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## Executive Summary

The purpose of this discussion is to examine the travel and transit patterns in the Scarborough region of Toronto as well as in the Pickering region. This report gives a basic demographic overview of travel and transit patterns in the regions, and makes suggestions regarding the nature of expanding public transit and reducing the number of cars on the road during peak transit hours. For both regions, peak transit hours appear to be between 6 am and 9 am, as people move from their homes to work—the bulk of this traffic could be reduced with a more efficient public transit system, targeted towards professionals.

## Background

The University of Toronto region was chosen for this particular discussion because the students that live in the region heavily affect the patterns of traffic of the region. University of Toronto Scarborough Camps is a large school with a large student population; because there are this many students in the population, there are different traffic patterns in the region (Utoronto. ca, 2015). The large, transitory population of students not only changes traffic patterns, but they also change parking patterns as well as the time of day when rush hour occurs; the presence of such a large university in the Toronto area makes for an excellent case study (Utoronto. ca, 2015). By comparing the University of Toronto area traffic to the Pickering region, a better understanding of the trends in traffic patterns and the effects of the university can be understood (Dmg. utoronto. ca, 2015).

There were a number of important data sources that were used in this report. The Transportation Tomorrow Survey was used extensively, as were the University of Toronto website and a number of different data management group programs through the University of Toronto. Data used for this survey has been gleaned from the most recent traffic information available to the researchers, except when otherwise stated—in many cases, the most recent data available is 5-8 years old, and is not available for most recent years (Jpint. utoronto. ca, 2015; Dmg. utoronto. ca, 2015). TTS reports were used extensively for comparative purposes.

## Study Area 1: University of Toronto Scarborough Campus and the Scarborough Region

The Scarborough Campus of the University of Toronto is a unique area for traffic, because it is a relatively densely packed area. In 2011, there were roughly 215, 200 households in the Scarborough area, but a population of 626, 300, which places the population at about 2. 9 persons per household (Dmg. utoronto. ca, 2015). However, because of the campus and the number of students present on the campus, this is a gross overestimation of the number of persons per household (Dmg. utoronto. ca, 2015). Each household had approximately 1. 7 drivers, but those drivers made 5. 6 trips per day—a relatively high number, but one that is expected, because the former city of Scarborough is outside the city center, and there are many families in the area that have to travel to and from school and work (Dmg. utoronto. ca, 2015).   
Rush hour for the city of Scarborough seems to be between 6am and 9am; between these hours, approximately 44% of these trips are made by individuals traveling to work, while only 25% are made by individuals traveling to school (Dmg. utoronto. ca, 2015). This indicates that students are less likely to commute—perhaps because many live within walking or biking distance of the campus, and the students do not need to use public transportation or a car as frequently as individuals who need to travel to work do (Dmg. utoronto. ca, 2015).

## Study Area 2: Pickering

As can be seen by the chart attached, there are significant trips out of the town of Pickering early in the mornings (Dmg. utoronto. ca, 2015). Pickering is a smaller town than Scarborough, with a population of only 88, 000 individuals; however, the residents do more driving in Pickering than they do in Scarborough. This may be because as a smaller town, Pickering offers less in the way of jobs and work; instead, people have to commute out of Pickering in the mornings (Dmg. utoronto. ca, 2015). The residents take approximately 50, 000 trips to work early in the morning, with each driver making a staggering 6. 8 trips per day (Dmg. utoronto. ca, 2015). Research suggests that the relatively high percentage of “ other” trips made out of Pickering—26% of the trips made in 24 hours—indicates that there are more individuals traveling for leisure in Pickering (Dmg. utoronto. ca, 2015).   
There are issues associated with the traffic load during these times that must be addressed further. Because most of the traffic is, again, happening in the early hours of the morning, it seems important to note that most of the traffic alleviation programs should focus on these earlier hours as well. Students make up a relatively small fraction of the number of individuals traveling during these hours, and more than half of the individuals making trips during these hours are drivers—this means that many people are driving alone. If drivers can be convinced to stop driving alone, it seems as though the traffic would decrease notably. Programs for carpooling can be put in place to help alleviate these traffic problems (Dmg. utoronto. ca, 2015).

## Discussion

Current transit patterns in both the Pickering area and the Scarborough area are affected by the number of individuals that are using their cars to get to work between the hours of 6am and 9 am (Dmg. utoronto. ca, 2015). These travel patterns reflect the need of those in the suburbs to travel from the suburbs into the other areas of the urban center, and the vast majority of individuals in the suburbs are more likely to use a car than public transport (Dmg. utoronto. ca, 2015). As can be seen from the preceding table, taken from the TTS report for the Pickering region, there are approximately 210, 000 trips taken by Pickering area residents each day, and many of those trips occur between 6 am and 9am (Dmg. utoronto. ca, 2015). The residents of this region make approximately 6. 8 trips per day, meaning that they are utilizing the roads slightly more frequently than their neighbors in the Scarborough region (Dmg. utoronto. ca, 2015).   
Expanding public transport hubs outwards into the sprawling suburban areas of Toronto, Hamilton, and Scarborough would be an excellent first step for the creation of lighter, more sustainable traffic patterns; however, it is also important to note that expanded public transport must be efficient, effective, and extensive to appeal to individual households that must make more than five trips per day, like the ones in the Scarborough region and Greater Toronto (Dmg. utoronto. ca, 2015).

## Recommendations and Conclusion

The current transit patterns in both regions demonstrate that households make a number of trips, especially early in the morning, because people need to be taken to school and to work. Expanding public transit options for the region could be extremely effective insofar as reducing traffic during peak hours, especially if hubs are placed in various key points of these suburban regions. Instead of driving to multiple places, travelers could drive to a single hub, park their cars, and utilize public transit options. This would be especially effective for individuals who do not have dependents that need to be dropped off at school or other locations; it would provide an easier, stress-free commute in both the early morning and afternoon as individuals return from work. It seems that students already use public transit, so the expansion of public transit would potentially improve their commute as well.

## References

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TTS QUERIES   
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