



# City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee

**Date:** May 18, 2021


**From:** Lloyd Bie, P.Eng.  
Director, Transportation

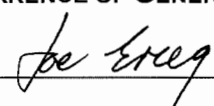

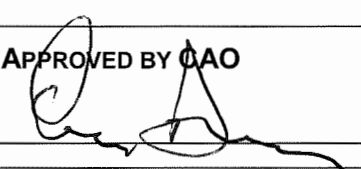
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**Re:** Proposed E-Scooter Pilot Project

### Staff Recommendation

1. That the E-Scooter Pilot Project (the Project) as described in the staff report titled "Proposed E-Scooter Pilot Project" dated May 18, 2021 from the Director, Transportation, be endorsed;
2. That should the Province of BC approve the Project and designate Richmond as a pilot community within the Electric Kick Scooter Pilot Project Regulations, staff implement the Project;
3. That the following Amendment Bylaws to allow the use and enforcement of e-scooters in Richmond during the Project be introduced and given first, second and third reading:
  - (a) Traffic Bylaw No. 5870, Amendment Bylaw No. 10272,
  - (b) Public Parks and School Grounds Regulation Bylaw No. 8771, Amendment Bylaw No. 10274,
  - (c) Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 10275; and
  - (d) Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, Amendment Bylaw No. 10276.

  
 Lloyd Bie, P.Eng.  
 Director, Transportation  
 (604-276-4131)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Parks Services	<input checked="" type="checkbox"/>	
Community Bylaws	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
Law	<input checked="" type="checkbox"/>	
Sustainability and District Energy	<input checked="" type="checkbox"/>	
<b>SENIOR STAFF REPORT REVIEW</b>	INITIALS: 	APPROVED BY CAO 

## Staff Report

### Origin

In October 2019, amendments to the provincial Motor Vehicle Act were enacted that gave the Province the ability to establish a regulatory framework to support the use of increasingly diverse modes of personal transportation. The framework allows for pilot projects in communities to test motorized personal mobility technologies such as electric kick scooters, also known as e-scooters.

At the November 20, 2019 Public Works and Transportation Committee, staff were directed to:

*“study the regulation of electric scooter sharing and parking and any related regulatory amendments that may be necessary to facilitate the introduction of dockless electric scooters sharing in Richmond (pending provincial regulatory approvals) and report back at the same time as the forthcoming March 2020 bike-sharing pilot.”*

Since late 2019, staff have been working with the Province to create the pilot e-scooter program and to have Richmond included as a pilot community within the provincial framework. On March 22, 2021, the Province announced the Active Transportation Electric Kick Scooter Pilot Project Regulations that allow the provincial government to partner with communities to assess e-scooters. To be considered for the pilot program, Council’s endorsement of participation and enactment of required bylaw amendments are required. This report seeks to fulfil these requirements and responds to the above referral.

This report supports Council’s Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

*Environmentally conscious decision-making that demonstrates leadership in implementing innovative, sustainable practices and supports the City's unique biodiversity and island ecology.*

*2.2 Policies and practices support Richmond's sustainability goals.*

This report supports Council’s Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

*An active and thriving community characterized by diverse social and wellness programs, services and spaces that foster health and well-being for all.*

*4.1 Robust, affordable, and accessible sport, recreation, wellness and social programs for people of all ages and abilities.*

This report supports Council’s Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

*Leadership in effective and sustainable growth that supports Richmond's physical and social needs.*

6.3 Build on transportation and active mobility networks.

**Analysis**

Motor Vehicle Act Micromobility Pilot Projects

In January 2020, the Ministry of Transportation and Infrastructure (the Ministry) released its Pilot Project Proposal Package for communities interested in establishing pilot projects to test motorized personal mobility technologies such as electric kick scooters, known as e-scooters (Figure 1). Pilot projects can have a maximum term of three years.



Figure 1: E-Scooter User

In accordance with the provincial process, staff submitted an Expression of Intent (EOI) on January 31, 2020 followed by the submission of a more detailed Pilot Project Proposal on March 6, 2020 to permit the operation of e-scooters in Richmond.

This report addresses the Provincial Cabinet requirements for implementation of the Project:

- Council consent to participate in the Province of BC’s Motor Vehicle Act Micromobility Pilot Projects Program in partnership with the Ministry; and
- The City’s proposed Project including the required bylaw amendments being approved by Provincial Cabinet.

Generally, the regulations for e-scooters are similar to those for bicycles and e-bicycles; a notable exception is the maximum speed of 24 km/h for e-scooters versus 32 km/h for e-bicycles (Table 1). Municipalities have the ability to further regulate how and where e-scooters can travel on municipal roadways via bylaw, such as setting speed restrictions and establishing rules on e-scooter use on different types of facilities.

Table 1: Summary of Provincial E-Scooter Pilot Project Regulations

Category	Description
Device Specifications	<ul style="list-style-type: none"> <li>• Powered solely by one or more electric batteries</li> <li>• Up to four wheels (1-2 wheels in front, 1-2 wheels at rear) with platform for standing</li> <li>• Maximum speed of 24 km/h</li> <li>• Continuous power output rating that in total does not exceed 500 W</li> <li>• Equipped with bell or horn</li> <li>• Front white or amber light and rear red light when operated between ½ hour after sunset and ½ hour before sunrise</li> <li>• No seating</li> </ul>
Area of Operation	<ul style="list-style-type: none"> <li>• Designated roads and off-street pathways in a pilot community, in accordance with the provincial regulation and bylaws of the pilot community</li> <li>• On streets with speed limit of 50 km/h or less: in a designated cycling lane or as near as possible to the right side of the street</li> <li>• On streets with speed limit greater than 50 km/h: only in a designated cycling lane</li> <li>• Not permitted on sidewalks unless allowed by pilot community’s bylaw</li> </ul>

Category	Description
User Requirements	<ul style="list-style-type: none"> <li>• Must be 16 years of age or older</li> <li>• Must wear a helmet</li> <li>• Do not need to hold a driver's licence</li> <li>• Must not carry passengers or ride abreast</li> </ul>

Overview of Richmond Proposed E-Scooter Pilot Project

The Project supports a new low carbon mobility option for Richmond residents, employees and visitors, and encourages transit use with a solution for the first and last mile trip. The goal is to provide a safe, convenient and fun personal mobility option for residents that reduces private automobile use, promotes active transportation and transit use, enhances connectivity, and allows multi-modal access to employment, recreation areas and services. With a potential shared e-scooter system, the devices can be integrated in future mobility hubs to enhance user access. Through monitoring and evaluation, the Project is an opportunity to understand the safety of e-scooters, impacts on the public realm, potential for travel mode shift, and community perceptions that in turn will help inform future micromobility and active transportation initiatives.

Staff propose that e-scooters be permitted to operate on selected roadways and off-street pathways. The following Project operational parameters beyond those of the provincial regulations are based on research to date on e-scooter operations in cities in Canada and around the world, discussion with e-scooter share operators, and consultation with Richmond RCMP, Vancouver Coastal Health, and the Richmond Active Transportation Committee.

*Operating Conditions*

While e-scooters may be viewed as similar to bicycles or e-bicycles, these are new devices and a restrained approach of permitting where the devices can operate on public roadways is appropriate for a pilot project employing new technology. Staff therefore propose that e-scooters be permitted to operate on:

- streets with designated cycling facilities,
- local streets defined as a street without lane lines or a directional dividing line with a speed limit of 50 km/h or less,
- streets with a directional dividing line and a maximum speed of 30 km/h, and
- off-street paved pathways next to the roadway or in parks that are signed or marked for shared use.

At the time of writing this report, the recommended operating areas are similar to those being considered in other Metro Vancouver municipalities participating in the provincial pilot program that intend to permit the operation of privately-owned e-scooters. Consistent with the provincial regulations, e-scooters will not be permitted on sidewalks. Staff further recommend that e-scooters not be permitted on unpaved trails due to safety concerns regarding the stability of the devices on uneven surfaces.

The facilities where e-scooters may operate will be defined by amendments to Traffic Bylaw No. 5870 and Public Parks and School Ground Regulations Bylaw No. 8771 as described in further detail below.

Research indicates that a common risk factor for e-scooter injuries is speed. Staff recommend that the maximum speed limit for on-street facilities be 20 km/h, which is the average speed of a typical cyclist. To minimize conflicts between motorized e-scooters and other users of off-street facilities due to higher differential speeds, the maximum speed limit will be reduced to 15 km/h on off-street pathways that may be shared with pedestrians (e.g., Railway Greenway). When on shared pathways where pedestrians are present, the provincial regulations require users to operate the e-scooter at a speed that does not exceed pedestrian traffic except when passing.

### *Safety and Enforcement*

Research shared by Vancouver Coastal Health identifies the following key safety factors for e-scooter users:

- lack of helmet use,
- illegal sidewalk riding,
- higher operating speed, and
- riding while under the influence of alcohol or drugs.

The areas of operation and the lower operating speeds are additional mitigative measures designed to address potential safety concerns beyond the provincial regulations. Similar to bicycle regulations, the enforcement of e-scooter regulations when riding will be provided by Richmond RCMP.

Staff are also exploring a partnership with Preventable for a safety education campaign regarding the use of e-scooters. Preventable is a nation-wide, multi-partner non-profit organization that undertakes social marketing campaigns focused on raising awareness of preventable injuries and changing attitudes and actions that directly lead to those injuries.

### *Monitoring and Evaluation*

Following provincial approval of a municipality's pilot program, the Ministry requires that municipalities provide an annual report related to the use and operation of e-scooters. At the one-year anniversary of the launch of the Project, staff will report back to Council with a status update for endorsement prior to submission to the Province to fulfill its monitoring and evaluation reporting requirements including:

- the extent to which e-scooter use promotes active transportation,
- the safety of e-scooter users and other road users,
- compliance with and enforcement of the provincial regulations and the bylaws of the pilot community, and
- the provision and use of e-scooter rental services and their regulation by the pilot community.

Data from various sources will be collected and analyzed to enable a data-led decision-making process to address any concerns that arise and inform any modifications to the Project (Table 2). The Let's Talk Richmond platform will be used to seek broad community input and feedback. Transportation will be the main point of contact for public comments or concerns.

Table 2: Data Sources to Support Monitoring and Evaluation

Data	Purpose	Source
Ridership	<ul style="list-style-type: none"> <li>Number of people are using e-scooters</li> </ul>	City, shared service operator
Destinations	<ul style="list-style-type: none"> <li>Where and when people are travelling</li> <li>Length of trip</li> <li>Trip routing</li> </ul>	
User & Public Surveys	<ul style="list-style-type: none"> <li>Why and how people are using e-scooters</li> <li>Public's opinion of e-scooters</li> </ul>	
Safety Monitoring	<ul style="list-style-type: none"> <li>Number, why and when people are injured</li> <li>Types of injuries</li> </ul>	Shared service operator, Vancouver Coastal Health

Proposed Bylaw Amendments

The following bylaw amendments are required to permit the operation of e-scooters on City roadways and property as a pilot within the framework of the provincial regulations. Collectively, the proposed bylaw amendments bring into force the new provincial regulations relating to e-scooters and enable enforcement in Richmond.

*Traffic Bylaw No. 5870*

The proposed amendments will allow e-scooters on roads with bike lanes, local roads, roads with a 30 km/h speed limit, and shared pathways within the City road right-of-way. The proposed amendments also regulate maximum speeds on different facilities and allow e-scooters users to ride in a crosswalk marked with elephant's feet similar to cyclists.

An additional amendment is proposed to address concerns the City has received regarding the speed of pedal bicycles and electric motor-assisted cycles (e-bikes) on pathways within the City road right-of-way that are shared with pedestrians. The speed differential with pedestrians can generate conflicts. Staff therefore propose that pedal bikes and e-bikes be limited to a maximum speed of 15 km/h on shared pathways.

While the Motor Vehicle Act already restricts riding on sidewalks, at the request of Richmond RCMP, a further bylaw amendment is proposed to explicitly prohibit bicycles, e-bikes and e-scooters from riding on the sidewalk unless otherwise signed.

*Public Parks and School Grounds Regulation Bylaw No. 8771*

Motorized e-scooters are currently prohibited from operating on trails and paths within City parks or school grounds. The proposed amendments will permit the use of motorized e-scooters on paved greenways and pathways in City parks that are signed as shared use facilities. These pathways include the Railway Greenway, the Middle Arm Greenway, and Imperial Landing Park. E-scooters will not be permitted on pathways within school grounds as these facilities are typically not wide enough to safely accommodate shared uses. Staff will work with the School District to address any concerns that may arise. If adopted, the proposed amendment will require modification of existing signage on pathways to reflect that e-scooters are now permitted, and new signage on pathways that are currently not signed for shared use.

Similar to the Traffic Bylaw amendment, an additional amendment is proposed to govern the speed of pedal bicycles and electric motor-assisted cycles (e-bikes) on park pathways and trails

shared with pedestrians. Pedal bikes and e-bikes will be limited to a maximum speed of 15 km/h on shared pathways and trails.

*Municipal Ticket Information Authorization Bylaw No. 7321 and Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122*

The proposed amendments will allow enforcement of the Traffic Bylaw and Public Parks and School Grounds Regulation Bylaw amendments with associated fine amounts. The proposed fine amounts for the Municipal Ticket Information Authorization Bylaw No. 7321 are consistent with those for similar violations by cyclists as defined in the regulations of the provincial Offence Act. The proposed fine amounts for the Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122 are consistent with those for similar violations of regulations within the Public Parks and School Grounds Regulation Bylaw.

Request for Proposals (RFP) to Operate Shared E-Scooter System

An RFP for the development and operation of a pilot public e-scooter share program by a third party was issued by the City on April 29, 2021 with a closing date of May 26, 2021. Following evaluation of the proposals received, a staff report will be presented in September 2021 with a recommendation for next steps.

**Financial Impact**

The cost to revise existing signage and install new signage on paved greenways and pathways to allow the operation of e-scooters on these facilities can be accommodated within an existing approved capital account.

**Conclusion**

Participation in the Province's Active Transportation Electric Kick Scooter Pilot Project will support the City's mobility targets and GHG emission and carbon reduction goals consistent with the Official Community Plan and the Community Energy and Emission Plan 2020-2050 Directions. Staff recommend that e-scooters be permitted to operate in Richmond on selected roadways and off-street paved pathways. Overall, the pilot project provides an opportunity for the City and the Province to research, test and evaluate the safety and efficiency of e-scooters to support cleaner and more sustainable transportation.



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Transportation Planner  
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Sonali Hingorani, P.Eng.  
Transportation Engineer  
(604-276-4049)

JC:lce



Traffic Bylaw No. 5870
Amendment Bylaw No. 10272

The Council of the City of Richmond enacts as follows:

- 1. Traffic Bylaw No. 5870, as amended, is further amended at Section 1.2 by adding the following definitions in their appropriate place:

Table with 2 columns: Term and Definition. Terms include Bicycle Lane, Designated Shared Pathway, E-Scooter, Local Street, and Motor Assisted Cycle.

- 2. Traffic Bylaw No. 5870, as amended, is further amended by deleting Section 29.5 and replacing it with the following:

29.5 No person shall ride a bicycle or e-scooter in a marked crosswalk, unless it is also marked by two lines of intermittent squares (elephant's feet) on one or both sides of the crosswalk, or it is otherwise signed to permit cycling.

- 3. Traffic Bylaw No. 5870, as amended, is further amended by deleting Section 29.6 and replacing it with the following:

29.6 Any person riding a bicycle or e-scooter in a marked crosswalk also marked by two lines of intermittent squares (elephant's feet) on one or both sides of the crosswalk, or otherwise signed to permit cycling, must yield the right-of-way to any pedestrians in the marked crosswalk.



4. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.7 as follows:

29.7 A person may not operate a bicycle, **motor assisted cycle** or **e-scooter** on a sidewalk unless otherwise directed by a sign.

5. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.7 as follows:

29.8 A person may not operate a bicycle or **motor assisted cycle** on a **designated shared pathway** at a speed exceeding 15 km/h.

6. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.8 as follows:

29.9 A person may operate an **e-scooter**:

(a) on any **bicycle lane, local street** and the roadways shown in Schedule B, which is attached and forms part of this Bylaw, at a speed not to exceed 20 km/h; and

(b) on a **designated shared pathway** at a speed not to exceed 15 km/h.

7. This Bylaw is cited as "**Traffic Bylaw No. 5870, Amendment Bylaw No. 10272.**"

FIRST READING

SECOND READING

THIRD READING

ADOPTED

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MAYOR

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\_\_\_\_\_  
CORPORATE OFFICER

CITY OF RICHMOND
APPROVED for content by originating dept. <i>UB</i>
APPROVED for legality by Solicitor <i>LB</i>



**Public Parks and School Grounds Regulation No. 8771  
Amendment Bylaw No. 10274**

The Council of the City of Richmond enacts as follows:

1. **Public Parks and School Grounds Regulation No. 8771** is amended at Section 2.3.1 by adding a new Section 2.3.1 (d) as follows:

(d) operate a bicycle or **motor assisted cycle** at a speed exceeding 15 km/h in any **public park** or **school ground**.

2. **Public Parks and School Grounds Regulation No. 8771** is amended by adding a new Section 2.3.3 as follows:

2.3.3 A person must not operate an **e-scooter** in any **public park** or **school ground**:

(a) except for a **designated shared pathway** in a **public park**; and

(b) at a speed exceeding 15 km/h.

3. **Public Parks and School Grounds Regulation No. 8771** is amended at Section 8.1 by adding the following definitions in their appropriate place:

E-Scooter means an electric kick scooter as set out in the *Electric Kick Scooter Pilot Project Regulation*, as amended or replaced from time to time.

Motor Assisted Cycle has the meaning set out in the *Motor Vehicle Act*, as amended or replaced from time to time.

Designated Shared Pathway means a two-way off-street paved pathway designated by signage, pavement markings or both for shared use by cyclists and pedestrians.

4. This Bylaw is cited as "Public Parks and School Grounds Regulation No. 8771, Amendment Bylaw No. 10274."

FIRST READING

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CITY OF RICHMOND
APPROVED for content by originating dept. <i>[Signature]</i>
APPROVED for legality by Solicitor <i>LB</i>

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MAYOR

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CORPORATE OFFICER



Municipal Ticket Information Authorization Bylaw No. 7321
Amendment Bylaw No. 10275

The Council of the City of Richmond enacts as follows:

- 1. Municipal Ticket Information Authorization Bylaw No. 7321, as amended, is further amended at SCHEDULE B 12A by adding the following in the appropriate numbered order of Column 2:

SCHEDULE B 12A

TRAFFIC BYLAW NO. 5870

Table with 3 columns: Column 1 (Offence), Column 2 (Bylaw Section), Column 3 (Fine). Rows include offences like 'Operation of bicycle, motor assisted cycle or e-scooter on sidewalk' with corresponding bylaw sections (29.7, 29.8, 29.9(a), 29.9(b)) and fines (\$95).

- 2. This Bylaw is cited as "Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 10274."

FIRST READING

SECOND READING

THIRD READING

ADOPTED

Four horizontal lines for signatures or dates.

Approval stamp box: CITY OF RICHMOND, APPROVED for content by originating dept. (with signature), APPROVED for legality by Solicitor (with signature).

\_\_\_\_\_  
MAYOR

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CORPORATE OFFICER



**Notice of Bylaw Violation Dispute Adjudication No. 8122  
Amendment Bylaw No. 10276**

The Council of the City of Richmond enacts as follows:

1. **Notice of Bylaw Violation Dispute Adjudication No. 8122**, as amended, is further amended in Schedule A at Schedule - Public Parks and School Grounds Regulation Bylaw No. 8771 by adding the following in the appropriate numbered order of Column A3 Section:

<b>Schedule – Public Parks and School Grounds Regulation Bylaw No. 8771</b>							
<b>Designated Bylaw Contraventions and Corresponding Penalties</b>							
<b>A1 Bylaw</b>	<b>A2 Description of Contravention</b>	<b>A3 Section</b>	<b>A4 Compliance Agreement Available</b>	<b>A5 Penalty</b>	<b>A6 Early Payment Option</b>	<b>A7 Late Payment Amount</b>	<b>A8 Compliance Agreement Discount</b>
Public Parks and School Grounds Regulation Bylaw No. 8771	Period of Time from Receipt (inclusive)		n/a	29 to 60 days	1 to 28 days	61 days or more	n/a
	Operating a bicycle or motor assisted cycle at a speed exceeding 15 km/h	2.3.1(d)	No	\$ 150.00	\$ 125.00	\$ 175.00	n/a
	Operating an e- scooter in an unauthorized area	2.3.3(a)	No	\$ 150.00	\$ 125.00	\$ 175.00	n/a
	Operating an e- scooter at a speed exceeding 15 km/h	2.3.3(b)	No	\$ 150.00	\$ 125.00	\$ 175.00	n/a

2. This Bylaw is cited as "Notice of Bylaw Violation Dispute Adjudication No. 8122, Amendment Bylaw No. 10276."

FIRST READING

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CITY OF RICHMOND
APPROVED for content by originating dept. <i>LB</i>
APPROVED for legality by Solicitor <i>LR</i>

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MAYOR

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CORPORATE OFFICER