

## **Introduction**

The topic of the survey is designed to understand the parking situation from the perspective of students, faculty, and any individuals who park on campus at MRU and to take the information provided to improve the situation going forward. Parking can be a challenge due to a variety of different factors which is what this survey is designed to understand. This survey is designed to analyze the 7 main categories of parking on campus which include, pricing, security, convenience, availability of spaces, availability of permits, parking enforcement, and accessibility. This survey is targeted towards the individuals that commute to campus by personal transportation as they often face parking challenges as opposed to the individuals who commute via public transportation. The survey would be implemented over the span of one semester. Over that time frame, participants would provide input that would be submitted to the university at the end of the semester. The results of this survey would be beneficial to MRU as the information collected will allow them to make specific changes to the parking issues that can be applied in future semesters.

## **Literature Review**

In a review of other similar surveys, it was noted each survey was conducted over one month, rather than semester-long or year-long studies. Our data sets would be compiled over 4 months to better gauge the perception of campus parking, and campus parking habits over time. We have also included different variables to our survey that measure the overall usage of parking spaces on campus, by measuring the amount of time used, how much time is spent parking and how often drivers park on campus.

“The maximum acceptable search time was found to be 15 min, beyond which the LOS is F. In two separate studies, Moradkhany et al. and dell’Olio et al. assumed the maximum parking search time was 15 min, which was consistent with the finding in the present study.” This time frame was considered when constructing the time-relevant questions in the survey.

In other questionnaires, the implementation of specific variables relevant to the topic makes it easier to understand which variables require the most attention and action going forward for the university to act upon. “In addition to the survey questions relating to how individuals traveled to and from McMaster University and the characteristics of the survey participants, a sub-set of survey participants was asked additional questions. Those who had a parking pass and who regularly drove to campus were also asked a series of stated preference questions asking respondents to select from among alternative hypothetical potential travel choices.” (Sweet & Ferguson, 2019). We had decided to include sections on carpooling and accessible parking options to help identify if these factors need to be improved upon, and how often these services are being utilized.

## **Methodology**

The survey was created in an online format for accessibility purposes. Participants can access the study by scanning a QR code that would be posted in physical form for convenience. The poster would be accessible for both students and individuals who have parked on MRU’s campus and posted around campus in common social spaces with high traffic volume such as the parkade entrance/exit, the library, The Table, West Gate Social, MRU Recreation center, Wyckham house, and major entrances/exits to increase participation for all individuals. The survey is open for all participants that utilize parking spots on campus over the four-month

winter semester. The survey is semestered to gather relevant information that pertains to the challenge of parking during the high-traffic times of the year. Taking this information throughout the semester allows researchers to gauge public perception of parking over time. The questionnaire will be structured by organizing the variables that the survey is designed to collect information on. Questions 1-3 pertain to the availability of parking spots on campus. Questions 4-6 are designed to gauge the safety of the parking lots on campus. Questions 7 and 8 are designed to understand whether or not there are enough parking spaces on campus. Question 9 pertains to the parking lots being able to accommodate all types of vehicles. Questions 10 and 11 pertain to the time component of finding a parking space. Questions 12 and 13 pertain to the ticketing enforcement for on-campus parking. Questions 14-17 are designed to understand that attitudes towards the price of parking. Questions 18-22 are implemented to understand the accessibility options for parking on campus. Questions 23-27 are designed to understand how often individuals come to the university carpool.

### **Conclusion**

The survey was designed to understand the parking situation on MRU's campus. The questionnaire underwent slight revisions from its original rendering based on feedback from peers. The feedback received saw the questionnaire have certain questions removed due to relevancy and new questions implemented with the original number being around 17 questions compared to the final edit for the questionnaire which contains 27 questions. The questionnaire was designed to include questions from 7 main categories which included pricing, security, convenience, availability of spaces, the availability of permits, parking enforcement, and accessibility concerns. These categories were seen as the most relevant to the topic and organized in the questionnaire making it easier for participants to understand what issues within the broad

topic of parking on campus the survey was designed to solve. The information gathered from the survey will outline which areas of the topic the university should focus on improving for future semesters.

**Qualtrics Link to Questionnaire**

[https://mtroyal.ca1.qualtrics.com/jfe/form/SV\\_8Inl3NZ6cjDEmcC](https://mtroyal.ca1.qualtrics.com/jfe/form/SV_8Inl3NZ6cjDEmcC)

## References

- Gurbuz, O., & Cheu, R. L. (2020). Survey to Explore Behavior, Intelligent Transportation Systems Needs, and Level of Service Expectations for Student Parking at a University Campus. *Transportation Research Record*, 2674(1), 168–177.  
<https://doi.org/10.1177/0361198119900169>
- Sweet, & Ferguson, M. R. (2019). *Parking demand management in a relatively uncongested university setting*. *Case Studies on Transport Policy*, 7(2), 453–462.  
<https://doi.org/10.1016/j.cstp.2019.01.008>
- University of Dalhousie (2019). *Dalhousie annual parking lot audit 2019 final report*. Retrieved from  
<https://cdn.dal.ca/content/dam/dalhousie/pdf/dept/sustainability/resources/publications-and-plans/transportation/Dalhousie%20Annual%20Parking%20Lot%20Audit%202019%20Final%20Report.pdf>

## **Appendix**

### Screener Questions:

1. What is your age?
2. What is your reason for coming to campus?
3. Have you parked on campus before?

### Survey Questions:

1. I feel confident in finding a parking space in the parkade.
2. I feel confident in finding a parking space in the west gate parking lot.
3. I feel confident in finding a parking space in the permit parking lots.
4. The parkade and parking lots around campus make me feel safe.
5. The parking lots around campus are well taken care of.
6. The lighting in parking lots is adequate.
7. There are enough parking spaces for everyone.
8. There are enough parking lots on campus.
9. Parking lots accommodate all types of vehicles.
10. I have to allocate time to finding a parking space.
11. I prefer to park off campus.
12. Have you received a parking ticket?
13. Parking enforcement hands out tickets without bias.
14. The cost of parking is reasonable.
15. Paying for parking is simple.
16. Do you have a parking pass?
17. The parking pass is reasonably priced.

18. How long do you normally park for?
19. There are lots of accessible parking options.
20. Do you use disability parking?
21. (if yes) There are enough disability parking spaces.
22. Disability parking is accessible for people with restricted mobility.
23. Drop-off areas are accessible to those with mobility issues.
24. Do you carpool to campus?
25. How often do you use carpool parking? (once a month, more than once a month, once a week, more than once a week, every day).
26. There are enough carpool spaces on campus.
27. Carpool spaces are conveniently located.