Five-Year Transit System Plan for 2020-2025

Chisago-Isanti Heartland Express
Northeast Region

Prepared for:
Chisago-Isanti Heartland Express

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Acronyms

ACS	American Community Survey
ADA	Americans with Disabilities Act
AVL	Automatic Vehicle Location
FTA	Federal Transit Administration
GMTIP	Greater Minnesota Transit Investment Plan
GTFS	General Transit Feed Specification
LEHD	Longitudinal Employer-Households Dataset
LEP	Limited English Proficiency
M,T,W,R,F	Monday, Tuesday, Wednesday, Thursday, Friday
MnDOT	Minnesota Department of Transportation
MPO	Metropolitan Planning Organization
MPTA	Minnesota Public Transit Association
MVLST	Motor Vehicle Lease Sales Tax
MVST	Motor Vehicle Sales Tax
NTD	National Transit Database
O&M	Operations and Maintenance
OTAT	Office of Transit and Active Transportation
RDO	Regional Development Organization
TAC	Technical Advisory Committee
TCRP	Transit Cooperative Research Program
U.S.C.	United States Code
USDOT	United States Department of Transportation

Glossary

Access: The opportunity to reach a given destination within a certain timeframe or without significant physical, social, or economic barriers.

Accessible Vehicle: A public transportation vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use mobility devices.

Americans with Disabilities Act (ADA): The Americans with Disabilities Act, passed in July 1991, gave direction to local transit agencies to ensure full access to transportation for persons with disabilities.

Capital Cost: The cost of equipment and facilities required to support transportation systems, including vehicles, radios, shelters, software, etc.

Central Transfer Point: A central meeting place where routes or zonal demand-responsive buses intersect so that passengers may transfer. Routes are often timed to facilitate transferring and depart once passengers have had time to transfer. When all routes arrive and depart at the same time, the system is called a pulse system. The central transfer point simplifies transfers when there are many routes (particularly radial routes), several different modes, and/or paratransit zones. A downtown retail area is often an appropriate site for a central transfer point, as it is likely to be a popular destination, a place of traffic congestion and limited parking, and a place where riders are likely to feel safe waiting for the next bus. Strategic placement of the transfer point can attract riders to the system and may provide an opportunity for joint marketing promotions with local merchants.

Circulator: A bus that makes frequent trips around a small geographic area with numerous stops around the route. It is typically operated in a downtown area or area attracting tourists, where parking is limited, roads are congested, and trip generators are spread around the area. It may be operated all-day or only at times of peak demand, such as rush hour or lunchtime.

Commuter Bus Service: Transportation designed for daily, round-trip service, which accommodates a typical 8-hour, daytime work shift (e.g., an outbound trip arriving at an employment center by 8 a.m., with the return trip departing after 5 p.m.).

Coordination: Coordination means pooling the transportation resources and activities of several agencies. The owners of transportation assets talk to each other to find ways to mutually benefit their agencies and their customers. Coordination models can range in scope from sharing information, to sharing equipment and facilities, to integrated scheduling and dispatching of services, to the provision of services by only one transportation provider (with other former providers now purchasing services). Coordination may involve human service agencies working with each other or with public transit operations.

Dedicated Funding Source: A funding source that, by law, is available for use only to support a specific purpose and cannot be diverted to other uses (e.g., the federal gasoline tax can only be used for highway investments and, since 1983, for transit capital projects).

Demand-Responsive Service: Service to individuals that is activated based on passenger requests. Usually passengers call the scheduler or dispatcher and request rides for dates and times. A trip is scheduled for that passenger, which may be canceled by the passenger. Usually involves curb-to-curb or door-to-door service. Trips may be scheduled on an advanced reservation basis or in “real-time.” Usually smaller vehicles are used to provide demand responsive service. This type of service usually provides the highest level of service to the passenger but is the most expensive for the transit system to operate in terms of cost per trip. In rural areas with relatively high populations of elderly persons and persons with disabilities, demand-responsive service is sometimes the most appropriate type of service. Sub-options

within this service type are discussed in order of least structured to most structured, in terms of routing and scheduling.

- **Pure Demand-Responsive Service**: Drivers pick up and drop off passengers at any point in the service area, based on instructions from the dispatcher. In pure demand-responsive systems, the dispatcher combines immediate requests, reservations, and subscription service for the most efficient use of each driver's time.
- **Zonal Demand-Responsive Service**: The service area is divided into zones. Buses pick up and drop off passengers only within the assigned zone. When the drop-off is in another zone, the dispatcher chooses a meeting point at the zone boundary for passenger transfer or a central transfer is used. This system ensures that a vehicle will always be within each zone when rides are requested.
- **Flexibly Routed and Scheduled Services**: Flexibly routed and scheduled services have some characteristics of both fixed route and demand-responsive services. In areas where demand for travel follows certain patterns routinely, but the demand for these patterns is not high enough to warrant a fixed route, service options such as checkpoint service, point deviation, route deviation, service routes, or subscription service might be the answer. These are all examples of flexible routing and schedules, and each may help the transit system make its demand-responsive services more efficient while still maintaining much of the flexibility of demand responsiveness.

Dial-A-Ride Service: A name that is commonly used for demand-responsive service. It is helpful in marketing the service to the community, as the meaning of "dial-a-ride" may be more self-explanatory than "demand-responsive" to someone unfamiliar with transportation terms.

Express Bus Service: Express bus service characteristics include direct service from a limited number of origins to a limited number of destinations with no intermediate stops. Typically, express bus service is fixed route/fixed schedule and is used for longer distance commuter trips. The term may also refer to a bus that makes a limited number of stops while a local bus makes many stops along the same route but as a result takes much longer.

Farebox Recovery Ratio: The percentage of operating costs covered by revenue from fares and contract revenue (total fare revenue and total contract revenue divided by the total operating cost).

Fares: Revenue from cash, tickets, and pass receipts given by passengers as payment for public transit rides.

Federal Transit Administration (FTA): An operating administration within the United States Department of Transportation that administers federal programs and provides financial assistance to public transit.

Feeder Service: Local transportation service that provides passengers with connections to a longer-distance transportation service. Like connector service, feeder service is service in which a transfer to or from another transit system, such as an intercity bus route, is the focal point or primary destination.

Fixed Route: Transportation service operated over a set route or network of routes on a regular time schedule.

Goal: A community's statement of values for what it wants to achieve.

Headway: The length of time between vehicles moving in the same direction on a route. Headways are called short if the time between vehicles is short and long if the time between them is long. When headways are short, the service is said to be operating at a high frequency; if headways are long, service is operating at a low frequency.

Intercity Bus Service: Regularly scheduled bus service for the public that operates with limited stops over fixed routes connecting two or more urban areas not near, that has the capacity for transporting baggage carried by passengers, and that makes meaningful connections with scheduled intercity bus service to more distant points, if such service is available. Intercity bus service may include local and regional feeder services, if those services are designed expressly to connect to the broader intercity bus network.

MAP-21: Moving Ahead for Progress in the 21st Century Act, signed into law in July 2012. MAP-21 established surface transportation funding programs for federal fiscal years 2013 and 2014.

Measure: A basis for comparison, or a reference point against which other factors can be evaluated.

Motor Vehicle Sales Tax (MVST): A source of revenue for Minnesota public transit. The percentages of this revenue source designated for metropolitan area and Greater Minnesota transit are defined in Minn. Stat. 297B.09.

Operating Expenditures: The recurring costs of providing transit service (e.g., wages, salaries, fuel, oil, taxes, maintenance, insurance, marketing, etc.).

Operating Revenue: The total revenue earned by a transit agency through its transit operations. It includes passenger fares, advertising, and other revenues.

Paratransit Service: "Paratransit" means the transportation of passengers by motor vehicle or other means of conveyance by persons operating on a regular and continuing basis and the transportation or delivery of packages in conjunction with an operation having the transportation of passengers as its primary and predominant purpose and activity but excluding regular route transit. "Paratransit" includes transportation by car pool and commuter van, point deviation and route deviation services, shared-ride taxi service, dial-a-ride service, and other similar services.

Passenger Trip (Unlinked): Typically, one passenger trip is recorded any time a passenger boards a transportation vehicle or other conveyance used to provide transportation. “Unlinked” means that one trip is recorded each time a passenger boards a vehicle, no matter how many vehicles that passenger uses to travel from their origin to their destination.

Performance Indicator: An indicator is a metric that provides meaningful information about the condition or performance of the transportation system but is neither managed to nor used to evaluate the effectiveness of policies, strategies, or investments.

Performance Measure: A performance measure is a metric that measures progress toward a goal, outcome, or objective. This definition covers metrics used to make decisions or evaluate the effectiveness or adequacy of a policy, strategy, or investment.

Performance Target: A target is a specific performance level representing the achievement of a goal, outcome, or objective.

Point Deviation Service: A type of flexible route transit service in which fixed scheduled stops (points) are established but the vehicle may follow any route needed to pick up individuals along the way if the vehicle can make it to the fixed points on schedule. This type of service usually provides access to a broader geographic area than does fixed route service but is not as flexible in scheduling options as demand-responsive service. It is appropriate when riders change from day to day but the same few destinations are consistently in demand. Also sometimes called checkpoint service.

Public Transportation: Transportation service that is available to any person upon payment of the fare either directly, subsidized by public policy, or through some contractual arrangement, and that cannot be reserved for the private or exclusive use of one individual or group. “Public”

in this sense refers to the access to the service, not to the ownership of the system that provides the service.

Revenue Hours: The number of transit vehicle hours when passengers are being transported. Calculated by taking the total time when a vehicle is available to the public with the expectation of carrying passengers. Excludes deadhead hours, when buses are positioning but not carrying passengers, but includes recovery/layover time.

Ridership: The total of all unlinked passenger trips including transfers.

Ridesharing: A form of transportation, other than public transit, in which more than one person shares the use of a vehicle, such as a van or car, to make a trip. Variations include carpooling or vanpooling.

Route Deviation Service: Transit buses travel along a predetermined alignment or path with scheduled time points at each terminal point and in some instances at key intermediate locations. Route deviation service is different than conventional fixed route bus service in that the vehicle may leave the route upon requests of passengers to be picked up or returned to destinations near the route. Following an off-route deviation, the vehicle typically returns to the point at which it left the route. Passengers may call in advance for route deviation or may access the system at predetermined route stops. The limited geographic area within which the vehicle may travel off the route is known as the route deviation corridor.

Section 5304 (State Transportation and Planning Program): The section of the Federal Transit Act of 1991, as amended, that provides financial assistance to the states for purposes of planning, technical studies and assistance, demonstrations, management training, and cooperative research activities.

Section 5307 (Urbanized Area Formula Program): The section of the Federal Transit Act of 1991, as amended, that authorizes grants to public transit systems in urban areas with populations of more than 50,000 for both capital and operating projects. Based on population and density figures, these funds are distributed directly to the transit agency from the FTA.

Section 5310 (Enhanced Mobility for Seniors and Persons with Disability): The section of the Federal Transit Act of 1991, as amended, that provides grant funds for the purchase of accessible vehicles and related support equipment for private non-profit organizations to serve elderly and/or disabled people, public bodies that coordinate services for elderly and disabled, or any public body that certifies to the state that non-profits in the area are not readily available to carry out the services.

Section 5311 (Non-urbanized Area Formula Program): The section of the Federal Transit Act of 1991, as amended, that authorizes grants to public transit systems in non-urbanized areas (fewer than 50,000 population). The funds initially go to the governor of each state. In Minnesota, MnDOT administers these funds.

Service Area: The geographic area that coincides with a transit system's legal operating limits (e.g., city limits, county boundary, etc.).

Service Gaps: Service gaps can occur when certain geographic segments cannot be covered by transportation services. This term can also refer to instances where service delivery is not available to a certain group of riders, or at a specific time.

Service Span: The duration of time that service is made available or operated during the service day (e.g., 6 a.m. to 10 p.m.).

Standard: A recommendation that leads or directs a course of action to achieve a certain goal. A standard is the expected outcome for the measure that will allow a service to be evaluated. There are two sets of transit standards.

- **Service design and operating standards**: Guidelines for the design of new and improved services and the operation of the transit system.
- **Service performance standards**: The evaluation of the performance of the existing transit system and of alternative service improvements using performance measures.

Total Operating Cost: The total of all operating costs incurred during the transit system calendar year, excluding expenses associated with capital grants.

Transfer: Passengers arrive on one bus and leave on another (totally separate) bus to continue their trip. The boarding of the second vehicle is counted as an unlinked passenger trip.

Transit Dependent: A description for a population or person who does not have immediate access to a private vehicle, or because of age or health reasons cannot drive and must rely on others for transportation.

Transit Subsidy: The operating costs not covered by revenue from fares or contracts.

Transit: Transportation by bus, rail, or other conveyance, either publicly or privately owned, that provides general or special service on a regular and continuing basis. The term includes fixed route and paratransit services as well as ridesharing. Also known as mass transportation, mass transit, or public transit.

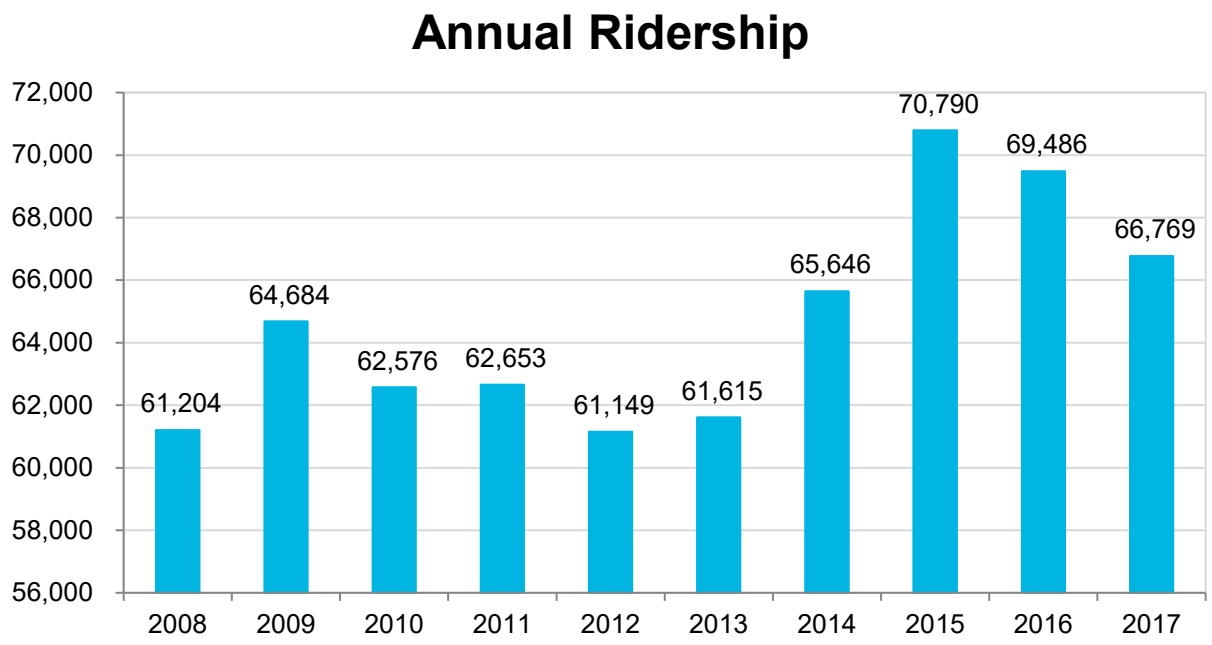
Trip Denial: A trip denial occurs when a trip is requested by a passenger, but the transportation provider cannot provide the service. Trip denial may happen because capacity is not available at the requested time. For ADA paratransit, a capacity denial is specifically defined as occurring if a trip cannot be accommodated within the negotiated pick-up window. Even if a trip is provided, if it is scheduled outside the +60/-60-minute window, it is considered a denial. If the passenger refused to accept a trip offered within the +60/-60-minute pick-up window, it is considered a refusal, not a capacity denial.

Volunteers: Volunteers are persons who offer services to others but do not accept monetary or material compensation for the services that they provide. In some volunteer programs, the volunteers are reimbursed for their out-of-pocket expenses; for example, volunteers who drive their own cars may receive reimbursement based on miles driven for the expenses that they are assumed to have incurred, such as gasoline, repair, and insurance expenses.

1. Executive Summary

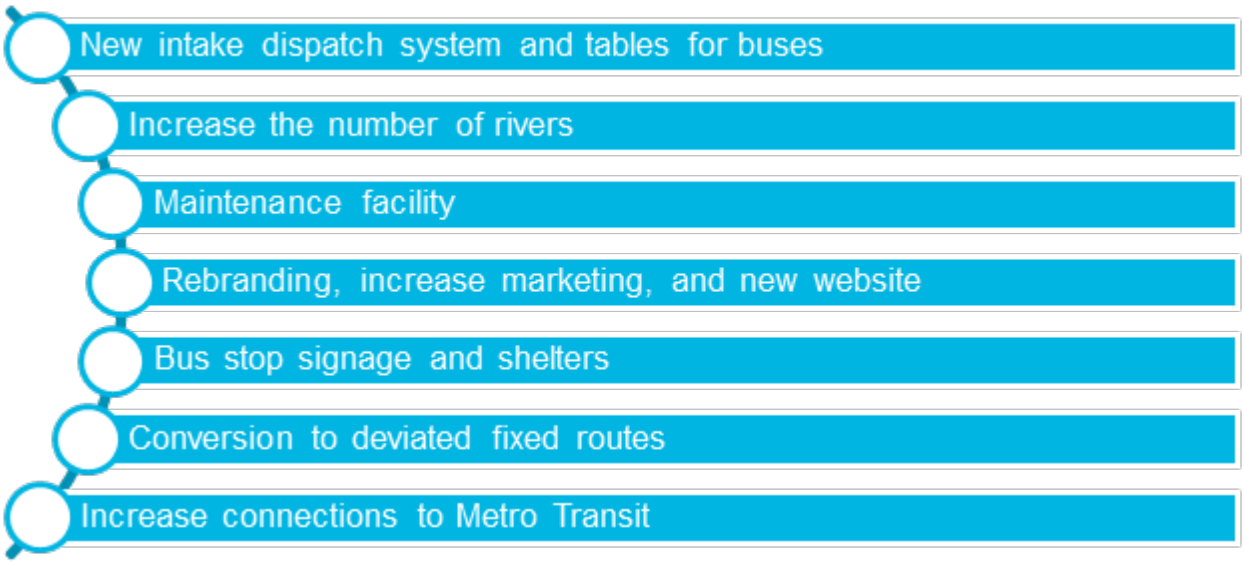
Heartland Express operates general public curb-to-curb demand response service on various routes within Chisago and Isanti Counties. There are currently no scheduled stops on the routes and riders need to call in 24 hours ahead of time. They are governed by a Joint Powers Board between Chisago and Isanti Counties. The service operates generally from 8 a.m. to 5 p.m. on city routes and from 6 a.m. to 5 p.m. on regional and county routes on weekdays. Weekend service is also provided from 7 a.m. to 5 p.m. on Saturdays and 7 a.m. to 1 p.m. on Sundays on the Cambridge and Isanti Area Route, Cambridge City Route, and North Branch City Route. Overall, total passenger trips increased by 5,500 annually in the last 10 years. In 2017 there were 66,769 riders at a cost of $86.69 per hour and $27.38 per passenger.

Figure 1. Annual Ridership between 2008 and 2017



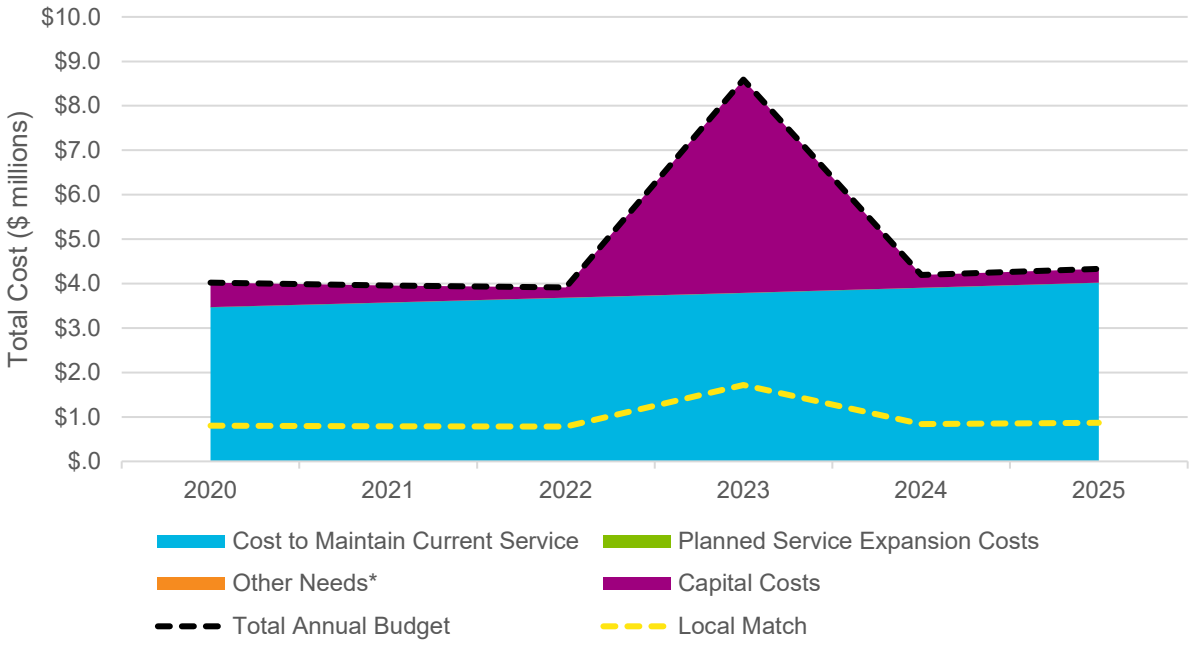
To identify Chisago-Isanti Heartland Express needs for the period between 2020 and 2025, the project team met with staff from the agency two times to learn about and discuss the agency's operating structure and environment, challenges, and opportunities for improvement. As a result of the meetings, agency needs were identified and prioritized for the five-year period, without fiscal constraints. This "unconstrained" needs list was developed to identify investments of all kinds that could enhance the agency's operational efficiency. Chisago-Isanti Heartland Express staff then prioritized needs to inform which strategic investments could be made to better meet the needs of the community. Figure 2 illustrates the needs designated by Chisago-Isanti Heartland Express. The five-year plan for Chisago-Isanti Heartland Express assumes that automated dispatch software, which is included in the agency's 2019 budget, would have already been acquired. All other capital and operating needs, including bus stop improvements, website development, facility consolidation, marketing support, operating costs to maintain existing services, service changes, training, and scheduled vehicle replacement, were allocated by year to develop an estimated annual budget.

Figure 2. Unconstrained Needs for Heartland Express



The project team developed capital and operating plans to lay out the costs of investing in improvements like service expansion, additional maintenance staff, and a new transit facility between 2020 and 2025 to address the agency's needs. Figure 3 summarizes the costs of investing in these improvements, and the detailed plans are included as Appendix A.

Figure 3. 2020-2025 Plan, Local Revenue Requirements



This Five-Year System Plan is intended to inform agency decisions and investments between 2020 and 2025. It is considered a "living document" and providers are encouraged to update the plan as necessary to meet changing agency and community needs.

2. Why a Five-Year System Plan?

Transit systems in Greater Minnesota have been working in a rapidly changing environment with system mergers and increased demand for service along with new policies and funding situations. Despite significant growth in the amount of service available outside of the Twin Cities Metropolitan Area, transit in Greater Minnesota is not always recognized or understood by local officials and residents. In order to address the growing need for transit service in a way that is integrated and embraced by the community, a vision for the future of each transit system is critical. Without a plan, systems are put in the position of having to react in the moment to new circumstances and operate on a year to year basis without a longer-term vision to guide annual budgets and decision making.

Transit providers and MnDOT agree that individual five-year plans will help identify system-specific priorities based on themes from the *Greater Minnesota Transit Investment Plan* (GMTIP). Five-year plans will help systems better deliver service and work toward overall goals such as:

- Improving coordination of services to meet transportation needs;
- Increasing ridership/usage across the network;
- Ensuring fiscal responsibility as a transit funding agency;
- Anticipating and planning for future funding levels to achieve service expansion;
- Articulating and communicating a vision for the transit system and the benefits it provides to the community.

Plans are intended to help systems work with local government officials, local planning agencies, transit system board members, and other organizations to prepare for these changes. Transit agencies recognize the importance of involving local officials in planning activities to continue building local support for improving transit systems, including long-term commitment of local funds to leverage state and federal dollars.

The process for developing the five-year plans is guided by a consultant Project Manager, the Office of Transit and Active Transportation at MnDOT, and the Minnesota Public Transit Association (MPTA). A Project Advisory Committee consisting of Transit Directors, staff from MPOs (Metropolitan Planning Organizations) and RDOs (Regional Development Organizations), local government officials, service organization representatives, and staff from MPTA and MnDOT is providing input and identifying key issues to be addressed by the plans.

Larger transit systems routinely develop and update five-year plans as do local governments when it comes to planning for future development. The Greater Minnesota Transit System five-year plans will allow all transit service to be incorporated into the larger transportation vision for communities as they plan for new economic development and a future with an aging population.

Policies established through the Olmstead Plan and Americans with Disabilities Act (ADA) require communities to accommodate the needs of people with disabilities. A statutory goal of meeting 90% of the need for transit service by 2025 in Greater Minnesota is also focusing more attention on exactly how to expand service around the state.

With a well-defined five-year plan, goals and ideas for improving transit service can be put into action with a clear blueprint for which routes to add or expand, specific hours of service to adjust, and how the funding can be identified to cover additional operating and capital expenses. The plans will also facilitate communication with the public and help raise awareness of how and where transit service is provided in the state, which will help encourage greater ridership.

The five-year plans are designed to be updated annually to meet changing needs and circumstances.

Transit service improves the livability and prosperity of communities all across Greater Minnesota. The Five-Year Transit System Plan will bring all stakeholders together to develop a future vision that will guide the decisions that are made today.

3. Agency Overview

Chisago-Isanti Heartland Express operates general public curb-to-curb demand response service within Chisago and Isanti Counties. Heartland Express' service area, shown on Figure 2, is about 20 square miles and is located in the eastern part of the state along the I-35 corridor about 40 miles north of the Twin Cities. The counties are located just to the north of the Metropolitan Council region.

3.1 Transit Agency Background

Transit service began in 1986 in Chisago County operating out of a building in Center City. In 1995 Isanti County was added and operations moved to the basement of the Isanti County Government. In 2006 the old Cambridge Fire Hall was remodeled and all operations, administration, and maintenance activities were moved to this location. Heartland Express continued to grow and in 2016 added a second location in North Branch. All agency vehicles and operating staff were moved to this location.

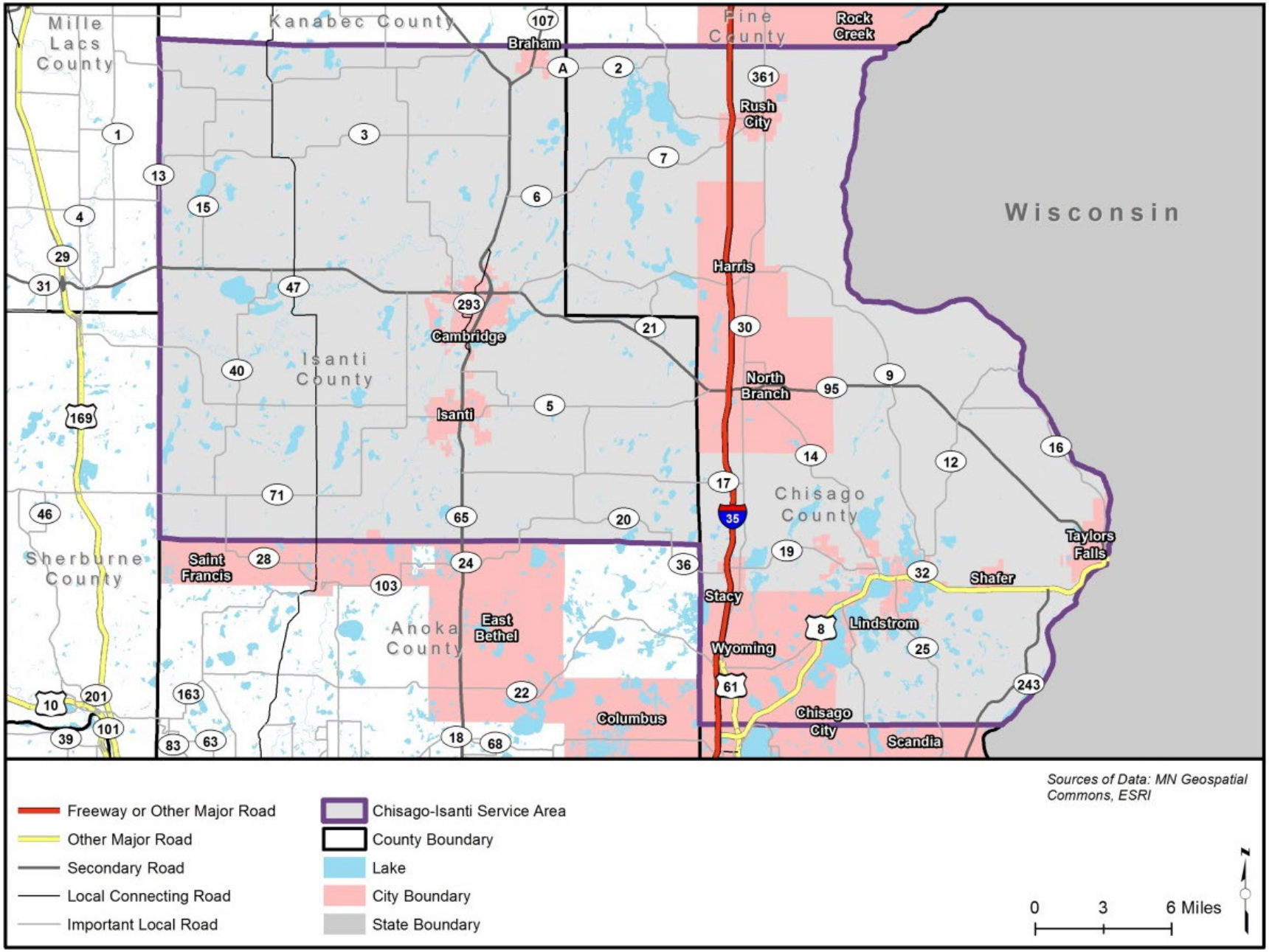
3.2 Governance

The Chisago-Isanti Heartland Express is governed by a Joint Powers Board between Chisago and Isanti Counties. Seven county commissioners from the two counties sit on the Board, which meets quarterly. The transit agency also has a Technical Advisory Committee (TAC) that provides guidance for service changes, staffing, and planning. The TAC is made up of community leaders from local organizations, social service organizations, and elected officials. The TAC meets on an as-needed basis.

3.3 Mission

The overall mission of Chisago-Isanti Heartland Express "as a leader in rural transportation within Region 7E, is to provide prompt, friendly, cost-effective transportation by responding in a personal manner to our area's ever changing needs."

Figure 4. Location Map



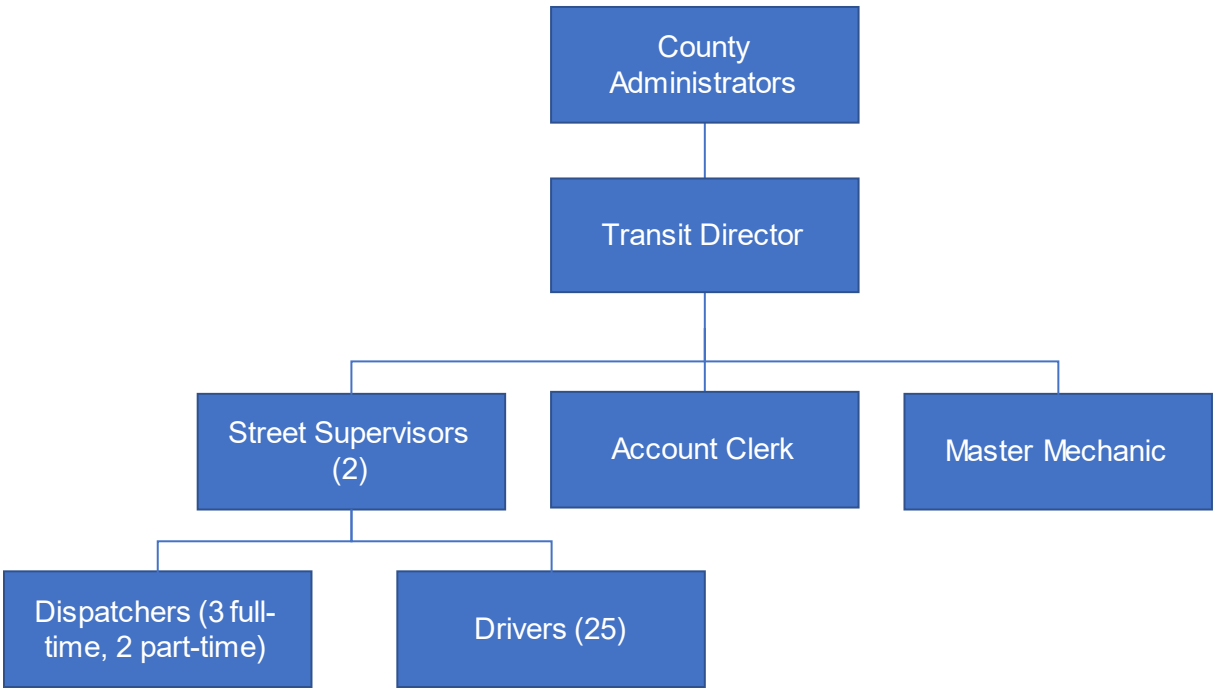
Within the mission statement, the agency has defined its key beliefs:

- “Every person should have the right to accessible transportation.
- Every individual is unique and worthy of our respect.
- Communication and teamwork are necessary for development and growth.
- Change is inevitable; how we respond to it determines our future.
- Our focus in service is to recognize, plan, implement and evaluate the needs of our customers.
- Humor contributes to overall well-being.
- A positive attitude facilitates a healthy environment.
- Outcomes are guided by informed choices, individual beliefs and values.
- We are caretakers of our environment for all generations.
- Honesty is necessary for trusting relationships.”

3.4 Decision-Making Process

The Chisago-Isanti Heartland Express Transit Director reports directly to the Chisago and Isanti County Administrators (Figure 3). The Transit Director is supported by an Assistant Transit Director who oversees an Account Clerk, Master Mechanic, and two Street Supervisors. The agency has 25 drivers and 5 dispatchers.

Figure 5. Organizational Chart



Decisions on changes related to service design, fares, and capital purchases are approved by the Joint Powers Board for final action.

3.5 Service Area Overview

As shown on Figure 2, Chisago-Isanti Heartland Express includes Chisago and Isanti Counties. Understanding the demographics can help explain changes in transit demand and support recommendations for changes in future transit service. The US Census Bureau is a primary source of demographic data and provides valuable indications of trends and projections. Demographic data from the American Community Survey (ACS) 5-year Estimates (2016) and employment data from the Longitudinal Employer-Households Dataset (LEHD) from 2015 comprise the datasets used to conduct this analysis. An overview of demographic conditions for Chisago-Isanti Heartland Express are calculated based on the total of census tracts or block groups that intersect with the service area (Table 1).

Approximately 92,500 residents live in the service area. The highest concentration of population (around 1,800 people per square mile) is in central Cambridge and the southern part of North Branch, as shown on Figure 4. According to the US Census Bureau's latest 2017 estimates, the service area population increased by 3.4% since 2010, with growth occurring in both Isanti County (4.7%) and Chisago County (2.6%).

As shown on Figure 5, the highest concentration of poverty is south of Braham (23%). Additional pockets of poverty are in the vicinity of the cities of North Branch, Cambridge, and Rush City.

Figure 6 maps the concentration of households without a vehicle. The highest concentrations of zero vehicle households are in northwest North Branch (15.7%), North Branch south of MN 95 (12%), Rush City (13.7%), and downtown Cambridge (13.1%). This follows a similar pattern as the concentration of poverty in the two counties.

MnDOT produces an Economic Health Index and a Transit Dependency Index to help assess a variety of demographic characteristics across a consistent geography. The Economic Health Index, illustrated on Figure 7, is based on the average number of employers, the trend in number of employers, the adult labor participation rate, and the population change from 2010 to 2016. The areas in the southern part of the counties around the I-35 corridor have higher Economic Health Index scores. There are no "Very Low" scores in the service area; however, northeast Chisago County between Rush City and Harris scored "Low."

The Transit Dependency Index is based on median household income and the percentages of population with a disability, workers without access to a vehicle, and households with limited English proficiency (LEP). Transit dependency is highest along the northern border of Isanti County near Braham, as shown on Figure 8. The area around Grandy at MN 65 and MN 6 scored "Very High" for transit dependency.

Approximately 25,500 jobs are located within the study area. Many of these are located in the larger cities and along major corridors (I-35, MN 95, MN 65, and US 8), as shown on Figure 9. Additional employment is shown in southwest Isanti County just north of Saint Francis.

Figure 10 shows a strong commute flow to the Twin Cities. About 34% of residents from Chisago and Isanti Counties commute to Hennepin County (19.1%) and Ramsey County (14.6%). The next most popular work destinations are within the service area that includes Chisago County (16%) and Isanti County (13.4%). Anoka County made up 12.8% of the work trips.

Figure 13 shows major trip generators throughout Chisago and Isanti counties with clusters in Cambridge, Rush City, North Branch and along Route 32 Major generators include housing complexes, several manufacturing companies, various nursing homes and schools.

Table 1. Demographic and Socioeconomic Profile

County/ Community	Population	Jobs	Median Household Income	People Living Below Poverty	Households without Vehicles	Seniors[a]	Disabled[b]
Service Area	92,502	25,527	$73,612	6.6%	4.4%	14.1%	12.3%
Chisago County	54,041	14,188	$72,908	6.0%	5.3%	13.8%	11.7%
Isanti County	38,461	11,339	$74,317	7.2%	3.5%	14.4%	13.0%
Minnesota	5,450,868	2,557,046	$63,217	10.8%	7.0%	14.3%	10.6%

Sources: LEHD 2015 Jobs, 2016 ACS 5-year estimates

[a]Percentage of population that is 65 years or older, US Census Bureau, 2011-2016 ACS 5-year estimates.

[b]Percentage of population with serious difficulty in any of four functional areas identified by the ACS (hearing, vision, cognition, ambulation), US Census Bureau, 2011-2016 ACS 5-year estimates.

Figure 6. Population Density

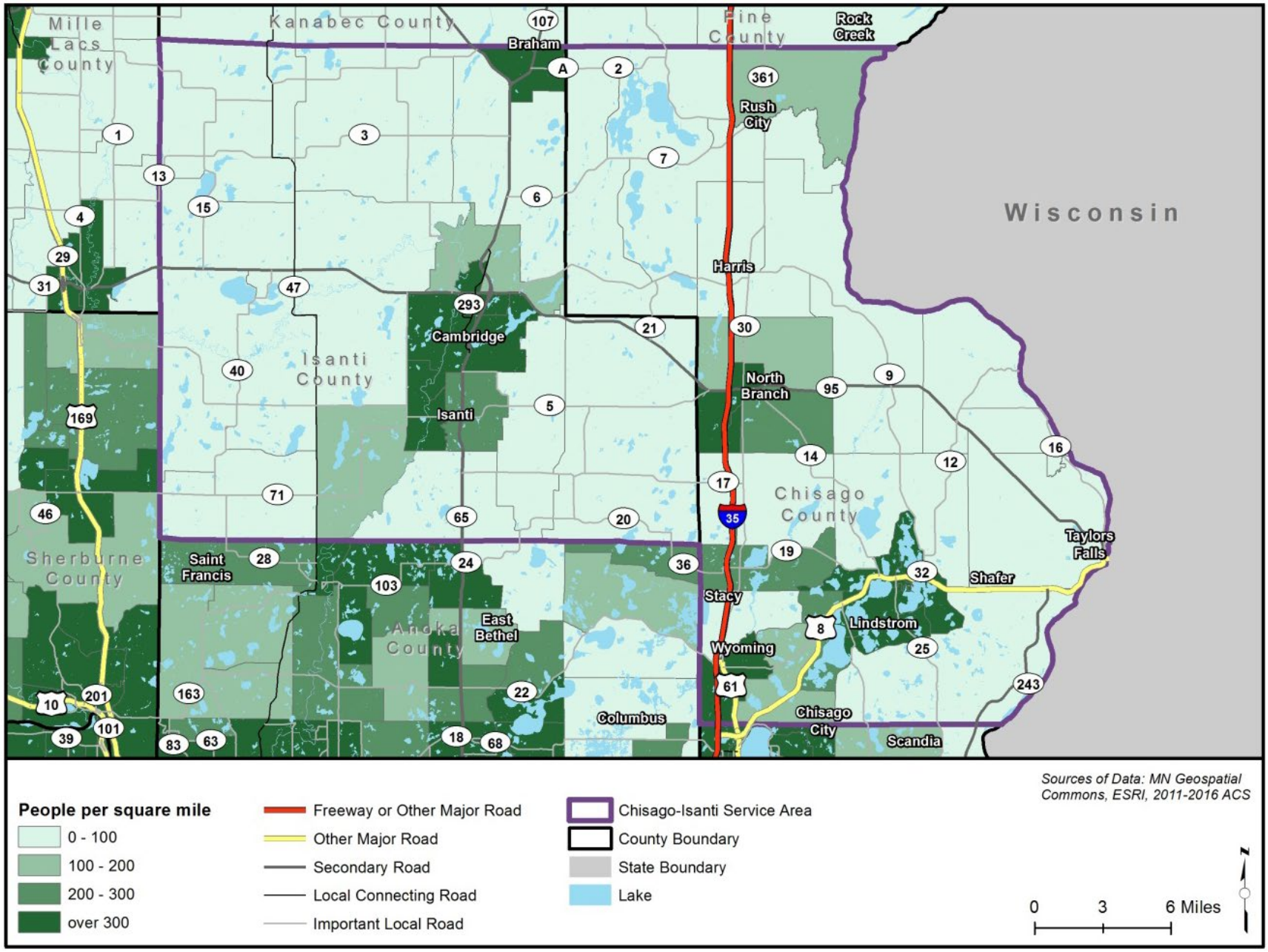


Figure 7. Persons Living Below the Poverty Level

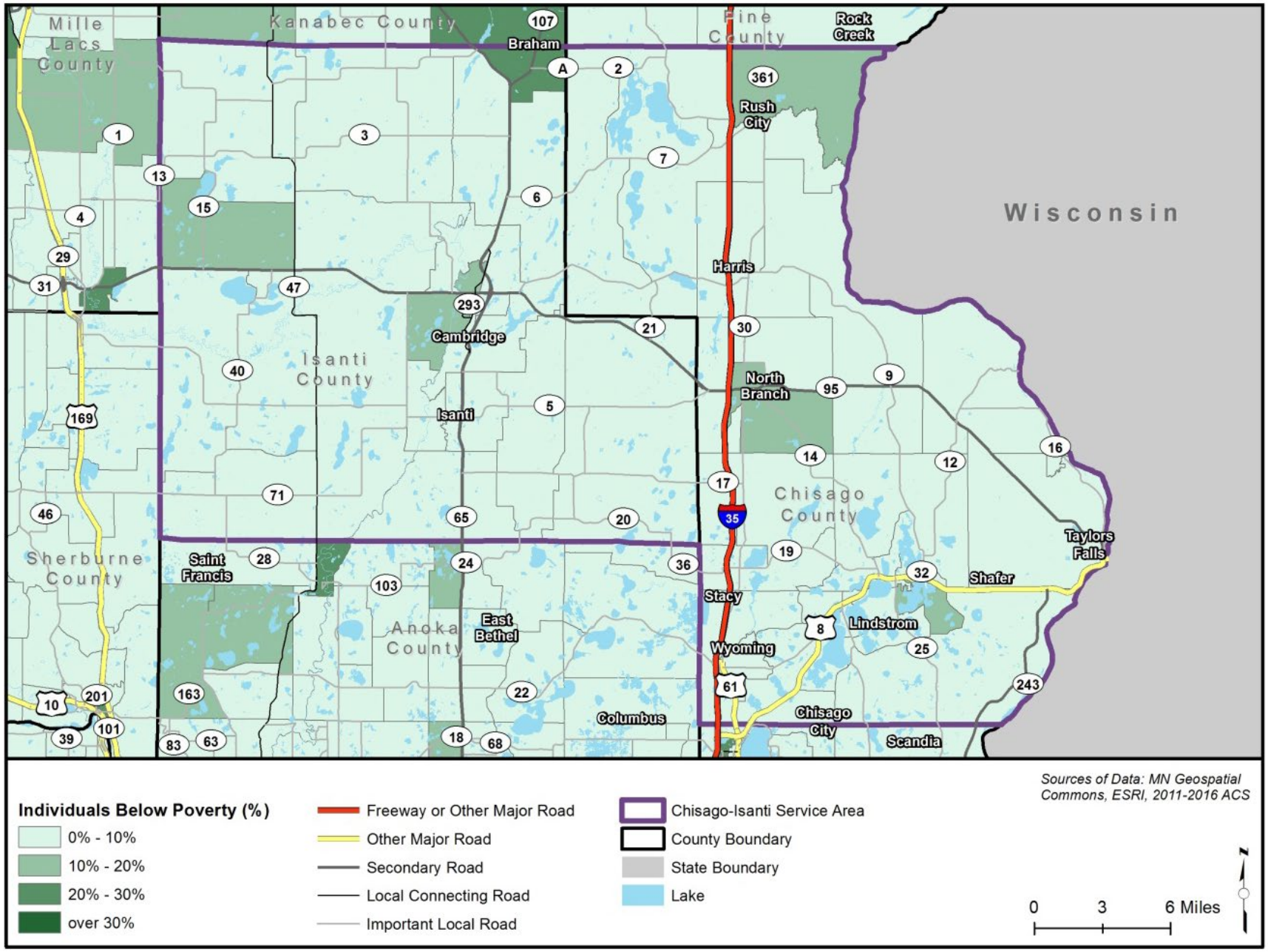


Figure 8. Zero-Vehicle Households

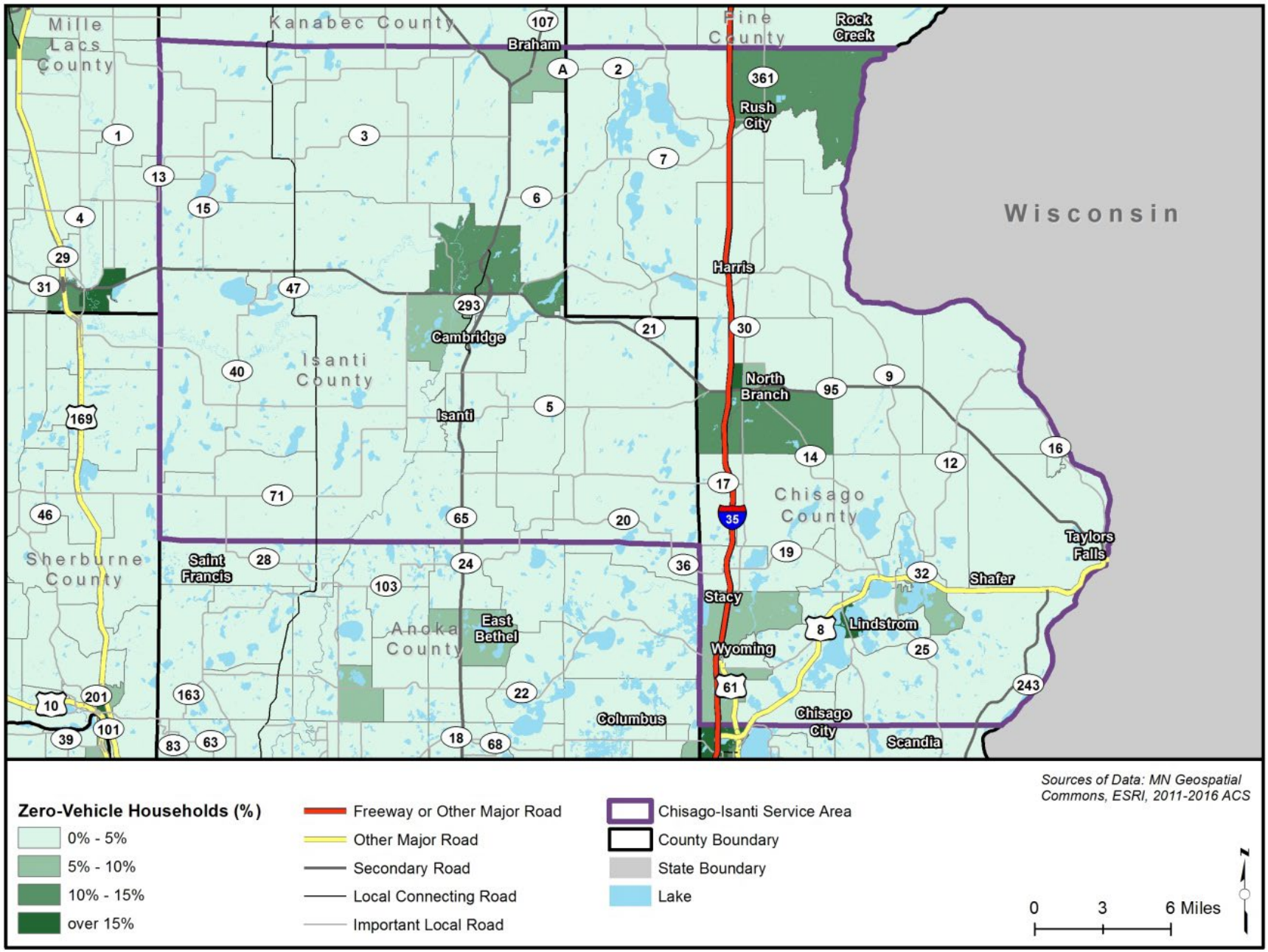


Figure 9. Economic Health Index

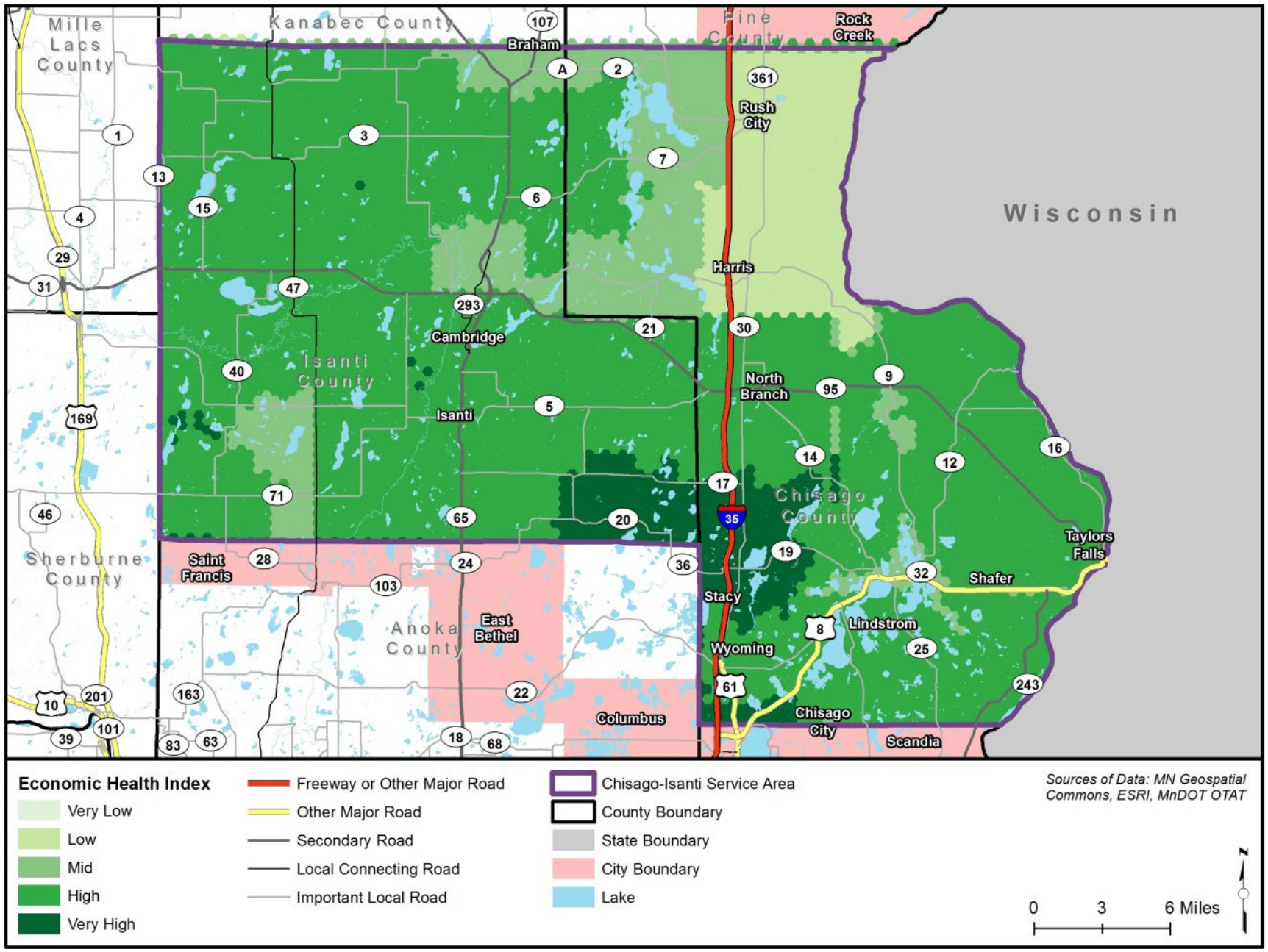


Figure 10. Transit Dependency Index

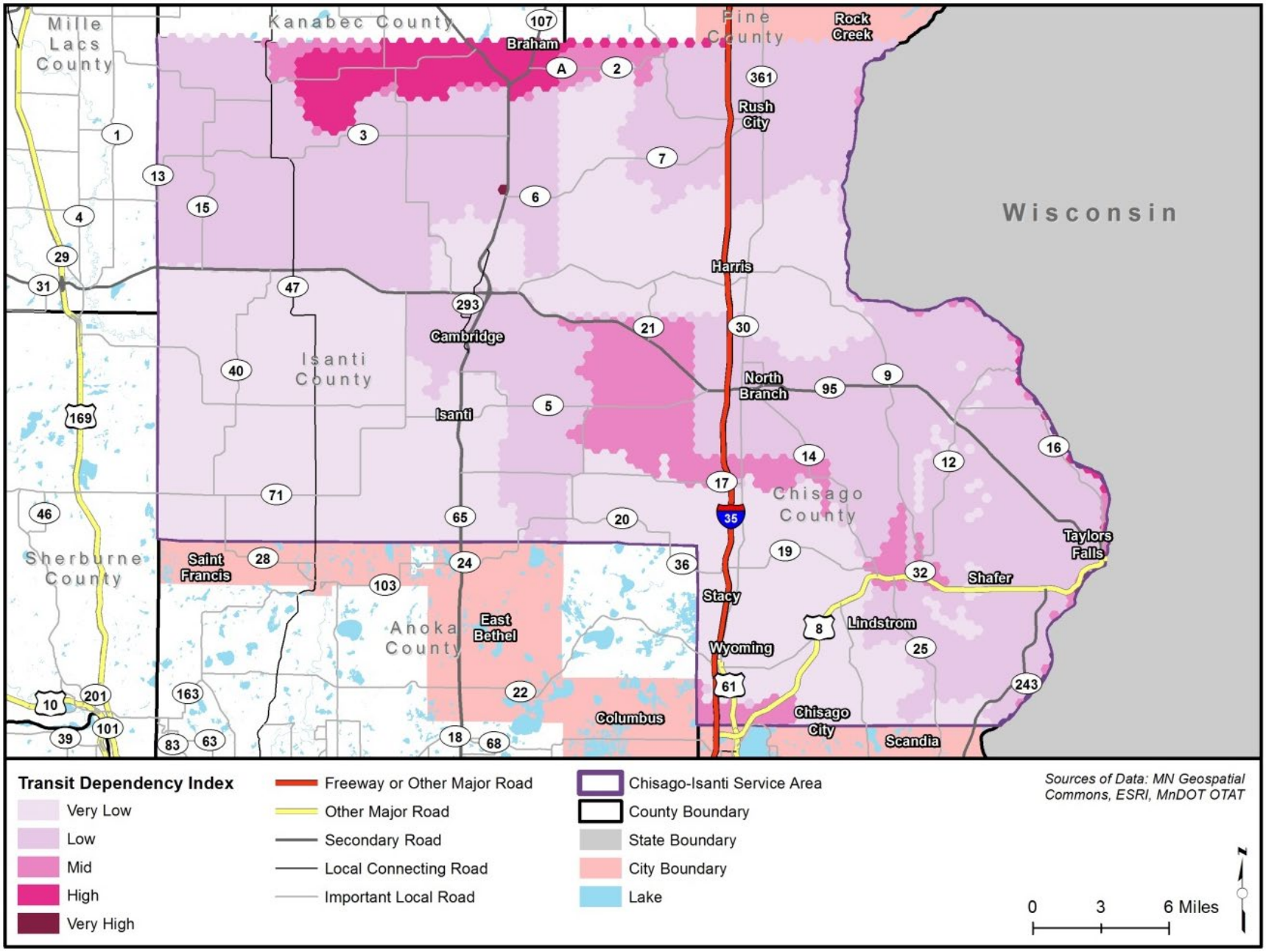


Figure 11. Job Density

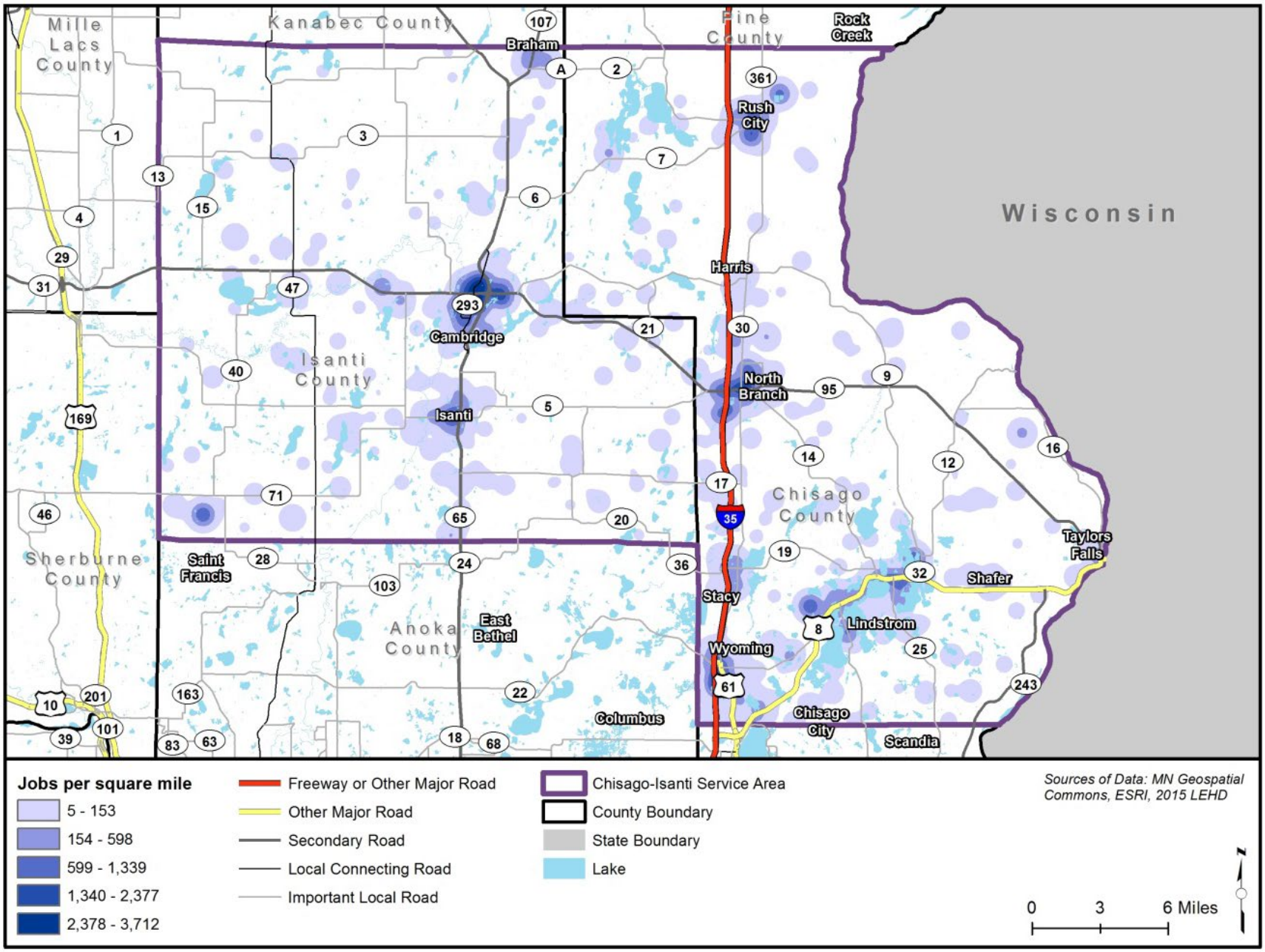


Figure 12. Primary Work Destinations for Commuters Living in the Service Area

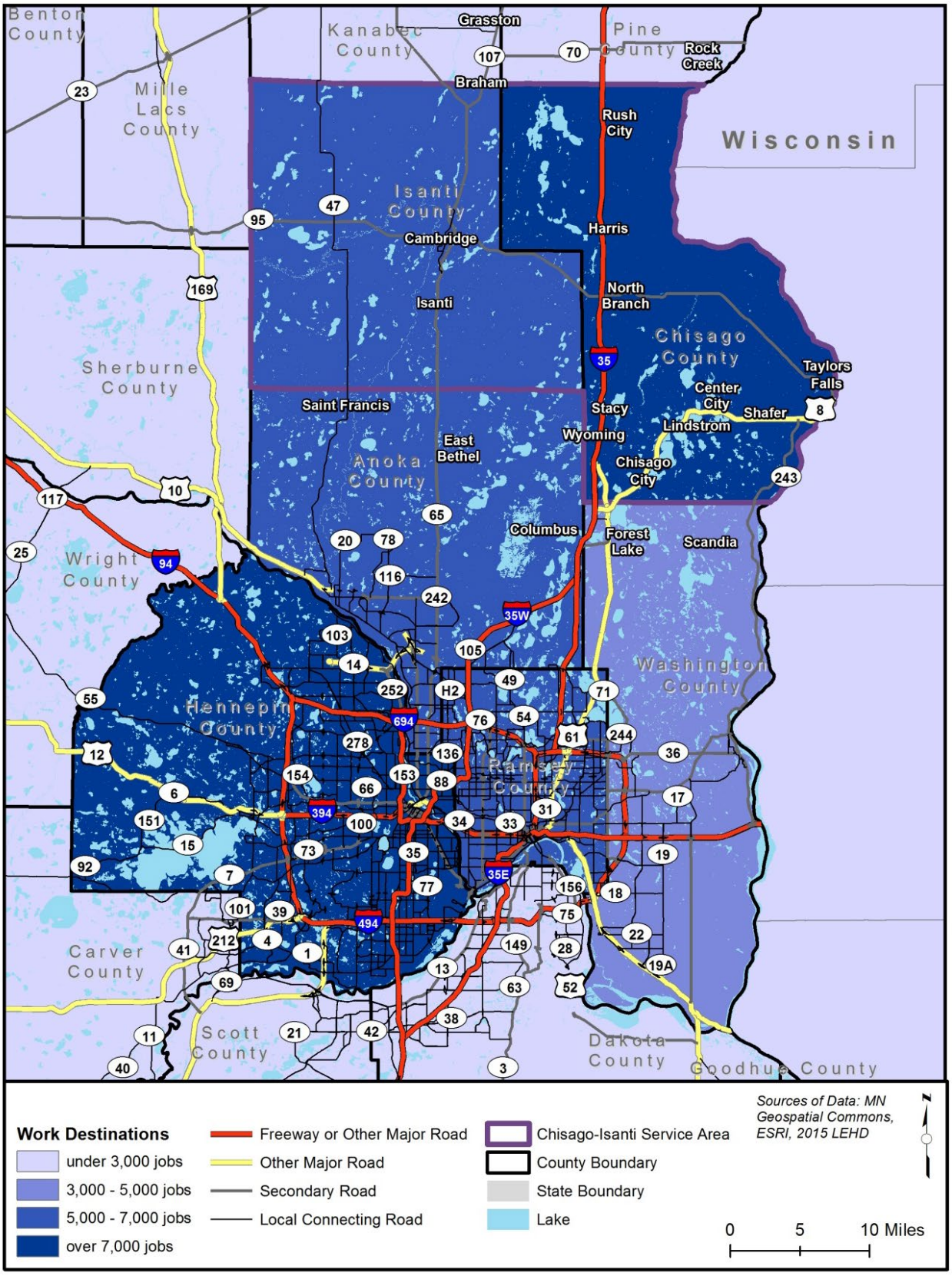
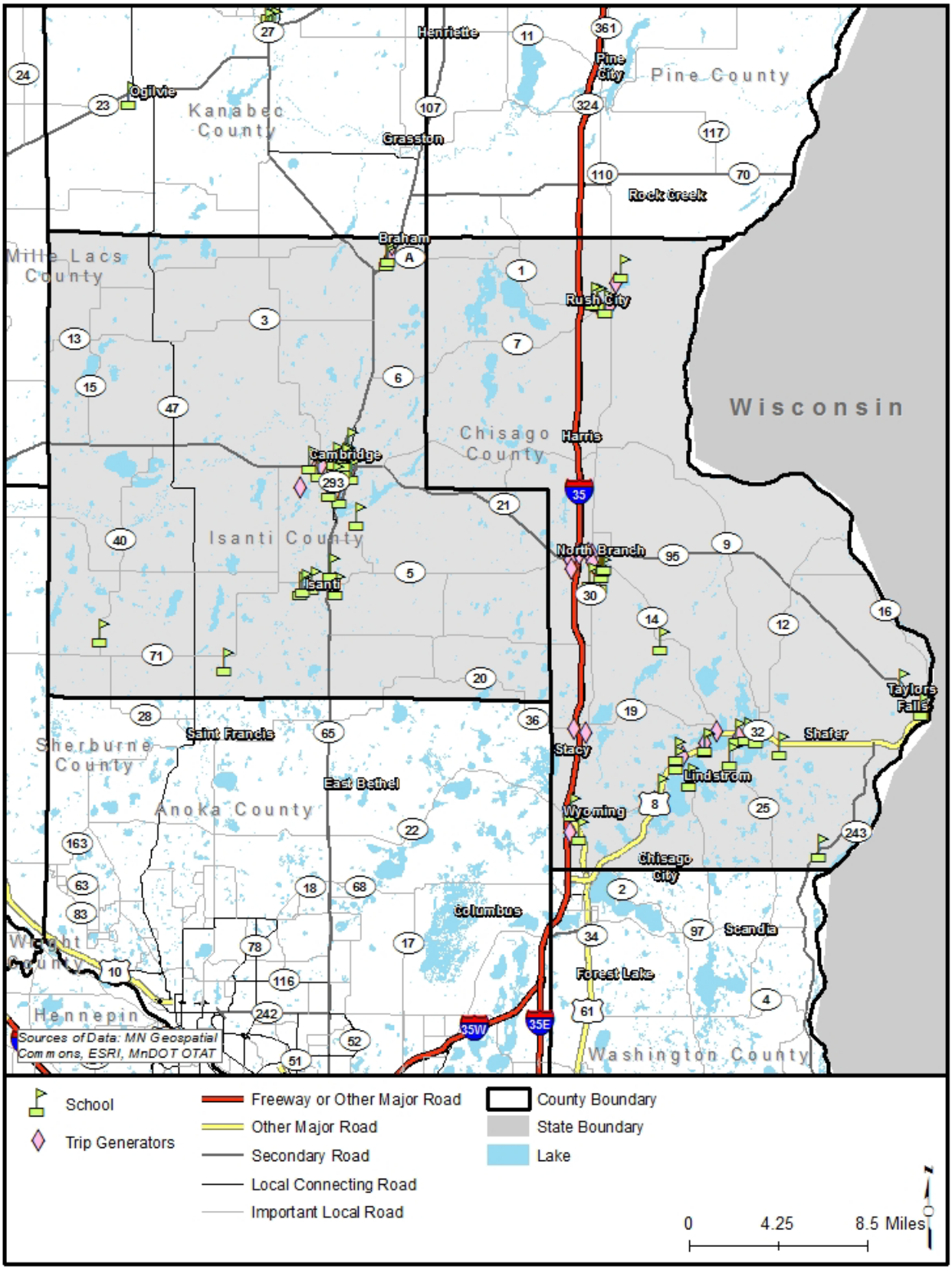


Figure 13. Major Trip Generators



3.6 Regional Connections

Timber Trails Transit provides on-demand service from the Mora area in Kanabec County to Braham and from Milaca/Princeton in Mille Lacs County to Cambridge with connections to Chisago-Isanti Heartland Express.

Arrowhead Transit also provides monthly service from Sandstone, Hinckley, and Pine City to the North Branch outlet mall on the first Friday of the month.

Additionally, Jefferson Lines/Greyhound provides service to North Branch in Chisago County on the Twin Cities to Duluth Line. The bus stops in North Branch at 8:15 a.m. northbound to Duluth and southbound to the Twin Cities at 2:20 p.m. seven days a week. The North Branch bus stop is located at the McDonalds at 5835 St. Croix Trail.

Amtrak service through Minnesota does not extend northeast into the service area. However, MnDOT's 2010 *Comprehensive Statewide Freight and Passenger Rail Plan* includes an intercity passenger rail link between Minneapolis and Duluth as part of its Phase 1 projects.

4. Agency Transit Services

Heartland Express operates general public curb-to-curb demand response service on various routes within Chisago and Isanti Counties. There are currently no scheduled stops on the routes and riders need to call in 24 hours ahead of time. The agency is considering adding some timepoints on routes in Cambridge and North Branch to improve transfers. The service is offered in the cities of Athens, Bradford, Cambridge, Center City, Chisago City, Crown, Dalbo, Day, Green Lake, Harris, Lindstrom, Long Lake, North Branch, Oxford, Pine Brook, Rush City, Spencer Brook, Stacy, Wyoming, and other parts of the two counties.

Riders can schedule general public demand response service from anywhere within the service area depicted on Figure 11. The service operates generally from 8 a.m. to 5 p.m. on city routes and from 6 a.m. to 5 p.m. on regional and county routes on weekdays. Weekend service is also provided from 7 a.m. to 5 p.m. on Saturdays and 7 a.m. to 1 p.m. on Sundays on the Cambridge and Isanti Area Route, Cambridge City Route, and North Branch City Route. The Chisago County Area Route operates with three buses, the Cambridge City Route uses two buses, and all other routes operate with one bus. Service spans and frequencies for each type of service provided are presented in Table 2.

Annual operating statistics for 2017 on each route are summarized in Table 3. The Cambridge and Isanti Area Route and weekend service were added in 2018 and are not accounted for in Table 3.

4.1 Ridership

Overall, total passenger trips have increased by 5,500. (Figure 12). Ridership grew between 2008 and 2009, and then declined in 2010. It remained steady until 2013 and then increased over the next two years. Ridership reached its peak in the last 10 years in 2015 with 70,790 passenger trips but since 2015 has begun to drop. While there was a drop in ridership between 2016 and 2017, the ridership per hour increased, indicating that more trips were provided with fewer service hours as indicated in Table 4. By month, ridership does not seem to follow a prevailing seasonal pattern, as shown on Figure 13.

Figure 14. Heartland Express Service Area

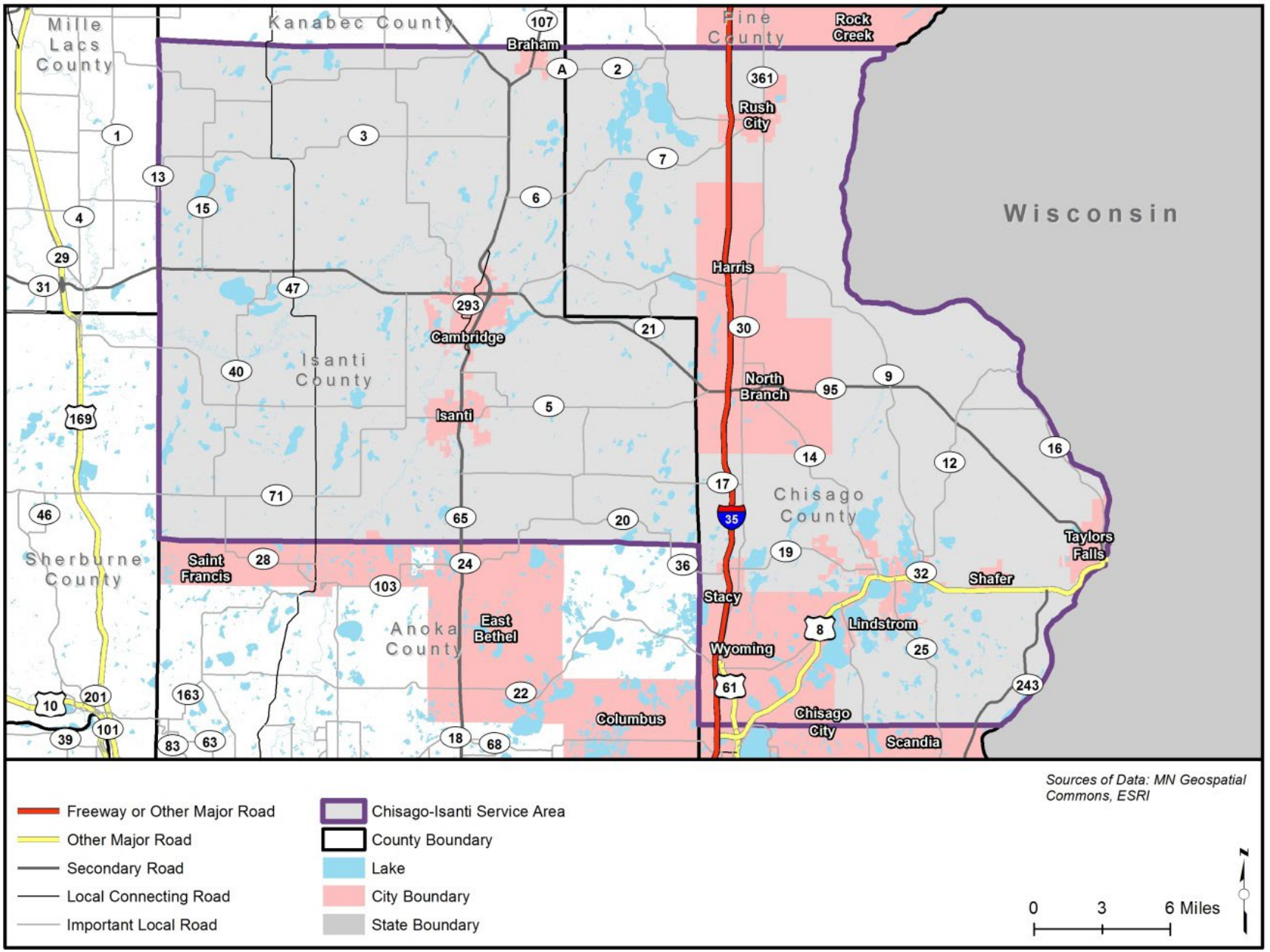


Table 2. Level of Service

Route	Type	Service Days	Span of Service	Frequency of Service
NW Isanti County	Demand Response	Weekdays	7 a.m. – 5:30 p.m.	Every hour
Braham-Cambridge	Demand Response	Weekdays	6a.m. – 5 p.m.	Every hour
West Isanti	Demand Response	Weekdays	6a.m. – 5 p.m.	Every hour
North Branch-Chisago	Demand Response	Weekdays	6:30a.m. – 5:30 p.m.	Every hour
North Branch-Cambridge	Demand Response	Weekdays	6a.m. – 4 p.m.	Every hour
Cambridge City	Demand Response	Weekdays	7:30a.m. – 4:30 p.m.	On-demand
Chisago County Area	Demand Response	Weekdays	6a.m. – 6 p.m.	Every hour
North Branch City Route	Demand Response	Monday-Friday Saturday Sunday	8a.m. – 5 p.m. 7a.m. – 4:30 p.m. 7a.m. – 1:30 p.m.	On-demand
Cambridge and Isanti Area	Demand Response	Monday-Friday Saturday Sunday	7a.m. – 5:15 p.m. 7a.m. – 4:30 p.m. 7a.m. – 1:30 p.m.	Every hour
Hwy 65 – East Bethel	Demand Response	Monday-Friday Saturday Sunday	7a.m. – 6 p.m. 7a.m. – 4:30 p.m. 7a.m. – 1:30 p.m.	Every hour

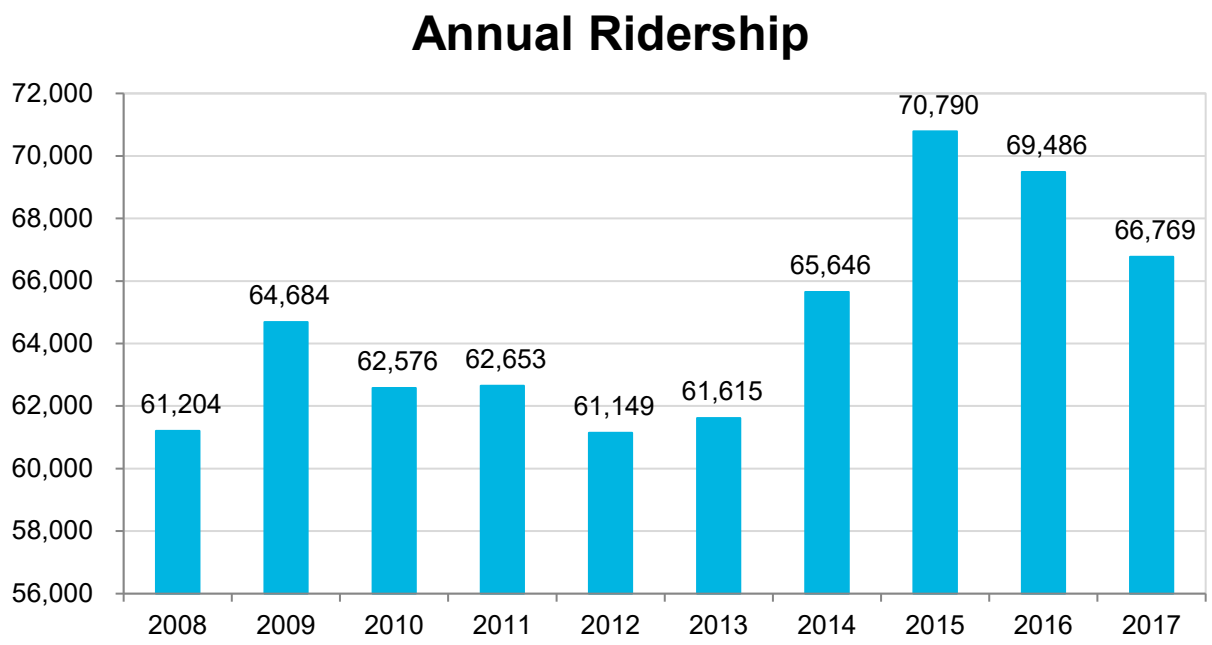
Source: Chisago-Isanti Heartland Express, 2018

Table 3. 2017 Operating Statistics

Route/Service	2017 Annual Miles of Service	2017 Annual Hours of Service
NW Isanti County	40,001	2,164
Braham-Cambridge	45,653	2,249
West Isanti	51,154	2,333
North Branch- Chisago	53,716	2,276
North Branch- Cambridge	50,003	2,228
Cambridge City	20,223	1,955
Chisago County Area	101,792	4,627
North Branch City Route	17,650	1,953
Cambridge-Isanti	New Route	New Route
Hwy 65 – East bethel	29,736	1,313
Total	**409,928**	**21,098**

Source: Chisago-Isanti Heartland Express

Figure 15. Annual Ridership between 2008 and 2017



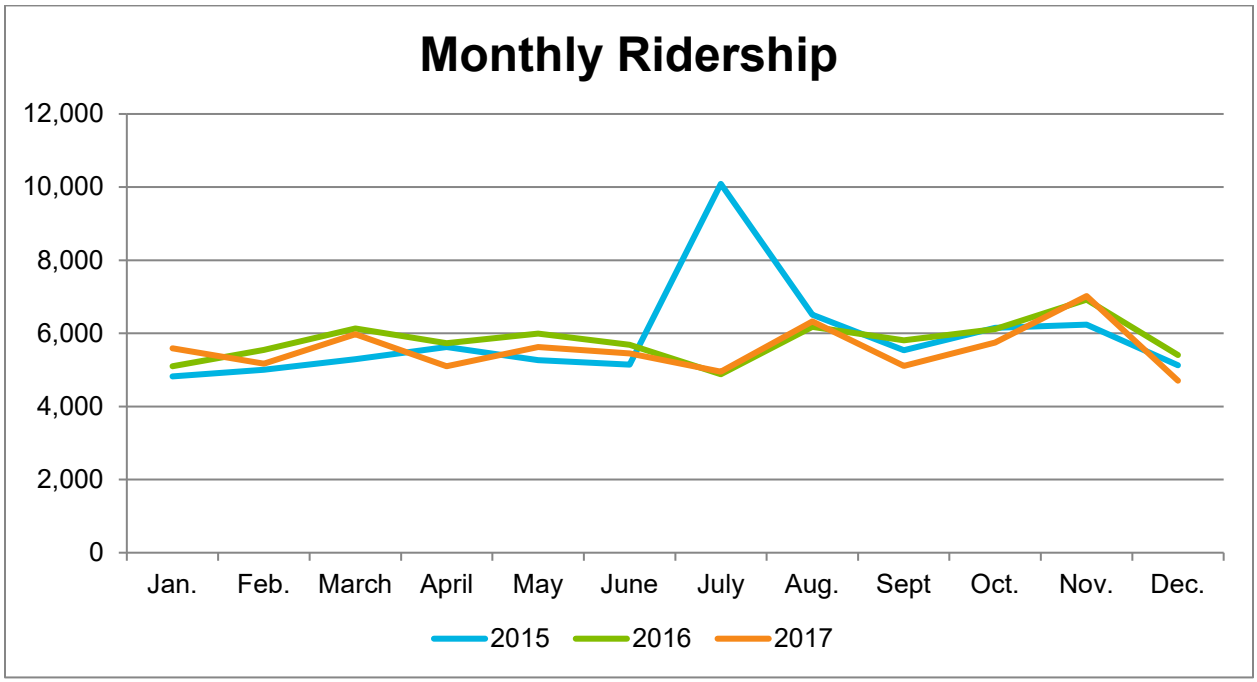
Source: 2013-2017 MnDOT Transit Plans

Table 4. System Ridership Trends (2015-2017)

Year	Annual Ridership	Riders/Month	Riders/Hour
2015	70,790	5,899	3.7
2016	69,486	5,791	3.0
2017	66,769	5,564	3.9
2018 Jan.-Sept.	51,247	5,694	3.0

Source: Chisago-Isanti Heartland Express Ridership Data

Figure 16. Ridership by Month (2015-2017)



Source: Chisago-Isanti Heartland Express Ridership Data

Table 5. 2017 Ridership Performance Metrics by Route

Route/Service	2017 Riders	2017 Riders/Mile	2017 Riders/Hour [a]
NW Isanti County	6,896	0.172	3.19
Braham-Cambridge	6,370	0.140	2.83
West Isanti	7,852	0.153	3.37
North Branch-Chisago	2,946	0.055	1.29
North Branch- Cambridge	8,989	0.180	4.03
Cambridge City	7,709	0.381	3.94
Chisago County Area	12,615	0.124	2.73
North Branch City	6,767	0.383	3.46

Route/Service	2017 Riders	2017 Riders/Mile	2017 Riders/Hour [a]
Cambridge-Isanti	New Route	New Route	New Route
Hwy 65-East Bethel	6,625	0.223	5.05
Total/Average	**66,769**	**0.163**	**3.16**

Source: MnDOT Office of Transit and Active Transportation Chisago-Isanti Tracking Sheet

[a] System-wide information was provided by Chisago-Isanti Heartland Express, this differes the the breakdown by route data for 2017 provided by MnDOT for the same period as the MnDOT data for miles, hours, expenses and revenue is budgeted data and not actual.

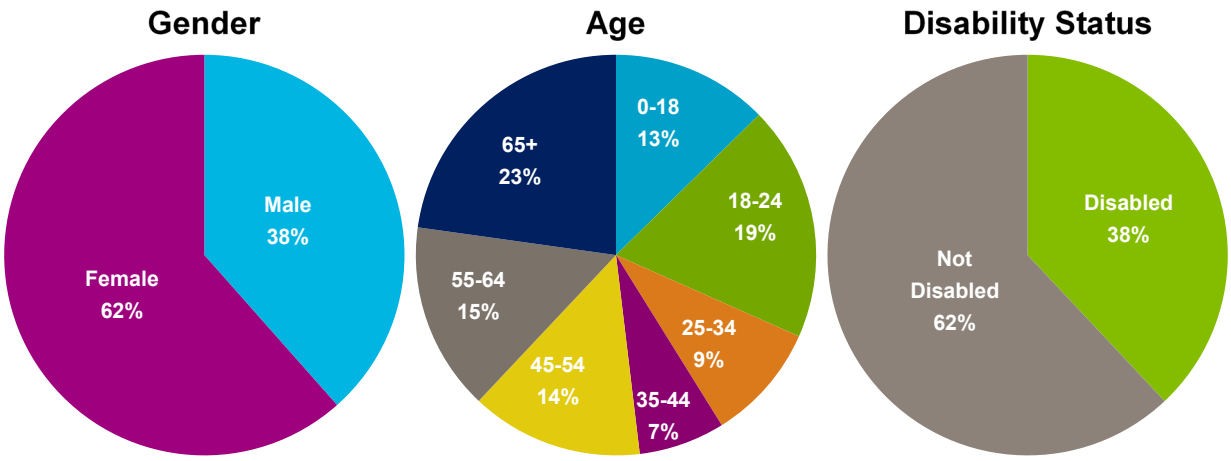
4.2 Service Delivery

Heartland Express operates all services in-house. Maintenance services are done at the bus facility located at 39840 Grand Avenue in North Branch. Heartland Express has three volunteer drivers.

4.3 Users

The description of Heartland Express users presented in this section is based on the agency's 2016 on-board survey of 164 passengers. Selected demographic characteristics of riders who completed the survey are shown on Figure 14. Almost two-thirds (62%) of the respondents were female; 38% were male. Survey respondents were more likely to be older, with 52% over age 45. Thirty-eight percent of respondents identified as having a disability.

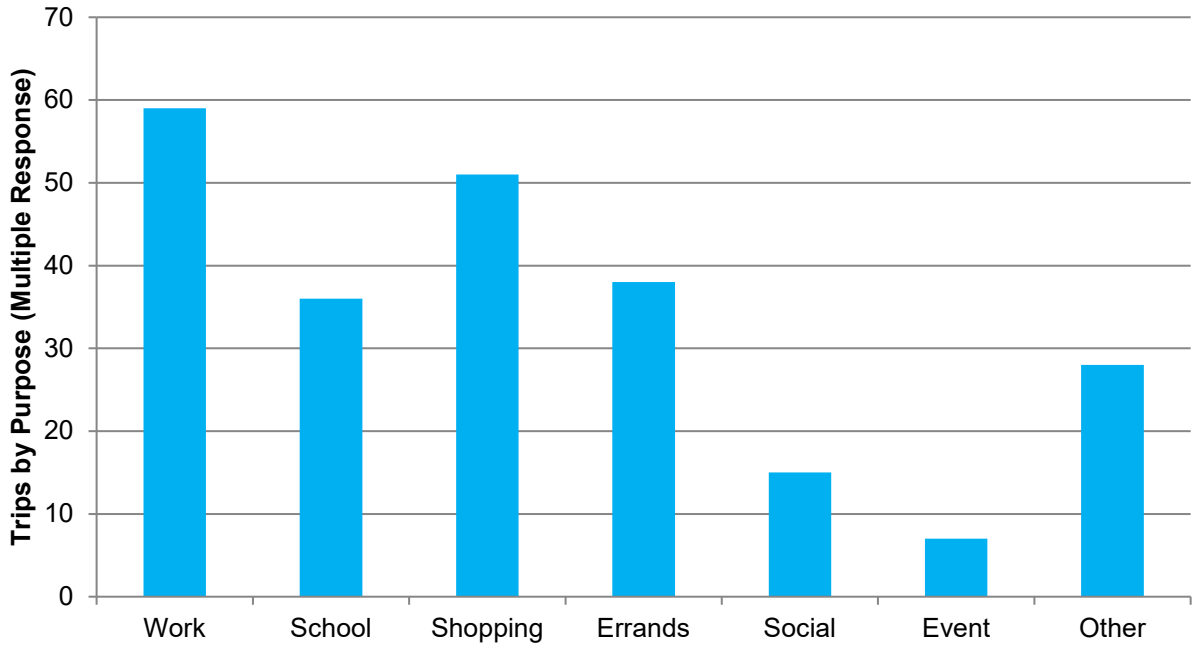
Figure 17. 2016 On-Board Survey Selected Demographic Characteristics



Source: Chisago-Isanti Heartland Express 2016 On-Board Survey

The most common trip purposes indicated were work and shopping, as shown on Figure 15. School trips and errands were also popular trips, with each receiving about 35 responses. In the "Other" category trip purposes were primarily medical trips (20 responses) and three volunteer trips.

Figure 18. 2016 Trip Purposes



Source: Heartland Express 2015 On-Board Survey

5. Capital

Heartland Express has a fleet of 18 400-series gasoline engine vehicles, including spares, and uses two facilities: one in Cambridge and another in North Branch. The Cambridge facility can house up to 18 vehicles and can perform light maintenance, in addition to administration and operations. The North Branch facility houses six vehicles and has operations. All maintenance is performed by a third party vendor. The Heartland Express fleet outlook through 2025 includes the replacement of 18 vehicles (Table 6). This does not include the anticipated expansion with the merger of Timber Trails Kanabec.

Table 6. Vehicle Management Plan (2019-2025)

Capital Plan	2019	2020	2021	2022	2023	2024	2025
Replacement Vehicles	6	3	2	0	2	4	1
Expansion Vehicles	0	0	0	0	0	0	0
Vehicle Cost	$510,000	$264,000	$182,000	$0	$194,000	$400,000	$103,000

Note: Projections based on a 7–year useful life and existing fleet.

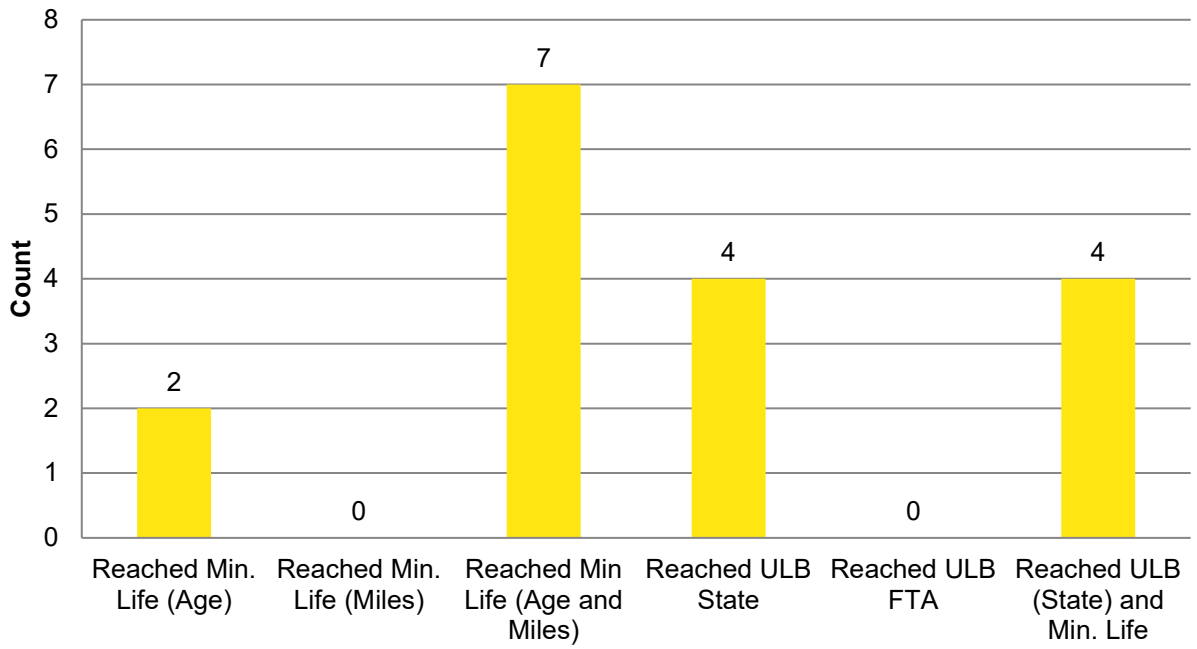
5.1 Background

5.1.1 Vehicles

As of July 2018, the Heartland Express owned fleet consisted of 18 vehicles made up of 25 to 26 foot long cutaways, primarily on Ford E-450 chassis (Table 7). Thirteen of the vehicles are used in peak revenue service on weekdays and three on weekends, the remaining five are spares. This equates to a spare ratio of 38.5%, which is above the 20% maximum recommended in the service guidelines outlined in the GMTIP. The average age in the fleet is 4.22 years and the oldest vehicles are nine years old. The average number of miles on a vehicle is 121,279 with older vehicles typically having higher mileage. All Heartland Express vehicles are wheelchair-accessible in accordance with requirements of the ADA. All the vehicles are equipped with bicycle racks and have cameras on-board. Bicycle access is a suggested metric MnDOT recommends providers track. For Dial-A-Ride systems the target is to have bicycle access on buses; Heartland Express is currently meeting this target. The vehicles do not have active automatic vehicle location (AVL) software on-board but do have passive automatic vehicle location software on-board.

The minimum life, outlined in the 2018 *Transit Asset Management Plan*, for this class of vehicle is five years and 150,000 miles with a useful life benchmark of 7 years for the state and 10 for the Federal Transit Administration (FTA). MnDOT has set the useful life benchmark in the 2018 *Transit Asset Management Plan* as 10 years for all cutaway buses with a performance measure of no more than 10% exceeding this useful life benchmark. Heartland Express is meeting this benchmark (Figure 16). Nine vehicles have reached their minimum life of which seven of these have reached both the minimum miles and age and two have reached just the age. Of these nine vehicles, four have reached the state useful life benchmark but none have reached the FTA useful life benchmark.

Figure 19. Vehicle Minimum Life and Useful Life Benchmarks as of 2019



Source: MnDOT Transit Asset Management Plan, 2018

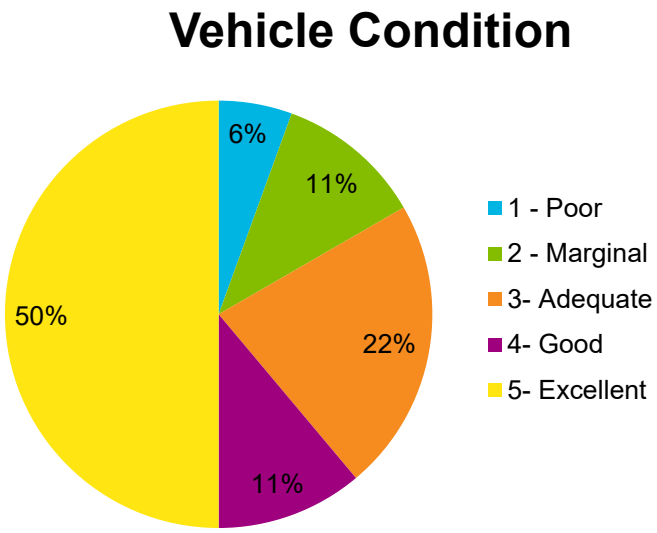
Table 7. Vehicle Fleet

Vehicle Manufacturer	Vehicle Model	Year	Mileage	Fuel	Seats (Wheelchair)	Amenities
ElDorado National	Aerotech (Ford E-450)	2009	298,873	Gas	16 (2)	Bike rack, Camera
ElDorado National	Aerotech (Ford E-450)	2009	375,421	Gas	19 (2)	Bike rack, Camera
ElDorado National	Aerotech (Ford E-450)	2010	168,337	Gas	16 (2)	Bike rack, Camera
Startrans (Supreme Corporation)	Senator (Ford E-450)	2011	295,060	Gas	8 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2012	217,183	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2012	221,290	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2013	127,896	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2013	130,779	Gas	10 (4)	Bike rack, Camera
Elkhart Coach	EC II (Ford E-450)	2013	211,068	Gas	8 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2014	35,689	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2014	63,119	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2016	10,924	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2016	26,578	Gas	10 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2017	0	Gas	21 (4)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2017	0	Gas	21 (4)	Bike rack, Camera
Arboc Mobility	Spirit of Mobility (GM 4500)	2017	400	Gas	2 (5)	Bike rack, Camera
Arboc Mobility	Spirit of Mobility (GM 4500)	2017	400	Gas	2 (5)	Bike rack, Camera
Glaval Bus	Universal (Ford E-450)	2018	0	Gas	21 (4)	Bike rack, Camera

Source: MnDOT Transit Asset Management Plan, 2018

Vehicle conditions are rated using a five point scale as defined by the 2018 *Transit Asset Management Plan*, with 1 being the worst and 5 the best. Scoring is done using a combination of factors, including the lifetime maintenance costs as a percentage of total purchase price, vehicle mileage, months in service, and cost of maintenance needed in the next six months. The average rating for a vehicle is 3.88 and the largest percentages are rated “excellent” (Figure 17).

Figure 20. Vehicle Condition Rating



Source: MnDOT Transit Asset Management Plan, 2018

While not exceeding the performance indicator set by the state for the useful life benchmark, half of the vehicles have reached their minimum useful life in regards to age and/or miles and four of these have met the state useful life benchmark of 7 years but not the federal benchmark of 10 years. As the vehicles age, it is anticipated that the cost to maintain the vehicles will increase. The spare ratio is higher than what is recommended by the state. Two of the vehicles could be retired and not replaced under the current spare ratio guidance if there were no changes in service that increased the number of vehicles in peak.

5.1.2 Facilities

Heartland Express has two facilities: one in Cambridge and another in North Branch (Table 8). The facility in North Branch is rented from Chisago County for $52,500 annually. The Cambridge facility was converted and remodeled from the old Cambridge Fire Hall in 2007 by Heartland Express to use as an Operations and Maintenance (O&M) facility and is considered to be in a ”good” state of repair according to the MnDOT 2018 *Transit Asset Management Plan*. Heartland Express has capital responsibility for maintaining and upgrading the Cambridge facility.

The Cambridge facility houses maintenance, operations, and administrative staff and 18 vehicles, though not all are stored inside. The North Branch facility is a satellite facility used to store six vehicles and reduce deadhead miles; all of these vehicles are stored inside. The facility was built in 2003 as an EMS garage and headquarters by Lakes Region EMS. In 2015 Chisago County purchased the vacant facility for $340,000 to develop an operations facility in Chisago County. Chisago County leases the facility to Heartland Express. Some dispatching occurs at North Branch, but Heartland Express is working to consolidate its dispatch operations to Cambridge. All minor maintenance work is performed in-house at the Cambridge Facility, while major work such as alignments and body work done by outside vendors.

Table 8. Facilities

Facility Type	Facility Location	Facility Size	Facility Age	Facility Amenities	Maintenance Capabilities
Cambridge Facility	245 2nd Avenue Southeast	5,827 square feet	12 years	18 vehicle storage capacity Administrative space Maintenance Operations	Light Maintenance
North Branch Facility	39840 Grand Avenue North	7,312 square feet	16 years	6 vehicle storage capacity Operations	None

5.1.3 Technology

In 2013, Heartland Express upgraded its dispatch software to Shah Software for $150,000. The cost was split 50/40/10 using federal, state, and local dollars, respectively. The upgrade included the installation of static AVL and mobile data terminals (tablets) on all vehicles. Shah is used for dispatching, scheduling, and reservations. While Shah has a module for active AVL, to track the driver's location in real-time, they do not have it as part of the existing contract. Heartland Express is possibly looking to replace Shah Software in September 2019 when the existing contract expires. Shah is not used for asset, parts, and maintenance management.

The Chisago/Isanti county phone system is used.

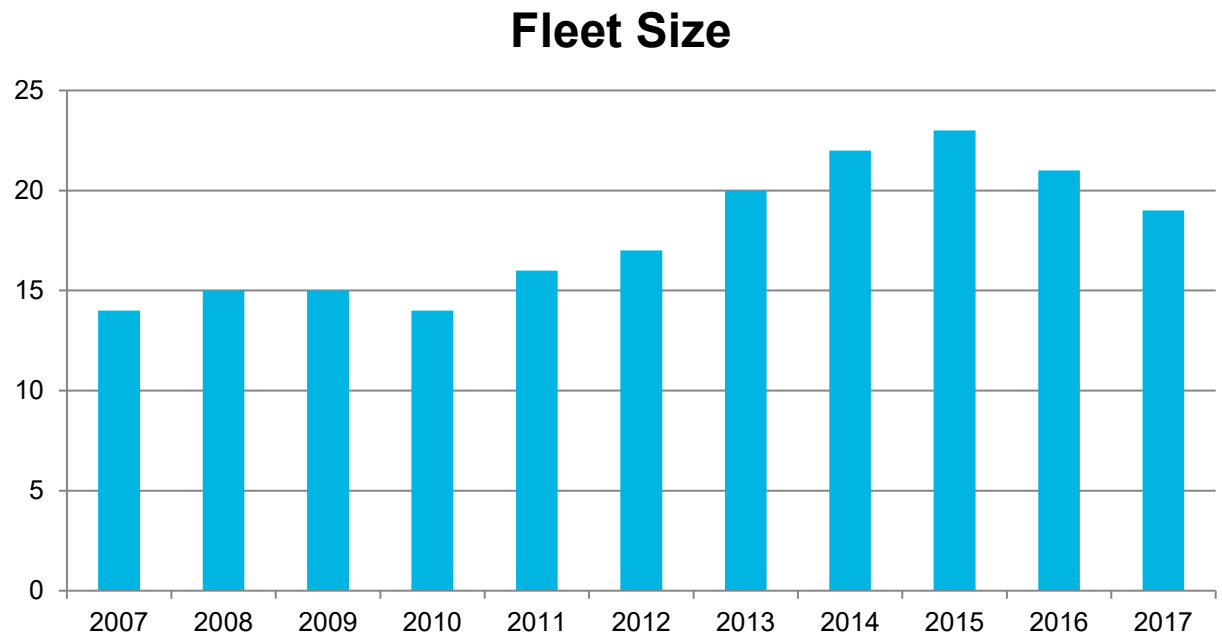
Heartland Express does not use mechanical or electronic fareboxes. Smartcards or other electronic fare media are not used.

5.2 History

Between 2011 and 2015, the Heartland Express fleet grew steadily, with a peak of 23 vehicles in 2015 (Figure 18). Previous to 2018, the fleet was divided between Isanti County and Chisago County, but beginning that year, Isanti County began administering transit for both counties and ownership of all the Chisago assets was transferred to Isanti County. In 2016, Heartland Express received a $559,900 grant to purchase seven buses to expand service. As of November 2018, five of these vehicles were delivered and the agency is awaiting the delivery of two more. They will be used to replace aging vehicles.

Agencies that receive federal financial assistance and own, operate, or manage capital assets used in the provision of public transportation are required under 49 U.S.C. 625 to create a transit asset management plan. This plan facilitates decision-making that balances needs and demands for rolling stock, facilities, and equipment. MnDOT Office of Transit and Active Transportation personnel make annual visits to each federal- or state-funded facility to inspect facility and fleet conditions and understand how assets have been maintained.

Figure 21. Chisago-Isanti Heartland Express Fleet Size (2007-2017)



Source: 2016 Isanti and Chisago County Comprehensive Annual Financial Reports

In 2017, MnDOT added a Transit Asset Management module to the BlackCat Grants Management System that facilitates streamlined communication between MnDOT and transportation providers regarding the maintenance and depreciation of assets. Additionally, MnDOT's updated 2018 *Transit Asset Management Plan* includes:

- Inventory of the number and type of capital assets
- Condition assessment of those inventoried assets for which a provider has direct capital responsibility
- Description of analytical processes or decision support tools that a provider uses to estimate capital investment needs over time and develop its investment prioritization
- Discussion of prioritization investment direction
- Plan implementation strategies and recommendations

Prior to 2020, fleet assets were prioritized based on life expectancy. For this five-year transit system plan, the assets are identified for replacement based on the *Transit Asset Management Plan* submitted to FTA on October 1, 2018.

6. 2020-2025 Annual Needs

6.1 Needs Identification Process

To identify Heartland Express' needs for the period between 2020 and 2025, the project team met with staff from the agency four times to learn about and discuss the agency's operating structure and environment, challenges, and opportunities for improvement. The first meetings were a chance to gather information and begin considering strategies and opportunities for the agency, as well as to use analysis and metrics to assess the agency's baseline conditions and performance. At the third and fourth meetings, the project team engaged with agency staff to develop and then refine a comprehensive list of the agency's needs for the five-year period and

prioritize these needs according to their relative importance to the agency's operations. The needs prioritization exercise was not conducted with fiscal constraints; it was intended to be a brainstorming session to determine the investments that could enhance the efficiency with which the agency functions and consider how it could invest strategically to better meet the needs of the community. The needs identified through this activity are presented, in order of priority, in Table 9.

The needs outlined in Table 9 reflect the agency's current and projected needs.

Agency input was the key driver for assigning priority to each need, based on agency employees' understanding of its operations and challenges. However, each need was vetted and reviewed by the consultant team to ensure that available data and information about the agency support the needs identified from the prioritization activity.

6.2 List of 2020 – 2025 Needs

The needs identified through the prioritization activity, in order of priority, are listed in Table 9. For new or extended service, operational costs were based off of anticipated hours and a hourly rate provided by Chisago-Isanti Heartland Express, as were vehicle unit costs.

6.3 Historical and Projected Annual Summary

Heartland Express has a variety of needs related to technology, marketing, facilities, service, and management. The potential merger between Heartland Express and Timber Trails Public Transit could require expedition of some needs, particularly those related to branding and marketing.

6.3.1 Transit Asset Management

The National TAM System Final Rule (49 U.S.C. 625) requires that all agencies that receive federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage capital assets used in the provision of public transportation create a TAM Plan. OTAT's TAM staff and TAM Plan aid in the decision-making process of balancing asset needs and demands for rolling stock, facilities, and equipment. Rolling stock mainly includes revenue bus vehicles and no rail vehicles. Equipment mainly includes non-revenue service vehicles. Facilities range from general purpose maintenance and overnight storage facilities to combined administrative and maintenance facilities including service and inspection.

Fleet assets are prioritized based on life expectancy, but this will change after 2020. For this FYTSP, the assets are identified for replacement based on the TAM plan submitted by OTAT to FTA on October 1, 2018. Other key components of the OTAT TAM Plan include development of Maintenance Plans for both facilities and vehicles and annual inspections of vehicles and facilities conducted by OTAT personnel. To further enhance implementation of the TAM Plan, MnDOT added a Transit Asset Management module to the BlackCat Grants Managements System in 2017 that allows greater tracking of assets.

6.3.2 Fleet

Heartland Express currently has a fleet of 18 vehicles. According to the MnDOT fleet outlook, Heartland Express (Isanti County) is expected to have two vehicles replaced each year between 2020 and 2027. While the average mileage in the fleet is 121,000 miles there is a disparity amongst the range with seven of the vehicles having over 150,000 miles and eight having less than 50,000 miles.

Table 9. Unconstrained Needs

Need	Priority Level	Year	Description	Rationale	Estimated Cost (2019)
New intake and dispatch system (to replace Shah software)	High	2020	Dispatch and scheduling system with mobile application. Must be user-friendly and have a messaging capability to streamline communication for drivers and dispatchers. Needs to address wireless reception gaps.	More efficient use of staff resources (fewer manual functions) Better customer service Reduce or eliminate reliance on voicemail system	$100,000[a]
New tablets for buses	High	2020	Tablets for all buses to enable active AVL capabilities	Enable customers to track vehicle location and more precisely estimate arrival times	$11,000[b]
New website	High	2020	New, upgraded, user-friendly website that includes information about agency's services - with maps, etc.	Provide clearer information to the public Enhance ridership	$8,000[c]
Rebranding	High	2021	Creation of new brand and logo	Create new brand identity Make information more accessible to customers	$4,000[d]
Signage at frequent stops	High	2021	Installation of signage at major pick-up and drop-off points	Prevent confusion for new/non-regular riders Enhance community awareness of the service	$1,600[e]
Maintenance facility in Cambridge	High	2023	Maintenance facility for servicing buses in Cambridge; possibly shared with ambulances	Potential long-term cost savings	$4 million[f]
Marketing	Medium	2020-2025	Newspaper, radio, social media advertising	Increase awareness, particularly with younger demographic, of service availability	$5,200 [g,h]
Bus shelters	Medium	2020-2025 (one per year)	Six bus shelters at major connecting points	Enhance ridership Improve rider experience Enhance community awareness of services	$81,000 ($13,500 per shelter)[i]

Need	Priority Level	Year	Description	Rationale	Estimated Cost (2019)
Service change - formally implement deviated routes	Medium	2021	Where it makes sense, begin operating service as a deviated fixed route, and update materials to reflect this change	A number of services currently operate as point deviated routes, but this is not clearly communicated to the public. Additional print materials and structure will make the service more accessible to some people.	Staff time + $200 for printed material
Update to policy manual	Low	2021	Policy manual has not been updated since 1995.	Formalize policies and institutionalize knowledge	$9,000 in staff time
Heating for bus shelters	Low	2024 and 2025	Heating for two bus shelters at major connecting points	Enhance ridership Improve rider experience	$70,000 ($35,000 per shelter to add heating + additional O&M costs)[j]

[a] *Estimate pending further details from MnDOT.*

[b] *Estimate assumes $500 per tablet for 18 tablets, plus set-up, shipping, and ancillary costs. Cost would be higher for tablets with AVL/APC capabilities.*

[c] *See, for example: https://digital.com/blog/how-much-does-website-cost/. Estimated cost includes some contingency for costs associated with theStaff time for review and oversight.*

[d] *Estimate including logo design and creation of various size and format files.*

[e] *For example, County Market, Cambridge Transit Center, Walmart, Cub Foods, Government Center, etc. Final locations to be identified by the agency and pending landowner approval (where applicable). Estimate assumes 20 signs.*

f Estimate developed using online workbook: "Estimate the Cost of a Vehicle O&M Facility," https://www.hdrinc.com/insights/estimate-cost-vehicle-om-facility. Price may change based on final specifications.

[g] *Assumption is that staff time will cover materials and map development; assumes printing of 1,000 double-sided route brochures at 10 cents per color page.*

[h] *Assumes a budget of $100 per week for various activities. Social media advertising can be done for as little as $5 or $10 per day. Radio and newspaper ad costs vary depending on the day of the week or time of day, as well as other factors. Marketing could also include having a presence at local events.*

[i] *This cost includes $7,500 to install a concrete bus shelter base (per MnDOT, http://www.dot.state.mn.us/bidlet/avgPrice/AveragePrice2017.pdf) and $6,000 for the shelter (http://www.startribune.com/july-7-hundreds-of-metro-bus-stops-have-thousands-seeking-shelters/265979041/) and accounts for inflation.*

[j] *An estimated $35,000 to add heating (https://www.mprnews.org/story/2015/01/07/heated-transit-shelters). Costs can range significantly, however (between $20,000 and $75,000 per shelter).*

6.3.3 Facility

Heartland Express currently has two facilities – the Cambridge and the North Branch facilities. The North Branch is rented from Chisago County for $52,500 annually, and is used to store vehicles inside and thus reduce deadhead miles. The agency owns the Cambridge facility, which also serves as the town's transit center and houses maintenance, operations, administrative staff, and vehicles (some are stored outside). While dispatch currently occurs at both of these two facilities, the agency is currently working to consolidate its dispatch functions at the Cambridge facility. However, the agency would eventually like to be able to conduct all of its vehicle maintenance at the Cambridge facility as well. While this would involve significant upfront costs, it could result in savings over the long term.

The potential merger with Timber Trails would add a third facility, in Mora, to the agency's assets. If this occurs, Heartland Express has expressed interest in conducting a facility consolidation – both generally to reduce its costs for use of the North Branch facility, as well as to account for the new facility in Mora. In order to minimize deadhead hours and miles, the agency may still want to look into options for storing some vehicles in North Branch overnight.

Signage for all major/regular stops was another need identified for the agency. While there does not appear to be a significant amount of confusion about pick-up locations, having signage will increase community awareness that the service is available and about some of the key locations to which it provides access. Implementation of signage is a relatively low-cost need that Heartland Express could implement during the first year of the plan, or after the rebranding of the agency after the potential consolidation with Timber Trails Public Transit has occurred. This will also help to familiarize the community with the new agency brand.

Shelters for riders, ideally heated, were identified as a need for Heartland Express riders using the deviated fixed route service. The shelters will make waiting for the bus more comfortable by providing protection from the wind and could increase the likelihood that people will use the service in the future. They will also serve a marketing purpose, alerting people in Chisago and Isanti Counties of available services. Due to the high expense of providing heating in shelters, Heartland Express will likely install heating as funding becomes available, prioritizing most highly the busiest locations that do not have an available indoor, heated waiting area.

6.3.4 Technology

A new dispatch and scheduling system is the top priority need for Heartland Express. Many functions of the current dispatch and scheduling system occur manually, AVL is static (not active), and accepting reservations by voicemail (as is currently done) is labor intensive, as those who request a ride via voicemail either never receive confirmation or a significant amount of staff time is used to call people who have requested reservations via voicemail to confirm their rides.

The agency would like a dispatch and scheduling system with a mobile application on each bus, allowing riders to request rides at all times of day and track the location of their vehicle around the time of their scheduled pick-up. The new system, which will likely require a new tablet for each in-use bus, should also have additional messaging capabilities to streamline communication for drivers and dispatchers. It must also address some wireless reception gaps in the agency's service area.

While a new system with enhanced capabilities may be costly to set up, they are likely to save a significant amount of staff time in the long run, and will likely increase customer satisfaction with the service, possibly leading to increased ridership over time.

6.3.5 Rebranding and Marketing

Heartland Express is planning to undertake a complete rebranding of its services, which must be reflected in all the agency's public-facing materials and assets. This will require support to develop a new brand and logo for the agency. Once a new agency brand has been developed, existing assets (vehicles, building signs, informational materials, website, etc.) must all be updated with the new brand. As informational materials explaining the agency's services are updated, new maps and graphics showing the locations that serve as de facto fixed deviated route stops should also be created.

The rebranding also presents a unique opportunity for Heartland Express. If the agency is able to implement new capabilities, such as a new mobile application with real-time vehicle location capabilities for riders around the same time it launches the new brand, there is a significant opportunity to establish a reputation in the community as an agency that offers door-to-door, reliable service using up-to-date tools. This could help to build the agency's attractiveness among new groups of people, while continuing to serve current riders. A new website will be a critical element of the rebranding effort. This plan also recommends that Heartland Express conduct enhanced marketing and advertising through newspaper(s), radio, social media, or other channels.

6.3.6 Service Needs

Some of Heartland Express' services are operating currently in a manner that is similar to deviated fixed route or point deviation services; that is, they have designated pick-up locations where they do pick-ups at specific times each day. However, information about the structured nature of this service is not available on the agency's website. It is recommended that the agency formalize this service structure and make information about how it works available to the public.

Many residents of Chisago and Isanti Counties commute to the Twin Cities Metro area for work, and would benefit from having a way to get to their workplaces via transit. For this reason, a connection between the Heartland Express service area and the transit network of the Twin Cities (e.g., at the terminus of bus routes leading into downtown Minneapolis, such as in Blaine) would benefit many residents living in the Heartland Express service area and provide them with commuting travel options that do not involve driving. The exact method/route of connection and implementation timeline are unknown at this point in time.

6.3.7 Human Resource and Training Needs

Heartland Express' Policy Manual was last updated in 1995. Given the numerous changes that have happened since 1995 in terms of agency operations, human resources practices, and technology, it makes sense for the agency to update its policy manual to reflect current conditions and ensure expectations are clearly provided to all employees. Staff time will be required to undertake this manual update.

7. System Performance

Performance measure tracking establishes a consistent way to evaluate a route or service type, provides a regular opportunity to reflect on future needs and service improvements, and ensures compliance with the ADA, MnDOT's Olmstead Plan, and any other local performance expectations. For state-funded transit services, MnDOT requires performance tracking of annual

ridership, baseline span of service, on-time performance, and asset management. Additionally, each provider is required to track denials based on the ADA trip denial definitions and process documentation in FTA Circular 4710.1[1] as well as service and performance indicators.

7.1 Historical Performance

This section evaluates the performance of the system and each route. Routes are classified based on their starting location (originating garage) and the communities/counties served. Routes that had the same starting location and served the same communities/counties were aggregated together. Five base data sets were collected or calculated from Heartland Express records to create the route performance metrics: ridership statistics, revenue hours, revenue miles, operating cost, and farebox revenue. Route statistics are described for each of the routes and services in Table 10.

7.1.1 Service Effectiveness

Service effectiveness describes the amount of service utilized per unit of transit service provided. Service effectiveness is measured based on two indicators: passengers per mile and passengers per hour.

Table 10. Route Diagnostic Information (2017)

Route	Passenger Trips	Annual Revenue Miles	Annual Revenue Hours	Farebox Revenue	Operating Cost
C4 - North Branch City Route	6,767	17,650	1,953	$14,955	$160,399
C3 - North Branch-Chisago	2,946	53,716	2,276	$6,511	$200,499
C2 - Chisago County Area	12,615	101,792	4,627	$27,879	$399,560
B1 - Braham	6,370	45,653	2,249	$14,078	$200,499
B2 - West Isanti County	7,852	51,154	2,333	$17,353	$200,499
B3 - North Branch Cambridge	8,989	50,003	2,228	$19,866	$190,434
B4 - NW Isanti County	6,896	40,001	2,164	$15,240	$170,384
B5 - Cambridge City	7,709	20,223	1,955	$17,037	$160,399
Hwy 65- East Bethel	6,625	29,736	1,313	$14,641	$145,302
Total	**66,769**	**409,928**	**21,098**	**$147,559**	**$1,927,974**

Source: MnDOT Heartland Express Service Information 2017 actuals for ridership, miles, and hours. Budgeted for operating cost and fare revenue based on actual ridership and budget fare revenue of $2.21 per passenger.

[1] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/Final_FTA_ADA_Circular_C_4710.1.pdf.

7.1.1.1 Passengers per Mile

Passengers per mile is a measure of efficiency and trip length. Large numbers indicate shorter trips. Smaller numbers indicate either longer trips, where passengers are traveling greater distances, or poorer performing routes. Heartland Express averages 0.163 passengers per mile (Table 11). The C4 – North Branch City Route had the highest passengers per revenue mile with 0.383 and the C3 - North Branch-Chisago Route had the lowest at 0.055. According to the 2017 *Rural Transit Fact Book* the national average for passengers per mile for rural transit demand response service providers is 0.15 and in Minnesota is 0.31. The system-wide average is slightly greater than the national rural average but less than the state rural average.

Table 11. 2017 Passengers per Revenue Mile Statistics

Route	Passengers per Mile	Ranking
C4 - North Branch City Route	0.383	1
C3 - North Branch-Chisago	0.055	9
C2 - Chisago County Area	0.124	8
B1 - Braham	0.140	7
B2 - West Isanti County	0.153	6
B3 - North Branch Cambridge	0.180	4
B4 - NW Isanti County	0.172	5
B5 - Cambridge City	0.381	2
Hwy 65- East Bethel	0.223	3
System Wide Average	**0.163**	**---**
National Rural Average	0.15	---
Minnesota Rural Average	0.31	---

Source: MnDOT and 2017 Rural Transit Fact Book

7.1.1.2 Passengers per Hour

Passengers per hour measures ridership as a function of the amount of service provided and will vary based on the geographic spread of the area and average operating speed. Higher numbers indicate a more efficient system. Heartland Express averages 3.16 passengers per hour (Table 12). The Hwy 65- East Bethel Route had the highest passengers per revenue hour with 5.04 and the C3 North Branch-Chisago Route had the lowest at 1.29. According to the 2017 *Rural Transit Fact Book* the national average for passengers per hour for rural transit demand response service providers is 2.6 and in Minnesota is 4.57. The system-wide average is greater than the national rural average and slightly less than the state rural average. The minimum threshold for demand response routes in rural areas, set by MnDOT, is 3 passengers per hour. Three routes are not meeting this target.

Table 12. 2017 Passengers per Revenue Hour Statistics

Route	Passengers per Hour	Ranking
C4 - North Branch City Route	3.46	4
C3 - North Branch-Chisago	1.29	9
C2 - Chisago County Area	2.73	8
B1 - Braham	2.83	7
B2 - West Isanti County	3.37	5
B3 - North Branch Cambridge	4.03	2
B4 - NW Isanti County	3.19	6
B5 - Cambridge City	3.94	3
Hwy 65- East Bethel	5.04	1
System Wide Average	**3.16**	**---**
National Rural Average	2.6	---
State Minimum Threshold	2.0	---
Minnesota Rural Average	4.57	---

Source: MnDOT and 2017 Rural Transit Fact Book

7.1.2 Financial Efficiency

Cost effectiveness measures the effectiveness of the system from a financial standpoint – how well the dollars put into the system are being used to produce trips. The cost effectiveness indicators are cost per passenger, cost per mile, cost per hour, farebox recovery, and subsidy per passenger.

7.1.2.1 Cost per Passenger

Cost per passenger is the overall cost to operate the route divided by the number of passengers. Heartland Express costs per passenger range from $20.81 to $68.06 with an average cost of $27.38 per passenger (Table 13). The B4 - NW Isanti County Route had the lowest cost per passenger at $20.81 and the C3 - North Branch-Chisago Route the highest at $68.06.[2] According to the *2017 Rural Transit Fact Book* the national average for cost per passenger for rural transit demand response service providers is $14.68. All the Heartland Express routes have a higher cost per passenger than the national average.

[2] Gaps and discrepancies in the data may be influencing the results. If the operating budget for 2017 is closer to what is reported in the 2017 *MnDOT Transit Report* then the average cost per passenger is closer to $21.08.

Table 13. 2017 Cost per Passenger Statistics

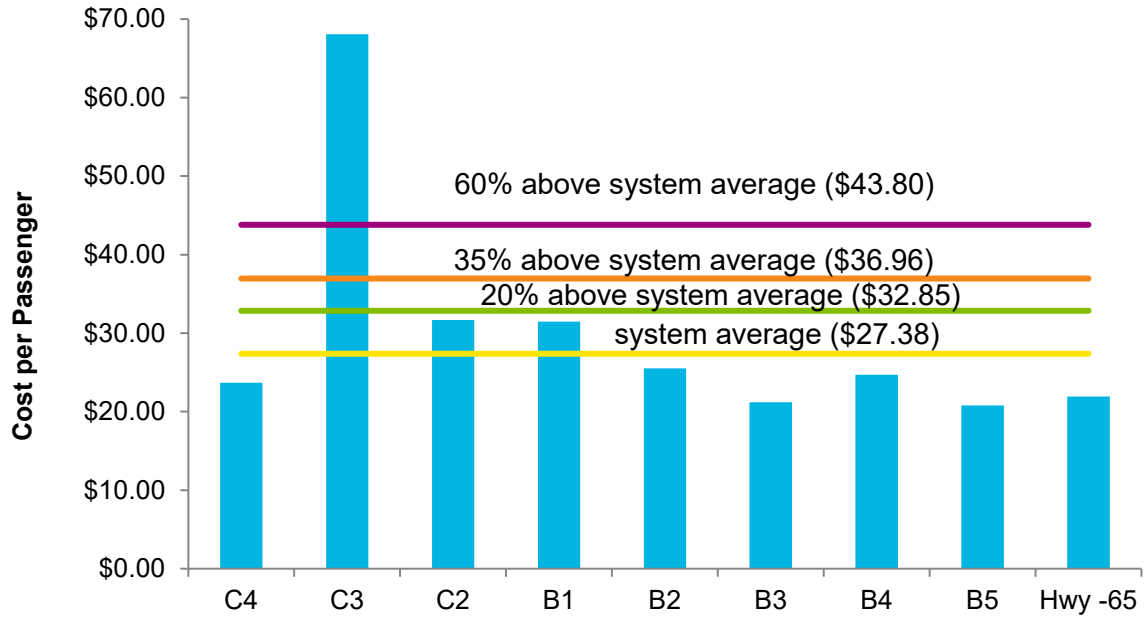
Route	Cost per Passenger	Ranking
C4 - North Branch City Route	$23.70	4
C3 - North Branch-Chisago	$68.06	9
C2 - Chisago County Area	$31.67	8
B1 - Braham	$31.48	7
B2 - West Isanti County	$25.53	6
B3 - North Branch Cambridge	$21.19	2
B4 - NW Isanti County	$24.71	5
B5 - Cambridge City	$20.81	1
Hwy 65- East Bethel	$21.93	3
System Wide Average	**$27.38**	**---**
National Rural Average	$14.68	---

Source: MnDOT and 2017 Rural Transit Fact Book

The GMTIP has set a performance metric for the cost per passenger at the route level. If a route has a cost per passenger that is 20 percent to 35 percent over the system average, minor modifications should be made to the route to improve performance. If the cost per passenger is 35 percent to 60 percent of the system average, major changes should be made to the route. On routes that have a cost per passenger that is greater than 60 percent of the system average, the significant changes should be made to the route such as restructure or possible elimination. As can be seen in Figure 19 three routes have a cost per passenger that is between 20 percent and 32 percent greater than the system average and one route that is greater than 60 percent of the system average.

The new performance tracking guidelines by MnDOT state that the target for cost per passenger for Dial-A-Ride services should not exceed $15 per passenger. All the Heartland Express routes exceed this value with several of the routes at twice this rate.

Figure 22. 2017 Cost per Passenger Comparison to State Performance Metrics



Source: MnDOT

7.1.2.2 Cost per Mile

Cost per mile measures financial efficiency of providing service and varies based on the average operating speed. The smaller the number indicates more financial efficient routes and/or faster operating speeds. Heartland Express costs per mile had a wide range and varied from $3.73 to $9.09 with an average cost of $4.46 per mile (Table 14).[3] C3 - North Branch-Chisago Route had the lowest cost per mile at $3.73 and the C4 - North Branch City Route the highest at $9.09. According to the *2017 Rural Transit Fact Book* the national average for cost per mile for rural transit demand response service providers is $2.22. All the Heartland Express routes have a higher cost per mile than the national average.

Table 14. 2017 Cost per Mile Statistics

Route	Cost per mile	Ranking
C4 - North Branch City Route	$9.09	9
C3 - North Branch-Chisago	$3.73	1
C2 - Chisago County Area	$3.93	4
B1 - Braham	$4.39	6
B2 - West Isanti County	$3.92	3
B3 - North Branch Cambridge	$3.81	2

[3] Gaps and discrepancies in the data may be influencing the results. If the operating budget for 2017 is closer to what is reported in the 2017 *MnDOT Transit Report* then the average cost per mile is closer to $3.43.

Route	Cost per mile	Ranking
B4 - NW Isanti County	$4.26	5
B5 - Cambridge City	$7.93	8
Hwy 65- East Bethel	$4.89	7
System Wide Average	**$4.46**	**---**
National Rural Average	$2.22	---

Source: MnDOT and 2017 Rural Transit Fact Book

7.1.2.3 Cost per Hour

Cost per hour measures financial efficiency of providing service. The smaller the number indicates more financial efficient routes and/or faster operating speeds. Heartland Express costs per hour had a wide range and varied from $78.73 to $110.64 with an average cost of $86.64 per hour (Table 15).[4] B4 – NW Isanti County Route had the lowest cost per hour at $78.73 and the Hwy 65 – East Bethel Route the highest at $110.64. According to the *2017 Rural Transit Fact Book* the national average for cost per hour for rural transit demand response service providers is $38.83. All the Heartland Express routes have a higher cost per hour than the national average. MnDOT has set a target cost of $60 per hour; all the Heartland Express routes exceed this.

Table 15. 2017 Cost per Hour Statistics

Route	Cost per mile	Ranking
C4 - North Branch City Route	$82.13	3
C3 - North Branch-Chisago	$88.10	7
C2 - Chisago County Area	$86.36	6
B1 - Braham	$89.16	8
B2 - West Isanti County	$85.95	5
B3 - North Branch Cambridge	$85.46	4
B4 - NW Isanti County	$78.73	1
B5 - Cambridge City	$82.06	2
Hwy 65- East Bethel	$110.64	9
System Wide Average	**$86.64**	**---**
National Rural Average	$38.83	---

Source: MnDOT and 2017 Rural Transit Fact Book

[4] Gaps and discrepancies in the data may be influencing the results. If the operating budget for 2017 is closer to what is reported in the 2017 *MnDOT Transit Report* then the average cost per hour is closer to $66.71.

7.1.2.4 Farebox Recovery

Farebox recovery measures the percentage of operating cost covered by fares and is an outcome heavily influenced by the ridership productivity of a route against its total operating cost, as well as the fare policy of the system. It is calculated by dividing fare revenue by operating cost. Heartland Express has an average farebox recovery of 8.07%,[5] which includes only fare revenue collected from the farebox. The GMTIP includes contract revenue and local contributions when calculating cost/farebox recovery. Using this methodology the system cost/farebox recovery is 15%, this does not meet the system-wide target recommended by MnDOT of 20%. The information presented in Table 16 accounts only for fare revenue collected from the farebox. The B5 - Cambridge City route had the highest with 10.62% and the C3 - North Branch-Chisago route the lowest at 3.25%. According to the *2017 Rural Transit Fact Book* the national average for passengers per mile for rural transit demand response service providers is 12%. All Heartland Express routes are performing worse than the national rural average.

Table 16. 2017 Farebox Recovery Statistics

Route	Farebox Recovery	Ranking
C4 - North Branch City Route	9.32%	4
C3 - North Branch-Chisago	3.25%	9
C2 - Chisago County Area	6.98%	8
B1 - Braham	7.02%	7
B2 - West Isanti County	8.65%	6
B3 - North Branch Cambridge	10.43%	2
B4 - NW Isanti County	8.94%	5
B5 - Cambridge City	10.62%	1
Hwy 65- East Bethel	10.08%	3
System Wide Average	**8.07%**	**---**
National Rural Average	12.0%	---

Source: MnDOT and 2017 Rural Transit Fact Book

7.1.2.5 Subsidy per Passenger

Subsidy per passenger measures how much it costs to operate a route on a “per passenger” basis. It is calculated by subtracting passenger revenue from operating cost and dividing by the total number of passengers. It is the cost to operate after taking into account fare revenue and the portion subsidized by other sources. Heartland Express has an average subsidy per

[5] Gaps and discrepancies in the data may be influencing the results. If the operating budget for 2017 is closer to what is reported in the 2017 *MnDOT Transit Report* then the average farebox recovery is closer to 10.48%.

passenger of $25.17 (Table 17).[6] The B5 - Cambridge City route had the lowest with $18.60 and C3 - North Branch-Chisago route the highest at $65.85. According to the 2017 *Rural Transit Fact Book* the national average subsidy per passenger for rural transit demand response service providers is $12.98. All the Heartland Express routes have a higher subsidy per passenger than the national average.

Table 17. 2017 Subsidy per Passenger Statistics

Route	Subsidy per Passenger	Ranking
C4 - North Branch City Route	$21.49	4
C3 - North Branch-Chisago	$65.85	9
C2 - Chisago County Area	$29.46	8
B1 - Braham	$29.27	7
B2 - West Isanti County	$23.32	6
B3 - North Branch Cambridge	$18.98	2
B4 - NW Isanti County	$22.50	5
B5 - Cambridge City	$18.60	1
Hwy 65- East Bethel	$19.72	3
System Wide Average	**$25.17**	**---**
National Rural Average	$12.98	---

Source: MnDOT and 2017 Rural Transit Fact Book

7.1.3 Capacity

While the laws that apply to ADA complementary paratransit service for a fixed route system have different criteria than a demand response system that is not complementary to fixed route, systems should still strive to limit capacity constraints. Capacity constraints can be indicated through denied and missed trips, long telephone hold times, and on-time performance. High levels of cancellations and no-shows can indicate a strain on the system and lead to capacity issues as well.

FTA defines a denial as trips requested at least a day prior that the agency cannot provide or is outside of the 1-hour negotiation window. It also includes round-trip requests where the agency can only provide one leg of the trip; if one portion is taken then it equates to one denial and if the entire trip is not taken then two denials. Missed trips are defined as trips that do not take place at the fault of the agency but were requested, confirmed, and scheduled. This includes leaving before the beginning of the pick-up window, not waiting the required wait time, arriving after the pick-up window is over, and departing without the rider or not arriving at all. Heartland Express does not currently track denied or missed trips.

[6] Gaps and discrepancies in the data may be influencing the results. If the operating budget for 2017 is closer to what is reported in the 2017 *MnDOT Transit Report* then the average subsidy per passenger is closer to $18.87.

The county phone system is used and the average hold time is 1.5 minutes.

The GMTIP service guidelines state that the on-time performance for a demand response system should be 90% arrivals within the pick-up window given. Heartland Express does not currently track on-time performance, nor do they list what the pick-up window is on their website.

No-shows are defined as cancellations made less than one hour prior to the pickup time or not being present for the pick-up. If the no-show is for the initial pick-up, the return ride is automatically cancelled. All no-shows are required to pay the full fare. Heartland Express averages two to three no-shows per day, which represents 1% of overall ridership.

While it is anticipated that some level of cancelations will exist, high percentages of same-day cancellations can put strain on a system and lead to increased costs. Cancellations are tracked through the Shah software but are unable to be differentiated between advance and same day cancellations.

7.1.4 Service Quality and Safety

The GMTIP has guidelines and performance measures for service quality and safety measures in order to gauge the reliability of a system. These metrics include the number of complaints, road calls, and accidents. Breakdowns are a measure of the number of road calls divided by the number of revenue miles and monitors how well routine maintenance is done, vehicle performance, and dependability. MnDOT has set a threshold of one road call per 14,000 revenue miles for each transit system. Information on the number of road calls for Heartland Express was unavailable. To be in compliance Heartland Express would need to have had 29 or less road calls in 2017 based on their reported revenue miles.

Monitoring accidents measures driver safety. A standard must be developed to define what an accident is. MnDOT has set a standard of one recordable accident or less per 100,000 revenue miles. A reportable bus accident is defined by the Federal Motor Carrier Safety Administration as one in which there is any commercial motor vehicle with seating for 9 or more involved in an accident that results in a fatality or an injury or any of the vehicles involved in the crash must be towed away from the scene. Information on the number of reportable accidents for Heartland Express was unavailable. To be in compliance Heartland Express would need to have had four or less reportable accidents in 2017 based on their reported revenue miles.

Valid complaints can be used to assess the level of customer service. MnDOT has set the guideline of six complaints per 100,000 passenger trips. Information on the number of complaints for Heartland Express was unavailable. To be in compliance Heartland Express would need to have had four or less complaints in 2017 based on their reported revenue passenger trips.

7.2 Projected Performance

Moving forward, Heartland Express must develop a plan for collecting the data needed to track the performance metrics required by MnDOT and the additional measures that it selects to measure progress toward local goals and priorities. As mentioned at the beginning of this chapter, MnDOT requires providers to track on-time performance, trip denials, and the percentage of communities with a baseline span of service, and MnDOT has set the targets for these performance metrics. MnDOT also requires providers to track passengers per hour, cost per service hour, and cost per trip, but providers define the targets for these performance metrics. Additionally, MnDOT requires providers to select three performance metrics of their choice, for which providers define the targets. A complete list of these performance metrics and their targets are summarized in Table 18.

The definitions of the performance measures that Heartland Express will track are as follows:

- **On-time performance**: the percentage of trips that arrive within a specified pick-up window.
- **Trip denials**: occurs when a trip is requested by a passenger, but the transportation provider cannot provide the service. Trip denial may happen because capacity is not available at the requested time. For ADA paratransit, a capacity denial is specifically defined as occurring if a trip cannot be accommodated within the negotiated pick-up window. Even if a trip is provided, if it is scheduled outside the +60/-60-minute window, it is considered a denial. If the passenger refused to accept a trip offered within the +60/-60-minute pick-up window, it is considered a refusal, not a capacity denial.
- **Percentage of communities with a baseline span of service**: the percentage of public transportation service areas meeting the baseline number of hours during the day when transit service is available in a particular area.
- **Passengers per hour**: unlinked passenger trips per revenue hour. This does not include volunteer trips.
- **Cost per service hour**: fully loaded operating cost per revenue hour. This does not include volunteer trips.
- **Cost per trip:** fully loaded operating cost per unlinked passenger trip. This does not include volunteer trips.
- **Service area**: the percent of the service area that has access to public transit.
- **Farebox recovery:** the percentage of operating costs covered by revenue from fares and contract revenue (total fare revenue and total contract revenue divided by the total operating cost).
- **Bicycle access**: the percent of the vehicles in the fleet with a bike rack.
- **Passenger complaints**: includes valid complaints made by passengers either in writing, by email, or over the phone. All complaints are considered valid until investigated.
- **Road calls:** any mechanical event (not related to an accident) that results in the loss of service or the vehicle being removed from revenue service and replaced with another vehicle.
- **Accidents**: anything that meets the National Transit Database reporting threshold for collision and a reportable event per the most recent Safety and Security Policy Manual or per the FTA Post-Accident Drug and Alcohol testing regulations testing was required. The 2018 Safety and Security Policy Manual defines a collision as one that includes a fatality, an injury which required immediate transport was needed from the scene for medical attention, property damage exceeding $25,000, involve transit revenue roadway vehicles and the towing away of any vehicles (transit or non-transit) from the scene, or a suicide or attempted suicide that involved contact with a transit vehicle. The FTA Post-Accident Drug and Alcohol testing regulations require a test when the accident involves a fatality, any individual suffered a bodily injury and immediately received medical treatment away from the scene of the accident, any disabling damage to any vehicle involved in the accident requiring the vehicle to be towed away from the scene, or the vehicle was removed from operation.

Table 18. Heartland Express Transit Performance Metrics

Performance Measure	Current Baseline	Goal/Target	Frequency of Measurement
On-time performance	Not known - baseline must be established	90% on time within published pickup window (before published time point for deviated route, 45/45 minute window for demand response)	Monthly
Trip denials	Not known - baseline must be established	Transit systems must follow the ADA trip denial definitions and process.	Monthly
Percentage of communities with a baseline span of service	Not known - baseline must be established	75% of population covered by demand response service area, or within ¾ mile of fixed-route service	Annually
Passengers per hour	3.12 system-wide	3 or more system-wide [d]	Monthly
Cost per service hour	$86.64 system-wide	$85 or less system-wide	Monthly
Cost per trip	$27.38 system-wide	$20 or less system-wide [b]	Monthly
Bicycle access	100%	90% or more of the fleet has bike racks	Annually
Service area	100%	100% of the population covered by the service area	Annually
Passenger complaints	4 or less	6 complaints per 100,000 boardings	Annually
Road calls	29 or less	1 per 14,000 miles	Annually
Accidents	4 or less	1 per 100,000 revenue miles	Annually
Farebox recovery	15% system-wide	15% system-wide [a]	Monthly
Annual ridership	66,769	70,000 [c]	Monthly and Annually

[a] Nationally, in 2016, the average farebox recovery for fixed route bus services was 23.9%; for demand response service, it was 7.3%; and for demand response service operated by taxi, it was 14.8%. Heartland Express' current 8.1% recovery rate is in line with national averages for demand response service. A performance target of 10% farebox recovery is a reasonable goal . For more information, see https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ntd/66011/2016-ntst.pdf.

[b] Currently, Heartland Express' average cost per trip is higher than (nearly double) national averages; however, data availability may be partially responsible for the results with respect to this metric. It is recommended that Heartland Express try to reduce its cost per rider to closer to $20 to be closer to the cost metrics of peer agencies in Minnesota.

[c] A rough target of increasing ridership to 70,000 by 2020 has been set exclusively for the current Heartland Express service area. As additional data become available, and depending on

when improvements are implemented, ridership targets may be adjusted throughout the five-year period of this plan.

[d] *Heartland Express' riders per hour is currently below the Minnesota average for agencies operating in rural areas; however, it is above national averages. Heartland Express may improve its productivity with respect to riders per service hour through implementation of an improved scheduling and dispatch software program, as well as other improvements that are likely to attract more riders.*

These metrics will enable Heartland Express to assess its performance and identify benefits that are being achieved from investments in the system and operating improvements and investments.

8. Operations

Heartland Express operates general public Dial-A-Ride service in Chisago and Isanti Counties. Heartland Express employs 3 individuals to cover customer service, dispatching, reservations, and scheduling plus 24 operators, 5 administration staff/supervisors, and 1 mechanic. The dispatch/scheduling individuals are all cross trained and perform all tasks. Not having an assigned staff for each task makes it difficult to supply consistent service. For example one individual may try to negotiate other times with a passenger when the requested time is unavailable and another may not. Having specific individuals for each task would provide consistent service and allow the employee to gain more knowledge in their specialized field.

Passengers requesting ride service must call and make a reservation by 2 p.m. the business day beforehand. This does not meet the MnDOT target of 24 hours in advance as an individual calling after 2 p.m. cannot schedule a ride for the following day after 2 p.m.. The trip is usually scheduled while on the phone and the passenger is given a 30 minute window of when they will be picked up. According to MnDOT the negotiation window should be no larger than one hour. If the requested time is unavailable the dispatcher will try to negotiate another time. Occasionally the trip is unable to be scheduled at that time and the passenger will receive a call back with the scheduled trip details. If this occurs the passengers are encouraged to call back to confirm they received the trip information. Trips are not batched the night before and passengers are not sent automatic reminders of their trips the night before.

The daily process for drivers is as follows upon arrival at the garage for the start of their shift. In step five the drivers complete a daily inspection report, which is then given to the mechanic each morning who reviews them.

1. Locates their vehicle on-site
2. Retrieve their trip assignment sheets from their mailbox in the garage
3. Log in to their tablet
4. Call dispatch to confirm daily changes
5. Perform pre-trip inspection drive their route; return to the garage at end of their shift; log out of their tablet; do post-trip; wash the bus; turn in daily paperwork.

Upon completion of a shift the driver fuels the vehicle off-site, performs a post trip inspection of the vehicle, and washes the bus. Any paperwork is then returned to the dispatcher.

Each morning the mechanic reviews all pre-trip inspections for issues and checks the daily mileage for routine maintenance. If something urgent needs repair throughout the day, the driver contacts the mechanic who determines the next steps. Minor maintenance work is performed in-house, while major work such as alignments and body work are done by outside vendors. The mechanic contacts outside vendors for pricing and selects the appropriate vendor. They then

make the appropriate arrangements and follow up to ensure timely repairs and return of the vehicle.

8.1 Background

Heartland Express requests operational funding from MnDOT on an annual basis. In 2018, Heartland Express had an operating budget of approximately $1.8 million as shown in Table 17. These operating costs were projected to be offset by $180,000 in anticipated operating revenue and system revenues. As shown on Figure 14, personnel expenses account for 70 percent of the Heartland Express operating budget, which includes expenses such as salaries, wages, and fringe benefits. The second largest expense category is vehicle expenses, which is comprised of fuel, preventative and corrective maintenance, tires, and other vehicle-related costs. Administration expenses are approximately 9 percent of the budget. Operations, insurance expenses, and taxes anf fees make up the remainder of the Heartland Express operating budget.

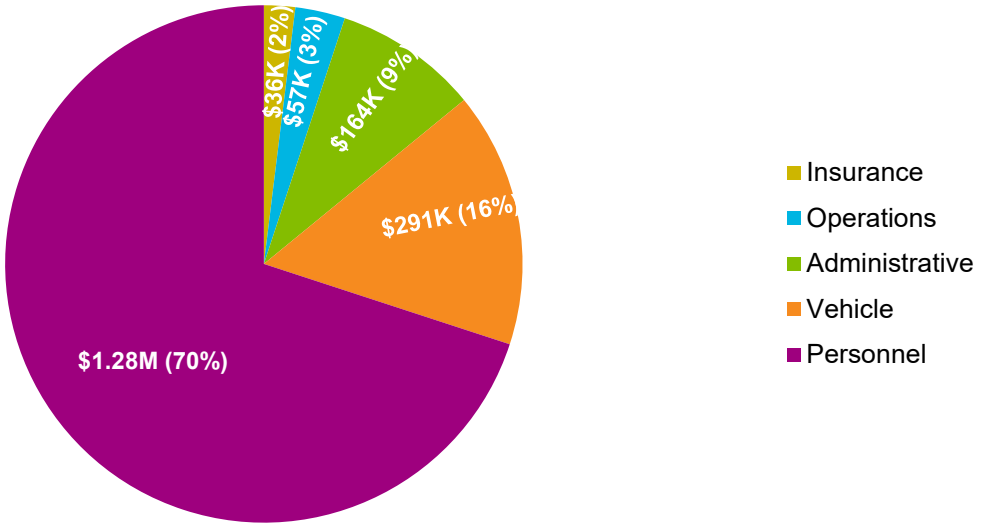
Table 19. 2018 Operating Budget Request

Line Item	Requested Amount
Personnel	$1.278,310
Administrative	$164,643
Vehicle	$291,326
Operations	$57,000
Insurance	$35,596
Taxes and Fees	$1,000
Expense Subtotal	**$1,827,875**
Operating Revenue	$180,000
Total Revenue Amount	**$180,000**
Less Refund Amount	**$39,511**
Total Operating Costs less Revenue	**$1,608,324** [a]

Source: Chisago Isanti Operating Budget 2018

[a] *The 2018 operating budget submitted by Chisago Isanti differs from the budget outlined in the 2018 MnDOT annual report*

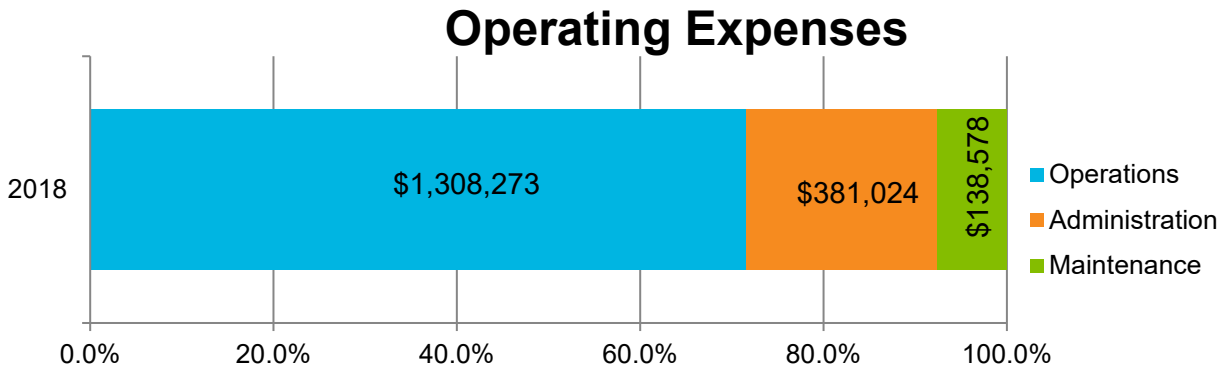
Figure 23. 2018 Budgeted Operational Expenses



Note: The figure does not include categories that were less than 1% of the budget.

The projected 2018 operating budget for Heartland Express is $1.8 million. The budget is broken down into three categories; maintenance, administration, and operations. The largest percentage (71.6 percent) of expenses are operating costs (Figure 23). Within each category there are several groups of line items. Figure 24 shows the overall budget for each group. Operating expenses include driver and support staff wages and benefits, fuel, vehicle registrations, and other operation charges as requested in the line item budget. Maintenance includes preventative and corrective maintenance for vehicles, vehicle maintenance and repair wages, tires and other parts, and property maintenance. The cost of maintenance makes up 7.6 percent of the Heartland Express budget, of which 49 percent is on preventative or corrective maintenance. Administration expenses are insurance, office supplies, utilities, professional fees, marketing/advertising, leases, administrative and office support salaries and wages, and drug and alcohol testing. Administration accounts for 20.8 percent of the budget.

Figure 24. 2018 Operating Expenses/Budget



Source: Chisago-Isanti Heartland Express Line Item Budget

8.2 Historical and Projected Annual Summary

Prior to 2007 Heartland Express operated solely a demand response system but in June 2007 converted to a route-based system with three main routes in the high ridership areas and a program to service outlying areas with demand response (Figure 21). In addition to restructuring the service model Heartland Express has begun to collaborate with other providers. In 2014 Heartland Express and the Timber Trails system hired a joint staff person to develop policies and monitor federal compliance of their programs, including drug and alcohol, procurement, Title VI, and other federal requirements.

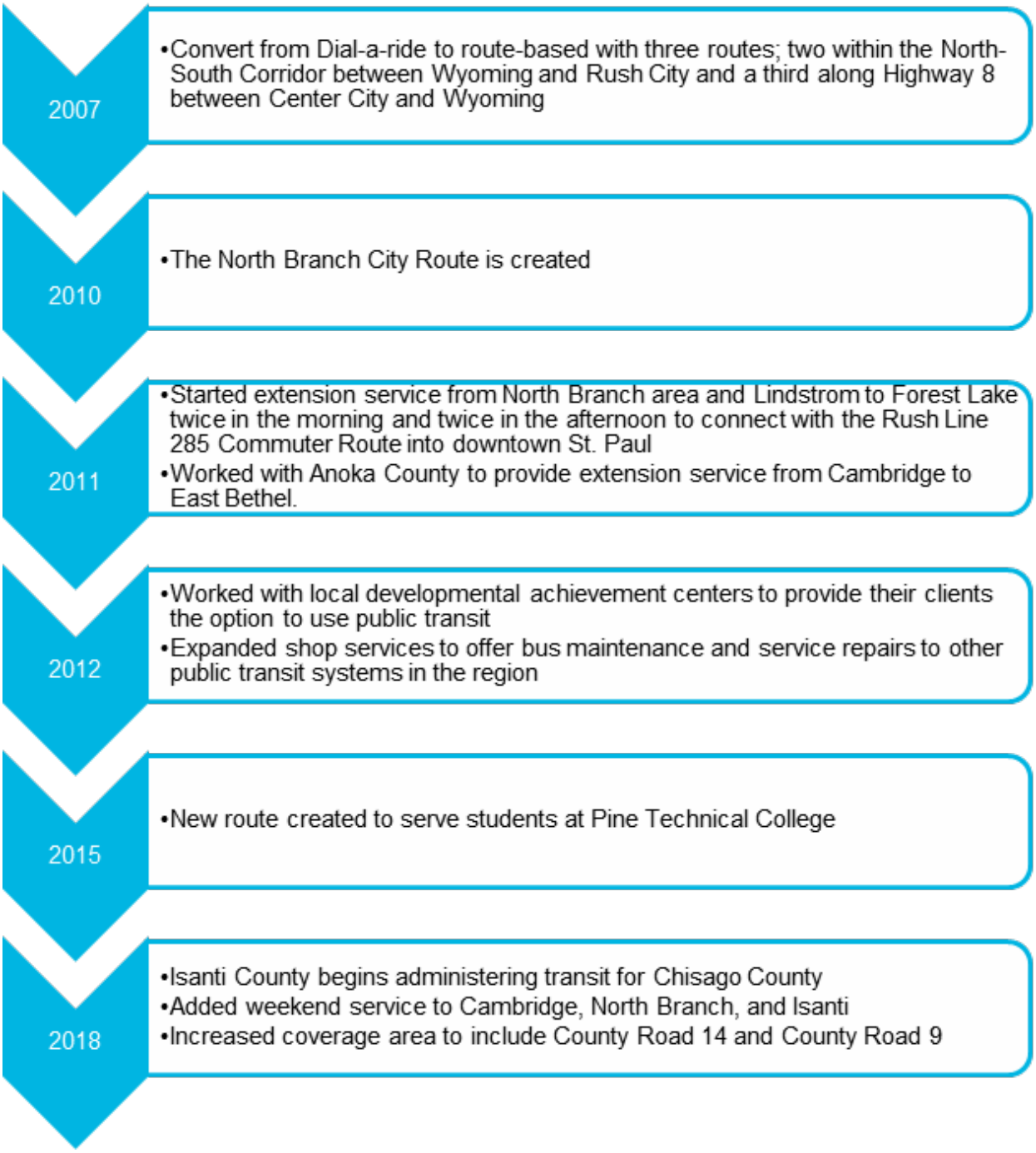
Heartland Express has been striving to expand service as is reflected in the increase in capital equipment and collaboration with other transit providers. They have extended service to create commuter connections with the Rush Line 285 Commuter Route into St. Paul, added service from Cambridge to East Bethel, expanded the maintenance service to help repair other public transit systems in the region, created a new route to serve Pine Technical College, expanded evening service, and added weekend service. The recent expansion in 2018 increased the operating budget by almost $300,000. The system now operates 644,722 miles and 31,412 hours annually and has a budget of $1,827,875. A breakdown of expenses and revenue is provided in Section 9.

Table 20. System Cost Efficiency by Year (2013-2018)

Year	Revenue Hours	Percent Change Revenue Hours	Revenue Miles	Percent Change Revenue Miles	Operating Cost	Percent Change Operating Cost
2013	21,327	-	No data available at this time	-	1,080,503	-
2014	20,325	-4.7%	No data available at this time	No data available at this time	1,065,501	-1.4%
2015	19,216	-5.5%	406,299	No data available at this time	1,098,000	3.1%
2016	22,915	19.2%	451,244	11.1%	1,339,113	22.0%
2017	16,939	-26.1%	409,928	-9.2%	1,533,297	14.5%
2018	31,412	85.4%	644,722	57.3%	1,827,875	19.2%

Source: 2014 MnDOT Transit Report, 2015 MnDOT Transit Report, 2016 MnDOT Transit Report, 2017 MnDOT Transit Report, 2018 MnDOT Transit Report, MnDOT Office of Transit and Active Transportation Chisago-Isanti Tracking Sheet

Figure 25. Heartland Express Service Changes Since 2007



Source: Chisago-Isanti Heartland Express and 2012-2017 MnDOT Transit Plans

8.3 Staffing

Heartland Express employs 18 full-time personnel and 17 part-time (Table 19). Drivers make up 69% of the workforce. Heartland Express operates 364 days a year, which equates to 625.25 revenue hours weekly. Assuming that each shift contains seven revenue hours, allowing one hour for deadhead and pre and post-trip inspection time, Heartland Express needs 17.9 full-time equivalent drivers to maintain service. This does not account for any extra board drivers or spare drivers that might be needed when scheduled drivers take time off. Currently there are 24

drivers, of which 9 are full-time and 15 are part-time. On average, part-time operators each must work 23.75 revenue hours weekly to maintain service.

Table 21. Staffing

Type of Staff	Management/ Supervising	Drivers	Dispatch/ Scheduling	Administrative/ Support	Maintenance	Total
Full Time	2	9	3	3	1	18
Part Time	0	15	2	0	0	17
Total	**2**	**24**	**5**	**3**	**1**	**35**

Source: Chisago-Isanti Heartland Express

8.4 2020-2025 Annual Needs

The Transportation Research Board's Transit Cooperative Research Program (TCRP) Report 161 outlines methods for quantifying need and forecasting demand for rural passenger transportation.[7] Transportation need, summarized in Table 20, is defined as the total number of households without a vehicle times the difference between the daily trip rate for rural households having one personal vehicle and rural households having no personal vehicle. Within Chisago and Isanti Counties there is an annual need for 980,300 one-way trips. Transportation needs can be met through a variety of options, including taxi service, volunteer drivers, community partners, or transit providers such as Chisago-Isanti Heartland Express.

Table 22. Transit Need by Jurisdiction

Transit Need/Mobility Gap by Jurisdiction	Annual Number of One-Way Trips Needed
Chisago County	601,700
Isanti County	378,600
Total	**980,300**

Source: Chisago-Isanti Heartland Express, 2017 ACS 5-Year Estimates, AECOM

In 2010, the state legislature asked MnDOT to determine the level of funding required to meet at least 80% of public transit need in Greater Minnesota by 2015, and 90% of need by 2025. The legislature set the goal, but did not provide additional funding or mandate that the need must be met. The transit providers participated in developing the strategies to increase ridership in Greater Minnesota. However, the GMTIP does not include detailed direction for the transit providers as transit service is based on local needs and resources. This five-year transit system plan for Chisago-Isanti Heartland Express complements the GMTIP by identifying the need for public transit and priorities unique to the transit provider. Recommendations and investments listed in this plan were developed with input from the community, stakeholders, and transit provider staff and are opportunities to improve current transit service and expand service as appropriate.

[7] Transportation Research Board, TCRP Report 161, *Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook*, http://www.trb.org/Publications/Blurbs/168758.aspx.

TCRP Report 161 provides several methods for estimating categories of transit demand, provided in Table 21. General purpose rural non-program demand is based entirely on demographic factors indicating decreased mobility, including population over age 60, population with a disability, and population without access to a vehicle. Demand for general public rural passenger transportation is calculated based on the unmet trip need and passenger miles of service in operation. Both estimates of demand are significantly below the Chisago-Isanti Heartland Express 2017 ridership of 66,769 (see Section 4.1). Accordingly, ridership targets and revenue estimation for future service expansions should be based on demonstrated performance of the system rather than national indicators.[8]

Table 23. Transit Demand by Service Area

Transit Demand Type	Annual Number of One-Way Trips In Demand
General Purpose Rural Non-Program Demand	55,900
General Public Rural Passenger Transportation	57,500

Source: Chisago-Isanti Heartland Express, 2017 ACS 5-Year Estimates, LEHD 2015, AECOM

Chisago-Isanti Heartland Express operations needs are described in this section. Meeting these needs will help to achieve many of the benefits that transit service is known to bring to communities. It is widely acknowledged that transit service alleviates traffic congestion, reduces air pollution, generates economic development, and provides access to employment. The benefits of transit service grow the longer the service is operational as a rider base grows and economic development impacts are realized. Being able to sustain the service for the long-term is paramount to realizing the benefits of transit in the region. Sustaining the service involves securing multi-year investments from funding partners and fostering a strong group of transit supporters in the region. Chisago-Isanti Heartland Express plans to implement a strong marketing program that cultivates a positive public image of the service. Sustaining the service is also dependent on the quality of the service, which should provide direct links between residents and their destinations, work or otherwise. The service must also be affordable, comfortable, and reliable. The operational needs described in this section will help to bring these benefits to the residents of Chisago and Isanti Counties.

8.4.1 Staffing Needs

No new staffing positions are proposed.

8.4.2 Marketing Needs

Rebranding

Heartland Express is planning to undertake a complete rebranding of its services, which must be reflected in all the agency's public-facing materials and assets. This will require support to develop a new brand and logo for the agency. Once a new agency brand has been developed, existing assets (vehicles, building signs, informational materials, website, etc.) must all be updated with the new brand. As informational materials explaining the agency's services are updated, new maps and graphics showing the locations that serve as de facto fixed deviated route stops should also be created. Rebranding is a high priority and should be implemented in 2012, and would cost around $4,000.

[8] Victoria Transport Policy Institute. *Transit Demand Management Encyclopedia*. 2011.

The rebranding also presents a unique opportunity for Heartland Express. If the agency is able to implement new capabilities, such as a new mobile application with real-time vehicle location capabilities for riders around the same time it launches the new brand, there is a significant opportunity to establish a reputation in the community as an agency that offers door-to-door, reliable service using up-to-date tools. This could help to build the agency's attractiveness among new groups of people, while continuing to serve current riders

New Website

A new website would provide clearer information to the public and could enhance ridership, it is a high priority and should be implementd in 2020. The cost to create a new website would be $8,000.

Marketing

Increased marketing through newspapers, the radio, social media and advertising would increase awareness of the service. Marketing is a medium term priority and should be ongoing beginning in 2020. Approximate annual marketing costs would be $5,200.

8.4.3 Operations Funding Needs

Conversion to Deviated Fixed Routes

Currently, some of Heartland Express' services are operated as point deviation services, with vehicles picking up passengers in a particular quadrant of the cities of Cambridge and North Brance at specific times throughout the hour (e.g., :15 in one quadrant, :30 in the next one, etc.). It is recommended that Heartland Express communicate how this service works to its customers and make the information available online for potential new system users. This will enhance predictability and user-friendliness of the service.

Connections to Metro Transit Services

Many residents of Chisago and Isanti Counties commute to the Twin Cities Metro area for work, and would benefit from having a way to get to their workplaces via transit. For this reason, a connection between the Heartland Express service area and the transit network of the Twin Cities (e.g., at the terminus of bus routes leading into downtown Minneapolis, such as in Blaine) would benefit many residents living in the Heartland Express service area and provide them with commuting travel options that do not involve driving. This connection would require a new vehicle (approximately $81,300 in 2019 dollars) and would add significantly to Heartland Express' operations budget. This is a low priority recommendation and the implementation time frame is currently unknown.

8.4.4 Human Resources and Training Needs

Update Policy Manual

Heartland Express' Policy Manual was last updated in 1995. Given the numerous changes that have happened since 1995 in terms of agency operations, human resources practices, and technology, it makes sense for the agency to update its policy manual to reflect current conditions and ensure expectations are clearly provided to all employees. Staff time will be required to undertake this manual update. This is a low priority recommendation and would be implemented in 2021.

8.4.5 Capital Needs

Capital needs identified by Chisago-Isanti Heartland Express include technology, vehicles, facilities, shelters, and signage.

Vehicles

Several of the Chisago-Isanti Heartland Express vehicles have met or are approaching their useful life and need to be replaced in order to meet MnDOT standards set in the 2018 *Transit Asset Management Plan*.

Mainteance Facility

There is a need to consolidate facilities and possibly create a shared facility to reduce the high expense associated with the North Branch facility. The cost for a new facility would be $4 million. This is a high priority recommendation and would be constructed in 2023.

New Dispatch System

A new dispatch and scheduling system is a top priority as many functions of the current dispatch and scheduling system occur manually, AVL is static (not active), and accepting reservations by voicemail (as is currently done) is problematic because either those who request a ride via voicemail never receive confirmation or a significant amount of staff time is used to call the people who left voicemails to confirm their rides. New tablets would need to be purchased for each bus in order to enable active AVL. The cost for the software would be $100,000 and for 18 tablets $11,000. This is a high priority recommendation and would be implemented in 2020.

Signage

Signage for all major/regular stops was another need identified for the agency. Having signage will increase community awareness that the service is available and about the locations to which it provides access. The cost 20 signs is estimated to be $1,600. This is a high priority recommendation and would be constructed in 2021.

Shelters

Shelters for riders, ideally heated, were also identified as a need. The shelters will make waiting for the bus more comfortable by providing protection from the wind and could increase the likelihood that people will use the service in the future. The cost per non-heated shelter is $14,300 and heated $35,000. Non-heated shelters are a medium priority recommendation and heated a low.

9. Financial

The Chisago Isanti Heartland Express 2018 operating costs and revenue sources are shown in Table 22 and Figure 23. In 2018, the agency's total operating costs were just over $2 million[9], with about $75,000 in farebox revenue (approximately 5 percent farebox recovery rate). Federal and state revenue sources provide 89 percent of rural transit agencies' annual operating expenses. The remaining 11 percent of the annual operating expenses come from local revenue sources.

Table 24. 2018 Operating Financial Profile

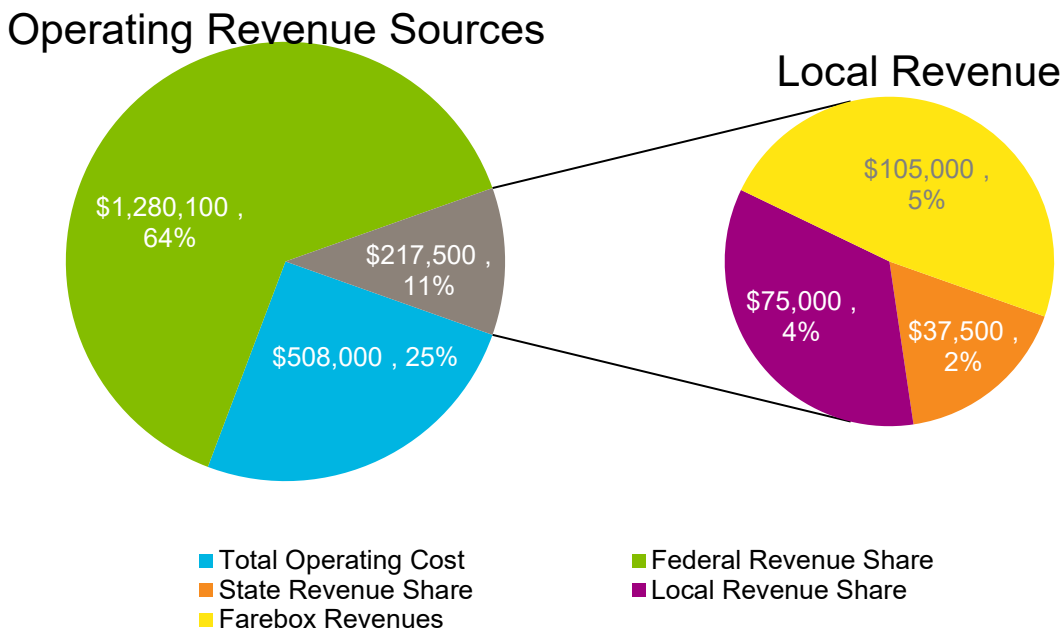
Expense/Revenue Category	Amount
Operating Costs	($2,005,600)
Federal Revenue Share	$508,000

[9] This includes the 2018 NSE Operating funds of $455,600 Overall operating costs are from the 2018 MnDOT Annual Report

Expense/Revenue Category	Amount
State Revenue Share	$1,280,100
Local Revenue Share	$0
Fare Revenue	$75,000
System Revenues	$105,000
Other Local Revenue	$37,500

Source of Data: Heartland Express, Financial Template; 2018 Transit Grant Request Awards MnDOT; 2018 MnDOT Annual transit Report

Figure 26. 2018 Operating Revenue by Source



Source of Data: Heartland Express, Financial Template; 2018 Transit Grant Request Awards MnDOT; 2018 MnDOT Annual transit Report

Heartland Express uses a zonal based fare and one-way fares are based on the zone of travel. As previously noted mechanical/electronic fareboxes are not used. All vehicles are equipped with a box to deposit cash and tokens. There has not been an increase in fares in the last eight years. Table 23 presents the different fares. City Zone is when the pick-up and drop-off are within the same city. The Chisago Corridor is defined as the pick-up and drop-off both being along destinations on Route 95 between Cambridge and North Branch. Boarder Zones are where the pick-up or drop-off is not within a City Zone or the Chisago Corridor. In-City discounts are available for seniors. One-way fares can be paid with cash or tokens; passes are not offered. Exact change is required if paying with cash; drivers do not make change. Tokens can be purchased by mail or at the following locations: County Market, North Branch; Brink's Market, Chisago City; Government Center, Center City; Cub Foods, Cambridge; Riverside Market, Isanti; and the Heartland Express Office in Cambridge. The values of the tokens are as follows:

- Pink = $1.50

- Blue = $2.00
- Orange = $3.50

Table 25. Fare Structure

Fare Type	Fares
Senior Dining Bus	Free will ($.75 each way is suggested donation)
In-City Senior (65+) Fare	$0.75
City Zones	$1.50
Chisago Corridor	$2.00
Border Zone	$3.50

Source: Chisago-Isanti Heartland Express

9.1 Background

Transit providers serving Greater Minnesota receive funding from several sources at the federal, state, and local levels. Specifically, transit funding is comprised of:

- Federal Transit Funding, United States Department of Transportation (USDOT) (FTA)
- State General Fund appropriations
- State Motor Vehicle Sales Tax (MVST)
- State Motor Vehicle Lease Sales Tax (MVLST)
- Local Share: farebox recovery, local tax levies, local contracts for service

Transit providers in Greater Minnesota generally receive federal funding through the Section 5311 Non-urbanized Area Formula Program, which provides capital and operating funding for small urban and rural areas, including intercity bus transportation. MnDOT is responsible for distributing federal funds to transit providers in Greater Minnesota.

MnDOT also distributes state funding from the General Fund and Transit Assistance Fund to Greater Minnesota transit providers. Transit services have received funding from the state's General Fund every year for decades. However, the majority of state funding for Greater Minnesota transit providers comes from the Transit Assistance Fund, which receives revenue through the MVST and MVLST.

Minnesota State law requires local participation in funding public transit services in Greater Minnesota. A statutory fixed-share funding formula sets a local share of operating costs by system classification as noted in Table 24. Local revenue sources that can provide the local match include farebox recovery, local property taxes, local sales taxes, contracted route revenues, advertising revenue, or program revenue.

State and federal funding for public transit should cover the remaining 80% or 85% of operating costs. In reality, the percentage of total funds spent on transit that are provided locally are higher than the mandated local share. Transit systems in Greater Minnesota often provide additional service that is not recognized in the funding formula, thus the total percentage of local funding for transit service in Greater Minnesota is more than 20%.

Table 26. Local Share Requirements

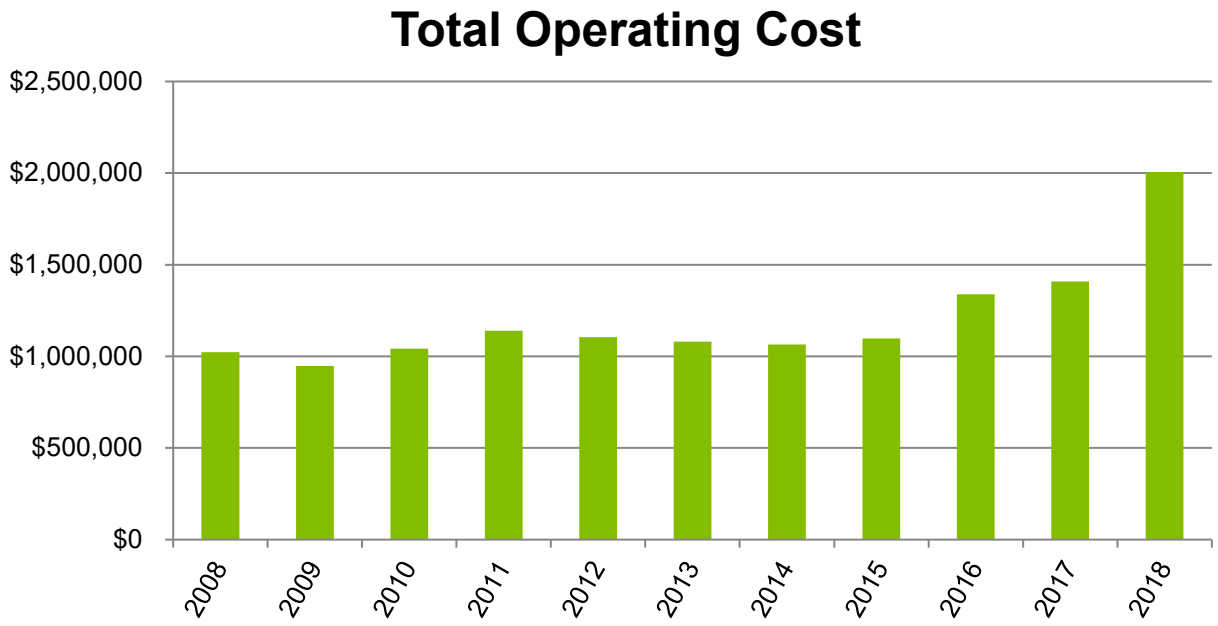
Program (Recipient Classification)	Percentage of Required Local Match
Elderly and Disabled	15%
Rural (population <2,500)	15%
Small Urban (population >2,500 and <50,000)	20%
Urbanized (population > 50,000)	20%

Source of Data: MnDOT Greater Transit Funding in Minnesota

9.2 History

The annual operating budget increased by 37 percent between 2008 and 2017, with the largest increase (22 percent) happening between 2015 and 2016. The current budget is just over $2 million and includes the 2018 NSE operating grant. Future projected budgets were unavailable.

Figure 27. Historical Operating Costs (2008-2019)



Source: 2011-2018 MnDOT Transit Plans

Funding sources for Heartland Express include local, state, and federal programs for operating assistance funds as well as farebox revenue and partnerships. Eighty-five percent of the operating budget is from state and federal sources. State operating funds come from the state general fund and the MVST. Federal funding is from Section 5311 funds, which are administered by MnDOT. Local revenue includes any advertising revenue, local contributions, contract revenue, and farebox revenue and makes up 15% of the overall operating budget (Figure 25). Per Minnesota state law, at a minimum 15% of the funding for rural programs must come from local revenue sources with the remaining 85% of operating costs coming from federal and state sources. Table 25 shows historical revenue. The percentage by funding source remained consistent.

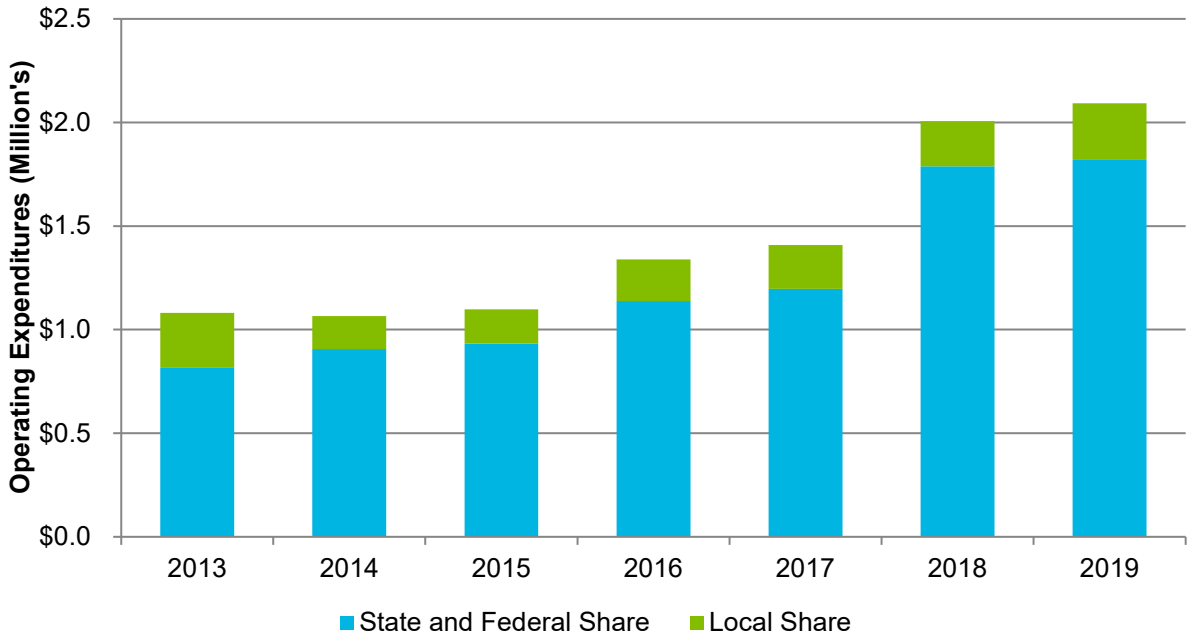
Table 27. Chisago Isanti Heartland Express Operating Revenue by Source

Funding Source	2013	2014	2015	2016	2017	2018	2019
State & Federal	$818,720	$905,676	$933,300	$1,138,246	$1,196,800	$1,788,100	$1,820,000
Local [a]	$261,783	$159,825	$164,700	$200,867	$211,200	$217,500	$273,000
Total	**$1,080,503**	**$1,065,501**	**$1,098,000**	**$1,339,113**	**$1,408,000**	**$2,005,600**	**$2,093,000**

Source: 2013-2017 MnDOT Transit Plans, 2019 Transit Grant Request Awards MnDOT

[a]Includes local contribution, farebox revenue, contract revenue, and marketing/advertisement revenue

Figure 28. Chisago Isanti Heartland Express Operating Expenditure Funding Sources (2013-2019)



Capital expenditures are detailed in Table 27, and the breakdown of funding sources is illustrated on Table 27. The major capital purchases for Chisago Isanti Heartland Express include buses and technology improvements. The local share for each purchase, except the 2018 bus procurement, was 20 percent with state and federal funds used for the remaining 80 percent. The largest capital expenditure was in 2018 to procure six new vehicles to operate under the service expansion. This was an expansion to the fleet, the remaing bus procruements were replacements. In 2015, Chisago Isanti Heartland Express did not make any capital purchases.

The average cost for the 25 foot vehicle on a Ford chassis is $69,411 and for a 26 foot GM 4500 is $141,290. Funding sources vary by vehicle (Table 27). Vehicles funded through The American Recovery and Reinvestment Act (ARRA) are 100% federally funded, those through the capital funding program are 80% federal and 20% locally funded, and state fund vehicles are either fully funded by the state or have a 20% local match.

Table 28. Chisago IsantHeartland Express Capital Expenditures (2013-2017)

Year	Asset Category	Total Expenditures	State and Federal Share	Local Share
2013	Buses	$145,681	$116,545	$29,136
2013	ITS	$74,651	$59,721	$14,930
2014	Buses	$139,171	$111,289	$27,882
2015	None	$0	$0	$0
2016	Buses	$282,580	$226,064	$56,516
2017	Buses	$153,250	$122,600	$30,650
2018	Buses	$559,900	$559,900	$0

Sources: 2014 MnDOT Transit Report, 2015 MnDOT Transit Report, 2016 MnDOT Transit Report, 2017 MnDOT Transit Report, 2018 MnDOT Transit Report

Table 29. Vehicle Capital Funding Sources

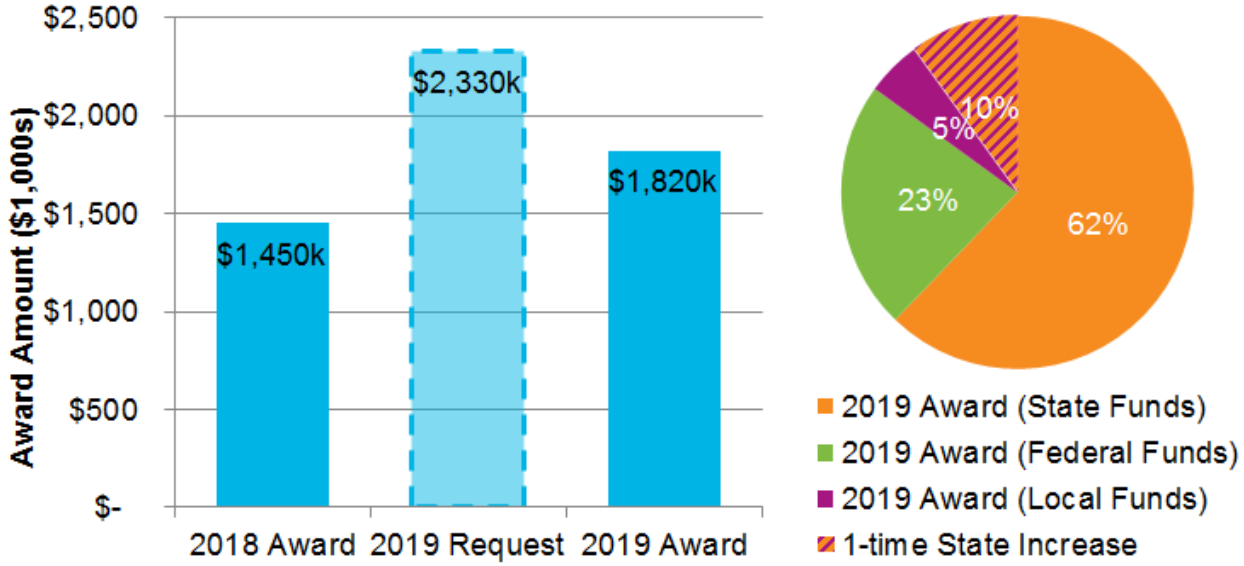
Funding Source	Count	Average Cost
ARRA	1	$61,510
Capital Funding 25’	8	$66,357
Capital Funding 26’	2	$141,290
State Funded	7	$74,033

Source: MnDOT Transit Asset Management Plan, 2018

9.3 Budget Revenue

Chisago Isanti Heartland Express has historically relied upon grants from federal, state, and local sources to operate.Figure 29 illustrates requested and granted funds from 2018 to 2019. The 2019 grant award is significantly less (by just over half a million) than the amount requested by Chisago Isanti Heartland Express. Additionally, MnDOT has approved a one-time across-the-board ten percent reduction in the local share required for Greater Minnesota Transit providers’ 2019 Public Transit Operating Grant. This means that the local share for Chisago Isanti Heartland Express has been reduced from 15 percent to 5 percent for 2019 only.

Figure 29. Grant Requests and Awards (2018-2019)

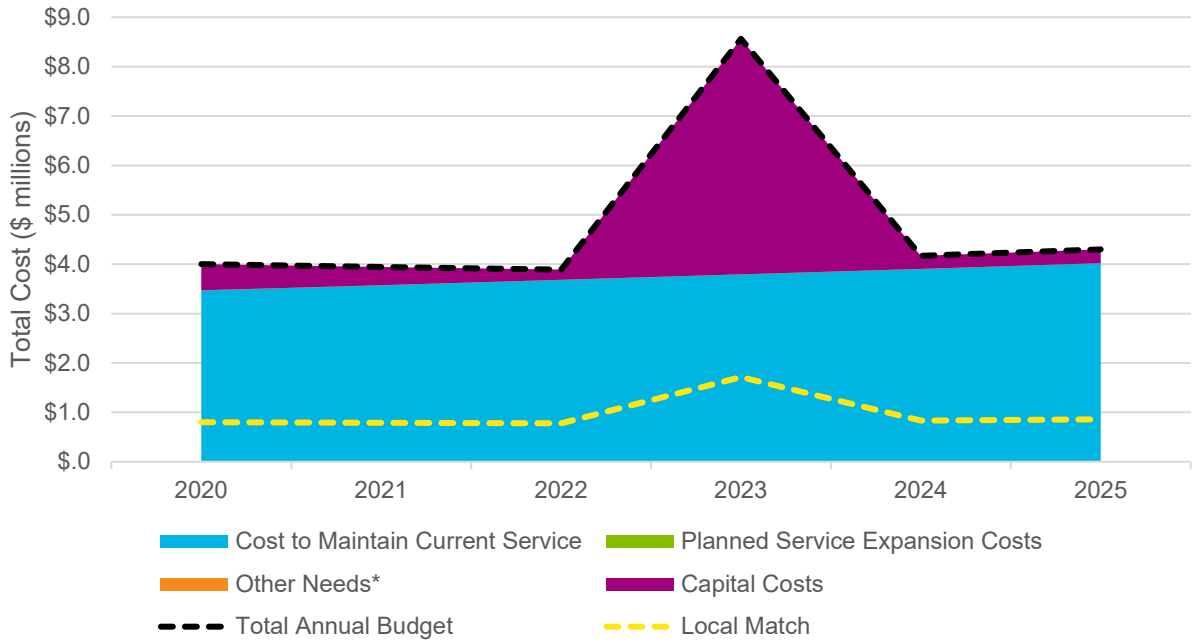


Source: MnDOT 2019 Transit Grant Requests and Awards Compared to 2018 Grant Awards

9.4 2019-2024 Needs vs. Projected Revenue

Capital and operating plans for 2020 through 2025 are included in Appendix A. The combined capital and operating expenses are summarized in Figure 30. As shown, costs to maintain current service, and other needs are expected to increase steadily each year. In 2020 a new dispatch system with on-board tablets will be procured and the installation of bus shelters will begin. A new website will be developed in 2021 followed by the rebranding of the system in 2021, the installation of bus stops signs, update to the policy manual, and a formal conversion to point deviated routes. The new maintenance facility in 2023 will increase capital costs relative to other years. Heated bus shelter installation will also begin in 2023. There are no plans for vehicle or service hour expansions. Local match would increase from approximately $800,000 in 2020 to approximately $860,000 in 2025.

Figure 30. 2020-2025 Plan, Local Revenue Requirements



Source: Capital and Operating Templates for 2020-2025 (Appendix A)

**Other needs are non-capital and non-service costs,*

10. Agency Strategic Direction

The five-year planning process for all the rural transit service providers (FTA Section 5311) in Greater Minnesota, the first of its kind, has identified and quantified the transit services being operated around the state, which vary greatly in size and scope, and identified potential areas for improvement, expansion, and regional coordination. The provision of transit service is subject to many federal and state guidelines, which may impact how improvements, expansion, and coordination recommendation are implemented. This section describes both overarching areas of potential improvement and opportunities identified across the state as well as those specific to Chisago-Isanti Heartland Express in addition to local, state, and federal requirements.

10.1 Requirements

The provision of transit service is subject to many local, state, and federal guidelines.

10.1.1 Federal Transit Administration (FTA)

FTA Section 5311 provides formula-based grants to support rural areas for transit capital, planning, and operating assistance.[10] Guidance on the grant, requirements, compliance, and application process is available online[11] and through MnDOT Office of Transit and Active Transportation (OTAT).[12]

[10] https://www.transit.dot.gov/rural-formula-grants-5311
[11] https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/formula-grants-rural-areas-program-guidance-and-application
[12] https://www.dot.state.mn.us/transit/

FTA is a major funder of rural transit service in Greater Minnesota. MnDOT operates as the primary recipient of FTA Section 5311 funds. As such, all Greater Minnesota transit service providers (sub recipients) receiving FTA Section 5311 funds, through MnDOT as the recipient, must comply with FTA regulations. FTA regulations pertain, but are not limited to, major topic areas including: training, safety, maintenance, service, and procurement. Any contracted service by transit agencies, including taxi services, must also comply with FTA requirements.

Chisago Isanti Heartland Express is not aware of any issues related to FTA Compliance.

FTA also requires compliance with the Americans with Disabilities Act (ADA), Olmstead Plan, and Title VI, described in more detail below.

10.1.2 Olmstead Plan

In 1999, the Supreme Court affirmed that mental illness is a type of disability, that individuals with disabilities, including those with mental illness, have a right to live in their communities as opposed to forcing institutionalization, and are covered by the Americans with Disabilities Act of 1990 (ADA) in *Olmstead vs. L.C and E.W.*[13] The State of Minnesota is one of the more progressive states in instituting a specific Olmstead Plan. Minnesota's Olmstead Plan was updated most recently in March 2018.[14]

For transit providers in Greater Minnesota, the Olmstead Plan requires that people with disabilities, including those with mental illness, are covered by the same requirements of the Americans with Disabilities Act (discussed in Section 10.1.4). It means that the level of transit service available to the general public (the span of service, frequency of service, and service area coverage) is also available to people with disabilities, including mental illness. It also means that social and human service agencies and public transit agencies should coordinate as much as possible to provide service to individuals with disabilities.

Chisago-Isanti Heartland Express services are available to all persons with disabilities, including mental illness, at the agency's standard fares (i.e., no additional fee). Continued and enhanced coordination with local human service agencies is ongoing as they participate in the development of the Region 7E East Central Minnesota Human Services Transportation Coordination Plan.

Chisago-Isanti Heartland Express currently coordinates with Timber Trails Transit to transfer passengers at the bus shelter in Braham between the two systems. They created a feeder route service from Cambridge to East Bethel to connect with Metro Transit route 865. In 2014 Heartland Express and the Timber Trails system hired a joint staff person to develop policies and monitor federal compliance of their programs, including drug and alcohol, procurement, Title VI and other federal requirements. The same year they expanded shop maintenance services to offer bus maintenance and service repairs to other public transit systems in the region.

10.1.3 Title VI

FTA requires all recipients and sub recipients to comply with U.S. Department of Transportation Title VI regulations, based on the Title VI of the Civil Rights Act of 1964. Title VI requirements for transit services are generally related to supplying language access to persons with limited English proficiency (LEP).[15] In Greater Minnesota, MnDOT is the primary recipient of FTA funds, so all the Section 5311 transit service providers are sub recipients. Thus, MnDOT has the primary responsibility for Title VI compliance. MnDOT may request information related to Title VI

[13] https://supreme.justia.com/cases/federal/us/527/581/
[14] https://www.dhs.state.mn.us/olmstead/
[15] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf

compliance, including language assistance plans or activities, public participation plans or activities including language access, etc., from the transit service providers as needed.

In Greater Minnesota, with primarily deviated fixed route and demand response service, Title VI responsibilities pertain to identifying communities with LEP and providing materials and outreach in appropriate languages.

Chisago-Isanti Heartland Express staff have not noted a demand for materials in other languages. Based on 2017 ACS data, less than 1% of households in Chisago or Isanti County report LEP.

10.1.4 Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) of 1990 is designed to prohibit discrimination based on disability. In terms of FTA and the provision of transit service, the ADA is structured to ensure equal opportunity and access for persons with disabilities.[16] ADA requirements apply to facilities, vehicles, equipment, bus stops, level of service, fares, and provision of service.

In Greater Minnesota, with most service provided via deviated fixed route or demand response, most service-related requirements (i.e. complementary paratransit service associated with fixed route service) are inherently met by mode. Any contracted service by transit agencies, including taxi services, must also comply with FTA and ADA requirements.

MnDOT defines the types of vehicles that are available for service provision in Greater Minnesota. All the vehicles on the list are ADA compliant. Any new facilities or bus stops must be constructed to be ADA compliant. All transit service providers must complete required training.

Service provision-related equivalencies include the following for demand response service:

- The response time, fares, geographic area of service, hours and days of service, trip purpose restrictions, and availability of information and reservations capability must be the same for all riders, including those with disabilities.
- With regard to capacity denials (denials within the existing service parameters in the above bullet), denials are allowed for demand response service, as long as the frequency of denials is the same as the frequency for riders without disabilities.
- Any priority given to persons with disabilities or higher levels of service is a local decision.
- Requirements for demand response service are different than those required for ADA complementary paratransit associated with fixed route service.

Service provision-related practices include the following for deviated fixed route service:

- Advertise route deviation policies, including distance and availability.
- Establish a reasonable service area in which deviations are permitted (e.g. ¾ mile).
- Establish reasonable limits on numbers of deviations per trip to ensure that the fixed route portion of the service is able to operate on-time.
- Apply reasonable surcharges for deviations (e.g. deviation surcharges no more than twice the base fare).

All Chisago-Isanti Heartland Express vehicles are ADA compliant. Capital cost estimates associated with bus stop improvement recommendations are inclusive of ADA standards.

[16] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/Final_FTA_ADA_Circular_C_4710.1.pdf

Chisago-Isanti Heartland Express does not provide fixed route service. The upgrade in automated scheduling and dispatch software will provide Chisago-Isanti Heartland Express with the data needed to demonstrate that capacity denials are not disproportionally impacting individuals with disabilities.

10.1.5 Agency

MnDOT is responsible for making sure each provider (sub recipient) complies with FTA Section 5311 requirements. MnDOT also has additional data tracking requirements for the transit service providers, including:

- Service data for National Transit Database (NTD)
  - Monthly and annually
  - By mode
- Grant management
- Fleet inventory
- Denials
  - Capacity
  - Unmet Need
- On-Time Performance (pickup window)
- Percent of communities with baseline span of service
- Performance metrics (required, but not tracked)
  - Passengers per hour
  - Cost per service hour
  - Cost per trip
  - Bicycle access
  - Service area
  - Passenger complaints per 100,000 boardings
  - Road calls per 14,000 miles
  - Accidents per 100,000 miles
  - Farebox recovery
  - Annual ridership

MnDOT reports annual NTD statistics and also created and maintains the Transit Asset Management Plan for all FTA Section 5311 transit service providers.

10.2 Opportunities

In discussing opportunities with transit service providers throughout Greater Minnesota, several overarching opportunities were identified. They are discussed in Section 10.2.1. Opportunities specific to Chisago-Isanti Heartland Express are discussed in Section 10.2.2.

10.2.1 Northeast Region

Across Greater Minnesota, several themes emerged related to the following opportunities:

- Regional coordination
- Marketing
- Mobility management
- Data standardization and tracking
- Transit manager handbook
- Succession planning
- Technology
- Online trip planner/Apps/general transit feed specification (GTFS)
- Bulk procurement

Regional connections for employment, medical appointments, socialization, and other trip purposes have been identified by many transit service providers as both a need and a challenge to operate. Many of the longer distance trips are not being completed by public transit but rather by volunteer drivers. Some providers do provide regional services into metropolitan areas or into neighboring counties. As the volunteer driver pools decrease over time, identifying a public transit solution to regional connectivity will be vital. One effort to fill regional transportation gaps is already underway. The Minnesota Departments of Transportation and Human Services, in collaboration with other state agencies, are working with the Metropolitan Council, and other local governments and organizations to create regional transportation coordinating councils as appropriate throughout Minnesota. Coordination between transportation providers and service agencies has been a goal and strategy to fill transportation gaps, provide more service with the same or fewer resources, streamline access to transportation, and provide customers more options of where and when to travel.

Getting the word out about the services that are available and how to use the transit service are themes that emerged from every transit service provider in Greater Minnesota. Developing marketing plans and getting out into the community is very time-consuming. Many providers could use additional staff for marketing activities, either a full-time staff position, or a shared regional staff position. Another solution may be to hire individuals in a mobility management role or train schedulers to all serve a mobility management role. Mobility managers are well versed in all types of transportation services in a community and work with customers to identify the best program for that customer. Mobility managers also work with community organizations, human service agencies, major employers, and others to get the word out about transit services and how to use them, including providing travel training for potential riders in some cases.

Data collection, organization, and reporting varies greatly from transit service provider to transit service provider. This inconsistency comes from different modes, different operating models, different types and level of technology, among other reasons. MnDOT has the opportunity through this five-year transit system planning process to identify and incorporate data standards, definitions, and tracking procedures. These could be documented in a Transit Manager’s Handbook, something that would be helpful to guide transit managers in planning, operating, and reporting transit services. Staff turnover and the need for succession were mentioned by several transit agencies, both from the perspective of new staff and older staff nearing retirement age. A Transit Manager’s Handbook would be helpful in both cases.

Technology also varies greatly from provider to provider; sometimes because of the size of the organization, sometimes because of technical support, sometimes because of staff size. New technology is becoming available and more affordable by the day. Transit service providers and MnDOT have many opportunities to increase the efficiency of service provision and improve customer service through investment in technology. Two primary opportunities came up with regard to technology with many providers:

- Increase awareness of the service and ability to understand how the service works by developing and publishing general transit feed specifications for flexible service (GTFS-Flex) for each transit service provider. This would enable anyone using Google Maps or Apple Maps or other mainstream online trip planners to see a transit service provider's service area or routes, hours of operation, and trip reservation procedure when they enter in an origin and a destination. It would automatically show whether transit service was available and how to use it.
- Save money, connect adjacent systems, and build regional connectivity and collaboration through bulk procurement of technology, especially scheduling/dispatching software.

10.2.2 Chisago-Isanti Heartland Express

Opportunities identified specific to Chisago-Isanti Heartland Express included:

- Regional connections to a Metro Light Rail or Bus Rapid Transit Station
- Expanded marketing including a new website, new material, and more aggressive approach
- Joint facility between the two counties, which could provide vehicle maintenance services for other county fleets as well
- Bulk procurement
- Improved fare collection through better marketing passes and tokens to passengers, reducing the amount of cash transactions on-board
- Improved dispatch software to properly track denials and other performance data
- Transition to a deviated fixed route

10.3 Risks/Challenges

As with opportunities, risks and challenges were also identified. Risks and challenges are summarized in this section in terms of themes throughout Greater Minnesota (10.3.1) and specific to Chisago-Isanti Heartland Express (Section 10.3.2).

10.3.1 Northeast Region

Potential risk and challenge themes identified across Greater Minnesota included:

- Funding
  - Longevity and dependability
  - Local match
  - Contracts
  - Performance-based
- Staffing
  - Drivers
  - Professional staff
- Fleet
  - Vehicles, number of wheelchair positions
  - Expansion

  - Replacement
  - Fleet classification/spare ratio
- Data collection/data tracking
- Performance tracking

Funding is a frequently cited concern in Greater Minnesota. Concerns are related to the longevity and dependability of state and federal funding; use of tax revenue for local match vs. fare and contract revenue; contracts, including multi-year contracts; and any future performance-based requirements for funding. Historically, some transit service providers have been conservative about instituting new services because of perceived performance pitfalls and longevity of funding. Moving forward focusing on improvement and expansion of service and the opportunities identified in the previous section, funding dependability, diversification, and documentation will be important.

Several providers mentioned difficulty in finding, hiring, and retaining drivers – both professional drivers and volunteer drivers. Training drivers and supporting drivers while working towards a commercial driver's license is also a challenge and can be costly. Additionally, finding qualified staff to fill roles associated with operations, management, dispatching/scheduling, marketing, technology, etc. can be challenging in rural areas. Generally people with the higher technical skills are living in the metropolitan areas and are less interested in living and working in the more rural areas. The labor pool is much smaller in a rural area.

Other potential challenges focus on fleet. Some transit service providers operate in rural areas with high proportions of disabled riders. As such, some require vehicles with more than two wheelchair positions. Diversifying vehicles available for use in Greater Minnesota may be required to implement some of the solutions identified in the five-year transit system plans and to realize the opportunities described in the previous section. Other areas for concern regarding fleet include being able to expand the fleet based on unmet needs; replacing vehicles that have higher-than average maintenance costs even if they have not exceeded their useful life; policies for classifying fleet, and using retired fleet in service or as spares; and maintaining an appropriate spare ratio. Several transit service providers reported service reductions due to an ineffective spare ratio or the inability to expand the fleet.

Finally, potential challenges exist with regard to data collection, data tracking, and performance tracking. As mentioned in the previous section, an opportunity exists to standardize data collection, reporting, and tracking. This is an ambitious goal due to the variety of scheduling software that is being used, the lack of any software in some cases, and the variety of operating models that exist. In order to realize some of the opportunities, some level of standardization would be required.

10.3.2 Chisago-Isanti Heartland Express

Potential risks and challenges identified for Chisago-Isanti Heartland Express included:

- Data tracking
- Gaps in radio coverage
- Existing phone voicemail reservation system
- Limited marketing

11. Increasing Transit Use for Agency

As the goal set forth by state legislature is to understand what level of funding it would take to meet 90 percent of the transportation needs in Greater Minnesota by 2025, the primary

assumption in the development of the five-year transit system plans is that transit agencies need to expand and grow ridership in order to meet the 90 percent of transportation needs. Strategies to improve transit services and increase ridership were described in detail in previous chapters. Another crucial element to increasing ridership and growing transit mode share in an area is a comprehensive marketing and education strategy. Ridership will not increase if the community does not know that the service exists or how to use it.

Section 11.1 describes the elements of a comprehensive marketing and education program that could help Chisago-Isanti Heartland Express grow ridership and community awareness. Section 11.2 describes an action plan for growing ridership and community awareness.

11.1 Marketing

Complementing the recommendations previously described in this five-year transit system plan, continuous marketing and education on the transit services available and how they work are crucial to the success of the transit program and to entwining the service into the fabric of the community. Some goals for marketing and education could include:

- Increase awareness, understanding, and utilization of the transit service by residents, employees, and visitors
- Promote transit service as both a fiscally responsible and green choice
- Position Chisago-Isanti Heartland Express as the bus service in the region

Possible strategies to achieve these goals include:

- Update website
  - Include concise, clear instructions on how to use the service and who is eligible (everyone!)
  - Include easy-to-understand schedules and maps of services
  - Link to website from other town/city/county/partner websites
  - Provide downloadable brochures
  - Embed an online trip planner or link to an online trip planner
  - Add a ‘Where’s my Bus’ option to the website
- Develop a social media presence
  - Post/update regularly
  - Advertise changes
  - Profile riders
  - Introduce new programs
  - Announce weather delays or cancellations
  - Promote the benefits of transit service
- Consider smartphone apps
  - Develop GTFS so that provider services show up as an option in common mapping apps (e.g., Google Maps, Apple Maps) and/or online trip planners. GTFS-Flex is the appropriate specification for deviated fixed route or demand response service.
  - Add a ‘Where’s my Bus’ option to the website or a separate app so that customers can track their rides

  - Allow customers to request trips/negotiate trips with schedulers
- Embrace the mobility management role in the community
  - Train schedulers and dispatchers to function as mobility managers
  - Educate on all services/programs available in the service area and beyond
  - Train to negotiate and make connections until the customer has a viable option to meet their request/need
- Brand, rebrand, or continue rebranding the Chisago-Isanti Heartland Express service

11.2 Action Plan

A marketing and education strategy for Chisago-Isanti Heartland Express should be based on input from existing riders and the larger community. Based on discussions with Chisago-Isanti Heartland Express, stakeholder outreach, and survey results, the following ideas were identified:

- Website redesign with consistent route and schedule information.
- Rebranding the service using new material and a more aggressive marketing approach – newspaper, radio, and website.
- Education for the general public about the service.
- Dedicated staff members for customer service and dispatch so they become experts in their job and relay a consistent message.
- Improved phone and voicemail system.

Other possible strategies include:

- Put together a marketing campaign that ‘speaks’ to potential customers – identify local advocates who have positive stories to share about their use of Chisago-Isanti Heartland Express bus service.

Some examples may include:

- Provide an example of a rider who used to spend X on commuting costs, but riding the bus to commute only costs Y, a savings of % percent annually
- Work with local senior groups to identify benefits to seniors in longevity and quality of life when mobility options are available that allow them to get out of their homes and attend events, run errands, and make it to medical appointments
- Include a ‘Benefits of Transit Service’ section on the website and brochures
- Use national research statistics on the benefits of transit service
- Identify different themes to capture the attention of different audiences and strategically utilize the themes in materials publicized with community partners and on Chisago-Isanti Heartland Express materials
- For mainstream materials, periodically focus on different themes to capture different audiences and re-engage others
- Benefit themes may include: economic development, aging in place, reduction in air pollution, technology, community building, access to education and employment opportunities, quality of life for seniors and disabled persons, reduction in dependence on personal vehicles, mobility options for people living in rural areas, attraction of international tourists who will only visit destinations that do not require the use of personal vehicles, etc.

Based on the marketing and education priorities identified for provider, the following are steps towards implementing a new or improved marketing strategy:

- Rebrand the service and create a new brand and logo.
- Upgrade the website to a new, user-friendly one that includes information about the service, routes, and maps
- Install bus stop signage at major pick-up and drop-off points to enhance community awareness of the service.

Appendix A Capital and Operating Plans for 2020 through 2025

Five Year Capital Plan																
Heartland Express																
Line Number	**Line Item Name**	**2019 Budget**	**Inflation Factor (3%/yr)**	**2020**	**2020 (local match)**	**2021**	**2021 (local match)**	**2022**	**2022 (local match)**	**2023**	**2023 (local match)**	**2024**	**2024 (local match)**	**2025**	**2025 (local match)**
1711	Vehicle Cost	$ 510,000		$ 264,000	$ 52,800	$ 182,000	$ 36,400	$ -	$ -	$ 194,000	$ 38,800	$ 400,000	$ 80,000	$ 103,000	$ 20,600
1712	Farebox(es)	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1713	AVL/MDT	$ -		$ 114,330	$ 22,866	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1714	Camera(s)	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1715	Logos	$ -		$ 8,240	$ 1,648	$ 4,456	$ 891.16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1716	Radio (Communication Equipment)	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1717	Other Bus Related Equipment	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1720	Lift, Ramp Expenses, etc.	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1730	Radio Equipment Expenses	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1740	Fare Box Expenses	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
1750	Other Capital Expenses	$ -		$ 5,356	$ 1,071	$ 16,762	$ 3,352	$ 5,682	$ 1,136	$ 5,853	$ 1,171	$ 6,028	$ 1,206	$ 6,209	$ 1,242
1760	Facility Purchase and/or Construction Cost	$ -		$ 113,905	$ 22,781	$ 14,322	$ 2,864	$ 14,752	$ 2,950	$ 4,556,622	$ 911,324	$ 56,225	$ 11,245	$ 57,912	$ 11,582
	Total Capital Budget	**$ 510,000**		**$ 505,831**	**$ 101,166**	**$ 217,540**	**$ 43,508**	**$ 20,434**	**$ 4,087**	**$ 4,756,475**	**$ 951,295**	**$ 462,253**	**$ 92,451**	**$ 167,121**	**$ 33,424**
Capital	Total 1711 - 1740 (only)	$ 510,000		$ 386,570	$ 77,314	$ 186,456	$ 37,291	$ -	$ -	$ 194,000	$ 38,800	$ 400,000	$ 80,000	$ 103,000	$ 20,600

Five Year Transit Sytem Plan -- Operating Budget																					
Provider	**Heartland Express**																				
Line Item	**Operating Expenses**	**2018 Budget**	**2018 (local match)**	**2019 Projected**	**Cost Factor**	**Inflation Factor (3% / year)**	**2020**	**2020 (local match)**	**2021**	**2021 (local match)**	**2022**	**2022 (local match)**	**2023**	**2023 (local match)**	**2024**	**2024 (local match)**	**2025**	**2025 (local match)**			
1010	Admin, Management & Supervisory Salaries	$128,285.00	$ 25,657.00	$ 132,133.55	Fixed	3%	$ 136,097.56	$ 27,219.51	$ 140,180.48	$ 28,036.10	$ 144,385.90	$ 28,877.18	$ 148,717.47	$ 29,743.49	$ 153,179.00	$ 30,635.80	$ 157,774.37	$ 31,554.87			
1020	Operator's Wages	$576,281.00	$ 115,256.20	$ 593,569.43	$ / Hour	3%	$ 611,376.51	$ 122,275.30	$ 629,717.81	$ 125,943.56	$ 648,609.34	$ 129,721.87	$ 668,067.62	$ 133,613.52	$ 688,109.65	$ 137,621.93	$ 708,752.94	$ 141,750.59			
1030	Vehicle Maintenance and Repair Wages	$51,418.00	$ 10,283.60	$ 52,960.54	$ / Mile	3%	$ 54,549.36	$ 10,909.87	$ 56,185.84	$ 11,237.17	$ 57,871.41	$ 11,574.28	$ 59,607.55	$ 11,921.51	$ 61,395.78	$ 12,279.16	$ 63,237.65	$ 12,647.53			
1040	General Office Support Wages		$ -	$ -	Fixed	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1050	Operations Support Wages	$147,601.00	$ 29,520.20	$ 152,029.03	Fixed	3%	$ 156,589.90	$ 31,317.98	$ 161,287.60	$ 32,257.52	$ 166,126.23	$ 33,225.25	$ 171,110.01	$ 34,222.00	$ 176,243.31	$ 35,248.66	$ 181,530.61	$ 36,306.12			
1060	Fringe Benefits	$374,725.00	$ 74,945.00	$ 385,966.75	variable	3%	$ 397,545.75	$ 79,509.15	$ 409,472.13	$ 81,894.43	$ 421,756.29	$ 84,351.26	$ 434,408.98	$ 86,881.80	$ 447,441.25	$ 89,488.25	$ 460,864.48	$ 92,172.90			
Personnel Services	Total 1000 (1010 - 1060)	$ 1,278,310.00	$ 255,662.00	$ 1,316,659.30			$ 1,316,659.30	$ 263,331.86	$ 1,316,659.30	$ 263,331.86	$ 1,316,659.30	$ 263,331.86	$ 1,316,659.30	$ 263,331.86	$ 1,316,659.30	$ 263,331.86	$ 1,316,659.30	$ 263,331.86			
1110	Management Fees		$ -	$ -	Variable	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1120	Drug and Alcohol Testing and Administration Fee Expenses	$1,500.00	$ 300.00	$ 1,545.00	Variable	3%	$ 1,591.35	$ 318.27	$ 1,639.09	$ 327.82	$ 1,688.26	$ 337.65	$ 1,738.91	$ 347.78	$ 1,791.08	$ 358.22	$ 1,844.81	$ 368.96			
1130	Advertising, Marketing and Promotional Charges	$20,000.00	$ 4,000.00	$ 20,600.00	Variable	3%	$ 21,218.00	$ 4,243.60	$ 21,854.54	$ 4,370.91	$ 22,510.18	$ 4,502.04	$ 23,185.48	$ 4,637.10	$ 23,881.05	$ 4,776.21	$ 24,597.48	$ 4,919.50			
1140	Legal, Auditing, and Other Professional Fees	$0.00	$ -	$ -	Variable	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1150	Staff Development Costs	$31,000.00	$ 6,200.00	$ 31,930.00	Variable	3%	$ 32,887.90	$ 6,577.58	$ 33,874.54	$ 6,774.91	$ 34,890.77	$ 6,978.15	$ 35,937.50	$ 7,187.50	$ 37,015.62	$ 7,403.12	$ 38,126.09	$ 7,625.22			
1160	Office Supplies	$7,000.00	$ 1,400.00	$ 7,210.00	Variable	3%	$ 7,426.30	$ 1,485.26	$ 7,649.09	$ 1,529.82	$ 7,878.56	$ 1,575.71	$ 8,114.92	$ 1,622.98	$ 8,358.37	$ 1,671.67	$ 8,609.12	$ 1,721.82			
1170	Leases and Rentals - Administrative Facilities	$60,658.00	$ 12,131.60	$ 62,477.74	Variable	3%	$ 64,352.07	$ 12,870.41	$ 66,282.63	$ 13,256.53	$ 68,271.11	$ 13,654.22	$ 70,319.25	$ 14,063.85	$ 72,428.82	$ 14,485.76	$ 74,601.69	$ 14,920.34			
1180	Utilities	$35,485.00	$ 7,097.00	$ 36,549.55	Variable	3%	$ 37,646.04	$ 7,529.21	$ 38,775.42	$ 7,755.08	$ 39,938.68	$ 7,987.74	$ 41,136.84	$ 8,227.37	$ 42,370.95	$ 8,474.19	$ 43,642.07	$ 8,728.41			
1190	Other Direct Administrative Charges	$9,000.00	$ 1,800.00	$ 9,270.00	Variable	3%	$ 9,548.10	$ 1,909.62	$ 9,834.54	$ 1,966.91	$ 10,129.58	$ 2,025.92	$ 10,433.47	$ 2,086.69	$ 10,746.47	$ 2,149.29	$ 11,068.86	$ 2,213.77			
Administrative Charges	Total 1100 (1110 - 1190)	$ 164,643.00	$ 32,928.60	$ 169,582.29	Variable		$ 169,582.29	$ 33,916.46	$ 169,582.29	$ 33,916.46	$ 169,582.29	$ 33,916.46	$ 169,582.29	$ 33,916.46	$ 169,582.29	$ 33,916.46	$ 169,582.29	$ 33,916.46			
1210	Fuel	$204,166.00	$ 40,833.20	$ 210,290.98	$/mile	3%	$ 216,599.71	$ 43,319.94	$ 223,097.70	$ 44,619.54	$ 229,790.63	$ 45,958.13	$ 236,684.35	$ 47,336.87	$ 243,784.88	$ 48,756.98	$ 251,098.43	$ 50,219.69			
1220	Preventive Maintenance (PM) Labor, Parts and Material Expenses (Vehicles)	$43,000.00	$ 8,600.00	$ 44,290.00	$ / Mile	3%	$ 45,618.70	$ 9,123.74	$ 46,987.26	$ 9,397.45	$ 48,396.88	$ 9,679.38	$ 49,848.79	$ 9,969.76	$ 51,344.25	$ 10,268.85	$ 52,884.58	$ 10,576.92			
1230	Corrective Maintenance (CM) Labor, Parts and Materials Expense (Vehicles)	$25,000.00	$ 5,000.00	$ 25,750.00	$ / Mile	3%	$ 26,522.50	$ 5,304.50	$ 27,318.18	$ 5,463.64	$ 28,137.72	$ 5,627.54	$ 28,981.85	$ 5,796.37	$ 29,851.31	$ 5,970.26	$ 30,746.85	$ 6,149.37			
1240	Tires	$16,660.00	$ 3,332.00	$ 17,159.80	$ / Mile	3%	$ 17,674.59	$ 3,534.92	$ 18,204.83	$ 3,640.97	$ 18,750.98	$ 3,750.20	$ 19,313.51	$ 3,862.70	$ 19,892.91	$ 3,978.58	$ 20,489.70	$ 4,097.94			
1250	Other Vehicle Charges	$2,500.00	$ 500.00	$ 2,575.00	$ / Mile	3%	$ 2,652.25	$ 530.45	$ 2,731.82	$ 546.36	$ 2,813.77	$ 562.75	$ 2,898.19	$ 579.64	$ 2,985.13	$ 597.03	$ 3,074.68	$ 614.94			
Vehicle Charges	Total 1200 (1210 - 1250)	$ 291,326.00	$ 58,265.20	$ 300,065.78			$ 300,065.78	$ 60,013.16	$ 300,065.78	$ 60,013.16	$ 300,065.78	$ 60,013.16	$ 300,065.78	$ 60,013.16	$ 300,065.78	$ 60,013.16	$ 300,065.78	$ 60,013.16			
1310	Purchase of Service		$ -	$ -	$ / Hour	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1330	Mileage Reimbursement for Public Transit Service		$ -	$ -	Fixed	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1340	Repair and Maintenance of Other Property		$ -	$ -	Variable	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1350	Leases and Rentals of Facilities or Equipment	$52,500.00	$ 10,500.00	$ 54,075.00	Variable	3%	$ 55,697.25	$ 11,139.45	$ 57,368.17	$ 11,473.63	$ 59,089.21	$ 11,817.84	$ 60,861.89	$ 12,172.38	$ 62,687.75	$ 12,537.55	$ 64,568.38	$ 12,913.68			
1360	Other Operations Charges	$4,500.00	$ 900.00	$ 4,635.00	$ / Hour	3%	$ 4,774.05	$ 954.81	$ 4,917.27	$ 983.45	$ 5,064.79	$ 1,012.96	$ 5,216.73	$ 1,043.35	$ 5,373.24	$ 1,074.65	$ 5,534.43	$ 1,106.89			
Operation Charges	Total 1300 (1310 - 1360)	$ 57,000.00	$ 11,400.00	$ 58,710.00			$ 58,710.00	$ 11,742.00	$ 58,710.00	$ 11,742.00	$ 58,710.00	$ 11,742.00	$ 58,710.00	$ 11,742.00	$ 58,710.00	$ 11,742.00	$ 58,710.00	$ 11,742.00			
1410	Public Liability and Property Damage on Vehicles	$8,120.00	$ 1,624.00	$ 8,363.60	Fixed	3%	$ 8,614.51	$ 1,722.90	$ 8,872.94	$ 1,774.59	$ 9,139.13	$ 1,827.83	$ 9,413.31	$ 1,882.66	$ 9,695.70	$ 1,939.14	$ 9,986.58	$ 1,997.32			
1420	Public Liability and Property Damage - Other than on Vehicles	$27,476.00	$ 5,495.20	$ 28,300.28	Fixed	3%	$ 29,149.29	$ 5,829.86	$ 30,023.77	$ 6,004.75	$ 30,924.48	$ 6,184.90	$ 31,852.21	$ 6,370.44	$ 32,807.78	$ 6,561.56	$ 33,792.01	$ 6,758.40			
Operation Charges	Total 1400 (1410 - 1420)	$ 35,596.00	$ 7,119.20	$ 36,663.88			$ 36,663.88	$ 7,332.78	$ 38,896.71	$ 7,779.34	$ 40,063.61	$ 8,012.72	$ 41,265.52	$ 8,253.10	$ 42,503.49	$ 8,500.70	$ 42,503.49	$ 8,500.70			
1510	Vehicle Registration and Permit Fees	$1,000.00	$ 200.00	$ 1,030.00	Fixed	3%	$ 1,060.90	$ 212.18	$ 1,092.73	$ 218.55	$ 1,125.51	$ 225.10	$ 1,159.27	$ 231.85	$ 1,194.05	$ 238.81	$ 1,229.87	$ 245.97			
1520	Federal Fuel and Lubricant Taxes and Excise Taxes on Tires		$ -	$ -	Fixed	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
1540	Other Taxes and Fees		$ -	$ -	Fixed	3%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -			
Taxes and Fees	Total 1500 (1510 - 1540)	$ 1,000.00		$ 1,030.00			$ 1,030.00	$ 206.00	$ 1,092.73	$ 218.55	$ 1,125.51	$ 225.10	$ 1,159.27	$ 231.85	$ 1,194.05	$ 238.81	$ 1,229.87	$ 245.97			
1594	Fuel Tax Refunds	($24,551.00)	$ (4,910.20)	$ (25,287.53)	Fixed	3%	$ (26,046.16)	$ (5,209.23)	$ (26,827.54)	$ (5,365.51)	$ (27,632.37)	$ (5,526.47)	$ (28,461.34)	$ (5,692.27)	$ (29,315.18)	$ (5,863.04)	$ (30,194.63)	$ (6,038.93)			
1596	Insurance Reimbursement	($15,000.00)	$ (3,000.00)	$ (15,450.00)	Fixed	3%	$ (15,913.50)	$ (3,182.70)	$ (16,390.91)	$ (3,278.18)	$ (16,882.63)	$ (3,376.53)	$ (17,389.11)	$ (3,477.82)	$ (17,910.78)	$ (3,582.16)	$ (18,448.11)	$ (3,689.62)			
	TOTAL OPERATING BUDGET	$ 1,788,324.00	$ 357,464.80	$ 1,841,973.72			$ 1,840,751.59	$ 368,150.32	$ 1,841,788.36	$ 368,357.67	$ 1,841,691.49	$ 368,338.30	$ 1,841,591.72	$ 368,318.34	$ 1,841,488.95	$ 368,297.79	$ 1,840,107.99	$ 368,021.60			

Appendix B Transit Need and Demand Analysis (TCRP 161)

Transportation need/ Mobility Gap in each County	the annual number of trips (1-way) needed because no access to a vehicle.
Chisago	601,700
Isanti	378,600
Total Need for service area	**980,300**

Demand for Public Transit (tab "3. Demand)	Demand only occurs in places where public transit service already exists.
Chisago	32,200
Isanti	23,700
Total Demand for public transit in service area	**55,900**
Total Demand for public transit in service area	**57,400**

Commuters from Rural Counties to Urban Centers (Minneapolis-St. Paul metro area)	Demand only occurs in places where public transit service already exists.
Chisago	N/A
Isanti	N/A
Total Demand for public transit in service area	-

Target Ridership = ½ mobility gap * 90%	MnDOT Ridership Targets
2020 ridership target	122,178
2021 ridership target	157,610
2022 ridership target	203,317
2023 ridership target	262,279
2024 ridership target	338,339
2025 ridership target	441,135