



Report for:



2013 Household Travel Survey:

High Level Overview

April 14, 2014

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OVERVIEW

Background and Introduction

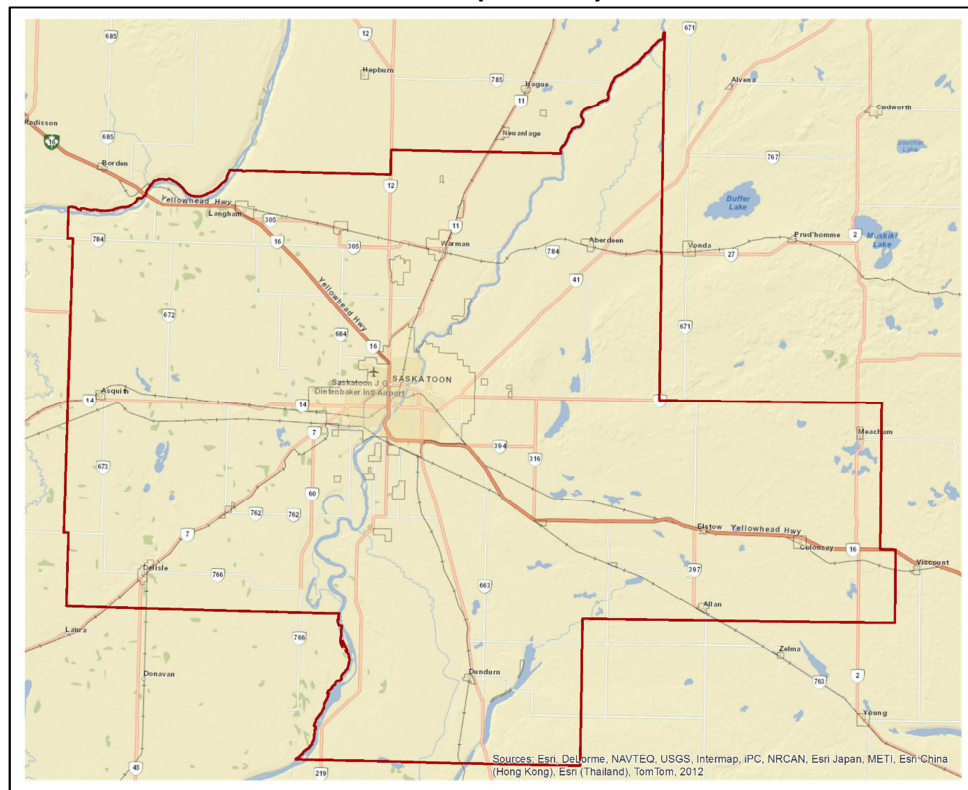
The City of Saskatoon commissioned Ipsos Reid to conduct the 2013 Household Travel Survey. The purpose of the survey was to collection information about:

- ◆ **WHERE** people are going
- ◆ **HOW** people are getting there
- ◆ **WHAT** people are doing there

The information collected helped the City to better understand residents' travel patterns to make informed decisions to help citizens get to where they want to go.

The survey sample area included the entire Saskatoon CMA, *including the area of Martinsville and Warman*. Please see Exhibit 1 for a detailed list of the sub-regions included in this sample area.

Exhibit 1: Map of Study Area



METHODOLOGY

Study Design

The Main Household Diary Survey was designed to collect information on travel behaviours with a group of randomly selected households in the sample area during weekdays (Monday to Thursday) over a 24-hour period. Exhibit 2 depicts the general approach followed for this survey. Survey design and preparation took place in May to July 2013. All processes, documents and systems were pre-tested internally and then tested with actual respondents in a pilot study, which took place in mid-August 2013.

Exhibit 2: Flow Chart of Main Household Diary Survey Data Collection Process

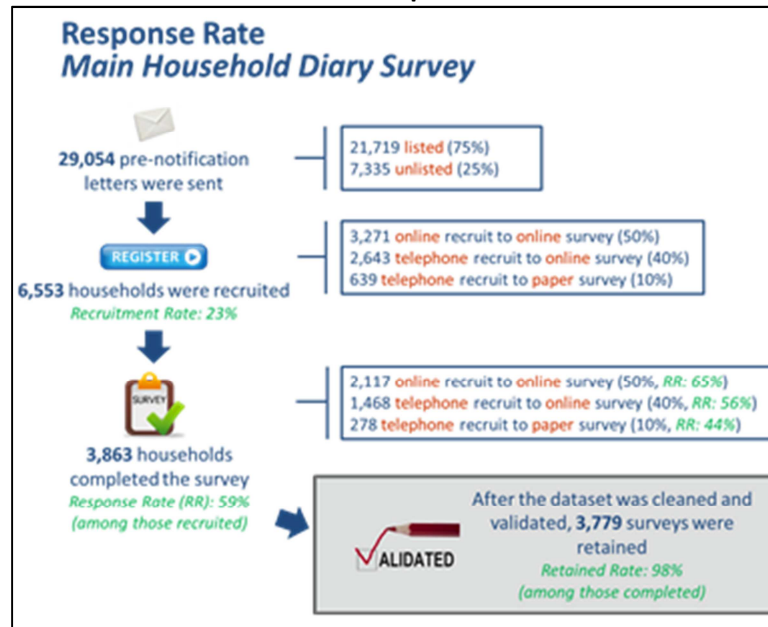


RESPONSE RATES

Response Rates

Exhibit 3 depicts the overall response and completion rates for each of the different stages for this survey.

Exhibit 3: Response Rate



To review, 29,054 households were sent a pre-notification letter. Of those, 3,271 self-registered online (2,254 household with listed landline and 1,017 without a listed landline). A total of 20,591 households with listed landlines received a telephone recruitment call.

In total, 6,553 households were recruited for the survey: 3,271 (50%) by self-registering online, 3,006 (46%) by telephone and 276 (4%) via our helpline. Exhibit 4 details the outcomes of various recruiting methods. Overall 3,863 (60%) households that registered completed the survey.

Exhibit 4: Recruiting Method Outcomes

Recruiting Method	# Recruited/ Self-Registered	# Completed the Diary	Completion Rate (%)
Online	3,271	2,117	65%
Telephone	3,006	1,515	50%
Helpline	276	231	84%
Total	6,553	3,863	60%

Final Status of Diary Survey Returns

As completed surveys were received, they were checked to ensure that the information was accurate and that the regional survey totals were reflective of the actual population distributions. As a result of the cleaning, 84, or 2.2%, of households were tagged and removed from the original dataset, leaving a final count of 3,779 households (a 58% eligible return rate).

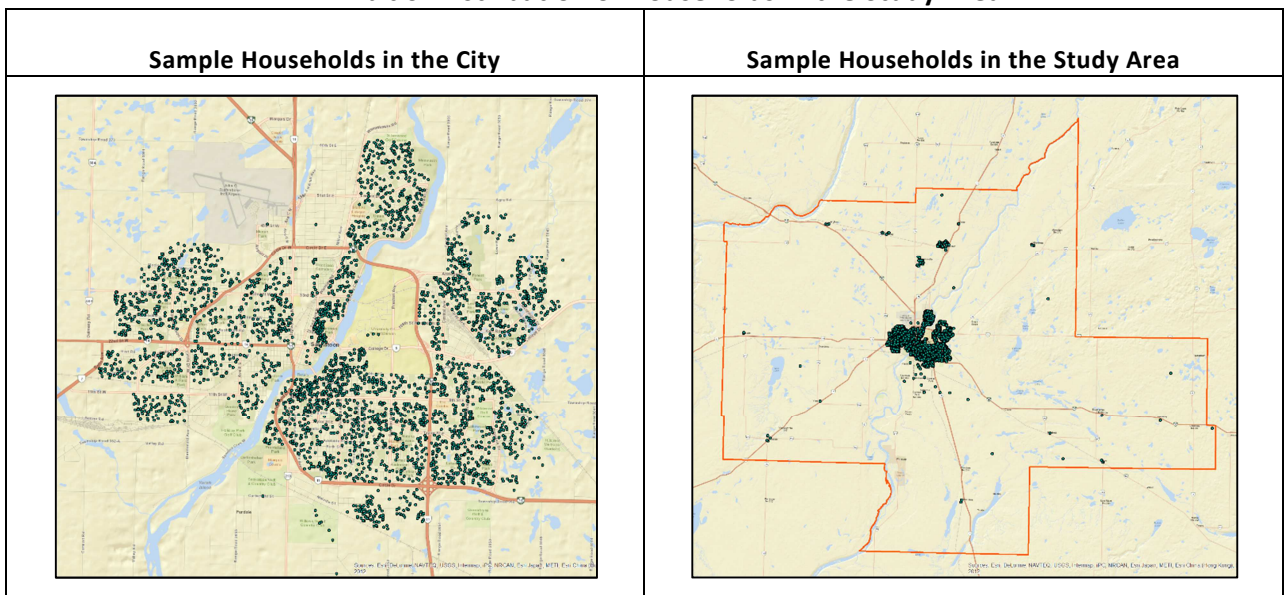
A detailed account of trip diary surveys excluded and returned is shown in Exhibit 5.

Exhibit 5: Trip Diary Returned and Excluded

	#	%
Total Diary Surveys Returned	3,863	n/a
Total Diary Surveys Excluded	84	2.2%
Total Retained Diary Surveys	3,779	97.8%
Total Retained Person Diary Surveys	8,605	n/a
Total Retained Trip Diary Surveys	28,387	n/a

The households in the final sample set are distributed throughout the residential portions of the study area as illustrated in Exhibit 6.

Exhibit 6: Distribution of Households in the Study Area



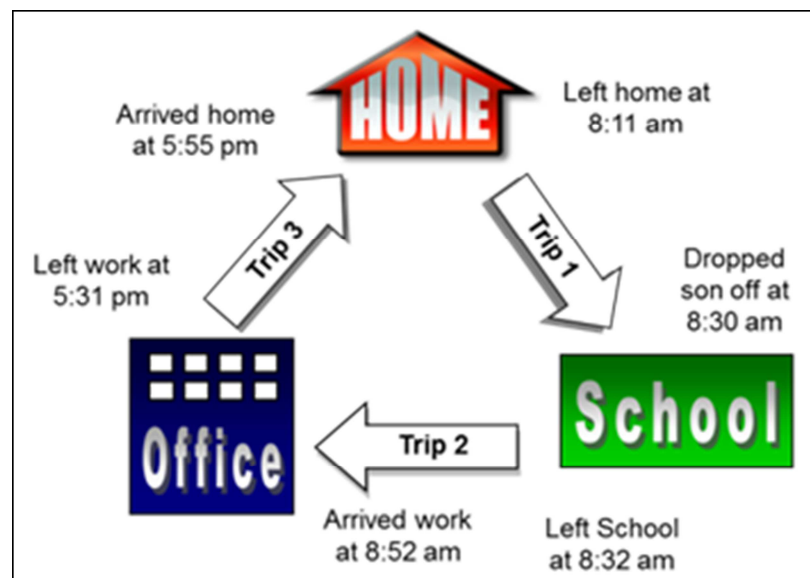
SURVEY FINDINGS

Travel Characteristics of the Expanded Sample

The final clean dataset is *weighted* (the process of applying mathematical “weights” to ensure the final sample is reflective of City of Saskatoon’s actual population) and then *extrapolated* to represent the total population figures using 2011 Census data. This section of the report presents selected travel characteristics of the expanded sample including person trip rates, trip purposes, and travel mode. These characteristics are calculated at the person level. The characteristics apply to persons 5 years or older unless noted differently. Given that the expanded sample generally matches well to the overall study area on a number of demographic characteristics, the travel characteristics are representative of patterns for a typical fall weekday from 2013.

Understanding what Constitutes “A Trip”?

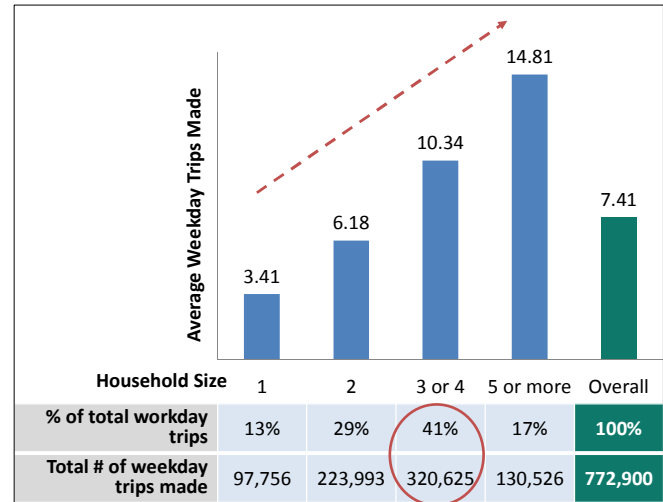
Before getting into the detailed findings, it is important to understand what constitutes as a trip. A “trip” is defined as each (one-way) segment of travel made between one point and another for a specific purpose. In other words, a “trip” is anytime you left one location and arrived at another location. In the example below, if a person drove from home to drop off a child at school, went from the child’s school to work, and then later returned home, that would be counted as 3 “trips”.



Detailed Findings – Trip Rates

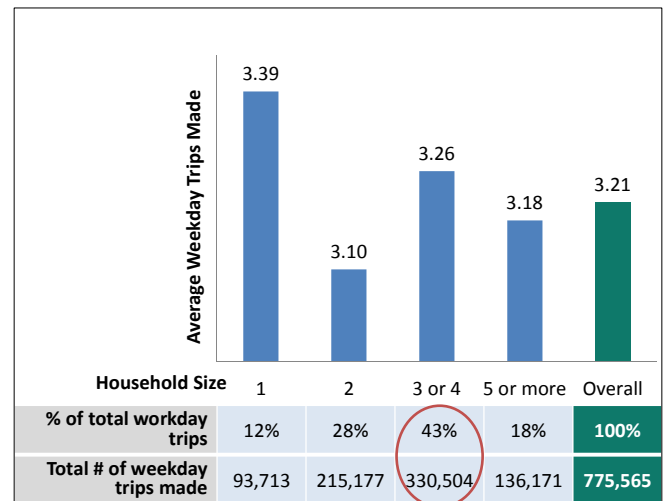
Household Trip Rates by Household Size

The average trip rate by household across the entire sample was 7.41 trips per day. The key determinant of household trip rate is household size, as illustrated in the chart on the right. Households with 3 or 4 persons accounted for over 40% of the weekday trips (percentages given in the charts are relative to the total weekday trips unless noted otherwise). Single person households accounted for about 13% of the trips.



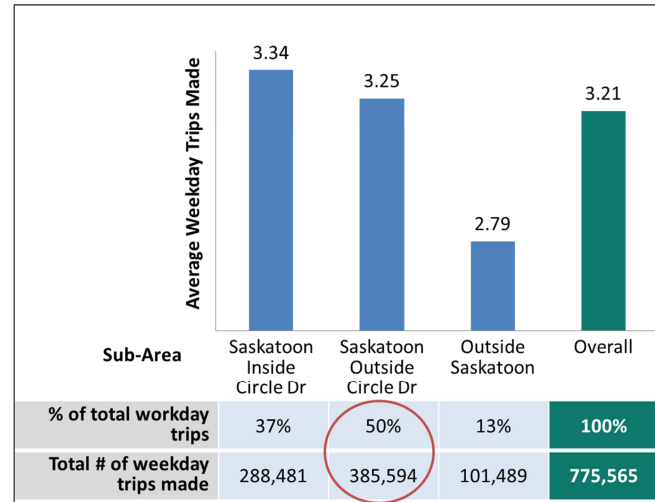
Person Trip Rates by Household Size

Persons in one person households had the highest average trip rate per person (3.39) but only accounted for 12% of the total trips (the slight differences between household vs. person trips stems from the calculation of separate expansion factors for persons and households). Persons in 2 person households had the lowest trip rate (3.10). *The narrow range of person trip rates (versus an average of 3.21), suggests that household size is not a critical variable for estimating trips.*



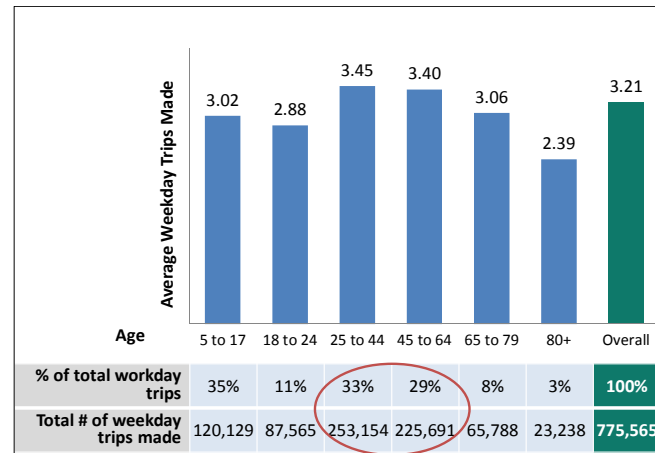
Person Trip Rates by Sub-Area

Persons living in households within the city had the highest average trip rate (3.34 trips per day or 4% higher than the overall average). The average trip rate for persons living in the rest of the city was 3.25. The lowest trip rate (2.79 or 13% lower than the overall average) was for persons living outside of the city. *Further analysis is required to understand the potential reasons for this lower trip rate.*



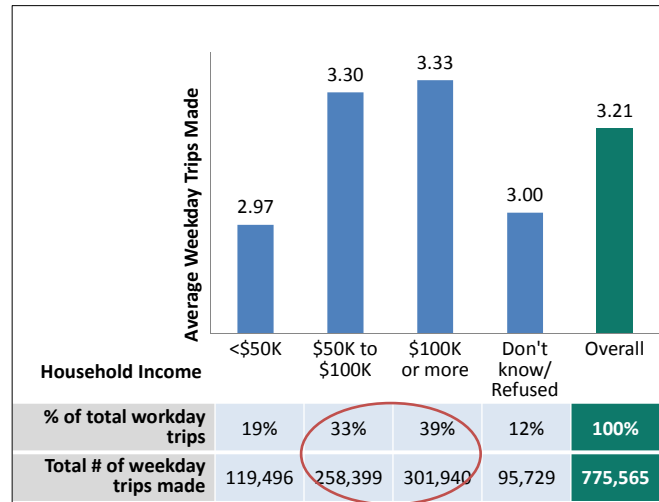
Person Trip Rates by Age Range

Persons in the 25 to 64 year age range had the highest average trip rates (3.45 trips among those aged 25 to 44 and 3.40 among those aged 45 to 64) and they accounted for over 60% of the trips made in the study area. Not surprisingly, persons in the over 80 age range had the lowest trip rate (2.39). Seniors (aged 65+) accounted for 11% of the trips made in the study area; *this percentage is likely to increase in the short to medium-term with the aging of the baby boom generation.*



Person Trip Rates by Household Income

Persons living in households with annual incomes under \$50,000 had the lowest average trip rate (2.97 trips per day or 7.5% lower than the overall average). Trip rates for the other two income ranges were not significantly different. The low trip rate (3.00) for the households where income data was not available suggests that most of these households had lower household incomes. *The range of trip rates suggests that income may be an important variable for estimating trips.*

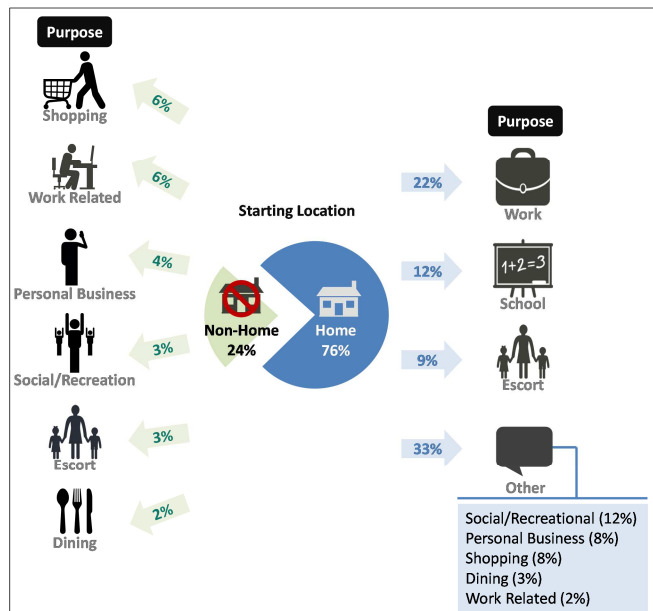


Detailed Findings – Trip Purpose

Trip Purpose

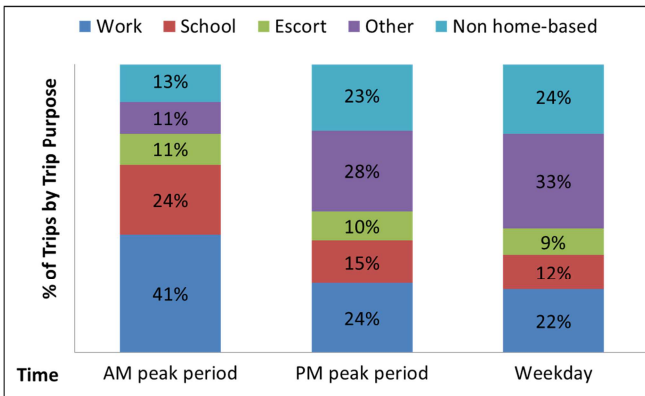
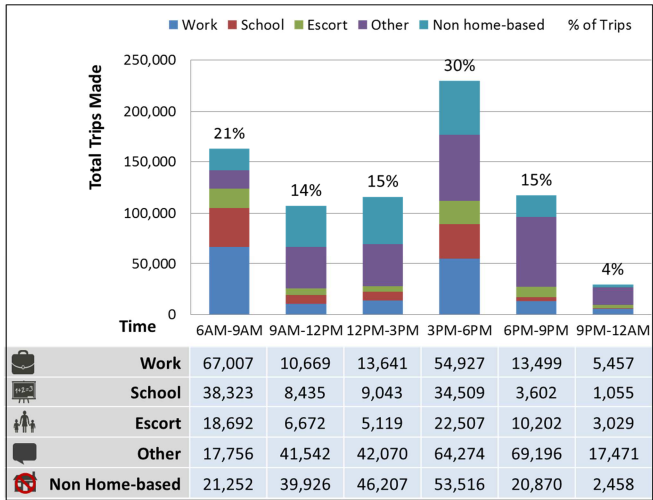
Based on reported trip purposes, the estimate of weekday trips were assigned to five trip purposes, four for travel to and from home and a fifth for non-home-based trips. Only about 22% of weekday trips made by residents were between home and work. Trips between home and school and escort trips (to pick someone up or drop them off) accounted for a further 21%. Most trips were made for other reasons (e.g. shopping, personal business) or were not home-based.

Trips that neither started nor ended at home can also be broken into more detailed categories. Shopping and work related trips (which includes returning to work after lunch out) were equally prevalent, each accounting for about one-quarter of the trips. The remaining trips were distributed among the other purposes.



Trip Purpose by Time Period

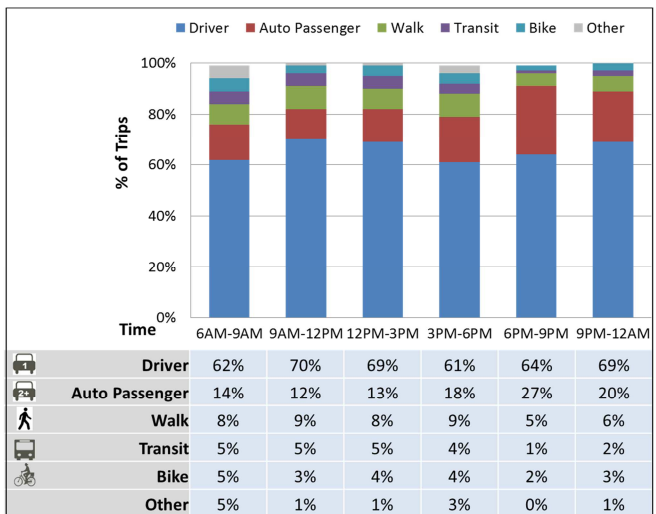
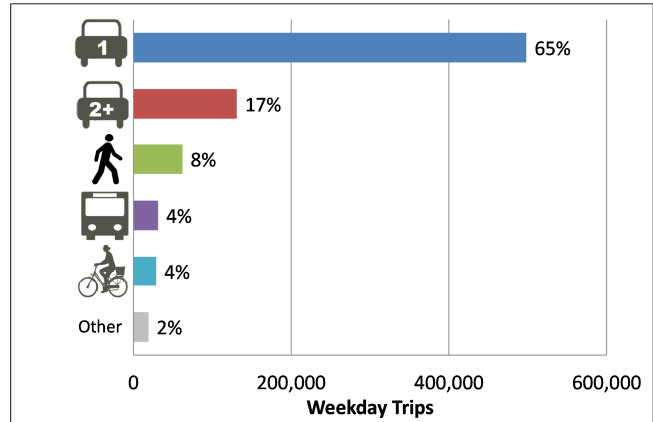
Trip purposes also vary by time of day. Most home-based work, school, and escort trips occurred during the AM and PM peak periods whereas trips for other reasons primarily occurred during the mid-day or evening periods. During the PM peak period, trip purposes are widely distributed. A similar number of trips were made during each of the mid-day and early evening periods. Since only 1% of the trips occurred before 6 AM, they are not shown.



Detailed Findings – Trip Mode

Trip Mode

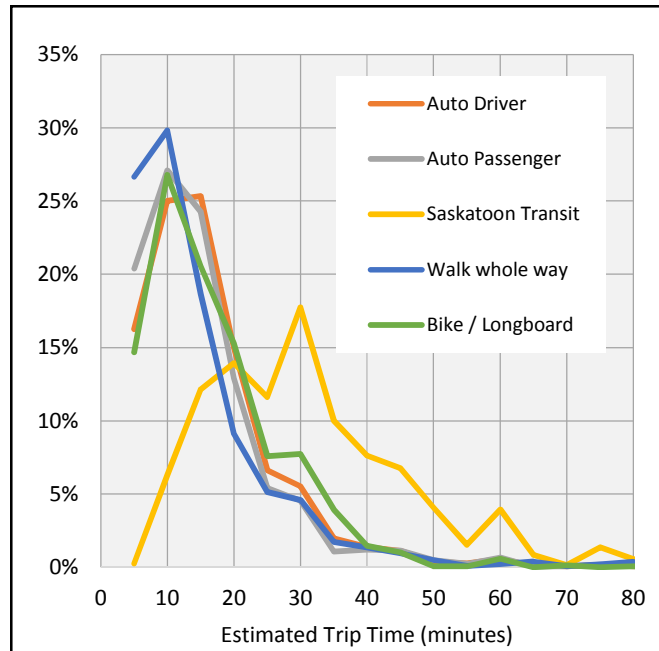
The different modes of travel used by survey respondents were grouped into six categories. The auto driver mode was used most often (65% or just over 500,000 per day), followed by auto passengers (17%) and walking (8%). Transit and bike modes were both around 4%. The weekday estimate of 31,500 transit trips is consistent with an estimated annual ridership of about 10 million. The other mode (2%) includes trips made by school bus.



Trip Duration by Mode

The chart on the right presents the distribution of trips made within the City of Saskatoon by estimated duration in minutes. Trip duration is based on travel times reported in the survey which tend to round to the nearest 5 minutes.

Somewhat surprisingly, all modes except transit have similar travel time distributions. Transit travel times are likely higher due to the added time required to wait for the bus and to access and egress time to/from the bus stop. Transfers add additional time to the trip as well.



Given the approximate nature of the travel times, means were not estimated. Median times and distance, as well as the most common range for each, are given below.

		Auto Driver	Auto Passenger	Saskatoon Transit	Walk	Bike/ Longboard	All Modes
Duration	Median Time (minutes)	12	11	28	9	12	12
	Most Common Range (minutes)	10 to 15	5 to 10	25 to 30	5 to 10	5 to 10	5 to 10
Distance	Mean Distance (km)	6.8	5.7	2.9	4.7	5.1	4.9
	Median Distance (km)	6.5	5.7	2.5	3.8	4.0	4.0

Detailed Findings – Work Trip Destinations

Map of Work Trip Destinations

The map on the right illustrates the locations of trips to work made by survey respondents. The work trip destinations are clustered in the downtown area, distributed throughout the main campus of the University of Saskatchewan, concentrated on Broadway Avenue and 8th Street E, and dispersed throughout the industrial and commercial areas near the airport.

