# CENTENNIAL COMMUTES

## Pathways for Improving Uptake of Active Transportation and Sustainable Mobility on Progress Campus

May 2023

the centre for active transportation

Urban Minds

CENTENNIAL COLLEGE

## Acknowledgment

Infrastructure Canada

This study was generously funded by Infrastructure Canada through the Active Transportation Fund, the first federal fund focused on active transportation.

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## Executive Summary

### Overview

Centennial College of Applied Arts and Technology is the oldest publicly funded college in Ontario; together, its five campuses host more than 29,000 students and 1396 full-time staff and 2820 part-time staff. In 2018, a commuter survey conducted by Smart Commute found that 58% of staff and faculty at Centennial drive to its campuses in a single occupancy vehicle, 33% take transit, and only 2% walk or cycle. In 2022, with funding from the Infrastructure Canada's Active Transportation fund, Centennial College launched an Active Transportation Study to identify how Centennial can help redistribute these numbers, and support both students and staff in moving away from single-occupancy vehicles towards more sustainable and active modes of transportation. The study was conducted at Centennial College's flagship campus — Progress Campus in Scarborough.

Centennial partnered with The Centre for Active Transportation (TCAT) and Urban Minds to engage students and staff at Progress Campus during March and April of 2023. Foremost experts in their fields, TCAT has spent 18 years working to build support for safe and inclusive streets for walking and cycling and Urban Minds has spent 7 years working to create meaningful ways for youth to shape their communities and cities. While the original intent of the study was to focus solely on active transportation adoption (i.e.: walking, cycling, scootering, etc.), as the study unfolded there was a shift towards investigating a wider array of transportation options including walking, cycling, public transit, and carpooling. Each of these modes of transportation were identified by Centennial's Real Estate Strategy and Facilities Operations sustainability staff as desirable ways for students and staff to commute to and from Progress Campus and thus ripe areas for exploration.

The 34 recommendations included at the end of this report — which span policy, infrastructure, and education — present dozens of opportunities for the College to take concrete action to encourage sustainable mobility amongst its community. While the Centennial Commutes study zones are on Progress Campus, many of the recommendations included in this report can be applied to Centennial College at large as well as the College's other four campuses.

### Key Findings

**1. The commuting patterns of students and staff are vastly different.**
The vast majority of students use transit as part of their commute. For staff and faculty, driving is much more common. Given this divergence, these communities will need different approaches to encourage them to engage in active and sustainable modes of travel. Target staff with initiatives to shift away from car use, while supporting student towards active transportation modes, such as walking and cycling.

**2. Prioritize the pedestrian experience on campus.**
Only 11% of students commute to Progress Campus by car, yet the car currently reigns

supreme on Progress Campus roads. Campus rights of way should repurpose existing road space to allow for wider sidewalks, raised intersections and crosswalks, accessibility ramps, and other traffic calming measures. Sidewalks should be designed with accessible and comfortable seating at regular intervals, pedestrian scale lighting, public art, greenery, and protection from the elements.

**3. Increasing access to bikes on campus is key.**
A lack of access to a bike is the greatest barrier to students cycling by an overwhelming margin. Prioritizing access to bikes is a critical step in supporting the adoption of cycling both on and around campus. Found a community bike hub on campus that offers free bike loans and work with the Toronto Parking Authority to bring Bike Share Toronto to Progress Campus.

**4. Traveling by bike does not feel like a viable choice.**
In addition to lacking access to a bike, safe and secure bike parking and bike lanes were repeatedly mentioned as investments that would help encourage cycling adoption. Many students shared that it does not feel like cyclists are prioritized on campus. A connected system of bike infrastructure should provide access to key destinations such as the student residence, library, student centre, athletic centre, and T Block through on-street lanes, off-road paths, or a combination of both. In addition to on-street infrastructure, cyclists require other facilities to make traveling by bike feel easeful. This includes bike repair stations, e-bike and e-scooter charging stations, and places for those who commute by bike to shower.

**5. Make public transit experience more comfortable.**
Centennial cannot control the quality and reliability of TTC and GO services. However, the College can create a more pleasant experience of taking public transit on campus by adding more seating, weather protection, Presto machines, enhanced lighting, and other amenities to the transit waiting area. Improve walking connections to the transit area from other key campus destinations, including the student residence. Explore options for including a metropass as part of student fees.

**6. Improve the winter experience on campus.**
Throughout the engagement process, winter was repeatedly identified as a key aspect that prevents students and staff from adopting sustainable mobility. Winter is often challenging, but it doesn't have to be. By developing a strategy for all Centennial campuses to create more winter-friendly experiences, the campuses can become more functional for sustainable transportation all year long.

**7. Continued engagement and data collection are crucial to the future success of sustainable mobility initiatives.**
As Centennial explores initiatives that support safe and accessible options for sustainable mobility, community engagement will be crucial in ensuring that these efforts are successful and meet the needs of the campus community. Co-creating strategies with staff and students will ensure initiatives are responsive to the ever changing needs of the campus community. Monitor and evaluate project plans as needed to ensure target goals are being met.

# 1 Introduction

## About Us

the centre for active transportation

**The Centre for Active Transportation (TCAT) at Clean Air Partnership**
Project Lead: David Simor, Director
Project Manager: Jennie Geleff

TCAT has the core mission of advancing knowledge and evidence to build support for safe and inclusive streets for walking and cycling, as modes of transportation that contribute to clean air, vibrant cities and a healthy population. TCAT has over a decade of experience implementing innovative approaches to community engagement and co-designing active neighbourhoods.

Urban Minds

**Urban Minds**
Project Lead: Ryan Lo, Co-Executive Director
Project Coordinators: Enosh Chen, Jane Law, Patrycia Menko

Urban Minds is a non-profit organization with a mission to create meaningful ways for youth to shape equitable and sustainable cities. We are a leading provider of youth engagement services to public and non-profit organizations. We help municipalities and civic organizations to better connect with youth and design youth-friendly spaces, programs, and services.

**Centennial College Student Ambassadors:**
Gilia Nolasco, Helie Updhyay, Kamal Chaudhary, Karsh Motiani

## Purpose and Scope

College campuses are vital engines of progress. Designed well, they can be hubs of not only academic achievement, but also social connection, environmental sustainability, and economic development. As each of these issues grows increasingly pressing, many large institutions and campuses are rethinking their approaches to campus mobility and taking action on the urgent need to shift away from auto-centric campus design. In turn, many campuses are beginning to map out an updated approach to campus mobility that is vibrantly human-centered and expressly supportive of walking, cycling, and other modes of active transportation.

To gather a vivid picture of the current state of commuting patterns at Progress Campus and produce recommendations to catapult campus mobility into a more sustainable future, TCAT and Urban Minds used four main engagement methods: an online survey, two dedicated focus groups targeting students and staff, a walk audit of Progress Campus, and four pop-up engagement booths at various campus locations. Over 1,000 students and staff were engaged using these four methods over the timespan of three weeks in early 2023. The project team also conducted an active transportation scan of other academic institutions in North America to gather inspiration and precedent.

# Methodology

TCAT and Urban Minds designed Centennial Commutes to capture diverse perspectives on current attitudes towards active and sustainable transportation, experiences of commuting to and from Progress Campus, and what can be done to make active and sustainable transportation more attractive to the community at large.

A detailed description of the study methodology used, including the survey questions, walk audit questions, focus group questions, and pop-up engagement boards, are included as appendices. Here is a brief overview of each study method:

## Online Survey

The Centennial Commutes online survey was open on Zoho Survey to all students and staff at Progress Campus for a total of three weeks, from March 20th to April 7th, 2023. The target set was 300 total survey responses, and 678 responses were received. The project team offered the Centennial community incentives for completing the online survey. The first 150 people to fill out the survey received $10 credited to their Centennial myCard account and another 50 students received free Centennial-branded merchandise.

The Centennial Commutes survey was advertised on Centennial College's social media channels including Instagram, Facebook, and LinkedIn, and was shared by Centennial's sustainability staff via email to its student, faculty, and staff networks. At the four pop-up engagement booths, the project team also handed out survey QR codes and directed those passing through to complete the survey on the spot for a small incentive such as a swag, coffee, and snacks..

For a majority of the period that the Centennial Commutes survey was open, the College was also conducting a campus-wide mandatory Cultural Assessment survey. As a result, there was a moratorium on advertising all other surveys across certain College channels (i.e.: social media, email blast), particularly to College staff. While the Centennial Commutes survey still surpassed its respondent goal by far, the moratorium resulted in much lower turnout among staff and faculty.

See Appendix A for the online survey questions.

# 1 Introduction

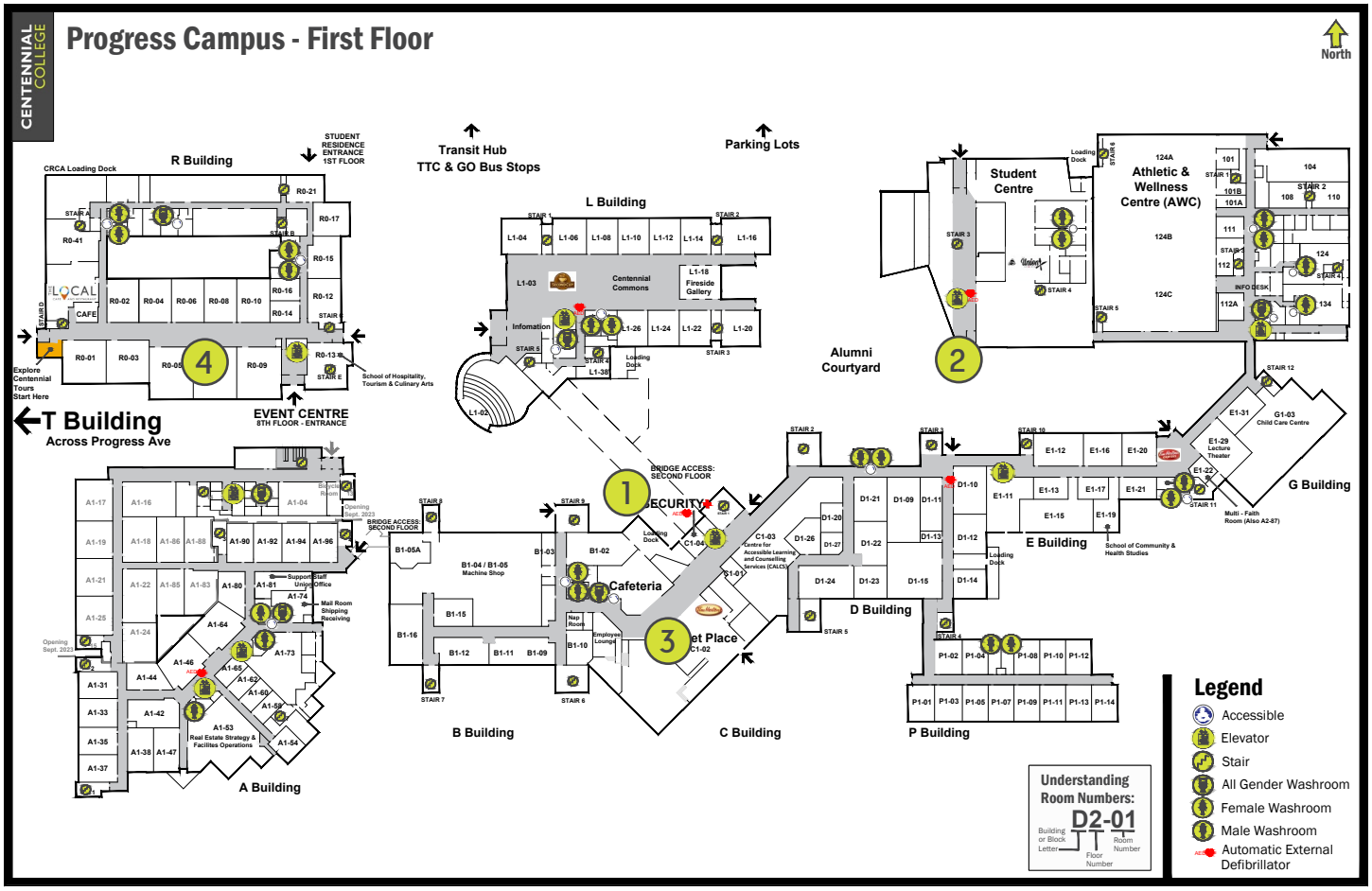
## Pop-up Engagment Hubs

Four pop-up engagement hubs were hosted on campus to supplement the information gathered through the online survey and engage students and staff who may not be as connected to online discourse and thus miss the virtual outreach.

The pop up-ups were hosted on and at the following dates and locations:

1. Pop-up 1: Wednesday, March 29th
   11:00 am-1:00 pm
   Bridge between the L Building and C Building
2. Pop-up 2: Thursday, March 30th
   11:00 am-1:00 pm
   By Union Grill at the Student Centre.
3. Pop-up 3: Monday, April 3rd
   11:00 am-1:00 pm
   Hallway by the MarketPlace cafeteria (C Building).
4. Pop-up 4: Tuesday, April 4th
   11:00 am-1:00 pm
   Main hallway of the R Building (School of Hospitality, Tourism & Culinary Arts).

At the pop-ups the project team was supported by four Centennial student ambassadors. These ambassadors were recruited via the College's social media channels and were required to attend a 1-hour in-person training session delivered by the project team over lunch on Wednesday, March 22nd. Each ambassador was compensated $100.00 for their time.




*Map of Progress Campus showing the locations of the pop-up engagement hubs.*

At each pop-up engagement hub, the project team set up highly visual and attractive engagement boards using six easels, which were used as interactive tools for the session. Students and staff who participated were offered free Centennial-branded prizes, snacks, and refreshments in exchange for their time to answer a few questions about their commute to Progress Campus. Each passerby was asked how they currently get to school, where they commute from, and what Centennial can do to make walking, biking, taking transit or carpooling both easier and safer. Participants then sorted each idea based on importance, identifying as either very important, somewhat important, or nice to have.

See Appendix B for the full engagement boards.

## Focus Groups

The project team hosted two focus groups to gather nuanced feedback on how Centennial can better support sustainable and active transportation. In order to gather feedback from two groups that engage with the campus in divergent ways, one focus group was hosted with students on March 30th, 2023 and a second with staff and faculty on April 4th, 2023 . Both focus groups were hosted in person at Progress Campus from 12:00-1:30 pm.

Focus group participants were recruited via email blast where they were directed to register via Eventbrite. Each focus group was limited to 12 participants and was operated on a first-come first-serve basis. Student participants received a $50 honorarium for their time and staff participants were credited $10.00 to their Centennial myCard accounts.

Due to the order in which Centennial sent out the recruitment email blasts, the student focus group

*The student ambassadors received training prior to facilitating the pop-up engagement hubs.*

*The project team and student ambassadors spoke to students about their commute to school.*


*Students received free snacks and Centennial-branded merchandise for their participation.*

# 1 Introduction

was primarily made up of those living at Progress Campus's student residence. While unintentional, this provided us with direct feedback from super-users of the campus environment a s well as many newcomers with unique insight, who are more likely than domestic students to opt to live on campus.

See Appendix C for the focus group questions.

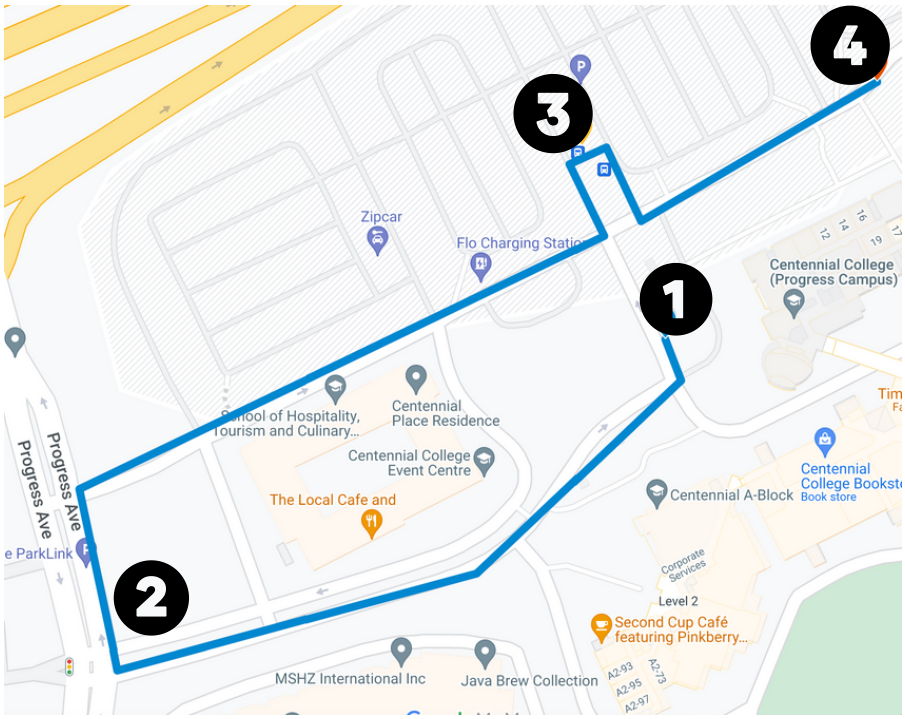
## Walk Audit

On April 3rd, 2023, the project team led a walk audit with 10 students at Progress Campus. This 90-minute facilitated walk took students to four key destinations on campus to discuss the environment's current transportation infrastructure, the barriers that presently exist to engaging in sustainable and active transportation, and any opportunities for improving the experience of sustainable and active travel on campus.

Each student was provided with a clipboard, pen, and questionnaire to record thoughts and feedback, and help guide the conversation. The four stops on the walk audit were:

1. Progress Campus Quad (in front of the flagpoles)
2. Intersection of Progress Avenue and Centennial College
3. Bus Stop Waiting Area
4. In front of the L Building and Alumni Courtyard

Similar to the focus groups, walk audit participants were recruited via email blast where they were directed to register via Eventbrite. While the walk audit was open and advertised to both students and staff, all of the 10 participants were Centennial students. Each participant received a $50 honorarium for their participation.




*Map of Progress Campus showing the route and stops of the walk audit.*

## Academic Institutions - AT Scan

To supplement the four engagement methods used as part of Centennial Commutes, the project team also conducted an active transportation scan of eight post-secondary campuses in Canada and the United States. The scan sought to identify post-secondary academic institutions that have developed plans to support active transportation initiatives on campus, thus providing additional context on how Centennial can move forward in a similar realm.

To identify the institutions for further investigation, the project team first identified 25 North American campuses that had either active transportation master plans or campus master plans with specific references to active transportation. From there, the team looked into which campuses were geographical analogous to Centennial, such as schools located in suburban areas or other parts of Toronto.

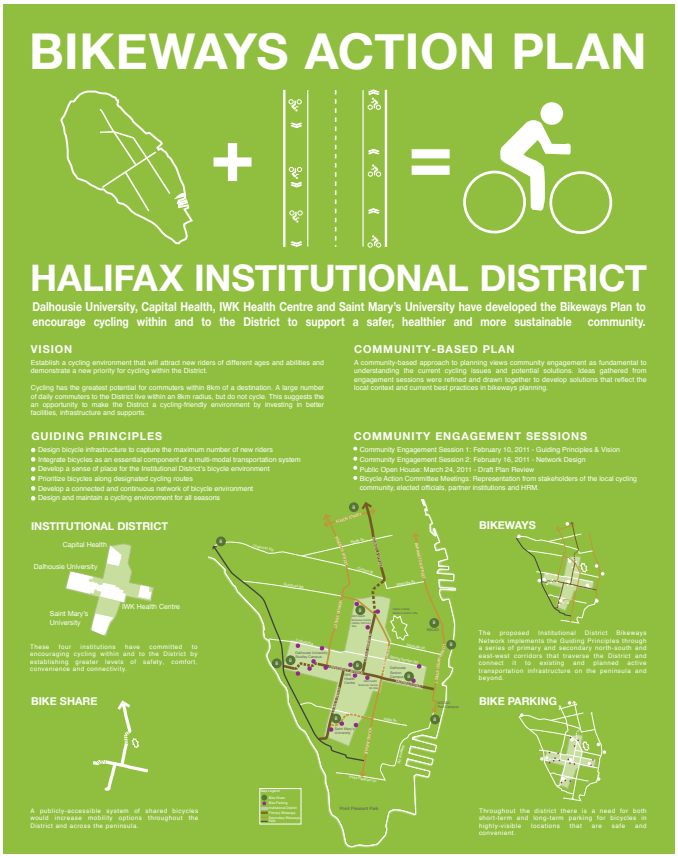
In the end, the eight campuses that were identified for investigation included:

- University of Toronto Scarborough Campus
- University of Toronto St. George Campus
- University of Toronto Mississauga Campus
- Queen's University
- University of Western Ontario
- Dalhousie University
- University of Connecticut
- University of Utah

For each school, the project team gathered the following information:

- Institution name
- Type of planning document
- Year the planning document was created
- Actions completed or committed
- Targets set (if any)
- Timeline for implementation
- Funding attached to plan (if any)
- Key departments or stakeholders for collaboration

Each school was identified through Google search, while the school-specific information was found through reports and plans available on each individual university's website. For full scan findings, see Appendix D.




*Dalhousie University partnered with other agencies and institutions to develop a Bikeways Action Plan in 2012.*

# 2 Engagement Findings

## Online Survey

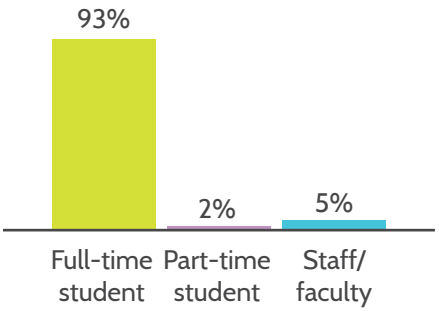
### Overview

A target of 300 completed surveys was initially set for the Centennial Commutes survey. Ultimately, a total of 678 people responded to the Centennial Commutes survey within a three week period, with 95% student respondents and 5% staff respondents. Of the respondents, 96% said that they visit campus at least once a week and 78% said that they visit campus three or more times a week. The respondent demographics are as follows:

- 80% of respondents were between the ages of 18 and 30. 18% of respondents were between the ages of 31 and 50.
- 54% of respondents identified as female, 45% identified as male, and 1% identified as non-binary.
- 35% of respondents identified as Black, Indigenous, or People of Colour (BIPOC), while 20% selected "prefer not to answer".
- 5% of respondents said that they have accessibility needs.

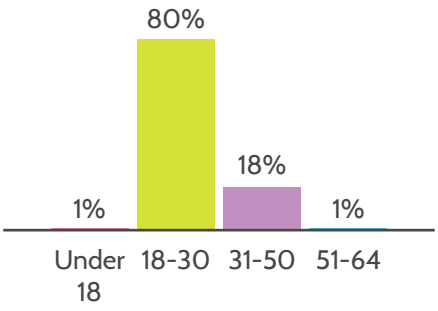
**Respondent Type**

*N = 673*



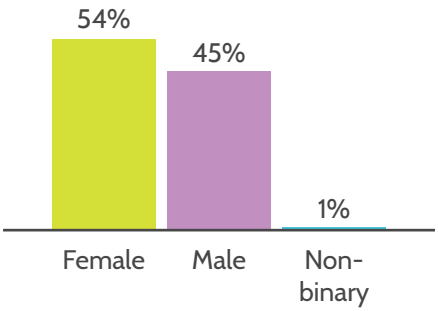

**Respondent Age**

*N = 635*



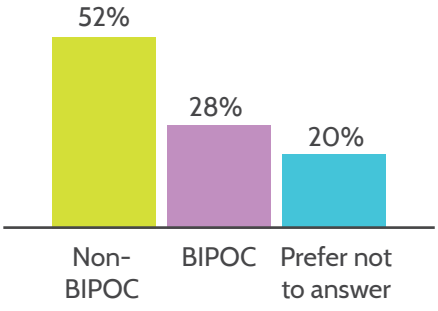

**Respondent Gender**

*N = 631*



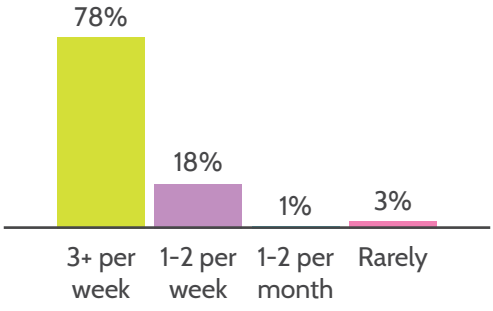

**BIPOC vs. Non-BIPOC**

*N = 508*




**Frequency of Trips to Campus**

*N = 679*



*Most respondents use public transit as part of their commute.*

## Findings

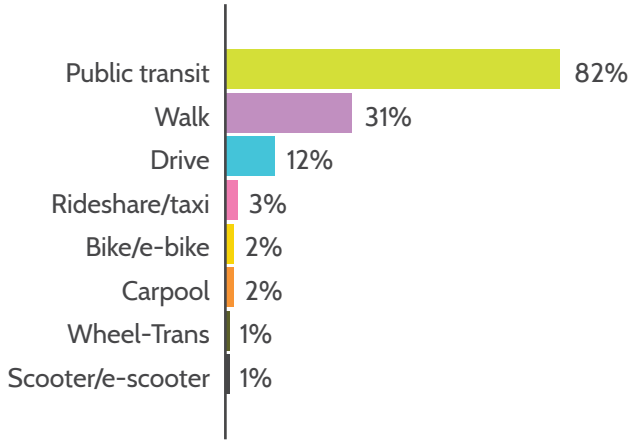
### Mode Share

A majority of respondents currently take public transit as part of their commute; 82% for at least part of their journey from home to Progress Campus. Many respondents (31%) rely on more than one mode of transportation to arrive at Progress Campus. Respondents were able to select more than one travel mode option.

Most respondents who take public transit for part of their journey utilize TTC buses (88%), with close to a quarter taking the subway (24%). 20% relay on GO transit and 5% rely on some combination of York, Peel, and Durham regional transit. Respondents were able to select more than one transit type.

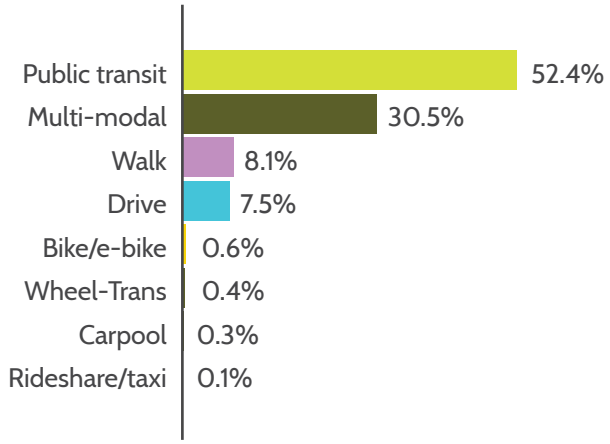
**Travel Mode**

*N = 678*



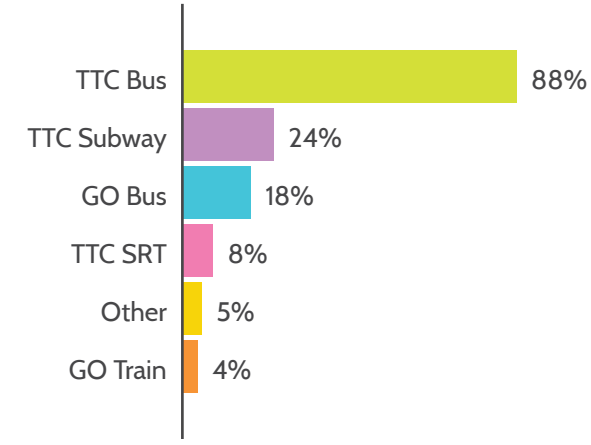

**Travel Mode (Sole Modes vs. Multi-modal)**

*N = 678*




**Transit Type**

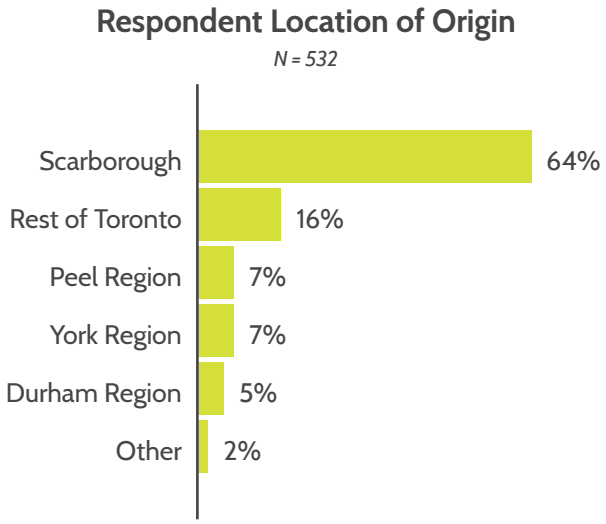
*N = 557*

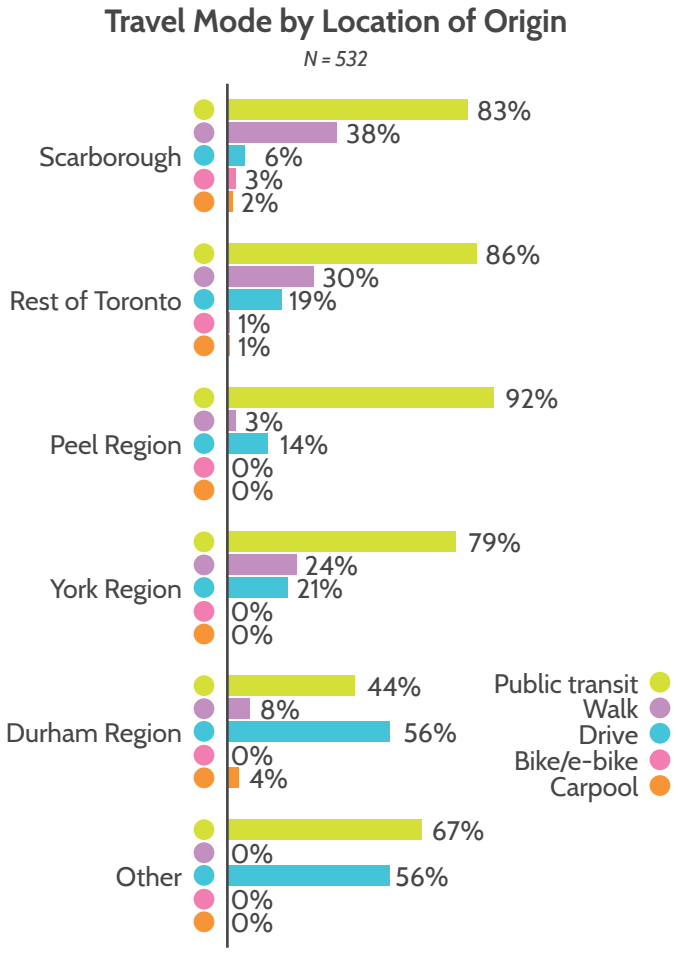


# 2 Engagement Findings

*Only a small percentage of respondents bike to campus.*

A majority of survey respondents (64%) live in Scarborough, indicating there is potential for students to walk and ride a bike to Progress Campus. Despite this, only 3% of respondents in Scarborough currently bike or e-bike to campus.

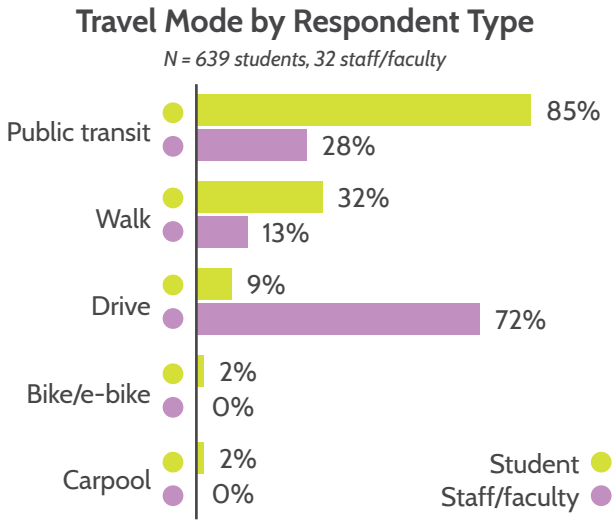


*A majority of staff respondents currently drive to campus.*

Staff travel habits differ from student travel habits. While only 9% of student respondents drive to Progress Campus, 72% of staff respondents drive. Only 28% of staff take public transit for a part of their journey. cost.

When compared to other regions, a higher proportion of staff commute to Progress Campus from Durham Region. Specifically, 58% of respondents in Durham are staff, while in all other regions staff only make up 2-11% of respondents. Additionally, students and staff from Durham are far more likely to drive than respondents from other regions even when they live closer to Progress Campus. Many of these respondents shared that public transit connections from Durham Region to Progress Campus are either inconvenient or completely lacking, which often resort in those commuters opting to travel by car.



# 2 Engagement Findings


*Students and staff weigh factors like time, cost, and convenience differently when it comes to their commute.*

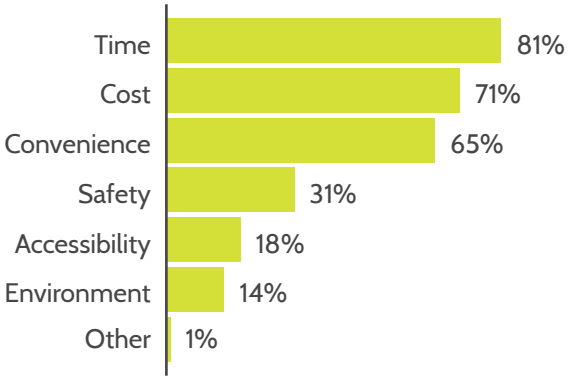
**What Drives Travel Mode?**
Overall, the three most powerful factors influencing travel mode are time, cost, and convenience. However, the relative weight of these factors varies based on whether one is a student or staff, as well as the respondents current mode of travel. Students are more driven by cost-related factors while staff are more driven by convenience. Those who drive are less likely to take into account the cost of their travel mode when deciding how to get to campus (58%) as compared to those who use other modes of travel (69-76%).

The biggest barriers prohibiting respondents from engaging with each of the following sustainable and active modes of transportation are:

- **Walking:** Walking from home to campus takes too long and there is a lack of winter maintenance along the route.

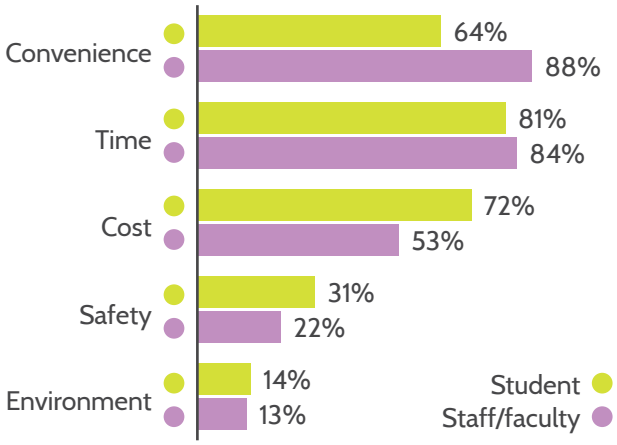
**Top 3 Factors Influencing Travel Mode**

*N = 674*



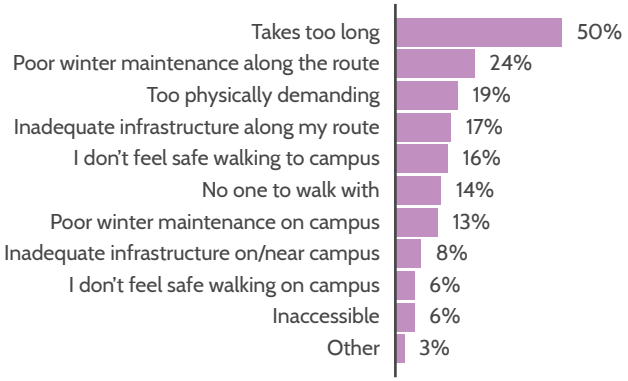

**Top 3 Factors Influencing Travel Mode by Respondent Type**

*N = 635 students, 32 staff/faculty*




**Biggest Challenges Walking to Campus**

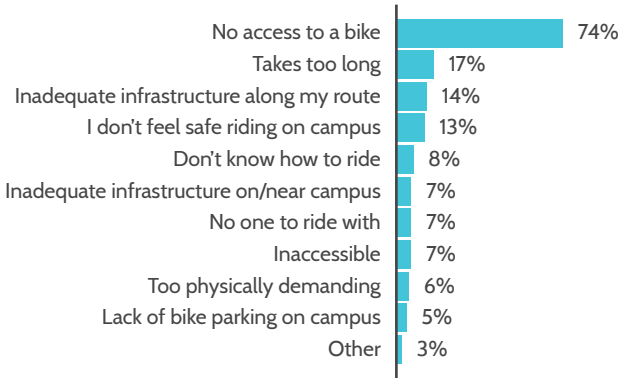
*N = 645*



- **Biking:** 74% of respondents said that the biggest challenge to biking to campus is a lack of access to a bike. All other listed barriers, including concerns about safety, lack of infrastructure, and time, were only selected by under 20% of respondents.

**Biggest Challenges Biking to Campus**

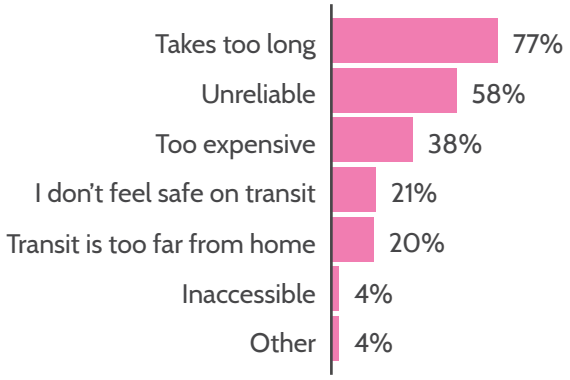
*N = 664*




- **Transit:** Transit takes too long, is unreliable, and expensive.

**Biggest Challenges Taking Transit to Campus**

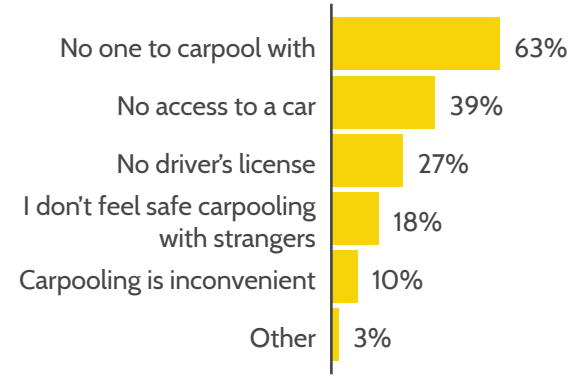
*N = 672*




- **Carpooling:** Many respondents have no one to carpool with, no access to a car, or no driver's license.

**Biggest Challenges Carpooling to Campus**

*N = 647*



# 2 Engagement Findings

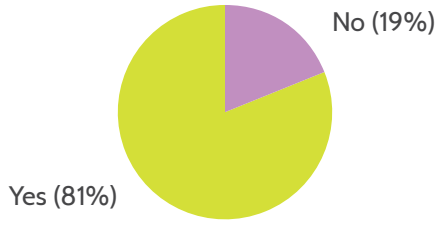
Despite the abundant challenges associated with each sustainable mode, 81% of respondents said that they are willing to shift their habits towards more sustainable modes of transportation, with 30% stating that they would consider biking to Progress Campus.

Some common survey respondent suggestions for Centennial to help improve access to various sustainable transportation options include:

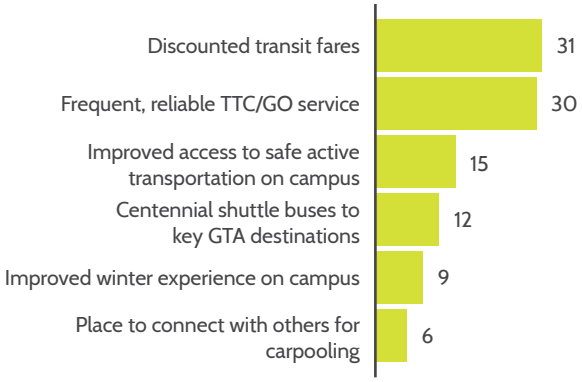
- **Walking and Biking:** Provide safer and more pedestrian and cycling infrastructure on campus and improve the winter experience on campus.
- **Transit:** Provide discounted or free public transit passes to students and a Centennial shuttle bus to key GTA destinations including Scarborough Town Centre.
- **Carpooling:** Create a forum to connect with others for carpooling

**Willingness to Change Travel Mode**

*N = 670*




**Popular Ideas for Making Sustainable Transportation More Attractive**



# Pop-up Engagement Hubs

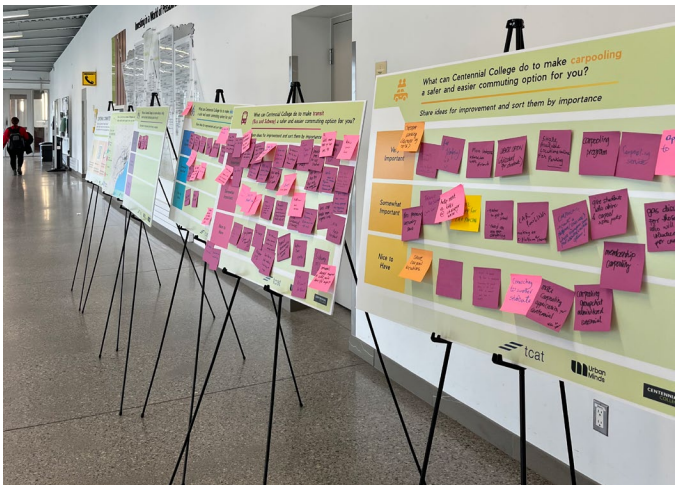
## Overview

More than 400 students and staff were engaged during the four pop-up engagement hubs hosted as part of the Centennial Commutes engagement process. Across the four hubs, 486 pieces of feedback were generated. 84% of those ideas were generated by transit users, 8% by those who drive, 4% by those who walk, 4% by those who cycle, and 1% by those who carpool. Each of the ideas generated explored how Centennial could improve commutes for students and staff using sustainable transportation options. Each of these ideas was sorted by how frequently they were suggested and by how important respondents deemed each idea on a scale of very important, somewhat important, and nice to have.

*Students participated in one of the pop-up engagement hubs at the R Building.*

## Findings

With nearly 500 ideas being raised, the engagement hubs provided an informal opportunity to have organic dialogue with Centennial staff and students, and to connect with those who may have been missed through the online survey. For each mode of sustainable transportation, common themes arose for ways that Centennial can make commuting to and from Progress easier and more enjoyable.




*Among all four travel modes, students had the most to say about transit (second board from the right).*

### Transit

Timeliness, frequency of service, and reducing costs were the biggest opportunities identified for improving transit to and from campus. Many students requested shuttle bus service from Progress Campus to key destinations such as the Brampton Gateway Terminal, SRT, and GO bus terminals in North York, such as York Mills and Finch TTC stations to make their commutes smoother and quicker. Similar sentiments were also echoed in the online service and focus groups, demonstrating the popularity of this idea.

# 2 Engagement Findings

**Walking**
Much like ideas raised in the focus groups, winter maintenance, snow removal, and improving pedestrian connectivity to key destinations on campus were deemed the most important considerations for Centennial improving the pedestrian experience at Progress. These concerns were raised both for municipally owned sidewalks off of campus, and for sidewalks and pedestrian spaces on Progress campus.

**Biking**
Despite very few respondents biking to campus at present, lots of ideas were generated on how to improve cycling access, which indicates latent demand for biking programs and improvements. Access to a bike rental system at Progress Campus was the most popular and heavily weighted idea for improving cycling as an option at Centennial, which echoes the survey finding that lacking access to a bike is the greatest barrier to cycling. Safe and secure bike parking, access to e-bikes, and safer bike lanes were also repeatedly mentioned.


*The pop-up engagement hub at the bridge between the L and C Buildings saw the highest turnout from students.*

**Carpooling**
In general, carpooling is a lesser explored option when it comes to commuting to and from campus. However, the Centennial community expressed interest in the idea of carpooling across multiple engagement methods.

Some of the most commonly shared ideas for improving carpooling focused on different ways of providing incentives. This included reduced parking fees, cheaper gas, and insurance, and paying students on campus to lead carpooling initiatives; since students are already stretched thin for resources it is challenging to find the capacity to organize carpooling amongst themselves. Others suggested that carpooling programs should be administered by the college, and there should be information boards, a carpooling app, or matchmaking service to connect interested students with each other.

# Focus Groups

## Overview

Two focus groups were held as part of the Centennial Commutes engagement process — one with students and one with staff and faculty. Each focus group was held over lunch on Progress Campus.

The student focus group was attended by eight students, each of whom reside at the student residence on Progress Campus. While recruitment was not specifically targeted to students who live in residence, these students shared extremely useful insight into mobility on and around campus, with the campus being their home. The staff focus group was attended by six staff members from various departments.

## Findings

### Walking

Both students and staff shared that in general, Progress Campus is not particularly pedestrian friendly and that there are many places on campus where cars are prioritized. However, the campus does have the potential to be a pedestrian friendly environment and for students who live in residence — many of whom are newcomers — walking is their primary mode of transport. These students requested more sidewalks around the student residence building, sidewalks that connect the student residence entrance to the bus terminal (where desire lines currently exist) and raised crosswalks and intersections to make navigating campus feel clearer, easier, and safer.

*A lot of the north side of the campus has the majority of the pathways. The part of the campus along Morningside and the south side you really have no choice but to walk on the roadway. The whole campus isn't utilized. The part along the ravine is really underdeveloped for pedestrians.*


*South side of campus*

# 2 Engagement Findings

**Biking**

Student and staff opinions differed when it came to exploring biking as a viable transportation option for getting to and from Progress Campus. Among students, there was a lot of interest in the idea of biking on campus, along with many concerns. Much like survey respondents, students identified lacking access to a bike as a major barrier, as well as apprehension around a lack of bike infrastructure both on and around campus. Many students were unaware that there was interior bike parking at their student residence and that there were places on campus to pump tires and perform simple repairs, which suggests there is also an opportunity for better education and information sharing on campus. Participants of the student focus group requested bike share options and secure bike parking on campus.

Staff expressed that in general, they live too far away for biking to be a viable transportation option on its own. Additionally, many were worried about showing up at their place of work sweaty and hot, but some still said that they would consider biking for a portion of their commute if better infrastructure existed.

*People have told me that often bikes get stolen on Centennial Campus, which makes me think twice about using a bike.*

*The campus isn't bike friendly – there are no bike lanes or awareness of where you're supposed to bike.*


*Desire lines indicating need for better pedestrian connections to the student residence.*

**Transit**

Much like the online survey and pop-up engagement hubs, many students raised concerns about the cost of transit and strongly urged Centennial to create a student specific transit pass. Both students and staff shared frustrations around reduced transit service at night and on weekends and expressed that the bus waiting area requires improvements including more shelter, warming stations, additional seating, and Presto loading stations. Newcomer students also expressed ubiquitous frustration with the lack of clear signage at the bus stops, lack of information indicating which direction buses are going, and little or no indication of what their routes are.

*I love taking public transit but am concerned that it is becoming less reliable and more time consuming."*

*A more direct route from downtown would be great. I would also love shuttle options between campuses as I often travel from one campus to another. When I go between campuses, I don't have time to wait for transit so will usually call an Uber."*

*I'd like to point out that there are fewer buses available on Saturdays and Sundays, making bus scheduling more difficult. There is no GO train available on Sundays, and it is very hard to get home on those days.*

*I've gotten lost so many times because I don't know where a bus is going to go.*

*Centennial college should provide free of cost transit pass because as an international student the transit pass cost is too high.*

*It would be nice if Centennial ran a shuttle bus to FreshCo or Food Basics. There are a few things that really matter to students, and one is grocery shopping.*

*When it's a good transit day, it's enjoyable, I can catch up on emails, read. But when it's a bad day, it can feel like hell.*

# 2 Engagement Findings

**Carpooling**
Since most staff already drive as their primary way of getting to campus, there was significant interest expressed around carpooling during the staff focus group. However, staff also expressed concerns around the impracticality of carpooling due to picking up kids on the way home and needing a car in case their kids get sick and need to be picked up early from school. Despite these concerns, there was a general interest among staff to entertain or attempt carpooling, especially if there was a centralized place to connect with others on the subject. While most students don't currently drive, they also expressed a willingness to consider carpooling in the future, particularly when they move further away from campus.

*Too many things depend on me outside of work, the main thing being my children. I need to be able to get to them in the event of emergency or illness, and require a car seat.*

*I live in a different municipality/town, biking, walking, and public transit from my house to campus would be quite challenging and not beneficial or feasible for me. The only sustainable option I could consider would be carpooling.*

*Carpooling will be very much helpful, cost effective and good for environment too.*


*Sharing a ride can be a good way to reduce carbon emissions when other modes of transportation such as walking, cycling, or transit are not feasible.*

# Walk Audit

## Overview

A walk audit was held as part of the Centennial Commutes engagement process on April 3rd. Ten students attended the walk audit over lunchtime on a cold and windy, but sunny day. Of the ten students who attended, five of those students had also attended the student focus group and were newcomers living in Centennial's student residence.

The students were asked to respond to general questions, which pertain to Progress Campus as a whole, as well as specific questions at each of the four walk audit stops. Participant responses to the questions about the whole campus elucidate that at present, students do not feel comfortable walking or biking on campus:

- When asked if the campus is a place respondents would enjoy walking 80% selected "somewhat" and 20% selected "no". No respondents affirmatively agreed that campus is a place they would enjoy walking.
- When asked if the campus is a place respondents would enjoy biking 20% selected "somewhat", 70% selected "no", and one chose not to answer. No respondents affirmatively agreed that campus is a place they would enjoy biking.
- Participants also noted that there are no bike lanes on campus and inadequate bike parking space, sidewalks are neither well connected to one another nor key destinations, and cars and buses travel too fast.

*Most of the car and pedestrian arrangements are not well designed. They are dangerous and all crushed together.*

*Pedestrian and cycling infrastructure not prioritized on campus*

# 2 Engagement Findings

## Findings

### Stop 1: Progress Campus Quad

The walk audit participants identified three key ways to improve the campus quad and make it a more pleasant place to spend time.

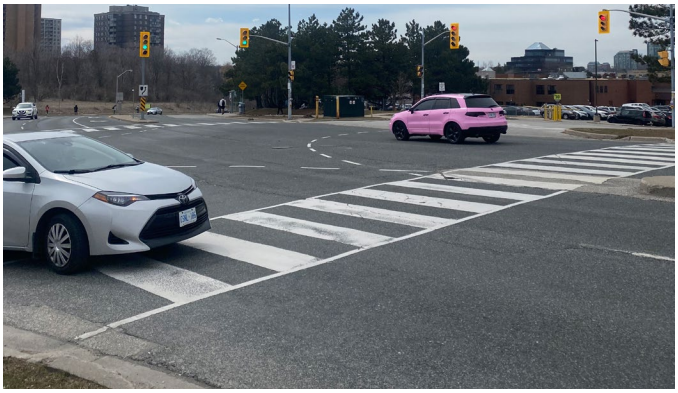
- Participants noted that there is no weather sheltering at the campus quad and that the area is in great need of protection from snow, wind, and rain.
- Many participants also noted that the area needs better pathways and directional signage to help students navigate from the quad to key school buildings and classrooms.
- Lastly, participants also noted that there is no seating, tables, or places to rest and spend time.

*Walk audit participants discussing their impressions of the Quad.*

### Stop 2: Intersection of Progress Avenue and Centennial College

The most common feedback at Progress Avenue and Centennial College was that cars drive too fast, and it often feels like there are inadequate measures to slow cars and protect pedestrians. The speed of cars makes students feel unsafe crossing the road, particularly at night. One student even noted that it feels like she's walking on the highway.

Participants suggested providing more time for pedestrians to cross the road, particularly travelling east-west to and from T Block, shorter wait times to receive a green pedestrian walk signal, better snow clearance, and bike lanes to travel in all directions. They were also extremely receptive to the idea of reducing the curb radius at the intersection to greatly slow down right-hand turning traffic.



*Progress Avenue was not considered a welcoming environment for pedestrians by audit participants.*

**Stop 3: Bus Stop Waiting Area**
When asked if the bus stop waiting area is easily accessible from sidewalks and pedestrian routes, 50% of participants selected "somewhat" and 50% selected "no". No walk audit participants affirmatively agreed that the bus stop waiting area can be easily accessed on foot, and many shared that they are especially in need of a pedestrian connection between the bus stop and the entrance to the student residence.

Beyond being challenging to access on foot, participants identified the following as major problems present in the space, and areas where they would benefit from improvements:

- Lack of weather protection
- Broken sidewalks and pavement
- Uncomfortable or lack of seating
- No bike parking
- Insufficient lighting

Lastly, students mentioned the challenges associated with navigating the bus system and requested clear signage that states which direction buses are going and how long it will take for the next bus to arrive.

*Limited seating available for those waiting for their bus.*

*Audit participants noting ideas fpr improving the bus waiting area.*

**Stop 4: In front of the L Building and Alumni Courtyard**
Walk audit participants shared that they rarely visit this area because there is nothing to do or see. Occasionally, they pass through to get from building to building. However, they also identified it as an area with a lot of potential and a place that, with changes, they could spend more time. As potential areas for improvement, they primarily identified better seating options, sheltering and weather protection, and more grass and greenery to make the space feel welcoming and calming.

*Walk audit participants exploring Alumni Courtyard.*

# Academic Institutions – AT Scan

## Overview

Among the eight plans investigated as part of the Active Transportation scan, there was significant variation in both scope and content among the institutions. Some plans primarily provided vision statements, some focused solely on infrastructural improvements, while others provided a mix of infrastructural, programming, engagement, and evaluation initiatives. Despite this variation, a few key themes and critical takeaways were present throughout.

## Key Themes

**De-Prioritize Cars and Reduce Car Parking on Campus**

Many of the plans highlight the need to use existing campus property as efficiently and effectively as possible. Several plans call for reducing the space allocated for car parking on campus, thereby encouraging a shift away from car dependency. Dalhousie University also calls for eliminating parking subsidies for staff and faculty to further catalyze this shift.

**Enhance Traffic Calming and Improve the Pedestrian Experience**

The University of Western Ontario, Queen's University, University of Toronto Scarborough Campus, University of Toronto St. George Campus, and University of Connecticut each references implementing traffic calming measures to improve the pedestrian experience on campus. This includes adding curb bulb-outs, raised crosswalks and intersections, using road diets to slow down traffic, and widening pedestrian pathways to increase walking comfort. Several plans also reference an efficient pedestrian network, which provides pedestrians with smooth connectivity between key campus destinations to reduce travel times.

**Create Vibrant Public Spaces**
Beyond negotiating space among pedestrians, bikes, and cars, most of the eight plans also highlight the importance of creating a vibrant and accessible public realm where the school community feels comfortable spending time. Approaches for achieving this include providing ample benches and seating areas, employing unique paint schemes or textured paving materials to contribute to a dynamic environment, incorporating walkways framed by tree plantings, and installing pedestrian-scaled lighting. Each of these additions must be designed in compliance with local accessibility standards, such as the Accessibility for Ontarians with Disabilities Act (AODA).

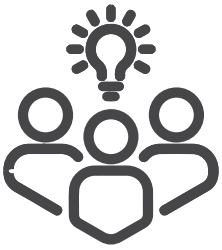
**Dedicate Space to Support Biking**
Almost all plans emphasized the need to prioritize dedicated space for biking. This includes not only dedicated road space for protected bike lanes, but also creating bike parking that is safe, secure, highly visible, well-lit, and proximal to key locations. University of Connecticut was unique in also emphasizing the need to accommodate and support e-bike and e-scooters on campus.

**Engage and Co-Create with the Campus Community**
The University of Utah, University of Connecticut, and Dalhousie University all stated the importance of engaging the campus community in order to co-create detailed plans and initiatives. Surveys, focus groups, and working groups are all mentioned as potential engagement methods for ensuring improvements meet the needs of the campus community.

**Leverage Municipal, Regional, and Provincial Cooperation**
Throughout the eight plans, walking and biking are the most referenced forms of transportation, where institutions must deepen their attention and investments. While transit is often mentioned, many of the plans also recognize that several aspects of transit are beyond the institution's control, highlighting the importance of working in concert with municipal, regional, and provincial entities. This includes public transit expansion plans, transportation and active transportation plans, Complete Streets policies, Vision Zero plans, and more.

# 3 Recommendations

## 1. Develop a vision and core principles



### 1.1 - Establish a bold collective vision.

Throughout the engagement process, Centennial community members lamented how it too often feels like cars are prioritized on campus. A great first step for Centennial College is to build a clear, collective vision that shifts this reality. The vision should catapult the college forward as an institutional leader in sustainable transportation and seek to support its community in living healthy, active, and vibrant lives. The vision will recognize that safe, affordable, accessible, and convenient mobility options is a key part of achieving this goal and act as an anchor as Centennial College spurs future action on sustainable mobility.

### 1.2 - Set measurable targets for mode share.

Building upon the collective vision, Centennial should set measurable campus mode share targets and take steps to adapt the built and social infrastructure to ensure these targets can be achieved. The City of Toronto's TransformTO Net Zero Strategy has set a target for 75% of all school and work trips under 5km to be walked, cycled, or on public transit by 2030. Since 82% of Centennial Commutes survey respondents already use public transit for at least a portion of their commute, Progress Campus can allocate a larger share of this target towards active transportation modes, such as walking and cycling.

In general, Centennial Commutes identified that the vast majority of the community already uses transit. However, among staff, driving is much more common. Centennial should also set ambitious targets to transition more staff to using sustainable modes and investigate how Progress Campus's present mode share compares to the Centennial College community as a whole.

## 1.3 - Recognize the inequities of car-centric planning.

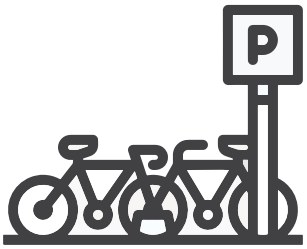
Transportation is the second largest source of greenhouse gases in Toronto, accounting for 33% of total emissions. Car-centric planning, which seeks to move cars as swiftly as possible above all else, has resulted in catastrophic environmental damage. Beyond sheer environmental damage, this same car-centric approach to planning has historically disadvantaged many equity seeking groups including women, low-income folks, people of colour, newcomers, people with accessibility needs, youth, and older adults. Recognizing and committing to reducing car dependency and the dominance of car-centric planning is the environmentally and socially just way forward. This anti-oppression and intersectional understanding of mobility must be centered in Centennial's sustainable mobility plans, policies, and initiatives.

## 1.4 - Establish a hierarchy of priorities within sustainable mobility.

When needs inevitably conflict, it is important to have a preestablished hierarchy of priorities within sustainable mobility and always make decisions based on that hierarchy — pedestrians first, cyclists second, transit-users third, and those who carpool fourth. For example, incentivizing carpooling through cheaper parking may inadvertently result in a more hostile environment for active travel modes and when a hierarchy is already established, it is clear that streets must first and foremost be designed to support the safe movement of pedestrians, cyclists, and transit-users.

# 2. Engagement, stakeholder collaboration & studies

## Develop standardized guidelines across all Centennial campuses




### 2.1 - Establish bike parking guidelines for all Centennial campuses.

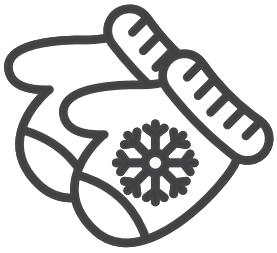
High quality bike parking can be the critical difference between someone choosing to ride to school or leave their bike at home. By establishing bike parking guidelines for all Centennial campuses the college ensures that bike parking can be built efficiently and without confusion, and all racks will be up to par.

### 2.2 - Develop a unified strategy for wayfinding and signage on all Centennial campuses.

Navigating campus shouldn't cause headaches and neither students nor staff should be left wondering where they are supposed to cross the road to get to class. Developing a clear wayfinding and signage strategy will help deliver navigational information in a way that prioritizes people traveling by sustainable modes, and ensure that pedestrians, cyclists, and transit users feel safe and confident moving about Centennial campuses.

## 2.3 - Establish sustainable mobility guidelines for all new buildings and public spaces on Centennial campuses.

Establish sustainable mobility guidelines that ensure all new buildings and public spaces will be designed to prioritize sustainable mobility. This should include wide sidewalks, pedestrian scale lighting, ample seating, secure bike parking, bike repair stations, e-bike charging stations, and connected routes to safely arrive on foot and bike. Guidelines for reduced space allocated to car parking should also be set for all new buildings and campus expansion projects.



## 2.4 - Develop a winter friendly strategy for all Centennial campuses.

Throughout the engagement process, winter was repeatedly identified as a key aspect that prevents students and staff from adopting sustainable mobility. Winter is often challenging, but it doesn't have to be. Develop a strategy for all Centennial campuses to create more winter-friendly environments and experiences on Centennial campuses. This should include prioritizing winter maintenance on campus sidewalks, bike lanes, and transit routes before car routes. It should also consider the creation of warming zones, bike infrastructure (i.e.: racks, repair stations) that are functional all year long, and community events that celebrate the many fun aspects of winter (i.e.: bonfires, snow sculpture competitions, etc.).

# 3 Recommendations

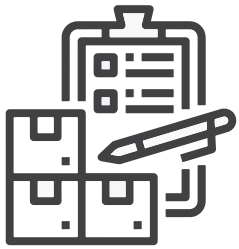
## Areas for further study

### 2.5 - Conduct a feasibility study of a Centennial shuttle bus to key off-campus destinations.

Students repeatedly identified a shuttle bus service to key destinations (i.e.: SRT, Brampton Gateway Terminal, and North York) as one of the primary ways Centennial could improve their transit commutes. Conduct a study to identify the financial, environmental, and logistical implications of a shuttle bus option.

### 2.6 - Conduct a needs assessment of future sustainable transportation projects.

A needs assessment will help Centennial navigate the gap between its current mode share and its targeted outcome. The needs assessment should include an analysis of the benefits and cost savings associated with reduced parking, and the infrastructural changes (i.e.: secure bike parking, protected bike lane network, enhanced bus waiting terminal, etc.) required to achieve future mode share targets.



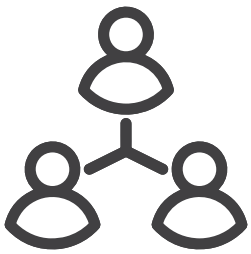
## 2.7 - Review and develop inventory of existing sustainable transportation infrastructure.

To make Centennial more hospitable for pedestrians, cyclists, and transit-users it's essential to understand where the college is starting from. Track the current land-use of the College and identify how space is currently allocated to various modes of transportation. Ask how these land-use patterns either support or discourage the community from engaging in active transportation. Identify any existing Centennial or student-led initiatives that support sustainable mobility.

## 2.8 - Annually track all crash and road violence incidents on and around campus.

By tracking all crash and road violence incidents on and around campus, Centennial can clearly understand how sustainable mobility initiatives affect road safety. Report annually on all progress made towards improving campus road safety and how this aligns with on-campus initiatives, infrastructural changes, and shifting travel modes.

## Create avenues for ongoing community input



### 2.9 - Create a Centennial-led Sustainable Mobility Working Group.

The working group should convene students, staff, faculty, and College administration to assist in decision making around sustainable mobility. Already, Centennial College has an accessibility committee composed of members from various departments and staff groups. Use a similar model, but add student representation to the group.

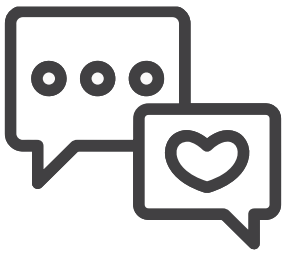
### 2.10 - Establish a stakeholder working group to improve sustainable transportation in Scarborough.

At present, Scarborough has few viable sustainable transportation options. By establishing a stakeholder working group, Centennial can play a leading role in convening local stakeholders and identifying ways to collectively address this chronic issue. The working group can identify joint initiatives for improving sustainable mobility, pool resources, share insights, and bring collective weight to bear on advocacy efforts for improving walking, cycling, and transit infrastructure in Scarborough. Refer to The Scarborough Opportunity to identify first steps for collaborating with partners.

Potential stakeholders include University of Toronto Scarborough Campus, Scarborough Health Network, Centenary Hospital, CycleTO, WalkTO, TTC Riders, Oxford College of Arts, Business and Technology, and the Toronto District School Board. The working group should also develop relationships with key governmental stakeholders including City of Toronto, TRCA, and Metrolinx, and work with Region of Durham and Durham Regional Transit to improve transit connections to Durham Region – an idea identified as having considerable potential.

## 2.11 - Coordinate with Centennial's Accessibility Advisory Committee.

As the College develops a winter friendly strategy, public space plan, a unified wayfinding and signage strategy, and sustainable mobility guidelines for all new buildings and public spaces, it is essential to coordinate all efforts with Centennial's Accessibility Advisory Committee. All new public spaces and sustainable mobility infrastructure should support and enhance efforts to improve accessibility on campus.



## 2.12 - Continue to gather input from the Centennial College community.

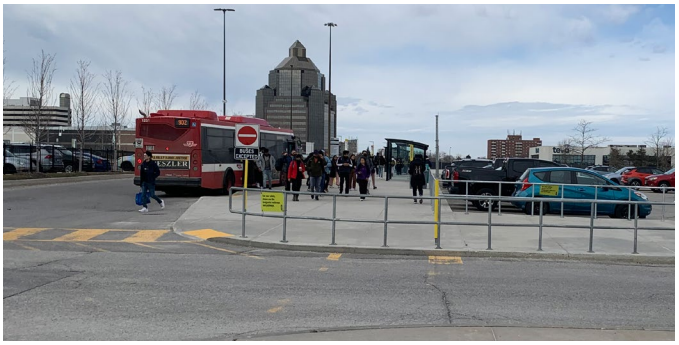
As Centennial explores initiatives that support safe and accessible options for sustainable mobility, community engagement will be crucial in ensuring that these efforts are successful and meet the needs of the campus community. In particular, additional engagement with staff and faculty is still needed. Much like the Smart Commute study conducted in 2018, the findings of this study confirm that staff make up the majority of people driving to and from Progress Campus.

## 2.13 - Conduct a bi-annual survey of campus commuting patterns and trends.

Conducting a bi-annual survey is a critical avenue for gathering campus-wide feedback on sustainable transportation initiatives. It will also help monitor whether the College's mode share targets are being met. The College should also collect similar information across all Centennial campuses to understand how the College is doing as a whole when it comes to sustainable transportation.

# 3. Build infrastructure that supports sustainable mobility

## On-street infrastructure



### 3.1 - Improve the pedestrian experience on campus.

The car currently reigns supreme on Progress Campus roads. Yet only 11% of students commute to Progress Campus by car. The student community feels this dissonance.

Campus rights of way should repurpose existing road space to allow for wider sidewalks, raised intersections and crosswalks, accessibility ramps, and other traffic calming measures. Sidewalks should be designed with accessible and comfortable seating at regular intervals, pedestrian scale lighting, public art, greenery, and protection from the elements. Specific examples for prioritizing pedestrians include:

- Implement a Share Streets approach on all campus streets not used by TTC buses.
- Build a walking path between the student residence and bus terminal.
- Create a safe pedestrian connection between A Block and L Block.
- Repurpose Alumni Courtyard into a space that supports social gathering and lingering.
- Install raised crosswalks at key pedestrian crossing points including in front of the library's main entrance and the crosswalk that connects the student residence to A Block.
- Install raised intersections along the main road, which connects Progress Avenue to the Athletic and Wellness Facilities.
- Remove fencing just south of the bus terminal, intended to corral pedestrians.

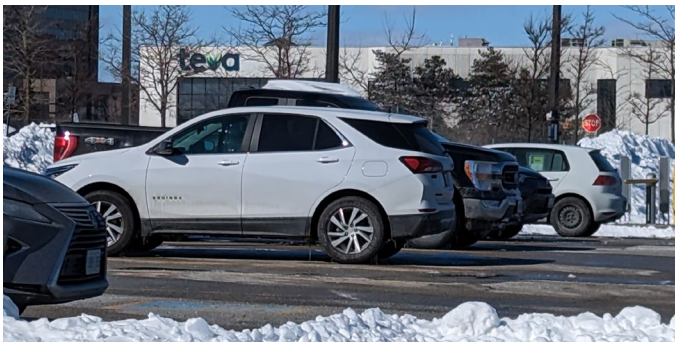

## 3.2 - Improve the pedestrian experience along Progress Avenue.

Food Basics at Sheppard Avenue and Markham Road is a key destination for Centennial Students who live in residence, most of whom are newcomers without access to a car. During the engagement process, these students shared stories of stumbling over snowbanks and sometimes walking on the road just to reach the grocery store. Work with local elected officials and the City of Toronto on implementing a road diet, protected bike lanes, pedestrian scale lighting, and better winter maintenance along Progress Avenue.

## 3.3 - Expand protected bike lane infrastructure on and around campus.

At present, Progress Campus has one small section of protected bike lane infrastructure, which fails to connect to any major destinations. This is a good place to build from and expand. This existing lane should be connected to a system of bike infrastructure that provides access to the student residence, library, student centre, athletic centre, and T Block through on-street lanes, off-road paths, or a combination of both. Off campus, Centennial should work with the City of Toronto's Cycling and Pedestrian Projects team to expand the cycling network in Scarborough and connect Progress Campus's bike lanes to Scarborough Town Centre and a wider community bike network.

# 3 Recommendations




## 3.4 - Reduce the abundance and increase the cost of parking on campus.

More than 10 acres of land on Progress Campus are dedicated to parking, 20% of the entire campus footprint. When institutions provide abundant and cheap parking, they are incentivizing driving as a mode of transport. Parking lots are expensive to maintain, act as heat sinks, and accumulate stormwater runoff. By reducing the amount of parking available on campus, not only does this meaningfully disincentivize driving, but critical space is also freed up for greenspace, seating, traffic calming, and an enhanced public realm. By increasing the cost of parking, including upping hourly rates, daily rates, flex passes, and long-term passes, driving is further disincentivized.

Couple these two actions — reducing parking abundance and increasing cost — with a communications campaign informing the community that all parking revenues will be allocated towards supporting sustainable transportation enhancements on campus.

## 3.5 - Improve the comfort and convenience of the campus bus terminal.

With 82% of survey respondents commuting to Progress Campus using public transit, the bus terminal serves as the primary point of entry for the vast majority of community members. Ensuring that transit users have a comfortable place to sit, a place to wait that provides shelter from the elements, and reliable information on approximately when they will commence their journey is a matter of basic dignity.

While Centennial cannot increase transit service or reliability, it can improve the experience of waiting for transit by adding:

- Comfortable seating
- Weather protection
- Warming stations
- Greenery
- Enhanced nighttime illumination
- Presto top-up machines
- Clear signage with bus routes and times
- Digital displays with bus arrival times

## 3.6 - Improve safety features at the main intersection connecting Progress Avenue to the T Block.

This intersection serves as both the main gateway to Progress Campus and the bridge between the T Block and the rest of the school. Yet this intersection is extremely daunting and shows little regard for the safety and well-being of the hundreds of students who must trudge across Progress Avenue on foot every week.

Work with the City of Toronto's Vision Zero team to consider potential road safety improvements from the City's Vision Zero Toolkit. Potential improvements include curb radii reductions, leading pedestrian intervals, left turn calming pilots, curb extensions, and longer crossing times for pedestrians — all of which will work to slow down car traffic and increase pedestrian visibility. The right-hand turning channel just north of the intersection should be removed or reconfigured to protect pedestrians.

## 3.7 - Implement pilot projects and tactical urbanism to test out road safety approaches.

Tactical urbanism refers to fast, low-cost, and scalable approaches to making temporary changes to the urban environment. These playful, street-based interventions are a fun and exploratory way to try and test many traffic calming measures and are a great opportunity to gather community feedback for more permanent improvements down the line.

# 3 Recommendations

## Off-street infrastructure


### 3.8 - Increase ease of navigating campus through wayfinding signage.

Throughout the engagement process, participants shared that they find it extremely difficult to navigate from building to building and often don't know the best route to get to their next destination. This constant feeling of uncertainty negatively impacts the pedestrian experience and makes navigating the campus on foot frustrating. Install maps with easy to read building directories and wayfinding signage that guides students from building to building.


### 3.9 - Build facilities that support cyclists.

While protected bike lanes are a great place to start, cyclists require other facilities to make traveling by bike feel easeful, enjoyable, and like the right choice for their journey.

**Bike parking**
Build new bike parking across campus that prioritizes high quality location and design.

- **Location** — Bike parking should be located in areas that provide easy access to key destinations, well-lit and high-traffic spaces, and surrounded by unobstructed terrain.

- **Design** — Bike parking should be designed using industrial grade materials such as steel or concrete so that racks can't be moved or cut, finished with a smooth outer surface such as rubber so bikes won't get damaged, provide shelter from the elements, and allow bikes to be locked at two points of contact — both the frame and wheel.

**Bike repair stations**
Expand on existing repair stations so that people can pump tires and perform simple repairs beside every bike parking location. Increase

communications advertising bike repair stations so the community knows they are available.

**E-bike and e-scooter charging stations**
As e-mobility grows increasingly common, institutions must proactively prepare to support students and staff who choose to travel by these modes. Providing charging stations helps grow the visibility of e-mobility as a viable form of transportation and opens cycling to school up to populations who may have been previously uncomfortable traveling on a typical bike.

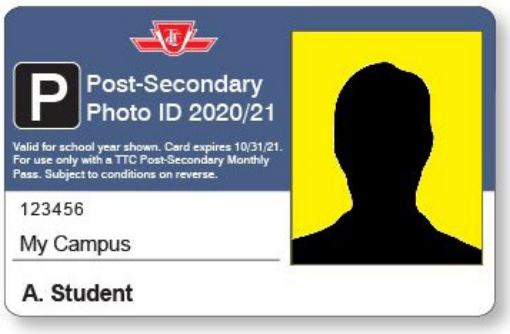
**Showers**
Provide space where long distance cyclists can shower after long rides and notify the Centennial community that this option is available.

**Review Centennial professional dress standards**
As raised in the staff focus group, one barrier to biking to work — particularly for women – is discomfort around arriving sweaty and disheveled. These concerns stem from oppressive systems, which hold different identity groups to different standards of dress. By reviewing Centennial's professional dress standards, staff of all genders and races may feel encouraged and more comfortable arriving on two wheels. Everyone sweats after all.

## 3.10 - Develop a Progress Campus public space plan to enhance all outdoor spaces.

Progress Campus holds so much potential when it comes to creating vibrant public spaces and supporting a dynamic campus life. That potential is simply waiting to be unleashed. At first glance, public space planning is not explicitly related to sustainable mobility. However, public spaces that are inviting, accessible, and full of life encourage people to lean into sustainable modes of transit and feel comfortable arriving by bike and exploring on foot. Coupled with a strong winter strategy, the outdoor spaces at Progress Campus can be pleasant to enjoy all year long.

# 4. Social and cultural supports




## 4.1 - Include the cost of a discounted monthly metro pass in school student fees.

Many post-secondary institutions include the cost of a discounted monthly metro pass in their student fees, with an option for students to opt out if needed. Throughout the engagement process, this was one of the most frequently suggested ways of improving the experience of community to campus by transit.

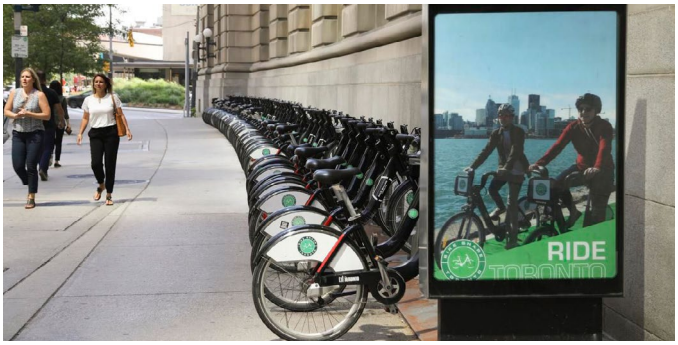
## 4.2 - Build a community bike hub on campus.

Community bike hubs are welcoming spaces where people can learn about cycling, meet other people who cycle, and go cycling together. They are effective engines for growing ridership because not only do they break down the social barriers associated with cycling, but they also allow riders to find community around cycling. Put simply, building a bike hub catalyzes interest in and knowledge about cycling.

For example, Bikechain is the University of Toronto Student Union run and funded bicycle facility on St. George Campus, which offers a hands-on educational repair shop, free bike rentals, and free repair and maintenance seminars to the university community.

Centennial can work with industry experts such as TCAT, Scarborough Cycles, or CultureLink on initiating a bike hub. Bike hub programming may include:

- **Repair clinics:** Students and staff can learn how to perform basic maintenance on their bikes.
- **Group rides:** Experienced riders take groups on a cycling-friendly route near campus to grow riding confidence and familiarize people with existing bike infrastructure.
- **Free bike loans:** Students and staff can rent out a bike just like a library book.




## 4.3 - Work with the Toronto Parking Authority on bringing Bike Share Toronto to Progress Campus.

74% of all survey respondents said that the biggest challenge to biking to campus is a lack of access to a bike. Beyond providing free bike loans through a community bike hub on campus, Bike Share provides immense benefits in connecting the campus community to the surrounding Scarborough community and allowing students to conveniently access a bike at almost 700 different locations across Toronto. In the future, Centennial may even consider rolling discounted Bike Share memberships into student fees.

# 3 Recommendations

## 4.4 - Support students living in residence through education on walking and biking on and around campus.

During both the focus groups and walk audit, many newcomer students living in residence expressed that they received very little support in learning how to navigate the campus and its surrounding areas on foot, bike, and transit. They shared endless stories of getting lost and needing to backtrack their steps. In addition, these same students were completely unaware that bike parking and repair stands existed on campus.

At the start of the school year, provide detailed information on local destinations and how to access them by walking, biking, and taking transit. Provide tutorials on using the TCC and the rules of biking and walking in Toronto, with TTC Riders or CycleTO as potential partners. Aid residence students and newcomers in forming walking and biking groups to get comfortable exploring the local neighbourhood.


## 4.5 - Ensure the return of events on campus public spaces.

Prior to COVID-19, student events and exhibits on campus public spaces helped create a sense of liveliness and vibrancy on campus. The drawn out pandemic pulled us all out of the habit of these types of gatherings. With public events permitted again, work to ensure the return of gatherings that create a sense of excitement on campus and remind the community that public spaces are areas to linger and enjoy, not to avoid.

## 4.6 - Create a Sustainable Mobility Coordinator for Progress Campus.

Create a permanent position for a Sustainable Mobility Coordinator who will lead new sustainability mobility projects and initiatives on campus. To begin, the Coordinator could:

- **Communications:** With Centennial's existing Corporate Communications team, develop a campaign on the benefits of sustainability mobility and the types of support that already exist at Centennial.
- **Education and outreach:** Develop educational materials to disseminate to all new students on the benefits of sustainable mobility and the various sustainable modes that can be used to travel to and around campus. Design educational programs specifically targeting students living in residence.
- **Online resources:** Create a Centennial College sustainable transportation website with all information on how the College supports walking, cycling, taking transit, and carpooling in one easily accessible place.

## 4.7 - Create a forum where carpooling can flourish.

Throughout the engagement process, both students and staff suggested a College-led forum where they can connect with one another to organize carpooling. It was even suggested to create a carpooling app, which would create student jobs and opportunities in the process. The College may consider developing and managing a system to increase the ease of carpooling.

# 4 Conclusion

Throughout Centennial Commutes, staff and students alike were excited about the possibility of improving sustainable mobility options on campus. The energy for more convenient, affordable, healthy, safe, and environmentally sustainable transportation was palpable. Centennial College has the support of the campus community in shifting what modes of transport get prioritized on Progress Campus. The current built form of Progress Campus prioritizes cars over public transit, walking, and cycling. Over 1,000 Centennial students and staff expressed support for transforming Centennial College's campuses into places that support more easeful experiences for everyday transit users, safer pedestrian and cycling infrastructure, and more vibrant public life.

Through bold visioning, incremental infrastructure improvements, and creating ongoing avenues of social and cultural support for community members interested in sustainable transportation, Centennial College can transform its campuses into vibrantly human-centered environments that are expressly supportive of taking transit, walking, cycling, and other modes of active transportation.


CENTENNIAL COLLEGE

# A

# Appendix A:
# Online Survey Questions

## Centennial Commutes Survey

Survey Period: March 20-April 7

**Survey Description:**
Urban Minds and The Centre for Active Transportation (TCAT) are partnering with Centennial College to engage students, faculty, and staff in a study about their transportation options to and from the Progress Campus. The goal of this survey is to better understand how students, faculty, and staff commute to and from campus, as well as identify opportunities and barriers to active, accessible, and more sustainable transportation options, including walking, biking, taking transit, and carpooling.

The results of this survey will be used to develop a plan for increasing sustainable transportation as a viable option to and from campus for the Progress Campus community.

This information is optional. If you would like to be included in reward/incentives please provide your contact information

- First Name
- Last Name
- Email
- Student Number

**General Questions**

1. What brings you to Centennial College?
- I am a full-time student
- I am a part-time student
- I am on faculty
- I am on staff
- Other _____

2. On average, how long does it take you to travel from home to Centennial College?
- Less than 30 minutes
- 30 minutes to 1 hour
- 1 to 2 hours
- More than 2 hours

3. How often do you travel to Centennial College?
- 3 or more times per week
- 1-2 times per week
- 1-2 times per month
- Rarely

4. Do you have any accessibility needs that make getting to and from campus challenging? (For example, you use a mobility aid or mobility assistive device, push a stroller, or assist someone with accessibility needs such as an elderly person or a small child)
- Yes
- No

5. How do you typically travel to and from Centennial College? If you use more than one mode, select all the apply (i.e.: if you walk to the subway, take the subway, and then bike from the subway to campus, select walk, transit, and bike).
- Walk
- Bike/e-bike
- Scooter/e-scooter
- Public Transit
- Drive
- Carpool
- Rideshare/Taxi
- Wheel-trans
- Other _____

--> If selected " Public Transit" Which of the following transit types do you use when you travel to and from Centennial College? Select all that apply.

- Subway
- Scarborough Rapid Transit (SRT)
- TTC Bus
- GO Bus
- GO Train
- Other _____

--> If selected "Public Transit", Do you use any apps to help you on your transit trip? Select all that apply.

- Google Maps
- Transit
- City Mapper
- Other _____

--> If selected "Drive, Bike, e-bike, scooter, e-scooter": How easy was it to find parking today?

- Very easy
- Somewhat easy
- Somewhat difficult
- Very difficult

6. Of the following factors, which three most heavily influence your decision on how you travel to and from Progress Campus?

- Convenience
- Time
- Cost
- Safety
- Environmental impact
- Accessibility
- Other _____

7. What are the biggest challenges to using public transit when traveling to and from Progress Campus? Select all that apply.

- Public transit takes too long
- Public transit is not reliable (frequent delays, schedules not met, etc.)
- I don't feel safe taking public transit
- Public transit is too expensive
- The nearest transit stop is too far from my home
- Public transit is inaccessible for me
- Other _____

8. What are the biggest challenges to riding a bike when traveling to and from Progress Campus? Select all that apply.

- I don't own or have access to a bike
- I don't know how to ride a bike
- I don't feel safe riding a bike to campus
- Bike infrastructure is inadequate along my route (i.e.: designated bike lanes, air pump stations, etc.)
- Bike infrastructure is inadequate on and nearby campus
- I don't have anyone to ride my bike with
- It would take too long to ride my bike
- There aren't safe and secure places to lock my bike on campus
- Biking is tiring and/or physically demanding
- Biking is inaccessible for me
- Other _____

9. What are the biggest challenges to walking when traveling to and from Progress Campus? Select all that apply.

- I don't feel safe walking to campus
- I don't feel safe walking on campus
- Pedestrian infrastructure is inadequate along my route (i.e.: sidewalks, safe crosswalks)

# A Online Survey Questions

- Pedestrian infrastructure is inadequate on and nearby campus
- I don't have anyone to walk with
- It would take too long to walk
- Winter maintenance and snow removal are inadequate along my route
- Winter maintenance and snow removal are inadequate on and nearby campus
- Walking is tiring and/or physically demanding
- Walking is inaccessible for me
- Other _____

10. What are the biggest challenges to carpool when travelling to and from Progress Campus? Select all that apply.
- I don't have anyone to carpool with
- I don't feel safe carpooling with people I don't know
- Carpooling is too inconvenient or time-consuming
- I don't have access to a car
- I don't have a driver's license
- Other _____

If selected "Yes" to have accessibility needs. If you are willing, please describe your accessibility situation:
- Wheelchair accessibility
- Visual Impairment
- Assist someone with travel
- Other _____

If selected "Yes" to have accessibility needs
Do you experience any accessibility issues on Progress Campus? For example, when being picked up or dropped off? Orienting yourself on campus? Crossing the street on campus? Having comfortable places to wait for await a ride or public transit?
- Yes
- No

If selected "Yes" to experiencing accessibility issues on Progress Campus Please elaborate:
_____

11. Centennial College is currently assessing various conditions that would best support students and staff in choosing more sustainable, active modes of transportation to get to and from campus. Would you consider changing how you get to and from Centennial College towards more sustainable transportation options?
- Yes
- No

--> If selected "Yes": Which of the following travel modes are you most likely to consider? Select all that apply.
- Walk
- Bike/e-bike/scooter/e-scooter
- Transit
- Carpool
- Other _____

12. Do you have any other thoughts or suggestions about how taking public transit, walking, biking, or carpooling to and from campus can be made more accessible and/or attractive to you?

**Demographics**

The following questions provide important information that let us better understand who we are hearing from. While these questions are optional, we encourage you to complete them to the best of your ability.

What are the first three digits of your postal code? This will help us understand where people are commuting from. (If the respondent does not know their postal code, record the major intersection or town / city)
- First 3 numbers of postal code_____

What is your age range?

- Under 18
- 18-30
- 31-50
- 51-64
- 65+
- Prefer not to answer

How do you identify in terms of gender?

- Male
- Female
- Non-Binary
- Prefer to self-describe: _____
- Prefer not to answer

Do you identify as Black, Indigenous, and/or as a person of colour?

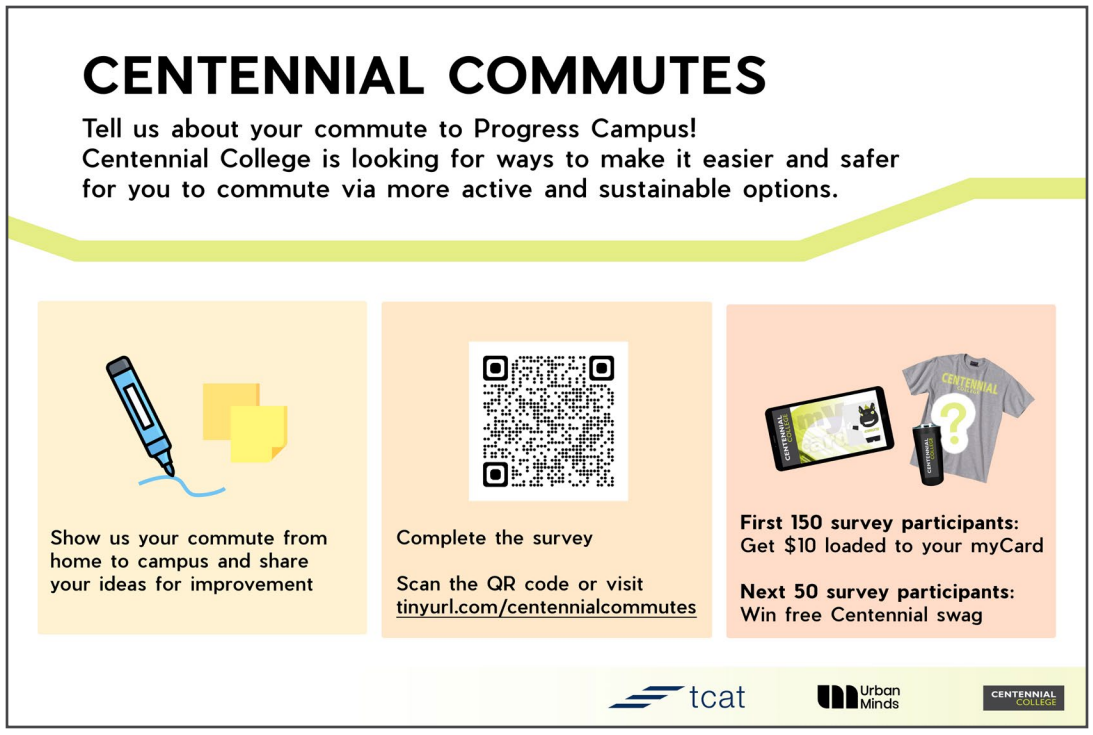
- Yes
- No
- Prefer to self-describe: _____
- Prefer not to answer

Please share with us a rough idea of your annual household income range (the total income made by you and all the family members living with you in a year).

- Under $20,000
- $20,000 - $50,000
- $50 -100,000
- $100,000 - $150,000
- Over $150,000
- I'm not sure / prefer not to answer

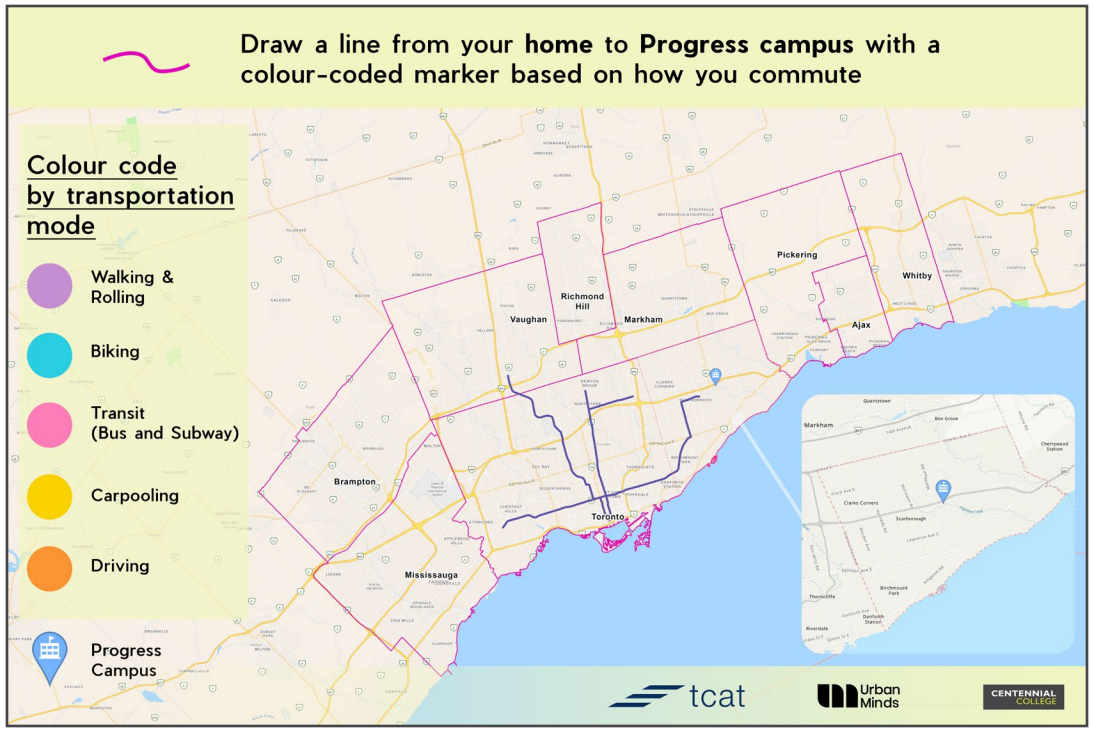
# B

# Appendix B:
# Engagement Boards




## Introduction Board

The first board introduces the study to passersby and invites them to complete the pop-up activities and survey to win prizes.

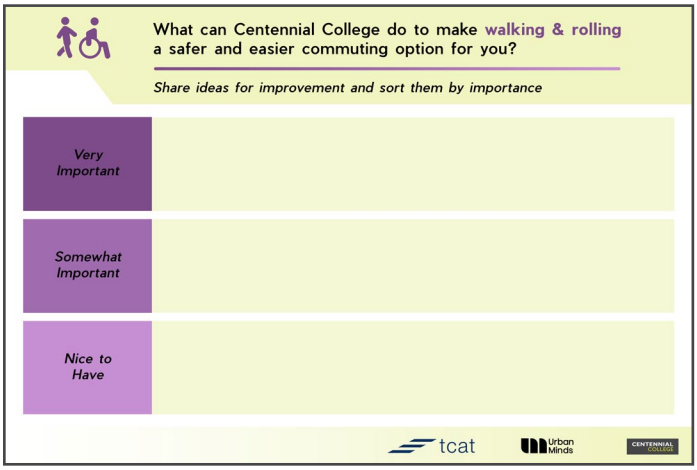


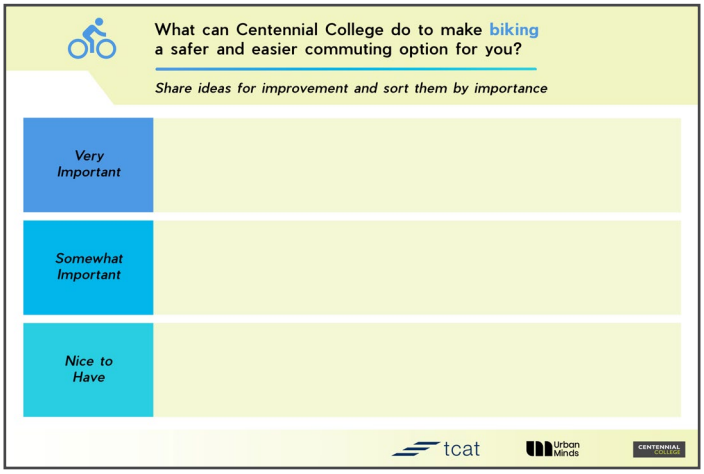

## Mapping Board

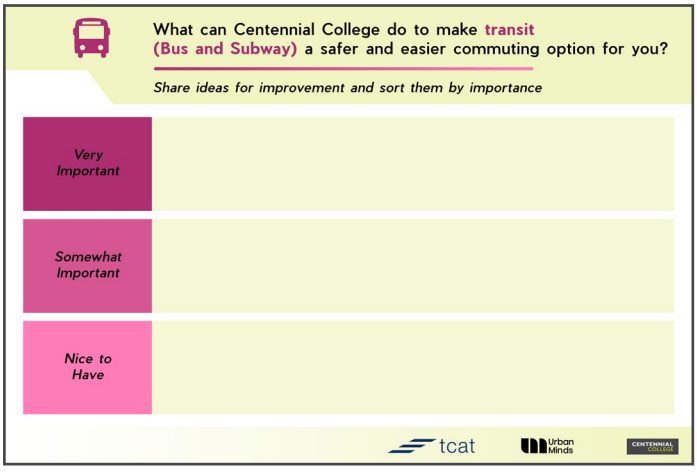
Participants are asked to draw a line from their home to Progress Campus on the map with a colour-coded marker based on their mode of transportation.

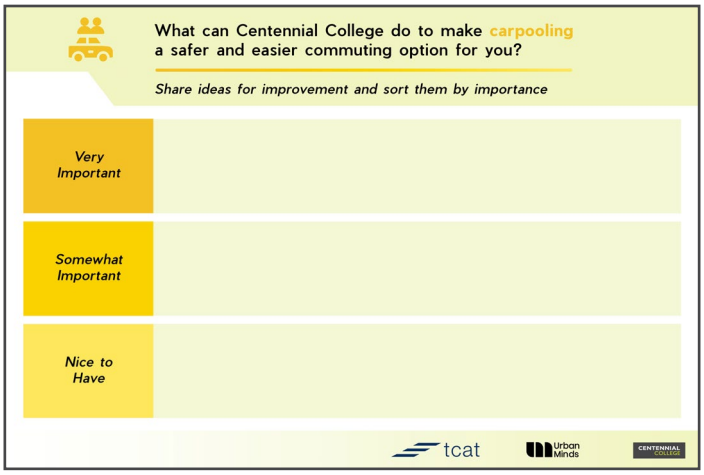
## Idea Boards

Participants are asked to share ideas on what Centennial College could do to make each active and sustainable travel mode a safer and easier commuting option for them. They then sort the ideas based on importance, from “very important” to “somewhat important” to “nice to have”.



# Appendix C:
# Focus Group Questions

## Focus Group Questions

1. How do you get to campus?
2. What area do you live in?
3. What can Centennial do to make walking to/on campus easier and safer for you?
4. What can Centennial do to make biking to/on campus easier and safer for you?
5. What can Centennial do to make taking public transit to/on campus easier and safer for you?
6. What can Centennial do to make carpooling to/on campus easier and safer for you?

# Appendix D:
# Academic Institutions AT Scan

D

Below is a summary table of post-secondary campus active transportation plans. Actions are highlighted based on common themes as listed below.

| Type of action |
|---|
| AT governance/staffing |
| Consultations/Baselines/Studies<br>• Existing conditions<br>• Modal split<br>• Lighting report<br>• Crash reports<br>• Bike network mapping<br>• Public feedback on barriers to riding |
| Stakeholder collaboration<br>• Work with<br>• Alignment with other plans |
| Visioning, goal setting and defining principles |
| Policy implementation<br>• Creating definitions |
| Infrastructure – Bikeways (short-, medium-, long-term)<br>• Pedestrian<br>• Bikes<br>• Transit<br>• Carpooling |
| Infrastructure – Support facilities (e.g., parking, repair stands, hubs) |
| Infrastructure – Wayfinding & Signage<br>• |
| Infrastructure – Car reduction (e.g. traffic calming, reduced parking) |
| Non-Infrastructure – Education/Media |
| Non-Infrastructure – Events/In-Person Activities<br>• Repair days<br>• Safety rides |
| Non-Infrastructure – Bike shares<br>• Bike share<br>• Bike lease |

| Institution | Plan Type | Year Created | Actions Completed or Committed | Targets | Timeline | Link to Plan | Funding | Departments / Stakeholders involved |
|---|---|---|---|---|---|---|---|---|
| **University of Toronto St. George Campus** | Campus Master Plan | 2011 | - Create new landscaped open spaces amenities in concert with new building projects. (p.g. 66)<br>- Seek additional opportunities for open space on the west campus. (pg. 66)<br>- Partner with City to implement streetscape improvements, particularly in the west campus. (pg. 66)<br>- King's College Circle improvements: three projects have been implemented to date including King's College Road and two pedestrian walkway connections. (p.g. 52)<br>- Implement final stages of King's College Precinct Plan thereby improving the public realm to provide a superior environment for pedestrians. (pg.54)<br>- Promote safe pedestrian crossings to and from the east campus. (pg.54)<br>- Seek additional opportunities to partner with the City for streetscape design and civic improvements on the west campus. (pg.54)<br>- Ensure that development sites provide pedestrian linkages indoors and out. (pg.54)<br>- Extend cross-campus pedestrian pathways to link existing with new. (pg.54)<br>- The City of Toronto Bike Plan will be used to inform cycling plans within the campus with a view to providing appropriate connections to a city-wide network of bicycle pathways. (pg. 56)<br>- The City of Toronto Walking Strategy will continue to inform the creation of new pedestrian environments such as those in pilot project stage at Willcocks Street and Devonshire Place (discussed under Open Space). (pg. 56)<br>- Investing in the Landscape – Open Space Master Plan (1999): The University should establish a Pedestrian Priority Zone to implement the policies in the University Master Plan and the Part II Official Plan, which place a high priority on the quality of the pedestrian environment on campus. This zone should include the reduction of surface parking in the primary open spaces of the campus (p.g. 69)<br>- Seek additional opportunities to partner with the City for streetscape and civic improvements. (p.g. 131)<br>- Extend cross-campus pedestrian pathways to link existing with new development. (p.g. 131)<br>- Create appropriate new landscaped open spaces and related amenities in concert with new building projects. (p.g. 131)<br>- Consider view corridor to the Ontario Legislature building at Queen's Park in development along its axis. (p.g. 131)<br>- Identify servicing to Site 12 and Site A to fulfill requirements for new development as well as those for surrounding sites. (p.g. 131)<br>- Work with the City to augment traffic calming measures to enhance the pedestrian experience. (p.g. 219)<br>- In partnership with a City of Toronto pilot project, reserved bicycle lockers, available by application, are now located at 71 Prince Arthur and 371 Bloor Street West (Site 1). (pg. 118)<br>- Bikechain is the University of Toronto Student Union (UTSU) run and funded bicycle facility. It provides a hands-on educational repair shop, free bicycle rentals, and free repair and maintenance seminars to the University community.<br>- Work with City to reduce parking on the St. George Campus supporting the City's autominimization policy through the introduction of alternate means of transportation to the community. (p.g. 347)<br>- Continue to increase bicycle infrastructure to accommodate the increasing cycling demand on campus. (p.g. 347) | None | 2030 | https://updc.utoronto.ca/wp-content/uploads/2016/03/StG-MP-FULL_Apr2015.pdf | None | University of Toronto Parking and Transportation Services - Provides, advertizes, and manages car parking<br><br>City of Toronto |
| **University of Toronto Mississauga Campus** | | 2011 | - The 2000 Master Plan called for the development of a coordinated parking, servicing and traffic plan. That plan has continued to inform the development of individual projects and initiative in the areas of parking and traffic. Recently, a safety audit was conducted of vehicle traffic patterns and specific location were identified where improvements are needed. One location, the entrance/exit to the CCT garage, has already been modified to improve flow, | None | 2030 | https://updc.utoronto.ca/wp-content/uploads/2016/03/UTM-Master- | None | UofT Board of Govenors |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | increase safety and improve sight-lines for both pedestrians and vehicles. Detailed improvements to other locations are under consideration. (p.g. 48)<br><br>- The University continues to be in discussions with Mississauga Transit to improve service and connections to the campus. (p.g. 48)<br><br>- A dedicated bike/pedestrian road adjacent to the Collegeway entrance connects to Mississauga Road. The Bike Share free rental and repair program was established in 2004; students can sign out bicycles free of charge to use for up to 24 hours. (p.g. 49)<br><br>- To address key concerns related to pedestrian circulation, installation of a new walkway and LED lighting along the Outer Circle Road was completed this year. It extends from the RAWC to the north campus entrance. In addition, light installation and remedial work is being done along the pathway through the wood lot between the North Building and the CCT. (p.g. 49)<br><br>- Opportunities to improve safety and ease of access across the ring road include crosswalks, placed relative to trail entry points, and parking. Improvements began in 2010. (p.g. 49)<br><br>- Coordinate open spaces and pedestrian routes, such as the future Campus Green and the Link. (p.g. 50)<br><br>- Continue to develop a hierarchy of pedestrian circulation (both interior and exterior), well designed through materials, lighting, signage and coordinated with capital development. (p.g. 50)<br><br>- Provide safe and clearly marked crossing points for pedestrians, particularly across Outer Circle Road. (p.g. 50)<br><br>- Clearly connect the inner campus pedestrian circulation network with the outlying nature trail system. (p.g. 50)<br><br>- Provide clear and sage connections to the greater City of Mississauga cycling route network (p.g. 50)<br><br>- Expand and improve vehicular pick-up and drop-off at key points of entry to the inner campus (p.g. 50)<br><br>- Improve UTM's transit service hub. Separate transit and other vehicular traffic, and provide sage and sheltered waiting areas for transit users. (p.g. 50)<br>- Improve and rationalize existing service/loading areas as development sites are implemented. (p.g. 50)<br><br>- The Mississauga Cycling Master Plan will be used to inform cycling plans within the campus with a view to providing appropriate connections to the city-wide network of bicycle pathways. The Cycling Master Plan contains comprehensive guidelines relating to Cycling Route Design, Design Standards, Signage and Way Finding, Bicycle Parking and Amenities, and more. (p.g. 52) | | | Plan-Full.pdf | | City of Mississauga<br><br>Peel Region |
| **University of Toronto Scarborough Campus** | | 2011 | - The campus will be designed to support active transportation, including walking and cycling, and ensure access for people with disabilities. The future campus will support the development of pedestrian and bike trails on and to campus, provide bike parking and other support facilities for cycling, and ensure universal design for people with mobility impairments (p.g. 14)<br><br>-The lands surrounding the intersection of Military Trail and Ellesmere Road are to be developed as a mixed-use, high-density Campus/City urban core, which will support residential, retail and other land uses in addition to the full range of academic uses. (p.g. 25)<br><br>- Pedestrian and cyclists use of the ravine trail system will be encouraged by: a. Ensuring high quality trails consistent with the adjacent and connected city trail system; b. Ensuring appropriate signage and wayfinding throughout the ravine trails; c. Providing direct connections to uses and activities in the ravine; and d. Ensuring trails are designed for safety and security, including the potential to accommodate light service vehicles for maintenance and emergency access. (p.g. 92)<br><br>- All streets will be designed to municipal standards and will: a. Accommodate a range of mobility options, including private vehicles, transit, bicycles and pedestrians; b. Contribute to the high quality, pedestrian oriented open space network; c. Ensure a cohesive and unified campus street network; and d. Provide simple and effective wayfinding and orientation throughout campus. (p.g. 93)<br><br>- The realigned Military Trail will accommodate the highest traffic volumes and be the primary street for accessing and servicing the campus. It will be designed to accommodate rapid transit, travel lanes, bicycle lanes and wide, landscaped sidewalks. (p.g. 93) | None | 2030+ | https://www.utsc.utoronto.ca/aboutus/sites/utsc.utoronto.ca.aboutus/files/docs/UTSC_Masterplan.pdf | | UofT Board of Governors<br><br>City of Toronto<br><br>TRCA<br><br>TTC<br><br>Metrolinx<br><br>Durham Region |

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| | | | - The university will ensure that campus streets are calm and safe for pedestrians. This may be achieved by: a. Restricting access during periods of heavy pedestrian activity, such as class changes; b. Implementing traffic calming measures, including speed humps and tables, curb bulbouts, planting strips and other traffic calming measures; Considering the implementation of 'naked streets', where all curbs, signs and other markings are removed to prioritize pedestrian activity; and d.<br><br>(p.g. 93-94)<br><br>- The street network will be designed to accommodate transit vehicles where appropriate, including: a. Potential light rail or rapid transit; b. Planned bus rapid transit line on Ellesmere Road; and c. Local and regional transit buses, which may circulate through internal campus streets subject to University and transit authority agreement. (p.g. 94)<br><br>- A comprehensive signage and wayfinding strategy will be implemented to provide clear direction to and through campus and to minimize impacts from unnecessary vehicular circulation. Wayfinding measures shall be designed to provide early direction to campus, including clear signage from the major approaches to the university, such as Highway 401, Morningside Avenue and Ellesmere Road<br><br>- The campus will be linked by an accessible, safe, convenient and comfortable pedestrian network that will ensure full campus connectivity. Pedestrians will be able to safely travel from the ravine through to the North Campus, with strong links beyond to neighbouring communities and the city lands to the north. a. Sidewalks will be designed as safe, attractive and interesting public spaces, and will accommodate a large number of users through wide sidewalk widths, benches and seating areas, and hardscaped areas. b. Sidewalks will provide direct, convenient and universally accessible connections to building entrances, public open spaces, transit stops, parking and pick-up/drop-off areas, and other important destinations. c. The pedestrian network will be design to ensure efficient and direct connections to minimize pedestrian travel time. d. Clear direction and signage will be provided for pedestrians and cyclists (p.g. 96)<br><br>- The pedestrian network will be primary means from which campus buildings and open spaces will be accessed and experienced. a. Primary building entrances will be oriented to pedestrian routes. All public entrances, amenity areas and outdoor public spaces will be grade-related and accessible. c. Hardscaped plazas shall be provided at all building entrances to accommodate anticipated users (p.g. 96-97)<br><br>-Pedestrian mobility, convenience and safety will be prioritized. a. Pedestrian areas will be designed to minimize vehicular-pedestrian conflicts, including minimizing curb cuts throughout campus. b. Pedestrian level wind impacts will be minimized along streets, building entrances and open spaces. c. Direct and convenient pedestrian connections will be accommodated during construction. d. All new development projects will include pedestrian and bicycle access plans in design submissions. e. Pedestrian priority will be established in street crossings through design, signal light timing and other means. f. Bicycling will be discouraged on high volume pedestrian paths. g. Outdoor lighting along sidewalks, buildings and streets will be designed primarily for pedestrian safety. (p.g. 97)<br><br>- Direct and convenient pedestrian connections will be established to areas surrounding the campus to ensure a permeable and urban campus experience. Sidewalks, landscaped open space and other pedestrian infrastructure will be directly connected to adjacent off-campus sidewalk and trail networks to ensure seamless connectivity, including connections to city streets and sidewalks, the planned Gatineau East Bikeway and the Highland Creek trail system. (p.g. 97)<br><br>- Weather protection for pedestrians will be prioritized. a. Building entrances should be designed with canopies and other protective measures; b. Adjacent buildings should be designed so that entrances are aligned to minimize travel distance; and c. Landscape design should consider weather protection, where appropriate. (p.g. 97)<br><br>- The current Military Trail alignment on the North Campus will be repurposed as a primary pedestrian spine. The Military Trail pedestrian walk will be designed to: a. Contain wide, continuous hardscaped areas to accommodate significant pedestrian volumes and outdoor events; b. Showcase high quality landscape treatment, including materials, street furniture, planting materials, etc.; c. Accommodate significant landscape improvements, including distinct materials, street furniture, planting materials and other means; d. Provide seating opportunities along its entire length; and e. Retain clear sight lines | | | | | |

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| | | | along the entire length of the pedestrianized Military Trail to maintain the historic trail right of way (p.g. 97)<br><br>- An 'accessible by all' approach to the pedestrian network will ensure universal accessibility throughout the campus environment. Exterior pedestrian spaces, including hardscaped areas, building entrances and, where feasible, pedestrian paths, will be designed for accessibility. (p.g. 97)<br><br>- The university will develop a strategy to implement significant and pedestrian network improvement projects, including: a. Ensuring the pedestrian route between the ARC and the Athletics Centre connects through to the Student Centre; b. Working with the TRCA and City to construct a safe and convenient trail from the South Campus down into the ravine that does not require stairways; and c. Constructing the Ellesmere Road bridge in concert with the rapid transit investments and Military Trail realignment. (p.g. 97)<br><br>- Pedestrian level signage and wayfinding will provide clear and effective direction for accessing and getting around campus. a. Signage and wayfinding will be designed to ensure consistency across campus and will be designed to appropriately fit with the campus setting. Consideration will be made to ensure appropriate colour, size, materials and lighting. b. Building signage will be provided around primary entrances and oriented toward pedestrian routes. (p.g. 98)<br><br>- The university will support bicycle use by implement bicycle lanes and multi-use trails and sidewalks throughout campus, as indicated in Figure 4.4. 2. (p.g. 98)<br><br>- Seamless access will be provided to adjacent off-campus bicycle routes, and the university will advocate for and work toward providing regional bicycle route connections, including: a. Implementation of the planned East Gatineau Trail through campus; b. Development of a bicycle accessible multi-use trail from the Highland Creek trail up to the South Campus; c. The potential development of a multi-use trail connecting the Highland Creek trail through to planned bicycle lanes at the intersection of Morningside and Military Trail; d. Implementation of bicycle trails in conjunction with planned rapid transit investments; and e. Identification and resolution of bicycle access and connectivity issues to nearby community resources. (p.g. 98)<br>- Bicycle use and accessibility will be prioritized by: a. Ensuring bicycle routes are prioritized for snow clearing in winter; b. Providing bicycle troughs on any outdoor stairs that form part of the pedestrian network; and c. Generally eliminating barriers to bicycle use. (p.g. 98)<br><br>- The university will advocate for inclusion in future municipal bicycle sharing programs, with multiple bicycle sharing stations in convenient on-campus locations. In the absence of a municipal program, the university may investigate options for a campus bicycle sharing program. (p.g. 99)<br><br>- Safe and convenient bicycle parking will be provided located in highly visible and active areas, in close proximity to primary building entrances. a. Bicycle parking should be located to provide direct and convenient access to bicycle lanes and travel routes. b. Three major bicycle parking facilities will be provided, as identified in figure 4.4, and will be designed to ensure safety, provide weather protection and accommodate future bike share facilities. c. The provision of indoor or weather protected bicycle parking facilities should be considered in all new developments. All City of Toronto bicycle parking requirements will be exceeded. d. Shower and change facilities should be provided for cyclists in convenient locations, including at existing and planned athletics facilities and academic facilities with high levels of activity or population. (p.g. 99)<br><br>- All campus buildings will be designed to be universally accessible and will implement the City of Toronto Accessibility Design Guidelines. (p.g. 101)<br><br>- Municipal and Provincial accessibility guidelines and legislation will be implemented throughout the campus environment to ensure universal accessibility in sidewalks, open spaces and other areas of campus. (p.g. 101)<br><br>- The campus pedestrian network and open space system should target universally accessibility through an 'accessible by all' approach. Specific attention should be paid to sidewalk and path design, including sidewalk width, curb cuts, the interface with public streets, paving materials and simplicity in use. (p.g. 101)<br><br>- The university will work to identify strategies to ensure direct access to the ravine for people with disabilities. (p.g. 101) | | | | | |

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| **University of Utah** | University Bicycle Master Plan | 2011 | - Conducted a baseline study (as part of the 2011 Bicycle Master Plan) on existing bicycling conditions, including: Existing bicycle network; Bicycle Parking & Utilization; Multi-Modal Connections; Bicycle Crashes & Safety; Existing Bicycle Education & Programs; Bicycle Counts; and Opportunities & Constraints. (pg. 13-39)<br><br>- Conducted an analysis (as part of the 2011 Bicycle Master Plan) on the needs & types of bicyclists (pg. 41-42)<br><br>-Conducted a review (as part of the 2011 Bicycle Master Plan) of public comments & feedback on themes of accessibility, safety, convenience and security. (pg. 44)<br><br>- Conducted a campus bicycle tour (as part of the 2011 Bicycle Master Plan) which identified areas with bicycle-pedestrian conflicts, conflicts with stairs, steep grades, busy roadways, and substandard existing bikeways. (pg. 47-49)<br><br>- Conducted an analysis (as part of the 2011 Bicycle Master Plan) on future bicycle mode share projections, future benefits of reduced campus parking needs, and resulting savings on capital costs. (pg. 50-53)<br><br>- The master plan recommends improving and building bikeways that interact with the existing system. The bikeways are comprised primarily of shared-use paths, bike paths, bike lanes, and shared lanes. Spot improvements are also included in the recommendations to enhance the linear bikeways. Each of these bikeway classifications are further broken down into short-term (3 years), medium-term (4-9 years), and long-term (10+ years). (pg. 55-72)<br><br>- All of the existing wave/ribbon racks should eventually be replaced with the Inverted U design. Areas of campus with high bike rack demand should be prioritized when considering rack replacement. The university should establish a retrofit schedule and budget. (pg. 72)<br><br>- The University can also improve short-term parking by providing shelter over groups of bike rack The University may consider incorporating covered bike parking into new building construction through the provision of overhangs. (pg. 73)<br><br>- Racks should be installed within 50 feet (or as close as possible) of main entrances to buildings in well-lit, visible parts of campus with high pedestrian volumes to deter theft and enhance the racks' overall convenience. (pg. 73)<br><br>- The University should adopt a guideline for removing neglected bicycles on all bike racks. The APBP Bicycle Parking Guide recommends: Posting a notice on the bicycle at least two weeks in advance of removing the bicycle. The notice should state that the bicycle will be removed by a certain date and provide the name and contact information for the owner to contact in case the bicycle is mistakenly identified as abandoned. We recommend that Commuter Services impound abandoned bicycles at the end of each month. In addition, Commuter Services officials can remove bicycles locked to surfaces other than University-installed bike racks, as well as bicycles believed to be inoperable at anytime. Each bicycle should be tagged and then removed two weeks after tagging if it is still there. Impounded bicycles should be stored for 90 days to provide bicycle owners the opportunity to reclaim their bicycle. Bicycles that go unclaimed should be donated to the Salt Lake City or University Bicycle Collectives. (pg. 74)<br><br>- Long-term bike facilities generally provide a more secure parking environment, and offer patrons greater control over the type of environment in which they store their bike. Currently, finding information about existing secure bicycle parking is challenging for potential users. Facilities are often managed by a building employee. Students have few existing options to securely store their bicycles. Running all secure bicycle parking operations through a single administrative organization such as Commuter Services would improve usage and convenience. Doing so would centralize all maintenance and utilization information, thereby allowing secure bike parking to function more efficiently, similar to other campus-wide programs. Additional secure bike parking should be considered at 10 locations (pg. 75)<br><br>- staircases should be avoided within identified bikeway corridors where bicycle connectivity is prioritized. It is desirable from a bicycling standpoint to also limit the use of stairs in other areas where bicycle use is expected. When staircases are constructed, they should accommodate bicycles through the use of a channel that allows bicyclists to push their bicycle up or down the staircase without the need to carry it. (pg. 76)<br><br>- A bicycle station provides a number of valuable amenities, typically in focal points of bicycle activity or near transit nodes. Bicycle stations serve existing populations of cyclists, and also encourage new bicyclists by providing services that overcome barriers cited by many as a reason that they do not bicycle more. Bicycle stations can provide any or all of the following services: Bicycle repair (self-serve or staffed); Bicycle rental; Retail sales of bicycle-related equipment and accessories; 24-hour secure and covered bicycle parking; Restrooms, showers and/or changing facilities; Coffee shop; Convenient access to public transportation. The University of Utah Campus Master Plan recommends bicycle stations be included with the proposed | 1. Provide safe and accessible routes for bicyclists through campus.<br>2. Implement comprehensive education and encouragement programs targeted at students, faculty and staff.<br>3. Increase bikeway enforcement.<br>4. Improve the connection between bicyclists and transit on campus.<br>5. Support Campus Sustainability and Climate Action Plan.<br>6. Create a complete campus bikeway network that is integrated into existing and future external bicycle facilities.<br>7. Monitor implementation of the University of Utah Bicycle Master Plan. | short-term (3 years), medium-term (4-9 years), and long-term (10+ years) | https://d2vxd53ymoe6ju.cloudfront.net/wp-content/uploads/sites/5/20171203054643/UniversityOfUtah-BicycleMasterPlan.pdf | | |

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| | | | Engineering Mall, Health Sciences Campus and Research Park. We endorse this recommendation. (pg.77)<br><br>- Three sign types are recommended for the University of Utah bikeway network: Wayfinding Signs which provide orientation and emphasize the connectivity between campus and the surrounding community and include signs, pavement markings, and maps; Guidance Signs which provide information related to campus policy and regulations and address many behaviors, such as when to yield, dismount zones, parking guidance and other information; and Directional Pavement Markings which are a type of wayfinding that helps bicyclists continue on a facility when it comes to an intersection, crosses a pedestrian area, or changes bikeway type. (pg. 77-81)<br><br>- We recommend that Commuter Services install frontmounted bicycle racks with capacity for three bicycles on each existing and future shuttle vehicle. (pg. 82)<br><br>- We recommended that UTA install newer bicycle racks capable of holding three bicycles to new buses being placed into service. (pg. 82)<br><br>- UTA buses should be deployed with mirrors or rear-view cameras to allow the driver to see a bicyclist mounting a bicycle. A dashboard light can show the driver when the rack has been deployed. UTA should consider adding a second rear-mounted bicycle rack to bring the capacity of each bus to a maximum of six bicycles. (pg. 82)<br><br>- We recommend that UTA retrofit existing TRAX vehicles with dedicated space onboard vehicles so that bicycles no longer block boarding doors. (pg. 82-85)<br><br>- Promote behavior strategies to influence the use of alternative modes of transportation. (pg. 88)<br><br>- Conduct enhanced biannual Commuter Transportation Survey to track commuting patterns, needs, and methods of travel. (pg. 88)<br><br>- Promote all modes of alternative transportation, including carpooling, vanpooling, car sharing, bicycling and walking. (pg. 88)<br><br>- Improve walkability and universal access through environmental design. Work with the Center for Disability Services, the Parking Committee, Bicycle Subcommittee and Facilities Management Department to create accessible and safe routes throughout campus for all non-motorized users (pg. 88)<br>- Educate new students, faculty, and staff regarding alternative transportation options and benefits. (pg. 88)<br><br>- Work with ASUU, UTA, and Salt Lake City to upgrade and expand the U-Bike share/rental program. (pg. 88)<br><br>- Design and construct new buildings with good bicycle parking and storage and bicycle rider amenities, and assess the need for new bicycle parking and secure storage at existing campus buildings using LEED-Neighborhood Design as a general guide. (pg. 88)<br><br>- Enhance connectivity between major campus destinations and on-campus intermodal hubs, including pedestrian, bicycle, and shuttle routes. (pg. 88)<br><br>- Work with Salt Lake City and the Wasatch Front Regional Council to encourage high-density development within walking/biking distance of campus and at UTA transit nodes. (pg. 88)<br><br>- Increasing parking permit prices may encourage some commuters to use alternative transportation modes, and will also provide increased revenue for Commuter Services for the maintenance, construction and administration of new facilities including roads, parking lots, and bicycle facilities. (pg. 90)<br><br>- Staff a Bicycle & Pedestrian Coordinator Position within Commuter Services to: monitor facility planning, design, and construction that impacts bicycling; staff bicycle advisory committee meetings; Implement Bicycle Master Plan projects and programs as well as seeking funding sources to do so; Identify new projects and programs that would improve the university's bicycling environment and improve safety for bicyclists, pedestrians, and motorists; Evaluate projects and programs; Coordinate bicycle counts. If funding the position proves to be a challenge, is may be possible to broker a deal between various departments such as the Office of Sustainability, Commuter Services, and Facilities Management Department to each provide a portion of the money required. (pg. 92-93)<br><br>- Develop a university bicycling website. Make bicycling information easier to find by providing resources, maps, safety information, events, group listings, etc. in one central place. (pg. 94-95)<br><br>- The University should hold a Bike Orientation for new students at the beginning of each school year, introducing bicycling as a convenient form of campus transportation, disseminating information about safe and courteous bicycling, Bike repair clinics and other activities, Promotion of the University | | | | | |

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| | | | of Utah Bicycling website, and including where and how to ride, how to securely lock a bike, etc. (pg. 95)<br>- Promote safety by educating all road users through a high-profile campaign (pg. 96-97)<br>- Apply to become a Bicycle Friendly University (pg. 97)<br>- Assess progress towards achieving the goals of the Bicycle Master Plan through an annual report including relevant cycling metrics (bicycle count results, new on-street and off-street bikeway miles, major completed projects, crashes) (pg. 98)<br>- Encourage and enforce the use of bike lights through a bike light campaign (pg. 98-99)<br>- Host campus bicycling activities like group rides and events, and offering incentives and rewards (pg. 99)<br>- Encourage bicycling by university staff within campus; reduce daytime auto trips (pg. 100)<br>- Encourage bicycling by campus event attendees by providing an event bicycle parking valet service (pg. 101)<br>- Increase efficiency and data clarity for university bicycle counts (pg. 101)<br>- Provide a bike sharing program at the University of Utah (pg. 103)<br>- Encourage desired bicycling behaviors (e.g., walking a bike in dismount zones, helmet use, riding on the correct side of the street/facility, coming to a full stop at stop signs/traffic signals) by rewarding bicyclists with incentives (e.g., coupons at a local bike shop, free/discounted food items at campus/local stores, bike related products - water bottles, bells, lights, helmets, locks - University of Utah merchandise). (pg. 104) | | | | | |
| **University of Connecticut** | Active Transportation Plan | October 2022 | - Create an official University-sanctioned Active Transportation Working Group to assist in active transportation decision-making. (pg. ES-4)<br>- Engage University Safety in PTV etiquette and incentive-based-outreach. (pg. ES-4)<br>- Take further steps toward procurement of a shared bike or e-scooter (PTV) vendor (pg. ES-4)<br>- Develop a survey that asks members of the UConn community what mode of transportation they use to get to campus and what mode they use to get<br>changes in the share of active transportation trips over time. The University should also set goals for increased walking, biking, PTV, and transit trips. (pg. ES-4)<br>- Prioritize near-term improvements for physical installation immediately, particularly those that are low cost. (pg. ES-4)<br>- Implement Pilot Road closure projects. (pg. ES-4)<br>- Existing conditions were determined by review of prior planning efforts, mapping, and analysis of existing conditions on the campus and input from the working group and the public at large to determine areas of concern. The following were mapped and analyzed: Pedestrian infrastructure; Lighting; Bicycle infrastructure; Bicycle Usage; Bicycle parking; Campus crash data; HuskyGo shuttle and WRTD bus routes and stops; Parking; Designed, planned, or future campus construction and planning projects. (pg. 3-17)<br>- Three virtual public meetings were held over the course of this Active Transportation Plan (ATP) project to identify who was in the audience, how they get to and around campus, and their awareness and use of existing transportation modes. (pg. 18)<br>- Recommendations in report follow this process: Review existing campus transportation infrastructure, identify safety concerns, review available bicycle and pedestrian facilities, evaluate circulation patterns and gaps, and determine connectivity challenges; Research existing campus policies and programs; Gather input from stakeholders, students, faculty, and other community members on the campus multimodal environment; Develop improvement alternatives that support and safely accommodate active transportation; Gather routine feedback from the UConn Active Transportation Working Group; Vet each improvement based on its safety benefit, cost, and ease of implementation; Develop a list of recommended infrastructure improvements that provide a framework for connecting parking facilities and other transportation hubs with the campus core and residences; Develop a list of strategies to improve campus education, programs, and polices to improve connectivity, raise awareness, and increase understanding of transportation etiquette. (pg. 21)<br>- Establish Bicycle Parking Guidelines (pg. 22)<br>- Add a requirement for both short- and long-term bike parking to campus locations (pg. 22) | 1. Reinforce the message that pedestrians always have the right-of way additional sustainable transportation options that augment and improve transit<br>3. Ensure that everyone has safe access to campus destinations, regardless of what mode of transportation they use<br>4. Reduce travel times for people using active transportation modes to/from all major destinations on campus | short-term (<5 years), medium-term (5-10 years), and long-term years) | https://updc.uconn.edu/atp/ | | |

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| | | | - Adopt Personal Transportation Vehicle (PTV), MPTV, and NMPTV definitions and Policies (pg. 22)<br><br>- Designate the existing sidewalks and paths that are approximately 10 feet wide or wider as shared-use paths. (pg. 24)<br><br>- Reconsider language in Section II. of the Rules & Regulations for the Control of Parking and Vehicles on the Grounds of the University of Connecticut that categorizes motorcycles, motor scooters, mopeds, and motorbikes as "Scooters," and differentiate between electric and gas-powered. Revisit current restrictions on where these vehicles must be parked, relative to enforcement capability and safety guidelines (pg. 24)<br><br>- Reconsider language in Section IV. of the Rules & Regulations for the Control of Parking and Vehicles on the Grounds of the University of Connecticut: IN-LINE SKATES, ROLLER SKATES, SKATEBOARDS & SIMILAR WHEELED DEVICES 1. GENERAL RESPONSIBILITY No person shall roller skate, in-line skate, or ride a skateboard in any UConn buildings, including parking ramps, nor shall any person roller skate, in-line skate, or ride a skateboard elsewhere on UConn property in areas where signs prohibiting such activities are posted. (pg. 24)<br><br>- Revisit current policy restricting In-line skating, roller skating, and skateboarding in areas where there is a lot of pedestrian activity. (pg. 24)<br><br>- Provide appropriate and safe charging areas for Hoverboards/Electronic Personal Transportation Vehicles so that their use is not discouraged relative to the UConn Residential Life 2021-2022 On-Campus Housing contract. Section 9.6.7: Hoverboards/Electronic Personal Transportation Vehicles currently reads as follows, "electronic personal transportation vehicles (e.g., hoverboards, electric bicycles, electric motorcycles, electric scooters, electric skateboards, etc.) that use a rechargeable battery, cannot be charged, operated, stored, or used inside residence halls and all other University of Connecticut buildings, including dining halls." (pg. 24)<br><br>- Create and enforce a prohibition on passing buses on campus. (pg. 24)<br><br>- Adoption of a shared bike, e-bike, or e-scooter program (pg. 24)<br><br>- Envisioned potential near-term (< 5years) bicycle network includes mostly striping improvements that can be accomplished within the existing curb-to-curb roadway width to create a quick, relatively lowcost, connected network of facilities throughout campus. Includes: Shared-Use (Multiuse) Paths, Cycle Track, Bike Lanes, Contra-flow Bike Lanes, Green Intersection and Driveway Crossing Markings, Bike Lane Buffers, Shared Bus-Bike Lane, Shared Lanes (pg. 25)<br><br>- Envisioned potential near-term (< 5years) pedestrian improvements include midblock crosswalk enhancements and new sidewalks installations that were prioritized based on their safety benefit. Includes: Crosswalk Visibility Enhancements, Pedestrian Refuge Islands (p.g. 25)<br><br>- Potential mid-term (5-10 years) PTV improvements include widening, striping, and signal improvements. Includes: Bike Boxes, Two-Stage Turn Queue Boxes, Mobility Hubs (pg. 39)<br><br>- Potential mid-term (5-10 years) pedestrian improvements include crosswalk and traffic calming enhancements that are aimed at improving visibility and slowing down vehicles on the campus core roadways where sharrows were installed under the potential near-term improvements and new sidewalks installments. Includes: Super Crosswalks, Raised Crosswalks (pg. 41)<br><br>- The potential long-term (10+ years) improvements include the installation of cycle tracks to replace the shared lane facilities, shared-use paths, mobility hubs at the residential and core campus areas (pg. 47)<br><br>- Potential long-term (10+ years) pedestrian improvements include additional traffic calming enhancements to further improve visibility and vehicle speeds on the campus core roadways and new sidewalks installments. Includes: The conversion of the super crosswalks to raised intersections, and the installation of new sidewalks (pg. 48) | | | | | |
| **Queens University** | Active Transportation Strategy | December 2013 | - A review of best practices informed the recommendation of appropriate strategies for AT within and around the Queen's University Campuses (pg. 2)<br><br>- Pedestrian priority areas on campus, pedestrian-scale streets and car-free zones, walking route maps with distances and times, pedestrian activated crossings, walking route networks, Improved Pedestrian Crossings, Traffic Calming Measures (pg. 2)<br><br>- Comprehensive cycling supports, including ample end-of-trip facilities, Extensive cycling infrastructure, Enhanced lane markings and signage, Bike rental program on campus, Campus bike centre for repair, maintenance, education, and loans, Cycle-friendly routes and facilities, Bike registration system, Bike share system, Secure bike storage, Bicycle regulation and enforcement, Bicycle advisory committee, Cycling route networks, Improve Bicycle Parking on Queen's Campuses (Bicycle Lockers and Covered Parking), Improve Maintenance of Designated Bike Lanes (pg. 3) | | | https://www.queensu.ca/geographyandplanning/sites/dgpwww/files/uploaded_files/SURP/Project%20Course%20Documents/SURP%20823%20AT Report%20Exec%20Su | | KFL&A Public Health, Queen's University, and the City of Kingston |

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| | | | - Multi-modal improvement including Flexible parking program, Use of existing City resources, Discounted bus pass for students and employees, Commuter Challenge Event for employees, Public transit system with year-round bike racks and storage, Guaranteed Ride Home Program, Interactive mapping tools, Park and Ride / Park and Bike / Park and Walk infrastructure, Real-time transit information, Employee AT incentive programs, Create Transit Stop Linkages, Facilitate the Provision of Discounted Employee Public Transit Passes, Do Not Subsidize Motor Vehicle Parking (pg. 3)<br>- Lobby for Changes to the Ontario Highway Traffic Act (pg. 4)<br>- Promote Cycling Awareness (pg. 4) | | | mmary%20%20compressed.pdf | | |
| **Dalhouise University** | Institutional Cycling Master Plan | | - Dalhousie, in partnership with HRM, offer Smart Cycle Lunch and Learn Lessons. Smart Cycle Classes cover the basics of cycling, helping you to become more confident and feel safer when biking on the road!<br>- The community-based approach used to develop this plan considers community engagement and public involvement as fundamental to understanding the current issues around cycling, and brainstorming solutions and long-term goals (pg. 1)<br>- Guiding principles for the plan were established, and include: Invest in bicycle infrastructure and programs that are designed to capture the maximum number of new riders; Integrate bicycles as an essential component of a multi-modal transportation system.; Develop a sense of place for the Institutional District's bicycle environment.; Prioritize bicycles along designated cycling routes ; Develop a connected and continuous network of bicycle routes including bicycle boulevards, bicycle lanes, bicycle paths, cycle tracks, bike boxes, colour treatments, sharrows, Elephant's Feet Bicycle Crossing Lines, Bus Bulges.; Design and maintain a cycling environment for all seasons.<br>- The Bikeways Route Map should visually represent the elements of the Bikeways Network: Bikeways Streets, On-street Routes, bike parking, major destinations and bike-share stations. (pg. 43)<br>- Route wayfinding provides additional visual cues to motorists that cyclists have priority along Bikeways Routes, providing greater comfort for cyclists (pg. 45)<br>- There are a range of different approaches to bike-sharing programs: public bike programs, bike rental programs and private bike programs (pg. 47) major destinations. End of trip facilities include bike parking, showers and change rooms (pg. 52)<br>- Throughout the District there is a need for both short-term and long-term parking for bicycles in highly visible locations that are safe and convenient and align with design principles:<br>Provide a high level of accessibility, Incorporate all-weather protection Provide high profile facilities at major destinations (pg. 52)<br>- To develop a culture of cycling in the District it is necessary to provide learning opportunities related to cycling safety, sharing the road, and repair and maintenance of bicycles. The Bike Centre, a pilot project funded by Dalhousie and Clean Nova Scotia, is currently taking on this role on the Studley Campus. The Bike Centre ideally would be funded on a long-term basis and potentially replicated in other parts of the District. Education is key to attracting new cyclists and helping people overcome their barriers related to cycling in an urban setting. Some of these education programs include Cycling Education Programming and Motorist Education (pg. 56)<br>- Through building on existing annual events and creating new events there will be opportunities to build a culture of cycling, attract new riders and demonstrate to a broader population the viability of cycling for the Institutional District. Annual events include: Bike Week, Active Transportation Month, Switch: Open Street Sundays. (pg. 56-57)<br>- Community-based social marketing techniques have successfully affected people's transportation behavior. A series of events or campaigns could be organized focusing on groups who may be interested in cycling as a mode of transportation, but are discouraged by specific barriers. As part of each institution's branding, marketing and promotions it may be helpful to integrate ideas of cycling and sustainable transportation to encourage students, staff, faculty and visitors to try cycling for their commute, short trips or recreation. This promotion campaign could highlight the environmental, health and economic benefits of cycling in an effort to attract new cyclists and build awareness for the potential of cycling within the District. Each institution should promote the Bikeways Plan internally, using personal stories to dispel assumptions regarding the barriers to cycling in the District. The institutional partners should employ a wide range of conventional and social media to grow a culture of cycling in the District. (pg. 57-58) | | | https://www.dal.ca/dept/sustainability/smart-trip/active-transport.html | | |

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| | | | - Recommended steps to support implementation of the Bikeways Plan include: Re-negotiate parking provisions for staff and faculty at Dalhousie University; reducing and eventually eliminating parking subsidies supports a shift to alternative modes.; Dedicate a portion of Dalhousie University, Capital Health and IWK Health Centre parking fees to investments in sustainable transportation initiatives (e.g., bikeways infrastructure, bike-share system).; Access government funding intended to help the province meet its targets for the reduction of greenhouse gas emissions.; Develop a Transportation Management Association to work collaboratively with the institutions to encourage sustainable transportation choices and provide integrated parking management. (pg. 59) | | | | | |
| **University of Western Ontario** | Open Space Strategy | | GATEWAYS<br>- Coordinate with the City on redesign of the intersection to increase pedestrian priority; (pg. 51)<br>Provide a pedestrian scaled gateway which frames the entrance to the campus from the intersection. This gateway should incorporate similar materials, colour, form and landscaping provided at the Lambton Drive entrance off Western Road for visual connectivity between all gateways locations; (pg. 51)<br>- Widen pedestrian walkways extending from the intersection, and provide a direct connection to the transit location on Western Road. (pg. 51)<br>- Walkways should be framed with deciduous tree plantings, pedestrian scaled lighting, and pedestrian seating opportunities at regular intervals for pedestrian comfort. These aspects will focus on improvements towards Accesibility for Ontarians with Disabilities Act (AODA) standards. (pg. 51)<br>- Wayfinding signage should be provided at this location to direct pedestrians as they enter the campus as you enter the campus to direct; (pg. 51)<br>- Remove the south entrance to Elborn College from Western Road. (pg. 51)<br>CORRIDORS – NETWORK RECOMMENDATIONS<br>- Certain core campus streets should be closed to private vehicles in order to reduce the incidence of cut-through traffic and improve pedestrian safety. This strategy may be regulated by time of day or type of vehicle and utilize access control to allow for exceptions such as emergency vehicles, service vehicles, and vehicles driven by persons with disabilities. (pg. 62)<br>- Limit access to the University Drive bridge. Only bicycles, pedestrians, Bus Rapid Transit vehicles, and designated university vehicles would be permitted on the bridge. (pg. 62)<br>- Identify specific locations and develop functional plans for drop-off facilities on each side of the river as well as on the west side of Western Road. Consider monitoring of these facilities by campus safety staff during peak traffic periods. This may require the addition of part-time paid staff. (pg. 62)<br>- Incorporate a potential drop-off facility into future development plans for the current South Valley parking lot. (pg. 62)<br>- Preserve the Lambton Drive roadway as an active transportation corridor that accommodates Bus Rapid Transit, pedestrians, and cyclists. (pg. 62)<br>- Incorporate parking structures along motorized corridors, on existing perimeter parking lots such as Chemistry, Huron Flats and Springett. (pg. 62)<br>- Limit local bus service to corridors that also permit general vehicular traffic. (pg. 62)<br>- Adhere closely to street design recommendations set forth in the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and the Ontario Traffic Manual when designing the corridors that will be shared among private vehicles, transit vehicles, bicyclists and pedestrians. (pg. 62)<br>- Follow suggested guidelines for minimum, desired, and maximum widths for all roadway features including travel lanes, bus lanes, bicycle facilities, and buffers. (pg. 62)<br>- Reserve a 14 metre right-of-way for multimodal and active transportation corridors such as Lambton Drive between Alumni Circle and Huron Drive as well as Perth Drive between University Drive and Windermere Road. This figure is based on recommended lane widths for bus travel (3.3m desired, 3.0m minimum), protected bicycle lanes (1.8m desired, 1.5m minimum plus a 0.3m buffer for paint/bollards), 2 metre sidewalks, and a curb-to-curb distance of 10.2 metres. (pg. 62)<br>- Consider roadway widening to safely accommodate all roadway users in an ideal fashion. (pg. 62)<br>- Equalize the elevation of the entirety of non-motorized corridors that previously accommodated vehicles such as Oxford Drive and Engineering Drive. Remove curbs where applicable. (pg. 62) | | | https://sustainability.uwo.ca/Campus/transportation/index.html | | |

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| | | | - Evaluate programming options for shared roadways. If cycle tracks are retained, they may be widened and separated by paint, bollards, or street furniture. Western may choose an arrangement where cyclists and pedestrians travel within a larger space uniquely identified with special paving material or paint treatments. The traditional sidewalk is also much wider in this configuration for those who do not prefer to use the shared space. (pg. 62)<br><br>COORIDORS – DESIGN RECOMMENDATIONS (pg. 63)<br><br>- Those which remain as shared roads should ensure that vehicular, pedestrian, and cyclists routes of travel are clearly demarcated with intersections or crossing locations high lighted to emphasize priority to pedestrians;<br><br>- Traffic lanes where proposed should be of an appropriate width. Traffic calming elements such as bumpouts, raised crosswalk intersections, and signage provided where appropriate;<br><br>- Those areas that will be transitioned from shared to pedestrian only should ensure that the scale of the hardscaped paths of travel are appropriate, and reductions to the existing width of hardscape paving be encouraged. This will reduce the amount of impermeable surfacing on campus that is subject to maintenance, reduce stormwater runoff generated, and provide more space along corridors for pedestrian amenities;<br><br>- Accessibility provisions at all crosswalk locations and curb ramps should be provided as per current Accessibility for Ontarians with Disabilities Act (AODA) standards, including appropriate grading, tactile matting, and tonal contrast of paving where required;<br><br>- Landscaping areas should be provided along all shared roadways, with adequate soil areas for root zone development. Tree and understory plantings where proposed should be setback far enough from curbs and walkways to allow room for snow storage in the winter;<br><br>- Roadside landscaping palettes should be limited to understory plantings and single stemmed deciduous trees with high canopied form at maturity;<br><br>- No roadside plantings should be provided in close proximity to shared road intersections or crosswalks to ensure open sight lines to on-coming traffic at all times;<br><br>- Narrow medians should be hard surfaced with decorative paving treatments which are durable, attractive and long lasting. Options for placement of banner poles, lighting or other vertical elements for interest within paved medians are recommended;<br><br>- Tree plantings are recommended only for medians where curb to curb widths are generous, with only tree species which demonstrate higher tolerances to salt, drought and restricted root zones planted in these areas;<br><br>- Understory plantings should be located only in areas where the landscape median / boulevard width is sufficiently wide;<br><br>- Seating opportunities should generally be provided at regular intervals along the road edge, be placed behind the sidewalk and oriented towards the path of travel; and<br><br>- Seating elements and paved areas should provide textured or tonal differentiation from the path of travel. All seating areas should provide adequate clearance for positioning of wheelchairs adjacent the seating element as per AODA requirements.<br><br>TRANSIT ACCESS AND CIRCULATION (pg. 71)<br><br>- To attract ridership and provide maximum convenience, transit access should be prioritized as an enhancement for pedestrians.<br><br>- Transit transfer stops should be concentrated on outer multimodal and active transportation corridors to facilitate the transfer between BRT and local bus services, including shuttles. The placement of stations respects the pedestrian-oriented principles of the circulation hierarchy while maintaining reasonable core campus access distances for transit riders.<br><br>- Lambton Drive should become a signature active transportation corridor through a complete suite of multimodal improvements. The same is true of Western Road, where non-motorized and transit improvements can transform the corridor into a integral part of campus rather than its current perception as a western edge barrier.<br><br>PEDESTRIAN ROUTES (pg. 74)<br><br>- The Western University campus should be comfortable to cross on foot, easily navigated, and leave a lasting impression on the visitor.<br><br>- Acknowledge that while pedestrians, bicycles, transit, and service vehicles may share certain routes through the core, pedestrians are provided separate sidewalks or paths along these routes. This provision includes the envisioned | | | | |

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| | | | multimodal corridor along Western Road and the active transportation corridor along Lambton Drive.<br><br>- Consider context when employing pedestrian circulation improvements along non-motorized and pedestrian only corridors.<br><br>- Remove curbs to create shared street environments on corridors that previously accommodated vehicles, such as Oxford Drive.<br><br>- Employ unique paint schemes or textured paving materials to create a dynamic environment which can become signature public space.<br><br>- Invest in pathway widening where pedestrian circulation is constrained in non-motorized corridors to increase walking comfort and reduce conflicts between shared pathway modes.<br><br>- Enhance shared spaces through the addition of street furniture, such as benches and bollards, in order to better define pedestrian only areas.<br><br>BICYCLE CIRCULATION AND PARKING (pg. 93)<br><br>- Within the campus core, non-motorized corridors that accommodate cycling in a shared-use configuration. These corridors would take on the character of shared spaces where a wide roadway sits flush with the level of the sidewalk<br><br>- Outside of the campus core, non-motorized corridors should continue to function as narrower shared use paths.<br><br>- Protected bicycle facilities, such as the cycle track along Middlesex Drive, should be replicated on corridors identified in the City of London Cycling Master Plan.<br><br>- Western should establish standards for bicycle parking and replace existing bicycle parking that does not meet those standards.<br><br>- Other amenities that should be provided include repair stations, a staffed bicycle centre, and shower/changing facilities.<br><br>- Western should consider either creating a bicycle sharing program or participating in a regional effort in the longer-term.<br><br>- Once a comprehensive bicycle program is in place, bicycle activity should be regularly monitored and evaluated to better direct resources toward future bicycle system management efforts.<br><br>COURTYARDS AND GARDENS (pg. 96)<br><br>- Bike storage in courtyard areas is encouraged only where cyclists can enter the courtyard directly without entry to the building;. Storage locations should take advantage of building overhangs, or be placed beneath canopy structures for protection from the elements;<br><br>PARKING MANAGEMENT STRATEGY (pg. 140)<br><br>- Western University should develop an aggressive transportation demand management program to promote and incentivize the use of other transportation modes to and from the campus. BRT will be a pivot point in managing transportation demand by providing fast and efficient transit to and through campus. Staff and faculty TDM programs typically require higher levels of subsidy and year-round investment. An initial program should at a minimum include the following elements: guaranteed ride home, walk/bike incentives such as a monthly reimbursable bike benefit and transit promotional programs such as discounted/free short-term transit passes. | | | | | |