

CHAPTER 4. Travel in Anchorage Today

Introduction

During the past half-century, Anchorage grew from a community of 30,500 to a mid-sized metropolitan area of 270,000 residents. Anchorage also spread out, covering a larger urban expanse; diversified its economy with a broader mix of establishments and service; and welcomed new residents.

In 2002, a household travel survey gathered information from residents of the Anchorage Bowl and the Chugiak-Eagle River area. The survey measured the demographic composition of households, their economic characteristics, and their detailed daily trip-making behavior. It revealed that Anchorage residents made more than 980,000 individual one-way trips each weekday to move about the MOA. When visitors and Mat-Su Valley commuters are taken into account, the total number of trips on the Anchorage Bowl road network is more than 1 million each weekday.

This chapter examines the composition and characteristics of local travel and the trip-making behavior of the households and the persons who traveled. An understanding of travel behavior is a critical building block in evaluating our current transportation system and future transportation needs.

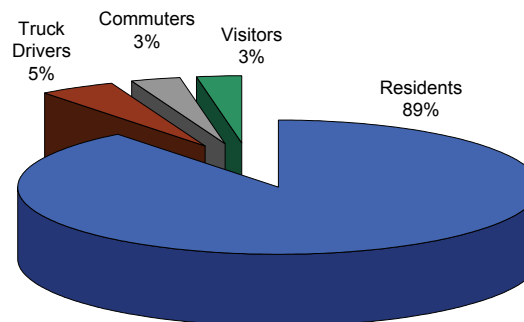
Who Travels in Anchorage

The Anchorage Household Survey measured trips made by MOA residents. Others making daily trips in the MOA are truck drivers, commuters and visitors from north and south of the MOA, and tourists and business persons temporarily in Anchorage. Figure 4-1 shows the percentages and types of travelers in Anchorage on a typical weekday in 2002.

Why People Travel

Travel is a part of the daily lives of all Anchorage residents; it takes them to work, recreation, shopping, school, and personal business

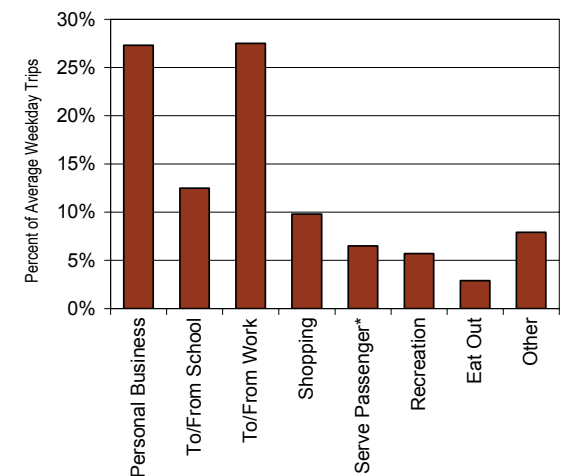
Figure 4-1. Who Travels in Anchorage



Source: DOT&PF and MOA

destinations. It also plays an essential role in activities of the business community, service organizations and institutions, government agencies, and the military. These varied travel purposes require trips to locations distributed throughout the community. Figure 4-2 shows the percent of travel by trip purpose in Anchorage on a typical weekday in 2002.

Figure 4-2. Why People Travel

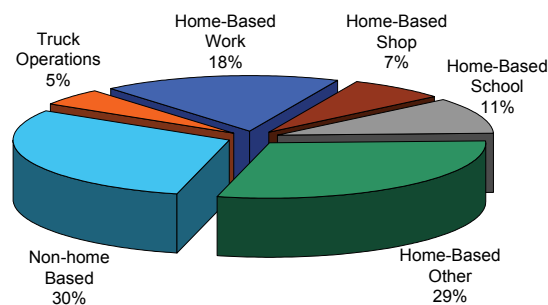


Source: 2002 Anchorage Household Survey

*A trip to "ferry" another person to and from desired location.

About 70 percent of all trips start or end at the traveler's home. These "home-based" trips include travel from home to work, shopping, and school. Trips that neither start nor end at the travelers' home are labeled "non-home" trips. Figure 4-3 shows the percentage of trips by purpose when viewed as home-based or non-home trips.

Figure 4-3. Home and Non-home Trips by Purpose



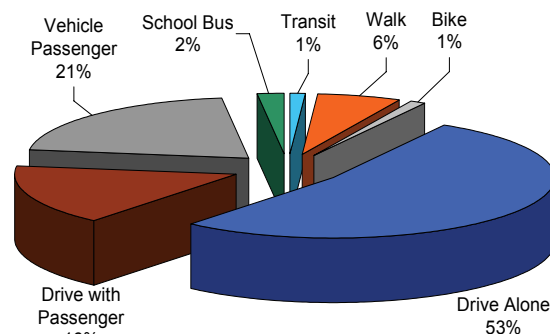
Source: 2002 Anchorage Household Survey

How People Travel

Walking, bicycles, automobiles, public transit, taxis, and trucks, as well as rail, air, and marine transport, all contribute to the mix of travel modes that serve daily needs.

Most trips in the Anchorage area – 90 percent – are made in personal vehicles, either as drivers or passengers. Figure 4-4 shows the distribution of travel by mode in Anchorage on a typical weekday in 2002.

Figure 4-4. How People Travel

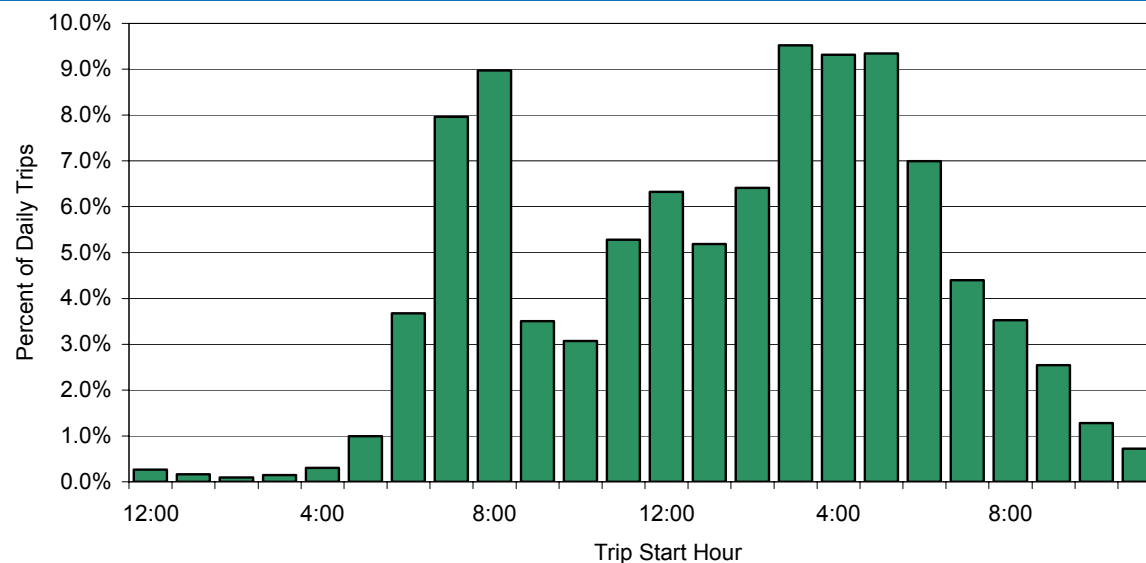


Source: 2002 Anchorage Household Survey

When People Travel

Travel occurs in a repetitive, daily cycle that mimics community activity. Characterized by low volume during night and early morning hours, trips increase abruptly for the morning commute, decrease during mid-day, and rise to the highest level during the afternoon commute, before steadily declining in the evening. This pattern repeats itself each weekday throughout the year, although the number of trips varies with seasons and weather conditions. Figure 4-5 charts trips in Anchorage on a typical weekday in 2002 by time of departure.

Figure 4-5. When People Travel



Source: 2002 Anchorage Household Survey

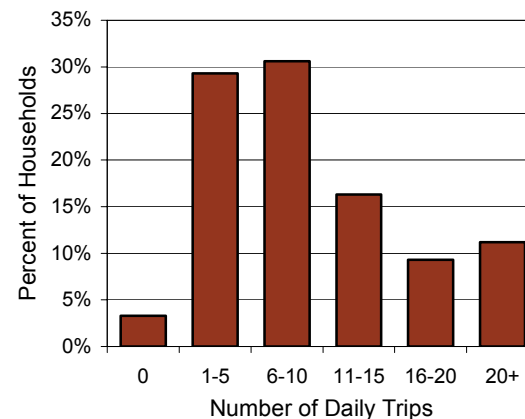
What Determines Household Travel

The 2002 Anchorage Household Survey showed that household members in an average Anchorage household in 2002 made 10.3 trips daily. Survey findings are available in *Anchorage Household Travel Survey* by NuStats (2002). Table 4-1 compares key travel statistics for Anchorage with those for selected metropolitan areas. The areas were selected by the availability of recent surveys, and statistics were calculated similarly for each area.

Among the five metropolitan areas, Anchorage has a larger average household size, more vehicles per household, more daily trips per person, and more trips per household. The Anchorage statistics are partly related to evolution of the municipality after World War II, a maturation characterized by lower-density development permitted by the availability of automobiles.

The statistics in Table 4-1 are areawide averages, but the numbers of trips made by individual households vary widely. Figure 4-6 illustrates the

Figure 4-6. Household Trips per Day



Source: 2002 Anchorage Household Survey

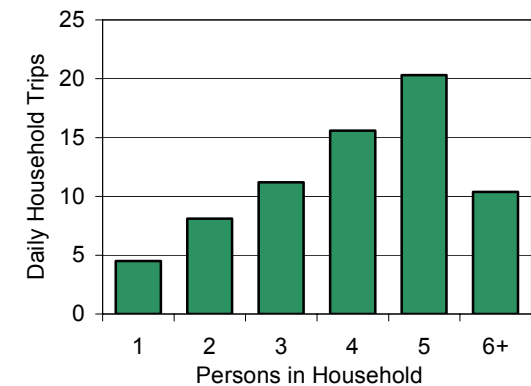
percentage of households making different numbers of daily trips.

Persons per Household

The number of persons in a family or household influences the number of daily household trips. As shown in Figure 4-7, the household daily trips range from single-person households at 4.5 trips to

households with five persons at 20.3 trips. Clearly the number of persons per household is an important determinant of household travel needs and activity.

Figure 4-7. Household Trips by Household Size



Source: 2002 Anchorage Household Survey

Number of Workers

The number of workers in a household also affects daily trips. As shown by the 2002 Anchorage Household Survey, most households have one or two workers (41 and 37 percent, respectively), 6 percent have three or more workers, and 16 percent of households have no workers. Figure 4-8 displays the average daily person trips related to workers per household. A tally of the average daily trips by the number of workers in households showed 6.3 trips for no workers, 8.5 trips for one worker, 11.7 trips for two workers, and 18.2 trips for three or more workers.

Table 4-1. Household and Travel Statistics for Comparative Metropolitan Areas

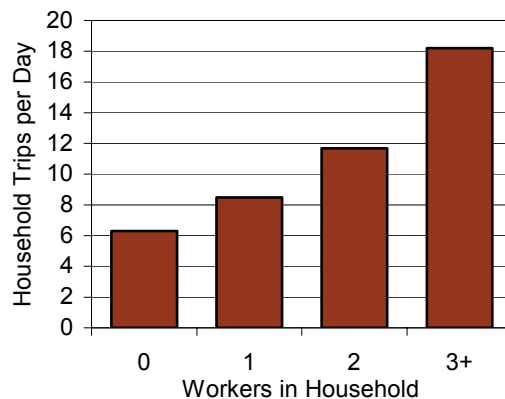
Item	Anchorage, AK	Knoxville, TN	Columbus, OH	Pittsburgh, PA	Philadelphia, PA
Survey year	2002	1999-2000	1999	2001-2002	1999-2000
Persons per household	2.6	2.4	2.5	2.4	2.4
Household vehicles	2.0	1.8	1.7	1.8	1.6
Trips per person	4.1	3.8	3.8	3.2	3.5
Trips per household	10.3	8.2	9.5	7.2	8.1

Source: NuStats, *Anchorage Household Travel Survey*, 2002

Vehicles Owned or Available

The number of vehicles owned or available to household members correlates closely with the number of workers per household. The 2002 Anchorage Household Survey revealed that households with no vehicles available (6 percent of households) average 4.4 person trips per day. Households with two vehicles available (42 percent of households) average 11.3 trips, and those with four or more vehicles make an average of 15.5 trips per day.

Figure 4-8. Household Trips by Workers in Household



Source: 2002 Anchorage Household Survey

Household Income

Household income also affects daily trips and the modes used for travel. Table 4-2 shows that lower income households make both fewer daily trips and more trips by public transit. Conversely, higher income households make the most trips and have the lowest transit use.

Classification of Households for Estimating Travel

Clearly many factors influence the number of trips made by households. When they are grouped

into categories with similar attributes, such as the number of persons, number of workers, and income levels, consistencies among households can be identified. Household classification is the basis for deriving aggregate trip forecasts and travel patterns for the entire MOA, its neighborhood, and community subareas. These relationships were used to estimate and examine travel in 2025.

Table 4-2. Household Income, Trips, and Transit Use

Household Income (\$)	Percentage of Total Households	Average Daily Weekday Trips per Household	Percentage of Households That Use Transit Service
<40,000	27	7.1	13.2
40,000-70,000	33	9.9	10.9
≥70,000	40	13.0	2.0

Where Do People Travel

As noted above, nearly 70 percent of all travel starts or ends at residences. Therefore, the residential land patterns, shown in Figure 4-9, largely dictate the majority of travel movements in the region. The estimated 95,000 Anchorage households in 2002 can be categorized as follows:

- 48 percent, single-family detached dwellings
- 17 percent, single unit-attached or duplex units
- 20 percent, buildings with three to nine units
- 10 percent, buildings with 10 or more units
- 6 percent, mobile homes, recreational vehicles, boats, or other types of accommodations

Areas with higher concentrations of employment have greater volumes of traffic because employment sites are the most common destinations for home-based trips. Figures 4-10 and 4-11 show the MOA locations for employment and shopping establishments, respectively.

Figure 4-12 shows traveler residence locations for all home-based trips, and Figure 4-13 illustrates the non-home termini locations of those same trips. The home termini of trips in Figure 4-12 are strongly related to the residential land use map, and the non-home trip termini in Figure 4-13 are more closely aligned with major employment and commercial areas of the city.

Figure 4-9. Anchorage Residential Land Use, 1998

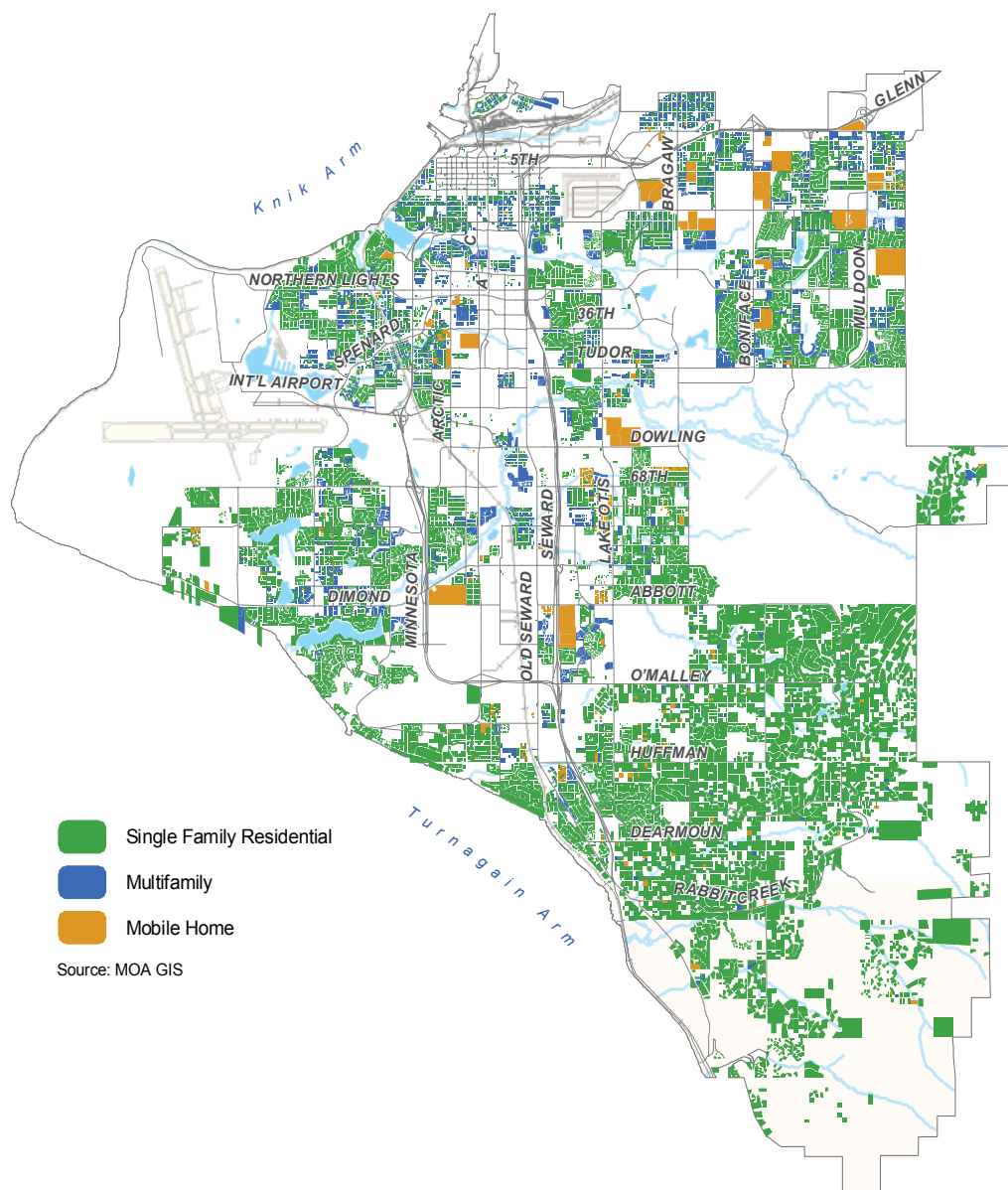


Figure 4-10. Anchorage Total Employment, 2002



Figure 4-11. Anchorage Retail and Related Employment, 2002

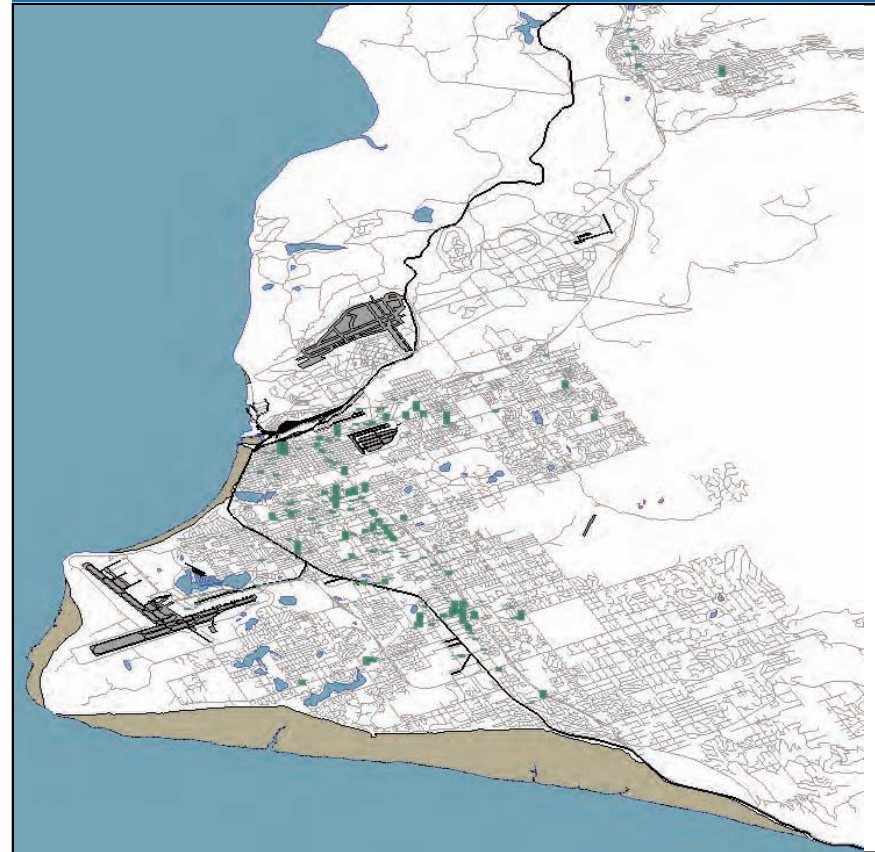


Figure 4-12. Traveler Residence Locations for All Home-Based Trips

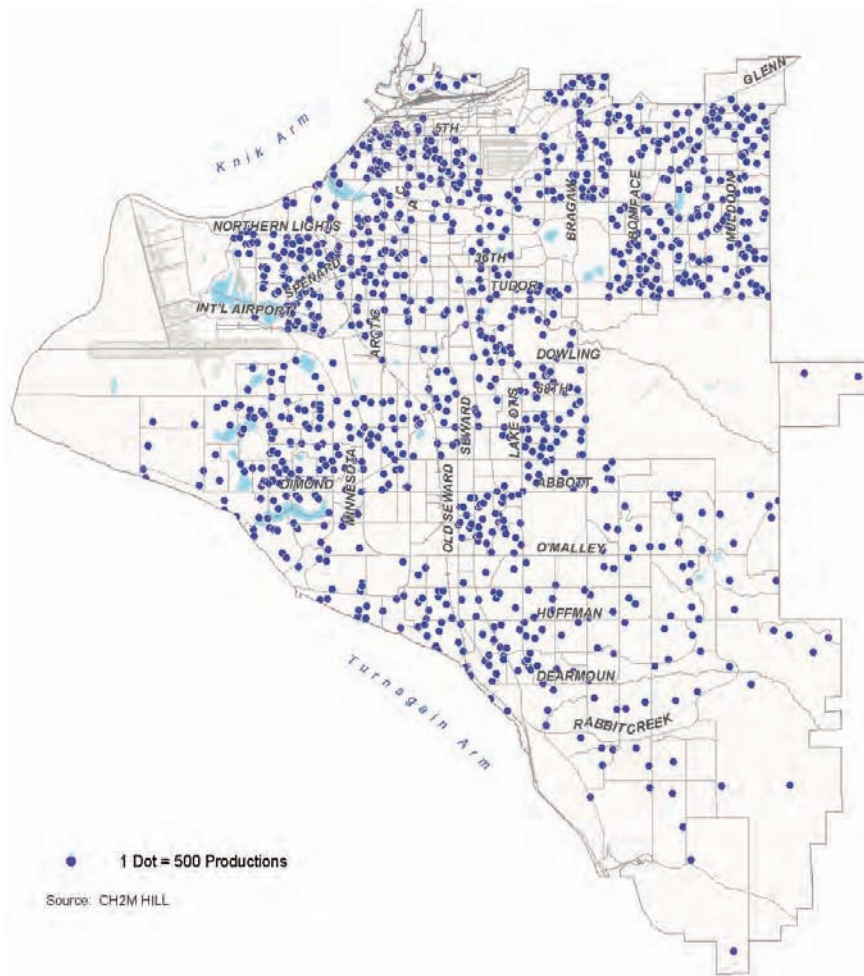
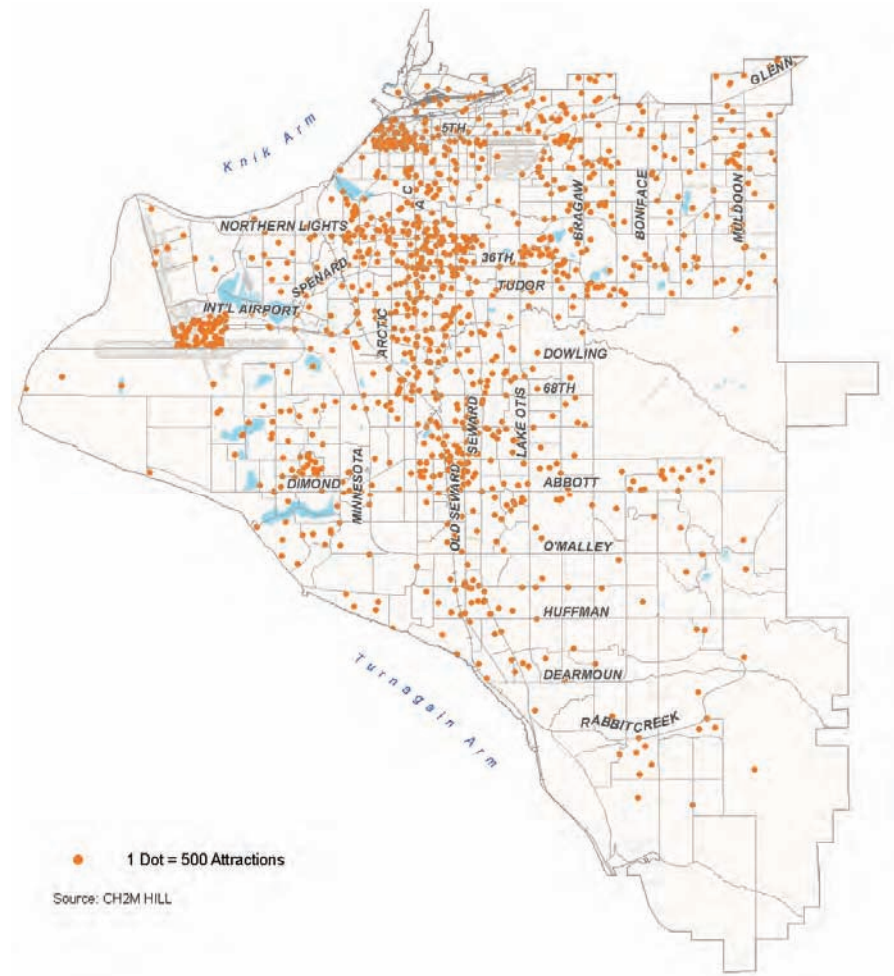


Figure 4-13. Non-home Termini Locations of All Home-Based Trips



Trip Travel Times

The travel time and distance for most trips are relatively short. Table 4-3 shows that work trips tend to be longer than other trips, and school trips generally are the shortest.

Table 4-3. Average Travel Time by Trip Purpose

Trip Purpose	Average Travel Time (Minutes)
Home-based work	13.35
Home-based shop	9.60
Home-based school	5.58
Home-based other	10.64
Non-home-based work	7.43
Non-home-based non-work	8.55
All trips	10.22

Source: 2002 Anchorage Household Survey

Summary

Travel in an urban area is complex and intertwined. Thousands of individuals and households make many transportation decisions each day – whether to travel, when to travel, by what mode, and to which destination. Collectively these individual travel decisions result in an aggregate demand on the Anchorage transportation system equal to more than 1 million trips each weekday in 2002. The next chapter takes stock of our existing transportation system infrastructure and how well it currently accommodates and serves those travel needs.