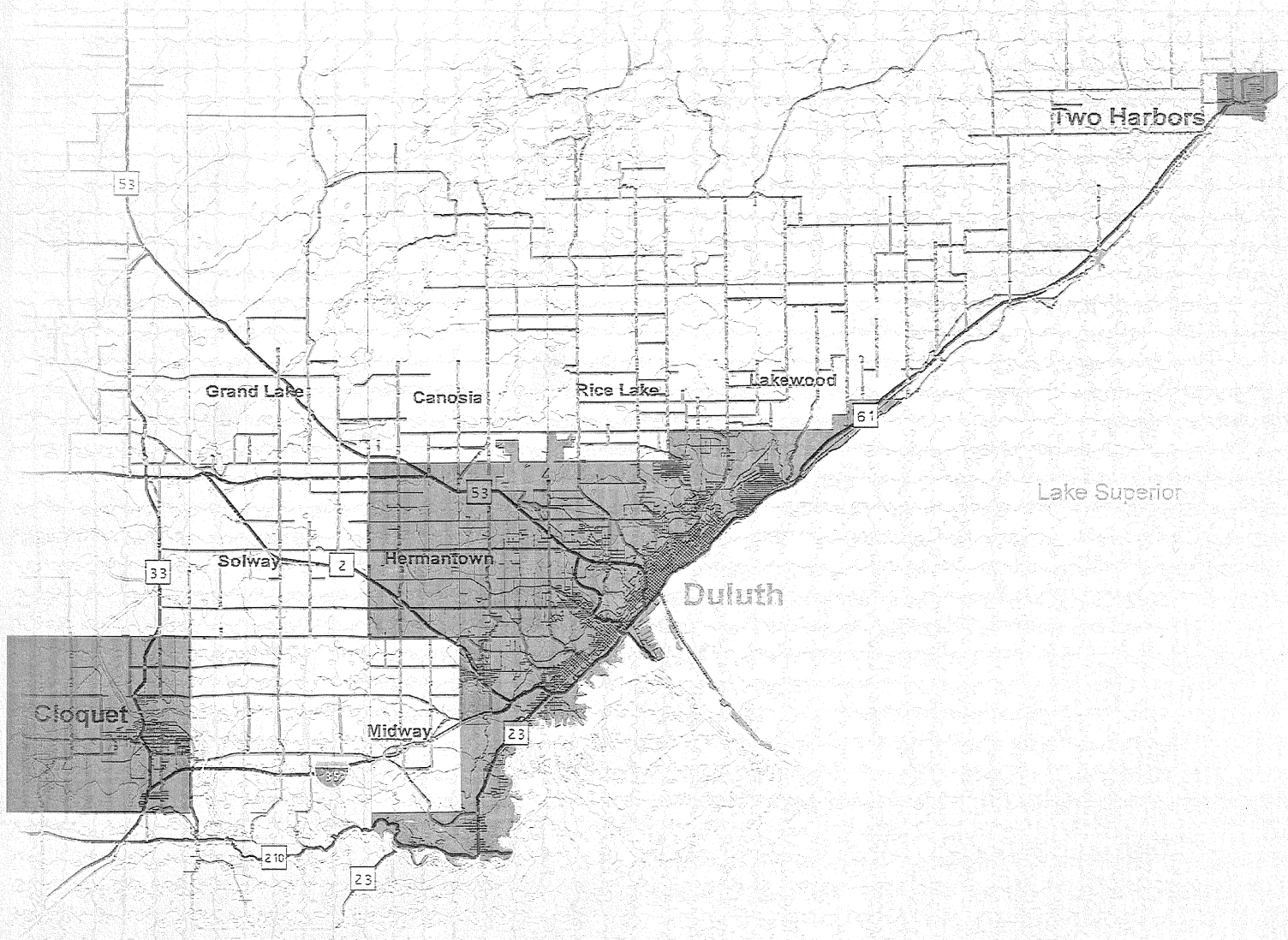


# Duluth Regional Transit Study



Prepared by: **SRF Consulting Group, Inc.**

Prepared for: **Duluth Superior  
Metropolitan  
Interstate Committee (MIC)**  
*In conjunction with Duluth Transit Authority*

*November 2001*

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## **1. INTRODUCTION**

The Duluth-Superior Metropolitan Interstate Committee (MIC), in conjunction with the Duluth Transit Authority, initiated a regional transit study focused on determining the need for and feasibility of new transit services connecting the City of Duluth to outlying areas, concentrating on the cities of Hermantown, Cloquet and Two Harbors (see Figure 1). The objective of this study was to identify any unmet needs in this area and to look for opportunities to enhance transit service. SRF Consulting Group, Inc. was retained to assist the Duluth-Superior MIC in all aspects of the study process.

This transit study looks at existing needs by first describing past and present demographic indicators in the study area as well as projected demographic trends by county and by city. Existing study area transit services are also discussed and system performance measures are also summarized.

Part of the transit needs assessment was an examination of needs from the customer's perspective. The study employed two methods to gather this information. In June 2001, a series of small-group meetings was held in the three target market cities and representatives from social service agencies, senior citizen services, and elected and appointed township, city, county and state officials were invited to participate. In addition to these small-group facilitated discussions, a survey was administered to over 3,700 employees of major Duluth employers gauging interest in potential commuter-oriented transit services.

A transit market analysis is also included in this report. This analysis used data from the transit survey, applying different types of screens to arrive at the likely target markets for commuter transit in the cities of Hermantown, Cloquet and Two Harbors. It also sorted survey responders by major employer, determining the characteristics of those employees most likely to use transit. This information will be useful in starting employer-based transit incentive programs.

The study concludes with transit service recommendations for the three study area cities and suggestions for measuring potential commuter transit service as an ongoing regional activity. These elements are summarized in the final chapter of the report.

## **2. TRANSIT NEEDS ASSESSMENT**

The first step in the Duluth Regional Transit Study planning process entailed an assessment of unmet transit needs in the study area. These needs were identified using a combination of quantitative and qualitative information. Demographic data was analyzed examining past, current and projected population, age, employment and income. A survey was administered to employees of some of Duluth's major employers and small-group discussion sessions were scheduled with area transit stakeholders to discuss how



well existing transit services were meeting travel needs and to identify opportunities for enhanced transit service. The results of these investigations are summarized in this section of the study.

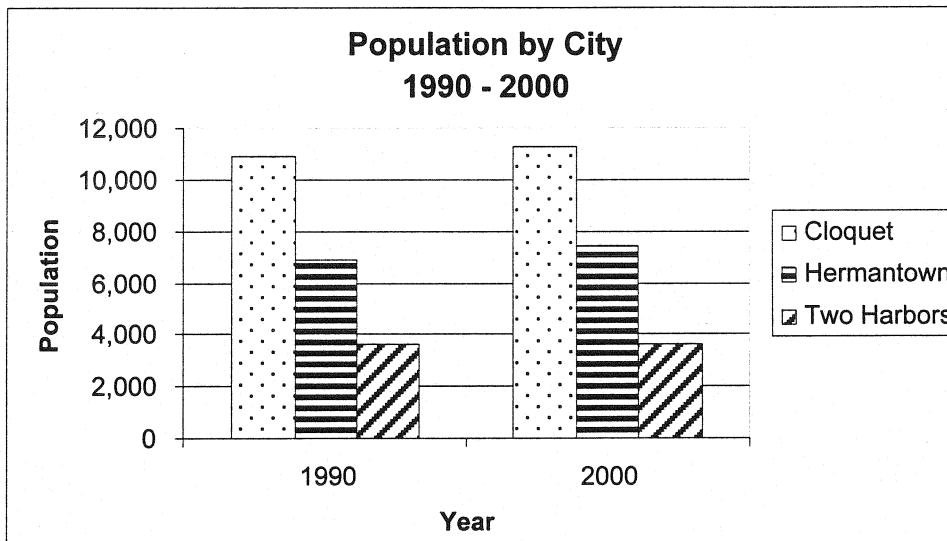
## DEMOGRAPHICS

Demographic analysis and data collection included the historical, current and projected demographics of the cities of Cloquet, Hermantown and Two Harbors as well demographic conditions in Carlton, St. Louis and Lake Counties. The following variables were examined:

1. Population
2. Age
3. Employment
4. Income

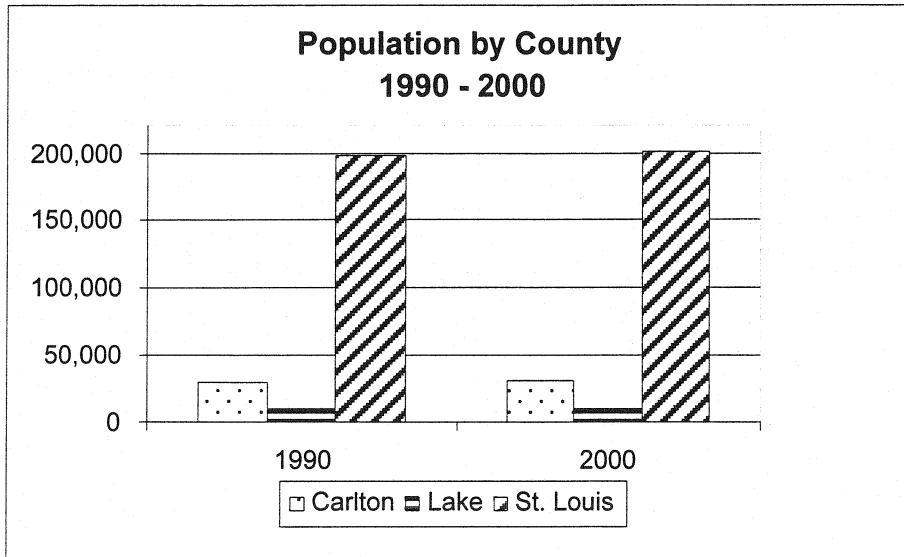
### POPULATION

Since 1990, the cities of Cloquet and Hermantown have experienced modest population growth of approximately four (4) percent and eight (8) percent respectively. The City of Two Harbors actually experienced a decline in population over this time period of one (1) percent.



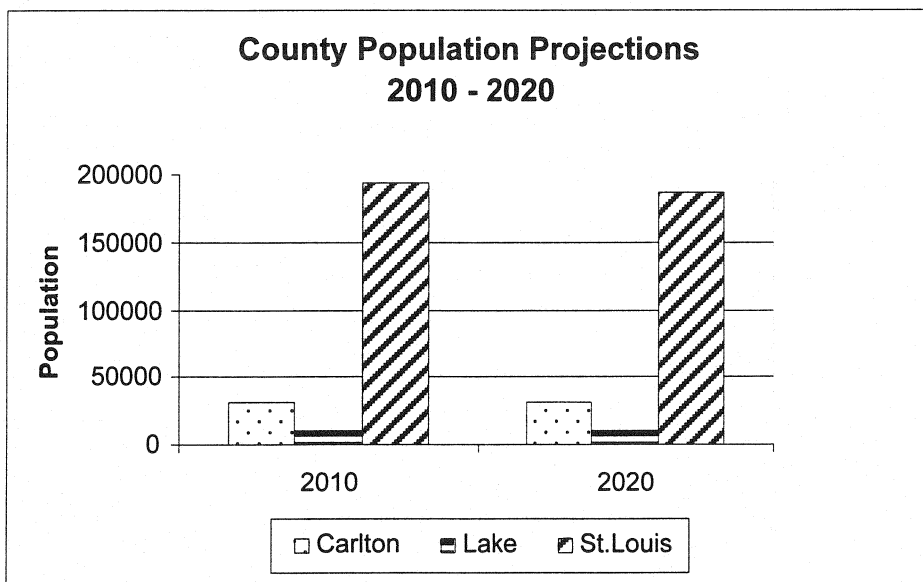
Source: U.S. Census

The three counties in the study area have also experienced modest growth over the past ten years (1990 to 2000) as well. Carlton County experienced the highest growth at approximately eight (8) percent, with Lake County experiencing approximately six (6) percent growth. St. Louis County experienced an overall increase in population of one (1) percent over this time period.



Source: U.S. Census

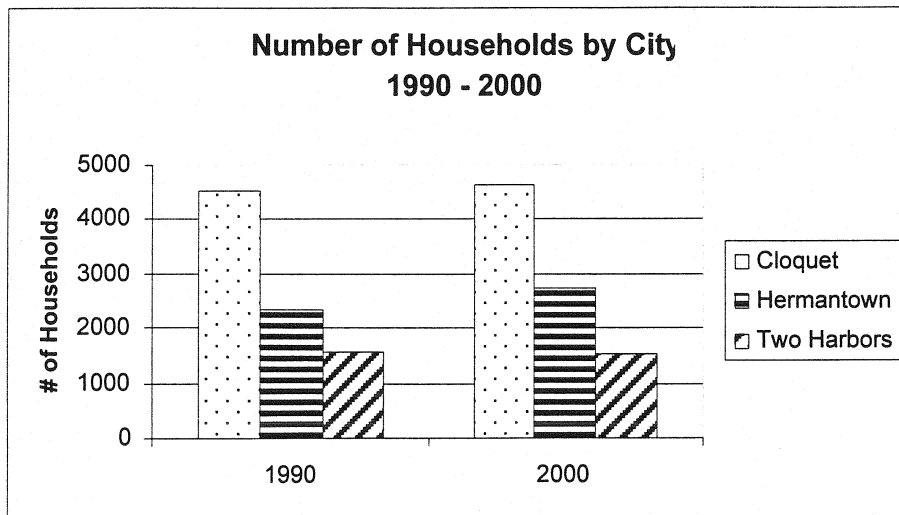
Over the next two decades, all three counties are projected to lose population. Population loss is anticipated to be greatest in Lake County at approximately 12 percent. St. Louis County is anticipated to lose approximately seven (7) percent of its population, with Carlton County's population projected to decrease by approximately three (3) percent.



Source: MN Planning

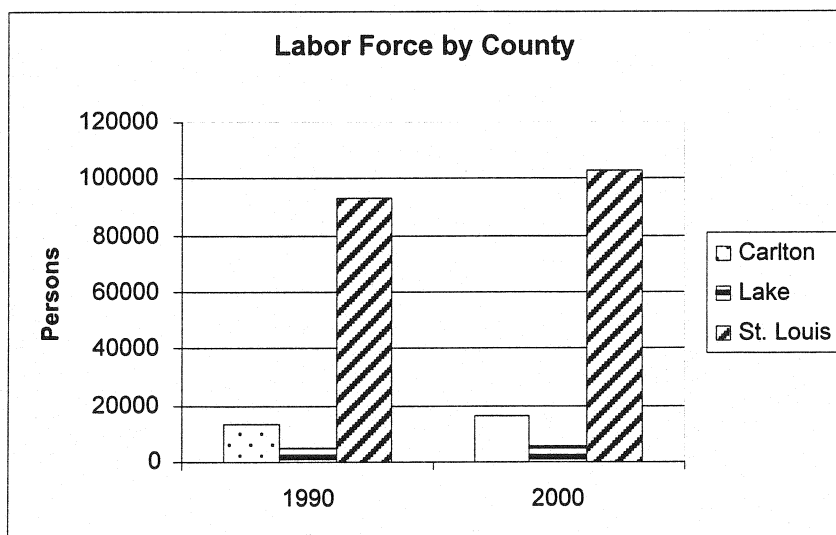
## HOUSEHOLDS

In the City of Hermantown, the increase in number of households over the past ten years (1990 to 2000), has outstripped population growth at a rate of almost 50 percent, with households growing at approximately 17 percent during this time period while population grew at a mere eight (8) percent. Growth in the number of households in the cities of Cloquet and Two Harbors has actually lagged population growth, with Cloquet households increasing at slightly less than three (3) percent and Two Harbors households declining by approximately three (3) percent.



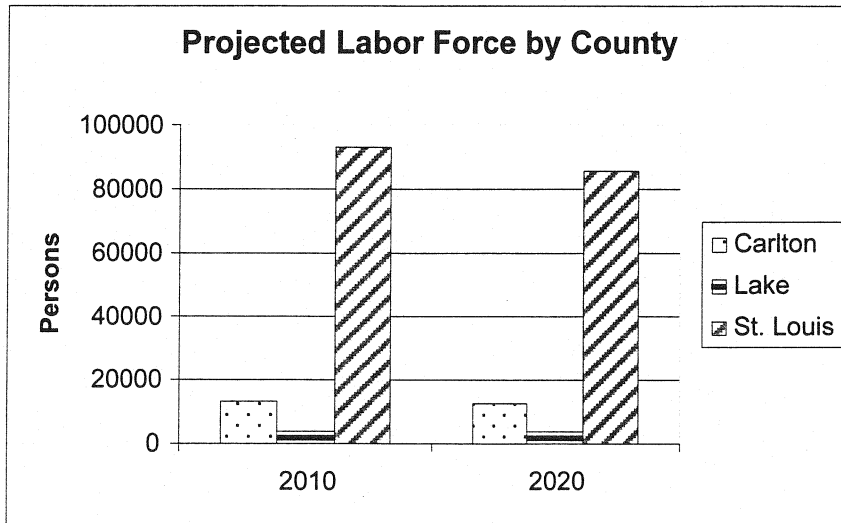
## EMPLOYMENT

Rates of growth in the labor force over the decade from 1990 to 2000 have outpaced population growth in the three-county study area. Carlton County's labor force increased the most at approximately 24 percent. St. Louis and Lake Counties grew at approximately ten (10) and seven (7) percent, respectively.



Source: MN Department of Economic Security

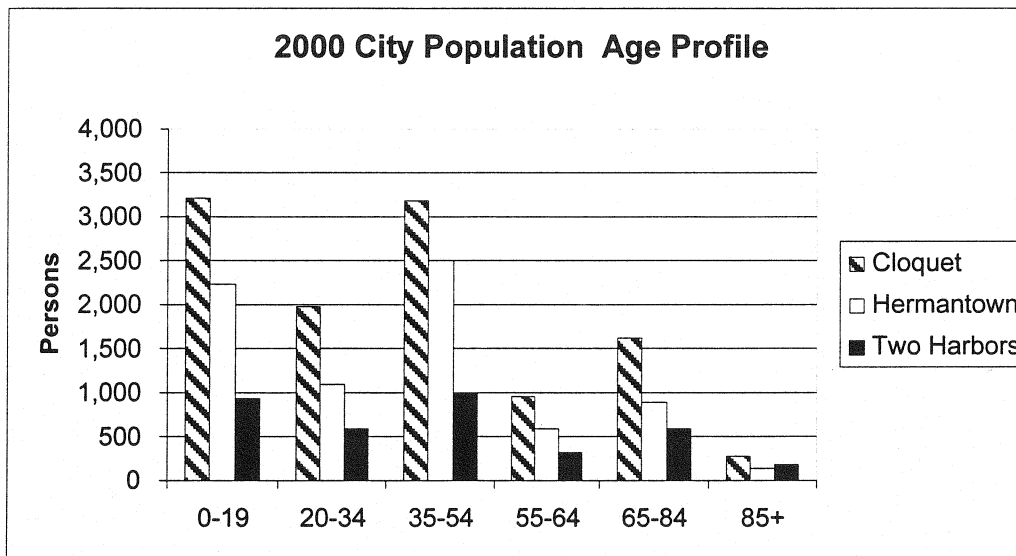
Although all three study-area counties have experienced growth in labor force over the decade from 1990 to 2000, this trend is expected to end by 2010. In fact, by 2020, the overall labor force is expected to decrease from 1990 levels by almost 25 percent in Lake County. This decrease will be less dramatic in St. Louis and Carlton Counties with decreases of six (6) percent and two (2) percent, respectively.



Source: MN Planning

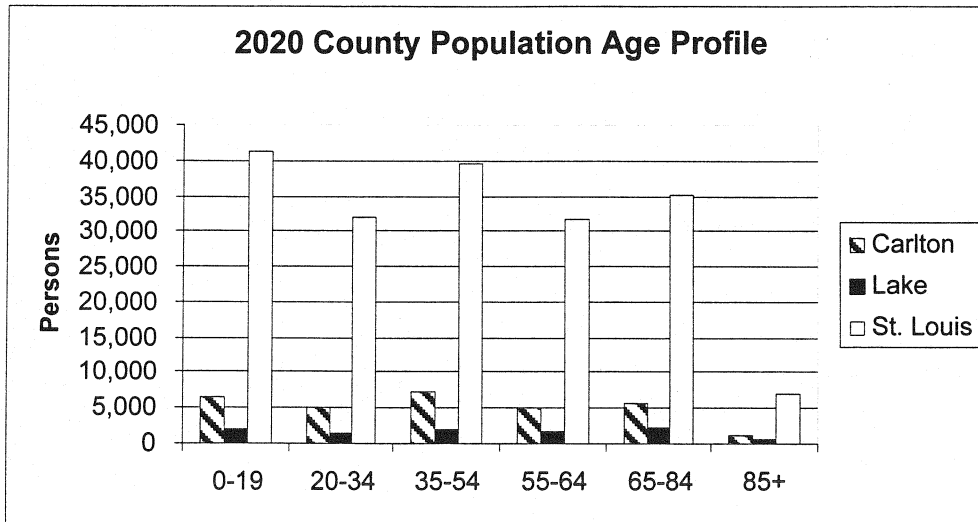
**AGE**

The age profile of the Cities of Cloquet, Hermantown and Two Harbors is shown below. Two Harbors has the highest percentage of population aged 65 or over (25 percent), with Cloquet having 23 percent of its population and Hermantown 20 percent of its population over the age of 65.



Source: U.S. Census

Projected population to the year 2020 by age profile is shown at the County level below. While overall population is expected to decrease in the study-area counties over the next two decades, the growth in persons age 65 and over is expected to be significant. The elderly population in Carlton County is expected to grow by approximately 34 percent. In Lake County, this growth is anticipated to be 30 percent while in St. Louis County, elderly populations are projected to increase by 21 percent



Source: MN Planning

## EXISTING TRANSIT SERVICE

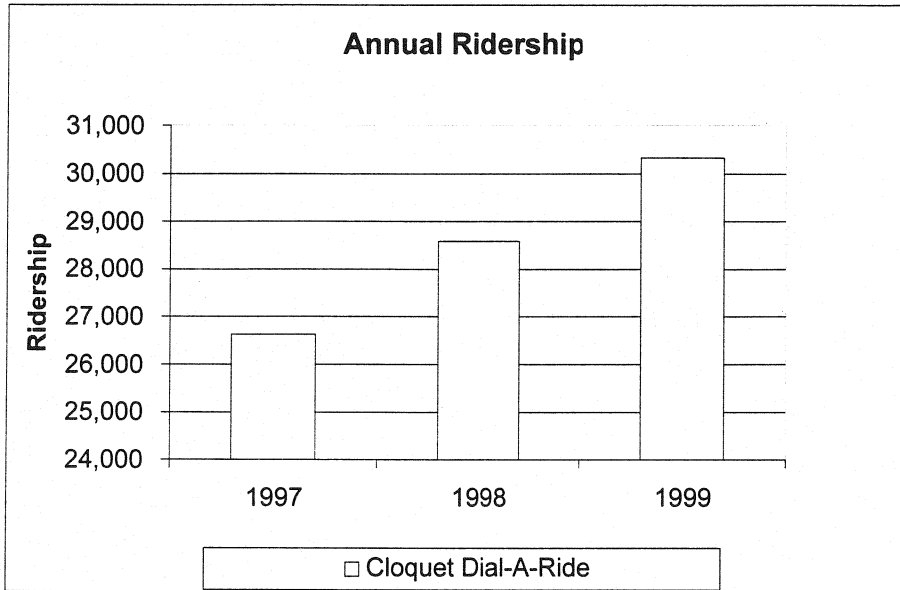
Existing public transit service in the study area is provided by several transit agencies and operators. Due to the large geographic size of the study area and the distance between the three cities that comprise the primary focus (Cloquet, Hermantown and Two Harbors), transit services for these cities are somewhat disconnected. Existing transit is summarized, by city, as follows.

### CITY OF CLOQUET

Within the City of Cloquet, Cloquet Dial-A-Ride (DAR) operates a "flexible-route" service within the city. A regular route and schedule of stops is used by Cloquet DAR; however, passengers may hail the bus between designated stops for pick-up. This "flexible-route" service is available on Monday through Friday from 10:00 a.m. to 5:00 p.m. Other regular "flexible-route" services offered include a route connecting Carlton to the Wal-Mart in Cloquet. This route operates twice daily, Monday through Friday.

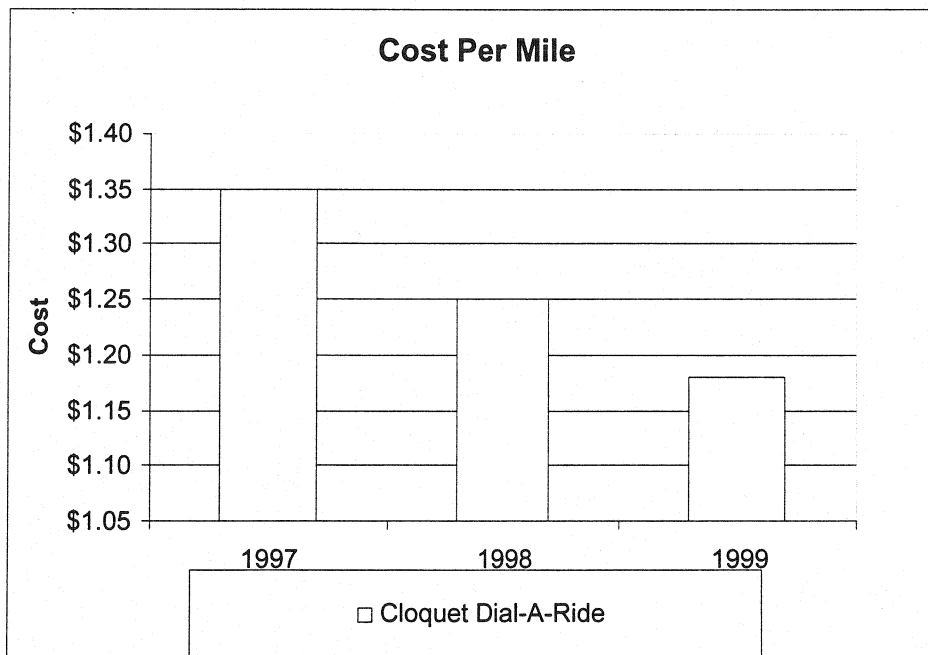
In addition to "flexible-route" services, door-to-door, dial-a-ride services are also available from Cloquet DAR. This type of service is available regardless of disability status. It does require 24-hour advance notification, however. There are no restrictions on the types of trips that can be made. Typical trip destinations include shopping areas, medical facilities, and schools. The standard fare is \$1.50. This is discounted to \$1.00 for senior citizens and disabled persons.

Ridership on Cloquet DAR has increased steadily over the three years for which data is available. From 1997 to 1999 overall ridership levels increased by 14 percent.



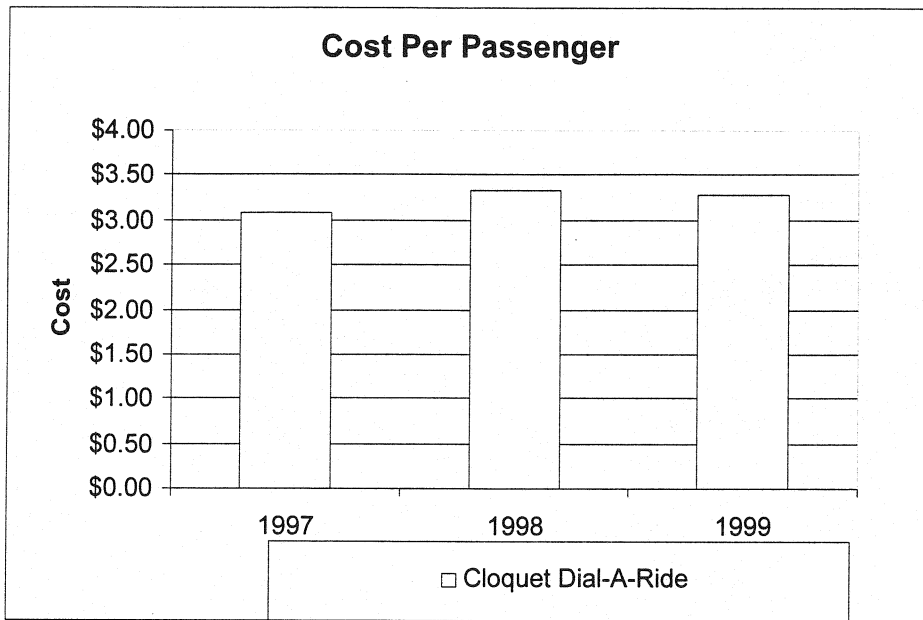
Source: Mn/DOT's Office of Transit

During the time that ridership has been increasing on the Cloquet DAR system, system cost per mile has been decreasing. This is an encouraging trend and speaks to the effective performance of the system.



Source: Mn/DOT's Office of Transit

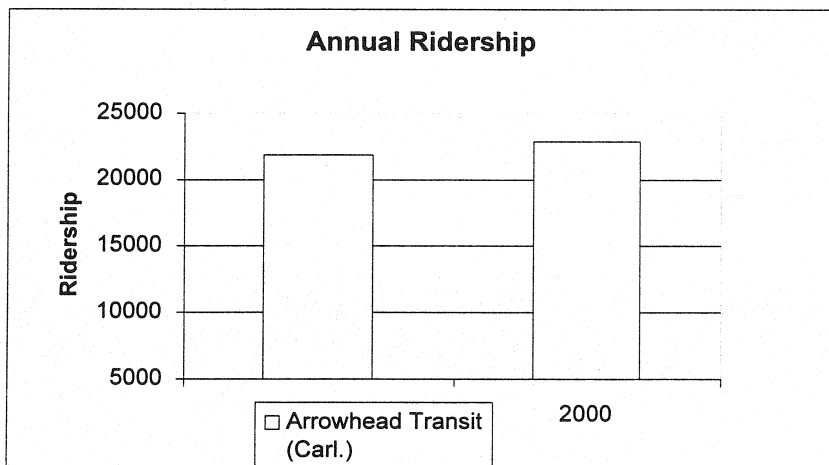
Cost per passenger has increased over the past three years on the Cloquet DAR system. Annual cost per passenger increased by approximately 6.5 percent from 1997 to 1999.



Source: Mn/DOT's Office of Transit

### Cloquet Regional Transit Services

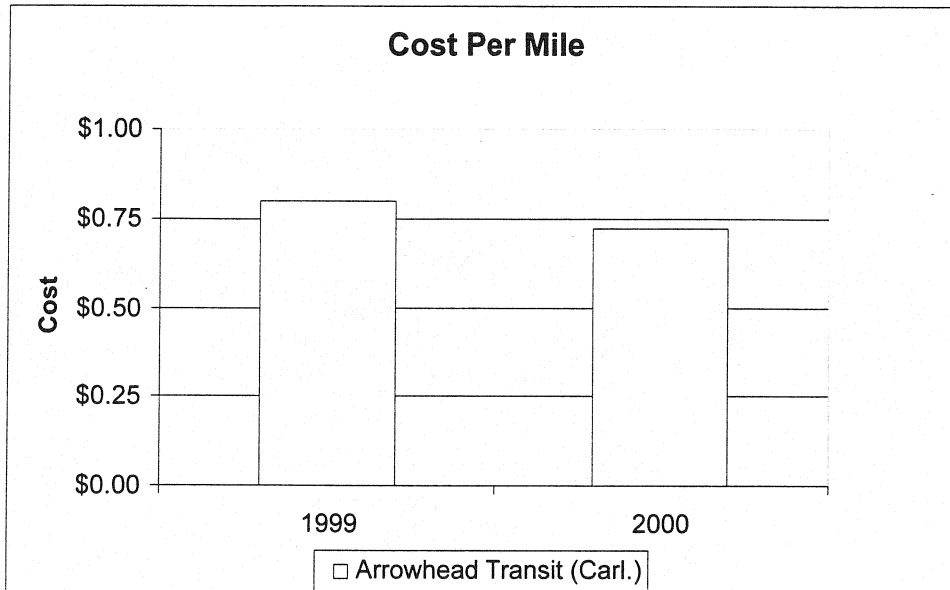
Arrowhead Transit provides regional transit connections from the City of Cloquet to the City of Duluth and beyond. Currently, twice-weekly service is provided from Cloquet into Duluth. Every Monday and Wednesday a bus makes four morning stops at various Cloquet locations (approximately 9:30 a.m.), with return service leaving Duluth at 2:30 p.m. Arrowhead Transit services from Cloquet are open to the public with no age or income restrictions. Regular fare from Cloquet to Duluth is \$1.60. Ridership statistics were not available at the route level; however, they were available at the county level. Arrowhead Transit statistics for Carlton County are depicted in the figure that follows. From 1999 to 2000, ridership levels grew slightly by approximately five (5) percent.



Source: Arrowhead Economic Opportunity Agency

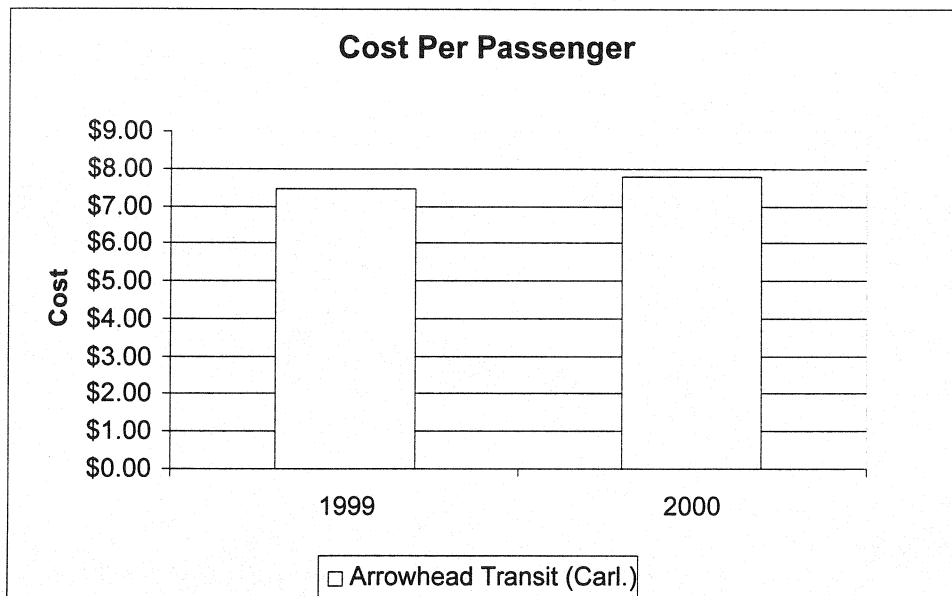


While Arrowhead Transit service in Carlton County is gaining ridership, cost per mile is decreasing, from \$0.80 to \$0.72, which is an encouraging trend.



Source: Arrowhead Economic Opportunity Agency

Cost per passenger on Arrowhead Transit's Carlton County system has increased slightly from 1999 to 2000, from \$7.45 to \$7.80.



Source: Arrowhead Economic Opportunity Agency

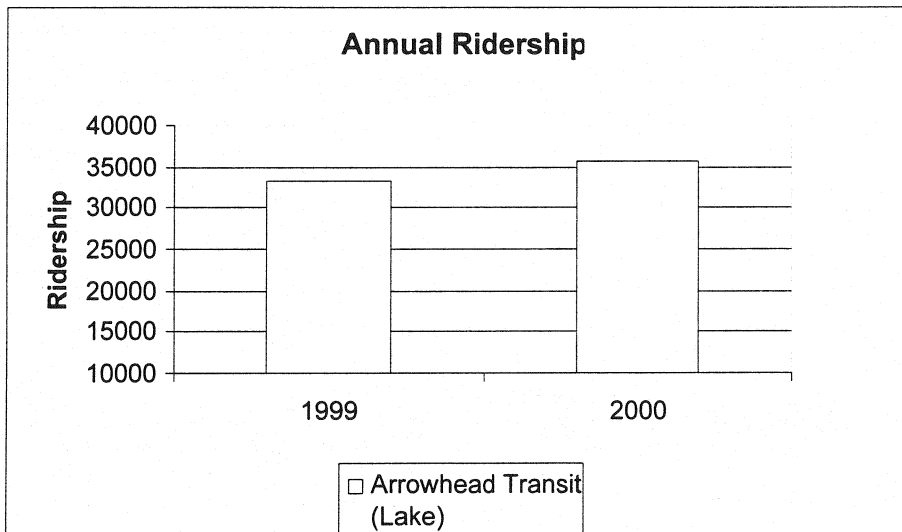
Other regional transit services in Cloquet are supplied by LCS Coaches, a private, for-profit firm that offers many transportation services in addition to regularly-scheduled bus service into Duluth. Commuter work trips into Duluth are served five-days-a-week, Monday through Friday, with one trip made in the morning and one return trip in the evening. People in Duluth wishing to make the reverse trip into Cloquet are able to do so. Several stops are made in the City of Cloquet, in addition to a park-and-ride lot located near I-35 in Scanlon. Stops in Duluth are across from the Holiday Center (at the DTA Transit Center), as well as St. Mary's and St. Luke's medical centers. Fares are \$2.25 one-way.

**CITY OF TWO HARBORS**

Arrowhead Transit provides urban and regional transit services within the City of Two Harbors connecting to Duluth and to points beyond. A regularly scheduled route departs from Two Harbors at 8:00 a.m. every Friday into downtown Duluth and to the Miller Hill Mall with return service scheduled to depart Duluth at 2:00 p.m. On the second Tuesday and fourth Thursday of every month, Arrowhead Transit operates a route that leaves the Two Harbors Depot with service to downtown Duluth. Full fare for service from Two Harbors to Duluth is \$2.60.

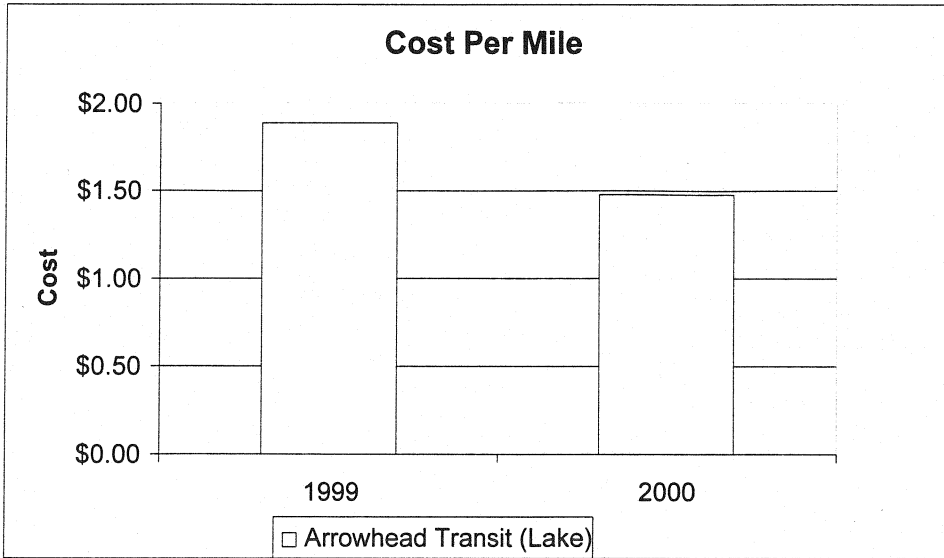
Arrowhead Transit also operates Dial-A-Ride service within the city of Two Harbors. This service operates Monday through Friday from 9:00 a.m. to 3:45 p.m. Fares for Dial-a-Ride service start at \$0.85 for service within the city, increasing to \$1.10 within a five-mile radius of the city and up to \$1.60 for service within a 5 to 10 mile radius. Ridership and performance indicators were not available at the route level, but are summarized in the following figures at the county level.

From 1999 to 2000, annual ridership on Arrowhead Transit has increased by approximately seven (7) percent.



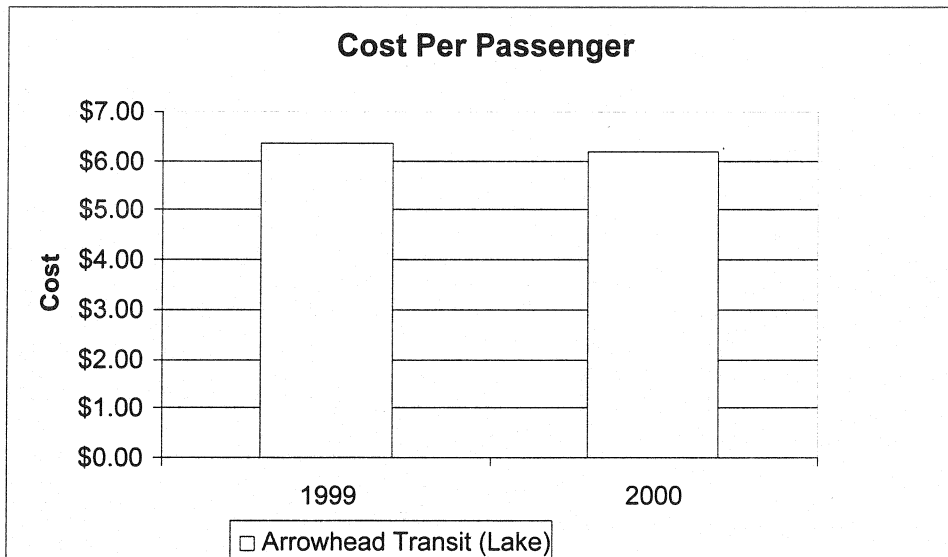
Source: Arrowhead Economic Opportunity Agency

As ridership increased over the time period from 1999 to 2000, cost per mile decreased by almost 22 percent, from \$1.89 to \$1.48.



Source: Arrowhead Economic Opportunity Agency

Cost per passenger also decreased over the time period of 1999 to 2000.



Source: Arrowhead Economic Opportunity Agency

## CITY OF HERMANTOWN

Transit services within the City of Hermantown are currently provided by the Duluth Transit Authority (DTA), which serves a limited portion of the city. Two DTA routes serve the Miller Hill Mall area of Hermantown (Route 9 or Piedmont and Route 10 or Duluth Heights/Miller Mall) with 30-minute peak and 60-minute off-peak service. These routes terminate downtown at the Duluth Transit Center.

## **SURVEY OF LARGE METROPOLITAN EMPLOYERS**

A survey was designed and administered to over 3,700 employees of some of Duluth's largest employers (see Attachment A for a copy of the survey). This survey attempted to measure interest in transit services to outlying areas (Hermantown, Duluth and Cloquet) and into the city of Duluth, specifically concentrating on home-to-work, commuter-type service (see Attachment B for figures depicting the locations of potential survey responders). Of the surveys distributed, a total of 764 were returned, representing a return rate of 19 percent. A copy of the survey is included in the appendix to this report.

The first step in survey analysis was to separate the respondents living in one of study area cities, Hermantown, Cloquet or Two Harbors in keeping with the focus of this study. When this was accomplished, it was found that there were 222 respondees living in one of these three (3) cities. These responses were then further analyzed and the results from this subset of survey responses are summarized as follows.

## EMPLOYERS

A total of ten employers were represented in the smaller survey sample. The largest number of responses came from employees of the following employers:

- University of Minnesota, Duluth – 80 responses
- Hermantown Schools – 38 responses
- Advanstar – 37 responses
- St. Scholastica – 21 responses
- Lake Superior College – 18 responses

## RESPONDENT PROFILE

(222 responders living in Hermantown, Cloquet and Two Harbors)

<b>TABLE 1 Respondent Profile</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
26 percent		74 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
1 percent	6 percent	15 percent	45 percent	33 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
9 percent	33 percent	26 percent	19 percent	13 percent
<b>Residence</b>				
<b>Two Harbors</b>	<b>Cloquet</b>	<b>Hermantown</b>		
2 percent	12 percent	86 percent		
<b>Auto Ownership (number of autos in household)</b>				
<b>No Autos</b>	<b>One Auto</b>	<b>Two Autos</b>	<b>Three or More Autos</b>	
No respondents	23 percent	48 percent	29 percent	
<b>Current Mode of Travel to Work</b>				
<b>Drive Alone</b>	<b>Carpool</b>	<b>Use Another Mode</b>		
89 percent	8 percent	3 percent		

## WILLINGNESS TO RIDE BUS

Survey respondents were queried as to their interest in riding a bus to work. Those respondents who replied in the affirmative were asked to complete the survey by describing their interest in various bus service characteristics. Those respondents indicating no interest in bus service did not complete the portion of the survey regarding bus service characteristics. A total of 141 respondents indicated potential interest in bus service. Their responses are summarized in the remainder of this section of the report.

Yes	Maybe	No
42 percent	22 percent	36 percent

## BUS SERVICE CHARACTERISTICS

(141 responders living in Hermantown, Cloquet and Two Harbors interested in riding transit)

- **Park and Ride versus Walk to Bus**

Respondents were evenly divided on whether they would prefer to walk to the bus or drive to a park-and-ride lot with 52 percent preferring to walk and 48 percent preferring to use a park-and-ride lot.

	<u>Percent (%)</u>
Park and Ride	52 %
Walk to Bus	48 %

- **Acceptable Fare for Service**

The majority of respondents (58 percent) believed that a fare of \$1 to \$2 was acceptable for bus service.

	<u>Percent (%)</u>
Less than \$1	27 %
\$1 to \$2	58 %
\$2 to \$4	15 %
more than \$4	0 %

- **Emergency Ride Home Assurance**

When queried regarding the need to guarantee a ride home in case of emergency, 23 percent of respondents indicated they would need this assurance. Most respondents (49 percent) indicated they would not need this assurance to ride bus service, but that it “would be nice.”

	<u>Percent (%)</u>
Yes	23 %
No	28 %
No, but it would be nice	49 %

- **Willingness to Wait**

Survey respondents were queried regarding their willingness to wait, after being dropped off by the bus, before the start of their regular work shift. The majority of respondents were willing to wait up to 20 minutes after being dropped off by the bus.

	<u>Percent (%)</u>
5 – 10 minutes	23%
10 – 15 minutes	20%
15 – 20 minutes	31%
20 – 30 minutes	26%

### SENSITIVITY TO ACCESS TO TRANSIT

A series of questions was asked regarding the likelihood of respondents riding the bus given various service conditions such as proximity of pick-up to a respondent’s residence, the need to transfer and other elements. Responses were given on a scale of 1 to 5 with 1 meaning they would definitely not ride a bus under the conditions described and 5 meaning they definitely would ride the bus. Reactions were gauged for various pick-up and drop-off conditions.

While people were generally willing to accept any type of pick-up condition, there was a slightly greater preference expressed for pick-up right outside their house. On the drop-off side, a different picture emerged. It would appear that there is a great sensitivity and reluctance by potential bus riders to transfers. When queried regarding likelihood of use if a transfer was necessary in downtown Duluth in order to complete their journey to work, fully 73 percent of all respondents said they would definitely not or probably not choose to ride the bus under those service conditions.



## Reactions to Various Pick-Up Conditions

The following represents the percentage of the 141 responders initially willing to consider transit who would ride the bus under the stated conditions:

- **Would you ride the bus if the bus would start at a park-and-ride lot near your house?**

Definitely Not	11%
Probably Not	4%
Maybe	39%
Probably Yes	26%
Definitely	20%

- **Would you ride the bus if the bus would stop no farther than three blocks from your house?**

Definitely Not	4%
Probably Not	6%
Maybe	27%
Probably Yes	29%
Definitely	34%

- **Would you ride the bus if the bus would stop directly at your house?**

Definitely Not	3%
Probably Not	1%
Maybe	13%
Probably Yes	25%
Definitely	58%

## Reactions to Various Drop-Off Conditions

The following represents the percentage of the 141 responders initially willing to consider transit who would ride the bus under the stated conditions:

- **Would you ride the bus if the bus would arrive at one or two central locations in downtown Duluth and you would need to transfer to a local bus service to get to work?**

Definitely Not	57%
Probably Not	17%
Maybe	17%
Probably Yes	8%
Definitely	1%

- **Would you ride the bus if the bus would operate on a limited route in Duluth and you might have to walk up to three blocks to get to work?**

Definitely Not	22%
Probably Not	14%
Maybe	33%
Probably Yes	21%
Definitely	10%

- **Would you ride the bus if the bus would stop directly at your place of work?**

Definitely Not	0%
Probably Not	1%
Maybe	11%
Probably Yes	27%
Definitely	61%

The sensitivity tabulations represent people who initially said they would consider transit. However, when confronted with real-world pick-up/drop-off choices that could be provided through new service, some of these initial transit riders became non-rider candidates. A total of 4 to 15 percent of initial rider candidates dropped out when faced with pick-up side service choices, and from 1 to 74 percent of potential candidates dropped out when faced with available drop-off side choices.

## OTHER SURVEY COMMENTS

The last question on the survey was an open-ended one asking people if they had any additional comments to make regarding long-distance commuter bus service.

- A total of 12 respondents believed that DTA service was needed in Hermantown.
- Three (3) people responded that they currently ride the LCS coach in from Cloquet
- Six (6) people stated that they disliked transfers
- Four (4) people responded that they would use the bus in poor weather
- Four (4) persons believed that better weekend and evening service was needed
- Five (5) persons would like direct service to school
- 12 people believed that long-distance commuter bus service was a “great idea”

## **SMALL-GROUP DISCUSSIONS**

Small-group discussion sessions were scheduled in the Cities of Two Harbors, Cloquet and Hermantown on June 13 and 14, 2001. The meetings were held at the Lake County Courthouse in Two Harbors on June 13, the Cloquet City Hall and Hermantown City Hall on June 14. A total of six meeting times were available during the course of both days and stakeholders were sent invitations informing them of the sessions.

The sessions were facilitated discussions based around a series of questions aimed at identifying transit service needs, focusing particularly on the need to connect their area to downtown Duluth and identifying gaps in existing services, such as time of day. Representatives from social service agencies, senior citizen services, and elected and appointed township, city, county and state officials were invited to participate.

A total of 11 persons (other than consultant/agency staff) attended these sessions; in Two Harbors a total of seven (7) persons attended, in Cloquet there were three (3) persons, and in Hermantown, one (1) person attended.

Comments from the meeting are summarized by city.

## TWO HARBORS

### **Existing Transit Service within Two Harbors:**

- Arrowhead Transit does a good job of meeting the travel needs of seniors; they are very accommodating and helpful with carrying packages and providing door-to-door service.

- Arrowhead Transit directly serves senior housing locations in Two Harbors. The activities coordinators arrange for service for local outings so that individuals don't have to make their own arrangements.
- Local service consists of route-deviation service in addition to on-demand (to access local service, a rider must call in advance, although occasionally same-day requests can be met).
- There is no taxi service currently operating in Two Harbors.
- On the first Sunday of every month there is a community-wide church service for which transportation is provided. The cost of this service is covered by the participating churches.
- Advanced reservation is desired, although people can hail buses from the street. Arrowhead does not have a problem with trip denials. They use a simple trip reservation process and radios to communicate with drivers.
- It is believed that there is one park-and-ride lot in town, but it is not currently in use.
- Arrowhead Transit is getting a new facility for maintenance on five acres just outside of Two Harbors.
- Arrowhead Transit cannot run general service charters, only for seniors and special needs groups.
- Volunteer drivers also serve some transportation needs. This service is coordinated by the Arrowhead Economic Opportunity Agency (AEOA). However, a shortage of volunteers sometimes limits service.
  - In order to use this service, one must be registered through social services (usually income or disability based).
  - If callers do not meet the requirements, than they are told to contact the driver directly so they can arrange their own rides.
  - Volunteers will operate on the weekends when regular service does not operate.

### **Transit Service to Duluth**

- Service to Duluth is not as good as it is within Two Harbors. There is a bus that regularly goes into Duluth on Fridays. Also, riders can use buses passing through Two Harbors from other cities.
- Arrowhead Transit will drop off at any medical facility in Duluth, as well as the malls and they will "shuttle" people in between. They are pretty flexible regarding drop-off points in Duluth.

## **Transit Needs**

- Surveys received by social service agencies indicate a need for more transportation services. However, some of the clients are difficult to serve given their disabilities.
- Transit service is currently only available 8 a.m. to 5 p.m. Monday through Friday. This leaves some people without service.
- There is no “fare sharing” agreement between DTA and Arrowhead Transit (people who ride Arrowhead Transit into Duluth must pay a second fare to use DTA service). Perhaps a “shared pass” between DTA and Arrowhead can be explored.
- There are some transportation needs from the outlying areas to Two Harbors, e.g., Silver Bay.
- DTA used to operate a “mall shuttle” that has been discontinued. This was a very desirable service even though it operated on an infrequent basis (30-minute headway). Perhaps this service could be reinstated at a greater service frequency.
- Marketing may be a way to increase awareness of existing services. It could also be a means to overcome potential customers’ concerns such as seniors who don’t know how to use the service or are afraid of falling. Simple improvements like bus stop signs, benches, shelters and schedules can help. Marketing can be aimed at other markets than seniors, maybe to shed the image of the “old-folks bus.”

## **Transit Costs**

- There was not much concern regarding existing rider costs.
  - \$0.85 in town
  - \$1.10 up to 5 miles out of Two Harbors
  - \$1.35 up to 10 miles out of Two Harbors
  - \$1.60 up to 15 miles out of Two Harbors

## **Transit for Employment:**

- Concerns about transportation needs for people who participated in the MN Family Investment Program led Lake County to consider buying a mini-van to transport them to work. However, this did not occur as people seemed able to meet their own transportation needs.

- Social service agencies involved in employment issues are seeing more people who are commuting from Duluth into Two Harbors. There are also large numbers of people living in Two Harbors and commuting into Duluth.
- There may be a need for service to the resort areas (Lutsen).

### **Other Transit Markets**

- Students: Arrowhead Transit did target service to the student (college and technical school in Duluth) market in Duluth a couple years ago, but it was not very successful.
- Pre-School to Daycare: Arrowhead Transit covers this market through the schools. Parents are informed of the service by the school district and it is up to them to arrange service.
- Recreational/Bicyclist: There may be an opportunity to market transit service from Duluth to Two Harbors for recreational/biking purposes, where a person could bike one leg of the trip, load their bike on the bus and ride the bus on the other trip leg.
- Recreational/Other: Other recreation events in Duluth include fireworks displays, going to the marina, and other tourist destinations.

### **Special Programs**

- Arrowhead Transit works with kids programs in the area to provide service to youth activities.

## HERMANTOWN

### **Existing Transit Service within Hermantown:**

- DTA serves the Miller Hill Mall Area in addition to the airport.
- Arrowhead Transit provides service to outlying areas of Hermantown as a dial-a-ride service.
- DTA also operates STRIDE, providing curb-to-curb service to disabled riders, which operates in parts of Hermantown.

### **Transit Service to Duluth**

- Arrowhead Transit operates a regular service from Cloquet into Duluth every Friday. For trips into Duluth on other days, riders must call in advance to schedule service

## **Transit Needs**

- Although STRIDE provides service to disabled clients to medical facilities, DTA will only drop-off passengers in the Mall area (viz., at the Wal-Mart). There have been instances in the past where patients will call from the Wal-Mart confused about how to get to the clinic or asking for a ride to the clinic.
- The greatest concentration in clinic patient population is coming from Duluth. Based on a patient-satisfaction survey administered by the clinic, most patients are currently driving to the clinic, but would be willing to take the bus, if service were provided.
- Peak times of clinic use are between 9 a.m. and 3 p.m., Monday through Friday, with patients arriving at all times during this period. Some patients would need curb-to-curb service, while others would be able to use a fixed-route type service.
- In general, the disabled population's transit needs, as far as medical trips, is well served. It is the general population whose needs are not being met.
- Bus service from Hermantown into the Duluth clinic may also be well-used, as parking can be expensive in downtown.

## **Transit for Employment:**

- Park-and-ride lots could be established in Hermantown for use by commuters wanting to use transit for work-type trips, or for other trip purposes into Duluth.

## **CLOQUET**

### **Existing Transit Service within Cloquet:**

Cloquet Dial-A-Ride offers service within the city, but this is also by reservation only.

- In addition to Arrowhead Transit and Cloquet Dial-A-Ride, the Fond-du-Lac Indian reservation also operates van service to and from Duluth for their customers. It is unclear as to whether casino workers who may be traveling from Duluth could also use this service.
- The Cloquet Human Development Center oversees a program of volunteer drivers, called Peer Helper Drivers that provides transportation services. Current and former clients act as the drivers. They are paid for their time and mileage and they, in turn, pick up other clients to bring them to medical appointments, shopping, work or other destinations. Problems include a lack of funding (\$\$\$ often run with three to four months left in the fiscal year) as well as a lack of drivers so that needs always outstrip the ability to serve.
- Social service agencies in Cloquet do currently contract with Arrowhead Transit to provide service for group outings.



- There is a Park-and-Ride lot in Scanlon near I-35 that could be used at greater intensity if route service into Duluth were initiated.
- Larson Commons is a senior assisted-living center in Cloquet that may be a potential generator of transit trips.

### **Transit Service to Duluth**

- Arrowhead Transit operates a regular service from Cloquet into Duluth every Friday. For trips into Duluth on other days, riders must call in advance to schedule service

### **Transit Needs**

- There are social services in Duluth to which Cloquet residents need access. Specifically, job-training programs oriented to social service clients.
- There is no “fare sharing” agreement between DTA and Arrowhead Transit (people who ride Arrowhead Transit into Duluth must pay a second fare to use DTA service). If there were a “seamless” service into Duluth and then around the city, this would be attractive to potential riders.
- Some people needing transit services could use a fixed-route system, and would be capable of getting to a park-and-ride lot by either scheduling with Cloquet DAR or making other arrangements, such as walking or driving. However, there will always be riders who need door-to-door type service.
- Currently there is no good service connecting Cloquet to the southern portion of Carlton County (Moose Lake). Most persons using this type of service would be coming into Cloquet from Moose Lake for shopping and medical- social service-purpose trips.
- Other potential park-and-ride lot locations include a municipal parking lot at 10th Street and Cloquet Avenue and the shopping areas south of town on Hwy. 33.
- Marketing could be used to increase ridership by making people aware of existing services. Marketing could also be used to identify transit needs and gaps in service. It should also address the costs of driving and the benefits of using transit.
- The Cloquet City Planner noted that the employment base in Cloquet exceeded the population base, an indicator of the draw of Cloquet as a commuting destination.

### **Transit for Employment:**

- Although there may be some Cloquet residents needing transit services into Duluth for work purposes, there may actually be a larger market for Duluth residents working in Cloquet. Large employment generators include Potlatch, USG (manufactures ceiling tile), Upper Lakes Foods (recently relocated from Superior, Wis.), and Carlton County.

### **Transit Costs**

- A range of \$2 to \$3 one-way fare was considered reasonable for service into Duluth.

### **Other Transit Markets**

- Students: There may be a market for college students living in Cloquet and going to school in Duluth. Also, transit could be marketed more to high school students, especially for trips into Hermantown to the mall.

### 3. TRANSIT MARKET ANALYSIS

Upon completion of the needs assessment portion of the study, focusing on all potential transit customers from the target market cities of Cloquet, Hermantown and Two Harbors, a market analysis was conducted to provide a more fine-grained picture of the characteristics of the most likely transit customers. In order to bring this picture into focus, the survey data summarized in the needs assessment was further analyzed, focusing on a sub-segment of responders from the target market cities.

#### POTENTIAL COMMUTER TRANSIT RIDERS FROM TARGET MARKET AREAS

The first screen used to filter out the likely transit riders was to sort from the 222 responders to the June 2001 survey those persons who responded positively to being potential riders of a new, commuter-oriented transit service into Duluth; 141 persons responded they would be likely transit riders. The next screen applied was to sort out those persons who would be peak-period transit riders. Effective commuter transit service typically focuses on peak-period service, defined for the purposes of this study as those persons starting work between the hours of 7:00 a.m. and 9:00 a.m. After analyzing the 141 responses indicating a potential interest in using commuter transit service, it was determined that 124 of the 141 were potential peak-period transit riders, or a total of 88 percent of all potential transit riders from the target market cities.

The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized in Table 2 below:

<b>TABLE 2 Profiles of Potential Commuter Transit Riders from Cloquet, Hermantown, and Two Harbors (sample size of 124)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
28 percent		72 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	5 percent	14 percent	53 percent	28 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
4 percent	36 percent	26 percent	19 percent	15 percent

## **Amenities**

Survey respondents were queried regarding the amenities they would like to have provided on a bus. Possible responses listed on the survey included on-board newspapers, radio news, and a reading light. Many survey respondents chose to select more than one amenity, creating many different combinations of responses (reading light and newspaper, newspaper and radio news, etc.). The analysis of responses focuses on persons who responded with a desire for a single amenity, in order to perceive whether one amenity was more desirable for potential riders than another.

All three amenities were generally well regarded. The most interest was expressed for on-board newspapers followed closely by radio news. Slightly less interest was expressed for reading lights.

## **Commuter Transit Markets by Employer**

Commuter transit markets by major employer were also analyzed, looking at those survey respondents who responded positively as potential transit riders and examining their characteristics. The results of this analysis are summarized in Attachment D.

## **SENSITIVITY TO TRANSIT SERVICE CHARACTERISTICS**

After assessing general characteristics of a likely transit market population from the target market areas, the survey data was analyzed to assess the sensitivity of potential transit customers to various transit service characteristics. Characteristics included fare, timeliness, type of drop-off at the work site, type of access at the home end, and directness of travel between home and work.

### **FARE LEVELS**

Of those persons initially willing to consider transit, 25 percent would like to see a fare less than \$1. A total of 50 percent of potential transit riders would like a fare of not more than \$2, with the remainder (25 percent) willing to pay above \$2.

### **ACCESS FROM HOME**

Respondents expressed equal interest in accessing transit service from a park-and-ride lot or walking to a nearby (not more than 3 blocks from house) bus stop. Not much interest was expressed in needing a guaranteed ride home program in order to make the service more viable.

## DIRECTNESS TO WORK

There was a greater level of sensitivity expressed by respondents in terms of directness of travel than in access to transit. Although there was little drop in interest if the home-trip end access switched from outside the home to a park-and-ride lot, there was a significant drop in interest expressed if the work-trip end access switched from outside the work place to walking up to three blocks from a bus stop. An even more significant drop in interest was expressed if the work-trip end access required a transfer to another bus route. Were a transfer necessary, only \_ as many persons would likely ride a bus than would ride a bus with a direct drop-off at the work place.

## TIMELINESS

Respondents did not express a great deal of sensitivity to the amount of time dropped off prior to the start of their work shift. One-fourth of respondents wanted to arrive within 10 minutes of their start time, \_ wanted to arrive within 15 minutes, and \_ wanted to arrive within 20 minutes of the start of their work shift. One-fourth of respondents were willing to arrive up to 30 minutes in advance of the start of their work shift.

## CONCLUSION

The most important factor in transit service characteristics would appear to be how close to the work site employees can be dropped off. Other factors appear to have equal influence on potential transit use.

## **SIZE OF POTENTIAL COMMUTER TRANSIT MARKET**

The survey administered to major Duluth employees had a return rate of 19 percent from 3,700 surveys administered. Since there were 222 responses from employees living in the target market cities, it was determined that the total sample size of target market employees would be 1,168. With a total of 141 responders indicating they were interested in commuter transit service, this represents 12 percent of all target market area employees willing to consider transit.

However, when persons indicating an interest in transit were further queried regarding their tolerance for transit service characteristics, it was discovered that the customer base became smaller than the initial 12 percent. In fact, only 2 to 4 percent of target market employees would be willing to consider transit under a reasonable service scenario that could be provided in the area (fare at \$1 – \$2, pick up near their home, drop off not directly in front of work site, arrival time 10 – 15 minutes prior to work). In other words, a gross total of 25 to 50 persons would be likely users of a new, commuter-oriented transit service from the cities of Hermantown, Cloquet and Two Harbors into Duluth. Attachment C contains detailed material concerning potential transit markets and the sensitivity of likely riders to transit service characteristics.

## COMPARISON OF OVERALL SURVEY RESPONDENTS TO TARGET MARKET AREA RESPONDENTS

To conclude the market analysis of potential Duluth regional transit riders, a rider profile comparison of respondents from the target market areas was made to the total universe of survey respondents (764). Table 3 summarizes the characteristics of these populations.

**TABLE 3**  
**Comparison of Sample Population**

	<b>Global Sample (764 respondents)</b>	<b>Target Area Sample (222 respondents)</b>	<b>Likely to Use Transit for Commuter Trips (124 respondents)</b>
<b>Gender</b>			
<b>Male</b>	28%	26%	28%
<b>Female</b>	72%	74%	72%
<b>Age</b>			
<b>Under 18</b>	1%	1%	0%
<b>18 – 24</b>	6%	6%	5%
<b>25 – 35</b>	18%	15%	14%
<b>36 – 50</b>	45%	45%	53%
<b>Over 50</b>	30%	33%	28%
<b>Income</b>			
<b>Under \$18,000</b>	14%	9%	4%
<b>\$18,000 - \$30,000</b>	30%	33%	36%
<b>\$31,000 – 45,000</b>	29%	26%	26%
<b>\$46,000 - \$60,000</b>	15%	19%	19%
<b>Over \$60,000</b>	12%	13%	15%

## **Conclusion**

The make-up of likely transit riders of commuter service from the outlying areas of Duluth during traditional peak period times is very similar to the population of employees that responded to the survey. As a result, potential transit riders need not be thought of as a unique set of individuals but merely the same as the general employment group, at least those who responded to the survey. Marketing to potential transit riders will need to focus on attitudinal differences this group may have with the general employee population, not necessarily on demographic differences.



## **4. RECOMMENDATIONS**

The following recommendations are based on a review of existing transit services and needs as identified through analysis of demographic trends, employee surveys and small-group discussion meetings.

### **CLOQUET AND TWO HARBORS**

- The level of identified need for commuter-type bus service from Cloquet and Two Harbors into Duluth does not appear to warrant the initiation of new commuter-type transit services. The existing transit services (Arrowhead Transit and the Cloquet Dial-a-Ride and LCS Coaches) appear to be adequately meeting the identified needs. Some opportunities may exist to enhance these existing services, and these are spelled out in the recommendations that follow.
- Arrowhead Transit could partner with DTA in examining expanding transit service to cover the recreational market. In doing so, DTA could build off of their existing commitment to bicycle commuters, as well as expanding service to another target market, specifically recreational bikers and hikers wanting to use the trails along Lake Superior to Two Harbors and Duluth.
- An existing park-and-ride lot at Scanlon and I-35W should be investigated as a potential site of a Transit Hub for the various transit services that could make use of it. Potential and current users include LCS Coaches, Cloquet Dial-A-Ride and Arrowhead Transit.
- The City of Cloquet could examine partnering with the City of Carlton to ensure that the Greyhound terminal located near the Casino was provided bus service by Cloquet DAR.

### **ENHANCE DTA TRANSIT SERVICES IN THE CITY OF HERMANTOWN:**

- In the City of Hermantown, there may be opportunities to provide needed transit services by incrementally increasing existing levels of DTA service, focusing on concentrations of population and transit trip generators in the city. Transit service corridors are depicted in Figure 2 and include Highway 53 near the Miller Hill Mall area, West Arrowhead Road, Maple Grove Road and Stebner Road. These corridors were identified based on clustering of either employees of major Duluth employers (see Figure 5 in Attachment B), or clustering of commercial, institutional or residential land uses. Figure 2 also depicts “transit crossroads” or the areas of intersection of one transit corridor with another. These “crossroads” also contain concentrations of transit trip generators such as the Miller Hill Mall, St. Luke’s Urgent Care and the Hermantown Clinic in the northern area (Highway 53 and Stebner Road) and the Deerfield Apartments, an Industrial Park and an area zoned for future multi-family housing at the southern transit “crossroad”.

- DTA should investigate the potential for establishing a park-and-ride lot in Hermantown. Potential sites should focus on the transit service corridors and “crossroads” as depicted in Figure 2. There may be an opportunity to partner with businesses in the Miller Hill Mall area to use outlying areas of existing parking lots under a shared-use contract. This type of agreement would minimize start-up capital costs to the DTA.
- DTA should investigate reconfiguring the existing Duluth Heights/Mall route to serve business clusters located near the Duluth International Airport. Cirrus Design, located at 300 Airport Road has indicated an interest in developing transit services for their employees. Other nearby employers include Natural Resource Research Institute (NRRI) located on Highway 53 and Airport Road, and United Health Group located at Arrowhead and Rice Lake Road in Duluth.
- DTA should work with major employers in Hermantown to identify existing company-based transportation programs such as ride-sharing, van-pool, or transit-incentive programs. If no such programs exist, DTA should partner with interested employers to develop these programs based on identified needs. Educational materials (brochures/hand outs, etc.) should be developed by DTA to be provided to employers highlighting the financial incentives for companies to offer transit options to employees, including information about relevant federal and state programs
- If DTA chooses to institute new transit services based on the success of incremental steps to reconfigure existing transit services, they should start with a “non-traditional” service configuration using smaller buses or vans and operating with employer-based trip ends. This would support the findings summarized in the “Market Analysis” portion of this study concluding that trip ends stopping directly at an employees’ work place were the most valued transit service characteristic of potential transit riders.

## **ENHANCE EXISTING STUDY AREA TRANSIT MARKETING EFFORTS**

- Current marketing efforts should be reviewed to ensure that target markets are aware of the range of transportation services available. Typical target markets include social services clients, students, the elderly and disabled. Transit markets that emerged from the survey data (discussed in Chapters 2 and 3) indicate the most likely customer in the Duluth area to be female, over the age of 35, with an annual income over \$18,000.
- Given the interest by employers in administering transit service surveys, DTA may want to periodically administer the same survey instrument as was used for this study. In so doing, a baseline could be developed and fluctuations in interest in transit could be noted. Also, by periodically administering the transit service survey, there would be an opportunity to identify new companies whose growing employee base may warrant partnering with DTA to provide service and/or initiate employer-based transit programs.

## ENHANCE EXISTING STUDY AREA TRANSIT SERVICE

- DTA, Arrowhead Transit and potentially LCS Coaches should examine the feasibility of various “shared pass” transfer programs between Arrowhead Transit, DTA and LCS Coaches, allowing a seamless transfer between the three systems. One option could be a “universal” pass purchased at the trip point of origin that would allow a rider to transfer at no extra charge from one system to another. Other options include using electronic fare cards charged by the customer to whatever value they wished that would automatically deduct the fare and allow transferring from one system to another, with or without an additional fare payment for the transfer. If electronic fare cards sharable between DTA, Arrowhead Transit and LCS Coaches were deemed infeasible, punch passes could be used that would still allow for tracking and/or charging for transfers between the two systems.
- Transferring between transit systems can be intimidating for persons not familiar with transit operations, particularly for elderly persons. This is especially true when service is infrequent and the result of missing one’s bus may mean a long wait for the next bus or the need to hire a taxi service to end one’s trip. DTA could explore various means of making this process less intimidating and strengthening the “guarantee” of a ride home. Strategies could range from ones using relatively “low-tech” solutions, such as drivers using in-vehicle communication systems to inform each other about passengers wishing to transfer and alerting them to wait, to “high-tech” solutions using global positioning systems placed on either the vehicle or the passengers themselves to communicate the position of the bus to the passenger or vice versa. These “transfer assurance” strategies may only have to be used once or twice per passenger before the comfort level of understanding how to transfer and the operating characteristics of the various routes became familiar enough that these extraordinary measures would not need to be taken. This program could be marketed to persons who would find it most attractive, namely elderly persons and the special needs population to make them aware of existing transit services and the enhanced ease of transferring from one system to another to complete their journey.
- DTA should examine reinstating the Miller Hill Mall area circulator. The circulator should connect stores within the mall area as well as serving St. Luke’s Urgent Care and the Hermantown Clinic.

**ATTACHMENT A**

**Regional Transit Survey**

# Regional Transit Survey

The purpose of this survey is to gauge interest in expanded transit service for people living outside of the Duluth Metro Area. Your answers **WILL IMPACT** future transit decisions regarding long-distance commuters. Please take the next 3-5 minutes to complete this survey and return it to a place designated by your employer. The Duluth Transit Authority thanks you.

1. Location & Demographics (Please circle or fill-in answer)

Which state do you live in?	<b>MN</b>	<b>WIS</b>			
What is your zip code?					
What is the major intersection closest to your home?					
Age:	<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>50+</b>
Gender:	<b>Female</b>	<b>Male</b>			
Yearly Income:	<b>Under \$18,000</b>	<b>\$18,000 – \$30,000</b>	<b>\$31,000 – \$45,000</b>		
	<b>\$46,000 – \$60,000</b>	<b>\$61,000 +</b>			
Available number of automobiles in your household:	<b>1</b>	<b>2</b>	<b>3+</b>		
Current travel mode to work:	<b>Drive alone</b>	<b>Carpool</b>	<b>Other _____</b>		

2. What time do you leave your house to get to work? \_\_\_\_\_ a.m. or p.m.
3. What time do you start work? \_\_\_\_\_ a.m. or p.m.
4. What time do you leave work to return home? \_\_\_\_\_ a.m. or p.m.
5. Would you consider riding a bus to work if this service was offered? \_\_\_Yes \_\_\_No \_\_\_Maybe  
(If you answered No to this question, you do not have to complete the rest of the survey.)
6. A Park and Ride lot is a parking lot set aside for transit riders to park their vehicle and then ride the bus to their final destination. Would you use a Park & Ride facility (free parking/pay for bus) if available or would you prefer to walk to a bus stop? \_\_\_ Park & Ride \_\_\_ Walk to bus stop
7. What do you feel is a reasonable fare to pay for long-distance bus service from your hometown to work?  
 \_\_\_ Less than \$1      \_\_\_ \$1 – \$2      \_\_\_ \$2 – \$4      \_\_\_ more than \$4

8. Would you need an "emergency ride-home assurance" (a guaranteed ride home at any time of the day in case of emergency) to consider riding a bus?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No                      \_\_\_\_\_ No, but it would be nice

9. Which items would you like to have on a bus (check all that apply)?

\_\_\_\_\_ On-board newspapers    \_\_\_\_\_ radio news    \_\_\_\_\_ reading light

Other: \_\_\_\_\_

10. What is the longest time you would be willing to wait for your work shift to start after the bus drops you off?

\_\_\_\_\_ 5 – 10 minutes                      \_\_\_\_\_ 10 – 15 minutes  
 \_\_\_\_\_ 15 – 20 minutes                      \_\_\_\_\_ 20 – 30 minutes

11. Consider the following bus service options and rate your likelihood of riding the bus on a scale of one (definitely not) to five (definitely).

**Would you ride the bus if...**

A. The bus would start at a park-and-ride lot near your house

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

B. The bus would stop no farther than three blocks from your house.

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

C. The bus would stop directly at your house.

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

D. The bus would arrive at one or two central locations in downtown Duluth and you would need to transfer to a local bus service to get to work.

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

E. The bus would operate on a limited route in Duluth and you might have to walk up to three blocks to get to work.

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

F. The bus would stop directly at your place of work.

<b>Definitely</b>					<b>Definitely</b>
<b>Not</b>			<b>Maybe</b>		<b>Definitely</b>
1	2	3	4	5	

12. Please share any additional comments regarding long-distance commuter bus service?

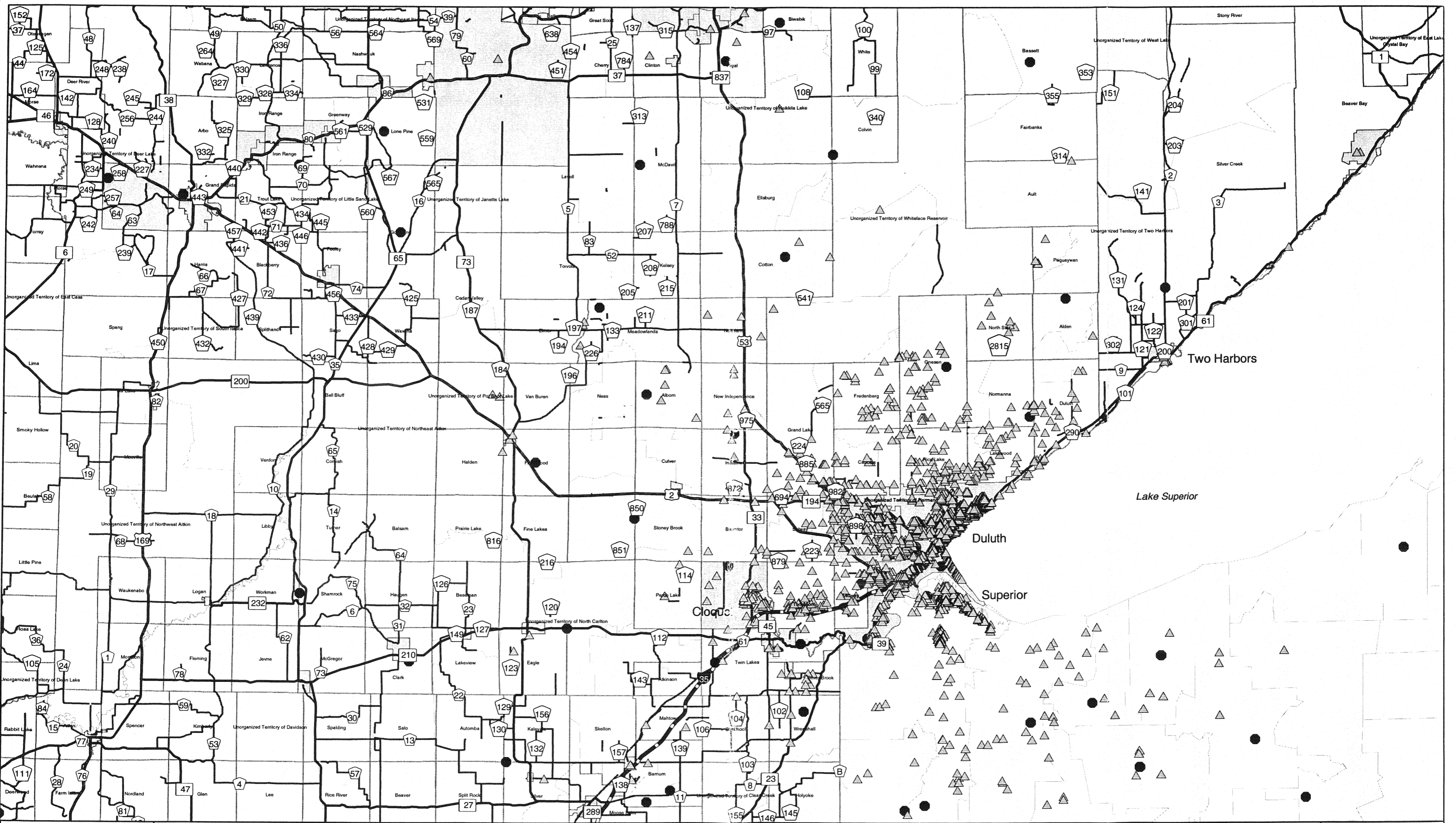
\_\_\_\_\_

\_\_\_\_\_

**PLEASE RETURN THIS SURVEY TO HUMAN RESOURCES AS SOON AS POSSIBLE & THANK YOU FOR YOUR PARTICIPATION!**

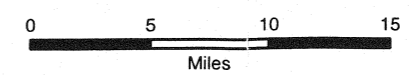
**ATTACHMENT B**

**Figures Depicting Employee Database**



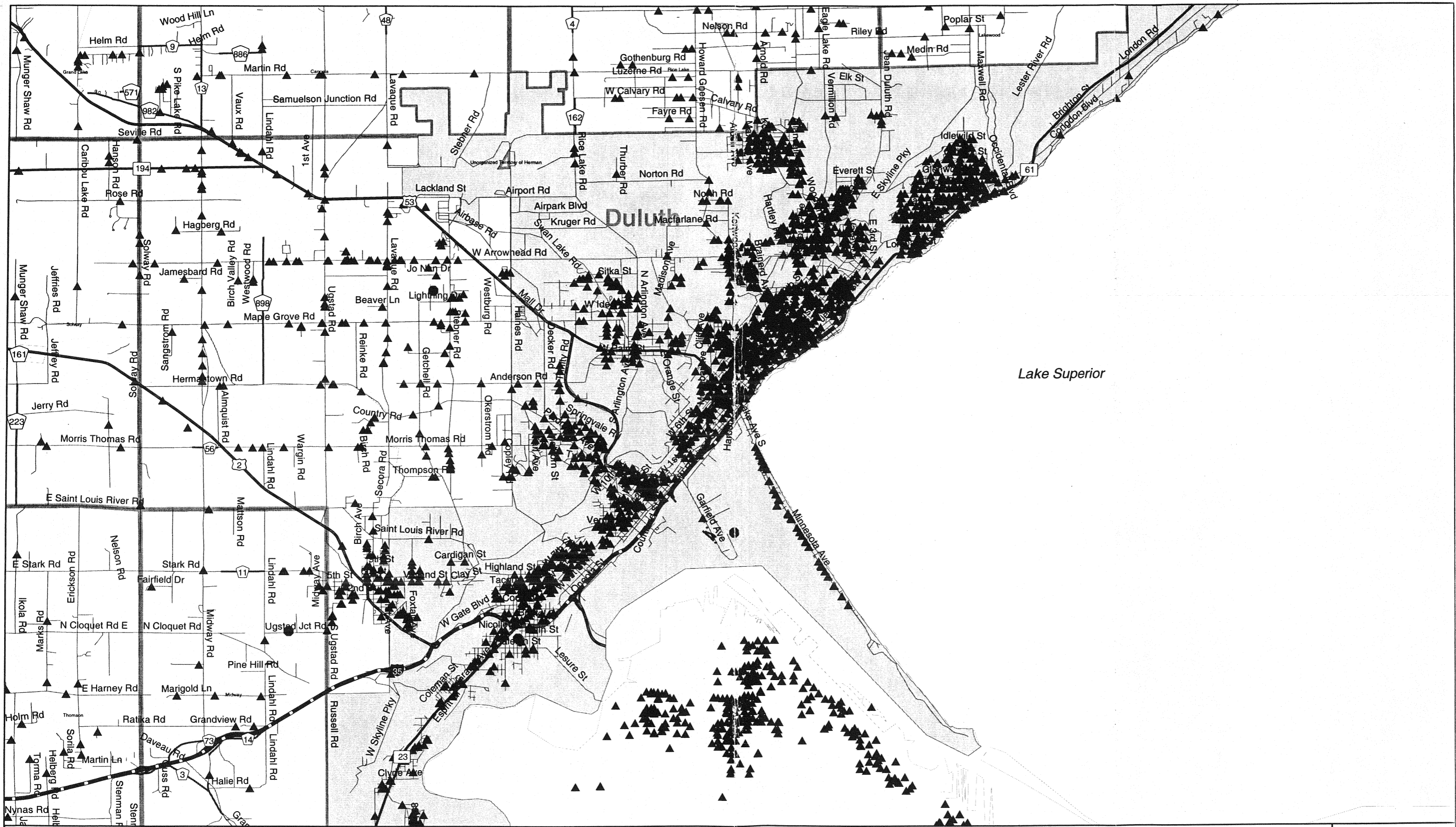
- ▲ Location of Employees
- Employees Mapped by Zip Code Only

## Employees of Duluth's Major Employers



**Figure 1**





- ▲ Location of Employees
- Employees Mapped by Zip Code Only

## Duluth Employees

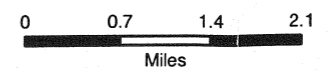
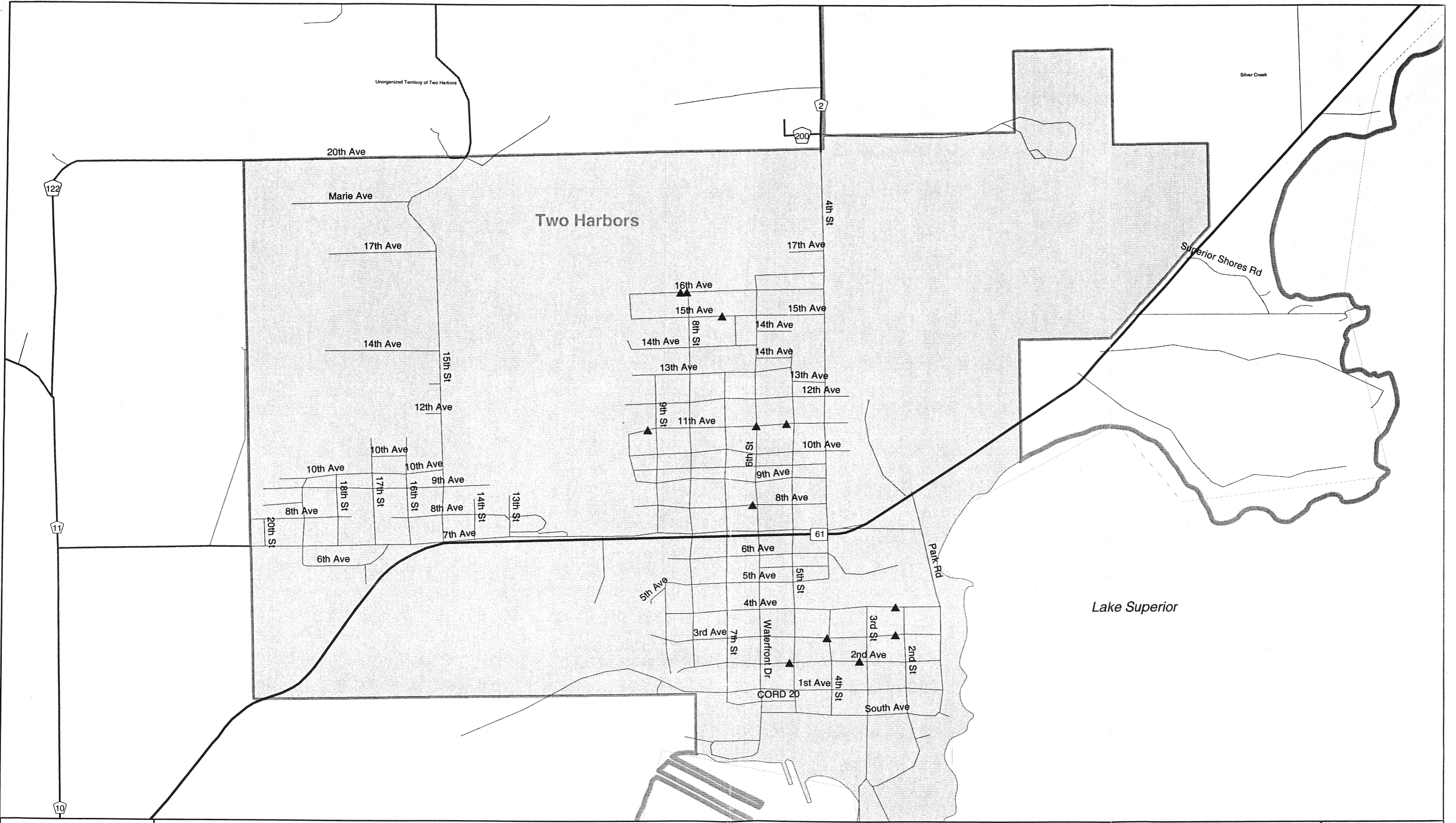
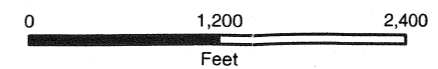


Figure 2



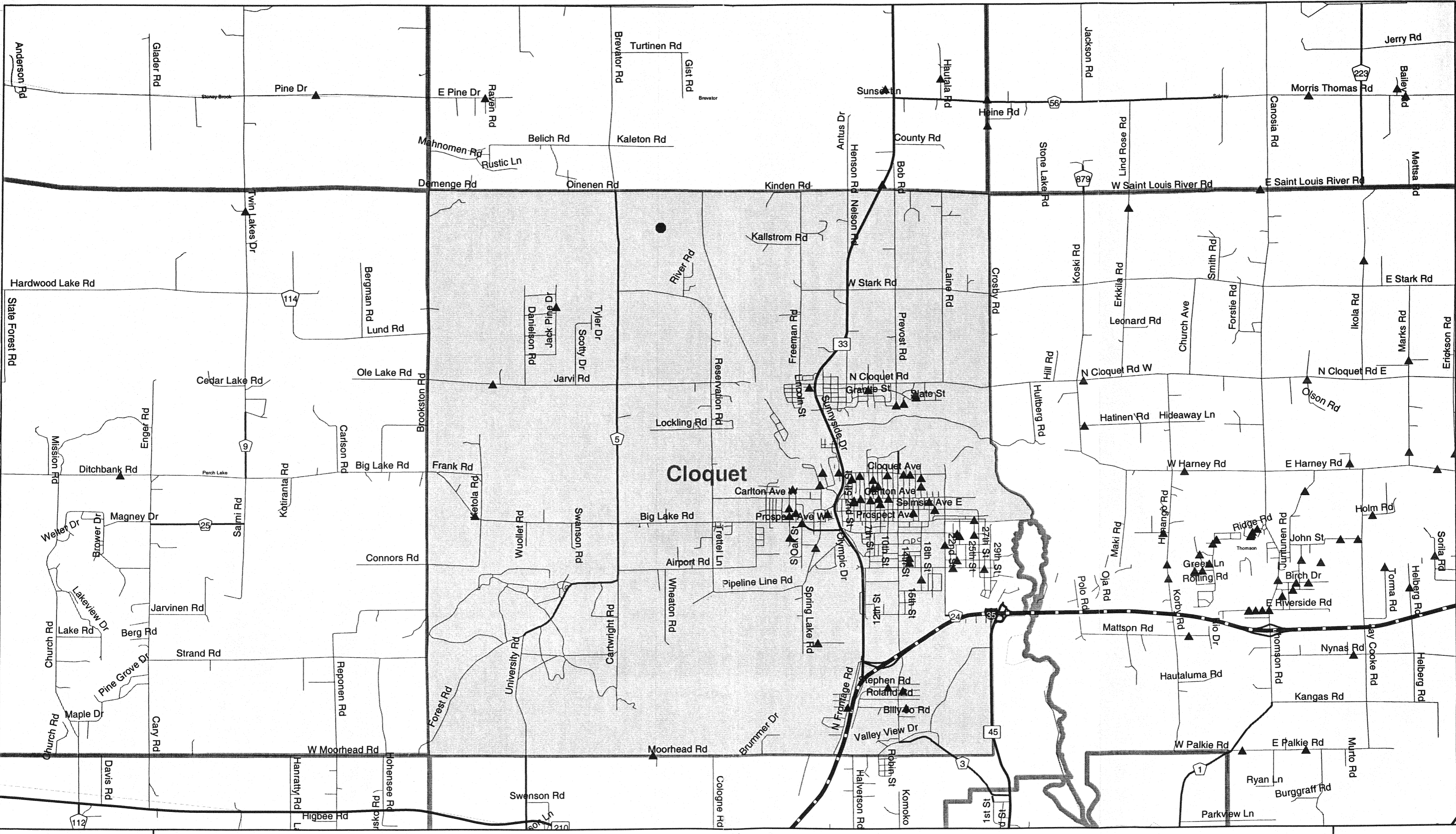
- ▲ Location of Employees
- Employees Mapped by Zip Code Only

## Two Harbors Employees



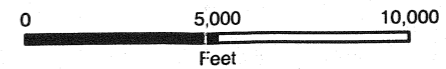
**Figure 3**



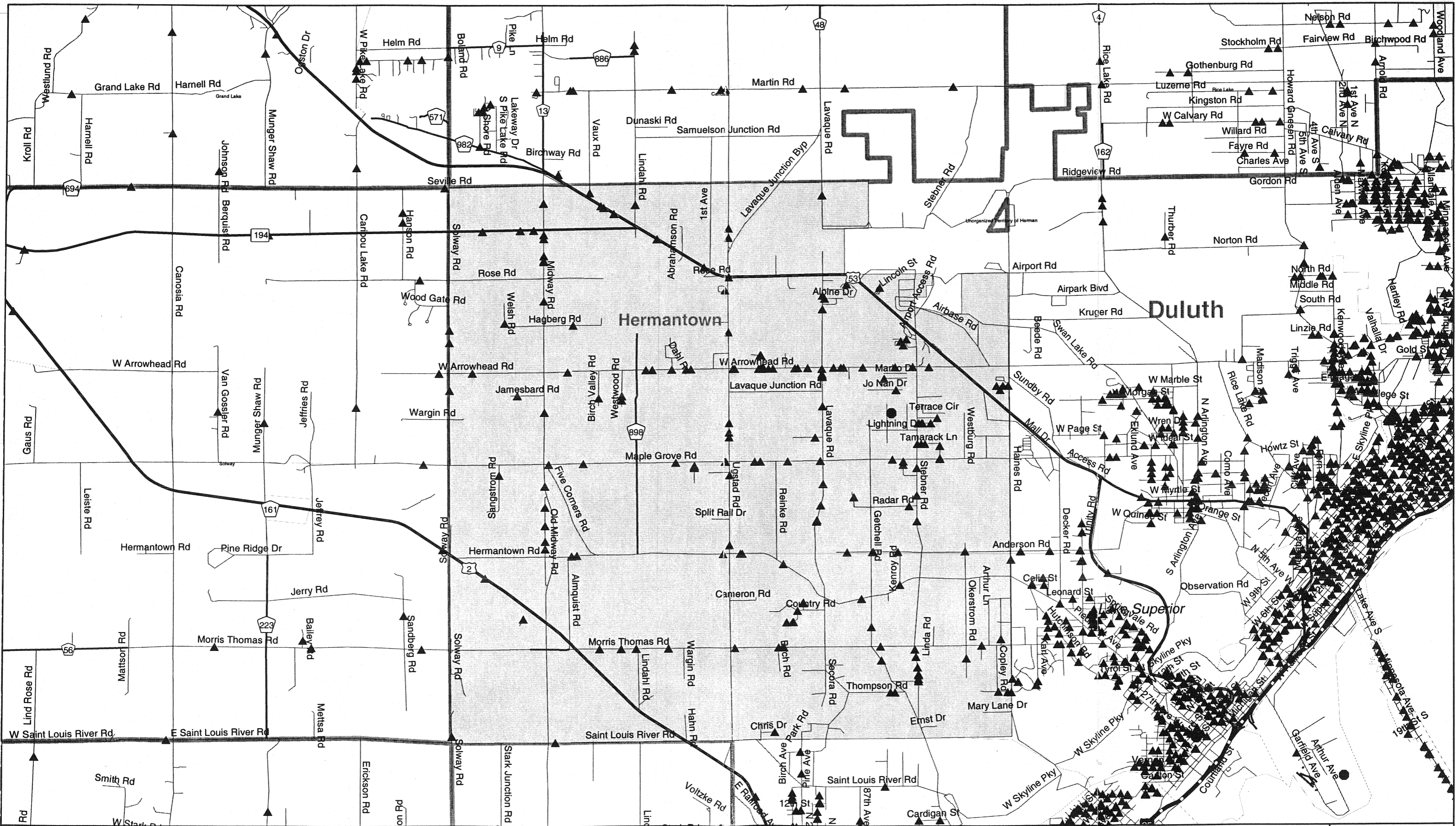


- ▲ Location of Employees
- Employees Mapped by Zip Code Only

## Cloquet Employees



**Figure 4**



- ▲ Location of Employees
- Employees Mapped by Zip Code Only

## Hermantown Employees

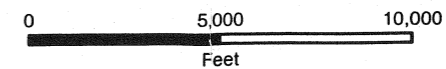


Figure 5

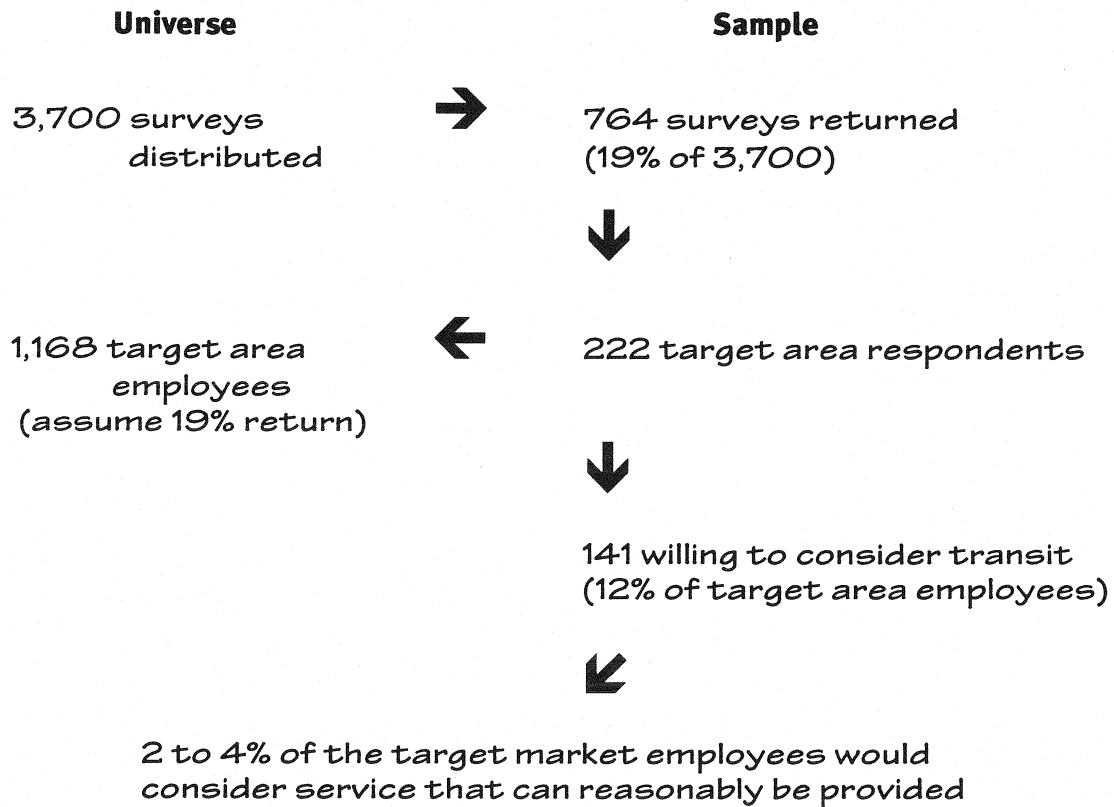
**ATTACHMENT C**

**Transit Market Analysis Technical Appendix**



# Duluth Regional Transit Study

## Market Analysis



23 to 47 employees from all target market areas combined would likely ride the bus to Duluth under a reasonable service scenario (fare at \$1 - \$2, pick up near their home, drop-off not directly in front of work site, arrive 10 - 15 minutes prior to work) given current reaction to transit service.

## **Duluth Regional Transit Study**

### **Sensitivity to Transit Service Characteristics**

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#### **Market**

- 12% of target area employees initially willing to consider transit.

#### **Fares**

- ¼ require fare less than \$1
- ½ willing to pay \$1 - \$2 per trip
- ¼ willing to pay above \$2

#### **Access**

- Equal interest in walking to bus stop or driving to park-and-ride.
- Not much interest in guaranteed ride home.

#### **Directness**

- Little drop in interest if home-end access switches from outside the home to park-and-ride.
- Significant drop in interest if work-end access switches from outside the work place to walking up to three blocks.
- More significant drop in interest if work-end access requires a transfer to another bus route (only ¼ level of interest of direct drop-off).

#### **Timeliness**

- Not a great deal of sensitivity to amount of time dropped off prior to work. One-fourth want to arrive within 10 minutes of start time, ½ want to arrive within 15 minutes and ¾ want to arrive within 20 minutes of the work start time. One-fourth willing to arrive up to 30 minutes.

#### **Conclusion**

- Most important factor appears to be how close to the work site employees can be dropped off. Other factors appear to have equal influence on potential transit use.

**Duluth Regional Transit Study**  
**Sensitivity to Transit Service Characteristics (percentage of**  
**target-area employees willing to use transit under various**  
**service conditions)**

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**TABLE A**  
**Fare of less than \$1; Wait time of less than 10 minutes**

	Destination		
	Transfer	3 Blocks	Work
Origin			
Park/Ride	3%	6%	9%
3 Blocks	3%	7%	10%
House	3%	7%	11%

**TABLE B**  
**Fare of less than \$1; Wait time of 10 – 15 minutes**

	Destination		
	Transfer	3 Blocks	Work
Origin			
Park/Ride	3%	5%	7%
3 Blocks	3%	6%	8%
House	3%	6%	8%

**TABLE C**  
**Fare of less than \$1; Wait time 15 – 20 minutes**

	Destination		
	Transfer	3 Blocks	Work
Origin			
Park/Ride	2%	4%	6%
3 Blocks	2%	4%	6%
House	2%	4%	6%



**Duluth Regional Transit Study**  
**Sensitivity to Transit Service Characteristics (percentage of**  
**target-area employees willing to use transit under various**  
**service conditions)**

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**TABLE D**

Fare of \$1 - \$2; Wait time of less than 10 minutes

Destination			
	Transfer	3 Blocks	Work
Origin			
Park/Ride	2%	5%	7%
3 Blocks	2%	5%	7%
House	2%	5%	8%

**TABLE E**

Fare of \$1 - \$2; Wait time 10 – 15 minutes

Destination			
	Transfer	3 Blocks	Work
Origin			
Park/Ride	2%	4%	6%
3 Blocks	2%	5%	6%
House	2%	4%	6%

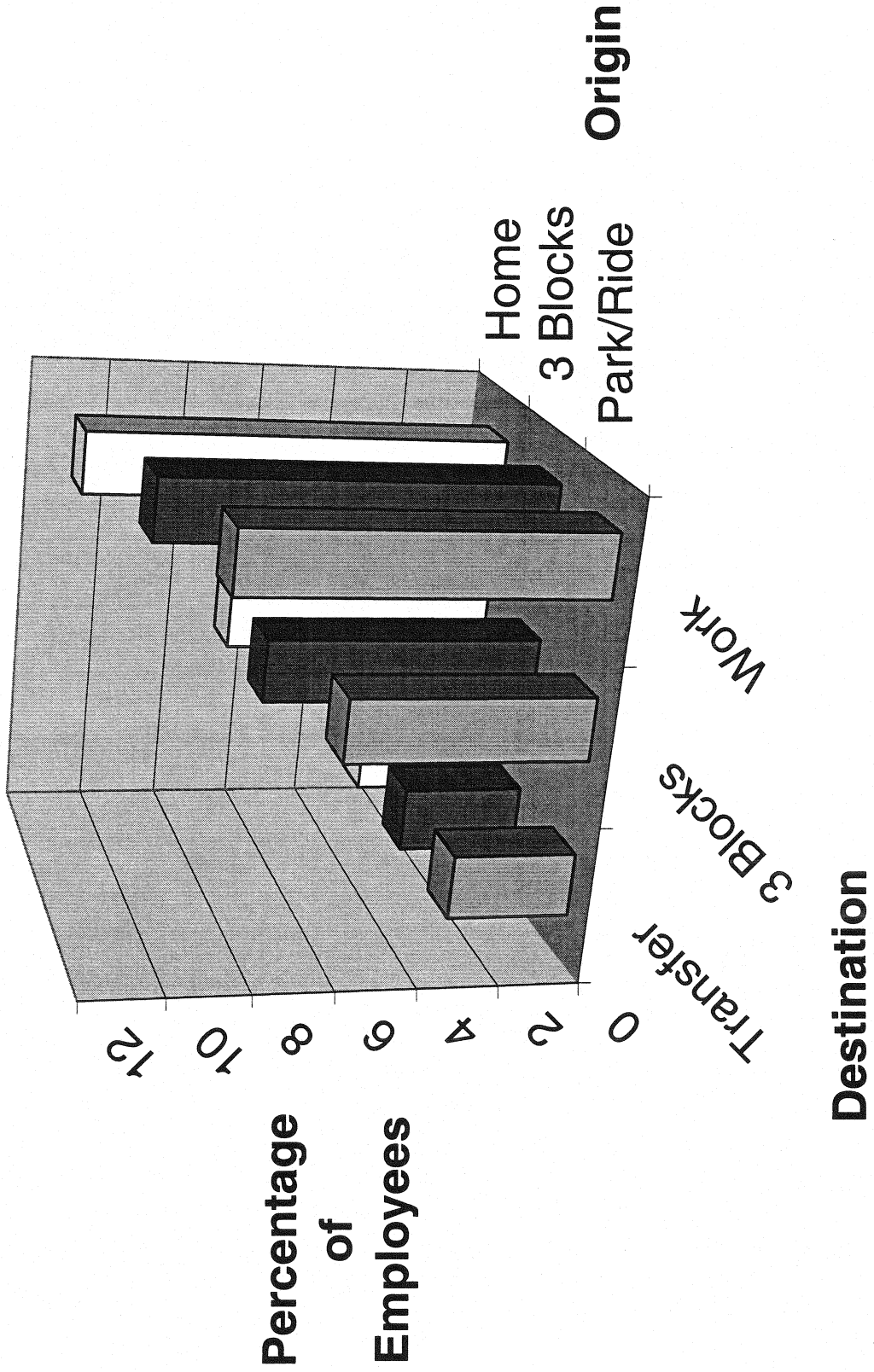
**TABLE F**

Fare of \$1 - \$2; Wait time of 15 – 20 minutes

Destination			
	Transfer	3 Blocks	Work
Origin			
Park/Ride	1%	3%	4%
3 Blocks	2%	3%	5%
House	2%	3%	5%

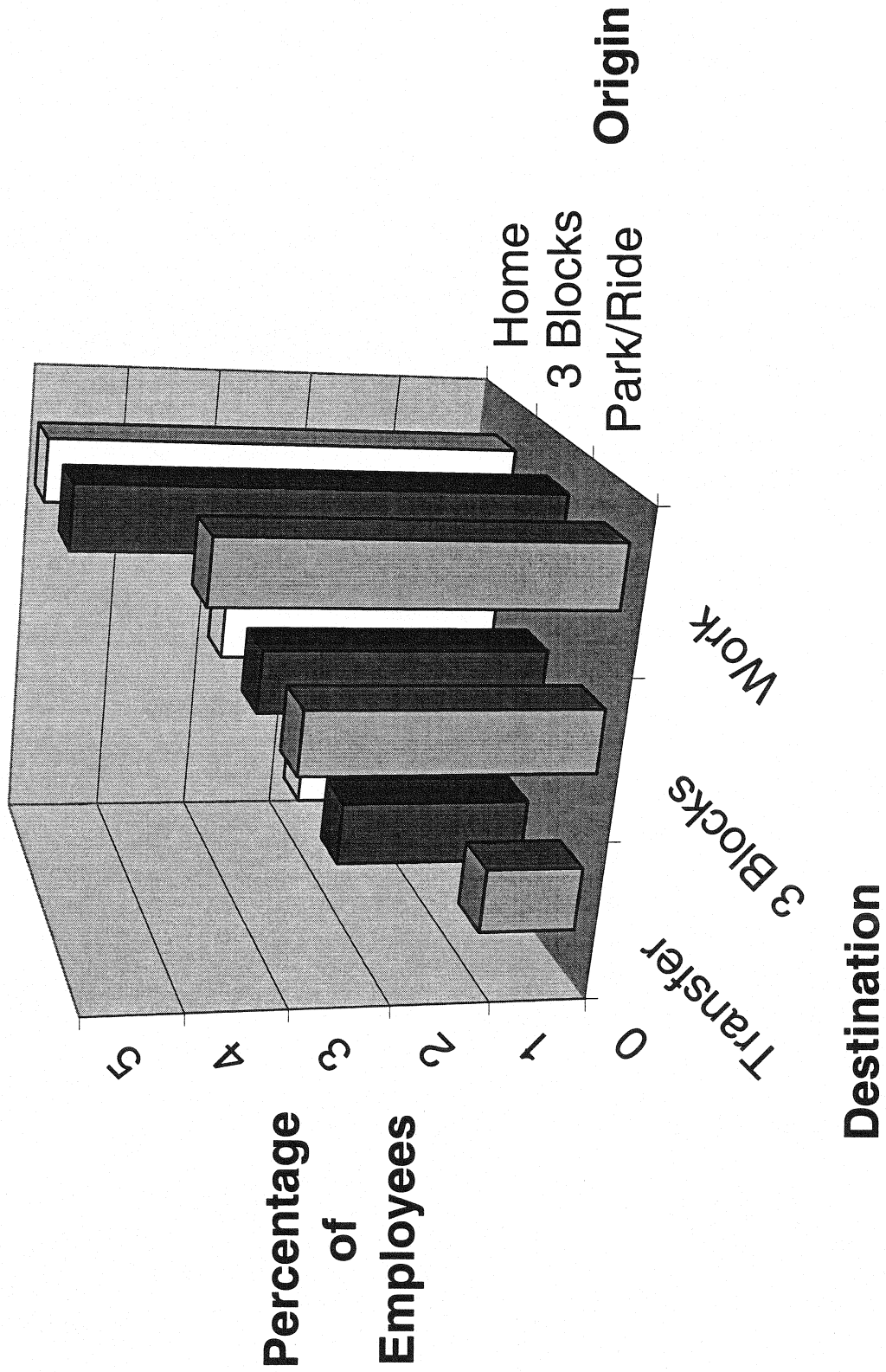
# Duluth Regional Transit Study

**Best Case: Fare <\$1, Wait <10 Minutes**



# Duluth Regional Transit Study

Likely Case: Fare \$1-2, Wait 15-20 Minutes



**ATTACHMENT D**

**Commuter Transit Markets by Employer**

## **COMMUTER TRANSIT MARKETS BY EMPLOYER**

As part of the Duluth Regional Transit Study, an analysis was completed of survey respondents who indicated they would be likely riders of commuter transit for each of the five major Duluth employers listed below. The responses summarized in Tables 1 through 5 again focusing on the target market areas of Cloquet, Hermantown and Two Harbors. A total of ten employers were represented in the sample of respondents living in the target market areas. The largest number of responses came from the following employers:

- University of Minnesota, Duluth – 80 responses
- Hermantown Schools – 38 responses
- Advanstar – 37 responses
- St. Scholastica – 21 responses
- Lake Superior College – 18 responses

The results of this analysis can be used to tailor services and marketing strategies to these directed markets.

**PROFILES OF POTENTIAL COMMUTER TRANSIT RIDERS TO THE UNIVERSITY OF MINNESOTA, DULUTH (SAMPLE SIZE OF 57)**

A total of 62 respondents to the Regional Transit Survey living in Cloquet, Hermantown, and Two Harbors and working at the University of Minnesota, Duluth indicated they would be potential commuter transit riders. Of these 62 potential riders, 57 were potential, peak-period riders (work start between 7:00 a.m. and 9:00 a.m.). The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized as follows:

<b>TABLE 1 Profiles of Potential Commuter Transit Riders to the University of Minnesota, Duluth (sample size of 57)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
40 percent		60 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	2 percent	12 percent	51 percent	35 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
2 percent	26 percent	34 percent	18 percent	20 percent

**Amenities**

Respondents were most interested in on-board newspapers and reading lights.

**PROFILES OF POTENTIAL COMMUTER TRANSIT RIDERS TO  
HERMANTOWN SCHOOLS (SAMPLE SIZE OF 12)**

A total of 12 respondents to the Regional Transit Survey living in Cloquet, Hermantown, and Two Harbors and working at Hermantown Schools indicated they would be potential commuter transit riders. All of these 12 potential riders were potential, peak-period riders (work start between 7:00 a.m. and 9:00 a.m.). The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized as follows:

<b>TABLE 2 Profiles of Potential Commuter Transit Riders to Hermantown Schools (sample size of 12)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
27 percent		73 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	No responders	17 percent	66 percent	17 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
No responders	17 percent	41 percent	25 percent	17 percent

**Amenities**

Respondents were most interested in on-board newspapers and radio news.

**PROFILES OF POTENTIAL COMMUTER TRANSIT RIDERS TO ADVANSTAR  
(SAMPLE SIZE OF 25)**

A total of 26 respondents to the Regional Transit Survey living in Cloquet, Hermantown, and Two Harbors and working at Advanstar indicated they would be potential commuter transit riders. Of these 26 potential riders, 25 were potential, peak-period riders (work start between 7:00 a.m. and 9:00 a.m.). The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized as follows:

<b>TABLE 3 Profiles of Potential Commuter Transit Riders to Advanstar (sample size of 25)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
24 percent		76 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	16 percent	24 percent	36 percent	24 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
13 percent	64 percent	5 percent	9 percent	9 percent

**Amenities**

Respondents were most interested in radio news and on-board newspapers.



**PROFILES OF POTENTIAL COMMUTER TRANSIT RIDERS TO ST. SCHOLASTICA (SAMPLE SIZE OF 16)**

A total of 17 respondents to the Regional Transit Survey living in Cloquet, Hermantown, and Two Harbors and working at St. Scholastica indicated they would be potential commuter transit riders. Of these 17 potential riders, 16 were potential, peak-period riders (work start between 7:00 a.m. and 9:00 a.m.). The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized as follows:

<b>TABLE 4 Profiles of Potential Commuter Transit Riders to St. Scholastica (sample size of 16)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
No responders		100 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	7 percent	7 percent	79 percent	7 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
No responders	65 percent	7 percent	14 percent	14 percent

**Amenities**

Respondents were most interested in radio news and on-board newspapers.

**PROFILES OF POTENTIAL COMMUTER TRANSIT RIDERS TO LAKE SUPERIOR COLLEGE (SAMPLE SIZE OF 9)**

A total of 11 respondents to the Regional Transit Survey living in Cloquet, Hermantown, and Two Harbors and working at Lake Superior College indicated they would be potential commuter transit riders. Of these 11 potential riders, 9 were potential, peak-period riders (work start between 7:00 a.m. and 9:00 a.m.). The responses of these peak-period, potential transit riders were further analyzed and the results of this subset of survey responses are summarized as follows:

<b>TABLE 5 Profiles of Potential Commuter Transit Riders to St. Scholastica (sample size of 16)</b>				
<b>Gender</b>				
<b>Male</b>		<b>Female</b>		
11 percent		89 percent		
<b>Age Distribution</b>				
<b>Under 18</b>	<b>18-24</b>	<b>25-35</b>	<b>36-50</b>	<b>Over 50</b>
No responders	No responders	No responders	56 percent	44 percent
<b>Income</b>				
<b>Under \$18,000</b>	<b>\$18,000 to \$30,000</b>	<b>\$31,000 to \$45,000</b>	<b>\$46,000 to \$60,000</b>	<b>Over \$60,000</b>
No responders	23 percent	33 percent	33 percent	11 percent

**Amenities**

Respondents were most interested in radio news.