# Municipal e-scooter pilots and Micromobility Programs Summary Table

| Program Description | Key Parameters/ Regulations (In addition to provincial requirements) | Micromobility Device Type(s) | Facility Type(s) | Key Lessons Learned | | Education, Outreach, and Marketing Approaches | Additional Information |
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| | | | | Successes | Challenges | | |
| **SHARED PILOTS AND PROGAMS** | | | | | | | |
| **BIKE SHARE TORONTO E-BIKE PILOT PROGRAM (2020), TORONTO, ON** | | | | | | | |
| Pedal-assisted e-bikes have been permitted on conventional, painted bike lanes in Toronto since 2014. In 2020, Canada's Bike Share Toronto, Canada's second largest bicycle share, launched an e-bike pilot program and added 300 pedal-assist e-bikes to their fleet and installed 10 e-bike charging stations. The program's success resulted in e-bikes becoming a permanent component of the City's Bike Share program. Bike Share Toronto is planning on expanding their e-bike fleet and number of charging stations within the next few years. | ▪ All e-bikes must follow the same rules of the road as bicycles.<br>▪ Maximum speed of e-bikes cannot exceed 25 km/h | Pedal-assisted E-bikes | Permitted use on:<br>▪ Bike lanes<br>▪ Roadways<br>▪ MUPs<br><br>Prohibited on:<br>▪ Sidewalks | **General Successes**<br>▪ On average, BST e-bikes take 2.5x trips than regular bikes, and travel 50% further and 10% longer than conventional bikes. These findings suggest that e-bikes have the potential to expand the service area of the program and provide access to shared micromobility in less dense areas, potentially replacing trips that would have been taken with cars.<br>**Micromobility Policies**<br>▪ Restricting the maximum speed of e-bikes prevents users from exceeding the speed limit<br>▪ Maintaining the same rules of the road as bicycles makes it easier for users to follow<br>**Facility Design**<br>▪ Toronto has a well-established Bike Share program and continuous cycling facilities which helped in the execution of this pilot project. | **General Challenges**<br>▪ Due to popularity, it was difficult to maintain the charge of e-bikes with only a few stations equipped with chargers. BST plans on expanding its supply of e-stations, but this presents a challenge with installing the appropriate electrical infrastructure.<br>**Micromobility Policies**<br>*List any challenges with micromobility policies or regulations of the pilot/program and, if available, how they were or will be resolved in the future*<br>**Facility Design**<br>*Not Available* | ▪ A mobile application that provides users with real-time information about bike availability, maps, and charging stations. | Currently, e-bikes account for 4% of the total Bike Shae fleet, however, by 2025, it is anticipated that e-bikes will account for 20% of the fleet (approximately 2,000 e-bikes).<br><br>*Bike Share Toronto First Quarter (Q1) 2022 Update* |
| **ELECTRIC KICK-SCOOTER PILOT PROJECT (2019), TORONTO, ON** | | | | | | | |
| In 2019, Toronto permitted the use of e-scooters within its Distillery District neighbourhood for a two-week pilot project. Following the project, the city decided to prohibit the use of both shared and privately-owned e-scooters and has opted out of the provincial pilot for both personal and shared e-scooters. This decision was informed by the potential impacts and implications the operation of these devices could have on pedestrians and those with accessibility needs. | Unavailable | E-scooters | Permitted use on:<br>▪ Public streets<br>▪ Bike lanes<br>▪ Pathways<br>▪ Trails and other public spaces<br><br>Prohibited on sidewalks | **Micromobility Policies**<br>*Not Available*<br>**Facility Design**<br>*Not Available* | **Micromobility Policies**<br>1. Concerns were reported from disability groups and residents regarding safety, especially for people living with disabilities and seniors, due to improper use, such as sidewalk riding, and poorly parked e-scooters causing trip hazards and obstructions. The city experienced challenges with enforcement to mitigate these issues.<br>2. Problems with indemnification agreements with e-scooter rental companies and liability of e-scooter riders if injured or injuring others<br>3. The decision made by the City of Toronto to opt out of the e-scooter pilot was partially justified by invoking the principles laid out by Toronto's Vision Zero Road Safety Plan. | Feedback was obtained from the Toronto Accessibility Advisory Committee, disability groups, residents, and City staff.<br><br>Stakeholder consultations were completed that included both corporate entities with a vested interest in the implementation of e-scooter infrastructure in Toronto and residents and organizations. | https://www.toronto.ca/news/toronto-city-council-votes-unanimously-to-support-safety-and-accessibility-by-opting-out-of-e-scooter-pilot/<br><br>https://www.toronto.ca/services-payments/streets-parking-transportation/cycling-in-toronto/cycling-and-the-law/electric-bicycles-e-bikes-e-scooters/ |

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| | | | | | **Facility Design**<br>▪ There were challenges with the integration of e-scooters with pedestrians and negatively impacting accessibility as e-scooters were left along sidewalks potentially creating obstructions. | | |
| **SHARED E-SCOOTER PILOT PROJECT (2020-2021), OTTAWA, ON** | | | | | | | |
| The 2020 shared e-scooter pilot ran from July to October and saw a fleet of 600 e-scooters deployed by Bird Canada, Lime, and Roll. During the season, more than 72,720 riders took over 238,000 separate trips throughout the central deployment area. Specific zones within the central deployment area were geofenced to prevent e-scooters from operating in them. Approximately 48% of e-scooter trips started in a BIA and 4% ended in a BIA. | ▪ Maximum operating speed of 20 km/h<br>▪ E-scooters cannot operate on sidewalks, transit stations, or along NCC pathways<br>▪ E-scooters are to be parked in the furniture zone, or in such a manner that does not obstruct the flow of pedestrian, vehicular or cyclist traffic<br>Shared e-scooters are only available from 6 am to 11 pm | E-Scooters | Permitted use on:<br>▪ All cycling facilities<br>▪ Roads with speed limits of up to 50 km/h<br>▪ MUPs<br>Prohibited on:<br>▪ Sidewalks<br>▪ In a park, or where cycling, skateboarding or rollerblading is prohibited | **Micromobility Policies**<br>▪ The City's bylaw sets the maximum operating speed of e-scooters to 20 km/h and lower in high pedestrian areas and to comply with speed limits on multi-use pathways to mitigate risk of injury<br>▪ Operating times of shared e-scooters reduced risk of late-night operating when visibility is reduced<br>**Facility design**<br>▪ Ottawa has an extensive network of connected cycling facilities and multi-use pathways that helped users follow program rules and stay off sidewalks. | **General Challenges**<br>▪ Lack of available scooters during high demand surges led to the city increasing its fleet size and widening its deployment area<br>▪ High demand drained the batteries and made it challenging for operators to keep the fleet charged, which contributed to improper parking if riders ran out of battery while riding.<br>**Micromobility Policies**<br>▪ Improper use like sidewalk riding and improper parking posed a hazard for pedestrians and people with mobility or visual impairments. To address this, in 2021 service providers were required to respond to improperly parked e-scooters withing an hour and enhance their communication/public outreach campaign. In 2022, the City imposed stricter regulations on e-scooter providers, including updates to the GPS precision and only allowing rides to end in designated parking zones<br>**Facility designs**<br>▪ Riding in high pedestrian areas and along pedestrianized streets led to complaints from residents and business owners about careless riding. In response, the City reduced the speed e-scooter operated in these areas and expanded the services no-ride zones. | ▪ Communication and public outreach campaign, including updates project webpage, Public Service Announcements, communications to BIAs and stakeholder groups, targeted messaging on social media, and providing key messages to Councillors and BIAs to share with their networks<br>▪ In-app and in-person communications from e-scooter providers<br>▪ In-app messaging while operating in specific areas with higher e-scooter ridership<br>▪ Communications with local transit to ensure awareness of safety measures when sharing the road with e-scooter users | 2020 Electric Kick Scooter Strategy and Pilot Report |
| **BIRD CANADA INC. E-SCOOTER AND E-BIKE SHARE PILOT PROJECT (2021), WINDSOR, ON** | | | | | | | |
| In May 2021, Windsor approved a one-year (12-month) pilot project with Bird Canada Inc. providing shared e-scooter and e-bike rental services. The pilot operated within a defined service area and saw e- | ▪ E-scooters cannot exceed a speed of 24 km/h, and 15 km/h in designated slow zones (like the waterfront pathway) | ▪ E-scooters<br>▪ E-bikes | Permitted use on:<br>▪ City-owned cycling facilities<br>▪ Footbridges | **Micromobility Policies**<br>▪ • E-scooter and e-bike geofencing allowed for the city to dictate where e-devices would operate at a slower speed (like in high pedestrian areas) or gradually stop (no ride zones). | **Micromobility Policies**<br>▪ • Improper use and placement/parking of e-scooters and e-bikes is difficult to enforce. When reported, the service provider responded to | ▪ In-app education on how to ride and park responsibly and helmet requests<br>▪ Reminder emails + in-app pop up messages and push notifications to smartphones | *Link* |

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| scooters deployed first, with e-bikes deployed later in the season. Over 22,500 people took e-scooter rides during the pilot. | ▪ Users must ride on the right-hand side of the road where bike lanes are not provided<br>▪ No passengers, cargo or baskets are allowed<br>▪ Riders are subject to penalties and suspension for improper riding<br>▪ E-scooters must be parked within the furniture zone of the sidewalk, out of the public right of way and without blocking the sidewalk, or within designated parking zones | | ▪ Roads with speed limits of up to 50 km/h<br>▪ MUPs<br>Prohibited on:<br>▪ Sidewalks<br>▪ Park trails (excepted Riverfront Trail) | **Facility Design**<br>*Not Available* | improper placement/parking of devices right away and issued warnings and suspensions if necessary.<br>**Facility Design**<br>*Not Available* | ▪ Information and short safety video on the City's website<br>▪ Service provider pop-ups offering test rides e- and education on safe and responsible riding<br>▪ Service provider offered a community pricing program for low-income residents, seniors, veterans and employees of pre-approved community-based organizations (50% discount) | |
| **LIME E-SCOOTER PILOT PROJECT (2018-2019), WATERLOO, ON** | | | | | | | |
| In fall 2018 and spring/summer 2019, the Region of Waterloo launched Canada's first shared electric scooter pilot program. Approximately 150 e-scooters were deployed in 2019 within the designated pilot area which included a section of the Laurel Trail to the Uptown Promenade and the David Johnston Research and Technology Park of the University of Waterloo. | ▪ E-scooters cannot exceed 15 km/h on campus (high pedestrian area) and 23 km/h off campus<br>▪ E-Scooters can only be operated between 7am to 9pm<br>▪ E-Scooters must be parked in designated parking locations identified by blue signs<br>▪ Users must possess a driver's license<br>▪ E-scooters must be only used within the designated operation area | E-scooters | Permitted use on:<br>▪ Laurel Trail (Designated MUP)<br>▪ University of Waterloo campus | **General Successes**<br>▪ Deploying the pilot project within a limited area allowed the region to have greater control on the project and easier to measure its results<br>▪ The uptake of this pilot project was supported by the fact that it was implemented within a university campus where walking and cycling is common and generally trips are short distances<br>**Micromobility Policies**<br>▪ Reducing speeds to 15 km/h in high pedestrian areas like on campus reduces the risk of collision or serious injury<br>**Facility Design**<br>*Not Available* | **Micromobility Policies**<br>▪ Because the e-scooters are dockless, there were improper parking issues, such as parking on private or public property like sidewalks.<br>▪ Scooters did not always shut down once outside of the geofenced area, with some uses travelling well outside the geofenced area.<br>**Facility Design**<br>*Not Available* | | *Link* |
| **SHARED E-BIKE AND E-SCOOTER PILOT (2018-2020), CALGARY, AB** | | | | | | | |
| The City of Calgary was granted permission by Alberta to run a shared e-Bike and e-Scooter pilot between 2018-2020, which saw over 200,000 unique users take 1.9 million trips during summer months. Approximately 55% of e-scooter and e-bike trips ended in BIAs. The pilot was deemed successful, and City Council voted to make the pilot permanent. | ▪ Riders must be 18 years of age or older<br>▪ Riders must yield to pedestrians<br>▪ E-bikes and e-scooters must be parked out of the pedestrian right-of-way | ▪ E-scooters<br>▪ E-bikes | E-bikes were permitted on:<br>▪ Bike lanes<br>▪ Roads<br>▪ Pathways<br>E-bike were prohibited on:<br>▪ Sidewalks | **Micromobility Policies**<br>▪ Since the speed and operating location of shared services can be effectively limited and regulated, these devices have more freedom in terms of where they can travel versus personal e-scooters.<br>**Facility Design**<br>▪ The 2020 e-scooter rider survey illustrates that users were comfortable riding along pathways, | **Micromobility Policies**<br>▪ Improper e-scooter user behaviour and reckless riding along pedestrian pathways created safety concerns. To address these concerns, the city implemented slow speed zones in areas with high pedestrian traffic, signage directing e-scooters to the bike path, and education and enforcement initiatives which resulted in improved user behaviour from 2019 to 2020. The city plans on assigning scooter ID numbers to report poor behaviour in the future. | ▪ Details about the pilot were communicated through social media channels, the city website, and in media interviews.<br>▪ E- device providers were required to conduct education and safety events. This included pop-ups with test rides, helmet giveaways, and educational engagement | • Shared e-Bike and e-Scooter Final Pilot Report (2020)<br>• Shared e-Bike and e-Scooter Data and Analysis (2020)<br>• Rules of the Road ( CBC-2019) |

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| | | | E-scooters were permitted on:<br>▪ Sidewalks (unless signed otherwise)<br>▪ Bike lanes<br>▪ Pathways<br><br>E-scooters were prohibited on:<br>▪ Roadways | empty sidewalks, and bike lanes, which fall under permitted facilities for these devices. | ▪ Improper parking of e-scooters causes accessibility issues for people walking/rolling on sidewalks and pathways. To address this, parking zones were installed in high-use areas and, in collaboration with service providers, implemented a fine to users who improperly parked. The city is investigating fining private companies directly for improperly parked e-Scooters along with dedicated company funding and incentives for e-Scooter parking.<br>▪ Safety concerns with operating the devices. The city is proposing requiring and evaluating companies' safety plans and strategies<br><br>**Facility Design**<br><br>▪ E-scooter use on sidewalks has a greater potential to result in conflicts with pedestrians and other sidewalk users. Slow speed zones were implemented in areas with high pedestrian volumes<br>▪ Conflicts with pedestrians in neighbourhoods and along shared facilities led the city to recommend that e-scooters are also permitted along lower-classified roadways without road markings, which usually have lower speed limits. | ▪ In-app education on how to ride and park responsibly<br>▪ A Safe Streets Patrol in specific areas with higher e-scooter ridership to educate riders on local rules<br>▪ The Calgary Community Standards conducted several education initiatives throughout the pilot to improve user behaviour. | |
| **SHARED E-SCOOTER PROGRAM (2019-2021), EDMONTON, AB** | | | | | | | |
| The City of Edmonton was granted permission by Alberta to run a shared e-Scooter pilot between 2019-2021. During 2020, more than 600,000 shared e-scooter trips were recorded, with more than half starting in a BIA. | ▪ Riders must be 18 years of age or older<br>▪ E-scooters cannot exceed 20 km/h<br>▪ E-scooters must follow the programs specific parking guidelines which includes, but not limited to, parking in a manner that does not block travel, or not in public transit stations or LRT platforms.<br>▪ E-scooters cannot be taken onto public buses, but are allowed on the LRT outside of peak hours and on weekends. | E-scooters | Permitted use on:<br>▪ All bike lanes<br>▪ Shared-use sidewalks and paths<br>▪ Roads with speed limits of up to 50 km/h<br>▪ Trails on Parkland<br><br>Prohibited on:<br>▪ Sidewalks (unless signed otherwise)<br>▪ Park trails not maintained by the city<br>▪ Road lanes closed for patio expansion | **Micromobility Policies**<br><br>▪ The speed of shared services was limited to reduce risk of collision or serious injury<br><br>**Facility Design**<br><br>*Not Available* | **Micromobility Policies**<br><br>▪ Survey results show that some of the top reasons respondents did not ride e-scooters in 2020 was safety concerns of operating e-scooters and not knowing regulations or how to use them.<br>▪ Top parking issues were e-scooters blocking the travel path, e-scooters not standing upright, and too many e-scooters in one location.<br>▪ Improper use, such as users riding along sidewalks, and not providing pedestrians a warning when passing caused concerns. City "peace" officers are responsible or enforcing rules on sidewalks, in parks, and along shared-se pathways while City Police provide on-street enforcement.<br><br>**Facility Design**<br><br>*Not Available* | ▪ In-app education and communications on proper use<br>▪ E-scooter providers offered in-person rider education and communications during pop-ups, which included e-scooters test rides, free helmet giveaways, and educational engagement<br>▪ Collaboration with shared e-scooter providers for Safe Streets Patrol to educate riders in areas with higher e-scooter ridership | *Edmonton's Shared Micromobility Program* |

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| **SHARED E-SCOOTERS-MICROMOBILITY PERMIT PROGRAM (2021), KELOWNA, BC** | | | | | | | |
| Kelowna's Micromobility Permit Program regulates how shared small vehicles and devices like e-bikes, e-scooters and limited speed mopeds operate. There are multiple companies that hold permits under the program, however these are only for shared e-scooter services. Shared e-scooters were initially offered in 2019, however they were limited in where they could operate. In 2021, shared e-scooter regulations were expanded to include a number of facilities and several companies began offering their devices, making e-scooters more accessible. Under this program, e-scooters operate under the same rules as bicycles. | ▪ Electric scooters cannot exceed a speed of 24 km/h<br>▪ E-Scooters cannot only be operated in the downtown between 10:30pm – 4am<br>▪ No passengers allowed on e-scooters | E-scooters | Permitted use on:<br>▪ Shared lanes/paths<br>▪ Separated bike lanes/paths<br>▪ Two-way protected bike lanes.<br>▪ Roads with speed limits of up to 50 km/h<br>Kelowna does not have painted bike lanes.<br>Prohibited on:<br>▪ Sidewalks and crosswalk (unless signed otherwise) | **Micromobility Policies**<br>▪ Time restrictions for share e-scooter operation in the downtown limits intoxicated riding<br>▪ Further restrictions implemented during the pilot lead to injury rates falling.<br>▪ Slow-speed zones were implemented in areas of high pedestrian traffic by using geofencing<br>▪ Share e-scooters have a low-speed first-ride feature for first-time users to get accustomed to e-scooters with less risk of injury<br>**Facility Design**<br>▪ The city boasts the most extensive bicycle network in Canada for a city its size, which provides users with multiple routes to use their e-scooter.<br>▪ The city continues to invest in bike lanes and similar facilities to keep all users safe. The new 2040 TMP calls for new strategies to improve how these facilities operate. | **Micromobility Policies**<br>▪ In response to concerns and complaints reported, Kelowna implemented 85 amendments to how shared e-scooter service is delivered since the start of the program, which reduced concerns over time.<br>▪ Improper parking on sidewalks caused concerns for pedestrians, older residents, and those with visual and mobility impairments. To address these concerns, service providers are required to respond to improperly parked e-scooters withing an hour, and the city set up preferred parking areas and conduct regular parking audits to monitor compliance. The audit indicate parking compliance has increased over time. E-scooter companies also issue warnings and fines directly to riders.<br>▪ Intoxicated driving posed a safety risk. To address this, the city banned shared e-scooter and e-bike use at night. This has reduced instances of intoxicated riding.<br>▪ Sidewalk riding is against regulations. To address this, the city installed signing, and e-scooters are equipped with a sidewalk riding detection feature which will warn, fine, or suspend (for repeat offences) a user if a significant amount of the trip is spend riding on the sidewalk. Data indicates instances of sidewalk riding have declined.<br>**Facility Design**<br>▪ Data from e-scooter location detection indicates sidewalk riding is most common in the downtown, especially along streets without bike facilities or where bike facilities are less protected from vehicles. | ▪ In-app education that provides rules of the road and safety tips<br>▪ E-scooter companies hosting in-person safety education events every week over pilot period to become familiar with their service, test ride in a safe environment, and receive a free helmet<br>▪ Public Education Campaign launched late 2021 to educate the public on regulations of e-scooters<br>▪ Incentives and options for low-income, unbanked, and underserved residents | *Micromobility Permit Program-2021 Program Evaluation Report* |
| **MUNICIPALITIES PERMITTING PERSONAL USE OF MICROMOBILITY DEVICES** | | | | | | | |
| **MICROMOBILITY PROJECT PHASE 1 (2021), MISSISSAUGA, ON** | | | | | | | |
| As part of the City's Micro-mobility Program Development Project-Phase 1, in late 2020 Mississauga approved an *Interim E-scooter Strategy* to respond to and regulate personally owned e-scooter devices | By-law amendments for e-scooters included:<br>▪ The definition of electric kick-style scooter (e-scooter) will | ▪ E-scooters<br>▪ E-bikes | E-scooter Permitted use on:<br>▪ MUPs and multi-use trails within the road ROW<br>▪ Cycling infrastructure | **Micromobility Policies**<br>▪ The Interim E-scooter Strategy permits e-scooter use along roads under 50 km/h and prohibits its use on sidewalks | **Facility Design**<br>▪ The active transportation network contains some gaps, which may pose a challenge for riders on where to operate and may force riders onto roads with speeds greater than 50 km/h | ▪ Communication and education strategy for e-scooters is to be developed.<br>▪ E-bikes have been included in the cycling handbook | *E-Scooter Pilot Program*<br>*Cycling Handbook* |

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| through by-laws amendments. This will allow city staff to assess how residents use e-scooters and help inform future decisions about the City's micro-mobility program and moving forward with a shared program. E-bikes use was also approved and follow the same regulations as conventional bicycles. | refer to that of Ontario's regulations<br>▪ Where e-scooters can and cannot operate (see facility types)<br>▪ Operators shall ride single file and near to the right-hand side when operating along a roadway<br>▪ Parking is prohibited along a highway, except in such a manner as to cause the least obstruction to pedestrian or vehicular traffic<br>Other regulations:<br>▪ E-scooters are allowed on MiWay transit buses as long as there is space<br>▪ Motorized bicycles are not allowed on transit bike racks | | ▪ bike lanes and paths<br>▪ public roadways with speed limits of up to 50 km/h<br>All devices prohibited on:<br>▪ Sidewalks<br>▪ Multi-use park trails or off-road trails<br>▪ Other City-owned lands not designated as public highway and transit stations<br>E-bike permits on:<br>▪ Any road conventional bicycles are permitted<br>▪ E-bikes weighing 40 kg or less are allowed on trails | ▪ An established active transportation network of bicycle lanes, signed bike routes, and multi-use trails provides safe and comfortable riding conditions throughout the city.<br>▪ Limiting their use within parks reduces pedestrian interactions. | | | |
| **E-BIKES (2014), TORONTO, ON** | | | | | | | |
| Pedal-assisted e-bikes have been permitted in Toronto since 2014. Like e-bikes in the Bike Share Toronto pilot, personal e-bikes are to follow the same rules of the road as other bicycles. | Power-assisted e-bikes that are capable of being propelled solely by an electric motor have slightly different regulations on where they can operate (see facility types).<br>Pedal-assisted e-bikes can park as a conventional bicycle on the sidewalk, or by using a post or ring stand. Power-assisted e-bikes may park on the street as motorcycles do. | ▪ E-bikes | Permitted use on:<br>▪ Bike lanes<br>▪ Roadways<br>▪ MUPs and Multi-use Trails, excluding in parklands (except e-bikes over 40 kg and power-assisted e-bikes)<br>Prohibited on:<br>▪ Sidewalks<br>▪ MUPs in parklands<br>▪ power-assisted e-bikes are not permitted on Cycle tracks/separated bike lanes and MUPs or multi-use trails | | | | |
| **E-CARGO BIKES (2021), TORONTO, ON** | | | | | | | |

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| In June 2021, Toronto City Council decided to opt-in to the province's pilot project and adopted by-laws allowing cargo e-bikes, weighing no more than 120 kg unladen, to operate along certain facilities. | Provincial regulations | E-cargo bikes | Permitted use on:<br>▪ Bike lanes<br>▪ Roadways<br>▪ Cycle tracks<br>Prohibited on:<br>▪ Sidewalks | | | | Electric Bicycles (E-Bikes) & E-Scooters |
| **E-SCOOTERS AND E-BIKES (2021), HAMILTON, ON** | | | | | | | |
| In late 2020, Hamilton's public works committee voted unanimously to allow the use of personal e-scooters. E-bike use in Hamilton follows the same regulations as conventional bicycles under their traffic bylaw. | By-law amendments for e-scooters included, but are not limited to:<br>▪ Maximum operating speed of 25 km/h<br>▪ No parking along a roadway or sidewalk that causes an obstruction<br>▪ No cargo, passengers or towing of another device<br>▪ E-scooters must keep a safe distance from pedestrians and other row users, and must yield to pedestrians and cyclists<br>▪ E-scooters operating on a trail or in a park, or a MUP must not operate at a speed noticeably greater than the speed of nearby pedestrians<br>▪ E-scooters must sound their horn/bell to notify cyclists and pedestrians of their approach | ▪ E-scooters<br>▪ E-bikes | E-bikes were permitted on:<br>▪ roads and highways where conventional bicycles are permitted (roadways up to 50 km/h, designated trails/pathways. MUPs adjacent to the roadway)<br>E-bike were prohibited on:<br>▪ Sidewalks and pedestrian areas<br>▪ Most parks<br>E-scooters were permitted on:<br>▪ Municipal roads<br>▪ Bike lanes<br>▪ Pathways<br>E-scooters were prohibited on:<br>▪ Sidewalks<br>▪ trails and in parks | | | | *Hamilton Traffic Bylaw Amendments for E-scooters* |
| **ELECTRIC KICK SCOOTER PILOT PROJECT (2020) OTTAWA, ON** | | | | | | | |
| In 2020, Ottawa permitted the use of personal e-scooters along with their shared e-scooter pilot project. Most of the same rules apply for both the | ▪ Maximum operating speed of 20 km/h | E-scooters | Permitted use on:<br>▪ All cycling facilities | **Micromobility Policies**<br>▪ The City's bylaw sets the maximum operating speed of e-scooters to 20 km/h and lower in | **Micromobility Policies** | ▪ Communication and public outreach campaign, including updates project webpage, Public Service | |

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| | | | | Successes | Challenges | | |
| shared and personally owned e-scooter pilots, except personal e-scooters can operate outside of the central deployment area at any time. | ▪ E-scooters cannot operate on sidewalks, transit stations, or along NCC pathways (unless by official sign)<br>▪ E-scooters are to be parked in the furniture zone, or in such a manner that does not obstruct the flow of pedestrian, vehicular or cyclist traffic | | ▪ Roads with speed limits of up to 50 km/h<br>▪ MUPs<br>Prohibited on:<br>▪ Sidewalks<br>▪ In a park, or where cycling, skateboarding or rollerblading is prohibited | high pedestrian areas and to comply with speed limits on multi-use pathways to mitigate risk of injury<br>Facility design<br>▪ Ottawa has an extensive network of connected cycling facilities and multi-use pathways that helped users follow program rules and stay off sidewalks. | ▪ Improper use like sidewalk riding and improper parking posed a hazard for pedestrians and people with mobility or visual impairments.<br>Facility designs<br>▪ Riding in high pedestrian areas and along pedestrianized streets led to complaints from residents and business owners about careless riding. In response, the city reduced the speed e-scooter operated in these areas and expanded the services no-ride zones. | Announcements, communications to BIAs and stakeholder groups, targeted messaging on social media, and providing key messages to Councillors and BIAs to share with their networks<br>▪ Communications with local transit to ensure awareness of safety measures when sharing the road with e-scooter users | |
| **E-CARGO BIKE PILOT (2021), OTTAWA, ON** | | | | | | | |
| The City of Ottawa enacted a by-law permitting the use of e-cargo bikes in Fall 2021 under the province's E-Cargo Bike Pilot. The by-law categorizes e-cargo bikes into personal and commercial vehicles and defines what transportation network facilities each type can and cannot operate on (see facility types).<br>Under Ottawa's by-law, commercial vehicles are defined as e-bikes that are e-bikes that are "wider than 0.95 m, heavier than 120 kg or that are used in the conveyance of cargo for commercial purposes or for hire to transport people". E-rickshaws would require a license to operate. | ▪ Commercial e-cargo bikes must have a company name or logo and an ID number<br>▪ Commercial operators can park in a loading-zone or no-parking zone if they purchase an annual short-term parking permit<br>▪ No parking or stopping that encroaches into travel or street furniture within the road right of way is permitted | E-cargo bikes | Permitted use on:<br>▪ Personal e-cargo bikes: can travel anywhere a conventional bicycle can, including MUPs<br>▪ Commercial e-cargo bikes: bike lanes or roads.<br>Prohibited on:<br>▪ Sidewalks<br>▪ Pathways with signage that prohibits bicycles<br>▪ multi-use pathways (Commercial e-cargo bikes) | The city has prepared criteria to evaluate the success of the pilot once complete. It will consider:<br>▪ The number of commercial e-cargo bikes in use and associated decrease in truck usage by organizations;<br>▪ road users, cyclists, pathway users and pedestrians Safety and comfort<br>▪ Accessibility concerns for persons with disabilities;<br>▪ Operational challenges for businesses;<br>▪ Parking compliance and owner/operator response to parking management issues<br>▪ Satisfaction of riders and residents of Ottawa as measured through 3-1-1 comments and complaints, emails to staff and the follow-up on-line e-cargo bike survey. | | ▪ City website communicates the rules of the e-cargo bike pilot. | *Ottawa Transportation Committee* |
| **CARGO BIKES, VANCOUVER, BC** | | | | | | | |
| In Vancouver, e-cargo bikes (pedal power with electric motor for assistance) follow similar regulations to conventional cargo bikes and have been deemed beneficial for traveling greater distances, carrying heavier loads, and assisting in challenging terrain. | Provincial regulations (similar to Ontario) | E-cargo bikes | Permitted on:<br>▪ City streets<br>▪ Local street bikeway<br>▪ Shared-use lanes<br>▪ Painted bike lanes<br>▪ Protected bike lanes<br>Prohibited on:<br>▪ The seawall<br>▪ Sidewalks | | | | *Cargo bike Guide* |

| Program Description | Key Parameters/ Regulations (In addition to provincial requirements) | Micromobility Device Type(s) | Facility Type(s) | Key Lessons Learned | | Education, Outreach, and Marketing Approaches | Additional Information |
|---|---|---|---|---|---|---|---|
| | | | | Successes | Challenges | | |
| **MICROMOBILITY PERMIT PROGRAM (2019), KELOWNA, BC** | | | | | | | |
| Pedal-assisted e-bikes and e-scooters are subject to the same rules of conventional bicycles. They are allowed where cycling is already permitted in Kelowna unless signage indicates otherwise. | On level ground, the maximum speed e-bikes can operate at is 32 km/h and 24 km/h for e-scooters. | Permitted devices:<br>▪ E-scooters<br>▪ E-bikes<br>Prohibited devices:<br>▪ E-skateboards | Permitted use on:<br>▪ Shared lanes/paths<br>▪ Separated bike lanes/paths<br>▪ Two-way protected bike lanes.<br>▪ Roads with speed limits of up to 50 km/h<br>Kelowna does not have painted bike lanes.<br>Prohibited on:<br>▪ Sidewalks and crosswalk (unless signed otherwise) | ▪ The city boasts the most extensive bicycle network in Canada for a city its size, which provides users with multiple routes to use their e-bike or e-scooter. | | | *Kelowna Cycling Regulations* |