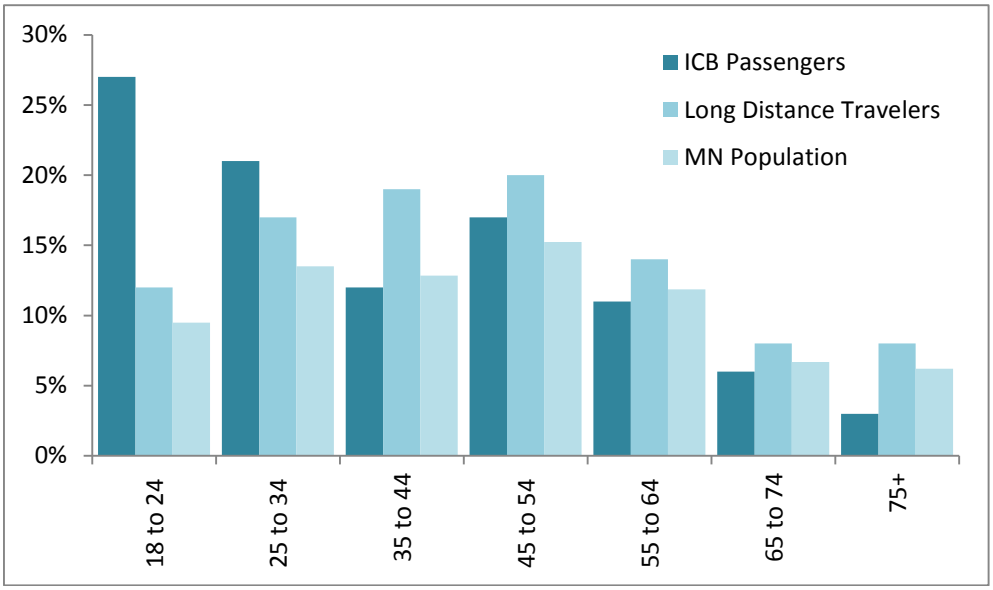
The following tables and charts present demographics comparing intercity bus passengers with long-distance travelers and with the state's population overall. Relative to other long-distance travelers, intercity bus passengers are:

- Younger
- Less likely to be currently employed
- More likely to be students
- From much lower income households
- A more racially diverse population

Table 4-1: Demographic Comparison

Hispanic/Latino	Intercity Bus Passengers	All Long Distance Travelers	Minnesota Population
Yes	6%	3%	5%
No	94%	97%	95%
Gender	**Intercity Bus Passengers**	**All Long Distance Travelers**	**Minnesota Population**
Male	58%	35%	50%
Female	42%	65%	50%

Chart 4-1: Age Distribution



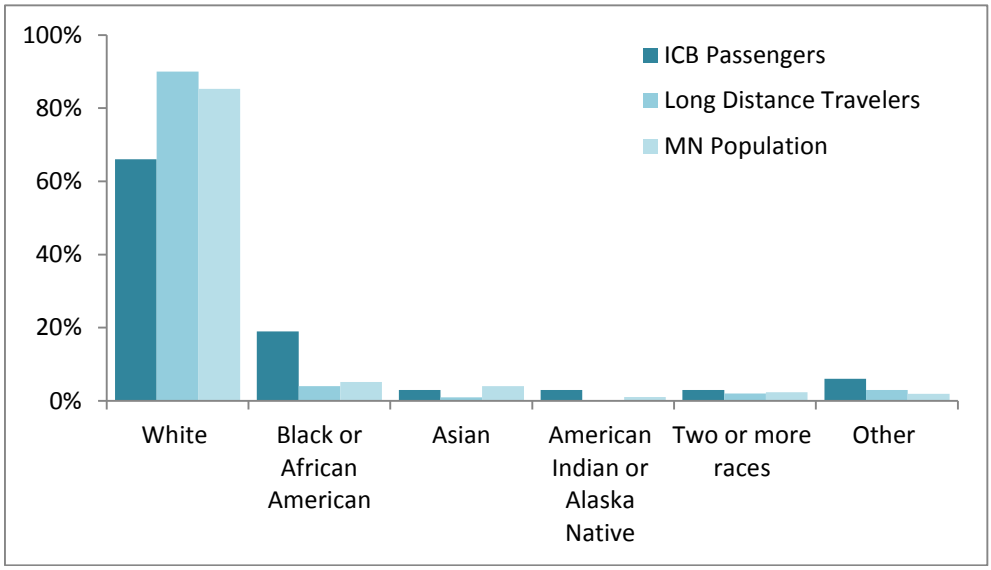


Chart 4-2:
Race Distribution

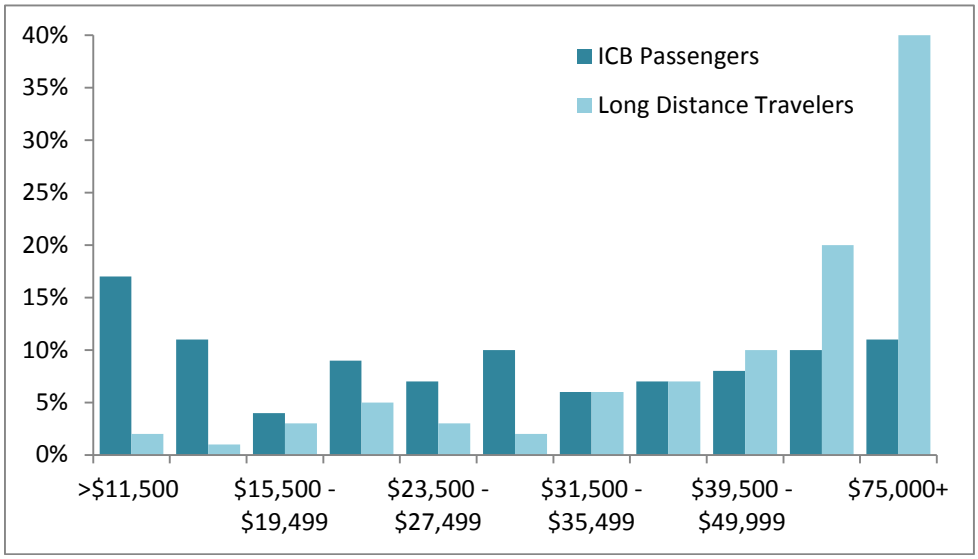


Chart 4-3:
Income Distribution
(State level data unavailable at these increments)

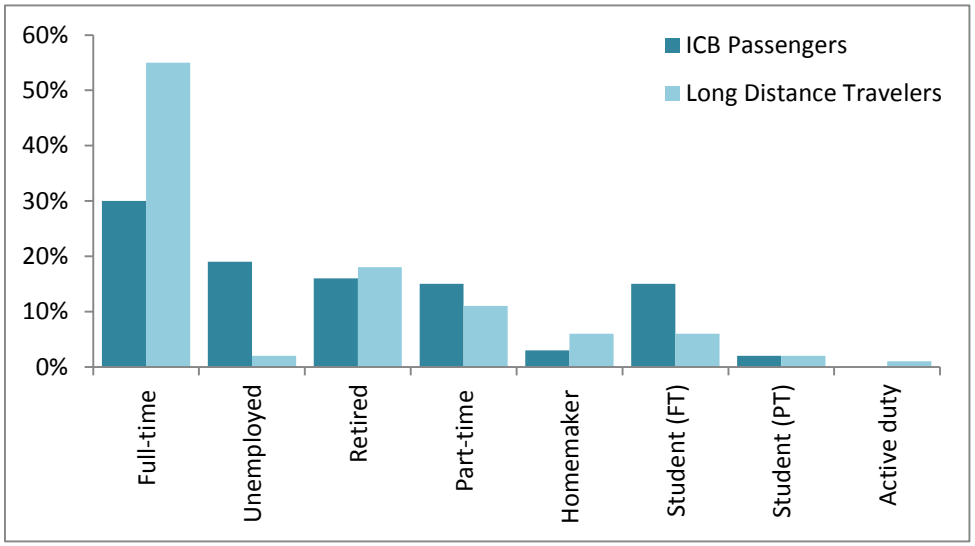


Chart 4-4:
Employment
(State level data unavailable)

Q: WHERE DO INTERCITY BUSES NEED TO GO?

Among all long-distance travelers, most trips are taken to locations in-state. Residents travel on a trip of 75 miles or more in the continental U.S. or Canada once every three to six weeks, on average, and in the past year most often traveled within Minnesota (74 percent), or to nearby or bordering states such as Wisconsin (22 percent) and North Dakota (13 percent). Minneapolis and Duluth are the most common destinations (21 and 18 percent) and Chicago is the most frequently traveled to city (10 percent) outside the state.

Table 4-2: Top Mentioned Destinations

Top Mentioned Destinations	All Long Distance Travelers	Top Mentioned Destinations	Intercity Bus Passengers
Minneapolis, MN	21%	Minneapolis, MN	79%
Duluth, MN	18%	Duluth, MN	22%
Chicago, IL	10%	Brainerd, MN	13%
St. Paul, MN	8%	Sioux Falls, SD	10%
Fargo, ND	8%	Fargo, ND	9%
Rochester, MN	6%	Grand Forks, ND	8%
St. Cloud, MN	6%	Rochester, MN	7%

The destination patterns of intercity bus passengers are different. Minneapolis was the destination for 79 percent, with over eight in ten destined for the Twin Cities. Destinations outside the state included Grand Forks and Sioux Falls, with lower percentages to Wisconsin including La Crosse (4 percent) and Madison (4 percent). These results likely reflect the structure of Minnesota's intercity bus routes, which center on the Twin Cities, and the fact that the survey focused on subsidized routes serving non-urbanized communities. The major carriers linking Minnesota with Wisconsin and Illinois were not surveyed (Greyhound and Megabus).

Q: WHY DO PEOPLE WANT TO MAKE THE TRIPS THAT THEY MAKE?

Among Minnesota long-distance travelers in general, most trips (81 percent) are made for social or recreational purposes. Only one in ten traveled last for work or school, with 4 percent of trips being specifically for school. While social or recreational trips are also the most common reasons for using intercity buses, it only accounts for 63 percent of bus trips, while 17 percent are for work and school, with 10 percent being specifically for school. Trips for personal business, such as to attend a wedding or funeral, also account for a larger proportion of intercity bus use than travel in general (20 vs. 9 percent).

Q: WHAT MOTIVATES PASSENGERS TO CHOOSE INTERCITY BUS?

The primary reasons people making long-distance trips gave for choosing a mode of transportation (in general) are the ease, convenience, and flexibility the mode provides

(46 percent) followed by the cost (22 percent). Only one percent of long-distance travelers used an intercity bus service on their last trip, with the preferred mode being driving themselves or riding with others (87 percent). In fact, nearly all long-distance travelers who took the household survey (96 percent) have both a driver's license and a vehicle available for their use, meaning that they could drive on trips. Respondents say they drive because it is easy, convenient, and flexible, whereas they use other modes when these modes are faster.

Table 4-3: Reasons for Using Intercity Bus

Reasons for Using Intercity Bus	Intercity Bus Passengers
Price / Cheaper Than Other Options	42%
Don't Drive / Have a Car	27%
Easier / Convenience	12%
Only Transportation Available / No Choice	12%
More Comfortable / Can Relax	6%
Has Service to Destination	5%
Enjoy Ride / Scenery	4%

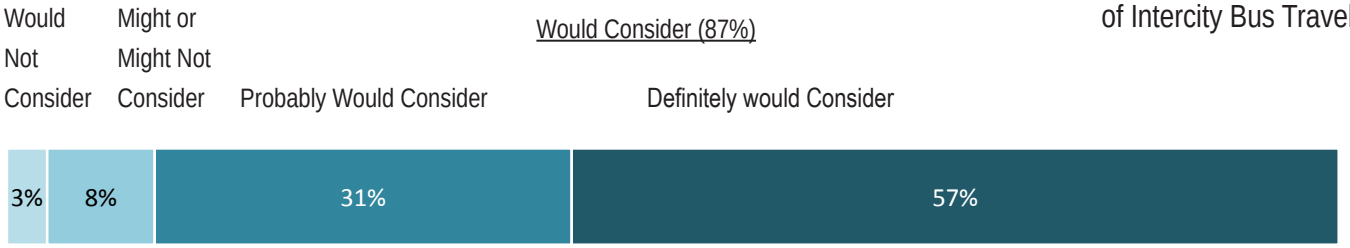
Price is the number one reason that intercity bus passengers choose intercity buses (42 percent), followed by the unavailability of a personal vehicle (27 percent). Only 12 percent mentioned choosing an intercity bus because of its ease, convenience, and flexibility. Service changes to address these issues may help boost ridership in Minnesota.

A gap exists between the way in which current passengers and long-distance travelers in general perceive intercity bus service. More than half (54 percent) of passengers are satisfied with the cost of bus service, while only 22 percent of long-distance travelers have a positive impression regarding the cost of bus service. Furthermore, while the speed of travel is seen as weakness of intercity bus travel, it is more of an issue for those not using buses. Only 12 percent of long-distance travelers rate intercity bus positively with regard to getting to a destination on time, compared to 36 percent of intercity bus passengers.

Q: HOW MUCH DO PASSENGERS VALUE INTERCITY BUS SERVICE?

A sizeable proportion of current customers are dependent on the intercity bus system. About three in ten current customers would not make the trips they made if not for intercity bus service, and 87 percent said they will consider using intercity bus services in again in the future. Less than half (47 percent) of current passengers have a driver's license and a vehicle available for their trip, and 12 percent say this is their only available transportation.

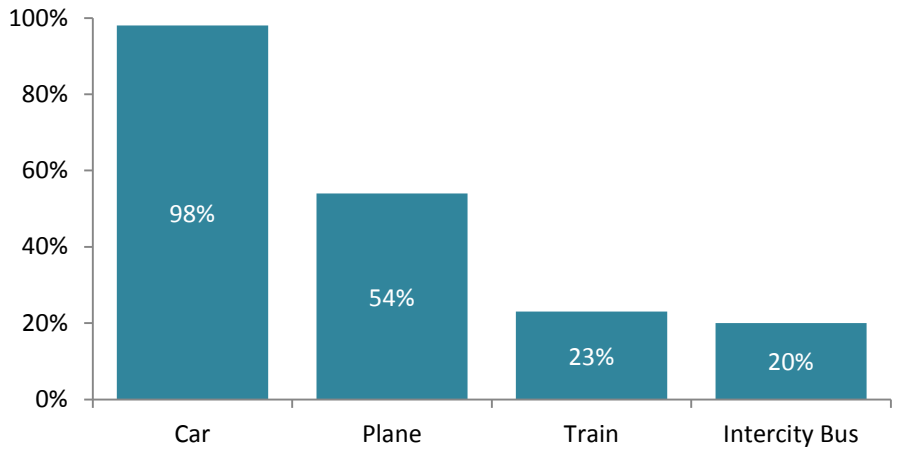
Chart 4-5: Intercity Bus Passengers: Future Consideration of Intercity Bus Travel



Q: HOW DOES INTERCITY BUS COMPARE WITH OTHER MODES?

One of the barriers to increasing intercity bus ridership is that it is simply not "top-of-mind" for travelers when they think of modes for longer distance travel. Whereas almost everyone (of the long-distance traveler household survey) thinks of a car (98 percent), and more than half (54 percent) think of air service, only 20 percent think of bus service. Furthermore, almost no one can name a specific intercity bus service without prompting.

Chart 4-6: Long Distance Travelers: Long Distance Trip Mode Awareness



Compared to its chief competition—the personal automobile—intercity buses appeal to a somewhat different demographic. Intercity bus passengers are more likely to have a lower income, be a minority, and make about half as many trips per year.

Q: WHAT WOULD MAKE NON-USERS MORE LIKELY TO CONSIDER INTERCITY BUS?

While the onboard research revealed a strong loyalty towards intercity bus travel, awareness and perceptions of intercity bus service among most Minnesota long-distance travelers were less favorable.

While only one percent of long-distance travelers used an intercity bus on their last trip, six in ten (60 percent) report having used an intercity bus at some point in the past, though most use buses less than once a year. Additionally, nearly seven in ten long-distance traveler households (68 percent) include someone who has taken a trip on an intercity bus before. Three in ten would consider using an intercity bus in the future (31 percent), though only 13 percent said they definitely would consider doing so. This figure drops from 31 to 23 percent when looking at those who have never used an intercity bus in the past.

A gap analysis revealed that key areas of dissatisfaction with intercity bus include scheduling flexibility when traveling and the amount of time it takes to get to the destination. Additionally, when asked what would make them more likely to consider

intercity buses in the future, long-distance travelers most often cited intercity bus schedules and performance (41 percent) and improved costs (15 percent).

Specific schedule and route improvements desired by long-distance travelers include:

- More routes/destinations—14 percent
- More frequency/more than once a day—12 percent
- Faster service/lower travel time—9 percent

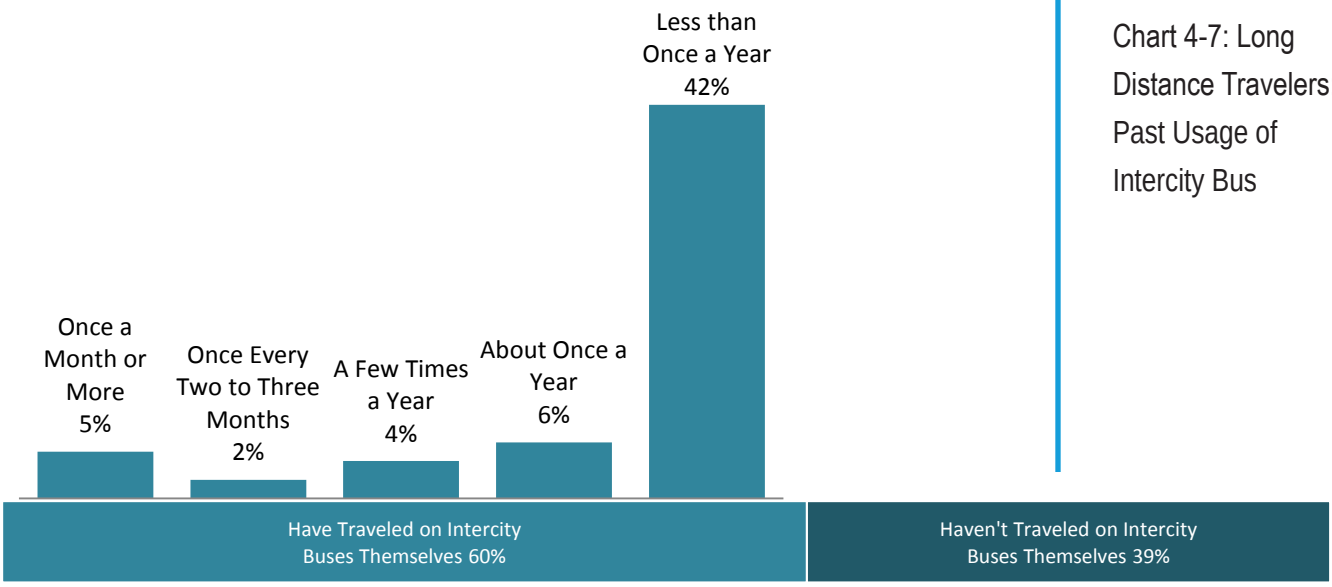


Chart 4-7: Long Distance Travelers: Past Usage of Intercity Bus

Q: HOW DO INTERCITY BUS PASSENGERS USE THE BUS?

Among the passengers surveyed for the study, 76 percent are traveling alone, compared to 85 percent of all travelers. Fifty-eight percent of intercity bus passengers travel a few times per year by bus, and 19 percent use the bus at least once a month. Passengers find out about the service from a recommendation (39 percent) or the Internet (29 percent). They maintain their relationship by visiting the bus company website (57 percent), though first time or light users are more likely to buy a ticket at a station while heavy users are more likely to purchase their ticket online.

Q: HOW SATISFIED ARE CURRENT INTERCITY BUS PASSENGERS?

Nearly nine in ten (87 percent) of intercity bus passengers mentioned that they definitely or probably would consider using the service again, and 57 percent rate intercity bus service as a 9 or 10 where 10 is very satisfied. Satisfaction with intercity bus service varied between those riding on the MnDOT subsidized routes and those customers on

the unsubsidized routes, even though the services are provided by the same firms using the same equipment (and there is no identification of services as being subsidized or unsubsidized). One theory is that the lower loads on the subsidized routes result is less crowding and thus greater satisfaction. Another difference in overall satisfaction was that passengers 55 and over are more likely to be satisfied with the service, and are more likely to recommend it to others.

Overall, among passengers the areas of high satisfaction included:

- Driver professionalism
- Heating/air conditioning
- Availability of luggage space
- Purchasing a ticket

Areas of lower satisfaction included:

- Frequency
- Amount of time it takes to get to the destination
- Availability of Wi-Fi and power outlets on the buses

Q: WHAT HAS CHANGED SINCE THE 2010 MINNESOTA INTERCITY BUS NETWORK STUDY?

A similar survey was conducted in 2008 for the 2010 Minnesota Intercity Bus Network Study. Comparing the results of this survey with the earlier data revealed that passengers are generally older and less likely to be students. Passengers are more likely to have a college education than in the past (19 percent vs. 10 percent). The median income of passengers was lower, $28,000 in 2013 as compared to $40,000 in 2008. However, in 2013 a lower percentage of passengers were dependent on intercity bus (31 percent vs. 47 percent). Many of these differences reflect the fact that the 2013 surveys were conducted on weekdays in late August, after summer vacation travel and before the beginning of the academic year. This likely resulted in fewer students (who are younger, have higher family incomes, have fewer options, and have not yet received their college degrees). One other area of difference between the two surveys is an apparent increase in connectivity. More passengers in 2013 used public transportation to reach intercity bus services (10 percent) as compared to 2008 (6 percent), and more passengers are making connections with other intercity services (13 percent compared to 3 percent).

SUMMARY

The surveys highlighted that areas of dissatisfaction with intercity bus service are frequency of service, the amount of time it takes to get to destinations, and availability of power outlets/Wi-Fi. While the passenger survey and long-distance traveler household survey results reflect greatly varying experiences and perceptions, key issues emerged that could help improve the performance of intercity buses in Minnesota in the future:

- The amount of time it takes to get to destinations is very important to both riders and residents. Adding express service may increase interest in intercity bus travel, as 52 percent of passengers said that they would be very or somewhat likely to consider an express bus if it cost 30 percent more.
- While most Minnesotans travel within the state or to other nearby states, intercity bus as a travel mode comes to mind for very few. Increasing awareness of intercity bus may help to increase ridership, as for many, intercity bus is not in their consideration set and the default is to travel by car.

Chapter 5

PROGRAM OVERVIEW AND NETWORK EVALUATION

The MnDOT S. 5311(f) program and its implementation are the focus of this chapter. A brief program overview reveals that, since 2010, changes have included the use of state funding to offset local match, the use of capital for vehicle purchases, and the elimination of funding for planning studies conducted by grant subrecipients. The chapter also evaluates the federal FY 2013 network in terms of multiple performance measures. It identifies network gaps and potential new routes, estimating ridership and performance. The analysis leads to recommended services and policy alternatives for Minnesota's S. 5311(f) program, included in Chapter 6.

Minnesota's Intercity Bus Program

Minnesota is involved with intercity bus services in several ways, primarily through the implementation of the S. 5311(f) program. MnDOT's Office of Transit provides grant funding through a competitive review process in which a designated committee selects projects from submitted applications. The Office of Transit manages the S. 5311(f) rural intercity bus program as part of its overall management of the S. 5311 program.

PROGRAM HISTORY

Minnesota's use of S. 5311 funding for rural intercity bus service under the S. 5311(f) program began following MnDOT's 1997-98 study of rural intercity bus needs. Since the program's inception, MnDOT has funded operating assistance projects each year. Initially both Greyhound and Jefferson Lines participated, implementing a number of different schedules and routes over time in an attempt to serve many of Minnesota's smaller towns. As noted in Chapter 1, S. 5311(f) funding requires a non-federal match of 50 percent of the net operating deficit of operating projects, and 20 percent for capital projects. Historically, MnDOT did not provide any state funding for local operating match, but instead required that applicant carriers provided the required cash match.

The operating assistance program faced its greatest challenge in August 2004, when Greyhound restructured its services in the north central region of the country, dropping all of its S. 5311(f) funded services. MnDOT contacted its other S. 5311(f) grantee, Jefferson Lines, who agreed to provide service on the Greyhound routes under six month contracts. Jefferson service started immediately after the end of Greyhound service, with additional marketing. For a number of years Jefferson provided all of the required local cash match, which is very unusual for a private for-profit company.

The other major change in the operating assistance part of the program was MnDOT's decision to allow applicants to utilize the value of in-kind miles as local match for a number of projects since the 2010 study. As described in Chapter 1, under the S. 5311(f) program the federal share of funding is limited to a maximum of 50 percent of the net operating deficit (operating cost less any fares or other revenue). The remaining 50 percent of the deficit must be funded from non-federal sources. In 2007 FTA began a pilot project that permitted states to redefine S. 5311(f) projects so as to combine rural intercity bus route segments requiring S. 5311(f) operating subsidy together with connecting unsubsidized intercity bus service. The combined project includes the costs, revenues, and subsidy requirements of both segments. Under current FTA guidance, up to 50 percent of the value of the fully allocated operating costs of the unsubsidized segment can be counted as in-kind operating match. In a practical sense, projects can be designed in such a way that the entire net deficit is funded with federal dollars, eliminating the need for local cash operating match. MnDOT has permitted the use of this funding method for several years. A number of routes operated by Jefferson Lines shifted to this funding method, using as in-kind match the value of connecting unsubsidized Jefferson Lines services.

Prior to FY 2014 MnDOT did not provide any portion of the local match for S. 5311(f) operating projects. However, for SFY 2014, MnDOT provided state match to cover the non-federal 50 percent of the net operating deficit, rather than utilizing either carrier cash match or in-kind match (Jefferson Lines provided 50 percent cash match on two routes through SFY 2014). This was to enable the state to utilize unspent funding from previous fiscal years that had been obligated using the standard S. 5311 funding ratios (rather than the in-kind match method). The change should be regarded as a one-time adjustment in program policy to address grants management issues; though MnDOT is considering the continued use of state funding as a means to incentivize program participation. It should be noted that the previous study recommended that MnDOT consider the use of state funds for operating match in the event that in-kind miles are not sufficient, as it makes the intercity program more consistent with funding for local rural transit.

Over time, MnDOT's S. 5311(f) program has also funded a number of capital projects, including facilities, maintenance, and vehicles. One early project that resulted in a federal policy change was the use of S. 5311(f) funding for a portion of the Hawthorne Transportation Center. MnDOT persuaded FTA to allow the use of this funding for a project in an urbanized area because the project serves residents who use rural intercity services to the station. The FTA program guidance now allows the use of S. 5311(f) on projects in urbanized areas in proportion to their use by rural riders.

Other capital projects have included funding to Jefferson Lines for vehicle rehabilitation, and to Greyhound Lines to retrofit over-the-road buses with wheelchair lifts to aid in compliance with Americans with Disabilities Act (ADA) requirements. In 2010 MnDOT provided capital funding for a number of vehicles under the ARRA stimulus program. In SFY 2012-13, regular (non-ARRA) 5311(f) money was used to purchase three mid-size cutaways for the operation of Jefferson Line's non-urbanized services.

The program has also funded marketing efforts for intercity bus, including route specific marketing elements of operating assistance projects, and other marketing studies

Intercity Bus and ADA Accessibility

Following the passage of the Americans with Disabilities Act of 1990, private firms operating over-the-road buses (OTRBs) faced different federal accessibility regulations than public operators. Some confusion existed regarding private firms that operated on behalf of the state. However, the latest S. 5311 program guidance issued under MAP-21 (Proposed Circular 9040.1G) indicates that all vehicles used to provide FTA-funded intercity bus service (by a public entity or under contract to a public entity) must be accessible to and usable by individuals with disabilities, including those in wheelchairs (p. VIII-8).

In addition, all non-S. 5311 fixed route/ schedule intercity service operated with OTRBs by large firms (based on revenue) has to be accessible as of October 2012. Service operated by small mixed service firms operating OTRBs (i.e. firms with less than 25 percent fixed route services) can still follow a 48 hour advanced notice requirement.

PROGRAM PURPOSE AND OBJECTIVES

The S. 5311(f) program purpose follows guidance as included in FTA Circular 9040.1F. The national program objectives of supporting meaningful connections, services that address the intercity needs of residents in non-urbanized areas, and the infrastructure of the intercity bus network are included as objectives in the Minnesota program. Another program objective in Minnesota is to promote the maximum feasible coordination of intercity bus services with local public transit and other modes to provide intercity mobility throughout the state. These objectives fit within broader MnDOT goals as well as the performance measures discussed later in the chapter. The following types of projects are eligible under the MnDOT S. 5311(f) program.

Operating assistance:

- Up to 50 percent federal share of operating deficit on new or existing intercity routes, with 50 percent local or private match.

- Up to 100 percent of operating deficit on new or existing intercity routes, using in-kind local match, based on the capital value of unsubsidized connecting intercity routes.
- Up to 50 percent federal share of operating deficit on new or existing intercity routes, with up to 50 percent state match.

Capital assistance at a ratio of 80 percent federal and 20 percent state/local share for:

- Purchase or enhancement of intercity bus vehicles.
- Construction or enhancement of intercity bus facilities.
- Passenger amenities.
- Technology supporting intercity bus customer service or operations.
- Other operations and maintenance equipment.

Marketing assistance with up to 80 percent federal share, with a 20 percent state/local match. Potential projects could include advertising, traditional passenger information, local coordination activities, or mobility management.

Requests for operating assistance continue to require locally specific marketing activities regardless of whether assistance for a full marketing and/or market research project is the subject of the application. Operating assistance projects require the carrier to fully define the service in terms of frequencies, days of service, schedules, and stops. A route-specific marketing plan is strongly encouraged. The applicant must project costs and revenues for the route, estimate its net operating deficit, and identify the source of the operating match.

AVAILABLE FUNDING

As described in Chapter 1, the S. 5311(f) program sets aside a minimum of 15 percent of each state's S. 5311 formula allocation for rural intercity bus assistance. Based on Minnesota's overall program, Table 5-1 presents the S. 5311(f) amounts for recent years.

Table 5-1:
S. 5311(f) Federal Appropriations

Federal FY	S. 5311 (total)	S. 5311(f)
2010	$ 12,704,164	$ 1,905,625
2011	$ 12,751,576	$ 1,912,736
2012	$ 12,767,441	$ 1,915,116
2013	$15,256,471	$2,288,471

ELIGIBLE APPLICANTS

Entities eligible to submit a project application include private, for-profit intercity carriers; private, non-profit intercity carriers; local transit providers; and public bodies proposing to provide intercity bus service. Each entity type is required to submit documentation that supports their legal status.

Carriers must hold the appropriate operating authority or be in compliance with Federal Motor Carrier Regulations by the time that a project commences (for FY 2014, this was July 1, 2013). The S. 5311(f) application includes this requirement, but does not provide any further guidance as to the appropriate operating authority or sources for further information on compliance with this requirement.

CONSULTATION AND TECHNICAL ASSISTANCE

MnDOT provides technical assistance to intercity carriers completing the S. 5311(f) application. Other MnDOT duties include facilitating coordination, preparing a statewide comprehensive application for FTA, conducting ongoing evaluations, and monitoring project results. Changes in this process since the previous study include the implementation of an annual workshop for applicants and an industry consultation, conducted at least every four years as called for by FTA requirements. The application now notes that the availability of in-kind match requires letters of support from operators of the unsubsidized connecting service, if the unsubsidized service provider is different from the applicant.

PROJECT REVIEW AND PERFORMANCE PERIOD

The Office of Transit conducts a preliminary review of submitted applications to determine their completeness. The intercity review committee then ranks the applications in order of funding importance. The most recent application was for the SFY 2014 period beginning July 1, 2013. In previous program years performance periods had stretched to as many as three fiscal years between application cycles. The next performance period will be 18 months in duration, from July 1, 2014 through December 31, 2015.

CERTIFICATION OF RURAL INTERCITY NEEDS

In May 2013 for the first time Minnesota filed a certification letter stating that it did not need to spend the full 15 percent of the total S. 5311 allocation for rural intercity projects.

Unspent S. 5311(f) funding had accumulated in MnDOT accounts, despite having an active program that addressed all the previously identified needs and valid applications. In part this occurred because some projects were slow to start, and because actual operating deficits were less than expected leaving obligated but unspent project balances. Table 5-2 presents recent federal and state amounts obligated and expended for the program.

Table 5-2: Federal and State S. 5311(f) Funding Obligations and Actual Expenditures

	Contract Start	Contract End	Federal Share			State Share		
			Operating	Capital	Marketing	Operating	Capital	Marketing
Obligated	1/1/09	6/30/11	$ 2,593,580	$ 1,203,920	$ 556,160	$0	$0	$0
Expended	1/1/09	6/30/11	$1,333,968	$1,203,920	$692,369	$0	$0	$0
Obligated	7/1/11	6/30/12	$ 1,054,831	$0	$ 391,060	$0	$0	$0
Expended	7/1/11	6/30/12	$916,657	$0	$354,356	$0	$0	$0
Obligated	7/1/11	6/30/13	$0	$ 864,000	$0	$0	$0	$0
Expended	7/1/11	6/30/13	$0	$428,555	$0	$0	$0	$0
Obligated	7/1/11	6/30/13	$ 1,273,904	$0	$ 453,600	$0	$0	$0
Expended	7/1/11	6/30/13	$1,155,057	$0	$409,279	$0	$0	$0
Obligated	4/1/13	5/15/13	$0	$0	$0	$0	$ 63,942	$0
Expended	4/1/13	5/15/13	$0	$0	$0	$0	$ 63,942	$0
Obligated	7/1/13	6/30/14	$ 999,300	$ 675,440	$ 591,600	$ 826,500	$0	$ 2,560
Expended	7/1/13	6/30/14	NA	NA	NA	NA	NA	NA

CURRENT PROGRAM OF PROJECTS

Table 5-3 presents a summary of the projects funded in the most recent grant year (SFY 2014) showing the applicant, routes, and amount of funding. At each program solicitation, MnDOT may receive a number of individual project applications to be evaluated in terms of the state's overall transportation goals and the program objectives. In that sense there is need to evaluate individual projects, both existing projects that are candidates for continuation, and potential new projects. Also, as noted above, MnDOT periodically conducts the required consultation process in order to determine whether there are unmet rural intercity needs—evaluating the overall network and the role of the S. 5311(f) program in adequately addressing these needs. Although the program has goals and objectives, in the past it has not used performance measures to assess the either individual projects or the overall program. The next section identifies potential performance measures.

Applicant	Route	Total Cost	Revenue	Net Cost	Federal Share	State Share	Local Share (Cash)
Jefferson Lines	Minneapolis – Duluth	$ 398,200	$ 229,000	$169,200	$ 84,600	-	$84,600
Jefferson Lines	Minneapolis – LaCrosse	$ 400,100	$ 223,700	$ 176,400	$ 88,200	-	$88,200
Jefferson Lines	Duluth – Grand Rapids	$ 305,100	$ 58,500	$ 246,600	$ 123,300	$ 123,300	-
Jefferson Lines	Minneapolis – Sioux Falls	$ 663,700	$ 254,500	$ 409,200	$ 204,600	$ 204,600	-
Jefferson Lines	Duluth – Fargo	$ 459,500	$ 117,400	$ 342,100	$ 171,050	$ 171,050	-
Jefferson Lines	Grand Forks – Brainerd	$ 493,100	$ 126,000	$ 367,100	$ 183,550	$ 183,550	-
Land to Air	Mankato – AL – Rochester	$ 141,700	$ 50,200	$ 91,500	$ 45,750	$ 45,750	-
Land to Air	Mankato – O – Rochester	$ 201,400	$ 52,000	$ 149,400	$ 74,700	$ 74,700	-
Rainbow Rider	Morris – Alexandria	$57,100	$10,000	$47,100	$23,500	$23,550	-
SFY14 Total Operating		$3,119,900	$1,121,300	$1,998,600	$999,250	$826,500	$172,800
SFY14 Capital					$675,440	-	-
SFY14 Marketing					$591,600	$2,560	-

Table 5-3:
SFY 2014 Program of Projects
(figures projected)

Network Evaluation

PERFORMANCE MEASURES

The intercity bus program supports Minnesota GO, MnDOT's 50-year vision for a multi-modal transportation system that maximizes the health of residents, the environment, and the economy. To evaluate the intercity bus program and the services it supports, this study proposes three categories of performance measures: availability, awareness, and efficiency. Table 5-4 summarizes these measures.

EVALUATION OF EXISTING (FY 2013) NETWORK

Currently, Minnesota's S. 5311(f) program does not specify performance measures or thresholds with which to evaluate supported routes. Decisions on route restructuring and termination are driven by providers on an ad hoc basis given periodic assessments of ridership and fare revenue. Jefferson Lines, for example, considers boardings per day (ideally 0.5 or more), time costs, and the availability of other transit options when deciding whether or not to eliminate a particular stop. Thus, the first step to evaluating Minnesota's intercity bus program is to apply the performance measures to SFY 2013's S. 5311(f) routes. Understanding the current performance helps to establish thresholds and expectations to guide future decisions as to which routes the program should support.

Table 5-4: Intercity Bus Performance Measures

Category	Measure	FY 13 Status	Benchmark/Threshold
Availability	Number of non-urbanized communities with stops	56 communities	Maintain or increase
Availability	% population within 10 or 25 miles of an intercity stop	10 miles: 79% 25 miles: 95%	Maintain or increase
Availability	Frequency of S. 5311(f) service as a % of network miles	< 7 RTs/wk: 17% 7 RTs/wk: 73% > 7 RTs/wk: 9%	At least daily service for all trunk routes; maintain or increase for regional feeders
Awareness	% population aware of intercity bus service	Household survey: 20%	Maintain or increase, based on annual omnibus survey
Efficiency	Annual passenger boardings per capita, non-urbanized communities	Average and median: 0.07	Maintain or increase individual stop rates
Efficiency	S. 5311(f) farebox recovery ratio by route	Average: 44% Median: 33%	40% or more for trunk routes, 20% or more for regional feeders
Efficiency	Boardings per subsidized trip	Average: 9 Median: 11	10 or more for trunk routes, 3 or more for regional feeders

NUMBER OF NON-URBANIZED COMMUNITIES WITH INTERCITY BUS STOPS

The number of communities with intercity bus stops is a measure of service availability. Currently, 67 communities across the state have intercity stops. Seven of these places have multiple stops (Crookston, Duluth, Minneapolis, Rochester, St. Cloud, St. Paul, and Winona). Of the 67 total communities, 56 are outside of an urbanized area of more than 50,000 in population. As MnDOT considers its S. 5311(f) projects, it should use 56 non-urbanized communities as a threshold to either maintain or increase.

PERCENTAGE OF THE POPULATION IN PROXIMITY TO AN INTERCITY STOP

The percentage of the population within a certain distance of both S.5311(f) and non-subsidized bus stops conveys intercity bus availability in terms of geographic coverage. In rural areas especially, 10 to 25 miles is a reasonable distance for residents to access the network.[1] As of Census 2010, 79 percent of the Minnesota population lived within 10 miles of a Minnesota intercity stop. About 95 percent lived within 25 miles. These percentages

1 The 10 and 25 mile distances are based on Minnesota-specific findings and national industry assumptions. US DOT's Research and Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS) defines a "reasonable coverage radius" for intercity bus stations as 25 miles. Also, the household surveys discussed in Chapter 4 found that roughly half of Minnesotans live with ten miles of an intercity bus stop. See Scheduled Intercity Transportation: Rural Service Areas in the U.S. www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/scheduled_intercity_transportation_and_the_us_rural_population/index.html.

only increase when including stops very close to the Minnesota border like La Crosse and Grand Forks, indicating widespread intercity coverage. MnDOT should review future service changes with the goal of staying at or above these thresholds.

FREQUENCY OF S. 5311(F) SERVICE AS A PERCENTAGE OF NETWORK MILES

Another performance measure for the S. 5311(f) program is the availability of intercity bus service, specifically service frequency. The S. 5311(f) route network covers approximately 1,500 route miles (not accounting for trip frequency or double counting where multiple routes run on one road segment). Similar to the entire network, the majority of those miles have a service frequency of seven round trips per week. However, none of the subsidized route miles have frequencies greater than 21 round trips per week. Ensuring that all S. 5311(f) routes with an origin or destination in the Twin Cities have at least daily service is an appropriate frequency threshold. Additional frequency may be appropriate given demand.

Round Trips/ Week	Total MN Route Miles		S. 5311(f) Route Miles	
<7	287	13%	252	17%
7	1,291	59%	1,063	73%
8 to 21	441	20%	131	9%
22 to 55	159	7%	0	0%
>56	27	1%	0	0%
TOTAL	2,205	100%	1,447	100%

Table 5-5: Frequency of Service by Route Mile

PERCENTAGE OF THE POPULATION AWARE OF INTERCITY BUS SERVICE

Awareness of intercity services is critical to grow ridership and attract new customers. The household survey discussed in Chapter 4 found that, for many Minnesotans, intercity bus service is not in their consideration set as a means of long distance travel. Only 20 percent of residents mentioned intercity bus as a mode that came to mind. In the future, MnDOT will use its annual omnibus survey, a representative survey of Minnesota residents on a variety of transportation-related issues, to ask two questions on intercity bus:

> Q: Are you aware of any inter-city bus service between your city and other Minnesota cities? [Yes, No, Not sure]
>
> Q: Has someone in your household ridden an inter-city bus in the past year? [Yes, No, Not sure]

The next omnibus survey will take place early in 2014. MnDOT may choose to use only that instrument for long-term tracking of awareness, due to slight differences in the presentation and wording of the omnibus and household surveys. However, this study's results still serve as a useful snapshot of the public's current awareness of intercity bus.

ANNUAL PASSENGER BOARDINGS PER CAPITA, NON-URBANIZED COMMUNITIES

Annual boardings on S. 5311(f) routes as a percentage of Minnesota's rural population also indicate the productivity of the program. In SFY 2013, a total of 56,307 passenger boardings occurred on the S. 5311(f) routes (with 2 months of data for Jefferson Lines' 919/920 route). This was about 6 percent of the 2010 non-urbanized area population within 10 miles of a non-urbanized area intercity bus stop. It was about three percent of the non-urbanized area population within 25 miles.

Shown in Appendix I (Table I-1), the average and median trip rates (boardings per capita) for stops on S. 5311(f) routes in FY 2013 were both 0.07. Going forward, stops falling below their FY 2013 trip rate should be reviewed to determine if there are potential actions that might be implemented to improve ridership. If either no actions can be identified or if following implementation ridership continues at that level or below, the carrier would be permitted to eliminate the stop.

FAREBOX RECOVERY RATIO

Farebox recovery is the ratio of fares collected to total operating costs. A high ratio indicates a market for intercity bus services and riders' willingness to pay for the service. It also reflects the degree to which providers are minimizing operating costs. Because routes serving areas of low population cannot be expected to have the same farebox as those routes serving higher density locations, this evaluation proposes a three tier route classification:

1. Unsubsidized routes
2. S. 5311(f) "trunk routes" with an origin or destination in the Twin Cities
3. S. 5311(f) "regional feeders" that do not have and origin or destination in the Twin Cities

Each tier has a different farebox recovery threshold. For the purposes of the S. 5311(f) program, trunk routes should reach a farebox recovery ratio of at least 40 percent, and regional feeders should have a farebox of at least 20 percent. Routes with farebox ratios falling below their classification threshold should be evaluated for improvement, and if

farebox recovery continues at levels below these thresholds following improvement actions, funding for continued service would be considered for elimination.

In FY 2013, farebox recovery on the S. 5311(f) routes ranged from 5 percent to 77 percent, with an average of 44 percent and a median of 33 percent (see Appendix I, Table I-2). Of those with an origin or destination in the Twin Cities (trunk routes), only Jefferson Lines' Red Wing route (since terminated) had a farebox recovery ratio less than the proposed 40 percent threshold. Of the regional feeder routes, Jefferson Lines' Duluth–Grand Rapids route and Land to Air's Owatonna–Mankato route did not meet the 20 percent threshold. However, the Jefferson route had only just been launched, and new services typically take a least two years to achieve their ridership potential. The Land to Air route has since been extended to Rochester, likely impacting its performance.

BOARDINGS PER SUBSIDIZED VEHICLE TRIP

Boardings per trip offer a sense of route level productivity by dividing the total annual passengers by the total annual trips for each S. 5311(f) route. As seen in Appendix I (Table I-2) boardings per trip on Minnesota's S. 5311(f) routes ranged from 23 on Jefferson Lines' Minneapolis–Milwaukee route to only 0.3 on Land to Air's Owatonna–Mankato route in FY 2013. However, as noted under the farebox recovery measure, the Land to Air route's extension to Rochester has likely impacted its performance. As in the case of farebox recovery, there are distinct tiers of service that should be reflected in evaluation. Using the same classification structure, the following thresholds for boardings per trip are recommended:

- S. 5311(f) trunk routes: 10 boardings per trip
- S. 5311(f) regional feeders: 3 boardings per trip

In the future, MnDOT should review and consider service modifications for routes with productivity below these levels (after they have been in operation for two years). In their first year, routes should achieve at least half of the target levels.

Boardings Per Trip, SFY 2013 S. 5311(f)-
Average: 9
Median: 11

Boardings Per Trip, Trunk Routes Only-
Average: 13
Median: 12

Boardings Per Trip, Regional Feeders Only-
Average: 5
Median: 3

NETWORK GAPS

In addition to evaluating the existing S. 5311(f) network in terms of performance measures, it is also important to identify network gaps based on the demographic analysis of Chapter 3. The first step was identifying the places classified as having a high relative density or percentage of transit dependence. Twenty-four of these places are currently unserved by

the intercity network (see Figure 5-1). As shown in Appendix I, Table I-3, an annual number of intercity bus trips was then estimated for each candidate location. The estimated trips for many of the candidates was very low, as little as 71 trips for Onamia. However, the initial list is inclusive, as some of the lower ridership places could be tied to other locations along a route, for example, a connection from Duluth to Two Harbors and Silver Bay.

Another consideration was the distance of the candidate location from existing intercity bus stops. Again, places with lower ridership estimates may still be candidates for service if they are on existing routes (e.g. Kasson, Le Sueur, or Melrose), as the incremental cost of adding a stop is low. In addition, greater distances (e.g. more than 25 miles from a stop) mean more limited access for residents and may warrant expanded service. Some of the candidate locations were formerly intercity stops (e.g. Hastings, Red Wing, New Ulm, Cambridge, Lake City, and Park Rapids). Given their history and past attempts at service, these places may or may not justify restored service.

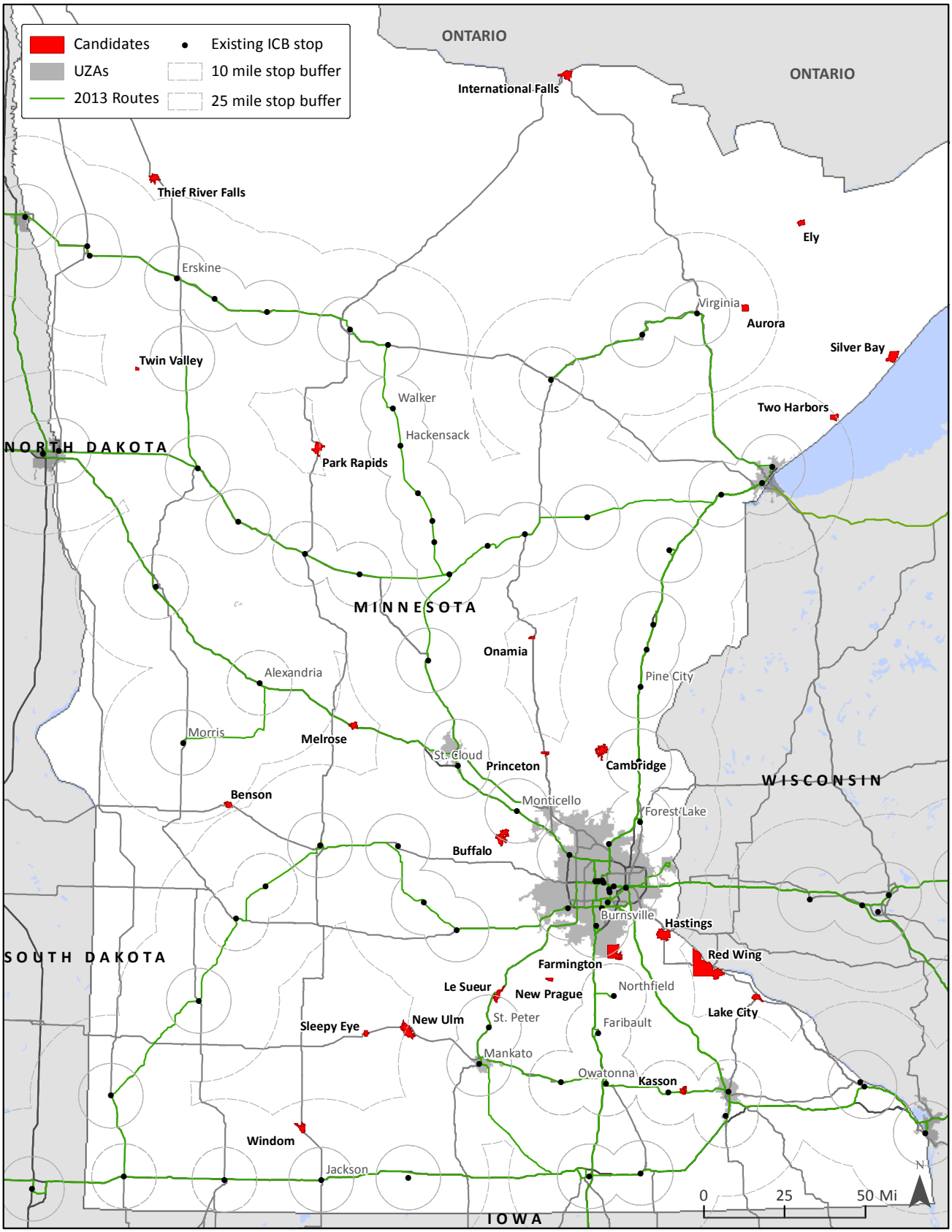
PERFORMANCE POTENTIAL OF UNSERVED CORRIDORS

The next step was to detail existing local transit connections at the candidate locations and analyze their feasibility. Seven of the 24 places had a reasonable local weekday connection, involving less than two hours of wait time. However, only one location had a weekend connection, when the highest volume of intercity bus travel tends to occur.

Though the evaluation of candidate locations revealed some potential new route corridors, it also highlighted the extensive coverage of the current intercity bus network. Unlike other states, intercity bus in Minnesota largely serves key regional destinations and trip generators. Thus, in addition to proposing new corridors or additional stops, another possibility is to strengthen or create local transit connections at existing intercity stops. This step of the evaluation looked at all the intercity stops and calculated the number of trips potentially generated by local transit transfers. The estimates were based on Chapter 4's household survey findings that approximately 10 percent of intercity bus riders transfer from local transit. None of the existing stops can be expected to benefit from more than 212 annual local transit trips (see Appendix I, Table I-4). These low estimates suggest that bolstering local transit connections must be done in a targeted manner.

Because the network gap analysis resulted in the identification of candidate stop locations rather than routes, a subsequent phase involved the development of hypothetical routes. As a preliminary assessment of feasibility, the TCRP 147 Rural Intercity Demand Toolkit was used to estimate ridership for the potential routes (see Appendix J for a thorough

Figure 5-1: Candidate Intercity Bus Stop Locations



explanation). Based on the Toolkit results, Figure 5-2 presents a map of the existing intercity network with the following seven potential intercity routes added.

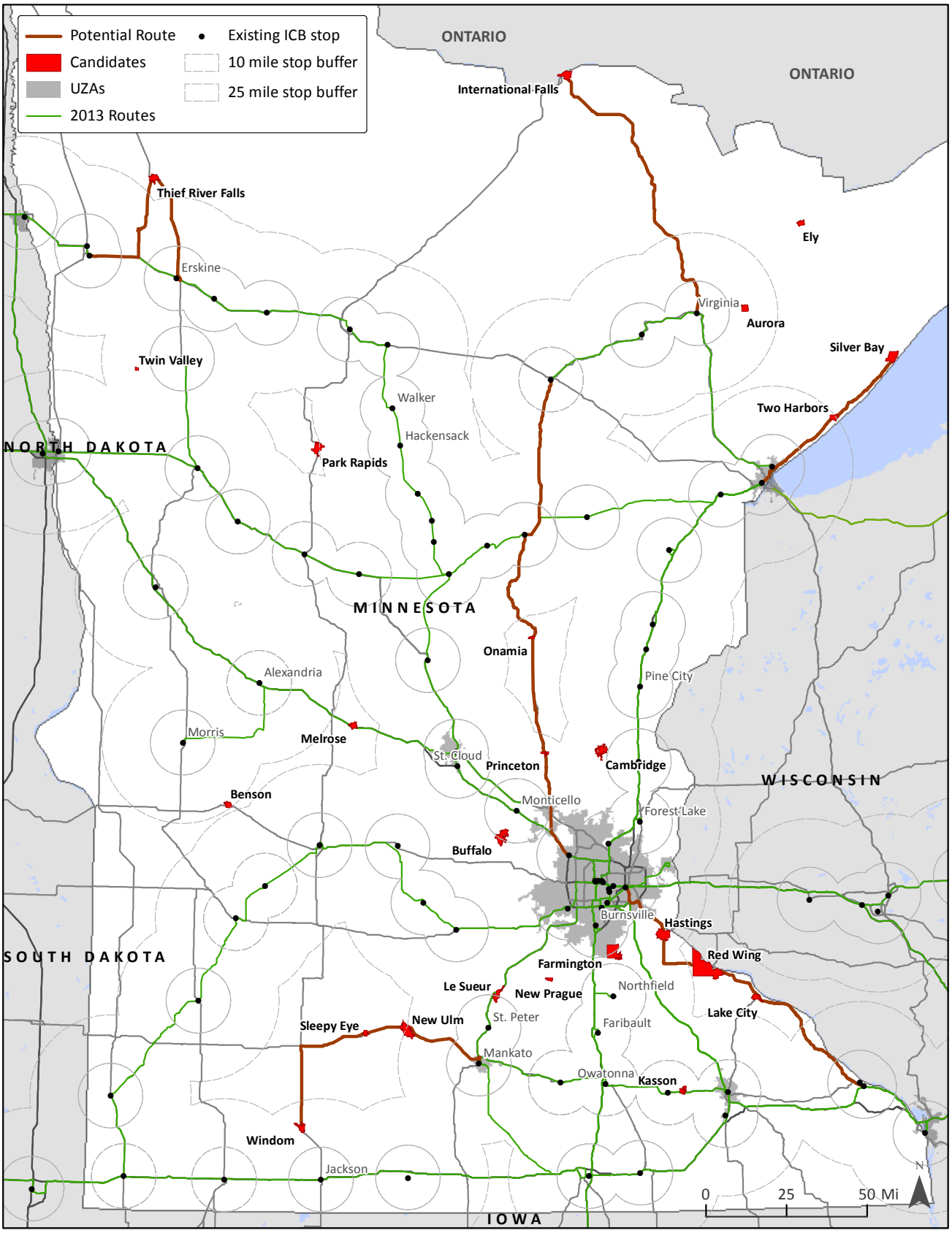
- Thief River Falls – Crookston
- Thief River Falls – Erskine
- Virginia – International Falls
- Minneapolis – Grand Rapids via Rt. 169
- Minneapolis – Winona
- Silver Bay – Duluth
- Windom – Mankato

Appendix J, Tables I-5 and I-6, present the estimated ridership, operating costs, and revenues for the potential routes. The routes range in length from about 34 miles to almost 184. Estimated ridership ranges from 200 passengers annually on the Minneapolis–Aitkin–Grand Rapids route to almost 5,250 annually on the Minneapolis –Winona route. Assuming daily frequency, only the Minneapolis–Winona route meets the applicable boardings per trip performance measure threshold.

The projected farebox recovery levels of the potential routes range from one percent for the Duluth–Silver Bay route to 38 percent for the Minneapolis–Winona route. Again, only the latter approaches the 40 percent farebox recovery ratio threshold set for subsidized trunk routes. Net deficit per passenger ranges from $1,523 on the Minneapolis–Grand Rapids route to a low of $24 on the Minneapolis–Winona route.

Though the Minneapolis–Winona route appears to merit consideration based on the established performance measures, it is again important to note the availability of Amtrak service along that corridor. In addition, the Tri-Valley Heartland Express is currently studying the potential of a Thief River Falls–Crookston route. Thief River Falls is home to both the Sanford Medical Center and Northland Community and Technical College, which may add to projected ridership estimates. Chapter 6 will build on this network expansion analysis, recommending specific services and policies for MnDOT to pursue.

Figure 5-2: Potential Intercity Routes



Chapter 6

RECOMMENDATIONS

The program recommendations presented in this chapter build upon the findings, research, and input documented in the previous chapters. The key findings are that Minnesota has a high level of intercity bus coverage, given the combination of the market-based services and those funded by MnDOT through the S. 5311(f) program. Survey findings reveal, however, that there is relatively little awareness of the available service.

This study's technical advisory committee (TAC) provided significant input regarding potential changes to the program, based in part on their review of the findings and analysis, but also on their experience with other modes, services, and programs. In general, their consensus was that the primary focus of the program should be on maintaining the coverage of the existing statewide network and improving those aspects that involve customer contact and needs, developing the network rather than expanding it. A list of TAC members is included in Appendix K.

Program Options and Prioritization

Based on the TAC's input and assessment, the program recommendations (each discussed in more detail below), in priority order, are:

1. Maintain the coverage of the current network,

2. Increase marketing and information efforts to raise awareness and usage,

3. Support intercity bus infrastructure by providing capital funding for vehicles, amenities, and passenger facilities, and

4. Allow limited service expansion.

In addition to the recommendations above, the TAC supported other program options at a lower priority. These included funding to replace carrier vehicles, fare reductions, use

of intercity bus funding for transit connections, statewide signage, and new intercity bus routes.

The TAC recognized that improvements desired by intercity travelers who do not currently use intercity bus services may not be easily fulfilled by the MnDOT S. 5311(f) program, which is focused on providing service to rural communities. Under the current program, additional service frequency would add costs and reduce performance by spreading limited ridership over more trips—potentially to levels below the performance measures accepted by the TAC. The desire of intercity travelers for more stops or destinations was evaluated in Chapter 5, where it was determined that few unserved locations could be addressed by additional intercity bus routes while meeting minimum performance standards. Faster travel times can only be provided by eliminating stops and making services express. Since the desire is to maintain coverage and provide access from rural areas, this requires adding schedules that are express in addition to local services. Adding schedules is only feasible if demand is sufficient to support more than the current level of service. S. 5311(f) funding is for services from non-urbanized areas (under 50,000 population), so it cannot be used to fund the express services between urbanized areas. Faster services may be provided in the future where the market can support them (e.g. the Duluth–Twin Cities corridor).

1. MAINTAIN STATEWIDE NETWORK COVERAGE

Maintaining the statewide network (or expanding in cases that appear to have sufficient demand) includes several program implications:

- Continue operating assistance: fund current routes, subject to the application of the previously discussed performance measures (if these services are not meeting the performance criteria after a development period, they should be revised, and if they still are not productive resources should be shifted to other potentially more productive services).

- Revise the S. 5311(f) application: specifically solicit applications for particular corridors to maintain intercity bus services. The application may also be open to those who have proposals for different or other services, which would also be evaluated in terms of their ability to meet state goals and performance standards for the program.

- Potentially provide state funding for local match: draw on state funding for the local operating match if there are not sufficient unsubsidized connecting service miles available from the applicant to match the federal operating assistance. In the past

carriers also provided cash match for many S. 5311(f) funded services, but this practice may be more limited in the future as a result of increased competition on unsubsidized services. The role of state funding will depend on:

  - The required subsidy to maintain the statewide network at the desired farebox recovery levels (from performance measures).
  - The available unsubsidized miles with meaningful connections.
  - To what extent Minnesota will utilize in-kind miles not captured in other states.

- Consider longer contract periods: extend grant contract periods (longer than a year) in order to promote carrier willingness to invest in equipment and facilities. Carriers have pointed out that obtaining funds to purchase vehicles or facilities may well require multi-year pay back periods, and that lenders see risk in one-year grant agreements under a competitive program. However, this presents grant management challenges for MnDOT, given FTA requirements for prompt grant close-outs.

The Oregon Department of Transportation (ODOT) S. 5311(f) program allows for two types of application responses. As part of the overall grant solicitation, providers may apply for funding for intercity services based on local needs or provider concepts. In addition, there is a separate solicitation for specific services in corridors that ODOT has identified as gaps in the network. This hybrid approach allows the state to define and maintain a statewide network, yet local or regional providers may also submit proposals for locally-identified needs.

2. INCREASE MARKETING, AWARENESS, AND INFORMATION

The second program priority is to provide support for projects that increase statewide awareness of the intercity bus network and its connections with local public transportation. The focus of this effort would be on statewide marketing actions to increase public awareness of the mode as a whole, and would be in addition to marketing funding provided to carriers to market specific subsidized routes. These activities could include:

- Employ marketing techniques such as “ambassadors” on campuses, etc. that are more likely to have payoff than high cost media (TV, etc.). Ambassadors could provide students with information on the intercity bus network and promote the mode at campus events.
- Increase the use of social media to reach potential riders.
- Support the development of transit information systems to include intercity services—develop GTSF (route and schedule) data for intercity network, make it available to Google Transit, app developers, and carriers.

- Consider ways in which this information can be provided through MnDOT—511, etc.

- Undertake targeted marketing to reach public transit providers that are on the existing intercity bus network. Develop their ability to bring connecting local passengers to the network—have them make the information available to their customers. MnDOT may need to find a way to pay feeder trip costs, as providers may hesitate to spend local operating dollars.

- Develop and implement a statewide trailblazer and intercity bus stop signage program.

- Provide real-time information on bus location via cellphone to improve the customer experience—if the bus is only once or twice a day, on a long route, the customer would really like to know if it is running on-time or is late.

GO Bus is the brand developed for intercity bus services funded by the Ohio Department of Transportation using S. 5311(f). The GO Bus program has been quite successful, including wrapped buses, Wi-Fi and power outlets on all buses, well-marked stop and terminal locations, a supporting website with connecting services, a simplified and promoted fare structure, extensive local promotion at stop locations in its service area, and support coordination with local transit systems and agencies. The overall program budget is approximately $2.8 million, less fare revenues of approximately $400,000. The annual marketing budget is $54,000 or about 2.5%, with additional administrative staff time that should be allocated to the marketing function.

The appropriate amount of marketing expenditure as a percent of revenues (or percent of operating budget) varies considerably depending on the particular industry and market. A rule of thumb is that consumer product companies should spend between 6 and 12 percent of revenues on marketing, with firms that are launching new products or entering new markets spending higher percentages, perhaps as much as 20 percent. Typically transportation firms spend less—the rule of thumb for appropriate marketing budgets in urban transit is that a system should spend 2 percent of its operating budget on marketing. Southwest Airlines typically spends 2 percent of revenues on marketing, though the percentage was higher in its initial years. In considering the appropriate level of marketing funding for Minnesota's intercity bus network, it should be noted that the state and its grantees have spent approximately $260,000 per year in federal and state funds over the past six years for marketing projects, approximately 9 percent of the total federal and state expenditures. This level of funding needs to be considered in relation to the total operating budget of both subsidized and non-subsidized services, not just the S. 5311(f) program routes. It may also have included activities that other industries or firms would consider as administrative expenses or the cost of selling (as opposed to marketing). In any event, the key issue will be

finding additional creative ways to leverage this investment to increase awareness among potential users.

3. SUPPORT INTERCITY BUS INFRASTRUCTURE

The MnDOT program should also provide support for the infrastructure needed to support the statewide network as an eligible S. 5311(f) expenditure. This could include:

- Vehicle capital: provide funding for vehicles needed to maintain the funded S. 5311(f) services subject to key considerations.
    - Fund vehicles used on the S. 5311(f) routes—if these services are operated by vehicles purchased with federal capital, the per mile operating costs should be adjusted to take out the depreciation on the vehicles so that federal funds are not used to pay twice for the vehicle.
    - Do not fund vehicles that operate in-kind match routes, as the value of the in-kind contribution is the capital the firm is providing to operate these services, and the use of a federally-funded vehicle would mean that the operator is not contributing the value of capital as in-kind.
    - Provide vehicle capital through a public or private non-profit eligible entity that can re-assign the vehicles to a new operator in the event that the private operator of a service changes over time.
- Funding for amenities to improve the customer experience: provide funding for new or existing vehicles to have amenities to improve the customer experience, responding to the desires of intercity bus passengers surveyed. This would include Wi-Fi and power outlets. Operating funding for support of Wi-Fi should also be considered as an eligible cost.
- Funding for shelters: consider shelters at rural stops with annual ridership above 1,000 trips per year as potential capital projects. Shelter projects should have a public sponsor/owner if not MnDOT in order to insure that they are maintained and policed.
- Funding for operating facilities: Consider operating/storage facilities within Minnesota where buses are overnighted as eligible capital projects. Such facilities would require public ownership to ensure continued use for public transportation purposes, but could be leased to the operators of S. 5311(f) services.

- Funding for intermodal terminal facilities: consider public intermodal terminal facilities at high boarding locations/transfer points where passengers have to wait (e.g. Brainerd) as eligible projects. Minnesota already has a number of public terminals that service intercity bus passengers, and future projects should be limited to locations that do not already have such facilities, are major transfer locations, and have significant ridership. As in the case of operating facilities, these should be owned by a public entity to ensure continued use as a public transportation facility in the event that the operating carrier changes.

- Funding for elements of Park & Ride facilities: consider elements of Park & Ride facilities that would support rural intercity bus usage as eligible for intercity bus program funding. These facilities would also need to be publicly-owned, and the intercity bus elements could include bus slips, shelters, small buildings, and parking related to the level of bus ridership. Such facilities could be included in an overall park and ride strategy, and could be leased to bus operators.

4. PROVIDE LIMITED SERVICE EXPANSION

Finally, limited service expansion is a lower program priority, primarily by improving coordination between local public transit and intercity bus services. Potential projects could include:

- Rural intercity feeder services: fund a limited expansion of rural intercity feeder services (like the Alexandria-Morris connection) to link identified unmet need locations off the network (or on the network but not served by intercity bus) with nearby stops. Such services would need to be scheduled to make meaningful connections, ideally serving multiple markets (meeting local needs as well as intercity bus connections) if possible. They would likely be operated by rural transit providers. The frequency of such services may be less than daily.

- Strategic expansion of local public transit: fund additional service hours for local public transit systems. This could include additional service hours Friday evenings and on Sundays (in cases with local colleges especially), allowing local systems to provide connections during peak periods of intercity bus ridership.

- Limited intercity bus route service expansion: in order to address the goal of daily service, or to improve accessibility and ridership, consider funding a limited expansion of current network services, particularly with regard to frequency or to improve the attractiveness of schedules.

OVERALL CONSIDERATIONS

Achieving the primary goal of maintaining the statewide intercity network is feasible within the current funding context, with the program utilizing its S. 5311(f) allocation primarily for operating assistance. In FY 2013, the estimated net operating deficit identified in program operating grants was $1,998,600 ($999,250 federal funding, $826,500 state funding, and $172,800 local funding). No match was provided using in-kind funds. If there had been no state share or local cash match provided, and in-kind match had been used for all of the operating program, the federal share would have been equal to the net operating deficit, $1,998,600, which is less than the FY 2013 S. 5311(f) allocation of $2,288,471. While the actual annual net operating deficit may differ, the fact that it is less than the federal allocation means that, in general, maintaining this network is feasible even if federal funds are used for 100 percent of the subsidy. However, utilizing federal funding for operating assistance at this level on an on-going basis would leave limited federal funding for other program areas such as marketing or capital.

For the 2014-2015 grant application cycle, MnDOT notified potential applicants that available Federal funding would likely exceed the subsidy requests, if upcoming project applications followed historical precedent. This funding surplus results in part from accumulated program balances from previous years, as actual invoices have drawn down less than the obligated funding amounts (reflecting that some services have performed better than anticipated). Given the goal of maintaining the network, and the anticipated level of federal funding, the financially constrained program should fund operating projects at a level that is sustainable out of the annual federal allocation (using the in-kind match). Simultaneously, the program should expend funds out of the accumulated balance for investments that could potentially reduce the operating deficits in future years, either by reducing operating costs (through provision of vehicles), or increasing ridership (through improved awareness or customer amenities). The best combination of operating, capital, and marketing projects cannot be determined in advance of the applications, but the policies presented in this chapter, and the performance measures presented in Chapter 5 can help MnDOT evaluate applications and monitor the program over the next several years.

This study has documented that MnDOT, in partnership with its grantees, has developed and maintained a sustainable intercity bus network that links the rural areas and small towns of Greater Minnesota with the Twin Cities, offering connectivity to destinations across the country. This network complements the services that are offered by the private market, providing coverage that cannot be sustained by fare revenue alone. Current passengers are generally satisfied with the service, but many potential passengers are

unaware that intercity bus is an available option. Improved marketing and information is needed to grow ridership. This network differs from most transit programs in that it is designed to complement the services provided by the marketplace; thus it is more difficult to lay out a program of specific projects. Because of the dynamic relationship between the private industry that provides intercity services and the MnDOT rural intercity bus program, this study has focused on identifying overall priorities and developing performance measures to assist MnDOT in its ongoing management of the program.

Appendix A

FEDERAL AND CARRIER POLICIES

Federal Policies

The 2005 federal transportation authorizing legislation, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) included a change in the FTA definition of public transportation that affects the ability to use federal transit funds for intercity bus services. This definition is included in the most recent reauthorization, Moving Ahead for Progress in the 21st Century (MAP-21) enacted in July 2012. The language excludes intercity bus transportation from the definition of public transportation that is supported with federal funding. In SAFETEA-LU there were three exceptions: the S. 5311(f) rural intercity bus assistance program, intermodal facilities, and the S. 3038 Over-the-Road Bus Accessibility Program. Under MAP-21 the S. 3038 program has been eliminated, so there are now only the two exceptions for which federal funding can be used for intercity bus services. This means that public transit agencies that receive FTA funding cannot operate intercity bus service between urbanized areas (with stops only in the urbanized areas)—this is a market reserved for the private for-profit industry.

FEDERAL FUNDING FOR INTERCITY SERVICES—S. 5311(F)

Federal S. 5311(f) funds are used in a majority of states to support rural intercity bus services. S. 5311(f) has existed in the same general form since 1992, when it was created as the Section 18(i) program of assistance for rural intercity routes as part of the 1992 ISTEA (Intermodal Surface Transportation Efficiency Act) transportation authorizing legislation. This program was subsequently codified as 49 USC S. 5311(f), and is fully described in Chapter VIII of Circular 9040.1F, the current S. 5311 guidance. The basic outline of the program has remained the same since 1992, though there have been some changes and re-interpretations over the years as the program has been implemented. SAFETEA-LU included language that resulted in more substantial changes, and MAP-21 included some additional changes in this program.

CONSULTATION REQUIREMENT

The major program change under SAFETEA-LU was that states planning to certify (partially or completely) that they do not need S. 5311(f) funds to meet intercity travel needs are required to undergo a consultation process prior to certifying, and state transit programs are being evaluated on this activity as part of their FTA State Management Reviews. FTA requires the consultation process to include identification of the intercity carriers, definition of the activities the state will undertake as part of the consultation process, an opportunity for intercity carriers to submit information regarding service needs, a planning process that examines unmet needs, and documentation that the results of the consultation process support the decision to certify—if, in fact, that is the final decision. MAP-21 continues this requirement. In Minnesota, the current assessment of intercity bus needs consists of two parts: 1) this study, which is a planning-level analysis of needs with a broad range of inputs, and 2) the industry consultation, which is a more targeted outreach effort to solicit input from providers and invite their participation in the program. This study incorporates feedback gathered during the 2013 consultation.

REQUIREMENT FOR A MEANINGFUL CONNECTION TO THE NATIONAL NETWORK

The S. 5311(f) program is implemented by each state as part of its overall S. 5311 program management activities. FTA guidance makes clear that S. 5311(f)-funded intercity services must take schedule considerations into account to have a meaningful connection with scheduled intercity bus services to points outside the service area, adding a dimension (schedule) to the definition of a meaningful connection. The requirement that services funded under this program make a meaningful connection with the national network has the effect of narrowing the definition of eligible intercity service under S. 5311(f). Regional public transit and airport carriers are typically excluded from the definition.

UNSUBSIDIZED CONNECTING SERVICE AS IN-KIND OPERATING MATCH

Obtaining the 50 percent local cash operating match required under the S. 5311(f) program has been a major program issue, particularly in states that provide no state operating assistance. Historically Minnesota did not provide state sources of funding to serve the federal requirement for local match for the rural intercity program, but its major participating private carrier, Jefferson Lines, did provide the match through private revenues. As described in Chapter 1, FTA has issued guidance permitting the use of in-kind match based on the value of connecting private unsubsidized service for S. 5311(f) operating funds. If the value of the in-kind match for a particular project is sufficient, it is possible to operate S. 5311(f) connecting service without local cash match.

Potential changes in FTA guidance concerning the in-kind match funding method could assist states in drawing down available federal funding and avoiding the need to certify that there are no unmet needs solely because of lack of match. The in-kind match funding method began as a pilot program in 2007, and was continued administratively through the end of SAFETEA-LU. It is now included in MAP-21 as statute, so it is a part of the on-going program. The statutory language in MAP-21 does not include the previous administrative program's limitation of the value of in-kind match to 50 percent of the fully-allocated cost of the unsubsidized connecting service. FTA's draft update of the S. 5311 circular continues the 50 percent limit on the amount of the value of in-kind match—however these regulations are not final. If there is an increase in the allowable value of service as in-kind match, it will be easier to find enough match for services funded under this program.

Following recommendations in the previous study, Minnesota has used the in-kind match approach extensively to fund many rural intercity services, with Jefferson Lines providing the in-kind match.

S.3038 OVER-THE-ROAD BUS ACCESSIBILITY PROGRAM GRANTS

This program was authorized as part of TEA-21 (Transportation Equity Act for the 21st Century), continued under SAFETEA-LU, and eliminated under MAP-21. It made funds available to private operators of over-the-road buses to pay for the incremental capital and training costs associated with compliance of the final U.S. DOT rules on over-the-road accessibility.[1] As the regulations addressing private operators of over-the-road buses required large fixed-route carriers (such as Greyhound) to be fully accessible by October 2012, this program was not continued.

FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION (FMCSA)

The other major federal policy framework affecting intercity bus service is the regulatory framework of FMCSA. FMCSA is an agency of U.S. DOT, and is one remnant of the regulatory authority formerly exercised by the Interstate Commerce Commission. FMCSA does not have any role in the economic regulation of the intercity bus industry; its focus is on ensuring that the firms providing service in interstate commerce are financially responsible (have the required levels of insurance) and operate within the federal safety requirements. Thus FMCSA is important to MnDOT in that intercity bus carriers in the state that offer interline service to interstate passengers must meet FMCSA requirements, with some limited exceptions.

1 49 CFR Part 37, published in the Federal Register on September 28, 1998 (63 FR 51670).

Greyhound, for example, requires that its interline partners have FMCSA authority to operate—even if they do not themselves operate interstate service. Under FMCSA rules, interstate commercial vehicle operators that receive FTA funding are required to have the highest insurance levels required by the states served.

FMCSA policing of insurance and safety allows MnDOT to address these issues by requiring FMCSA registration and compliance, rather than overseeing these regulations as part of its intercity bus program. The major changes in FMCSA oversight in recent years have included a stepped-up focus on intercity bus passenger carrier safety enforcement, particularly focusing on carriers that have identified safety issues. Changes have been made to make it more difficult for a carrier that is shut down for safety violations to reopen the next day under a different name.

Carrier Policies

INTERLINING AND THE NATIONAL BUS TRAFFIC ASSOCIATION

The NBTA is a non-profit clearinghouse for interline bus tickets that allow passengers to travel on more than one bus carrier. NBTA members can sell a single ticket to passengers who may need to use other carrier members to reach their final destination. In Minnesota, Jefferson Lines and Greyhound are NBTA members but Megabus is not. Because NBTA member carriers try to function as a network, they often serve common terminals and coordinate schedules to facilitate passenger connections. In addition, NBTA offers a sponsored membership to regional or rural public transit operators that provide connecting service to an NBTA member, allowing them to sell interline tickets and have the ticket cleared through NBTA. Rainbow Rider Transit is an example of a sponsored member.

FTA guidance states that rural intercity bus services funded by S. 5311(f) must provide meaningful connections with the national intercity bus network. In order to meet this requirement, many states have adopted S. 5311f) policies that require recipients to be NBTA members or participate in the sponsored carrier program.

Appendix B

INTERCITY BUS RESEARCH

Research on Curbside Buses

A limited number of studies have examined and collected reliable data on intercity bus services and ridership. The available data indicate that U.S. cities experienced a significant decline in conventional intercity bus service between 1960 and early 2006, due to the rise of car ownership and air travel, increasing household incomes, and the decline of city centers. Conventional intercity bus service had come to be considered a last resort of travel, but 2006 saw a revival of the industry. The level of intercity bus service nationwide increased for the first time in 40 years, largely due to new service provided by curbside buses.[1] The trend of annual growth in intercity bus services has continued since then, as shown in Exhibit B-1.

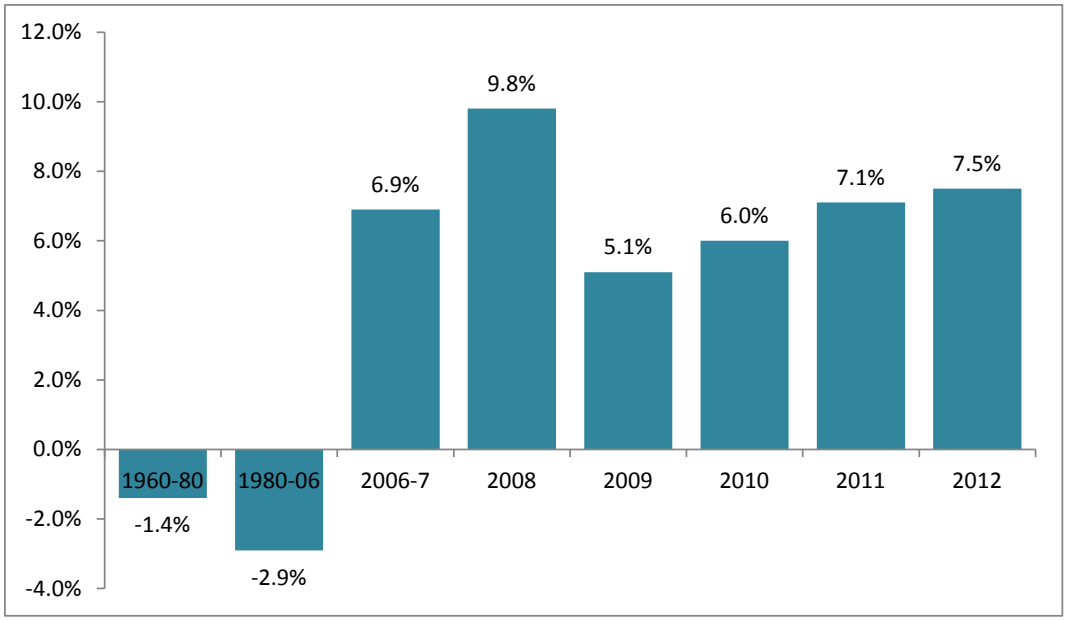


Exhibit B-1: Changing Level of Intercity Bus Service (Percentage Annual Growth and Decline).

Source: Schwieterman et al.

1 Schwieterman, J., L. Fischer, S. Smith, and C. Towles. "The Return of the Intercity Bus: The Decline and Recovery of Scheduled Service to American Cities, 1960-2007." *Intercity Bus Research*. Chaddick Institute for Metropolitan Development, DePaul University, 2007. Web. 2 Oct. 2013.

The increased service levels primarily reflect service expansions and the development of new hubs by curbside operators, particularly BoltBus and Megabus, but also include expansion of Greyhound and Peter Pan's premium service into new markets. The level of service provided by the curbside operators increased by more than 30 percent annually in both 2011 and 2012. Whereas curbside buses initially operated around Chicago and the northeast, service has expanded to the west, pacific northwest, and south. One of the newest developments has been corporate curbside buses starting to acquire regional bus lines to expand their national network, as exemplified by Coach USA to expand the Megabus network. This has introduced discounted, express intercity bus service to many corridors that lacked high quality intercity bus or rail service for many years.[2]

POLICY ISSUES REGARDING CURBSIDE BUSES

- Impact on Rural Intercity Bus Service. Curbside buses generally link major cities, often serving smaller cities only if they have a major university. The growth of curbside services may have had negative impacts on traditional intercity services, as firms such as Greyhound have eliminated stops in smaller towns in order to compete.

- Safety. The safety of curbside bus services has been a public concern highlighted through press coverage of several accidents in recent years.[3] Consequently, both corporate curbside carriers and traditional intercity bus providers have promoted their commitment to safety.

- Equity. The predominant sale of curbside bus tickets online, which requires the use of a credit card, has implications for equity. Curbside bus operators have also had to address equity issues for persons with disabilities.

- Curbside Conditions in Cities. A significant concern raised by municipalities in the last few years has been the congestion on sidewalks and streets at locations where curbside buses pick up and drop off passengers. Curbside bus companies have increasingly worked with municipal officials to identify pick up and drop off locations, but this process has been contentious in some cities.

2 Schwieterman, J., B. Antolin, P. Largent, and M. Schulz. "The Motor Coach Metamorphosis: 2012 Year-in-Review of Intercity Bus Service in the United States." *Intercity Bus Research*. Chaddick Institute for Metropolitan Development, DePaul University, 2013. Web. 2 Oct. 201

3 Ibid.

Other Recent Intercity Bus Research

TRANSPORTATION RESEARCH BOARD DOCUMENTS

In addition to the research covering the rise of curbside buses, there are a number of other recent publications addressing the intercity bus industry. The Transit Cooperative Research Program (TCRP) and the National Cooperative Highway Research Program (NCHRP) have three publications currently available addressing intercity bus services.

TCRP REPORT 79: EFFECTIVE APPROACHES TO MEETING RURAL INTERCITY BUS TRANSPORTATION NEEDS (2002)—KFH GROUP, INC.

This study was intended to assist communities, providers, and state administrators in identifying strategies to support rural intercity bus transportation, and to identify methods of planning, funding, operating, and marketing these services. It included a survey of states to identify funded intercity bus projects, and a survey of the projects to assess potential solutions and identify barriers and model strategies. The resulting report is divided into three parts: Part I addresses needs, funding, and programs; Part II defines strategies to support intercity services; and Part III provides detailed project descriptions.

The report identified potential barriers to the implementation of rural intercity bus projects, including lack of sponsors to provide local operating match. The report identified a number of different types of projects, and a process that could be used to identify appropriate projects given the needs and goals of a particular jurisdiction. Minnesota's operating, capital, and marketing projects were included in the surveys and project descriptions.

TCRP REPORT 147: TOOLKIT FOR ESTIMATING DEMAND FOR RURAL INTERCITY BUS SERVICES (2011)—KFH GROUP, INC., WITH JASON K. SARTORI

The fundamental goal of this project was to develop an easy to use tool for estimating the potential demand for rural intercity bus services. The study collected data from over a hundred projects, classifying them in an effort to reduce the wide variation in service types, providers, and ridership. Eventually a more limited set of projects was used to develop two tools to estimate rural intercity bus ridership. One tool is a regression model that estimates ridership as a function of route length, carrier type, and whether or not service is provided to an airport and/or a major correctional facility. The other tool is a trip rate model developed from data collected in the National Household Travel Survey, in which ridership

is based on stop level population and then summed over the route. Neither model is sensitive to fares or frequency, as the calibration base had little variation in per mile fares or frequency. Data from Jefferson Lines was used as part of the calibration. The Toolkit is used in this study to assess potential routes, as explained in more detail in Appendix J.

NCHRP RESEARCH RESULTS DIGEST 356: ANALYSIS OF STATE RURAL INTERCITY BUS STRATEGIES-REQUIREMENTS FOR UTILIZATION OF S. 5311(F) FUNDING (2011)—KFH GROUP, INC.

This report documents research conducted under two NCHRP Project 20-65 task orders: Task 20—Analysis of Rural Intercity Bus Strategy and Task 25—Evaluate Requirements for the Utilization of Section 5311(f) Funds for Intercity Bus Service. In many ways an update to TCRP Report 79, this project involved a survey of state rural intercity bus programs to identify implementation progress and strategies. It included an assessment of regular-route service (funded and not funded), state implementation of the S. 5311(f) program, classification and assessment of different state approaches, case studies of "successful" programs, and then a general description of a "model program."

The MnDOT intercity bus program was included as one of the case studies of "successful" programs, and the model program has many elements of Minnesota's program. The model includes some additional elements that could be considered for Minnesota—including a shift from an "open" application process (applicants develop the services or projects and submit them) to one in which the state identifies corridors, services, or projects and then solicits specific applications to address those needs.

OTHER RESEARCH

In addition to the TCRP/NCHRP research, there have been additional papers on intercity bus over the past few years. Mintesnot Woldeamanuel evaluated the intercity bus industry based on sustainability indicators.[4] He found that intercity bus is an environmentally friendly, economically viable mode of long-distance travel, worthy of policy consideration as a means of serving an increasing population of older adults, rural residents, and those without a personal vehicle (by choice or not).

4 Woldeamanuel, Mintesnot. "Evaluating the Competitiveness of Intercity Buses in Terms of Sustainability Indicators." J*ournal of Public Transportation* 15.3 (2012): 77-96. Print.

An intercity bus service funding and assessment methodology was developed by a team of researchers for the Montana DOT.[5] This paper includes an overview of the S. 5311(f) program and its requirements, but the primary focus is on a methodology developed for Montana to determine if its rural intercity bus needs are adequately met, and if so how to allocate funds to other rural services. Basically the process identifies existing and potential routes based upon historic route patterns, demographic analysis, and public input. For these routes actual or estimated demand is used to estimate cost per mile and cost per ride, and a threshold set (at the 85th percentile) below which proposed projects are considered not cost effective. The percentile is based upon its use in traffic engineering and in setting speed limits.

Another state-supported research project is the *Analysis of the 2011 Michigan DOT Intercity Rail and Bus Passenger Surveys*.[6] This report documents surveys of intercity bus and rail passengers by the Michigan DOT. Passengers on Greyhound and Indian Trails intercity services were surveyed in the spring of 2011, along with passengers on Amtrak rail and Amtrak Thruway buses. The survey collected information on passenger characteristics, boarding and alighting locations, access modes and travel times, destinations, trip purpose, and possible alternative modes. In general, Michigan's intercity bus passengers were making trips to visit friends or family (59 percent). Most passengers used an auto to access the service, though 12-15 percent used local transit, and 22-27 percent used another intercity bus (highlighting the importance of network connections). The main reasons for choosing intercity bus included total cost of the trip (55 percent) and the convenience of the schedule (37 percent). Rider characteristics included a median age of 31.5, slightly more female riders, and a median household income of $19,100.

5 Ye, Zhirui, David Kack, Jaydeep Chaudhari, and Levi Ewan, "Intercity Bus Service Funding and Assessment Methodology." *Journal of Public Transportation* 15.3 (2012): 113-128. Print.

6 Sperry, B.R. and C.A. Morgan. "Analysis of the 2011 Michigan DOT Intercity Rail and Bus Passenger Surveys." Prepared for the Michigan Dept. of Transportation. Texas Transportation Institute, 2012. Print.

Appendix C

MINNEAPOLIS-ST. PAUL (MSP) AIRPORT SHUTTLES

Provider	Service Area	Intermediate Stops	Service Hours	Freq.	Scheduled Trips	One-Way Fares	Reservation Required?	Notes
Chippewa Valley Airport Service	Eau Claire, WI and Rice Lake, WI to MSP	Hudson, Baldwin, and Menomonie, WI on the Eau Claire route. Barron, Turtle Lake, and Baldwin on the Rice Lake route.	3 a.m. - 1:35 a.m. daily (last trip leaves Eau Claire at 6:10 p.m. and MSP at 11:55 p.m.). Driver may wait 15 min.	1.5 - 2.5 hours	11 RT daily	$25-$50, $15 for children 10 years and under with parent. $25 from Rice Lake, discounted rates for groups of 3 or more.	Yes, prepaid reservations (by credit card) required to MSP, online, by phone, or locations in Eau Claire, Menomonie, Hudson, Baldwin; trips originating in Minneapolis do not require reservations. Reservations for groups of 3+ must be made by phone.	The VA Medical Center in Minneapolis and Mall of America are also served after airport, upon request. Long-term parking available at Menomonie, Baldwin and Hudson. Now includes service to Rice Lake that was once provided by Rice Lake Shuttle.
Executive Express / Go My Ride	Willmar, Morris, Alexandria, Wadena, Brainerd to MSP. Service to other out-state cities in central Minnesota can be made by special arrangement.	Albany, Albertville, Avon, Baxter, Bertha, Browerville, Camp Ripley, Clarissa, Clearwater, Cold Spring, College of St. Benedict, Cyrus, Eagle Bend, Glenwood, Hewitt, Litchfield, Little Falls, Long Prairie, Maple Grove, Melrose, Monticello, New London, Osakis, Paynesville, Plymouth, Rogers, Sauk Centre, Spicer, Starbuck, St. Cloud, St. John's Univ.	3:30 a.m. - 11:30 p.m. daily	1 - 2 hours (14xs daily)	2 to 13 RT per route daily	$30-65 one-way and $48-113 round-trip for 1 passenger; More for additional passengers; $1-4 fuel surcharge per person per way.	Yes, online or by phone. Can confirm reservation with credit card, or company will call or email to confirm. Walkups at MSP and St. Cloud.	Also provides private charter and delivery services. Has customer service counter in Lindbergh Terminal.

Provider	Service Area	Intermediate Stops	Service Hours	Freq.	Scheduled Trips	One-Way Fares	Reservation Required?	Notes
Go Carefree Shuttle	La Crosse, WI	Winona and Rochester served once per day	5:55 a.m. - 11:15 p.m. (last trip leaves MSP at 8:15 p.m.)	Approx. 1.5-3 hrs	Mon - Sat: 7 RT; Sun: 6 RT	$25-$49, $20-$29 for children 12 years and under	Yes. Online reservation system only for travel that originates or ends in Minneapolis. Phone reservations for all trips.	Go Rochester Direct serves as their agent at MSP. Also provides same-day package delivery.
GO Rochester Direct	Rochester to MSP	By request only: Cannon Falls, Zumbrota, Pine Island, Oronoco	Mon -Sat 3:30 a.m.-11:45 p.m. Sun 5 a.m.-10:45 p.m.	30-45 min.	Mon - Fri 19 RT; Sat - Sun 18 RT	One-way regular $29, senior $27, child $19, Mayo employee $23. RT regular $55, senior $52, child $35, Mayo employee $46	Advance reservations are required to guarantee service. Walkups at MSP are welcome pending seating availability.	Major Rochester destinations include IBM and Mayo Clinic. Based in Kahler Grand Hotel in Rochester. Also have counter at Lindbergh Terminal of MSP. Originally Rochester Direct, now partners in the GO Airport Shuttle network. Can verify or cancel reservation online. Reservations must be cancelled 24 hrs prior, or credit card may be charged.
J & J Shuttle	New Ulm, West Haven	Will pick up in towns en route to the Twin Cities	Mon - Fri, leaves new Ulm at 7 a.m., Sat/Sun by request	NA	NA	$40	Yes	No counter or scheduled service from MSP.

Provider	Service Area	Intermediate Stops	Service Hours	Freq.	Scheduled Trips	One-Way Fares	Reservation Required?	Notes
Land to Air Express	Mankato to MSP	St. Peter and major motels along I-494 en route to MSP. La Sueur, Belle Plaine, Jordon by reservation.	Mon - Fri 4:30 a.m.- 10:45 p.m. (last trip leaves Mankato at 5 p.m. and MSP at 9 p.m.) Sat/Sun 8 a.m. - 10:35 p.m.	Approx. 2-4 hours	Mon - Fri: 6 RT; Sat-Sun-Holiday: 3 RT	$35 from Mankato. $65 RT. Children 12 and under free with paid adult.	No, can buy tickets at locations in Mankato and St. Peter or through travel agents. For guaranteed seating, phone reservations required 24 hrs in advance.	Also offers charter service for groups of 14 or less.
Lakes Express	Baxter/ Brainerd to MSP	Little Falls, St. Cloud, and Monticello; stops at St. Cloud State, St. Bens, St. Johns, Clearwater, Elk River, Maple Grove, and Rogers also available (though not scheduled)	1:15 a.m. - 2:15 a.m. daily (last trip leaves Baxter at 8:45 p.m. and MSP at 11 p.m.)	every 3.5 hours	7 RT daily, no major holidays.	$30-$55	Yes, at least 24 hours in advance by phone. Call for walkup availability.	Will pick up at any Baxter or Brainerd hotel, or can arrange taxi service for home pick-up. 24 hr advance cancellation or changes. Service counter in Lindbergh Terminal. Offers charter service for groups of <14 and same day delivery/ courier service.

Provider	Service Area	Intermediate Stops	Service Hours	Freq.	Scheduled Trips	One-Way Fares	Reservation Required?	Notes
NWT Express	Northwestern WI to MSP	Almena, Barron, Cameron, Cumberland, Hayward, New Richmond, Rice Lake, Shell Lake, Spooner, St. Croix Falls, Stone Lake, Trego, Amery, and Turtle Lake, WI	Mon-Wed-Fri-Sun: 8:30 a.m. - 10:15 p.m.; Tues-Thurs-Sat 6 a.m - 7:45 a.m.	7 hours	2 RT daily	$68-85 (depending on city of origin), seniors $62-79. RT $128 - $158. Possible fuel surcharge, 2nd and 3rd rider discounts.	Yes, reservation must be made 24 hours in advance (or must pay $15 late booking fee) online, by email, or by phone; payment required prior to travel.	For service on Fri or Sun, minimum of 2 paid passengers required. Based in Hayward, WI, provides scheduled passenger and package delivery service between Hayward and Twin Cities. Also offers charter service. $15 fee charged for changes or cancellations; no refunds for cancellations within 24 hrs of departure or for no shows. Surcharges for bags apply.
RideSafe	MSP, St. Paul, Anoka	NA	7 days per week, groups only	NA	NA	$100 to $150 per group	Yes	No counter or scheduled service from MSP.
Skyline Shuttle	Duluth to MSP	Hinckley by request, in advance for other stops	2:25 a.m. - 1:55 a.m. daily	1.5 - 2.5 hours	10 RT daily	$49 RT from Hinckley, $69 RT from Duluth; various discounts apply.	Advance reservations are required to guarantee service. 12 hour cancellation policy.	Major destinations served include Mall of America, Grand Casino Hinckley, and State Capitol. Reservations can be cancelled 12 hours prior to departure. Cancellations less than 12 hours before will be turned into “open” reservation which can be used any time in the future.

Appendix D

LOCAL TRANSIT CONNECTIONS

Local Transit Connections By System

Local System	Approx. Span	Service type	Potential Intercity Stop Connections
Albert Lea Transit (now SMART)	M-F 7am-430pm	Route deviation, dial-a-ride, and subscription in the city of Albert Lea	Ole's East Side Shell
Arrowhead Transit	M-F 6am-8pm; Sat 9am-5pm; Sun 8am-2pm (schedules vary by city)	Route deviation and dial-a-ride in 8 counties: Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, Pine, St. Louis	Aitkin City Hall, Paul Bunyan Transit Stop, Che-Wa-Ka-E-Gon Convenience Store, Jefferson Lines Terminal, UM-D Bookstore, Itascan Motel, Hwy 371 (Discharge Only), Tobies, MNDOT Wayside Rest MP 173, Best Oil Co - Little Store, McDonald's, Victory Gas Station, Scanlon Park N Ride, Village Inn, City Hall, Mickey's Pizza and Subs, North Country Café, Wendys, Super Valu
Austin - Mower Co. Area Transit (now SMART)	M-F 6am-10pm; Sat 9am-5pm; Sun 1pm-5pm	Route deviation, dial-a-ride, and subscription in the city of Austin and Mower County	Mileage Fuel Stop
Becker County Transit	M-F 8am-6pm	Route deviation and dial-a-ride in the city of Detroit Lakes and Becker County	White Earth Transit Station
Brainerd / Crow Wing Public Transit	M-F 715am-430pm	Route deviation and dial-a-ride in the cities of Brainerd and Baxter, and Crow Wing County	Mickey's Pizza and Subs, North Country Café, Wendys, Super Valu
Chisago / Isanti County Heartland Express	M-F 6am-6pm	Route deviation and dial-a-ride in Chisago and Isanti Counties	McDonald's
Cities Area Transit (CAT)	M-F 6am-10pm; Sat 8am-10pm	Fixed route and dial-a-ride in the cities of Grand Forks and East Grand Forks	Grand Forks
Duluth Transit Authority	M-F 430am-1230am; Sat 6am-8pm; Sun 740am-740pm	Fixed route and dial-a-ride (Stride) in the cities of Duluth, Proctor, Hermantown, and Superior	Jefferson Lines Terminal, UM-D Bookstore
East Grand Forks Transit	M-F 6am-10pm; Sat 8am-10pm	Fixed route and dial-a-ride in the city of East Grand Forks	Grand Forks
Faribault County Prairie Express	M-F 7am-5pm	Dial-a-ride in Faribault County and surrounding area	Ole's East Side Shell, Nelson's Market Place, Land to Air Depot, Freedom Valu Center
Fosston Transit	M-F 8am-430pm; Sun 8am-12pm	Dial-a-ride in the city of Fosston	Le Piers West Convenience Store
Granite Falls Heartland Express	M-F 630am-530pm	Dial-a-ride in the city of Granite Falls	Tri-County Co-op

Greater Mankato Transit System	M-F 635am-535pm; Sat 10am-530pm	Fixed route and paratransit in the cities of Mankato and North Mankato	Land to Air Deport
Hibbing Area Transit	M-F 6am-8pm; Sat 9am-3pm; Sun 9am-2pm	Route deviation and dial-a-ride in the city of Hibbing	Country Kitchen
Kandiyohi Area Transit	M-F 530am-530pm; Sat 8am-430pm	Route deviation and demand response in the city of Willmar and Kandiyohi County	Lakeview Inn
La Crescent Apple Express	M-F 6am-6pm	Route deviation in the cities of La Crescent and La Crosse	La Crosse Bus Depot
Lincoln County Heartland Express	M-F 830am-430pm	Dial-a-ride in Lincoln County and the surrounding area	Ampride
Mahnomen County Heartland Express	M-F 730am-430pm	Dial-a-ride in Mahnomen County	Shooting Star Casino
Martin County Transit	M-F 5am-6pm; Sat 5am-10pm; Sun 8am-10pm	Dial-a-ride in Martin County and the city of Fairmont	Freedom Valu Center
Maple Grove Transit	M-F 550am-7pm; Sat 8am-430pm	Commuter express and dial-a-ride in the city of Maple Grove	Maple Grove Transit Station
Meeker County Public Transit	M-F 630am-6pm; Sat 8am-1pm; Sun 8am-12pm	Route deviation and dial-a-ride in Meeker County and the city of Litchfield	Shell Outpost
Metro Transit	24/7	Fixed routes in 5 counties: Anoka, Dakota, Hennepin, Ramsey, and Washington	Megabus, 95th Avenue Park & Ride, Hawthorne Transportation Center, University of MN, Jefferson Lines - Union Depot, Midway Shopping Center, Forest Lake Transit Center, MN Valley Transit Authority, MSP Airport, Southwest Transit Station, Mall of America, Maple Grove Transit Station
Minnesota Valley Transit Authority	M-F 445am-1130pm; Sat 730am-1030pm; Sun 730am-930pm	Fixed route and flexible fixed route in cities of Apple Valley, Burnsville, Eagan, Rosemount, Savage, and Lakeville	Minnesota Valley Transit Authority, Mall of America, MSP International Airport
Moorhead Area Transit	M-F 615am-1015pm; Sat 715am-1015pm	Fixed route and paratransit in the cities of Moorhead and Dilworth	MN State University
Morris Transit	M-F 6am-10pm; Sat 12pm-4pm; Sun 8am-1230pm	Dial-a-ride in the city of Morris	University of MN
Paul Bunyan Transit	M-F 7am-6pm; Sat 8am-5pm	Route deviation, dial-a-ride, and subscription in the city of Bemidji and Beltrami County	Paul Bunyan Transit Stop
Pine River Ride with Us	M-F 845am-4pm	Dial-a-ride in the city of Pine River	City Hall
Pipestone County Transit	M-F 7am-5pm; Sat 9am-3pm; Sun 8am-1pm	Dial-a-ride in Pipestone County	Lange's Cafe
Prairie Five Rides	M-F 6am-6pm	Dial-a-ride in 5 counties: Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine	Ampride, Metro Bus, Pilot Travel Center, MSP International Airport, Kwik & Ezy
Prairieland Transit System	M-F 7am-6pm	Route deviation and dial-a-ride in Nobles County	Cenex/Ampride
Rainbow Rider Transit	M-F 6am-6pm; Sat 730am-5pm	Dial-a-ride in six counties: Douglas, Grant, Pope, Stevens, Traverse, and Todd	Pilot/ Flying J Truck Stop, University of MN, Ernie's

RiverRider Public Transit	M-F 7am-5pm	Route deviation and dial-a-ride in Sherburne and Wright Counties	Cruisers Convenience Store, Metro Bus, Pilot Travel Center
Rochester City Lines	M-F 530am-10pm; Sat 7am-7pm	Fixed route and dial-a-ride in the city of Rochester	Rochester City Line Bus Stop, Rochester Airport, Mileage Fuel Stop
Rock County Heartland Express	M-F 730am-5pm	Dial-a-ride in Rock County	Express Way Luverne
SEMAC (now Rolling Hills Transit)	M-F 8am-430pm	Route deviation, dial-a-ride, and subscription in the Counties of Dodge, Fillmore, Houston, and Winona and the city of Blooming Prairie	Dodge Center Park & Ride, Rochester City Line Bus Stop, Rochester Airport, Sinclair Convenience Store, Transit Stop @ Winona State
Shakopee Transit	M-F 540am-720pm	Express bus, local circulator, and shuttle service in the city of Shakopee and downtown Minneapolis	Mall of America
Southwest Transit	M-F 5am-930pm	Fixed route in the cities of Chanhassen, Chaska, and Eden Prairie	Southwest Transit Station
St. Cloud Metro Bus	M-F 530am-12am; Sat 745am-645pm; Sun 9am-6pm	Fixed route and dial-a-ride in the cities of St. Cloud, Sartell, Sauk Rapids, and Waite Park	Pilot Travel Center, Metro Bus
St. Peter Transit	M-F 7am-8pm; Sat 10am-5pm	Dial-a-ride in the cities of Kasota and St. Peter	St. Peter Co-op
Steele County Area Transit (now SMART)	M-F 6am-6pm; Sat 9am-3pm; Sun 730am-1pm	Route deviation and demand response in the city of Owatonna and Steele County	Oakdale Motel
Stewartville Heartland Express	M-F 830am-5pm	Dial-a-ride in the city of Stewartville and limited service to Rochester	Rochester City Line Bus Stop, Rochester Airport
Three Rivers Hiawathaland Transit	M-F 6am-645pm; Sat 7am-5pm	Route deviation and dial-a-ride in Goodhue, Rice, and Wabasha Counties	Nelson's Market Place
Trailblazer Transit	M-F 630am-530pm	Dial-a-ride and volunteer transportation in Sibley and McLeod Counties	Go for It C Store, Cenex
Transit Alternatives	M-F 6am-6pm	Route deviation, dial-a-ride, and subscription in Clay and Otter Tail Counties	White Earth Transit Station, Olson Oil Company, Tesoro
Tri-Cap Transit Connection	M-F 7am-5pm	Flex route and dial-a-ride in Benton, Morrison, and Stearns Counties	Pilot Travel Center, Metro Bus
Tri-Valley Heartland Express	M-F 7am-5pm	Route deviation and dial-a-ride in the city of Bagley and 6 counties: Polk, Norman, Marshall, Pennington, Red Lake, and Kittson	Westside Express - Tesoro, Tri-Valley Heartland Express, University of MN Crookston, Le Piers West Convenience Store, MN State University, Ness Cafe
Wadena County Friendly Rider Transit	M-F 715am-530pm; Sat 10am-2pm; Sun 8am-1230pm	Route deviation and dial-a-ride in Wadena and northern Todd Counties	TJ's Detail Center, Ernie's
Waseca County Transit	M/W 8am-3pm; F 8am-1230pm	Demand response in Waseca County	Casey's General Store
Watonwan Take Me There (TMT)	M-F 6am-5pm	Dial-a-ride and subscription in Watonwan County and the surrounding area	Land to Air Depot, Freedom Valu Center
Western Community Action	M-F 545am-9pm; Sat 830am-615pm; Sun 8am-4pm	Route deviation, dial-a-ride, and subscription in Jackson, Lyon, and Redwood Counties; limited service in Cottonwood and Lincoln Counties	Ampride, Burger King
Winona Transit Service	M-F 6am-615pm	Route deviation and subscription in the cities of Winona and Goodview	Sinclair Convenience Store, Transit Stop @ Winona State

Source: http://www.dot.state.mn.us/transit/reports/transitreports/12/index-2012.html

Appendix E

DEMOGRAPHIC AND LAND USE ANALYSIS

Demographic Analysis Methodology

The demographic analysis presented in Chapter 3 employs a scale of "very low" to "very high" to display the locations in Minnesota with potentially transit dependent persons (see Table E-1). The scale is based on the average for the state overall. It is important to note that a block group classified as "very low" can still have a significant number of potentially transit-dependent persons; "very low" only means below the average for Minnesota. At the other end of the spectrum, "very high" means greater than twice the state average. The classification method follows a structure introduced in a 2004 NCHRP report for assessing environmental justice impacts.[1] Figures E-1 to E-4 display the density of transit-dependent persons in Minnesota by Economic Development Region.

Table E-1: Transit Dependence Classification

Number/Percentage of Vulnerable Persons or Households	Potential Transit Dependence Score
<= the state average	1 (Very Low)
> average and <= 1.33 times average	2 (Low)
> 1.33 times average and <= 1.67 times average	3 (Moderate)
> 1.67 times average and <= 2 times average	4 (High)
> 2 times the state average	5 (Very High)

The methodology used in this analysis differs from the 2010 study in that it does not include those persons with a disability as a transit-dependent population segment. Due to Census reporting, the most current disability information at the block group level is from Census 2000. This information is both dated and incompatible with 2010 block group geographies. In addition, the analysis increases the youth/young adult category from 18-24 to 18-34. The change reflects findings by Fischer and Schwieterman (2011) that almost three quarters of intercity passengers fall within the latter range.

1 Forkenbrock, D. and Sheeley, J. 2004. Effective Methods for Environmental Justice Assessment. NCHRP Report 532. Transportation Research Board. Washington, DC: National Academy Press.

Figure E-1: Density of Transit Dependent Populations, Economic Development Regions 1, 2, 4, & 5

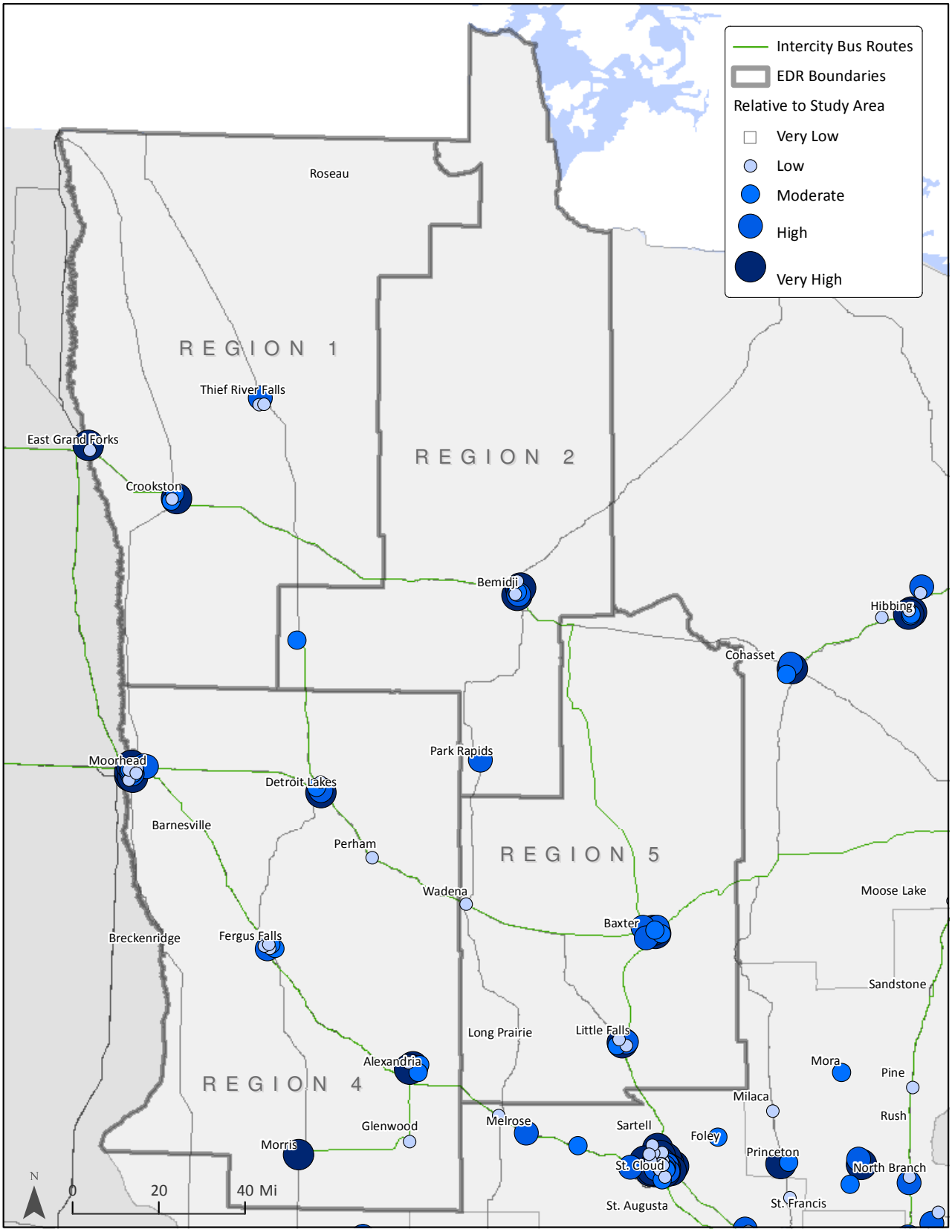


Figure E-2: Density of Transit Dependent Populations, Economic Development Regions 3, 7E, & 7W

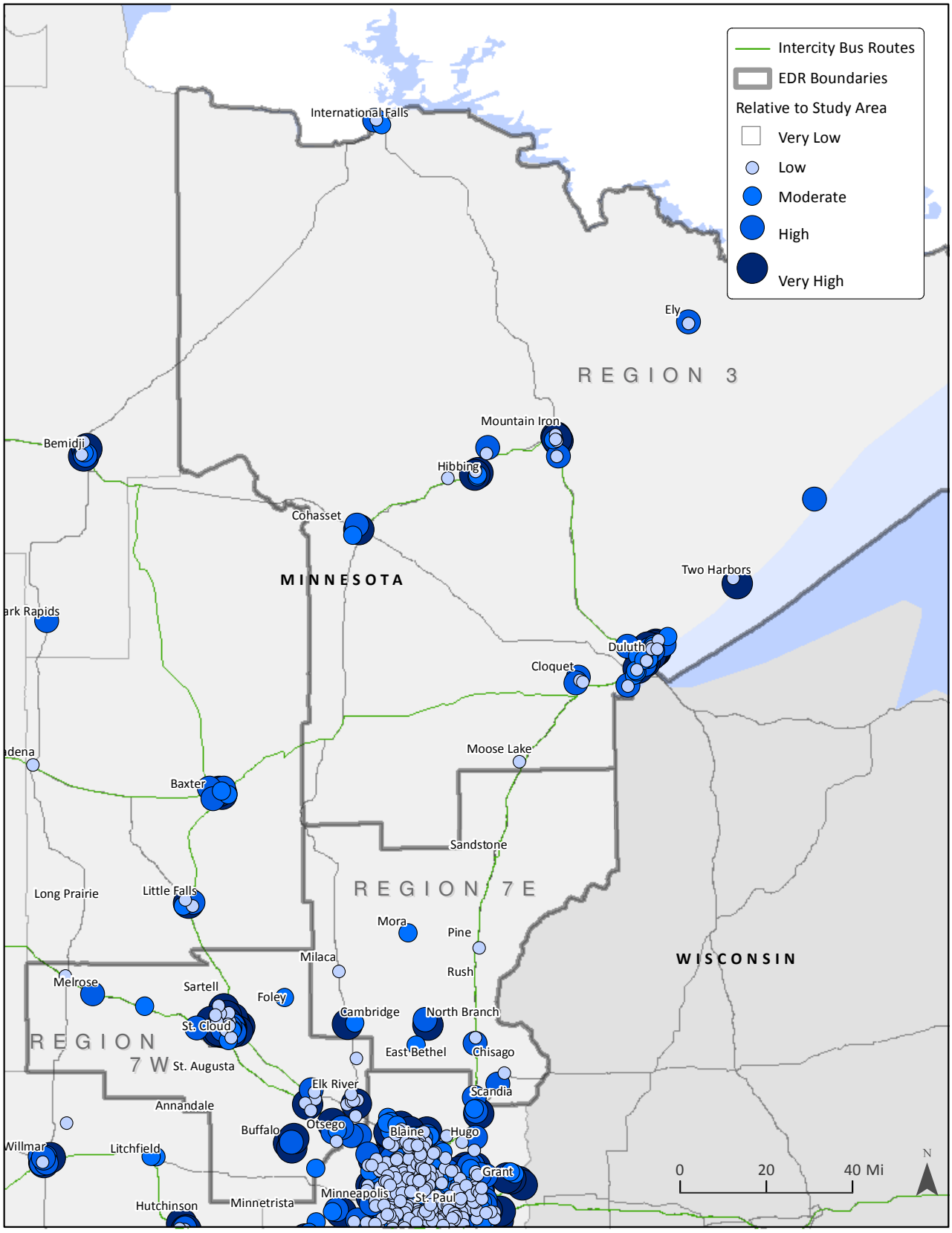


Figure E-3: Density of Transit Dependent Populations, Economic Development Regions 6E, 6W, 8, & 9

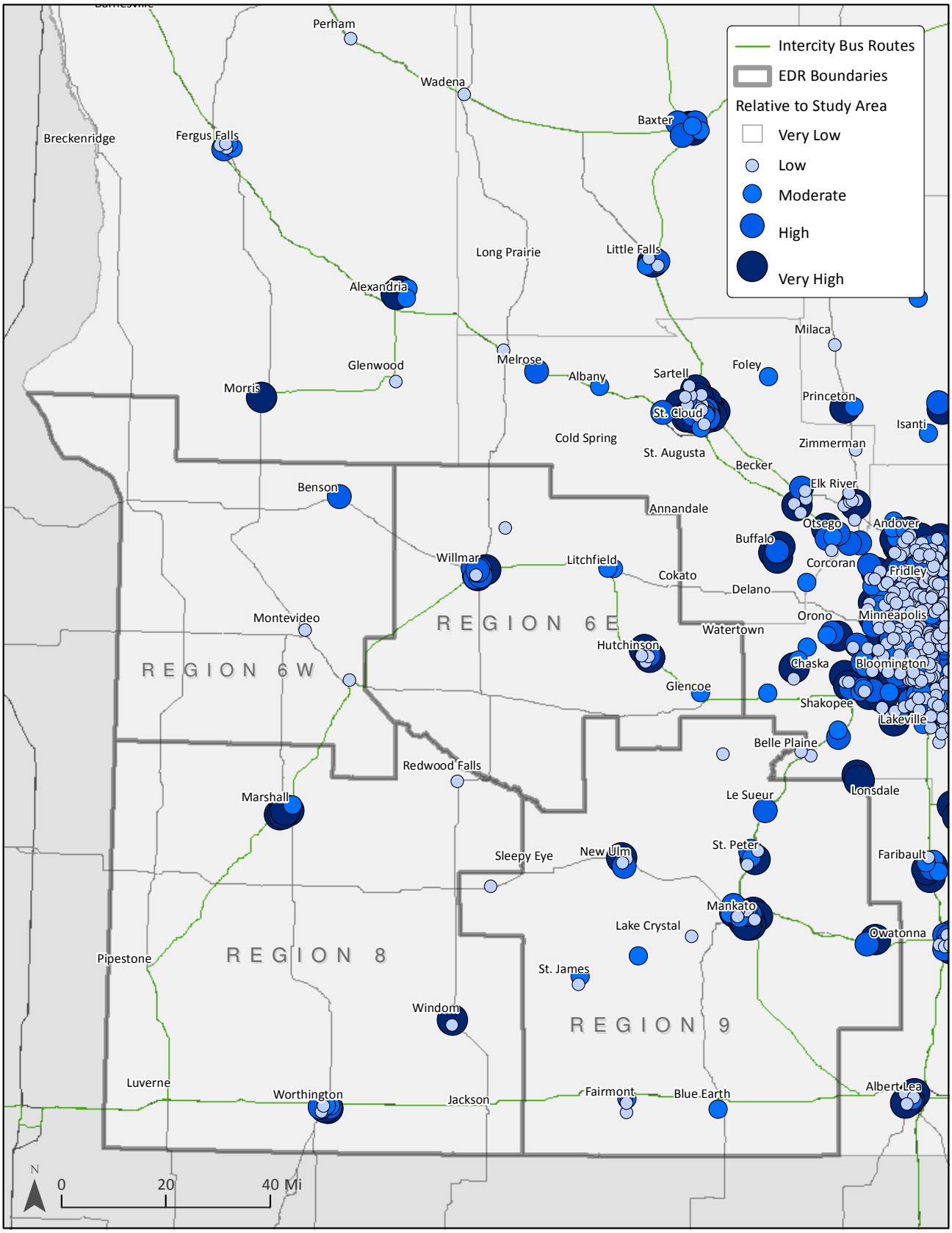
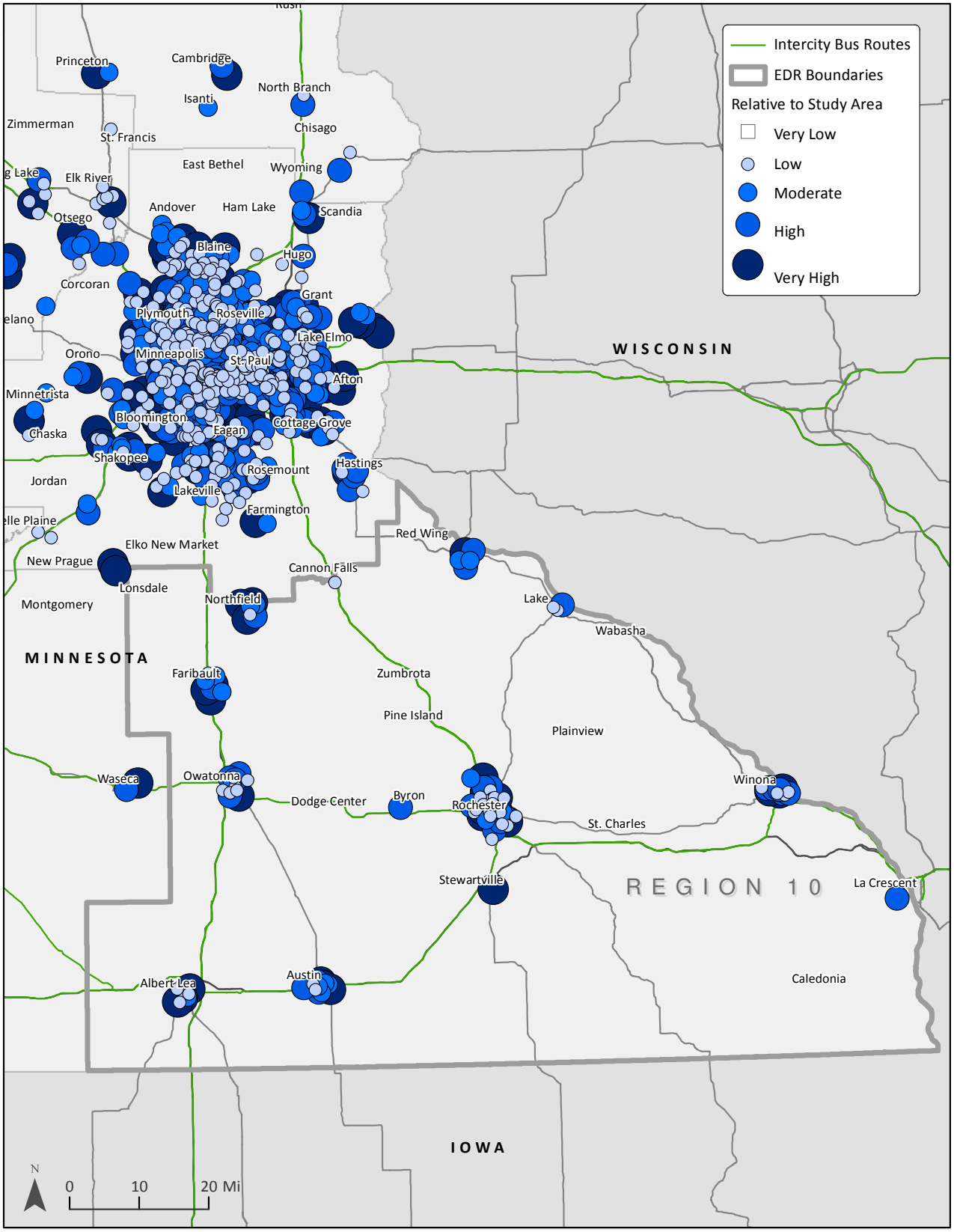


Figure E-4: Density of Transit Dependent Populations, Economic Development Region 10



Minnesota Destinations and Facilities

CORRECTIONAL FACILITIES

Name	City	< 10 miles	10-25 miles	> 25 miles
Stillwater	Bayport	x		
Faribault	Faribault	x		
Lino Lakes	Lino Lakes	x		
Willow River/Moose Lake	Moose Lake	x		
Red Wing	Red Wing			x
Rush City	Rush City	x		
Shakopee	Shakopee	x		
St. Cloud	St. Cloud	x		
Oak Park Heights	Stillwater	x		
Togo	Togo			x
Source: MN Department of Corrections. http://www.corr.state.mn.us/facilities/default.htm				

EDUCATIONAL FACILITIES

Name	City	2011 Enrollment	< 10 miles	10-25 miles	> 25 miles
Academy College	Minneapolis	191	x		
Adler Graduate School	Richfield	84	x		
Alexandria Technical College	Alexandria	2,770	x		
American Academy of Acupuncture	Roseville	110	x		
American Indian OIC	Minneapolis	111	x		
Anoka Technical College	Anoka	2,389	x		
Anoka-Ramsey Community College	Coon Rapids	9,234	x		
Anthem College	St. Louis Park	298	x		
Apostolic Bible Institute	St. Paul		x		
Argosy University, Twin Cities	Eagan	2,145	x		
Art Institutes International Minnesota	Minneapolis	1,794	x		
Augsburg College	Minneapolis	3,908	x		
Aveda Institute Minneapolis	Minneapolis	369	x		
Bemidji State University	Bemidji	5,368	x		
Bethany College of Missions	Bloomington		x		
Bethany Lutheran College	Mankato	612	x		
Bethel University	St. Paul		x		
Brown College	Mendota Heights	485	x		
Cardinal Stritch University	Edina		x		
Carleton College	Northfield	2,018	x		
Central Lakes College	Brainerd	4,406	x		

Name	City	2011 Enrollment	<10 miles	10-25 miles	> 25 miles
Century College	White Bear Lake	10,836	x		
College of Saint Benedict	St. Joseph	2,086	x		
College of St. Scholastica	Duluth	3,144	x		
Concordia College	Moorhead	2,770	x		
Concordia University	St. Paul	2,764	x		
Crossroads College	Rochester	161	x		
Crown College	Saint Bonifacius	1,198		x	
Dakota Co. Technical College	Rosemount	3,776	x		
DeVry University	Edina	712	x		
Dunwoody College of Technology	Minneapolis	1,041	x		
Everest Institute	Eagan	129	x		
Fond Du Lac Tribal & Community College	Cloquet	2,319	x		
Globe/MN School of Business	Blaine	748	x		
Globe/MN School of Business	Brooklyn Park	429	x		
Globe/MN School of Business	Minneapolis	240	x		
Globe/MN School of Business	Moorhead	271	x		
Globe/MN School of Business	Plymouth	412	x		
Globe/MN School of Business	Richfield	1,623	x		
Globe/MN School of Business	Rochester	452	x		
Globe/MN School of Business	Shakopee	387	x		
Globe/MN School of Business	Waite Park	658	x		
Globe/MN School of Business	Woodbury	1,421	x		
Gustavus Adolphus College	St. Peter	2,459	x		
Hamline University	St. Paul	4,852	x		
Hennepin Technical College	Brooklyn Park	6,745	x		
Herzing University	Minneapolis	374	x		
Hibbing Community College	Hibbing	1,486	x		
Inver Hills Community College	Inver Grove Heights	6,106	x		
Itasca Community College	Grand Rapids	1,286	x		
ITT Technical Institute	Eden Prairie	573	x		
Lake Superior College	Duluth	5,221	x		
Le Cordon Bleu College of Culinary Arts	Mendota Heights	617	x		
Leech Lake Tribal College	Cass Lake	208	x		
Luther Seminary	St. Paul		x		
Macalester College	St. Paul	2,005	x		
Martin Luther College	New Ulm	777		x	
Mayo Clinic College of Medicine	Rochester		x		
McNally Smith College of Music	St. Paul		x		
Mesabi Range Community & Technical College	Virginia	1,609	x		
Metropolitan State University	St. Paul	8,170	x		
Miami Ad School Minneapolis	Minneapolis	44	x		
Minneapolis Business College	Minneapolis	428	x		

Name	City	2011 Enrollment	<10 miles	10-25 miles	> 25 miles
Minneapolis College of Art and Design	Minneapolis	665	x		
Minneapolis Community & Technical College	Minneapolis	10,191	x		
Minnesota School of Cosmetology	Woodbury		x		
Minnesota State College - SE Technical	Winona	2,418	x		
Minnesota State Community & Technical College	Fergus Falls	6,950	x		
Minnesota State University	Mankato	15,709	x		
Minnesota State University	Moorhead	7,244	x		
Minnesota West Community & Technical College	Pipestone	3,364	x		
MN State Community & Technical College	Detroit Lakes	6,950*	x		
MN State Community & Technical College	Moorhead	6,950*	x		
MN State Community & Technical College	Wadena	6,950*	x		
MN West Community & Technical College	Canby	3,364*			x
MN West Community & Technical College	Granite Falls	3,364*	x		
MN West Community & Technical College	Jackson	3,364*	x		
MN West Community & Technical College	Worthington	3,364*	x		
National American University	Bloomington	603	x		
National American University	Brooklyn Center	836	x		
National American University	Roseville	529	x		
Normandale Community College	Bloomington	9,942	x		
North Central University	Minneapolis	1,384	x		
North Hennepin Community College	Brooklyn Park	7,432	x		
Northland Community & Technical College	Thief River Falls	3,958			x
Northwest Technical College	Bemidji	1,371	x		
Northwest Technical Institute	Eagan		x		
Northwestern College	St. Paul	3,043	x		
Northwestern Health Sciences University	Bloomington		x		
Oak Hills Christian College	Bemidji	117	x		
Pine Technical College	Pine City	1,155	x		
Rainy River Community College	International Falls	376			x
Rasmussen College	Brooklyn Park	6,651*	x		
Rasmussen College	Eagan	6,651*	x		
Rasmussen College	Eden Prairie	6,651*	x		
Rasmussen College	Lake Elmo	6,651*	x		
Rasmussen College	Mankato	6,651*	x		
Rasmussen College	Moorhead	6,651*	x		
Rasmussen College	St. Cloud	6,651*	x		
Ridgewater College	Willmar	4,146	x		
Riverland Community College	Austin	3,720*	x		
Riverland Community College	Albert Lea	3,720*	x		
Riverland Community College	Owatonna	3,720*	x		
Rochester Community & Technical College	Rochester	6,055	x		
Saint John Vianney College Seminary	St. Paul		x		

Name	City	2011 Enrollment	<10 miles	10-25 miles	> 25 miles
Saint John's University	Collegeville	2,010		x	
Saint Mary's Univ. of MN	Rochester	5,688*	x		
Saint Mary's Univ. of MN	Minneapolis	5,688*	x		
Saint Mary's Univ. of MN	Winona	5,688*	x		
Saint Paul College	St. Paul	6,322	x		
South Central College	North Mankato	4,083*	x		
South Central College	Faribault	4,083*	x		
Southwest MN State University	Marshall	6,761	x		
St. Catherine University	Minneapolis	5,227*	x		
St. Catherine University	St. Paul	5,227*	x		
St. Cloud State University	St. Cloud	17,604	x		
St. Cloud Technical College	St. Cloud	4,708	x		
St. Olaf College	Northfield	3,179	x		
Summit Academy OIC	Minneapolis	179	x		
TechSkills	Bloomington	42	x		
United Theological Seminary	New Brighton	177	x		
University of Minnesota	Crookston	2,653	x		
University of Minnesota	Duluth	11,806	x		
University of Minnesota	Morris	1,932	x		
University of Minnesota	Rochester	273	x		
University of Minnesota	Minneapolis	52,556	x		
University of Phoenix	St. Louis Park	274	x		
University of St. Thomas	Minneapolis	10,506*	x		
University of St. Thomas	St. Paul	10,506*	x		
Vermilion Community College	Ely	781			x
White Earth Tribal & Community College	Mahnomen	101	x		
William Mitchell College of Law	St. Paul	1,011	x		
Winona State University	Winona	8,960	x		

*Enrollment split between multiple campuses.

Sources: http://www.ohe.state.mn.us/pdf/enrollment/basicdata/basicData2011.pdf
http://www.mnprivatecolleges.org/our-colleges
http://www.mnscu.edu/colleges/campuses.html

COMMERCIAL AIRPORTS

Name	Code	City	< 10 miles	10-25 miles	> 25 miles
Minneapolis-St. Paul International	MSP				
Lindbergh Terminal		St. Paul	x		
Humphrey Terminal		Minneapolis	x		
Bemidji Regional	BJI	Bemidji	x		
Brainerd Lakes Regional	BRD	Brainerd	x		
Range Regional	HIB	Hibbing	x		
Duluth International	DLH	Duluth	x		
International Falls	INL	International Falls			x
Rochester International	RST	Rochester	x		
St. Cloud International	STC	St. Cloud	x		
Thief River Falls Regional	TVF	Thief River Falls			x
Source: http://www.dot.state.mn.us/aero/airports.html					

MILITARY INSTALLATIONS

Name	City	< 10 miles
Camp Ripley- MN National Guard	Little Falls	x
Duluth Air National Guard	Duluth	x
Marine Safety Unit Duluth	Duluth	x
Minneapolis-St. Paul Air Reserve Station	Minneapolis	x
Sources: http://usmilitary.about.com/od/theorderlyroom/l/blstatefacts.htm http://www.militaryinstallations.dod.mil http://www.minnesotanationalguard.org		

MEDICAL FACILITIES

Name	City	MN Licensed Bed Capacity	< 10 miles	10-25 miles	> 25 miles
Abbott Northwestern Hospital	Minneapolis	952	x		
Avera Marshall Regional Medical Center	Marshall	49	x		
Buffalo Hospital	Buffalo	65		x	
Cambridge Medical Center	Cambridge	86	x		
Children's Hospital & Clinics	Minneapolis	279	x		
Cuyuna Regional Medical Center	Crosby	42	x		
District One Hospital	Faribault	49	x		
Douglas County Hospital	Alexandria	127	x		
Essentia Health Duluth	Duluth	165	x		
Essentia Health Fosston	Fosston	43	x		

Name	City	MN Licensed Bed Capacity	<10 miles	10-25 miles	>25 miles
Essentia Health St. Josephs	Brainerd	162	x		
Essentia Health St. Mary's	Duluth	380	x		
Essentia Health St. Mary's	Detroit Lakes	87	x		
Essentia Health Virginia	Virginia	83	x		
Fairview Lakes Medical Center	Wyoming	61	x		
Fairview Northland Regional	Princeton	54		x	
Fairview Ridges Hospital	Burnsville	150	x		
Fairview Southdale Hospital	Edina	390	x		
Firstlight Health System	Mora	49	x		
Gillette Childrens Hospital	St. Paul	60	x		
Glencoe Regional Health Services	Glencoe	49	x		
Grand Itasca Clinic & Hospital	Grand Rapids	64	x		
Healtheast Bethesda Hospital	St. Paul	254	x		
Healtheast St Johns Hospital	Maplewood	184	x		
Healtheast Woodwinds Hospital	Woodbury	86	x		
Hennepin County Medical Center	Minneapolis	894	x		
Hutchinson Health	Hutchinson	66	x		
Lake Region Healthcare	Fergus Falls	108	x		
Lakeview Memorial Hospital	Stillwater	97	x		
Maple Grove Hospital	Maple Grove	130	x		
Mayo Clinic Health System	Albert Lea	77	x		
Mayo Clinic Health System	Austin	82	x		
Mayo Clinic Health System	Fairmont	57	x		
Mayo Clinic Health System	Mankato	272	x		
Mayo Clinic Health System	New Prague	49		x	
Mayo Clinic Health System	Red Wing	50			x
Mayo Clinic Methodist Hospital	Rochester	794	x		
Mayo Clinic St. Mary's Hospital	Rochester	1265	x		
Mercy Hospital	Coon Rapids	271	x		
MN DOH Central District	Rochester		x		
MN DOH Freeman Building	St. Paul		x		
MN DOH Golden Rule Building	Saint Paul		x		
MN DOH NE District	Duluth		x		
MN DOH NW District	Bemidji		x		
MN DOH S. Central District	Fergus Falls		x		
MN DOH SE District	Marshall		x		
MN DOH SW District	Mankato		x		
MN DOH West Central District	St. Cloud		x		
New Ulm Medical Center	New Ulm	62		x	
North Memorial Medical Center	Robbinsdale	518	x		
Olmsted Medical Center	Rochester	61	x		
Owatonna Hospital	Owatonna	43	x		

Name	City	MN Licensed Bed Capacity	<10 miles	10-25 miles	>25 miles
Park Nicollet Methodist Hospital	St. Louis Park	426	x		
Pipestone County Medical Center	Pipestone	44	x		
Rainy Lake Medical Center	International Falls	49			x
Regency Hospital	Golden Valley	92	x		
Regina Medical Center	Hastings	57	x		
Regions Hospital	St. Paul	454	x		
Rice Memorial Hospital	Willmar	136	x		
Riverview Hospital & Nursing Home	Crookston	49	x		
Riverview Medical Center	Waconia	109		x	
Sanford Bemidji Medical Center	Bemidji	118	x		
Sanford Medical Center Thief River Falls	Thief River Falls	99			x
Sanford Worthington Medical	Worthington	48	x		
Shriners Hospital For Children	Minneapolis	40	x		
St. Cloud Hospital	St. Cloud	489	x		
St. Francis Regional Medical Center	Shakopee	93	x		
St. Gabriels Hospital	Little Falls	49	x		
St. Josephs Area Health Services	Park Rapids	50			x
St. Josephs Hospital	St. Paul	401	x		
St. Luke's Hospital	Duluth	267	x		
Stevens Community Medical Center	Morris	54	x		
Tri County Hospital	Wadena	49	x		
United Hospital	St. Paul	546	x		
United Hospital District	Blue Earth	43		x	
Unity Hospital	Fridley	275	x		
University Medical Center Mesabi	Hibbing	175	x		
University of Minnesota Medical Center	Minneapolis	1700	x		
Winona Health Services	Winona	99	x		
Sources: http://www.health.state.mn.us/divs/fpc/directory/showprovideroutput.cfm http://www.health.state.mn.us/index.html					

Appendix F

SURVEY METHODOLOGY AND DETAILS

Notes on Reading the Survey Results

Statistically significant differences are noted through the use of boxes ( ) and letters. If a statistically significant difference occurs, a box is shown on the significantly higher of the two (or three) data points. Additionally, letters are used to note which percentage is significantly lower.

In the example at the right, those who took 5 to 12 trips in the past year are significantly more likely than those who took more than 12 trips to live 10 miles or less from the most convenient bus stop. Similarly, those who took more than 12 trips are significantly more likely than those who took 4 or less trips to live more than 10 miles from the most convenient bus stop.

All figures represent the total population sampled (610 for the household survey and 318 for the onboard survey), unless otherwise noted.

Distance from Home to Most Convenient Bus Stop		
Travel Frequency in the Past Year	10 miles or less	More than 10 miles
4 or less trips (A)	51%	36%
5 to 12 trips (B)	53% C	46%
More than 12 trips (C)	37%	55% A

Standard Error of the Data

Household Survey If the percentage found is around:	50%	40% or 60%	30% or 70%	20% or 80%	10% or 90%	1% or 99%
Then, the standard error in percentage points for a total sample of n = 610 is:	±4.0	±3.9	±3.6	±3.2	±2.4	±0.8
For example, if a question yielded a percentage of 20%, then we can be sure 95 out of 100 times that the true percentage would lie between 16.8% and 23.2% (20% ±3.2 percentage points).						

Onboard Survey If the percentage found is around:	50%	40% or 60%	30% or 70%	20% or 80%	10% or 90%	1% or 99%
Then, the standard error in percentage points for a total sample of n = 318 is:	±5.5	±5.4	±5.0	±4.4	±3.3	±1.1
For example, if a question yielded a percentage of 20%, then we can be sure 95 out of 100 times that the true percentage would lie between 15.6% and 24.4% (20% ±4.4 percentage points).						

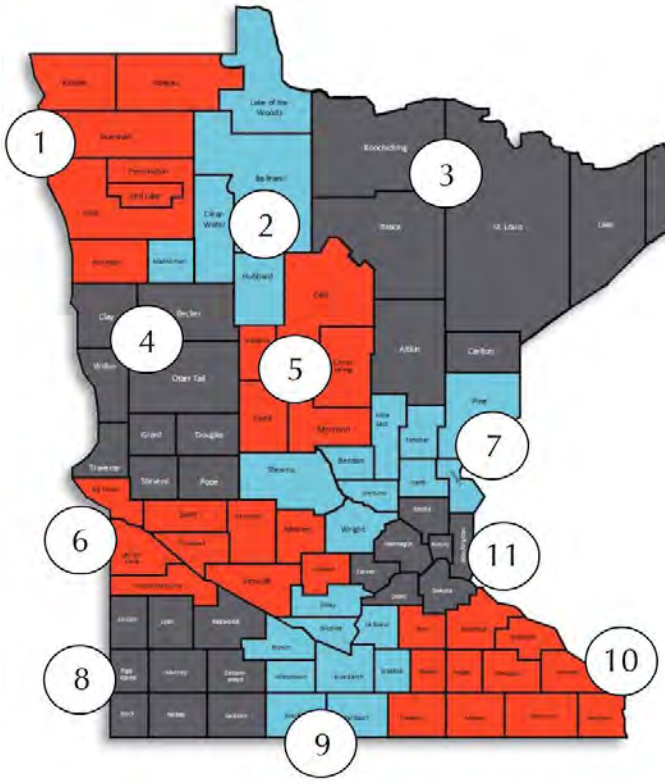
Onboard Survey Details

In total, 318 onboard interviews were conducted among passengers on 36 different Jefferson Lines and Land to Air Express intercity buses. The interviewing was conducted August 26 - 29, 2013 by five WBA professional intercept interviewers. In some cases the interviewer only rode the bus for a portion of the route.

Route	Company	Origin	Destination	S. 5311(f) Status	Dates Surveyed	Interviews
234	Land to Air	Rochester	Mankato	Subsidized	8/27	1
235	Land to Air	Mankato	Rochester	Subsidized	8/28	3
701	Jefferson	Minneapolis	Sioux Falls, SD	Unsubsidized	8/26	14
702	Jefferson	Sioux Falls, SD	Minneapolis	Unsubsidized	8/26	16
906	Jefferson	Duluth	Minneapolis	Subsidized	8/28	13
911	Jefferson	Minneapolis	Duluth	Subsidized	8/26, 8/27, 8/28	30
912	Jefferson	Duluth	Minneapolis	Unsubsidized	8/27, 8/29	25
919	Jefferson	Duluth	Grand Rapids	Subsidized	8/28	3
920	Jefferson	Grand Rapids	Duluth	Subsidized	8/29	4
925	Jefferson	Minneapolis	Sioux Falls, SD	Subsidized	8/26, 8/27, 8/28, 8/29	19
926	Jefferson	Sioux Falls, SD	Minneapolis	Subsidized	8/26, 8/27, 8/28, 8/29	25
927	Jefferson	Minneapolis	Fargo, ND	Subsidized	8/26, 8/27, 8/28, 8/29	60
928	Jefferson	Fargo, ND	Minneapolis	Subsidized	8/26, 8/27, 8/28, 8/29	30
929	Jefferson	Duluth	Fargo, ND	Subsidized	8/26	9
930	Jefferson	Fargo, ND	Duluth	Subsidized	8/29	12
965	Jefferson	Minneapolis	Milwaukee, WI	Subsidized	8/26, 8/27, 8/28	27
966	Jefferson	Milwaukee, WI	Minneapolis	Subsidized	8/27, 8/28, 8/29	27

Household Survey Details

The household survey included 610 interviews of Minnesota residents conducted September 18 - 29, 2013 by WBA's professional telephone interviewers. To qualify, respondents needed to live in Minnesota and have traveled from home on at least one trip of 75 miles or more one-way to a destination in the continental U.S. or Canada within the past twelve months. Quotas were set for each Economic Development Region. The number of interviews completed among residents of each region is consistent with the region's relative population. Weights were applied to make the data consistent with the ages of the actual population of the residents of Minnesota.



Region	Population	Percent	Interviews	Percent
1	86,091	1.6%	10	1.6%
2	83,023	1.6%	9	1.5%
3	326,225	6.2%	37	6.1%
4	221,688	4.2%	25	4.1%
5	163,003	3.1%	19	3.1%
6	163,110	3.1%	17	2.8%
7	566,081	10.7%	67	11.0%
8	119,151	2.2%	15	2.5%
9	231,302	4.4%	26	4.3%
10	494,684	9.3%	56	9.2%
11	2,849,567	53.7%	329	53.9%
Total	5,303,925	100%	610	100%

Appendix G

ONBOARD SURVEY QUESTIONS

MnDOT Intercity Bus Service – Onboard Rider Survey

QUOTAS	
TOTAL	**400**

SA. Route Number

01	Route 234	09	Route 919	17	Route 965
02	Route 235a	10	Route 920	18	Route 966
03	Route 235b	11	Route 925	19	Route 503
04	Route 236	12	Route 926	20	Route 505
05	Route 237	13	Route 927	21	Route 511
06	Route 238	14	Route 928	22	Route 513
07	Route 906	15	Route 929	23	Route XXX
08	Route 911	16	Route 930	24	Route XXX

SB. Bus Line

01 Jefferson Lines
02 Land to Air Express

SC. Bus number:
_____

READ TO EVERYONE:

Hello, my name is _ from WBA Research, a national research firm. We are conducting a short survey today among bus riders and would like to include your opinions. If you complete this survey, you will receive a $10 gift card to Target.

Q1. In what city did you board this bus? **(READ LIST IF NECESSARY. INSERT APPROPRIATE STOPS FOR ROUTE.)**

01 City **[see city by route list]**
02 City
03 City
04 City
05 City
06 City
07 City
95 Somewhere else **(Specify:** _____**)**
99 **DO NOT READ:** Refused

Q2. And in what city will you get off this bus? **(READ LIST IF NECESSARY. INSERT APPROPRIATE STOPS FOR ROUTE.)**

01 City **[see city by route list]**
02 City
03 City
04 City
05 City
06 City
07 City
95 Somewhere else **(Specify:** _____**)**
99 **DO NOT READ:** Refused

Q3. What is the five digit zip code of your primary residence?
__ __ __ __ __ *99999-Refused*

Q4. What is the primary purpose of your bus trip today? **(READ LIST. RANDOMIZE, BUT KEEP 01-03 TOGETHER. ACCEPT ONE RESPONSE ONLY.)**

01 Visit friends or relatives
02 Shopping
03 Other social or recreational
04 Work related travel
05 Travel to school or college
06 Medical
07 Other personal business
08 Traveling to your home
95 Or something else **(Specify:** _____**)**
99 **DO NOT READ:** Refused

THOSE WHO ARE TRAVELING HOME [Q4(08)], ASK:

Q4A. What was the purpose of your trip? Where are you coming from? **(READ LIST. RANDOMIZE, BUT KEEP 01-03 TOGETHER. ACCEPT ONE RESPONSE ONLY.)**

01 Visit friends or relatives
02 Shopping
03 Other social or recreational
04 Work related travel
05 Travel from school or college
06 Medical
07 Other personal business
96 Or something else **(Specify:** _____**)**
99 **DO NOT READ:** Refused

ASK EVERYONE:

Q5. Please enter the number of people traveling with you in your party, including yourself and any children. **(RANGE = 1-97.)**

___ *98-More than 97 people 99-Refused*

THOSE WHO ARE TRAVELING IN A GROUP [Q5(02-98)] ASK:

Q6. Again, including yourself, how many of these **[INSERT NUMBER OF TRAVELERS]** are adults ages 18 or older? **(DO NOT ALLOW Q6 TO BE GREATER THAN Q5. RANGE = 1-Q5 RESPONSE.)**

___ *98-More than 97 people 99-Refused*

Q7. Who are you traveling with? **(READ LIST.)**

	Yes	No	Refused
A. Spouse or partner	01	02	99
B. Boyfriend or girlfriend	01	02	99
C. Friends	01	02	99
D. Children and/or grandchildren	01	02	99
E. Other family, such as parents, grandparents, or siblings	01	02	99
F. Business associates	01	02	99
G. Anyone else **(specify)**	01	02	99

ASK EVERYONE:

Q8. How did you purchase your ticket for this trip? **(READ LIST.)**

01 Online directly from **[INSERT ANSWER TO SB]**
02 Online from another source
03 By phone
04 At a bus station
05 At some other business such as a gas station or hotel
06 Directly from the bus driver
95 Or some other way **(Specify:** _____**)**
99 **DO NOT READ:** Don't know/Refused

THOSE WHO DID NOT PURCHASE THEIR TRIP ONLINE [Q8(02-99)], ASK:

Q9. Do you have access to the internet, either at home, at work, or from some other location?

01 Yes
02 No
99 **DO NOT READ:** Don't know/Refused

THOSE WHO DID NOT PURCHASE THEIR TRIP ONLINE BUT HAVE ACCESS TO THE INTERNET [Q8(02-99) AND Q9(01)], ASK:

Q10. Have you ever been on the website for **[INSERT ANSWER TO SB]**?

01 Yes
02 No
99 **DO NOT READ:** Don't know/Refused

THOSE WHO PURCHASED THEIR TICKET ONLINE OR HAVE BEEN ON THE JEFFERSON LINES WEBSITE [Q8(01) OR Q10(01)], ASK:

Q11. Have you ever accessed the **[INSERT ANSWER TO SB]** website from…? **(READ LIST.)**

	Yes	No	Refused
A. Your own personal computer or laptop at home	01	02	99
B. Your own smartphone	01	02	99
C. Your own tablet (such as an iPad or Kindle)	01	02	99
D. A computer or other internet enabled device belonging to a friend or family member	01	02	99
E. A computer at work	01	02	99
F. In some other way **(specify)**	01	02	99

THOSE WITH INTERNET ACCESS [Q8(01) OR Q9(01)], ASK:

Q12A. Do you normally access the internet using any of the following?
(READ LIST. RANDOMIZE. ASK FOR EACH NOT MENTIONED IN Q11)

	Yes	No	Refused
A. Your own personal computer or laptop at home	01	02	99
B. Your own smartphone	01	02	99
C. Your own tablet (such as an iPad or Kindle)	01	02	99
D. A computer or other internet enabled device belonging to a friend or family member	01	02	99
E. A computer at work	01	02	99
F. Or in some other way **(specify)**	01	02	99

ASK EVERYONE:

Q12. How did you first hear about the availability of this bus route?
(DO NOT READ LIST. ACCEPT ONE RESPONSE ONLY. CLARIFY 'NEWSPAPER/NOT INTERNET.')

01 Word of mouth/Family/Friends
02 Newspaper (not Internet)
03 Yellow pages
04 Internet
05 From a local transit provider
06 From a local intercity bus agent or terminal staff member
07 Saw or passed a bus on the road
08 Television
09 Radio
95 Somewhere else **(Specify: _____)**
98 Refused
99 Do not recall

Q13. When you decided to take this trip, what was your reason for using a bus rather than some other means of transportation? **(PROBE ONCE IF NECESSARY. CLARIFY ANYTHING THAT COULD HAVE MULTIPLE MEANINGS.)**

_____

Q14. How did you get to this bus? **(READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.)**

01 Walked
02 Drove yourself
03 Dropped off by a friend or a relative
04 Took a local bus or transit
05 A taxi
06 An airplane
07 Another intercity bus
08 An Amtrak train
95 Or some other way **(Specify: _____)**
99 **DO NOT READ:** Refused

Q15. When you get off the bus, how will you get to your final destination? **(READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.)**

01 Walk
02 Will drive yourself
03 Get picked up by a friend or relative
04 Will take a local bus or transit
05 A taxi
06 An airplane
07 Another intercity bus
08 An Amtrak train
95 Or some other way **(Specify: _____)**
99 **DO NOT READ:** Refused

Q16. How many motor vehicles are available for regular use by members of your household, including yourself? **(READ LIST IF NECESSARY. IF NECESSARY, READ:** "This can include cars, vans, motorcycles, etc."**)**

01 Zero
02 One vehicle
03 Two vehicles
04 Three vehicles
05 Four or more vehicles
99 **DO NOT READ:** Refused

Q17. Do you have a driver's license?

01 Yes
02 No
99 **DO NOT READ:** Refused

Q18. How would you have made this trip today if this bus had not been available?
(READ ENTIRE LIST. RANDOMIZE.)

01 Drive yourself in <u>your</u> personal or family vehicle **(ONLY SHOW IF Q17(01))**
02 Ride with someone in <u>their</u> vehicle
03 Use a private van or bus
04 Take an airplane
05 Take a train or Amtrak
06 Rent a vehicle
07 Purchase a vehicle
08 Would not take trip
95 Or some other way **(Specify: _____)**
99 **DO NOT READ:** Don't know/Refused

Q19. What, if anything, would you change about this bus service?
(PROBE ONCE IF NECESSARY. CLARIFY ANYTHING THAT <u>COULD</u> HAVE MULTIPLE MEANINGS.)

_____

Q20. In regards to going to the places you want to travel, please rate current intercity bus service on each of the following using a scale of 0 to 10, where 0 means you are very dissatisfied and 10 means you are very satisfied. First/Next… **(READ LIST. RANDOMIZE.)**

	Rating	Not sure
A. Frequency of bus service		99
B. Cleanliness and condition of buses		99
C. Cleanliness and condition of bus stations or stops		99
D. Availability of bus fare and schedule information		99
E. Cost of bus service		99
F. Amount of time it takes to get to your destination when traveling by bus		99
G. Availability of Wi-Fi on buses		99
H. Availability of power outlets on buses		99
I. Convenience of bus stations and stops		99
J. How user friendly this bus service is		99
K. Availability of luggage space on buses		99
L. Professionalism of the driver		99
M. Heating and air conditioning on buses		99
N. Ease of purchasing a ticket		99

Q21. Overall, how satisfied are you with your experience on this intercity bus trip on a scale of 0 to 10, where 0 means you are very dissatisfied and 10 means you are very satisfied?

_____ **Rating (99 FOR 'DON'T KNOW/REFUSED')**

Q22. Excluding this trip, have you ever traveled on an intercity bus before?

01 Yes
02 No
99 **DO NOT READ:** Don't know/Refused

THOSE WHO HAVE TRAVELED ON INTERCITY BUSES BEFORE [Q22(01)], ASK:

Q23. How often do you travel on intercity buses? **(READ LIST.)**

01 Once a month or more
02 Once every two to three months
03 A few times a year
04 About once a year
05 Or less than once a year
99 **DO NOT READ:** Don't know/Refused

ASK EVERYONE:

Q24. How likely would you be to consider traveling on an intercity bus in the future? Would you say you…? **(READ LIST.)**

05 Definitely would consider traveling on an intercity bus,
04 Probably would consider,
02 Might or might not consider,
01 Probably would not consider, or
01 Definitely would not consider traveling on an intercity bus
99 **DO NOT READ:** Don't know/Refused

Q25. How likely would you be to recommend each of the following to a friend or family member on a scale of 0 to 10, where 0 means not at all likely and 10 means very likely? **(READ LIST. RANDOMIZE.)**

	Rating	Don't know/Refused
A. Intercity bus travel		99
B. **[INSERT ANSWER TO SB]**		99

Q26. If express service were available from **[INSERT ANSWER TO Q1]** to **[INSERT ANSWER TO Q2]**, but cost 30% more than your fare today, how likely would you be to choose an express route over this route? **(READ LIST.)**

05 Very likely
04 Somewhat likely
03 Neutral
02 Somewhat unlikely
01 Very unlikely
99 **DO NOT READ:** Don't know/Refused

Q27. How many miles is your home from the most convenient intercity bus terminal or stop? **(READ LIST IF NECESSARY.)**

01 Less than 1 mile
02 1 to 3 miles
03 4 to 5 miles
04 6 to 10 miles
05 11 to 20 miles
06 Or more than 20 miles
99 **DO NOT READ:** Don't know/Refused

READ: The final few questions are for classification purposes only.

D1. What is your age? **(SHOW RESPONDENT CARD WITH RESPONSE CATEGORIES.)**

01 Less than 18
02 18 to 24
03 25 to 34
04 35 to 44
05 45 to 54
06 55 to 64
07 65 to 74
08 75 or older
99 **DO NOT READ:** Refused

D2. What is the last grade or level of education that you have completed? **(READ LIST IF NECESSARY.)**

01 Grade school or less
02 Some high school
03 High school graduate or GED
04 Some college or tech school
05 4 year college graduate
06 Or graduate school
99 **DO NOT READ:** Refused

D3. Are you currently…? **(READ LIST. ACCEPT ONE RESPONSE ONLY.)**

01 Employed full-time,
02 Employed part-time,
03 A full-time student,
04 A part-time student,
05 Retired,
06 Homemaker ,
07 Not employed, or
08 Or in active military service
99 **DO NOT READ:** Refused

D4. What is your immediate family's annual household income, before taxes?
(SHOW RESPONDENT CARD WITH RESPONSE CATEGORIES.)

01 Less than $11,500
02 $11,500 to less than $15,500
03 $15,500 to less than $19,500
04 $19,500 to less than $23,500
05 $23,500 to less than $27,500
06 $27,500 to less than $31,500
07 $31,500 to less than $35,500
08 $35,500 to less than $39,500
09 $39,500 to less than $50,000
10 $50,000 to less than $75,000
11 Or $75,000 or more
99 **DO NOT READ:** Refused

D5. Not including yourself, how many people currently live in your household?

_____

(USE 99 "DON'T KNOW/REFUSED")

D6. Of those **[INSERT]** people, how many are:

Your children: _____
Your spouse: _____
Your parents: _____
Other dependents: _____
Other non-dependents: _____

(USE 99 "DON'T KNOW/REFUSED")

D7. How well do you speak English? **(READ ENTIRE LIST.)**

03 Very well
02 Well
01 Not well
99 **DO NOT READ:** Don't know/Refused

D8. What is your native language? **(READ LIST IF NECESSARY.)**

01 English
02 Spanish
03 Hmong
04 Somalie
05 German
06 Vietnamese
95 Or something else **(specify)**
99 **DO NOT READ:** Don't know/Refused

D9. Are you Hispanic or of Latino descent?

01 Yes
02 No
99 **DO NOT READ:** Refused

D10. Which of the following best describes your race? **(READ LIST. ACCEPT ONE RESPONSE ONLY.)**

01 Asian
02 Black or African American
03 American Indian or Alaska Native
04 White
05 Native Hawaiian or Other Pacific Islander
95 Some other race **(specify)**
97 Or two or more races
99 **DO NOT READ:** Refused

D11. **DO NOT ASK:** Gender

01 Male
02 Female

Thank you very much for your time. **(PRESENT RESPONDENT WITH GIFT CARD.)**

D12. Time **(RECORDED AUTOMATICALLY)**

Cities by Routes

Punch	City	Route(s)
01	Minneapolis – Hawthorne Station	All
02	Eagan	965,966
03	Hastings	965,966
04	Red Wing	965,966
05	Lake City	965,966
06	Rochester	965,966,234,235a,235b,236,237,238
07	Winona State University	965,966
08	La Crosse	965,966
09	Sparta	965,966
10	Baraboo	965,966
11	Madison	965,966
12	Milwaukee	965,966
13	St. Paul	906,911
14	Blaine – Transit Center	906,911
15	Forest Lake	906,911
16	North Branch	906,911
17	Pine City	906,911
18	Hinckley	906,911
19	Sandstone	906,911
20	Moose Lake	906,911
21	Cloquet	906,911,929,930
22	Duluth	906,911,919,920,929,930
23	Virginia	919,920
24	Hibbings	919,920
25	Grand Rapids	919,920
26	Burnsville Transit Center	925,926
27	Owatonna	925,926,235b,236,237,238
28	Albert Lea	925,926,234,235a
29	Fairmont	925,926
30	Jackson	925,926
31	Worthington	925,926
32	Eden Prairie Transit Center	925,926
33	Glencoe	925,926
34	Hutchinson	925,926
35	Litchfield	925,926
36	Wilmar	925,926
37	Clara City	925,926
38	Granite Falls	925,926
39	Marshall	925,926
40	Pipestone	925,926
41	Luverne	925,926
42	Sioux Falls	925,926
43	Maple Grove	927,928
44	Monticello	927,928
45	Sioux Falls	925,926
46	Maple Grove	927,928
47	Monticello	927,928
48	St. Cloud	927,928
49	Little Falls	927,928
50	Brainerd	927,928,929,930
51	Nisswa	927,928
52	Pequot Lakes	927,928
53	Pine River	927,928
54	Hackensack	927,928

Punch	City	Route(s)
55	Walker	927,928
56	Bemidji	927,928
57	Bagley	927,928
58	Fosston	927,928
59	Erskine	927,928
60	Crookston	927,928
61	Grand Forks	927,928
62	Fargo	927,928,929,930
63	Moorhead	929,930
64	Detroit Lakes	929,930
65	Perham	929,930
66	Wadena	929,930
67	Staples	929,930
68	Crosby	929,930
69	Aitkin	929,930
70	McGregor	929,930
71	Cloquet	929,930
72	Waseca	235a,235b,236,237,238
73	Dodge Center	235b,236,237,238
74	Austin	234,235a

Appendix H

HOUSEHOLD SURVEY QUESTIONS

MnDOT Intercity Bus Service – Community Survey

QUOTAS (FROM S3)	
Region 1	10
Region 2	9
Region 3	37
Region 4	25
Region 5	18
Region 6	18
Region 7	65
Region 8	14
Region 9	26
Region 10	56
Region 11	322
TOTAL	**600**

SA. Region **(FROM SAMPLE)**

READ TO EVERYONE:

Hello. My name is _____ from WBA, a national opinion research firm. We are conducting a survey on behalf of the Minnesota Department of Transportation about transportation in your area. This survey is for research purposes only; we are not trying to sell anything. Your opinions are very important to us. This call may be monitored or recorded for quality control purposes.

S1. I would like to ask you some questions about your travel in the past 12 months. Have you traveled **75 miles or more** *one-way* away from home to a destination in the Continental U.S. or Canada, excluding commuting to work, by any mode of transportation in the past 12 months?

01	Yes	➔	**SKIP TO S3**
02	No	➔	**CONTINUE**
98	**DO NOT READ:** Refused	➔	**THANK & TERMINATE**
99	**DO NOT READ:** Don't know ➔		**CONTINUE**

THOSE WHO HAVE NOT TRAVELED 75 MILES OR MORE, ONE-WAY, IN THE PAST 12 MONTHS [S1 (02, 99)], ASK:

S2. Has any other adult in your household traveled at least 75 miles or more one-way away from home to a destination in the Continental U.S. or Canada in the past 12 months?

01	Yes, available	➔	**ASK TO SPEAK TO PERSON, THEN REPEAT INTRODUCTION**
02	Yes, but not available	➔	**ASK FOR AND RECORD FIRST NAME. SCHEDULE CALLBACK.**
03	No	➔	**THANK & TERMINATE**
98	**DO NOT READ:** Refused	➔	**THANK & TERMINATE**
99	**DO NOT READ:** Don't know ➔		**THANK & TERMINATE**

ASK EVERYONE:

S3. Which county in Minnesota do you live in? **(DO NOT READ LIST.)**

01	Aitkin	31	Itasca	61	Pope
02	Anoka	32	Jackson	62	Ramsey
03	Becker	33	Kanabec	63	Red Lake
04	Beltrami	34	Kandiyohi	64	Redwood
05	Benton	35	Kittson	65	Renville
06	Big Stone	36	Koochiching	66	Rice
07	Blue Earth	37	Lac qui Parle	67	Rock
08	Brown	38	Lake	68	Roseau
09	Carlton	39	Lake of the Woods	69	Saint Louis
10	Carver	40	Le Sueur	70	Scott
11	Cass	41	Lincoln	71	Sherburne
12	Chippewa	42	Lyon	72	Sibley
13	Chisago	43	Mahnomen	73	Stearns
14	Clay	44	Marshall	74	Steele
15	Clearwater	45	Martin	75	Stevens
16	Cook	46	McLeod	76	Swift
17	Cottonwood	47	Meeker	77	Todd
18	Crow Wing	48	Mille Lacs	78	Traverse
19	Dakota	49	Morrison	79	Wabasha
20	Dodge	50	Mower	80	Wadena
21	Douglas	51	Murray	81	Waseca
22	Faribault	52	Nicollet	82	Washington
23	Fillmore	53	Nobles	83	Watonwan
24	Freeborn	54	Norman	84	Wilkin
25	Goodhue	55	Olmsted	85	Winona
26	Grant	56	Otter Tail	86	Wright
27	Hennepin	57	Pennington	87	Yellow Medicine
28	Houston	58	Pine	95	Other ➔ **T&T**
29	Hubbard	59	Pipestone	97	Do not live in Minnesota ➔ **T&T**
30	Isanti	60	Polk	99	Don't know/Refused ➔ **T&T**

S4. **Record Gender (DO NOT ASK)**

01 Male
02 Female

READ TO EVERYONE:

For the next few questions we are going to talk about trips you have made in the past year that are **75 miles or more** *one-way* away from home to destinations in the Continental U.S. or Canada. **(NOTE: HAVE THIS TEXT APPEAR AT THE TOP OF EACH SCREEN FOR Q1-Q6 WITH NOTE TO 'READ IF NECESSARY.')**

Q1. When you think about making trips that are **75 miles or more** *one-way* away from home to destinations in the Continental U.S. or Canada, what modes of transportation come to mind? **PROBE ONCE:** Any others? **(DO NOT READ LIST. ACCEPT ALL THAT APPLY. ' IF 'BUS,' CLARIFY:** Are you aware of any specific bus services?**)**

FOR EACH MODE NOT MENTIONED IN Q1 (0-03,06-08), ASK:

Q2. Are you aware of any of the following modes of travel for these types of trips? **(READ ENTIRE LIST. RANDOMIZE.)**

IF AWARE OF MODES IN Q1 OR Q2, ASK:

Q3. Which of these modes have you used in the past 12 months? **(LIST MODES MENTIONED IN Q1 OR Q2. READ LIST IF NECESSARY. ACCEPT ALL THAT APPLY.)**

	Q1	Q2			Q3
		Yes	No	DK/RFSD	
Car	01				01
Plane	02				02
A. Amtrak	03	01	02	99	03
Other Train	04				04
B. Jefferson Lines bus service	05	01	02	99	05
C. Land to Air bus service	06	01	02	99	06
Other airport shuttle **(specify)**	07				07
D. Greyhound bus service	08	01	02	99	08
E. Megabus	09	01	02	99	09
Charter or group tour bus	10				10
Other bus **(specify)**	11				11
Bus (unspecified)	12				12
Other mode **(specify)**	95				95
None	97				
Don't know/Refused	99				99

ASK EVERYONE:

Q5. How many *one-way* trips of 75 miles or more have you made in the past 12 months? **(IF NECESSARY, READ:** Please count each round-trip as two one-way trips. **RANGE = 1-365.)**

___ *999-Don't know/Refused*

Q5A. For the **[INSERT ANSWER TO Q5]** trips you have made, what cities were the final destinations for each of your trips? **(PROBE FOR STATE/PROVINCE. ACCEPT UP TO 12 RESPONSES.)**

99-Don't know/Refused

_____ _____

City **State/Province**

THOSE WHO HAVE TRAVELED TO MORE THAN ONE CITY IN Q5A OR DON'T KNOW/REFUSED [Q5A(99)], ASK:

Q6. For the next few questions, I would like you to think about the last trip you took. What city was the final destination for your last trip? **(LIST CITIES MENTIONED IN Q5A. READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.)**

01 City #1
02 City #2
03 City #3
04 City #4
05 City #5
06 City #6
07 City #7
08 City #8
09 City #9
10 City #10
11 City #11
12 City #12
95 **DO NOT READ:** Other **(specify city and state)**
99 Don't know/Refused

READ TO THOSE WHO TRAVELED TO ONLY ONE CITY IN Q5A:

For the next few questions, I would like you to think about that last trip you took to **[INSERT ANSWER TO Q5A]**.

ASK EVERYONE:

Q7. What mode or modes of transportation to get to and from (**[INSERT RESPONSE TO Q5A/Q6]**/your final destination)*? **PROBE, IF NECESSARY:** Did you take any additional modes for any part of your trip to (**[INSERT RESPONSE TO Q5A/Q6]**/your final destination)? **(*INSERT BASED ON RESPONSE TO Q5A/Q6. DO NOT READ LIST. CLARIFY 'CAR.' IF 'BUS,' CLARIFY:** Which bus service did you use? **ACCEPT ALL THAT APPLY.)**

01 Drove yourself in your personal or family vehicle
02 Rode with someone in their vehicle
03 A private van or bus
04 Plane
05 Amtrak
06 Other Train
07 Jefferson Lines bus service
08 Land to Air bus service
09 Greyhound bus service
10 Megabus
11 Charter or group tour bus
12 Other bus **(specify)**
13 Bus (unspecified)
14 An airport shuttle **(specify)**
95 Other mode **(specify)**
99 Don't know/Refused

THOSE MENTIONING MODES OF TRANSPORTATION FOR LAST TRIP [Q7(01-95)], ASK:

Q7A. When you decided to take this trip, what was your reason for using (this mode/these modes)* rather than some other means of transportation? **(PROBE ONCE IF NECESSARY. CLARIFY ANYTHING THAT COULD HAVE MULTIPLE MEANINGS.)**

_____

ASK EVERYONE:

Q8. What was the primary purpose of this trip? **(READ LIST. ACCEPT ONE RESPONSE ONLY.)**

01 Visit friends or relatives
02 Shopping
03 Other social or recreational
04 Work related travel
05 Travel to school or college
06 Medical
07 Other personal business
95 Or something else **(specify)**
99 **DO NOT READ:** Don't know/Refused

Q9. How many people traveled with you in your party, including yourself and any children. **(RANGE = 1-96.)**

___ *97-More than 96 people 99-Don't know/Refused*

THOSE WHO TRAVELED IN A GROUP [Q9(02-98)] ASK:

Q10. Again, including yourself, how many of these **[INSERT RESPONSE TO Q9]** were adults ages 18 or older? **(DO NOT ALLOW Q10 TO BE GREATER THAN 95. RANGE = 1-Q9 RESPONSE.)**

___ *98-More than 97 people 99-Don't know/Refused*

Q11. Who did you travel with? **(READ LIST. RANDOMIZE. ACCEPT ALL THAT APPLY.)**

01 A spouse or partner
02 Boyfriend or girlfriend
03 Friends
04 Children and/or grandchildren
05 Other family, such as parents, grandparents, or siblings
06 Business associates
07 A special interest, hobby, or religious group
95 Anyone else **(specify)**
99 **DO NOT READ:** Don't know/Refused

ASK EVERYONE:

Q12. How many motor vehicles are available for regular use by members of your household, including yourself? **(READ LIST IF NECESSARY. IF NECESSARY, READ:** This can include cars, vans, motorcycles, etc.**)**

01 Zero
02 One vehicle
03 Two vehicles
04 Three vehicles
05 Four or more vehicles
99 **DO NOT READ:** Refused

Q13. Do you have a driver's license?

01 Yes
02 No
99 **DO NOT READ:** Refused

Q14_1. Regardless of how you choose to go to the places you want to travel to in the Continental U.S. and Canada that are 75 miles or more away from home, please rate how important each of the following are in choosing a mode of transportation using a scale of 0 to 10, where 0 means it is not at all important and 10 means it is very important.

First/Next… **(READ <u>ENTIRE</u> LIST. RANDOMIZE LIST. USE 99 FOR DON'T KNOW/REFUSED.)**

	Rating
A. Frequency of service	
B. Cleanliness of vehicle or mode	
C. Cleanliness and condition of stations, stops or airports	
D. Availability of fare and schedule information	
E. Cost of service	
F. Amount of time it takes to get to your destination	
G. Availability of Wi-Fi on vehicle or mode	
H. Availability of power outlets on vehicle or mode	
I. Ease of getting to and from the station, stop or airport	
J. Scheduling flexibility when traveling	
K. Availability of luggage space	
L. Professionalism of staff	
M. Heating and air conditioning on vehicle or mode	
N. Ease of purchasing a ticket	

READ TO EVERYONE:

These next few questions are about intercity bus travel. Intercity buses include those busses which carry passengers significant distances between cities, towns or other populated areas on regularly scheduled trips. Even if you don't know a lot about intercity buses, please answer the questions based on your perceptions or anything you've heard.

Q14. Thinking about going to the places you want to travel in the Continental U.S. and Canada that are 75 miles or more away from home, **please rate current intercity bus service** on each of the following using a scale of 0 to 10, where 0 means it does a poor job and 10 means it does an excellent job.

First/Next… **(IF NECESSARY, READ:** "Please rate intercity buses based on your perceptions or anything you may know, even if you have never used an intercity bus." **READ ENTIRE LIST. RANDOMIZE. *ALWAYS HAVE O LAST. USE 99 FOR DON'T KNOW/REFUSED.)**

	Rating
A. Frequency of bus service	
B. Cleanliness of buses	
C. Cleanliness and condition of bus stations or stops	
D. Availability of bus fare and schedule information	
E. Cost of bus service	
F. Amount of time it takes to get to your destination when traveling by bus	
G. Availability of Wi-Fi on buses	
H. Availability of power outlets on buses	
I. Ease of getting to and from bus stations and stops	
J. Scheduling flexibility when traveling by bus	
K. Availability of luggage space on buses	
L. Professionalism of bus drivers	
M. Heating and air conditioning on buses	
N. Ease of purchasing a bus ticket	
O. Overall, how would you rate intercity buses as a means of transportation for trips of 75 miles or more, one-way*	

THOSE WHO HAVE NOT USED INTERCITY BUSES IN THE PAST YEAR, [Q3 (NOT 06-09) AND Q7 (NOT 08-11)], ASK:

Q15. Excluding this trip, have you ever traveled on an intercity bus before?

01 Yes
02 No
99 **DO NOT READ:** Don't know/Refused

THOSE WHO HAVE NEVER USED INTERCITY BUSES OR DON'T KNOW IF THEY HAVE, [Q3 (NOT 06-09) AND Q7 (NOT 08-11) AND Q15 (02,99)], ASK:

Q15A. Has any member of your household traveled on an intercity bus before?

01 Yes
02 No
99 **DO NOT READ:** Don't know/Refused

THOSE WHO HAVE TRAVELED ON INTERCITY BUSES BEFORE [Q3 (06-09) OR Q7 (08-11) OR Q15 (01)], ASK:

Q16. How often do you travel on intercity buses? **(READ LIST.)**

01 Once a month or more
02 Once every two to three months
03 A few times a year
04 About once a year
05 Or less than once a year
99 **DO NOT READ:** Don't know/Refused

ASK EVERYONE:

Q17. How likely would you be to consider traveling on an intercity bus in the future? Would you say you: **(READ ENTIRE LIST.)**

05 Definitely would consider traveling on an intercity bus,
04 Probably would consider,
03 Might or might not consider,
02 Probably would not consider, or
01 Definitely would not consider traveling on an intercity bus
99 **DO NOT READ:** Don't know/Refused

Q17A. What would make you more likely to consider traveling on an intercity bus in the future? **(PROBE ONCE, IF NECESSARY. CLARIFY ANYTHING THAT COULD HAVE MULTIPLE MEANINGS.)**

_____

Q18. How likely would you be to recommend each of the following to a friend or family member on a scale of 0 to 10, where 0 means not at all likely and 10 means very likely? **(READ LIST. RANDOMIZE B-E.)**

	Rating	Don't know/Refused
A. Intercity bus travel		99
B. Jefferson Lines **[IF Q1(06) OR Q2B (01)]**		99
C. Land to Air bus service **[IF Q1(07) OR Q2C (01)]**		99
D. Greyhound bus service **[IF Q1(08) OR Q2D (01)]**		99
E. Megabus **[IF Q1(09) OR Q2E(01)]**		99
F. A long distance airport shuttle service		99

Q19. How many miles is your home from the most convenient intercity bus terminal or stop? **(READ LIST IF NECESSARY.)**

01 Less than 1 mile
02 1 to 3 miles
03 4 to 5 miles
04 6 to 10 miles
05 11 to 20 miles
06 Or more than 20 miles
98 **DO NOT READ:** Refused
99 **DO NOT READ:** Don't know

READ: The final few questions are for classification purposes only.

D1. What is your age? **(READ LIST.)**

01 Less than 18,
02 18 to 24,
03 25 to 34,
04 35 to 44,
05 45 to 54,
06 55 to 64,
07 65 to 74, or
08 75 or older
99 **DO NOT READ:** Refused

D2. What is the last grade or level of education that you have completed? **(READ LIST IF NECESSARY.)**

01 Grade school or less,
02 Some high school,
03 High school graduate or GED,
04 Some college or tech school,
05 4 year college graduate, or
06 Or graduate school
99 **DO NOT READ:** Refused

D3. Are you currently…? **(READ LIST. ACCEPT ONE RESPONSE ONLY.)**

01 Employed full-time,
02 Employed part-time,
03 A full-time student,
04 A part-time student,
05 Retired,
06 Homemaker ,
07 Not employed,
08 Or in active military service
99 **DO NOT READ:** Refused

D4. What is your immediate family's annual household income, before taxes? **(READ LIST.)**

01 Less than $11,500
02 $11,500 to less than $15,500
03 $15,500 to less than $19,500
04 $19,500 to less than $23,500
05 $23,500 to less than $27,500
06 $27,500 to less than $31,500
07 $31,500 to less than $35,500
08 $35,500 to less than $39,500
10 $39,500 to less than $50,000
11 $50,000 to less than $75,000
12 Or $75,000 or more
99 **DO NOT READ:** Refused

D5. Not including yourself, how many people currently live in your household? **(RANGE 00-20.)**

___ *21-More than 20 people 99-Refused*

THOSE LIVING WITH SOMEONE ELSE [D5(01-21)], ASK:

D6. Of those **[INSERT]** people, how many are:
(IF D5(20,99): Of the people currently living in your household, how many are:)
(D6 MUST EQUAL D5 UNLESS 21,99)

Your children: _____
Your spouse: _____ **(RANGE 00-01)**
Your parents: _____ **(RANGE 00-04)**
Other dependents: _____
Other non-dependents: _____

(USE 99 "DON'T KNOW/REFUSED")

ASK EVERYONE:

D7. How well do you speak English? **(READ ENTIRE LIST.)**

03 Very well
02 Well, or
01 Not well
99 **DO NOT READ:** Don't know/Refused

D8. What is your native language? **(READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.)**

01 English
02 Spanish
03 Hmong
04 Somali
05 German
06 Vietnamese
95 Or something else **(specify)**
99 **DO NOT READ:** Don't know/Refused

D9. Are you Hispanic or of Latino descent?

01 Yes
02 No
99 **DO NOT READ:** Refused

D10. Which of the following best describes your race? **(READ LIST. ACCEPT ONE RESPONSE ONLY.)**

01 Asian
02 Black or African American
03 American Indian or Alaska Native
04 White
05 Native Hawaiian or Other Pacific Islander
95 Some other race **(specify)**
97 Or are you multi-racial
99 **DO NOT READ:** Refused

Thank you for taking the time to provide us with some helpful feedback. Have a nice evening/day.

Code	Region	County	Code	Region	County
35	1	Kittson County	33	7	Kanabec County
44	1	Marshall County	48	7	Mille Lacs County
54	1	Norman County	58	7	Pine County
57	1	Pennington County	5	7	Benton County
60	1	Polk County	71	7	Sherburne County
63	1	Red Lake County	73	7	Stearns County
68	1	Roseau County	86	7	Wright County
4	2	Beltrami County	17	8	Cottonwood County
15	2	Clearwater County	32	8	Jackson County
29	2	Hubbard County	41	8	Lincoln County
39	2	Lake of the Woods County	42	8	Lyon County
43	2	Mahnomen County	51	8	Murray County
1	3	Aitkin County	53	8	Nobles County
9	3	Carlton County	59	8	Pipestone County
16	3	Cook County	64	8	Redwood County
31	3	Itasca County	67	8	Rock County
36	3	Koochiching County	7	9	Blue Earth County
38	3	Lake County	8	9	Brown County
69	3	St. Louis County	22	9	Faribault County
3	4	Becker County	40	9	Le Sueur County
14	4	Clay County	45	9	Martin County
21	4	Douglas County	52	9	Nicollet County
26	4	Grant County	72	9	Sibley County
56	4	Otter Tail County	81	9	Waseca County
61	4	Pope County	83	9	Watonwan County
75	4	Stevens County	20	10	Dodge County
78	4	Traverse County	23	10	Fillmore County
84	4	Wilkin County	24	10	Freeborn County
11	5	Cass County	25	10	Goodhue County
18	5	Crow Wing County	28	10	Houston County
49	5	Morrison County	50	10	Mower County
77	5	Todd County	55	10	Olmsted County
80	5	Wadena County	66	10	Rice County
34	6	Kandiyohi County	74	10	Steele County
46	6	McLeod County	79	10	Wabasha County
47	6	Meeker County	85	10	Winona County
65	6	Renville County	2	11	Anoka County
6	6	Big Stone County	10	11	Carver County
12	6	Chippewa County	19	11	Dakota County
37	6	Lac qui Parle County	27	11	Hennepin County
76	6	Swift County	62	11	Ramsey County
87	6	Yellow Medicine County	70	11	Scott County
13	7	Chisago County	82	11	Washington County
30	7	Isanti County			

Appendix I

S. 5311(F) NETWORK PERFORMANCE AND EVALUATION

Stop	FY 2013 Ridership	Trip Rate	2010 Place Population
Scanlon	683	0.69	991
Hinckley	626	0.35	1,800
Cass Lake	234	0.3	770
Detroit Lakes	1,399	0.16	8,569
Walker	147	0.16	941
Granite Falls	385	0.13	2,897
Bemidji	1,757	0.13	13,431
Winona	3,125	0.11	27,592
Albert Lea	1,964	0.11	18,016
Perham	310	0.1	2,985
Fosston	126	0.08	1,527
Bagley	112	0.08	1,392
Erskine	36	0.07	503
Pine City	213	0.07	3,123
Moose Lake	163	0.06	2,751
Clara City	76	0.06	1,360
Marshall	685	0.05	13,680
Willmar	950	0.05	19,610
Sandstone	120	0.04	2,849
Crookston	307	0.04	7,891
Glencoe	155	0.03	5,631
Pipestone	114	0.03	4,317
Luverne	111	0.02	4,745
North Branch	204	0.02	10,125
Litchfield	125	0.02	6,726
Austin	457	0.02	24,718
Hutchinson	147	0.01	14,178
Total	14,731	-	203,118

Table I-1: Annual Passenger Boardings Per Capita in Non-Urbanized Communities

Average Ridership: 546
Median Ridership: 213

Average Trip Rate: 0.07
Median Trip Rate: 0.07

Trip Rate Standard Deviation: 0.14

*Table I-1 does not include any stops within urbanized areas. It does not include Wadena, due to that location's prior status as a transfer point.

Table I-2: FY 2013 S. 5311(f) Route Performance

Provider	Schedule Number	Route	Passengers	Trips per week	Annual Trips	Boardings per Trip	Total Revenue (MN)	Total Costs (MN)	Fare Box Ratio	Twin Cities Trunk Route?
Jefferson Lines	906	Duluth to Minneapolis	5,683	7	364	15.6	$156,994	$204,865	77%	Y
	909	Minneapolis to Duluth	3,734	7	364	10.3	$84,208	$205,742	41%	Y
	910	Duluth to Minneapolis via Mora	4,967	7	364	13.6	$121,119	$206,518	59%	Y
	911	Minneapolis to Duluth via Mora	6,654	7	364	18.3	$164,933	$225,407	73%	Y
	929	Wadena to Fargo*	3,364	5	260	12.9	$51,311	$115,697	44%	
	930	Fargo to Wadena*	3,442	5	260	13.2	$51,710	$113,332	46%	
	932	Minneapolis to Milwaukee	8,386	7	364	23.0	$124,597	$196,700	63%	Y
	935	Milwaukee to Minneapolis	7,470	7	364	20.5	$99,539	$198,333	50%	Y
	919	Duluth to Grand Rapids**	55	7	56	1.0	$778	$14,432	5%	
	920	Grand Rapids to Duluth**	141	7	56	2.5	$1,374	$15,176	9%	
	923	Rochester to Minneapolis via Red Wing	614	7XH	355	1.7	$8,782	$129,887	7%	Y
	924	Minneapolis to Rochester via Red Wing	648	7XH	355	1.8	$9,419	$127,583	7%	Y
	925	Minneapolis to Sioux Falls	1,991	4X5H	203	9.8	$63,106	$191,003	33%	Y
	926	Sioux Falls to Minneapolis	2,260	4X5H	203	11.1	$78,799	$193,037	41%	Y
	927	Fargo via Bemidji (south)	2,166	3XH	146	14.8	$46,623	$142,994	33%	
	928	Fargo via Bemidji (north)	2,096	3XH	146	14.4	$40,070	$143,482	28%	
Land to Air	232	Owatonna to Mankato	189	14	728	0.3	$1,865	$25,747	7%	
	233	Mankato to Owatonna	303	14	728	0.4	$3,007	$25,747	12%	
	234	Rochester to Mankato	1,095	7	364	3.0	$16,090	$69,963	23%	
	235	Mankato to Rochester	1,049	7	364	2.9	$16,313	$69,963	23%	
TOTAL			56,307		6,408		$1,140,636	$2,615,607	44%	

XH= "Except Holidays." Assumes 10 annual holidays.
*Wadena to/from Fargo is now served by a restructured 929/930 between Duluth and Fargo.
**Data for Jefferson Lines' 919/920 only includes 2 months reported.

Table I-3: Candidate Intercity Bus Stop Locations (continued next page)

Needs Analysis Place Results	2010 Pop.	2010 # of HHs	Est. Annual Trips	On existing route, no stop	< 10 mi to stop	10-25 mi to stop	>25 mi to stop	Prior ICB stop?	Local Transit Agency	Daily Connection to ICB	Intercity Connection Notes
Hastings	22,172	8,735	1,769			x		x	Metro Transit		
Farmington	21,086	7,066	1,431		x				Metro Transit	Y	To Minneapolis via commuter bus from Park&Ride. No Weekends.
Red Wing	16,459	7,017	1,421				x	x	Hiawathaland Transit	Y	To Minneapolis, via Amtrak Empire Builder (727 & 828)
New Ulm	13,522	5,732	1,161					x	Brown County Heartland Express (Dial-A-Ride)		Previously served
Buffalo	15,453	5,699	1,154		x				Buffalo Allied Transit		10 miles from Monticello
Thief River Falls	8,573	3,802	770				x		Tri-Valley Heartland Express		Community college
Cambridge	8,111	3,137	635					x	Isanti-Chisago Heartland Express	Y	Served until FY13. To North Branch. Not on Weekends
Int. Falls	6,424	2,903	588				x		Arrowhead Transit		Two trips a month to Duluth, Virginia and Bemidji and Grand Rapids
New Prague	7,321	2,711	549			x			SmartLink Transit (Dial-A-Ride)		No link to Northfield
Lake City	5,063	2,238	453				x	x	Hiawathaland Transit	Y	To Rochester. No Weekends
Kasson	5,931	2,224	451	x					Rochester City Lines & Rolling Hills Transit	Y	To Rochester. No Weekends
Windom	4,646	1,994	404			x			Western Community Action - Community Transit		Nearest stop is Jackson, 10-25 miles

*The annual trip estimate uses an equation including 2010 households, an intercity mode share of .0185, and a daily long distance trip rate of 0.03. See NCHRP Report 735, Long-Distance and Rural Travel Transferable Parameters for Statewide Travel Forecasting Models, Washington, DC 2012, Table 6.7 and S. 1. For verification, estimates were also calculated for existing rural stops and compared to actual FY 2013 ridership. The average difference in actual ridership and the equation estimate was 65 trips.

Table I-3: Candidate Intercity Bus Stop Locations (continued)

Needs Analysis Place Results	2010 Pop.	2010 # of HHs	Est. Annual Trips	On existing route, no stop	< 10 mi to stop	10-25 mi to stop	>25 mi to stop	Prior ICB stop?	Local Transit Agency	Daily Connection to ICB	Intercity Connection Notes
Princeton	4,698	1,926	390			x			Timber Trails Transit		Nearest stop is Monticello, 10-25 miles
Park Rapids	3,709	1,772	359			x		x	Hubbard County Heartland Express (Dial-A-Ride)	Y	Served until last year. To Bemidji and Walker. No Weekends
Ely	3,460	1,681	341				x		Arrowhead Transit		One trip a week to Virginia & Hibbing
Two Harbors	3,745	1,649	334			x			Arrowhead Transit		Two trips per month to Duluth
Le Sueur	4,058	1,640	332	x					Timber Trails Transit (Dial-A-Ride)		On Mankato Land to Air route
Sleepy Eye	3,599	1,475	299				x		Brown County Heartland Express (Dial-A-Ride)		More than 25 mi
Benson	3,240	1,469	298			x			Prairie Five (Dial-A-Ride)		25 mi from Morris
Melrose	3,598	1,309	265	x			x		Tri-Cap Transit (Dial-A-Ride)		On existing Grand Forks route
Silver Bay City	1,887	836	169				x		Arrowhead Transit		Two trips a month to Duluth
Aurora	1,682	777	157			x			Arrowhead Transit	Y	To Virginia. No Weekends
Twin Valley	824	357	72			x			Tri-Valley Heartland Express		Just over 10 mi to Mahnomen
Onamia	878	349	71				x		Timber Trails Transit (Dial-A-Ride)		Over 25 mi to Little Falls

*The annual trip estimate uses an equation including 2010 households, an intercity mode share of .0185, and a daily long distance trip rate of 0.03. See NCHRP Report 735, Long-Distance and Rural Travel Transferable Parameters for Statewide Travel Forecasting Models, Washington, DC 2012, Table 6.7 and S. 1. For verification, estimates were also calculated for existing rural stops and compared to actual FY 2013 ridership. The average difference in actual ridership and the equation estimate was 65 trips.

Table I-4: Potential Local Transit Connections for Existing Intercity Stops (continued next page)

Non-Urban Stop	2010 Pop.	2010 HHs	Est. Annual Trips	Est. Local Transit Trips to ICB*	Local Transit System	Weekend Service?
Aitkin	2,165	936	190	19	Arrowhead Transit	
Albert Lea	18,016	7,774	1,575	157	Albert Lea Transit, Austin-Mower Co. Area Transit (now SMART), Faribault County PE	Y
Alexandria	11,070	5,298	1,073	107	Transit Alternatives, Rainbow Rider Transit	Y
Austin	24,718	10,131	2,052	205	Austin-Mower Co. Area Transit, Albert Lea Transit (now SMART)	Y
Bagley	1,392	619	125	13	Tri-Valley Heartland Express, White Earth Tribal Transit	
Bemidji	13,431	5,339	1,082	108	Arrowhead Transit, Hubbard County Heartland Express, Paul Bunyan Transit, FAR North Public Transit	Y
Brainerd	13,590	5,851	1,185	119	Arrowhead Transit, Brainerd/Crow Wing County Transit	Y
Cass Lake	770	305	62	6	White Earth Tribal Transit	
Clara City	1,360	584	118	12		
Crookston	7,891	3,109	630	63	Tri-Valley Heartland Express	
Crosby	2,386	1,065	216	22	Arrowhead Transit, Brainerd/Crow Wing County Transit	Y
Detroit Lakes	8,569	3,864	783	78	Transit Alternatives, White Earth Tribal Transit, Becker County Transit	
Dodge Center	2,670	998	202	20	SEMAC (now Rolling Hills Transit)	
Erskine	503	234	47	5	Tri-Valley Heartland Express	
Fairmont	10,666	4,812	975	97	Martin County Transit	Y
Faribault	23,352	8,317	1,685	168	Three Rivers Hiawathaland Transit	
Fergus Falls	13,138	5,814	1,178	118	Transit Alternatives	
Forest Lake	18,377	7,015	1,421	142	Metro Transit	Y
Fosston	1,527	670	136	14	Tri-Valley Heartland Express, Fosston Transit	
Glencoe	5,631	2,220	450	45	Trailblazer Transit	
Grand Rapids	10,869	4,615	935	93	Arrowhead Transit	Y
Granite Falls	2,897	1,282	260	26	Prairie Five Rides, Granite Falls HE	
Hackensack	313	143	29	3		
Hibbing	16,361	7,414	1,502	150	Arrowhead Transit, Hibbing Area Transit	Y
Hinckley	1,800	736	149	15	Arrowhead Transit	Y
Hutchinson	14,178	5,950	1,205	121	Trailblazer Transit, Meeker County Public Transit	
Jackson	3,299	1,489	302	30	Martin County Transit, WCA Community Transit	
Litchfield	6,726	2,747	556	56	Meeker County Public Transit	Y

*Assumes that 10 percent of intercity riders transfer from local transit, per household surveys.

Table I-4: Potential Local Transit Connections for Existing Intercity Stops (continued)

Non-Urban Stop	2010 Pop.	2010 HHs	Est. Annual Trips	Est. Local Transit Trips to ICB*	Local Transit System	Weekend Service?
Little Falls	8,343	3,608	731	73	Tri-CAP Transit Connection	
Luverne	4,745	2,048	415	41	Rock County Heartland Express	
Mahnomen	1,214	529	107	11	Mahnomen County HE, White Earth Tribal Transit	
Marshall	13,680	5,394	1,093	109	Lincoln County HE, WCA Community Transit	Y
McGregor	391	180	36	4	Arrowhead Transit	
Monticello	12,759	4,693	951	95	RiverRider Public Transit	
Moose Lake	2,751	648	131	13	Arrowhead Transit	
Morris	5,286	1,986	402	40	Rainbow Rider Transit, Morris Transit	Y
Nisswa	1,971	876	177	18	Brainerd/Crow Wing County Transit	
North Branch	10,125	3,604	730	73	Chisago-Isanti County HE	
Northfield	20,007	6,272	1,271	127	Three Rivers Hiawathaland Transit	
Owatonna	25,599	10,068	2,040	204	Steele County Area Transit, Albert Lea Transit (now SMART)	Y
Pequot Lakes	2,162	955	193	19	Brainerd/Crow Wing County Transit	
Perham	2,985	1,304	264	26	Transit Alternatives	
Pine City	3,123	1,322	268	27	Arrowhead Transit, Timber Trails Public Transit	Y
Pine River	944	417	84	8	Brainerd/Crow Wing County Transit, Pine River Ride With Us	
Pipestone	4,317	1,923	390	39	Pipestone County Transit	Y
Sandstone	2,849	602	122	12	Arrowhead Transit	
Scanlon	991	426	86	9	Arrowhead Transit	
St. Peter	11,196	3,491	707	71	St. Peter Transit	Y
Staples	2,981	1,222	248	25	Wadena County Transit	Y
Virginia	8,712	4,242	859	86	Arrowhead Transit	Y
Wadena	4,088	1,840	373	37	Wadena County Transit	Y
Walker	941	452	92	9		
Waseca	9,410	3,504	710	71	Waseca County Transit	
Willmar	19,610	7,677	1,555	156	Kandiyohi Area Transit	Y
Winona	27,592	10,449	2,117	212	Winona Transit	
Worthington	12,764	4,458	903	90	Prairieland Transit	

*Assumes that 10 percent of intercity riders transfer from local transit, per household surveys.

Appendix J

TCRP REPORT 147: RURAL INTERCITY DEMAND TOOLKIT

TCRP Report 147: Toolkit for Estimating Demand for Rural Intercity Bus Services was used to estimate ridership for and assess the feasibility of the potential routes documented in Chapter 5. The Toolkit can be found online at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_147.pdf.

The Toolkit includes two models that generate estimates of annual ridership, based on user inputs. The first model is a regression model, a statistical equation based on the length of the route and the average population of the stops served (excluding the largest population stop, which is the assumed destination). The next model is a trip rate model using National Household Travel Survey data. It accounts for regional variation in long-distance public transportation trip rates of rural residents.

User inputs include stop population (either Urbanized Area or Urban Cluster population), route length, whether the route would serve a commercial airport and/or a correctional facility, and whether it would be operated by a national intercity bus operator.

The Toolkit can be adjusted to evaluate particular situations that may affect potential ridership. Both models already eliminate the population of the destination city as it is assumed that very few residents there would take advantage of a new opportunity for travel to a rural area that was previously unserved. In some cases it is also useful to remove other cities that already have substantial intercity bus service, where the potential impact of a small incremental expansion of service would be limited. For example, this analysis dropped Minneapolis from the Minneapolis–Winona route, leaving Red Wing as the destination. The ridership estimate thus reflects the remaining towns along the route and is much closer to likely demand.

Because of differences between the regression and trip rate model results in many of the corridors, the two demand estimates were averaged to provide a single number. This was done to be on the conservative side with regard to potential ridership. The Toolkit is also limited in that the models do not provide for testing the impact of multiple frequencies.

Applying the Toolkit to Chapter 5's potential routes resulted in the following estimates. Table J-5 presents estimated ridership, and Table J-6 presents estimated operating costs and revenues. For all seven potential routes, the assumed operator was a non-intercity provider. An operating cost of $2.30 per mile was used. These figures were multiplied by the number of round-trip miles for the proposed service. Intercity services generally operate 365 days per year, so that level of service was used for all cost estimates. For revenue estimates, this analysis assumed that average passenger-trip length is 80 percent of route length (as some passengers will not ride the entire length of the route). Revenue per passenger mile was assumed to be $0.15, based on estimates from current services.

Table J-5:

Predicted Ridership for Potential Routes

Route Description	One-Way Miles	Serves Airport	Serves Correc. Facility	Likely Operator	Regression Model Ridership	Trip Rate Model Ridership	Est. Ave. Ridership
Thief River Falls - Red Lake Falls - Crookston - Grand Forks (ND)	64	--	--	Non-Intercity	0	1,300	650
Thief River Falls - Erskine	34	--	--	Non-Intercity	0	600	300
Virginia - International Falls	98	--	--	Non-Intercity	0	600	300
Minneapolis - Elk River - Princeton - Onamia- Aitkin - Grand Rapids	184	--	--	Non-Intercity	400	0	200
Minneapolis - Red Wing - Lake City - Winona	119	--	Yes	Non-Intercity	1,600	8,900	5,250
Silver Bay - Two Harbors - Duluth	55	--	--	Non-Intercity	0	200	100
Windom - Sleepy Eye - New Ulm - Mankato	91	--	--	Non-Intercity	0	900	450

Table J-6:

Revenue and Costs for Potential Routes

Route Description	One-Way Miles	Est. Avg. Ridership	Est. Annual Revenue	Est. Farebox Recovery	Est. Annual Operating Cost	Net Operating Deficit	Net Deficit/ Passenger
Thief River Falls - Red Lake Falls - Crookston - Grand Forks (ND)	64	650	$4,992	4.6%	$107,456	-$102,464	-$158
Thief River Falls - Erskine	34	300	$1,224	2.1%	$57,086	-$55,862	-$186
Virginia - International Falls	98	300	$3,528	2.1%	$164,542	-$161,014	-$537
Minneapolis - Elk River - Princeton - Onamia- Aitkin - Grand Rapids	184	200	$4,416	1.4%	$308,936	-$304,520	-$1,523
Minneapolis - Red Wing - Lake City - Winona	119	5,250	$74,970	37.5%	$199,801	-$124,831	-$24
Silver Bay - Two Harbors - Duluth	55	100	$660	0.7%	$92,345	-$91,685	-$917
Windom - Sleepy Eye - New Ulm - Mankato	91	450	$4,914	3.2%	$152,789	-$147,875	-$329

The Toolkit was also used to estimate demand on the SFY 2013 S. 5311(f) routes, and this was compared to actual ridership, as can be seen in Table J-7. The purpose of this exercise was to validate the use of the Toolkit to estimate demand on potential routes, and at the same time compare actual ridership to model estimates. For the most part, the Toolkit estimates are comparable to the actual ridership, suggesting that there is validity in using it to evaluate potential corridors. Because the Toolkit was calibrated with data from S. 5311(f) services across the country, the fact that actual and estimated demand are relatively close suggests that most of the Minnesota routes are performing as can be expected given their operating environment.

Table J-7:
Predicted and Actual Ridership for S. 5311(f) Subsidized SFY 2013 Routes

Route	One-Way Miles	Serves Airport	Serves Correc. Facility	Regression Model Ridership	Trip Rate Model Ridership	Est. Ave. Ridership	SFY 2013 Actual Ridership
Duluth to Minneapolis	196	Yes	Yes	3,800	14,700	9,250	9,417
Minneapolis to Duluth							
Duluth to Minneapolis via Mora	176	--	Yes	3,800	14,500	9,150	11,621
Minneapolis to Duluth via Mora							
Wadena to Fargo	92	--	--	0	200	100	6,806
Fargo to Wadena							
Minneapolis to Milwaukee	426	--	--	10,300	19,100	14,700	15,856
Milwaukee to Minneapolis							
Duluth to Grand Rapids	123	--	--	200	0	100	196
Grand Rapids to Duluth							
Rochester to Minneapolis via Red Wing	132	--	--	900	900	900	1,262
Minneapolis to Rochester via Red Wing							
Minneapolis to Sioux Falls	288	--	--	4,400	770	2,585	4,251
Sioux Falls to Minneapolis							
Fargo via Bemidji (south)	430	--	Yes	5,200	6,800	6,000	4,262
Fargo via Bemidji (north)							
Owatonna to Mankato	44	--	--	0	1,200	600	492
Mankato to Owatonna							
Rochester to Mankato	125	--	--	2,200	2,000	2,100	2,144
Mankato to Rochester							

Appendix K

TECHNICAL ADVISORY COMMITTEE

Technical Advisory Committee (TAC) Invitee	Organization
Jack Larson	Arrowhead Transit
Harold Jennison	Rainbow Rider Transit
Bonnie Buchanan	Jefferson Bus Lines
Jason Mekalson	Land to Air Express
Jan Klassen	MnDOT District 7
Praveena Pidaparthi	MnDOT Office of Passenger Rail
Mike Schadauer	MnDOT Office of Transit
Arlie Johnson	Metropolitan Airports Commission
Dave Pesch	Rochester/Olmsted Council of Governments
Katie Caskey	MnDOT Office of Transportation System Management
Michael Corbett	MnDOT Office of Transportation System Management