Appendix D
Travel Characteristics

BURNSIDE

Innisfil

Town of Innisfil | Transportation Master Plan

Appendix D | Travel Characteristics

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Project Name: Innisfil Transportation Master Plan Update

To: Town of Innisfil

From: R.J. Burnside & Associates Limited

1.0 Background

Recent travel patterns were derived based on 2016 data from Transportation Tomorrow Surveys (TTS), as supplied by the Data Management Group at the University of Toronto. This reflects an update to the travel trend analysis previously conducted in the Town's 2018 Transportation Master Plan (TMP), which utilized 2011 TTS data. This information was used to establish the Town's existing travel demand on a high-level. TTS data established a zonal system as illustrated in Figure D-1, which was aggregated to derive travel characteristics for each sub-area within the Town.

Figure D-1: Aggregated TTS Zone System
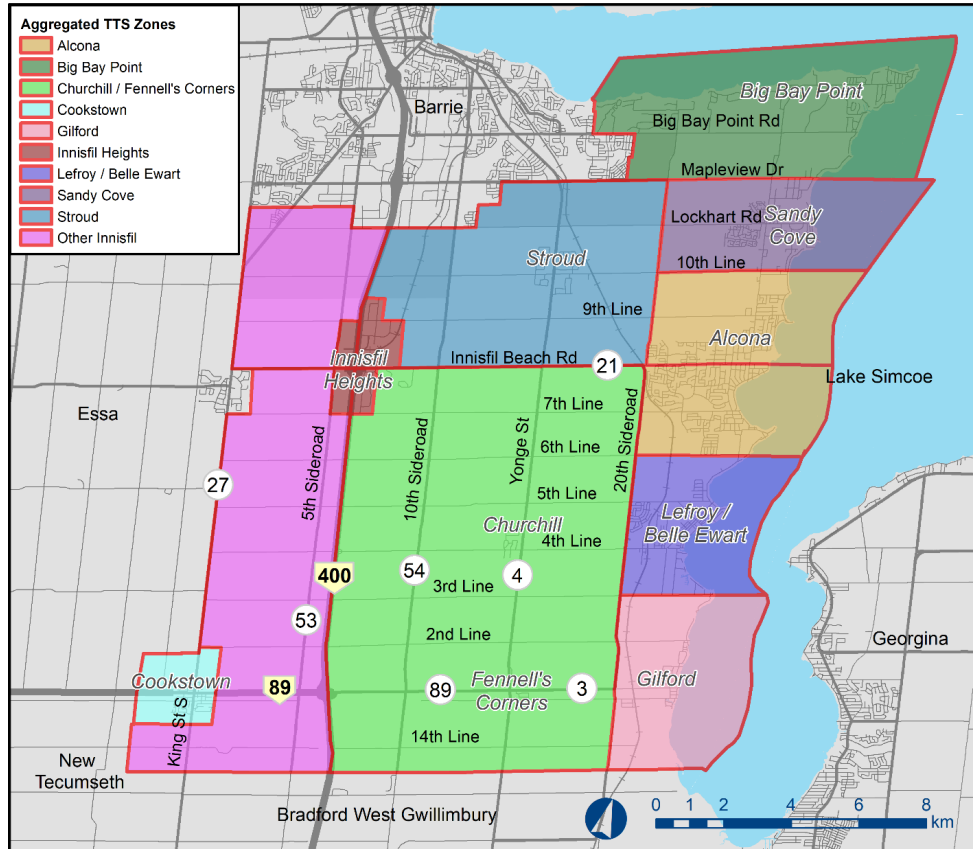
2.0   Historical Trends

The Town's TMP reviewed historical TTS trends between 2006 and 2011, which revealed:

- An increase in average vehicle ownership per household from 1.8 to 2.0.
- An increase in the total number of trips to or from Innisfil during the PM peak period from 19,500 to 23,300, which amounts to a 19% increase during the five-year period.
- An increase in auto mode share (including auto driver and passenger) from 91% to 94%, along with a corresponding decrease in other modes, including walking, cycling, transit and school bus.
- A slight decrease in the daily trip rate per person and per household, which was also observed in the surrounding municipalities.

An updated TTS trend analysis between 2011 and 2016 was not conducted due to the variation in survey expansion methods between 2016 and pre-2016 data, which would not yield comparable results.

3.0   Travel Factors

Most recent (2016) household and person characteristics were extracted from TTS to better inform the number and type of trips made by residents within Innisfil. There are approximately 13,400 households in Innisfil, with an average of 2.7 persons, 2 drivers, 2.1 vehicles and 5.3 total daily trips per household. These household characteristics are slightly higher compared to those of Simcoe County as a whole, as summarized in Table D-1. A breakdown of employment status by average full-time, part-time and home workers per household indicates that Innisfil also has a higher proportion of full-time workers per household compared to the County. There is also a greater proportion of households in Innisfil with higher income ranges ($60,000 to $124,999), as shown in Figure D-2 which may be attributed in part to the high proportion of full-time workers per household.

Table D-1: Household Characteristics

	Innisfil	Simcoe County 1
Households	13,376	117,566
Average Persons per Household	2.7	2.6
Full-Time Workers	1.2	1.0
Part-Time Workers	0.3	0.3
Home Workers	0.1	0.1
Students	0.5	0.5
Other (children and retired workers)	0.7	0.7
Average Drivers per Household	2.0	1.9
Average Vehicles per Household	2.1	2.0
Average Total Daily Trips per Household	5.3	5.1

Note: 1. Simcoe County does not include the City of Barrie and Orillia, as they are politically independent single-tier municipalities.

Figure D-2: Household Income
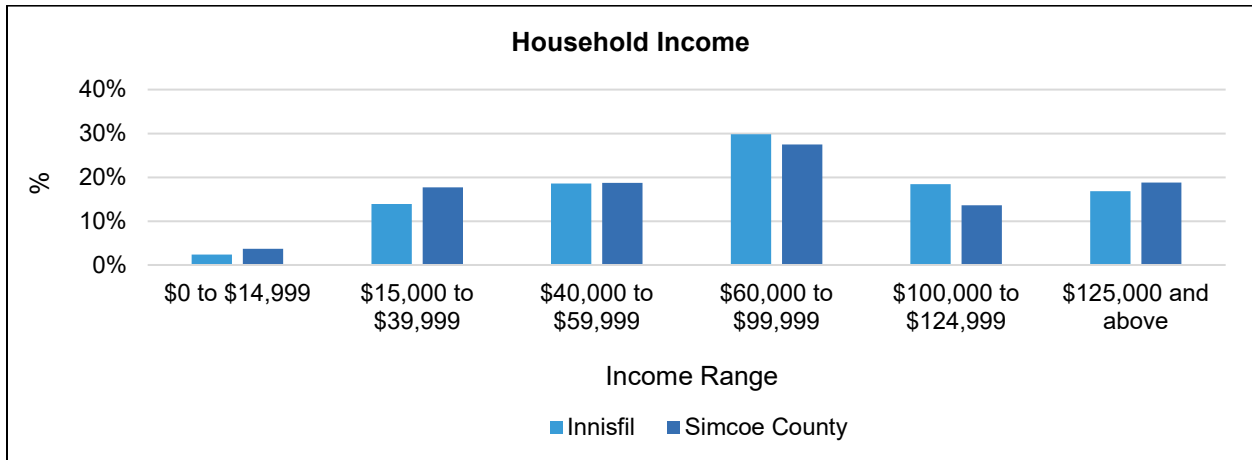
4.0 Trip Patterns

4.1 Peak Periods

Daily trips travelling to/from the Town fluctuates, but evidently peaks during the morning AM period between 6:30 AM – 9:30 AM and evening PM period between 3:30 PM – 6:30 PM, as shown in Figure D-3. As mentioned previously, this data reflects 2016 surveyed data. Travel patterns have changed in recent years as a result of the COVID-19 pandemic but appears to be on a gradual return to pre-pandemic levels. However, considering this trip database is the latest pre-pandemic data available, peak periods from this data were used for the purpose of assessing travel trends.
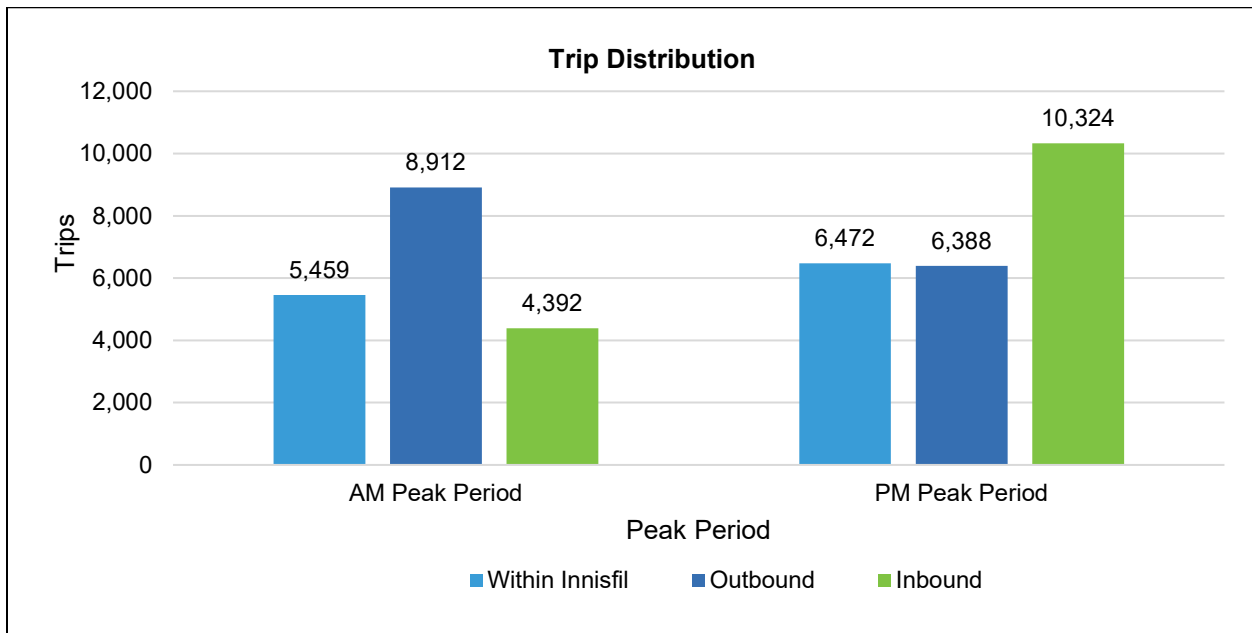
Figure D-3: Daily Trip Fluctuation by Hour
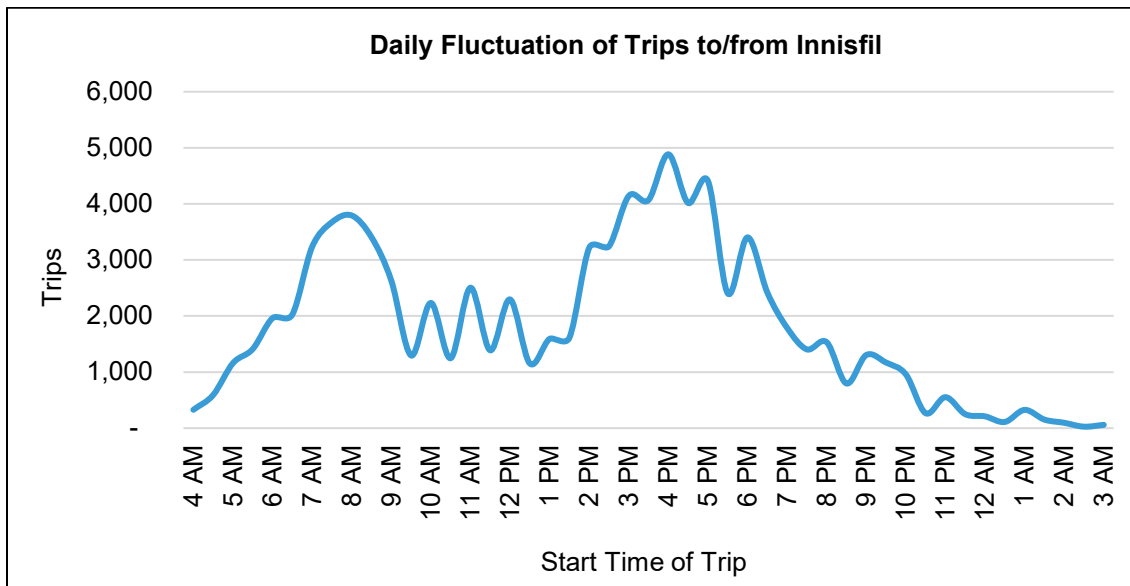
4.2   Distribution

There are approximately 5,500 and 6,500 internal Town trips during the AM and PM peak period, respectively. During the AM peak period, there are more outbound trips compared to inbound; this pattern is reversed in the PM peak period as shown in Figure D-4.

Figure D-4: Trip Distribution

4.3   Internal Trips

A review of trip distribution patterns within Innisfil for the AM and PM peak period, as shown in Figure D-5 and Figure D-6, respectively, indicates that most internal Town trips occur within Alcona, particularly during the AM peak period. During the PM peak period, there are more trips travelling between Alcona and Churchill / Fennell's Corners as well as travelling within Cookstown, compared to the AM peak period.

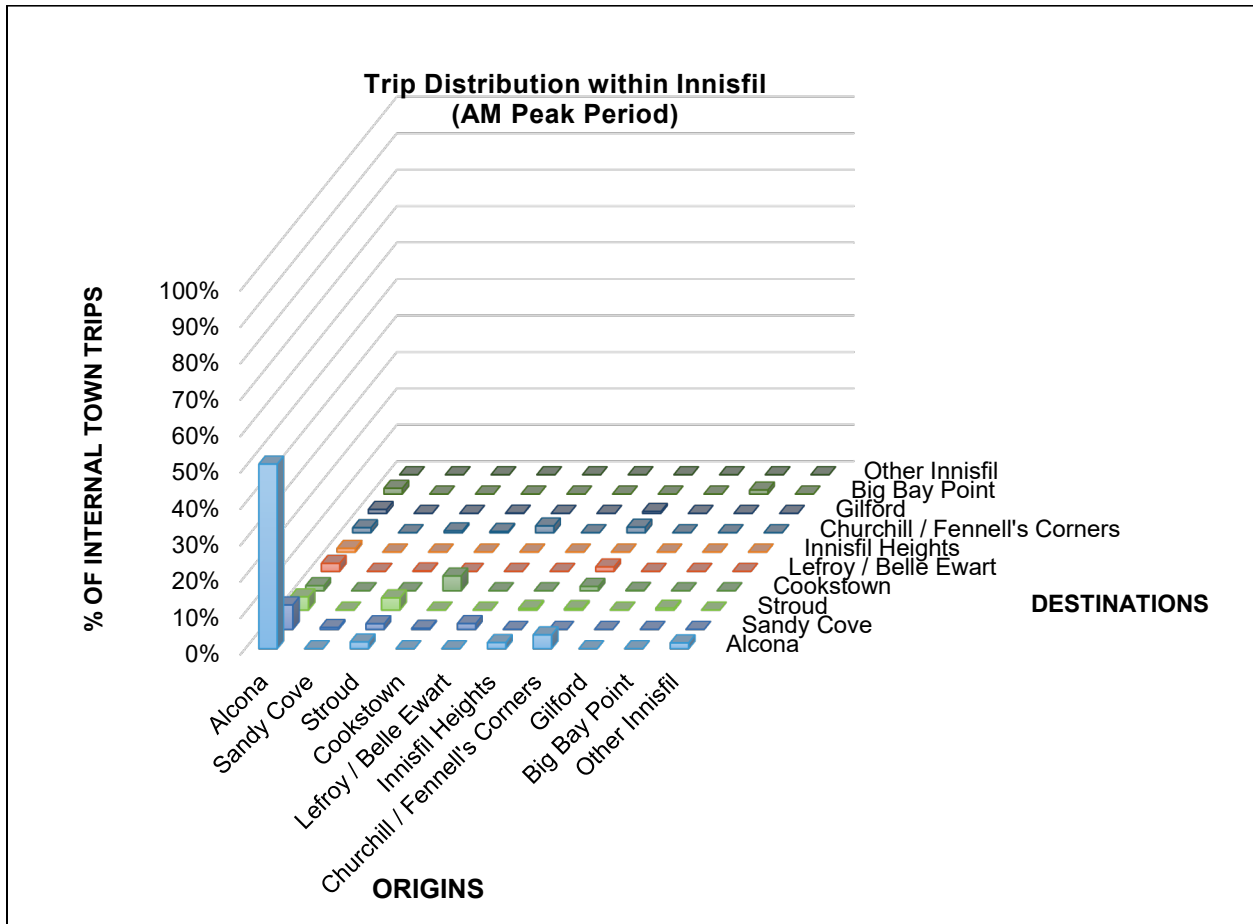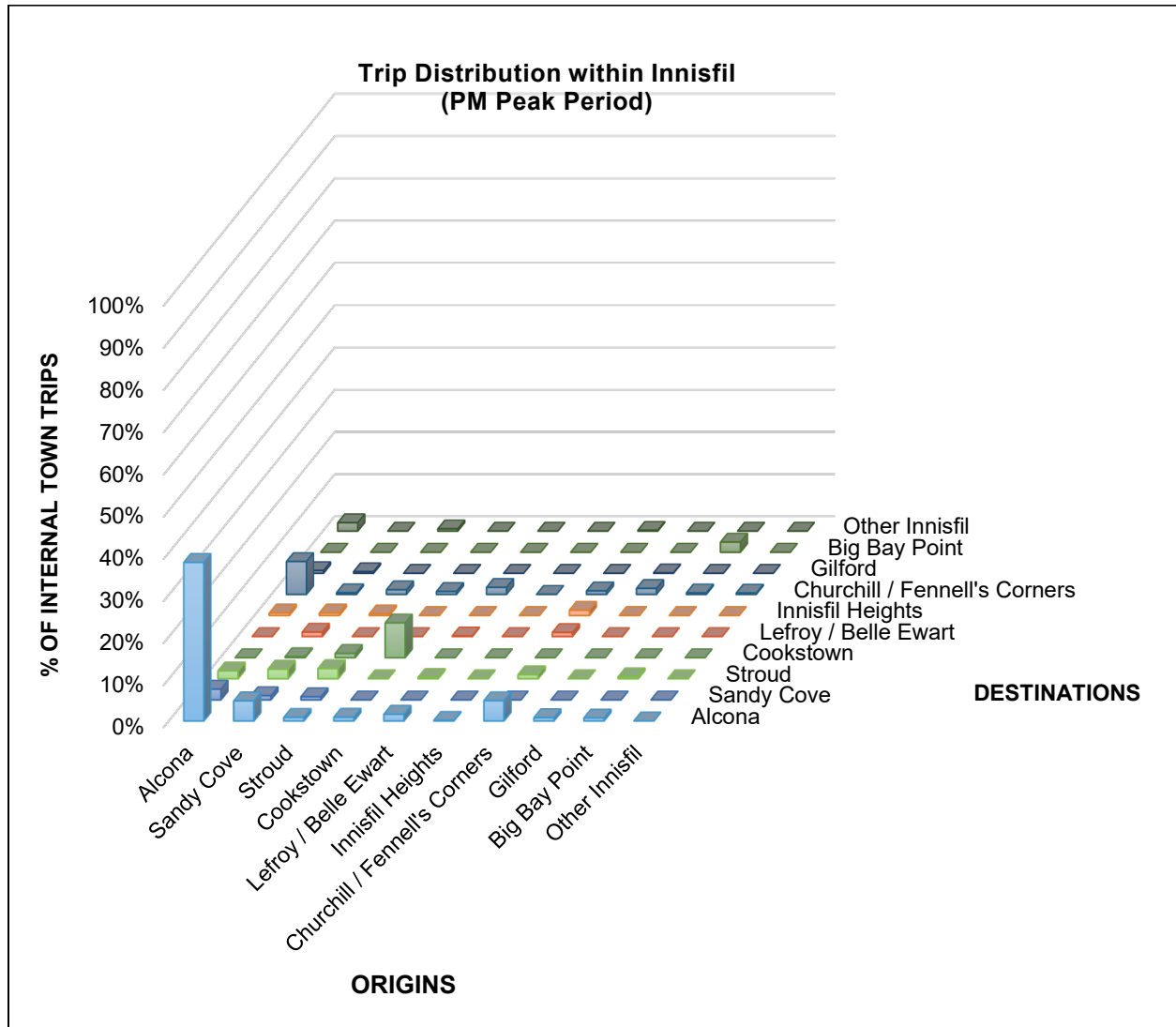**Figure D-5: Trip Distribution within Innisfil (AM Peak Period)**

Figure D-6: Trip Distribution within Innisfil (PM Peak Period)

Trip Distribution within Innisfil
(PM Peak Period)

4.4   External Trips

A review of inbound trips from outside of Innisfil reveals that most trips originate in Barrie during the AM and PM peak periods, as shown in Figure D-7 and Figure D-8, respectively. During the AM peak period, the second most common origin for inbound trips is the rest of Simcoe County (including Orillia) and then York Region, whereas during the PM peak period, there are more inbound trips originating in York Region compared to the rest of Simcoe County (including Orillia).

During the AM peak period, most external inbound trips are travelling to Alcona (~4,700), followed by the Churchill / Fennell's Corners area (~1,400). Similarly, the external inbound trips during PM peak period also consists largely of destinations to Alcona (~8,000), followed by the

Churchill / Fennell's Corners area (~2,000). There does appear to be a greater proportion of trips travelling to Sandy Cove during the PM peak period by a magnitude of approximately 1,200 trips compared to the AM peak period.

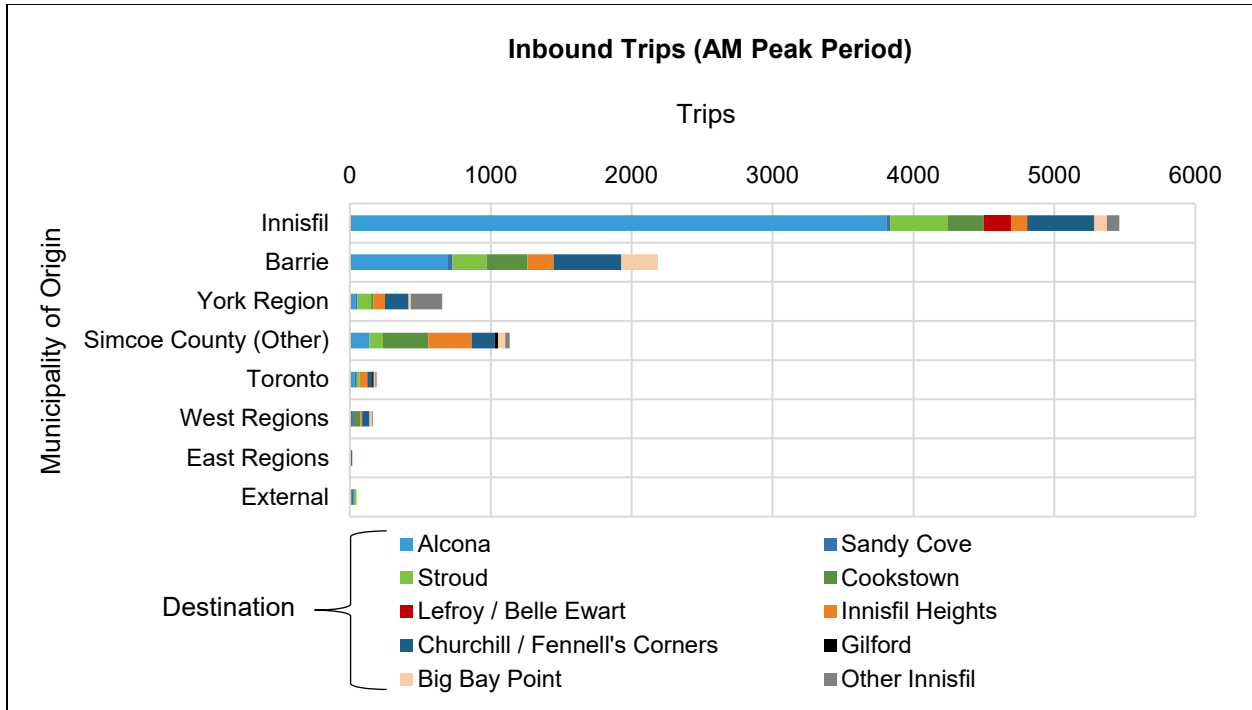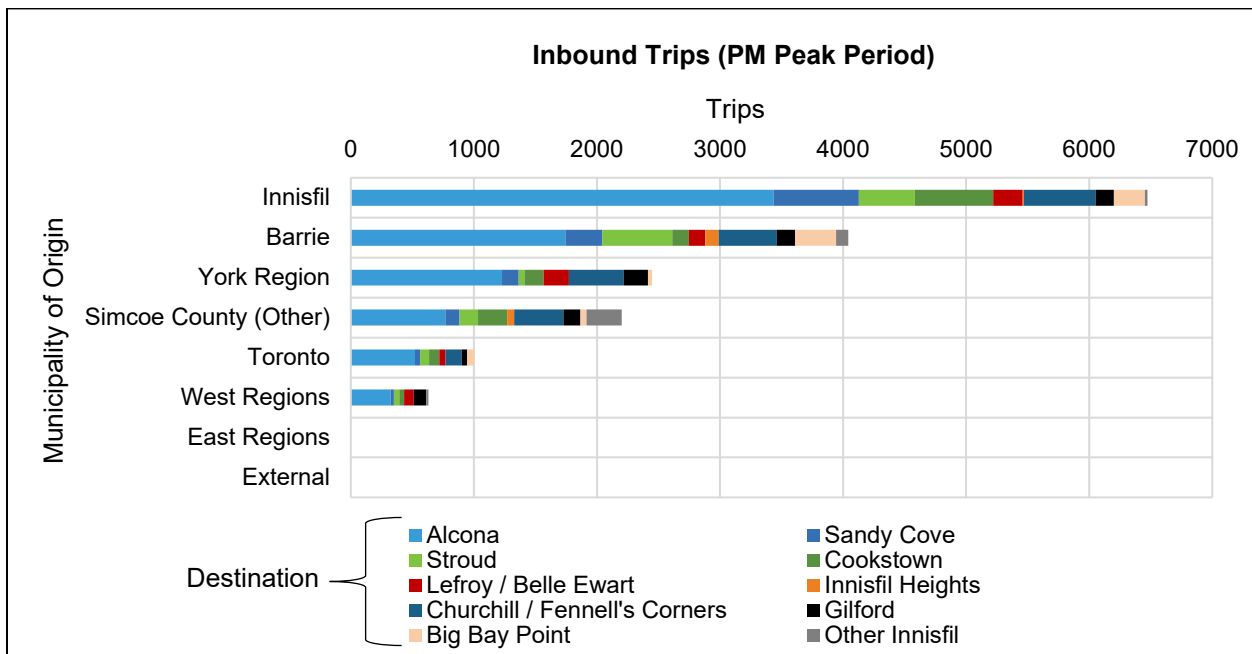**Figure D-6: Inbound Trips (AM Peak Period)**

Figure D-7: Inbound Trips (PM Peak Period)

A review of external outbound trips reveals that most trips originate in Alcona during the AM and PM peak periods, as shown in Figure D-9 and Figure D-10, respectively; however, unlike the AM peak period, there are approximately 1,000 more outbound trips originating from both the Churchill / Fennell's Corners area and Innisfil Heights during the PM peak period. This is likely attributed to the employment lands within Innisfil Heights and near Yonge Street / Innisfil Beach Road (Barclay) that is driving work-to-home trips.

During the AM peak period, most external outbound trips are travelling to Barrie (~4,200), followed by York Region (~2,000) and then the rest of Simcoe County including Orillia (~1,600). In comparison, the external outbound trips during PM peak period consists largely of destinations to Barrie (~3,400), followed by the rest of Simcoe County including Orillia (~1,500) and then York Region (~700).
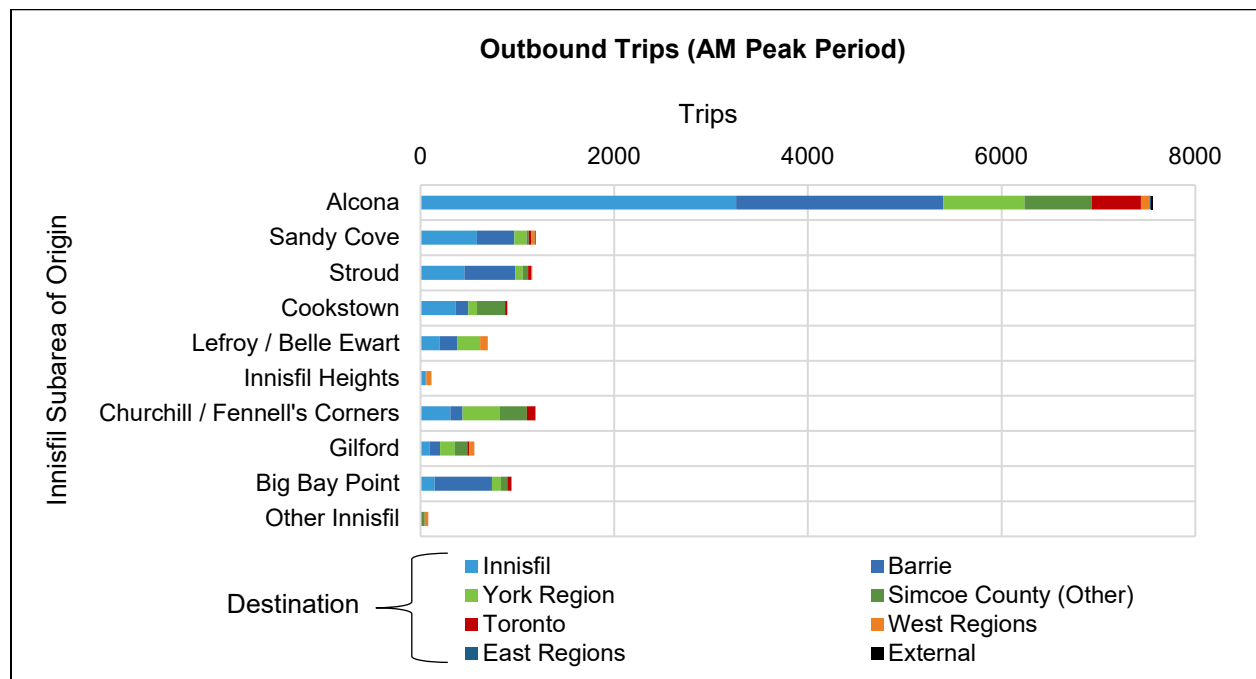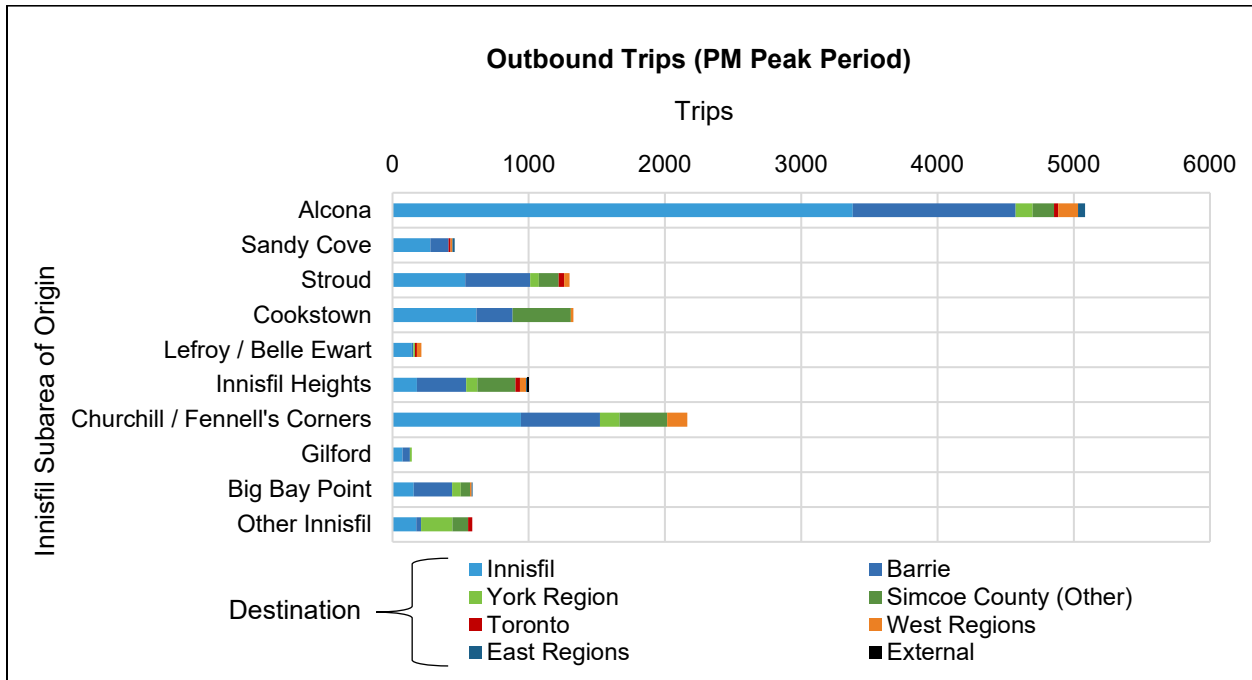
**Figure D-8: Outbound Trips (AM Peak Period)**

Figure D-9: Outbound Trips (PM Peak Period)

Outbound Trips (PM Peak Period)

4.5 Travel Distance

An assessment of trip distances by mode indicates that the vast majority (71%) of daily trips are over 10 km; this is reasonable given most trips using the Town's road network is travelling to/from external municipalities. Almost all of these trips (96%) use automobile. The trip distance breakdown by mode is illustrated in Figure D-11. Since this information was derived based on TTS data, which is expanded from household survey data, it should be recognized that shorter, recreational trips are underreported. As a result, a shortfall in the data includes the underrepresentation of the number of shorter trips, particularly taken by walking or cycling.

Figure D-10: Daily Trip Distance by Mode
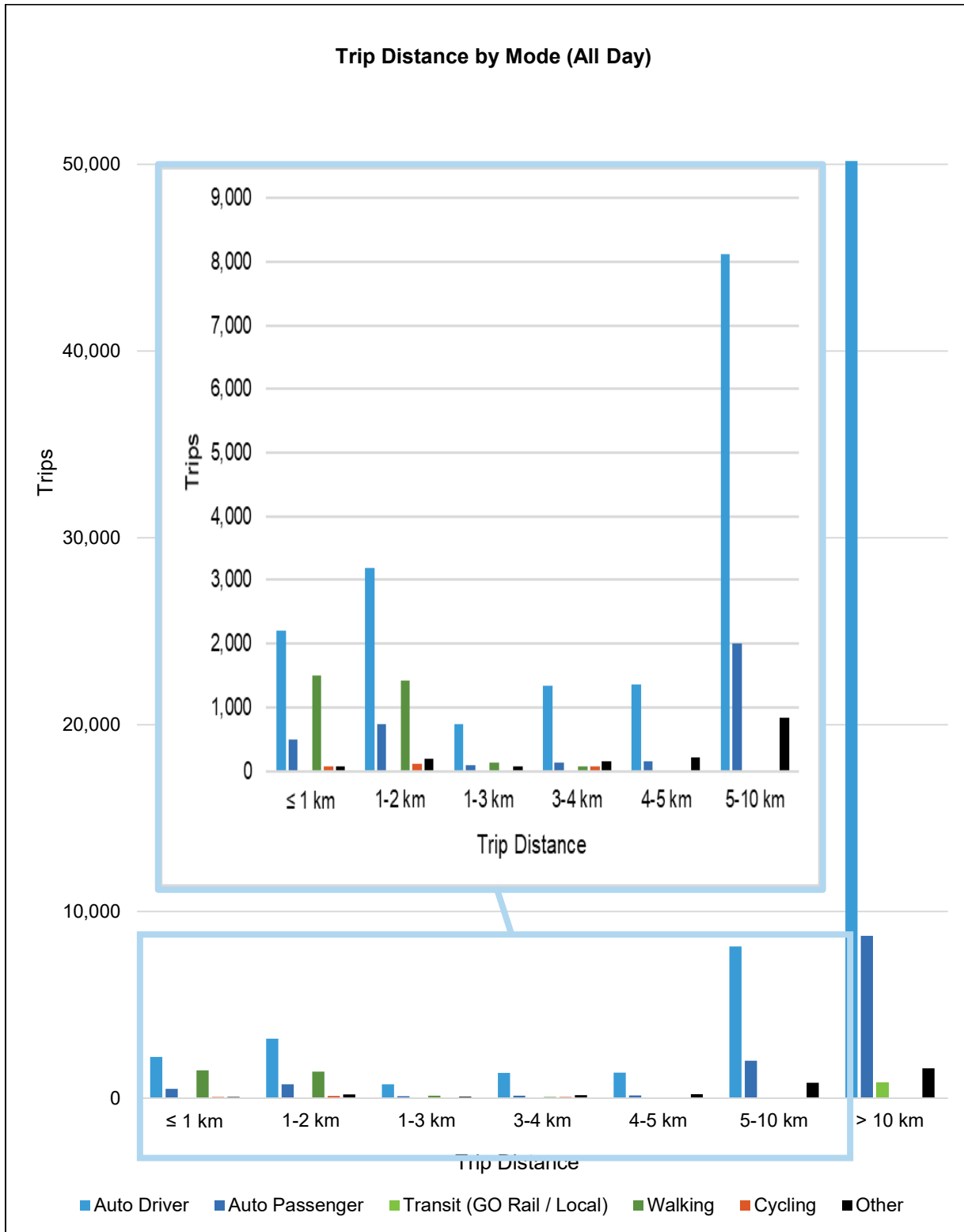
Note: 1. 'Other' modes include school bus, motorcycle and others.

5.0   Trip Purpose

A comparison between the trip purpose for the AM and PM peak periods was conducted. As illustrated in Figure D-12, work forms the main purpose of travel during the AM peak period, followed by other discretionary trips to/from home (e.g., recreational, errands-based, etc.). During the PM peak period, there is a decrease in the proportion of work-related trips and a substantial increase in the proportion of home-based other trips. Note that these trips include those that start or end in Innisfil and are not distinguished by direction (e.g., home-based work trips include home to work and work to home trips).

these include trips that start or end in Innisfil.

Figure D-11: Trip Purpose