

## **CITY OF MANASSAS PARK - STAFF REPORT/RECOMMENDATION**

**REQUESTING DEPARTMENT:** Community Development

**MEETING DATE:** 9/20/22

**SUBJECT/TOPIC:** Shared Mobility Device Recommendation

**BACKGROUND:** In the 2019 Session of the Virginia General Assembly, House Bill (HB) 2752, "Motorized skateboards or scooters; clarifies definitions, riding or driving on sidewalks, etc." was introduced. The bill passed the House and Senate and was approved by the Governor on March 22, 2019. This legislation can be viewed in its entirety in Attachment 1.

The specific provision newly created because of HB 2752 is as follows:

**§ 46.2-1315. Powers of localities to regulate use of motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire.**

Any county, city, town, or political subdivision may (i) by ordinance regulate or (ii) by any governing body action or administrative action establish a demonstration project or pilot program regulating the operation of motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire, provided that such regulation or other governing body or administrative action is consistent with this title. Such ordinance or other governing body or administrative action may require persons offering motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire to be licensed, provided that on or after January 1, 2020, in the absence of any licensing ordinance, regulation, or other action, a person may offer motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire.

This item came before the Governing Body at its regular meeting on May 17, 2022, as informational in nature. At that time, City Staff was directed to conduct research into e-scooters and other related devices in response to specific inquiries and establish an internal team to identify a recommendation. Inquiries from the May 17 meeting and corresponding research are as follows:

1. Complaints of Existing Programs

- a. In coordination with the City of Manassas, the main complaint is parking, such as scooters blocking sidewalk or being abandoned. All complaints are forwarded to the dedicated Fleet Manager for action and resolution.
- b. Most complaints and concerns regarding e-scooters are parking issues, scooters left in areas with high pedestrian traffic, walkways, in front of doors, etc. Complaints regarding e-scooters driving on narrow, potentially crowded sidewalks and the danger presented to pedestrians have also been documented.
  - i. Attachment 2: <https://data.nbcstations.com/national/DC/scooters/mobile.html>
  - ii. Attachment 3: [https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be\\_story.html](https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be_story.html)
  - iii. Attachment 4: <https://georgetowner.com/articles/2020/01/27/e-scooters-to-be-corralled/>

2. Washington D.C. Regulations (restrictions on leaving on sidewalks)
  - a. "DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use"
  - b. Attachment 5: <https://ddot.dc.gov/release/dc-law-now-requires-riders-lock-shared-electric-scooters-bike-racks-scooter-corrals-or>
  - c. While the 'lock-to' requirement already applies to District-permitted e-Bikes, the new legislation requires riders of District-permitted electric scooters to park and use the equipped lock to tether the vehicle to the following infrastructure:
    - i. Bike racks
    - ii. In-street bicycle and scooter corrals
    - iii. Parking signposts
    - iv. Stop signs
  - d. District-permitted electric scooters and e-Bikes should not be locked to the following:
    - i. Bus shelters
    - ii. Private fences or gates
    - iii. Trees
    - iv. Capital Bikeshare docks
    - v. Garbage cans
3. City of Manassas Regulations (restrictions on leaving on sidewalks)
  - a. Scooters in the downtown area must be parked at four (4) specific parking areas where bike racks are available. Scooters can be left on sidewalk but should not obstruct access. The Fleet Manager is required to re-balance and reset the scooters daily. The Manassas City PD provided comments on the permit requirements and attended the pre-launch meeting with the vendor to make sure all their concerns would be addressed.
4. Studies on Scooter and Crash Safety
  - a. BIRD Scooters provides a monthly report to the City of Manassas including this data. Since the inception of the program, there have been zero reported crashes.
  - b. Upward trend in hospitalizations from micro mobility products (e-scooters included) from 2017-2020:
    - i. Attachment 6: see attached article.
    - ii. Attachment 7: Prevalent types of injury from e-scooter accidents.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8348701/>
5. Regulations on age/license requirements to operate an e-scooter
  - a. Virginia law (§ 46.2-908.1) states that "No person less than 14 years old shall drive any electric personal assistive mobility device, motorized skateboard or scooter, or class three electric power-assisted bicycle unless under the immediate supervision of a person who is at least 18 years old."
    - i. Attachment 8: <https://law.lis.virginia.gov/vacode/title46.2/chapter8/section46.2-908.1/#:~:text=No%20person%20less%20than%2014,at%20least%2018%20years%20old>
  - b. No license or permit is currently required to operate electric scooters under VA law
6. Abandoned Scooters and Clutter
  - a. The City of Manassas does not believe it has a clutter problem with scooters. The Vendor's Fleet Manager is responsible for the collection and proper placement of abandoned scooter within the City.
7. Parking Locations
  - a. Can be identified and regulated by the local government.
  - b. The City of Manassas has identified four (4) parking locations in its downtown as shown in Attachment 9.
8. Frequency of Vandalism

- a. The City of Manassas has not reported any instances of vandalism.
- 9. Types of Permits Required
  - a. In the City of Manassas, a City Business License, certificate of insurance, shared mobility permit, required fee, and right-of-way permit is required. A community engagement plan is also required.
    - i. The potential exists in Manassas Park to require a Conditional Use Permit on private land if there is a permanent location identified such as an office.
- 10. Burdens on Police and Fire
  - a. Concerns regarding an increased workload, enforcement, and volume of calls
    - i. See challenges below.
- 11. Crossing Route 28
  - a. There is the ability to create a “geofence” in specific areas where scooters are not to be operated. If desired, Route 28 can be one of those such areas.

City Staff formed a team including representatives from Community Development, Public Works, Police, Fire, and Parks and Recreation. Discussions focused on the benefits and challenges of considering a shared mobility device program and/or an ordinance regulating such devices in the City. The City of Manassas Program was discussed. Documents pertaining to the City of Manassas Program can be viewed in Attachments 9, 10, 11, and 12. Meetings were held, and the team has reached a consensus on moving forward.

Benefits discussed by the internal team include the provision of an alternative mode of transportation for residents (commuting, leisure, shopping, getting to Park Central, etc.), greater connectivity within the City and potentially with Manassas City, potential for discounted rates for low-income riders, a new data set for use in future funding applications and research (including user data, hours used, miles traveled, hours of operation, trip diagnostics, etc.), potential new revenue stream (from licensing, permits, and inspections), the ability to regulate and license a program as the City sees fit, and having a third-party with a dedicated Fleet Manager responsible for all aspects of the program including complaints and gathering abandoned devices on a daily basis.

The team also discussed challenges in detail pertaining to public safety, an increase in workload, and clutter. Specific items discussed by the team include the potential for fires at charging stations (in residential areas; particularly multi-family development), increase in inspections required for charging facilities, collisions, and accidents, increase in EMS calls, concerns regarding enforcement of future regulations (e.g., drinking/intoxicated while operating scooters, age of scooter users, etc.), and the potential for clutter and abandoned scooters.

After in-depth discussion and active participation by all team members, the City Team recommends an ordinance and fee structure be established to develop a shared mobility device program in the City. Administrative regulations will also be developed to supplement the ordinance to outline items such as designated parking locations on City property, total number of devices allowable, and data gathering and reporting requirements, etc.

Staff was advised by the City Attorney that prohibiting shared mobility devices altogether is not an option for consideration. As such, the initial pilot program as discussed does not seem appropriate as it cannot alter the decision to allow or not allow it. Instead a pilot contract with a vendor maybe appropriate. Staff will also explore ability to issue violations and/or fines to a specific vendor for noncompliance with the ordinance and/or administrative regulations within a specific time (e.g., 48 hours). In the event the City must gather abandoned devices staff will explore fees (staff time, fine, holding fee, etc.) to be charged to the vendor that must be paid to retrieve the device.

A draft ordinance, fee structure, and additional information outlining the proposed pilot program (application, permit/license program, and administrative regulations) will return to the Governing Body at a future date to be determined. A formal Public Hearing will be advertised and scheduled for the purposes of amending the fee schedule and City Code should the Governing Body support the program as presented.

Alternatively, a program can be developed solely through the City Manager's office with only administrative regulations. This would not require a Public Hearing. However, these administrative regulations will not be able to support necessary fees and will lack enforceability regarding seeking violations and/or fines for noncompliance.

<b>FINANCIAL IMPACT</b> <b>Total: \$0.00</b>	Budgeted:	YES _____ NO _____ N/A
	Amount Budgeted:	\$0.00
	Amount Spent:	\$0.00
	Amount Requested:	\$0.00
	Budget Line Item:	N/A

**STAFF RECOMMENDATION:** That the Governing Body authorize staff to develop a draft ordinance, fee structure, application, permit/licensure program, and administrative regulations to support a shared mobility device program pursuant to Virginia Code Section 46.2-1315 for consideration at a future meeting (date to be determined) and revisit the program 12 months after the program officially commences.

<b>CITY MANAGER APPROVAL:</b> Required: <input checked="" type="checkbox"/> Not Required: _____	<u>Laszlo A. Palko</u> Laszlo A. Palko, City Manager
<b>CITY ATTORNEY APPROVAL:</b> Required: _____ Not Required: _____	_____ Dean H. Crowhurst

**ATTACHMENTS:**

- 1) Virginia General Assembly Legislation – 2019 Session, Chapter 780
- 2) E-Scooter Data in Washington, D.C., NBC Stations
- 3) D.C. Council Approves New E-Scooter Regulations, Washington Post
- 4) E-Scooters to be Corralled, The Georgetown
- 5) DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use, District Department of Transportation
- 6) Injuries Using E-Scooters, E-Bikes and Hoverboards Jump 70% During the Past Four Years, United States Consumer Product Safety Commission
- 7) Electric Scooter-Related Injuries: A New Epidemic in Orthopedics, National Library of Medicine
- 8) Code of Virginia § 46.2-908.1. Electric personal assistive mobility devices, electrically powered toy vehicles, electric power-assisted bicycles, and motorized skateboards or scooters.
- 9) City of Manassas Ordinance #O-2020-10
- 10) Manassas Shared Mobility Administrative Rules and Regulations
- 11) Manassas Shared Mobility Permit Application
- 12) Downtown Manassas Parking Map

# VIRGINIA ACTS OF ASSEMBLY -- 2019 SESSION

## CHAPTER 780

*An Act to amend and reenact §§ 46.2-100, 46.2-800, 46.2-849, 46.2-903, 46.2-904, 46.2-905, 46.2-908.1, 46.2-1015, 46.2-1041, and 46.2-1081 of the Code of Virginia and to amend the Code of Virginia by adding in Chapter 13 of Title 46.2 a section numbered 46.2-1315, relating to motorized skateboards or scooters; operation; local authority.*

[H 2752]

Approved March 22, 2019

### **Be it enacted by the General Assembly of Virginia:**

**1. That §§ 46.2-100, 46.2-800, 46.2-849, 46.2-903, 46.2-904, 46.2-905, 46.2-908.1, 46.2-1015, 46.2-1041, and 46.2-1081 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding in Chapter 13 of Title 46.2 a section numbered 46.2-1315 as follows:**

#### **§ 46.2-100. Definitions.**

As used in this title, unless the context requires a different meaning:

"All-terrain vehicle" means a motor vehicle having three or more wheels that is powered by a motor and is manufactured for off-highway use. "All-terrain vehicle" does not include four-wheeled vehicles commonly known as "go-carts" that have low centers of gravity and are typically used in racing on relatively level surfaces, nor does the term include any riding lawn mower.

"Antique motor vehicle" means every motor vehicle, as defined in this section, which was actually manufactured or designated by the manufacturer as a model manufactured in a calendar year not less than 25 years prior to January 1 of each calendar year and is owned solely as a collector's item.

"Antique trailer" means every trailer or semitrailer, as defined in this section, that was actually manufactured or designated by the manufacturer as a model manufactured in a calendar year not less than 25 years prior to January 1 of each calendar year and is owned solely as a collector's item.

"Autocycle" means a three-wheeled motor vehicle that has a steering wheel and seating that does not require the operator to straddle or sit astride and is manufactured to comply with federal safety requirements for motorcycles. Except as otherwise provided, an autocycle shall not be deemed to be a motorcycle.

"Automobile transporter" means any tractor truck, lowboy, vehicle, or combination, including vehicles or combinations that transport motor vehicles on their power unit, designed and used exclusively for the transportation of motor vehicles or used to transport cargo or general freight on a backhaul pursuant to the provisions of 49 U.S.C. § 31111(a)(1).

"Bicycle" means a device propelled solely by human power, upon which a person may ride either on or astride a regular seat attached thereto, having two or more wheels in tandem, including children's bicycles, except a toy vehicle intended for use by young children. For purposes of Chapter 8 (§ 46.2-800 et seq.), a bicycle shall be a vehicle while operated on the highway.

"Bicycle lane" means that portion of a roadway designated by signs and/or pavement markings for the preferential use of bicycles, electric power-assisted bicycles, *motorized skateboards or scooters*, and mopeds.

"Business district" means the territory contiguous to a highway where 75 percent or more of the property contiguous to a highway, on either side of the highway, for a distance of 300 feet or more along the highway, is occupied by land and buildings actually in use for business purposes.

"Camping trailer" means every vehicle that has collapsible sides and contains sleeping quarters but may or may not contain bathing and cooking facilities and is designed to be drawn by a motor vehicle.

"Cancel" or "cancellation" means that the document or privilege cancelled has been annulled or terminated because of some error, defect, or ineligibility, but the cancellation is without prejudice and reapplication may be made at any time after cancellation.

"Chauffeur" means every person employed for the principal purpose of driving a motor vehicle and every person who drives a motor vehicle while in use as a public or common carrier of persons or property.

"Circular intersection" means an intersection that has an island, generally circular in design, located in the center of the intersection, where all vehicles pass to the right of the island. Circular intersections include roundabouts, rotaries, and traffic circles.

"Commission" means the State Corporation Commission.

"Commissioner" means the Commissioner of the Department of Motor Vehicles of the Commonwealth.

"Converted electric vehicle" means any motor vehicle, other than a motorcycle or autocycle, that has been modified subsequent to its manufacture to replace an internal combustion engine with an electric

propulsion system. Such vehicles shall retain their original vehicle identification number, line-make, and model year. A converted electric vehicle shall not be deemed a "reconstructed vehicle" as defined in this section unless it has been materially altered from its original construction by the removal, addition, or substitution of new or used essential parts other than those required for the conversion to electric propulsion.

"Crosswalk" means that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway; or any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.

"Decal" means a device to be attached to a license plate that validates the license plate for a predetermined registration period.

"Department" means the Department of Motor Vehicles of the Commonwealth.

"Disabled parking license plate" means a license plate that displays the international symbol of access in the same size as the numbers and letters on the plate and in a color that contrasts with the background.

"Disabled veteran" means a veteran who (i) has either lost, or lost the use of, a leg, arm, or hand; (ii) is blind; or (iii) is permanently and totally disabled as certified by the U.S. Department of Veterans Affairs. A veteran shall be considered blind if he has a permanent impairment of both eyes to the following extent: central visual acuity of 20/200 or less in the better eye, with corrective lenses, or central visual acuity of more than 20/200, if there is a field defect in which the peripheral field has contracted to such an extent that the widest diameter of visual field subtends an angular distance no greater than 20 degrees in the better eye.

"Driver's license" means any license, including a commercial driver's license as defined in the Virginia Commercial Driver's License Act (§ 46.2-341.1 et seq.), issued under the laws of the Commonwealth authorizing the operation of a motor vehicle.

"Electric personal assistive mobility device" means a self-balancing two-nontandem-wheeled device that is designed to transport only one person and powered by an electric propulsion system that limits the device's maximum speed to 15 miles per hour or less. For purposes of Chapter 8 (§ 46.2-800 et seq.), an electric personal assistive mobility device shall be a vehicle when operated on a highway.

"Electric personal delivery device" means an electrically powered device that (i) is operated on sidewalks, shared-use paths, and crosswalks and intended primarily to transport property; (ii) weighs less than 50 pounds, excluding cargo; (iii) has a maximum speed of 10 miles per hour; and (iv) is equipped with technology to allow for operation of the device with or without the active control or monitoring of a natural person.

"Electric personal delivery device operator" means an entity or its agent who exercises direct physical control or monitoring over the navigation system and operation of an electric personal delivery device. For the purposes of this definition, "agent" means a person not less than 16 years of age charged by an entity with the responsibility of navigating and operating an electric personal delivery device. "Electric personal delivery device operator" does not include (i) an entity or person who requests the services of an electric personal delivery device to transport property or (ii) an entity or person who only arranges for and dispatches the requested services of an electric personal delivery device.

"Electric power-assisted bicycle" means a vehicle that travels on not more than three wheels in contact with the ground and is equipped with (i) pedals that allow propulsion by human power and (ii) an electric motor with an input of no more than 1,000 watts that reduces the pedal effort required of the rider *and ceases to provide assistance when the bicycle reaches a speed of no more than 20 miles per hour*. For the purposes of Chapter 8 (§ 46.2-800 et seq.), an electric power-assisted bicycle shall be a vehicle when operated on a highway.

"Essential parts" means all integral parts and body parts, the removal, alteration, or substitution of which will tend to conceal the identity of a vehicle.

"Farm tractor" means every motor vehicle designed and used as a farm, agricultural, or horticultural implement for drawing plows, mowing machines, and other farm, agricultural, or horticultural machinery and implements, including self-propelled mowers designed and used for mowing lawns.

"Farm utility vehicle" means a vehicle that is powered by a motor and is designed for off-road use and is used as a farm, agricultural, or horticultural service vehicle, generally having four or more wheels, bench seating for the operator and a passenger, a steering wheel for control, and a cargo bed. "Farm utility vehicle" does not include pickup or panel trucks, golf carts, low-speed vehicles, or riding lawn mowers.

"Federal safety requirements" means applicable provisions of 49 U.S.C. § 30101 et seq. and all administrative regulations and policies adopted pursuant thereto.

"Financial responsibility" means the ability to respond in damages for liability thereafter incurred arising out of the ownership, maintenance, use, or operation of a motor vehicle, in the amounts provided for in § 46.2-472.

"Foreign market vehicle" means any motor vehicle originally manufactured outside the United States,

which was not manufactured in accordance with 49 U.S.C. § 30101 et seq. and the policies and regulations adopted pursuant to that Act, and for which a Virginia title or registration is sought.

"Foreign vehicle" means every motor vehicle, trailer, or semitrailer that is brought into the Commonwealth otherwise than in the ordinary course of business by or through a manufacturer or dealer and that has not been registered in the Commonwealth.

"Golf cart" means a self-propelled vehicle that is designed to transport persons playing golf and their equipment on a golf course.

"Governing body" means the board of supervisors of a county, council of a city, or council of a town, as context may require.

"Gross weight" means the aggregate weight of a vehicle or combination of vehicles and the load thereon.

"Highway" means the entire width between the boundary lines of every way or place open to the use of the public for purposes of vehicular travel in the Commonwealth, including the streets and alleys, and, for law-enforcement purposes, (i) the entire width between the boundary lines of all private roads or private streets that have been specifically designated "highways" by an ordinance adopted by the governing body of the county, city, or town in which such private roads or streets are located and (ii) the entire width between the boundary lines of every way or place used for purposes of vehicular travel on any property owned, leased, or controlled by the United States government and located in the Commonwealth.

"Intersection" means (i) the area embraced within the prolongation or connection of the lateral curblines or, if none, then the lateral boundary lines of the roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways joining at any other angle may come in conflict; (ii) where a highway includes two roadways 30 feet or more apart, then every crossing of each roadway of such divided highway by an intersecting highway shall be regarded as a separate intersection, in the event such intersecting highway also includes two roadways 30 feet or more apart, then every crossing of two roadways of such highways shall be regarded as a separate intersection; or (iii) for purposes only of authorizing installation of traffic-control devices, every crossing of a highway or street at grade by a pedestrian crosswalk.

"Lane-use control signal" means a signal face displaying indications to permit or prohibit the use of specific lanes of a roadway or to indicate the impending prohibition of such use.

"Law-enforcement officer" means any officer authorized to direct or regulate traffic or to make arrests for violations of this title or local ordinances authorized by law. For the purposes of access to law-enforcement databases regarding motor vehicle registration and ownership only, "law-enforcement officer" also includes city and county commissioners of the revenue and treasurers, together with their duly designated deputies and employees, when such officials are actually engaged in the enforcement of §§ 46.2-752, 46.2-753, and 46.2-754 and local ordinances enacted thereunder.

"License plate" means a device containing letters, numerals, or a combination of both, attached to a motor vehicle, trailer, or semitrailer to indicate that the vehicle is properly registered with the Department.

"Light" means a device for producing illumination or the illumination produced by the device.

"Low-speed vehicle" means any four-wheeled electrically powered or gas-powered vehicle, except a motor vehicle or low-speed vehicle that is used exclusively for agricultural or horticultural purposes or a golf cart, whose maximum speed is greater than 20 miles per hour but not greater than 25 miles per hour and is manufactured to comply with safety standards contained in Title 49 of the Code of Federal Regulations, § 571.500.

"Manufactured home" means a structure subject to federal regulation, transportable in one or more sections, which in the traveling mode is eight body feet or more in width or 40 body feet or more in length, or, when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein. "Manufactured home" does not include a park model recreational vehicle, which is a vehicle that is (i) designed and marketed as temporary living quarters for recreational, camping, travel, or seasonal use; (ii) not permanently affixed to real property for use as a permanent dwelling; (iii) built on a single chassis mounted on wheels; and (iv) certified by the manufacturer as complying with the American National Standards Institute (ANSI) A119.5 Park Model Recreational Vehicle Standard.

"Military surplus motor vehicle" means a multipurpose or tactical vehicle that was manufactured by or under the direction of the United States Armed Forces for off-road use and subsequently authorized for sale to civilians. "Military surplus motor vehicle" does not include specialized mobile equipment as defined in § 46.2-700, trailers, or semitrailers.

"Moped" means every vehicle that travels on not more than three wheels in contact with the ground that (i) has a seat that is no less than 24 inches in height, measured from the middle of the seat perpendicular to the ground; (ii) has a gasoline, electric, or hybrid motor that (a) displaces 50 cubic centimeters or less or (b) has an input of 1500 watts or less; (iii) is power-driven, with or without pedals that allow propulsion by human power; and (iv) is not operated at speeds in excess of 35 miles

per hour. *"Moped" does not include a motorized skateboard or scooter.* For purposes of this title, a moped shall be a motorcycle when operated at speeds in excess of 35 miles per hour. For purposes of Chapter 8 (§ 46.2-800 et seq.), a moped shall be a vehicle while operated on a highway.

"Motor-driven cycle" means every motorcycle that has a gasoline engine that (i) displaces less than 150 cubic centimeters; (ii) has a seat less than 24 inches in height, measured from the middle of the seat perpendicular to the ground; and (iii) has no manufacturer-issued vehicle identification number.

"Motor home" means every private motor vehicle with a normal seating capacity of not more than 10 persons, including the driver, designed primarily for use as living quarters for human beings.

"Motor vehicle" means every vehicle as defined in this section that is self-propelled or designed for self-propulsion except as otherwise provided in this title. Any structure designed, used, or maintained primarily to be loaded on or affixed to a motor vehicle to provide a mobile dwelling, sleeping place, office, or commercial space shall be considered a part of a motor vehicle. Except as otherwise provided, for the purposes of this title, any device herein defined as a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, *motorized skateboard or scooter*, or moped shall be deemed not to be a motor vehicle.

"Motorcycle" means every motor vehicle designed to travel on not more than three wheels in contact with the ground and is capable of traveling at speeds in excess of 35 miles per hour. "Motorcycle" does not include any "autocycle," "electric personal assistive mobility device," "electric power-assisted bicycle," "farm tractor," "golf cart," "moped," "motorized skateboard or ~~foot-scooter scooter~~," "utility vehicle," or "wheelchair or wheelchair conveyance" as defined in this section.

"Motorized skateboard or ~~foot-scooter scooter~~" means every vehicle, regardless of the number of its wheels in contact with the ground, that (i) ~~has no seat, but is designed to be stood upon by the operator is designed to allow an operator to sit or stand,~~ (ii) has no manufacturer-issued vehicle identification number, and (iii) is powered in whole or in part by an electric motor having an input of no more than 1,000 watts or a gasoline engine that displaces less than 36 cubic centimeters, (iv) weighs less than 100 pounds, and (v) has a speed of no more than 20 miles per hour on a paved level surface when powered solely by the electric motor. "Motorized skateboard or ~~foot-scooter scooter~~" includes vehicles with or without handlebars but does not include "electric personal assistive mobility devices."

"Nonresident" means every person who is not domiciled in the Commonwealth, except: (i) any foreign corporation that is authorized to do business in the Commonwealth by the State Corporation Commission shall be a resident of the Commonwealth for the purpose of this title; in the case of corporations incorporated in the Commonwealth but doing business outside the Commonwealth, only such principal place of business or branches located within the Commonwealth shall be dealt with as residents of the Commonwealth; (ii) a person who becomes engaged in a gainful occupation in the Commonwealth for a period exceeding 60 days shall be a resident for the purposes of this title except for the purposes of Chapter 3 (§ 46.2-300 et seq.); (iii) a person, other than (a) a nonresident student as defined in this section or (b) a person who is serving a full-time church service or proselyting mission of not more than 36 months and who is not gainfully employed, who has actually resided in the Commonwealth for a period of six months, whether employed or not, or who has registered a motor vehicle, listing an address in the Commonwealth in the application for registration, shall be deemed a resident for the purposes of this title, except for the purposes of the Virginia Commercial Driver's License Act (§ 46.2-341.1 et seq.).

"Nonresident student" means every nonresident person who is enrolled as a full-time student in an accredited institution of learning in the Commonwealth and who is not gainfully employed.

"Off-road motorcycle" means every motorcycle designed exclusively for off-road use by an individual rider with not more than two wheels in contact with the ground. Except as otherwise provided in this chapter, for the purposes of this chapter off-road motorcycles shall be deemed to be "motorcycles."

"Operation or use for rent or for hire, for the transportation of passengers, or as a property carrier for compensation," and "business of transporting persons or property" mean any owner or operator of any motor vehicle, trailer, or semitrailer operating over the highways in the Commonwealth who accepts or receives compensation for the service, directly or indirectly; but these terms do not mean a "truck lessor" as defined in this section and do not include persons or businesses that receive compensation for delivering a product that they themselves sell or produce, where a separate charge is made for delivery of the product or the cost of delivery is included in the sale price of the product, but where the person or business does not derive all or a substantial portion of its income from the transportation of persons or property except as part of a sales transaction.

"Operator" or "driver" means every person who either (i) drives or is in actual physical control of a motor vehicle on a highway or (ii) is exercising control over or steering a vehicle being towed by a motor vehicle.

"Owner" means a person who holds the legal title to a vehicle; however, if a vehicle is the subject of an agreement for its conditional sale or lease with the right of purchase on performance of the conditions stated in the agreement and with an immediate right of possession vested in the conditional vendee or lessee or if a mortgagor of a vehicle is entitled to possession, then the conditional vendee or lessee or mortgagor shall be the owner for the purpose of this title. In all such instances when the rent



paid by the lessee includes charges for services of any nature or when the lease does not provide that title shall pass to the lessee on payment of the rent stipulated, the lessor shall be regarded as the owner of the vehicle, and the vehicle shall be subject to such requirements of this title as are applicable to vehicles operated for compensation. A "truck lessor" as defined in this section shall be regarded as the owner, and his vehicles shall be subject to such requirements of this title as are applicable to vehicles of private carriers.

"Passenger car" means every motor vehicle other than a motorcycle or auticycle designed and used primarily for the transportation of no more than 10 persons, including the driver.

"Payment device" means any credit card as defined in 15 U.S.C. § 1602 (k) or any "accepted card or other means of access" set forth in 15 U.S.C. § 1693a (1). For the purposes of this title, this definition shall also include a card that enables a person to pay for transactions through the use of value stored on the card itself.

"Pickup or panel truck" means (i) every motor vehicle designed for the transportation of property and having a registered gross weight of 7,500 pounds or less or (ii) every motor vehicle registered for personal use, designed to transport property on its own structure independent of any other vehicle, and having a registered gross weight in excess of 7,500 pounds but not in excess of 10,000 pounds.

"Private road or driveway" means every way in private ownership and used for vehicular travel by the owner and those having express or implied permission from the owner, but not by other persons.

"Reconstructed vehicle" means every vehicle of a type required to be registered under this title materially altered from its original construction by the removal, addition, or substitution of new or used essential parts. Such vehicles, at the discretion of the Department, shall retain their original vehicle identification number, line-make, and model year. Except as otherwise provided in this title, this definition shall not include a "converted electric vehicle" as defined in this section.

"Replica vehicle" means every vehicle of a type required to be registered under this title not fully constructed by a licensed manufacturer but either constructed or assembled from components. Such components may be from a single vehicle, multiple vehicles, a kit, parts, or fabricated components. The kit may be made up of "major components" as defined in § 46.2-1600, a full body, or a full chassis, or a combination of these parts. The vehicle shall resemble a vehicle of distinctive name, line-make, model, or type as produced by a licensed manufacturer or manufacturer no longer in business and is not a reconstructed or specially constructed vehicle as herein defined.

"Residence district" means the territory contiguous to a highway, not comprising a business district, where 75 percent or more of the property abutting such highway, on either side of the highway, for a distance of 300 feet or more along the highway consists of land improved for dwelling purposes, or is occupied by dwellings, or consists of land or buildings in use for business purposes, or consists of territory zoned residential or territory in residential subdivisions created under Chapter 22 (§ 15.2-2200 et seq.) of Title 15.2.

"Revoke" or "revocation" means that the document or privilege revoked is not subject to renewal or restoration except through reapplication after the expiration of the period of revocation.

"Roadway" means that portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the shoulder. A highway may include two or more roadways if divided by a physical barrier or barriers or an unpaved area.

"Safety zone" means the area officially set apart within a roadway for the exclusive use of pedestrians and that is protected or is so marked or indicated by plainly visible signs.

"School bus" means any motor vehicle, other than a station wagon, automobile, truck, or commercial bus, which is: (i) designed and used primarily for the transportation of pupils to and from public, private or religious schools, or used for the transportation of the mentally or physically handicapped to and from a sheltered workshop; (ii) painted yellow and bears the words "School Bus" in black letters of a specified size on front and rear; and (iii) is equipped with warning devices prescribed in § 46.2-1090. A yellow school bus may have a white roof provided such vehicle is painted in accordance with regulations promulgated by the Department of Education.

"Semitrailer" means every vehicle of the trailer type so designed and used in conjunction with a motor vehicle that some part of its own weight and that of its own load rests on or is carried by another vehicle.

"Shared-use path" means a bikeway that is physically separated from motorized vehicular traffic by an open space or barrier and is located either within the highway right-of-way or within a separate right-of-way. Shared-use paths may also be used by pedestrians, skaters, users of wheel chairs or wheel chair conveyances, joggers, and other nonmotorized users and electric personal delivery devices.

"Shoulder" means that part of a highway between the portion regularly traveled by vehicular traffic and the lateral curbline or ditch.

"Sidewalk" means the portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for use by pedestrians.

"Snowmobile" means a self-propelled vehicle designed to travel on snow or ice, steered by skis or runners, and supported in whole or in part by one or more skis, belts, or cleats.

"Special construction and forestry equipment" means any vehicle which is designed primarily for

highway construction, highway maintenance, earth moving, timber harvesting or other construction or forestry work and which is not designed for the transportation of persons or property on a public highway.

"Specially constructed vehicle" means any vehicle that was not originally constructed under a distinctive name, make, model, or type by a generally recognized manufacturer of vehicles and not a reconstructed vehicle as herein defined.

"Stinger-steered automobile or watercraft transporter" means an automobile or watercraft transporter configured as a semitrailer combination wherein the fifth wheel is located on a drop frame behind and below the rearmost axle of the power unit.

"Superintendent" means the Superintendent of the Department of State Police of the Commonwealth.

"Suspend" or "suspension" means that the document or privilege suspended has been temporarily withdrawn, but may be reinstated following the period of suspension unless it has expired prior to the end of the period of suspension.

"Tow truck" means a motor vehicle for hire (i) designed to lift, pull, or carry another vehicle by means of a hoist or other mechanical apparatus and (ii) having a manufacturer's gross vehicle weight rating of at least 10,000 pounds. "Tow truck" also includes vehicles designed with a ramp on wheels and a hydraulic lift with a capacity to haul or tow another vehicle, commonly referred to as "rollback." "Tow truck" does not include any "automobile or watercraft transporter," "stinger-steered automobile or watercraft transporter," or "tractor truck" as those terms are defined in this section.

"Towing and recovery operator" means a person engaged in the business of (i) removing disabled vehicles, parts of vehicles, their cargoes, and other objects to facilities for repair or safekeeping and (ii) restoring to the highway or other location where they either can be operated or removed to other locations for repair or safekeeping vehicles that have come to rest in places where they cannot be operated.

"Toy vehicle" means any motorized or propellant-driven device that has no manufacturer-issued vehicle identification number that is designed or used to carry any person or persons, on any number of wheels, bearings, glides, blades, runners, or a cushion of air. "Toy vehicle" does not include electric personal assistive mobility devices, electric power-assisted bicycles, mopeds, *motorized skateboards or scooters*, or motorcycles, nor does it include any nonmotorized or nonpropellant-driven devices such as bicycles, roller skates, or skateboards.

"Tractor truck" means every motor vehicle designed and used primarily for drawing other vehicles and not so constructed as to carry a load other than a part of the load and weight of the vehicle attached thereto.

"Traffic control device" means a sign, signal, marking, or other device used to regulate, warn, or guide traffic placed on, over, or adjacent to a street, highway, private road open to public travel, pedestrian facility, or shared-use path by authority of a public agency or official having jurisdiction, or in the case of a private road open to public travel, by authority of the private owner or private official having jurisdiction.

"Traffic infraction" means a violation of law punishable as provided in § 46.2-113, which is neither a felony nor a misdemeanor.

"Traffic lane" or "lane" means that portion of a roadway designed or designated to accommodate the forward movement of a single line of vehicles.

"Trailer" means every vehicle without motive power designed for carrying property or passengers wholly on its own structure and for being drawn by a motor vehicle, including manufactured homes.

"Truck" means every motor vehicle designed to transport property on its own structure independent of any other vehicle and having a registered gross weight in excess of 7,500 pounds. "Truck" does not include any pickup or panel truck.

"Truck lessor" means a person who holds the legal title to any motor vehicle, trailer, or semitrailer that is the subject of a bona fide written lease for a term of one year or more to another person, provided that: (i) neither the lessor nor the lessee is a common carrier by motor vehicle or restricted common carrier by motor vehicle or contract carrier by motor vehicle as defined in § 46.2-2000; (ii) the leased motor vehicle, trailer, or semitrailer is used exclusively for the transportation of property of the lessee; (iii) the lessor is not employed in any capacity by the lessee; (iv) the operator of the leased motor vehicle is a bona fide employee of the lessee and is not employed in any capacity by the lessor; and (v) a true copy of the lease, verified by affidavit of the lessor, is filed with the Commissioner.

"Utility vehicle" means a motor vehicle that is (i) designed for off-road use, (ii) powered by a motor, and (iii) used for general maintenance, security, agricultural, or horticultural purposes. "Utility vehicle" does not include riding lawn mowers.

"Vehicle" means every device in, on or by which any person or property is or may be transported or drawn on a highway, except electric personal delivery devices and devices moved by human power or used exclusively on stationary rails or tracks. For the purposes of Chapter 8 (§ 46.2-800 et seq.), bicycles, electric personal assistive mobility devices, electric power-assisted bicycles, *motorized skateboards or scooters*, and mopeds shall be vehicles while operated on a highway.

"Watercraft transporter" means any tractor truck, lowboy, vehicle, or combination, including vehicles

or combinations that transport watercraft on their power unit, designed and used exclusively for the transportation of watercraft.

"Wheel chair or wheel chair conveyance" means a chair or seat equipped with wheels, typically used to provide mobility for persons who, by reason of physical disability, are otherwise unable to move about as pedestrians. "Wheel chair or wheel chair conveyance" includes both three-wheeled and four-wheeled devices. So long as it is operated only as provided in § 46.2-677, a self-propelled wheel chair or self-propelled wheel chair conveyance shall not be considered a motor vehicle.

**§ 46.2-800. Riding bicycles, electric personal assistive mobility devices, electric power-assisted bicycles, mopeds, or motorized skateboards or scooters; riding or driving animals.**

Every person riding a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, moped, *motorized skateboard or scooter*, or ~~an~~ animal or driving an animal on a highway shall be subject to the provisions of this chapter and shall have all of the rights and duties applicable to the driver of a vehicle, unless the context of the provision clearly indicates otherwise.

The provisions of subsections A and C of § 46.2-920 applicable to operation of emergency vehicles under emergency conditions shall also apply, mutatis mutandis, to bicycles, electric personal assistive mobility devices, electric power-assisted bicycles, ~~and~~ mopeds, *and motorized skateboards or scooters* operated under similar emergency conditions by law-enforcement officers.

**§ 46.2-849. How signals given.**

A. Signals required by § 46.2-848 shall be given by means of the hand and arm or by some mechanical or electrical device approved by the Superintendent, in the manner specified in this section. Whenever the signal is given by means of the hand and arm, the driver shall indicate his intention to start, stop, turn, or partly turn by extending the hand and arm beyond the left side of the vehicle in the manner following:

1. For left turn or to pull to the left, the arm shall be extended in a horizontal position straight from and level with the shoulder;
2. For right turn or to pull to the right, the arm shall be extended upward;
3. For slowing down or stopping, the arm shall be extended downward.

B. Wherever the lawful speed is more than 35 miles per hour, such signals shall be given continuously for a distance of at least 100 feet, and in all other cases at least 50 feet, before slowing down, stopping, turning, or partly turning.

C. A person riding a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, ~~or~~ moped, *or motorized skateboard or scooter* shall signal his intention to stop or turn. Such signals, however, need not be given continuously if both hands are needed in the control or operation of the bicycle, electric personal assistive mobility device, electric power-assisted bicycle, ~~or~~ moped, *or motorized skateboard or scooter*.

D. Notwithstanding the foregoing provisions of this section, a person operating a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, ~~or~~ moped, *or motorized skateboard or scooter* may signal a right turn or pull to the right by extending the right hand and arm in a horizontal position straight from and level with the shoulder beyond the right side of the bicycle, electric personal assistive mobility device, electric power-assisted bicycle, ~~or~~ moped, *or motorized skateboard or scooter* and may signal slowing down or stopping by extending the right arm downward.

**§ 46.2-903. Riding or driving vehicles on sidewalks; exceptions.**

No person shall ride or drive any vehicle other than (i) an emergency vehicle, as defined in § 46.2-920, (ii) a vehicle engaged in snow or ice removal and control operations, (iii) a wheel chair or wheel chair conveyance, whether self-propelled or otherwise, (iv) a bicycle, (v) an electric personal assistive mobility device, ~~or~~ (vi) an electric power-assisted bicycle, *or (vii) unless otherwise prohibited by ordinance, a motorized skateboard or scooter* on the sidewalks of any county, city, or town of the Commonwealth.

**§ 46.2-904. Use of roller skates and skateboards on sidewalks and shared-use paths; operation of bicycles and certain motorized and electric items and devices on sidewalks, crosswalks, and shared-use paths; local ordinances.**

The governing body of any county, city, or town may by ordinance prohibit the use of roller skates, skateboards, and electric personal delivery devices and/or the riding of bicycles, electric personal assistive mobility devices, motorized skateboards or ~~foot-scooters~~ *scooters*, motor-driven cycles, or electric power-assisted bicycles on designated sidewalks or crosswalks, including those of any church, school, recreational facility, or any business property open to the public where such activity is prohibited. Signs indicating such prohibition shall be ~~conspicuously~~ posted in general areas where use of roller skates, skateboards, and electric personal delivery devices, and/or bicycle, electric personal assistive mobility devices, motorized skateboards or ~~foot-scooters~~ *scooters*, motor-driven cycles, or electric power-assisted bicycle riding is prohibited. Unless otherwise prohibited, electric personal delivery devices may be operated on the sidewalks and shared-use paths and across the roadway on a crosswalk of any locality of the Commonwealth.

A person riding a bicycle, electric personal assistive mobility device, motorized skateboard or ~~foot-scooter~~ *scooter*, motor-driven cycle, or electric power-assisted bicycle on a sidewalk or shared-use

path or across a roadway on a crosswalk shall yield the right-of-way to any pedestrian and shall give an audible signal before overtaking and passing any pedestrian. An electric personal delivery device operated on a sidewalk or shared-use path or across a roadway on a crosswalk shall yield the right-of-way to any pedestrian.

No person shall ride a bicycle, electric personal assistive mobility device, motorized skateboard or ~~foot-scooter scooter~~, motor-driven cycle, or electric power-assisted bicycle or operate an electric personal delivery device on a sidewalk, or across a roadway on a crosswalk, where such use of bicycles, electric personal assistive mobility devices, electric personal delivery devices, motorized skateboards or ~~foot-scooters scooters~~, motor-driven cycles, or electric power-assisted bicycles is prohibited by official traffic control devices. *No person shall park a bicycle, electric power-assisted bicycle, or motorized skateboard or scooter in a manner that impedes the normal movement of pedestrian or other traffic or where such parking is prohibited by official traffic control devices.*

A person riding a bicycle, electric personal assistive mobility device, motorized skateboard or ~~foot-scooter scooter~~, motor-driven cycle, or electric power-assisted bicycle on a sidewalk or shared-use path or across a roadway on a crosswalk shall have all the rights and duties of a pedestrian under the same circumstances. An electric personal delivery device operated on a sidewalk or shared-use path or across a roadway on a crosswalk shall have all the rights and duties of a pedestrian under the same circumstances.

A violation of any ordinance adopted pursuant to this section *or any provision of this section* shall be punishable by a civil penalty of not more than \$50.

**§ 46.2-905. Riding bicycles, electric personal assistive mobility devices, electric power-assisted bicycles, motorized skateboards or scooters, and mopeds on roadways and bicycle paths.**

Any person operating a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, *motorized skateboard or scooter*, or moped on a roadway at less than the normal speed of traffic at the time and place under conditions then existing shall ride as close as safely practicable to the right curb or edge of the roadway, except under any of the following circumstances:

1. When overtaking and passing another vehicle proceeding in the same direction;
2. When preparing for a left turn at an intersection or into a private road or driveway;
3. When reasonably necessary to avoid conditions including, but not limited to, fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards, or substandard width lanes that make it unsafe to continue along the right curb or edge;
4. When avoiding riding in a lane that must turn or diverge to the right; and
5. When riding upon a one-way road or highway, a person may also ride as near the left-hand curb or edge of such roadway as safely practicable.

For purposes of this section, a "substandard width lane" is a lane too narrow for a bicycle, electric personal assistive mobility device, electric power-assisted bicycle, motorized skateboard or ~~foot-scooter scooter~~, or moped and another vehicle to pass safely side by side within the lane.

Persons riding bicycles, electric personal assistive mobility devices, ~~or~~ electric power-assisted bicycles, *or motorized skateboards or scooters* on a highway shall not ride more than two abreast. Persons riding two abreast shall not impede the normal and reasonable movement of traffic, shall move into a single file formation as quickly as is practicable when being overtaken from the rear by a faster moving vehicle, and, on a laned roadway, shall ride in a single lane.

Notwithstanding any other provision of law to the contrary, the Department of Conservation and Recreation shall permit the operation of electric personal assistive mobility devices on any bicycle path or trail designated by the Department for such use.

**§ 46.2-908.1. Electric personal assistive mobility devices, electric personal delivery devices, electrically powered toy vehicles, electric power-assisted bicycles, and motorized skateboards or scooters.**

All electric personal assistive mobility devices, electric personal delivery devices, electrically powered toy vehicles, and electric power-assisted bicycles shall be equipped with spill-proof, sealed, or gelled electrolyte batteries. No person shall at any time or at any location *operate* (i) ~~drive~~ an electric personal assistive mobility device or an electric power-assisted bicycle *at a speed* faster than 25 miles per hour ~~or~~, (ii) ~~operate~~ a motorized skateboard or scooter *at a speed* faster than 20 miles per hour, or (iii) an electric personal delivery device at a speed faster than 10 miles per hour. *No person shall operate a skateboard or scooter that would otherwise meet the definition of a motorized skateboard or scooter but is capable of speeds greater than 20 miles per hour at a speed greater than 20 miles per hour.* No person less than 14 years old shall drive any electric personal assistive mobility device, motorized skateboard or ~~foot-scooter scooter~~, or electric power-assisted bicycle unless under the immediate supervision of a person who is at least 18 years old.

An electric personal assistive mobility device ~~or motorized skateboard or foot-scooter~~ may be operated on any highway with a maximum speed limit of 25 miles per hour or less. An electric personal assistive mobility device shall only operate on any highway authorized by this section if a sidewalk is not provided along such highway or if operation of the electric personal assistive mobility device on such sidewalk is prohibited pursuant to § 46.2-904. Nothing in this section shall prohibit the operation of

an electric personal assistive mobility device, electric personal delivery device, or motorized skateboard or ~~foot scooter~~ *scooter* in the crosswalk of any highway where the use of such crosswalk is authorized for pedestrians, bicycles, or electric power-assisted bicycles.

Operation of electric personal assistive mobility devices, *motorized skateboards or scooters*, electrically powered toy vehicles, bicycles, and electric power-assisted bicycles is prohibited on any Interstate Highway System component except as provided by the section.

The Commonwealth Transportation Board may authorize the use of bicycles or *motorized skateboards or scooters* on an Interstate Highway System Component provided the operation is limited to bicycle or pedestrian facilities that are barrier separated from the roadway and automobile traffic and such component meets all applicable safety requirements established by federal and state law.

**§ 46.2-1015. Lights on bicycles, electric personal assistive mobility devices, electric personal delivery devices, electric power-assisted bicycles, mopeds, and motorized skateboards or scooters.**

A. Every bicycle, electric personal assistive mobility device, electric personal delivery device, electric power-assisted bicycle, ~~and~~ moped, *and motorized skateboard or scooter with handlebars* when in use between sunset and sunrise shall be equipped with a headlight on the front emitting a white light visible in clear weather from a distance of at least 500 feet to the front and a red reflector visible from a distance of at least 600 feet to the rear when directly in front of lawful lower beams of headlights on a motor vehicle. Such lights and reflector shall be of types approved by the Superintendent.

In addition to the foregoing provisions of this section, a bicycle or its rider may be equipped with lights or reflectors. These lights may be steady burning or blinking.

B. Every bicycle, or its rider, shall be equipped with a taillight on the rear emitting a red light plainly visible in clear weather from a distance of at least 500 feet to the rear when in use between sunset and sunrise and operating on any highway with a speed limit of 35 mph or greater. Any such taillight shall be of a type approved by the Superintendent.

**§ 46.2-1041. Restrictions as to solid rubber tires.**

Every tire, other than a pneumatic tire, made of rubber on a *motor* vehicle moved on any highway shall have rubber on its entire traction surface at least one inch thick above the edge of the flange of the entire periphery. No *motor* vehicle equipped with such tires shall be operated on any highway in the Commonwealth unless a permit therefor is first secured from the Department of Transportation.

**§ 46.2-1081. Slow-moving vehicle emblems.**

A. Every farm tractor, self-propelled unit of farm equipment or implement of husbandry, and any other vehicle designed for operation at speeds not in excess of 25 miles per hour or normally operated at speeds not in excess of 25 miles per hour, shall display a triangular slow-moving vehicle emblem on the rear of the vehicle when traveling on a public highway at any time of the day or night.

B. Should a slow-moving vehicle tow a unit on a public highway, then the towing vehicle or the towed unit shall be equipped with the slow-moving vehicle emblem as follows:

1. If the towed unit or any load thereon obscures the slow-moving vehicle emblem on the towing vehicle, the towed unit shall be equipped with a slow-moving vehicle emblem, in which case the towing vehicle need not display such emblem.

2. If the slow-moving vehicle emblem on the towing vehicle is not obscured by the towed unit or any load thereon, then either or both such vehicles may be equipped with such emblem.

C. The standards and specifications for the slow-moving vehicle emblem and the position of mounting of the emblem shall conform to standards and specifications adopted by the American Society of Agricultural Engineers, the Society of Automotive Engineers, the American National Standards Institute, Inc., or the federal Department of Transportation.

D. The use of the slow-moving vehicle emblem shall be restricted to the uses specified in this title.

E. The provisions of this section shall not apply to bicycles, electric power-assisted bicycles, ~~or~~ mopeds, or *motorized skateboards or scooters*. Display of a slow-moving vehicle emblem on a bicycle, electric power-assisted bicycle, ~~or~~ moped, or *motorized skateboard or scooter* shall not be deemed a violation of this section.

**§ 46.2-1315. Powers of localities to regulate use of motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire.**

Any county, city, town, or political subdivision may (i) by ordinance regulate or (ii) by any governing body action or administrative action establish a demonstration project or pilot program regulating the operation of motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire, provided that such regulation or other governing body or administrative action is consistent with this title. Such ordinance or other governing body or administrative action may require persons offering motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire to be licensed, provided that on or after January 1, 2020, in the absence of any licensing ordinance, regulation, or other action, a person may offer motorized skateboards or scooters, bicycles, or electric power-assisted bicycles for hire.

**2. That the provisions of this act adding § 46.2-1315 to the Code of Virginia shall not be construed to impact any existing regulations, ordinances, or pilot projects currently being implemented by a locality or political subdivision as authorized by existing law.**

**3. That the provisions of this act amending § 46.2-903 of the Code of Virginia shall become effective January 1, 2020.**

### 1. E-Scooters on the Sidewalks

Among the many complaints sent to DDOT about dockless bikes and electric scooters, one of the most frequent concerned the quantity of scooters blocking sidewalks. "Sidewalk(s)" were mentioned 590 times from 2016 to 2019.

### 2. E-Scooter Riders in Travel Lanes

From 2018 to 2019, electric scooter users reported 181 accidents. 36% of those accidents were reported to have occurred in a traffic lane, compared to 8% in bike lanes and sidewalks, and 48% in unspecified areas.

### 3. Avoiding Traffic in Travel Lanes

66 electric scooter accidents from 2018 to 2019 occurred in travel lanes. Some riders reported issues with accelerating and decelerating when trying to cross the street or avoid vehicles, leading to falls and potential injuries.

### 4. E-Scooter Riders in Bike Lanes

Many complaints to DDOT involved questions of electric scooters and riders in the bike lanes. Some locals are concerned over scooter riders going at fast speeds on the sidewalks, and expressed a desire for them to be restricted to bike lanes. Others question whether scooters should be in bike lanes at all, as many riders have no prior experience on scooters and lack protective gear like helmets.

### 5. E-Bikes in Washington, D.C.

Electric scooters came to DC via a pilot program that lasted from Spring of 2018 to the end of 2018. There are currently 8 e-scooter companies in operation in DC: Bird, Bolt, Jump, Lime, Lyft, Razor, Skip, and Spin. There are **5,235 electric scooters** in DC in total as of October 2019.

## Attachment 3: D.C. Council Approves New E-Scooter Regulations

[https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be\\_story.html](https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be_story.html)

### D.C. Council approves new e-scooter regulations



Electric scooters lined up at H and 14th streets NW last month. (Matt McClain/The Washington Post)

By [Luz Lazo](#)

October 20, 2020

The D.C. Council gave final approval Tuesday to legislation further regulating electric-scooter services in the nation's capital.

The legislation, which passed unanimously, establishes new rules for scooter use in the city, chief among them a requirement that the companies that operate the services provide a way for the devices to be locked to racks or poles.

The legislation allows electric scooter and bicycle operations to grow over the next few years to a maximum of 20,000 devices by Oct. 1, 2023. Today, seven companies are allowed to operate just under 7,000 scooters combined; about 4,000 e-bikes are permitted.

The regulations also set benchmarks to ensure the devices are available in all wards of the city and require more signage warning users about riding scooters on sidewalks.

Supporters said the legislation, led by council member Mary M. Cheh (D-Ward 3), balances safety with the need to provide more transportation options.



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“Overall, this bill is a great balance of a need for more regulation to make scooters and other shared mobility devices safe and easily available,” council member Charles Allen (D-Ward 6) said earlier this month as he voted to advance the bill for a final vote.

#### *[\[Detection technology could help keep e-scooters off sidewalks\]](#)*

Motorized scooters started appearing in the District in the spring of 2018. They quickly became a popular option for getting around, with tourists using them to see the sights, commuters turning to them out of frustration with the region's troubled transit system and residents finding them perfect for short-distance trips.

They also became controversial. Unprepared for the massive growth of the services, the city faced public criticism as abandoned scooters began littering sidewalks, parks and other public spaces. Pedestrians continue to complain that they fear for their safety as scooters whiz by on narrow and crowded sidewalks. People who use wheelchairs complain about being unable to navigate around scooters left dumped in the middle of sidewalks.

The legislation addresses those complaints by [requiring the devices have lock-to capability](#). The locking requirement would go into effect Oct. 1, 2021, to give companies time to update their fleets and the city time to install additional bike racks.

Some of the operators, including Lime and Bird, opposed the lock-to measure, saying retrofitting scooters to add the capability could cost millions at a time they are struggling to [recover from losses suffered during the coronavirus pandemic](#).

Robert Gardner, Lime's director of government relations for the Washington region, said last month that the measure would discourage people from using scooters.

“It doesn't make any sense to burden the most popular alternative to driving that D.C. has seen in decades with regulation that discourages its use,” Gardner said.

The industry has fought similar requirements in many cities, though it has complied in Chicago, San Francisco and Denver.

“In a way, the popularity and proliferation of electric scooters across the country has greatly benefited us, because the experiences and legislative initiatives of other jurisdictions have informed our own legislation — a perfect example being a locking-mechanism requirement that is already estimated to improve parking compliance by 75 percent in Chicago,” Cheh said.

#### *[\[Bike-share and e-scooter companies, hit hard by the pandemic, may come back stronger\]](#)*

To address concerns that there are insufficient racks to lock the devices, the council added a provision requiring the District Department of Transportation to add 1,000 bike racks a year for the next four years.

According to DDOT, there are 5,000 bike racks across the city and 80 bike and scooter corrals. The agency said it typically installs 200 to 300 racks a year while business improvement districts install 100 to 200.

### Attachment 3: D.C. Council Approves New E-Scooter Regulations

[https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be\\_story.html](https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be_story.html)

A fiscal-impact report last month from the District's chief financial officer, Jeffrey S. DeWitt, said DDOT has funding for the installation of 150 racks this fiscal year but no money for them beyond fiscal 2021. The report said "funds are not sufficient" to implement the new regulations. Installing a single rack costs up to \$800.

Critics of the scooter services say the regulations are a good first step but mean nothing without enforcement.

"The big problem with the bill is that no one is charged with enforcing its provisions, and I doubt riders or scooter companies will follow the rules," said Steven Reichert, a Dupont Circle resident who has been a vocal advocate for restricting scooter riding on sidewalks.

"The legislation does nothing to improve safety for pedestrians by stopping scooters from being driven on sidewalks," he said.

Scooters and bikes are allowed on sidewalks, except in the Central Business District, and scooter users still ride them in restricted areas. The legislation urges users to travel in protected bike lanes when available.

Howard Marks, founder of the group Take Back Our Sidewalks, said he is skeptical about the effectiveness of the lock-to requirement. Some companies have acknowledged that in cities that already require the feature, few use it.

"The ultimate situation is to require docking stations for e-scooters like Capital Bikeshare," Marks said.

Spin is already doing that in some parts of the city. Last year, the company introduced docking stations where customers can pick up and return its devices. Spin said the charging stations, on private property, keep the scooters powered up and help eliminate some of the sidewalk clutter.

Dan Winston, Spin's regional manager for the Washington area, said the company supports "the D.C. Council's plans to promote safe parking," noting that Spin has the most experience operating lock-to scooters, using them in Chicago and San Francisco.

"We have led the industry in alternative parking solutions like hubs, incentivized drop points and neighborhood ambassadors," he said.

Maurice Henderson, senior director of government partnerships at Bird, said the company looks forward to working with the District in meeting the requirements "to ensure the e-scooter program continues to be a success."

[\*\[Lime and Bird sued over alleged scooter safety failures and injuries to dozens\]\*](#)

The regulations would go into effect after approval by Mayor Muriel E. Bowser (D) and a 30-day congressional review. In a letter to D.C. Council Chairman Phil Mendelson (D) on Tuesday, Bowser said increasing the availability of scooters and other mobility options is one of her goals.

Although she voiced concern that parts of the legislation are unfunded and that finding money will be challenging in the current economic environment, the mayor said she supports it.

### Attachment 3: D.C. Council Approves New E-Scooter Regulations

[https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be\\_story.html](https://www.washingtonpost.com/local/trafficandcommuting/dc-council-to-take-final-vote-on-new-e-scooter-regulations/2020/10/19/660f5cce-121f-11eb-bc10-40b25382f1be_story.html)

Perhaps most important in the legislation, supporters said, is that it covers scooters, bicycles and e-bikes and would allow DDOT to establish additional rules.

The legislation makes operating a scooter while drunk illegal and establishes fines for many violations. For example, operating a scooter or e-bike while under the influence of alcohol or drugs carries a fine up to \$150; anyone found tampering with the devices would face a \$125 penalty.

Users must be at least 16 years old, wear helmets if under 18, legally park the devices, obey restrictions on carrying packages while riding, ride only in designated areas and not ride with passengers, according to the legislation.

Other provisions of the bill:

- DDOT is required to put up signage or pavement markings inside the Central Business District alerting scooter riders about the prohibition against riding on sidewalks.
- Companies are required to deploy at least 3 percent of their fleets to each of the District's eight wards between 5 and 7 a.m. daily.
- Companies are prohibited from putting dockless scooters within 300 feet of an elementary or middle school or senior wellness center. The rules would also apply to dockless e-bike operations. Areas immediately outside Metro station entrances are exempt.
- Service operators are required to maintain a 24-hour toll-free number for the public to report illegally parked scooters and file other complaints.
- Operators are required to offer optional free classes on how to safely ride.
- The e-bike speed limit is set at 20 mph.
- Operators are required to release fleet, trip and complaint data to DDOT.

Some of the proposed rules mirror DDOT regulations that went into effect last year. The city established fees for operators and maintained a cap on the number of devices each company is allowed to deploy.

Bird, Bolt, Lime, Lyft, Razor, Skip and Spin operate scooters in the city. Helbiz and Jump, which is under the Lime umbrella, operate e-bikes.

"This is a transit industry and, like other forms of transportation, requires rules and regulations to keep us all safe and accountable to one another," council member Brooke Pinto (D-Ward 2) said at a council session last month.

Attachment 4: E-Scooters to be Corraled, The Georgetowner  
<https://georgetowner.com/articles/2020/01/27/e-scooters-to-be-corralled/>

E-Scooters to Be Corralled

BY PEGGY SANDS • JANUARY 27, 2020 0 345

The new corral for scooters added to bike racks around D.C. Courtesy DDOT.

There were more than 5 million dockless bike and scooter rentals in the District in 2019, according to the District Department of Transportation. That also meant that the some 5,000 licensed, convenient and increasingly popular e-vehicles were left by their riders in front of, next to and sometimes on private properties, driveways, gardens and streets adjacent to their destinations.

As usage of e-scooters has increased, so have complaints about safety and, as DDOT puts it, “parking behavior.”

With better behavior in mind, the agency in February will install about 100 off-sidewalk parking “corrals” across all eight wards for private and shared dockless scooters and bikes. “These off-sidewalk corrals provide a designated area where both shared dockless vehicles can be stored safely,” said DDOT Director Jeff Marootian.

“DDOT is specifically targeting locations where we can make a difference by ‘daylighting’ intersections for pedestrian safety,” explained Marootian. At these intersections, the corrals will be placed in the area between a stop sign and the start of a parking zone.

Three corral locations in Georgetown are on the list: near the corners of M and Thomas Jefferson Streets, 33rd and M Streets and 26th and P Streets NW.

Common-sense regulations already exist, along with some enforcement and requirements for accountability by the 10 companies (8 for scooters) that have contracts with the District to offer and maintain dockless vehicles. These apply particularly to streets with parking signage.

“All drivers must obey the signs and avoid parking in ‘no parking’ or ‘no standing’ zones approaching intersections. Installing corrals at these locations provides both needed parking infrastructure for dockless vehicles and also prevents dangerous illegal car parking,” according to DDOT.

Current DDOT guidelines require scooters to be parked with one wheel on the curb, to allow for the greatest amount of space for pedestrian to walk by. In corridors where there are no off-sidewalk parking

Attachment 4: E-Scooters to be Corraled, The Georgetowner

<https://georgetowner.com/articles/2020/01/27/e-scooters-to-be-corralled/>

corrals, scooters should be parked in the “furniture zone,” that is, within the first five feet of the curb, where there are typically public benches or street trees.

Corrals were first piloted in business improvement districts and commercial areas where higher numbers of dockless vehicles were expected to be parked. The new locations focus on residential areas where sidewalks are narrower and more likely to be blocked by an improperly parked dockless vehicle, based on feedback DDOT received from residents.

There are no penalties planned for riders who do not use the corrals. Residents on impacted blocks will receive notice from DDOT approximately one week before the corrals are installed. Residents can submit a request for an off-sidewalk parking corral.

As of Jan. 1 of this year, eight companies operated electric scooters in the District: Bird, Bolt, Jump, Lime, Lyft, Razor, Skip and Spin. All have permits in effect through March 31, 2020.

*Attachment 5: DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use, District Department of Transportation*

DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use

Monday, September 27, 2021

FOR IMMEDIATE RELEASE

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DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use

(WASHINGTON, DC) — The District Department of Transportation (DDOT) today announced that beginning October 1, 2021, District-permitted electric scooters will be required to lock to city infrastructure when parked throughout DC.

“Because of Mayor Bower’s commitment to multimodal transportation, our city is rich with diverse available options like our electric scooters and eBikes,” said Acting DDOT Director Everett Lott. “By requiring these shared fleet vehicles be locked to certain infrastructure, and making more of that infrastructure available, we are keeping our sidewalks and public places open and free from obstruction for all to enjoy.”

While the ‘lock-to’ requirement already applies to District-permitted eBikes, the new legislation requires riders of District-permitted electric scooters to park and use the equipped lock to tether the vehicle to the following infrastructure:

Bike racks

In-street bicycle and scooter corrals

Parking signposts

Stop signs

DDOT has installed more than 800 bicycle racks so far this year and plans to install at least 1,000 additional bicycle racks on sidewalks and in-street parking corrals in 2022.

District-permitted electric scooters and eBikes should not be locked to the following:

Bus shelters

Private fences or gates

Trees

Capital Bikeshare docks

Garbage cans

Shared electric scooter companies permitted to operate in the District will provide locking instructions and guidelines through the app used to rent their vehicles. DDOT will work with these companies to

*Attachment 5: DC Law Now Requires Riders to Lock Shared Electric Scooters to Bike Racks, Scooter Corrals, or Signposts After Use, District Department of Transportation*

ensure compliance with the new regulation. All District-permitted electric scooters are labeled with a toll-free number people can call to report scooters parked incorrectly.

For more information about micromobility in the District, please visit [ddot.dc.gov/page/micromobility-district](https://ddot.dc.gov/page/micromobility-district).

###

The District Department of Transportation's mission is to equitably deliver a safe, sustainable, and reliable multimodal transportation network for all residents and visitors of the District of Columbia.

Follow us on Twitter for transportation-related updates and more; like us on Facebook and follow us on Instagram. Visit the website at [ddot.dc.gov](https://ddot.dc.gov). Visit [goDCgo.com](https://goDCgo.com) for more information on transportation options in the District.

## Attachment 6: Injuries Using E-Scooters, E-Bikes and Hoverboards Jump 70% During the Past Four Years

### Injuries Using E-Scooters, E-Bikes and Hoverboards Jump 70% During the Past Four Years

**Release Date:** September 30, 2021

WASHINGTON, D.C. – As consumers step up their use of e-scooters, hoverboards, and e-bikes to return to work, school and other activities, the U.S. Consumer Product Safety Commission (CPSC) reminds everyone to keep safety a priority.

According to advance data from a soon-to-be-released CPSC report on hazard patterns associated with micromobility products, injuries and deaths continue to rise, but data are certainly consistent with the notion that a lot of people staying home in 2020, led to a leveling off or slight reduction in scooter use.

Here's what the latest data show:

- There were more than 190,000 emergency room (ED) visits due to all micromobility products from 2017 through 2020. ED visits had a steady 70% increase from 34,000 (2017), 44,000 (2018), 54,800 (2019) to 57,800 (2020).
- Much of the increase between 2017 and later years was attributable to ED visits involving e-scooters, which rose three times as much, from 7,700 (2017), to 14,500 (2018), to 27,700 (2019) and 25,400 (2020).
- Injuries happened most frequently to upper and lower limbs, as well as the head and the neck.
- CPSC is aware of 71 fatalities associated with micromobility products from 2017 through 2020, although reporting is incomplete.

The hazards associated with micromobility products primarily fall into three broad areas: mechanical, electrical, and human factors. To address these hazards, CPSC staff continues to work with ASTM International and Underwriters Laboratories (UL) to develop and make improvements to, voluntary standards. In support of these and other efforts, CPSC has done analyses of incident data and has done testing for the various hazards. CPSC also collaborates with federal partners and industry stakeholders to promote micromobility safety.

The best way to avoid injuries when using micromobility products:

- Always make sure to wear a helmet.
- Before riding an e-scooter, make sure to check it for any damage, which includes examining the handlebars, brakes, throttle, bell, lights, tires, cables and frame. Damage to the e-scooter can cause loss of control and lead to a crash.

More life-saving tips can be found in CPSC's [e-scooter safety alert](#) and safety [PSA](#).

Release Number

21-205



Attachment 7: Electric Scooter-Related Injuries: A New Epidemic in Orthopedics

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8348701/>

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PMCID: PMC8348701

PMID: [34362067](https://pubmed.ncbi.nlm.nih.gov/34362067/)

Electric Scooter-Related Injuries: A New Epidemic in Orthopedics

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Francesco Oliva, Academic Editor and Nicola Maffulli, Academic Editor

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Abstract

**Background:** The use of electric scooters has increased considerably as they are an accessible means of transportation. The number of injuries from falls and collisions has risen significantly. Therefore, the aim of the study was to describe demographics injury patterns of electric scooter accidents produced over one year. **Methods:** A prospective observational study of electric scooter- related injuries presented in the emergency room from May 2019 until May 2020. The inclusion criteria was based on the direct cause of injury produced while an electric scooter was in use. Demographic data, the use of a helmet or the lack thereof, accident mechanism, injury time, type of injury produced, and the treatment applied were collected. **Results:** Over the study period, 397 patients were identified with a total of 422 injuries. The mean age was 30.8 years, with 12.6% of patients being minors. The patients mainly presented in evening hours and in summertime at the emergency department. Of the total injuries seen, 46.9% were fractures. Some 25% of the total cases required surgery. Only 19% of the riders wore a helmet at the time of the accident. Most of the fractures were to the upper limbs (62.6%). There was a greater incidence of radius fractures. **Conclusion:** Injuries incurred while using electric scooters are an emerging phenomenon, despite existing regulations. In this study, most injuries occurred in young men and were due to falls from the vehicle. Nearly half of those injuries were fractures to the upper limbs. Surprisingly, 50% of the fractures required surgery.

**Keywords:** electric scooters, accidents, epidemiology, incidence, injury, prevention

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## 1. Introduction

The way we move around the city is currently undergoing change. We are increasingly opting for more practical personal vehicles, which are easily accessible and give us the autonomy to move where and when we want. The electric scooter (e-scooter) is trending and is one of the most widely used means of transportation in the world. In Spain, it all started with a renting scheme in September 2017 in Madrid and Barcelona that rapidly spread around the country [1].

These devices can reach a speed of 30 km/h and even greater when moving downhill. It is powered by a rechargeable battery that can last 6–8 h depending on the model [2]. Since it is cheaper than other means of transportation such as cars or motorbikes and it can travel in bike lanes to avoid the usual city traffic, it has become one of the most preferred means of urban transport due to its accessibility and facility of use [3].

However, this scootermania has a cost. The number of injuries associated with e-scooter accidents has become a public health issue by causing a massive increase of admissions in emergency rooms [4,5,6]. This study aims to describe the demographics and injury patterns in patients attended to in the orthopedics emergency room after an e-scooter accident over 1 year in a hospital in Barcelona, Spain.

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## 2. Materials and Methods

A prospective observational study was designed including all patients admitted to the Hospital del Mar emergency room due to an injury produced after e-scooter accidents between May 2019 and May 2020. The hospital is a 3rd level center located within the southern area of the city of Barcelona that treats approximately 18,000 patients per year in the emergency department.

Injuries produced after falls from electric skateboards, electric bicycles and self-balancing scooters (e.g., Segway®, Bedford, NH, USA.) were excluded. Cranial and organ injuries were not included in this study as they are admitted to other emergency departments like neurosurgery and general surgery.

Demographic data such as age, gender and nationality were collected. Patients were also asked about the mechanism (fall, collision, hit by vehicle) and time of injury as well as whether they wore a helmet or not at the time. Incidentally, they were asked if they were driver's license holders. The investigators also collected data about the type of injury, the affected side of the body, its location, the radiological tests performed, and treatment applied. Institutional Review Board Approval was obtained before beginning the study (CEIm 2020-9669).

### Statistical Analysis

The statistical analysis was performed using SPSS version 16 (SPSS Inc., Chicago, IL, USA) software package. Categorical data was presented as frequencies and percentages, while continuous data was presented as mean  $\pm$  standard deviations (SD). The *p*-values for categorical data were obtained from the chi-square or Fisher's exact test.

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## 3. Results

A total of 397 patients presented in the emergency room with injuries related to e-scooter accidents during the study period. There were 238 male (59.9%) and 159 females (40.1%) with a mean age of 30.8 years (SD, 10.1). The demographics and accident characteristics collected are shown in [Table 1](#).

Table 1

Patient and accident characteristics associated with e-scooter-related injuries during a 1-year study period.

Attachment 7: Electric Scooter-Related Injuries: A New Epidemic in Orthopedics

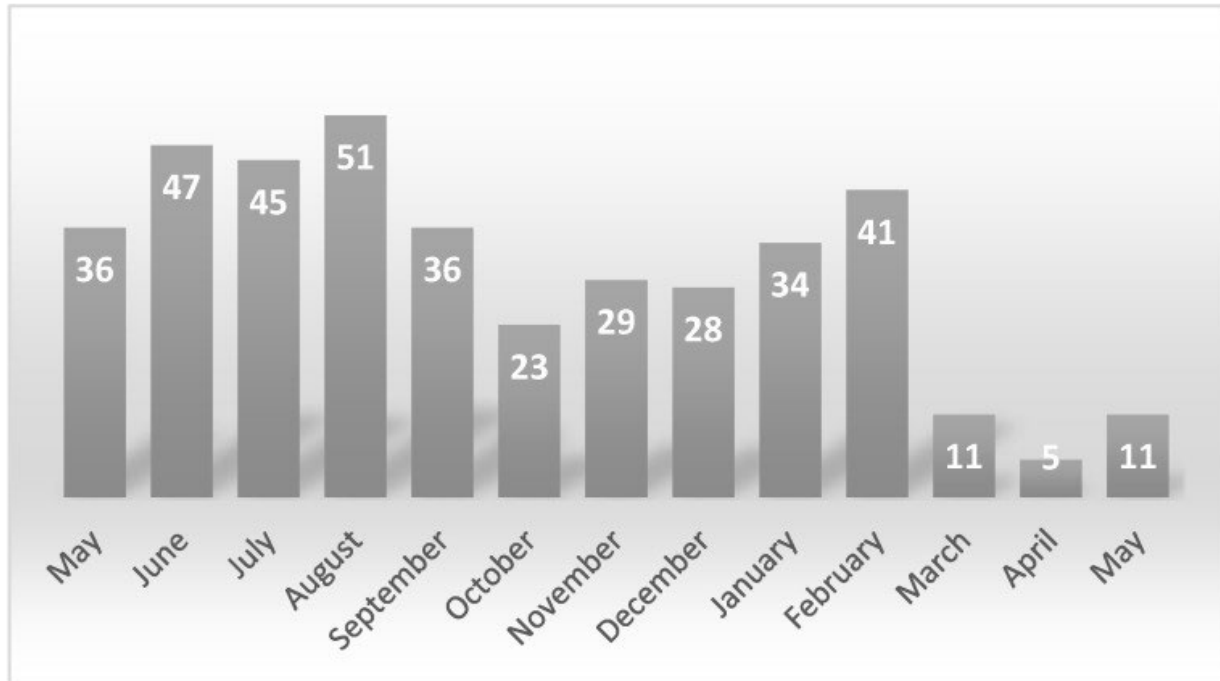
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8348701/>

	<b>N (%)</b>
<b>Age</b>	
<16	50 (12.6%)
16–25	102 (25.7%)
26–40	166 (41.8%)
41–64	74 (18.6%)
>64	5 (1.3%)
<b>Gender</b>	
Male	238 (59.9%)
Female	159 (40.1%)
<b>Nationality</b>	
Resident	300 (75.6%)
Tourist	97 (24.4%)
<b>Injured patient</b>	
Rider	374 (94.2%)
Non-rider	23 (5.8%)
Pedestrian	18 (4.5%)
Carried by rider	4 (1%)
Other vehicle	1 (0.3%)
<b>Helmet use</b>	
Yes	55 (19.1%)
No	234 (80.9%)
<b>Driver's license</b>	

	<b>N (%)</b>
Yes	162 (54.9%)
No	133 (45.1%)
<b>Mechanism of injury</b>	
Fall	341 (85.9%)
Collision	38 (9.6%)
Hit by a vehicle	18 (4.5%)
<b>Time of injury</b>	
7 am–3 pm	87 (21.9%)
3 pm–11 pm	242 (61%)
11 pm–7 am	68 (17.1%)

[Open in a separate window](#)

The patient breakdown was 374 (94.2%) e-scooter riders, 18 pedestrians, 1 rider of another type of vehicle and 4 e-scooter passengers. Only 55 patients (19.1%) were wearing a helmet at the time of injury. In most of the cases, the mechanism of injury was a fall from the vehicle (341 (85.9%)). That was followed by 38 (9.6%) collisions between vehicles and 18 (4.5%) between an e-scooter and a person. Of all the injured, 300 (75.6%) were residents and 97 (24.4%) were tourists. Most of the injuries (242 (61%)) occurred in the afternoon period (3 pm–11 pm). The vast majority of the injuries occurred in summer (179), from June to September, with a notable decrease from March 2020 to May 2020, as observed in [Figure 1](#).

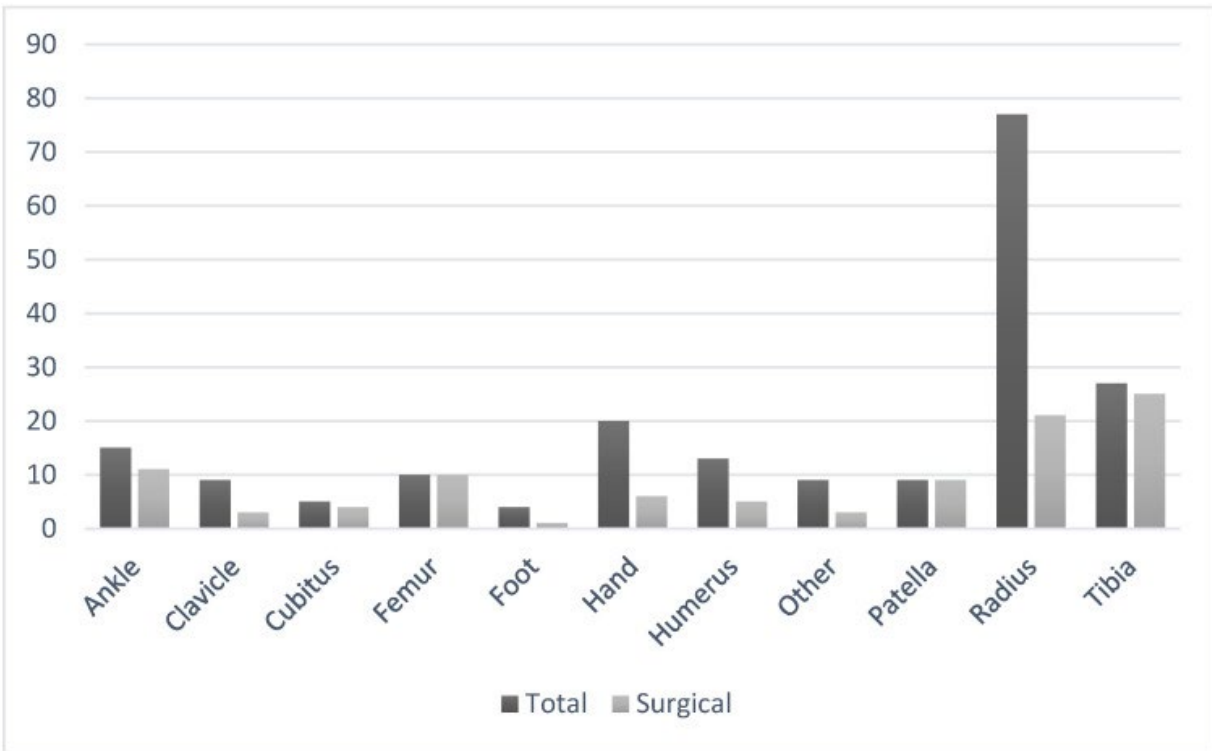


[Figure 1](#)

Most injuries were produced during summer months. A decrease in the number of injuries can be observed during the COVID-19 lockdown period.

A total of 422 injuries were evaluated. Considering that a patient could present different patterns of injury at the same time, that total covers 171 contusions (40.5%), 32 (7.6%) wounds requiring stitching, 21 (5%) dislocations and 198 (46.9%) fractures. There were 191 (45.2%) injuries on the left side of the body, 202 (7.9%) on the right side and the remaining 29 (6.9%) injuries were to the axial skeleton. Most of the injuries (235, 55.7%) were to the upper limbs and most of the accidents occurred during evening hours with a total of 242 (61%) patients admitted to ED between 3 pm and 11 pm. Relative to the fractures, most were to the upper limbs (124, 62.6%), being radial fractures the most common (77, 38.9%).

As for the treatment of fractures, 98 (49.5%) needed surgical treatment and 100 (50.5%) were treated conservatively, as can be seen in [Figure 2](#). Lower limb fractures (66) were more commonly treated with surgery (57, 86.4%) than upper limb fractures. Of the 124 upper limb fractures, 39 were treated surgically. Two mandible fractures were treated surgically, and the rest of axial fractures were treated conservatively.



[Figure 2](#)

Although most fractures were produced on radius, lower limb fractures were more commonly treated by surgery. In 'other' fractures were included 1 acetabular injury, 4 costal fractures, 2 vertebral fractures and 2 mandibular fractures.

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#### 4. Discussion

E-scooters are a practical and convenient means of transport. However, their use is accompanied by an increasing number of emergency room visits due to accidents over recent years. It is becoming a major public health issue, due to the associated morbidity and costs related to injuries produced after accidents. In this study, it was observed that 46.9% of the injuries related to e-scooter accidents resulted in fractures and 49.5% of them required surgery for their treatment, which sustains that these types of accidents may be managed as high-energy injuries. According to our results, only 18.9% of patients wore a helmet in the moment of the accident, which seems like riders are not completely aware of the potential risks of driving an e-scooter [5,7,8].

Due to the high prevalence of accidents and risky behaviors associated with e-scooters, appropriate regulatory responses have been published that include an increase in the number of fines applied [9]. In the latest regulation published in Spain (2017), it has been established that only riders over 16 years old with only one rider per vehicle are authorized in a public space. Furthermore, the use of lights, a helmet and a bell are required. In addition, the maximum velocity allowed is limited to 30 km/h. Any infringement is punishable with a fine up to €500, depending on the severity of the infraction.

In our study, 24.7% of the patients referred to the emergency department required surgical treatment. That fact along with the scarce data published on e-scooter injuries supports them being treated as high-energy mechanisms that can result in severe injuries. These results are in line with those published by Ishmael et al. and Störmann et al. in which 27.6% of injuries were treated surgically [3,10]. It is important that riders understand the hazards associated with moving around on a two-wheeled vehicle that may reach 30 km/h. E-scooters not only share lanes with other vehicles such as bicycles, motorcycles or cars but also sidewalks with pedestrians due to the lack of laws on circulation. Additionally, wheel thickness makes e-scooters vulnerable to different obstacles in roads that may lead to falls. Although most of the fractures are to the upper limbs, surgical procedures are more frequently required on the lower limbs. This may be causally related to the speed at the time of the accident as higher speeds diminish the reaction time. The fall-damping reaction with the upper limbs may also explain why most injuries are to the upper limbs when compared to skateboard-related injuries [11]. In fact, the incidence of fractures produced after e-scooter accidents is comparable to the reported in skateboard accidents—Lustenberger et al. reported an incidence of 50.3%—and superior to the reported in bicycle accidents—Davidson et al. and Rivara et al. reported an incidence of 40% and 32.6%, respectively [12,13,14]. The incidence of fractures observed in e-scooter related accidents was superior to the incidents observed in road bicycle (23%) and mountain bike injuries in USA (27–43%) [15,16]. When comparing fracture incidence in traffic accidents in Sweden, Meredith et al. reported that car accidents resulted in fracture in 37% of cases, motorcyclists in 27.6% and bicyclists in 15.6% [17]. Even though mechanisms of injury differ between vehicles, this high percentage of fractures observed in e-scooter accidents when comparing to other means of transportation reinforce the need to develop safety measures to avoid severe lesions.

Although legal mechanisms are in force, most riders underestimate the dangers involved with e-scooter use as only 16.8% of patients wore a helmet at the moment of the accident. That percentage of riders using a helmet is similar to the trend reported by Trivedi et al. of 4.4% and Liew et al. of 5.6% [5,18]. Although it is well known that helmet use significantly reduces the risk of brain injury and long-term complications in motorcyclists, there is limited data about its use with e-scooters [19]. La Torre et al. conducted a study comparing head injuries before and after implementing a helmet law for scooter riders and found a relative risk reduction of 0.42–0.44 [20]. In 2018, Høye also reported that the use of bicycle helmets reduced head injuries by 48%, meaning an overall 60% reduction in severe head injuries and 28% reduction in facial injuries. This reduction may be even greater in situations of increased crash risk such as on slippery or ice roads [21].

Most emergency department presentations were observed in the evening hours (61%). These results are in line with those published in recent literature in which 60 to 65% of accidents were produced during the late evening hours [10,22]. Trivedi et al. reported injuries produced from 3 pm to 11 pm in some 56% of the cases [5]. It may be because e-scooters are more frequently used as a recreational means of transport rather than a means of transportation to the workplace. The finding herein is that there was no difference in the fracture incidence between the morning (50.5% of total injuries produced), evening (49.2%) and nighttime (45.6%) hours. This result is similar to those reported by Moftakhar et al. [23]. Additionally, a greater number of accidents were seen during the summer. It is probably due to an increase in the recreational use of e-scooters. A notable decrease was also noticed from March 20th to May 20th, 2020. It is the period in which a quarantine period was declared due to the global pandemic of SARS-COV-19, suggesting its effect on the incidence of e-scooter accidents per year.

According to our findings, 14.7% (58) of patients attended to in the emergency room were underage. Some 76% of those were under 16, which is the minimum legal age allowed to ride an e-scooter [24]. Of those 58 patients, only 3 (5.1%) wore a helmet, showing that children and parents are unaware of the risks associated with the e-scooter. Previous studies concluded that the use of a helmet reduces the risk of a head injury and that the most effective way to reduce accident-related injuries is to use protective gear [11,25]. It was also observed that 38% of the injuries produced in children required orthopedic treatment, either with a cast (27.6%) or surgery (10.4%). Children are not only at risk as users but also when they are carried by their parents without any protective equipment or security accessories.

While e-scooters are becoming more popular and their use is growing, it is important to highlight the risks and reinforce suggestions for their proper use. Helmet use should be mandatory to prevent head and neurological injuries, with an expected decrease of brain injuries of some 60% [21,26]. Moreover, the use of knee and elbows pads should be promoted to prevent severe injuries to the extremities as per scooter, skating and extreme sports safety recommendations [27,28]. Another strategy to improve e-scooter safety may be to improve rider education such as the need for a license to circulate with these vehicles [29]. Kosola et al. reported that a mandatory helmet law and a driver's license requirement reduced the number and severity of moped- and scooter-related injuries [30]. Finally, we would also reinforce that sidewalk circulation should be forbidden since almost 5% of patients arriving in the emergency department were hit by e-scooters.

To the best of our knowledge, this is the first prospective study of e-scooter-related injuries in Europe and the first study related to the e-scooter published in Spain. Since Trivedi et al. published the first descriptive study about e-scooter-related injuries, interest around accidents produced by this means of transportation has increased [5]. Table 2 provides a comparison of the results of this study with previous literature. One of the main strength points of this study is the sample size obtained, one of the biggest sample sizes reported in literature, which may provide an accurate description of non-head injuries after e-scooter accidents. In addition, the study was designed for a duration of one year, which allows observing differences in the number and pattern of injuries in different periods of the year. When analyzing the results of this study and the data previously reported, it can be observed that a high percentage of the injuries produced are fractures and, therefore, allow us to understand these types of casualties as high-energy accidents. It is also alarming that the vast majority of riders do not wear a helmet when driving e-scooters, which can lead to severe head injuries, preventable with the use of this protective gear. Finally, it is also noteworthy that up to 15% of electric scooter accidents occur in minors, an age in which driving of motorized vehicles is not allowed. With this article, the authors intend to raise awareness of the risks of using e-scooters, recognizing that this type of vehicle is a valid alternative for intra-urban mobility as long as the precautionary measures are taken: helmet and protective equipment use, avoid driving on sidewalk and respect traffic rules.

Table 2

Comparison of previous studies reporting injuries after e-scooter accidents.



## Attachment 7: Electric Scooter-Related Injuries: A New Epidemic in Orthopedics

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8348701/>

Author	Study Design	Country	Sample Size	Mean Age	Riders	Helmets	Minor	Fractures	Most Frequent
Trivedi 2018 [5]	Retrospective	USA	249	33.7	91.6%	4.4%	10.8%	31.7%	Upper extremity
Blomberg 2019 [31]	Retrospective	Denmark	130	27	86.6%	3.6%	10%	11.5%	Face
Campbell 2019 [4]	Retrospective	New Zealand	21	31	N.S.	N.S.	14.3%	100%	Ankle
Dhillon 2020 [32]	Retrospective	USA	87	35.1	N.S.	18.4%	N.S.	57.4%	Face
Ishmael 2020 [3]	Retrospective	USA	73	35.4	97.3%	N.S.	5.5%	93.2%	Lower extremity
Liew 2020 [18]	Retrospective	Singapore	36	34	38.9%	5.6%	N.S.	33.3%	N.S.
Moftakhar 2020 [23]	Retrospective	Austria	175	34.4	94.9%	N.S.	N.S.	35.2%	Upper extremity
Puzio 2020 [22]	Retrospective	USA	92	30	N.S.	0%	N.S.	24%	N.S.
Stormann 2020 [10]	Retrospective	Germany	76	34.3	92.1%	1.3%	2.6%	48.6%	Upper extremity
Bloom 2021 [33]	Retrospective	USA	248	35.8	N.S.	3%	9%	21.4%	Radius
Coelho 2021	Prospective	Spain	397	30.8	94.2%	19.1%	12.6%	46.9%	Radius

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N.S.: Non specified.

## Attachment 7: Electric Scooter-Related Injuries: A New Epidemic in Orthopedics

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Our study has several limitations. The data for head and torso injuries produced after e-scooter accidents was not collected as it is evaluated by neurosurgery, thoracic surgery or general surgery based on the Severity Index. This limits the possibility to relate a head injury with helmet use and to describe the prevalence of head injuries after e-scooter accidents. Moreover, only patients attended in our hospital were included, which may limit the evaluation of geographic and urban planning that may influence the frequency, severity and characteristics of injuries produced in Barcelona. Another limitation is that the study was performed only over one year, and it was a year in which there was an unexpected quarantine due to the epidemic of SARS-COV-19 that may have brought down the number of accidents and injuries produced. Although the study and patient inclusion process were finished in May 2020, an upturn in the number of e-scooter-related accidents has been observed from June 2020 onward.

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### 5. Conclusions

Injuries caused by electric scooters are an emerging phenomenon despite existing regulations. Most injuries are to the upper limb and a significant part of them are fractures. A striking 25% of the injuries seen required surgery. E-scooter-related injuries may be severe and preventable. Current regulations might not be enough to aid in preventing these accidents. Enhanced user education, stricter laws and the need for protective gear are called to bring down the incidence of serious accidents with e-scooters.

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### Author Contributions

A.C., P.F., A.A. and L.C. conceptualized and designed the study, drafted the initial manuscript, designed the data collection instruments, collected data and carried out the initial analysis. J.F.S.-S., D.P.-P., S.M.-D. and J.C.M. supervised and critically reviewed the manuscript: J.F.S.-S., S.M.-D., J.C.M. All authors have read and agreed to the published version of the manuscript.

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### Funding

This research received no external funding.

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### Institutional Review Board Statement

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Institutional Review Board of Hospital del Mar (CEIm 2020-9669).

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8348701/>

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

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Conflicts of Interest

The authors declare no conflict of interest.

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Footnotes

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Attachment 8: Code of Virginia § 46.2-908.1. Electric personal assistive mobility devices, electrically powered toy vehicles, electric power-assisted bicycles, and motorized skateboards or scooters.

Code of Virginia

[Table of Contents](#) » [Title 46.2. Motor Vehicles](#) » [Subtitle III. Operation](#) » [Chapter 8. Regulation of Traffic](#) » [Article 12. Bicycles](#) » § 46.2-908.1. Electric personal assistive mobility devices, electrically powered toy vehicles, electric power-assisted bicycles, and motorized skateboards or scooters

§ 46.2-908.1. Electric personal assistive mobility devices, electrically powered toy vehicles, electric power-assisted bicycles, and motorized skateboards or scooters.

All electric personal assistive mobility devices, electrically powered toy vehicles, and electric power-assisted bicycles shall be equipped with spill-proof, sealed, or gelled electrolyte batteries. No person shall at any time or at any location operate (i) an electric personal assistive mobility device at a speed faster than 25 miles per hour or (ii) a motorized skateboard or scooter at a speed faster than 20 miles per hour. No person shall operate a skateboard or scooter that would otherwise meet the definition of a motorized skateboard or scooter but is capable of speeds greater than 20 miles per hour at a speed greater than 20 miles per hour. No person less than 14 years old shall drive any electric personal assistive mobility device, motorized skateboard or scooter, or class three electric power-assisted bicycle unless under the immediate supervision of a person who is at least 18 years old.

An electric personal assistive mobility device may be operated on any highway with a maximum speed limit of 25 miles per hour or less. An electric personal assistive mobility device shall only operate on any highway authorized by this section if a sidewalk is not provided along such highway or if operation of the electric personal assistive mobility device on such sidewalk is prohibited pursuant to § [46.2-904](#). Nothing in this section shall prohibit the operation of an electric personal assistive mobility device or motorized skateboard or scooter in the crosswalk of any highway where the use of such crosswalk is authorized for pedestrians, bicycles, or electric power-assisted bicycles.

Operation of electric personal assistive mobility devices, motorized skateboards or scooters, electrically powered toy vehicles, bicycles, and electric power-assisted bicycles is prohibited on any Interstate Highway System component except as provided by the section.

The Commonwealth Transportation Board may authorize the use of bicycles or motorized skateboards or scooters on an Interstate Highway System Component provided the operation is limited to bicycle or pedestrian facilities that are barrier separated from the roadway and automobile traffic and such component meets all applicable safety requirements established by federal and state law.

2001, c. [834](#); 2002, c. [254](#); 2006, cc. [529](#), [538](#); 2007, cc. [209](#), [366](#); 2009, c. [795](#); 2013, c. [783](#); 2017, cc. [251](#), [788](#); 2019, c. [780](#); 2020, cc. [59](#), [260](#), [1269](#).

The chapters of the acts of assembly referenced in the historical citation at the end of this section may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

**ORDINANCE #O-2020-10**

First Reading	November 25, 2019
Second Reading	December 9, 2019
Enacted	December 9, 2019
Effective	December 9, 2019

**AN ORDINANCE TO AMEND AND REENACT THE CODE OF ORDINANCES, CITY OF MANASSAS, VIRGINIA (2002), AS AMENDED, BY AMENDING CHAPTER 114 (TRAFFIC AND VEHICLES), ARTICLE IX, SECTION 114-421 AND BY ADDING DIVISION 4 ENTITLED "MOTORIZED SKATEBOARDS OR SCOOTERS, BICYCLES, OR ELECTRIC POWER-ASSISTED BICYCLES FOR HIRE."**

**BE IT ORDAINED** by the Council of the City of Manassas, Virginia, meeting in regular session this 9th day of December 2019; and

That the Code of Ordinances of the City of Manassas, Virginia (2002) is hereby amended and reenacted by amending Article IX, Section 114-421 and by adding a new Division, which shall read as follows:

**CHAPTER 114 – TRAFFIC AND VEHICLES**

**ARTICLE IX. BICYCLES; TOY VEHICLES; MOTORIZED SKATEBOARDS OR SCOOTERS, BICYCLES, OR ELECTRIC POWER-ASSISTED BICYCLES FOR HIRE**

**DIVISION 1. – GENERALLY**

**Sec. 114-391. - Riding bicycles or use of roller skates or skateboards on sidewalks and crosswalks.**

- (a) The city council may by ordinance prohibit the use of roller skates and skateboards and/or the riding of bicycles on designated sidewalks or crosswalks, including those of any church, school, or recreational facility, or any business property open to the public where such activity is prohibited. Signs indicating such prohibition shall be conspicuously posted in general areas where use of roller skates and skateboards and/or bicycle riding is prohibited.
- (b) A person riding a bicycle on a sidewalk, or across a roadway on a crosswalk, shall yield the right-of-way to any pedestrian and shall give an audible signal before overtaking and passing any pedestrian.
- (c) No person shall ride a bicycle on a sidewalk, or across a roadway on a crosswalk, where such use of bicycles is prohibited by official traffic control devices.



- (d) A person riding a bicycle on a sidewalk, or across a roadway on a crosswalk, shall have all the rights and duties of a pedestrian under the same circumstances.
- (e) A violation of any ordinance adopted pursuant to this section shall be punishable by a civil penalty in accordance with a fee schedule established by an uncodified ordinance enacted by the city council.

**Sec. 114-392. - Riders not to cling to other vehicles; playing on the streets and highways forbidden.**

- (a) No person shall play on a highway, other than on the sidewalks thereof, within the city. No person shall use roller skates, skateboards, toys or other devices on wheels or runners on highways in the city, except on a sidewalk. It shall nevertheless be lawful to use a bicycle, moped or motorcycle on the highways, if the rider complies with the other provisions of this Code and the State Code. The prohibition on playing in the highways shall not apply where the city council, by resolution, designates an area where play is permitted and posts signs to that effect. The term "highway" herein includes all streets, paved alleys and public parking lots in the city.
- (b) No person riding upon any bicycle, moped, roller skates, skateboard, toy or other device on wheels or runners shall attach the same or himself to any vehicle upon a roadway.

**DIVISION 2. - BICYCLES**

**Sec. 114-411. - Reserved.**

**Sec. 114-412. - Helmets.**

- (a) Every person 14 years of age or younger shall wear a protective helmet that meets the standards promulgated by the American National Standards Institute or the Snell Memorial Foundation whenever riding or being carried on a bicycle or electric power-assisted bicycle on any highway, sidewalk or public bicycle path. Any parent, guardian or other legal custodian who knowingly permits his child 14 years of age or younger to ride or be carried on a bicycle or electric power-assisted bicycle on any highway, sidewalk or public bicycle path without wearing a protective helmet as required by this section shall be guilty of a violation of this section.

- (b) Violation of this section shall be punishable by a fine of \$25.00. However, such fine shall be suspended for:
  - (1) First time violators; and
  - (2) Violators who, subsequent to the violation but prior to imposition of the fine, purchase helmets of the type required by this section.
- (c) Violation of this section shall not constitute negligence, or assumption of risk, be considered in mitigation of damages of whatever nature, be admissible in evidence, or be the subject of comment by counsel in any action for the recovery of damages arising out of the operation of any bicycle, nor shall anything in this section change any existing law, rule or procedure pertaining to any civil action.

**Secs. 114-413—114-420. - Reserved.**

### **DIVISION 3. - GOLF CARTS**

[Sections 114-421 through 114-425, related to golf carts, is not set out]

#### **Sec. 114-426. - Penalty.**

Except as otherwise specifically provided, any person who shall violate any provision of this division shall be guilty of a traffic infraction.

### **DIVISION 4. – MOTORIZED SKATEBOARDS OR SCOOTERS, BICYCLES, OR ELECTRIC POWER-ASSISTED BICYCLES FOR HIRE.**

#### **Sec. 114-430. - Purpose.**

The purpose of this Division is to establish rules and regulations governing the operation of shared mobility systems for docked and dockless (i) bicycles or electric power-assisted bicycles and (ii) motorized skateboards or scooters within the City of Manassas, in order to ensure that the operation of such shared mobility systems is consistent with the safety and welfare of pedestrians, people with disabilities, and other users of the public rights-of-way, as authorized by Virginia Code §§15.2-2015 and 46.2-1315.

#### **Sec. 114-431. – Definitions.**

The following words, terms, phrases, when used in this Division, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

*Bicycle* means a device propelled solely by human power, upon which a person may ride either on or astride a regular seat attached thereto, having two or more wheels in tandem, including children's bicycles, except a toy vehicle intended for use by young children.

*City* means the City of Manassas, Virginia.

*City Manager* means the City Manager of the City of Manassas, or his or her designee.

*Electric power-assisted bicycle* means a vehicle that travels on not more than three wheels in contact with the ground and is equipped with (i) pedals that allow propulsion by human power and (ii) an electric motor with an input of no more than 1,000 watts that reduces the pedal effort required of the rider and ceases to provide assistance when the bicycle reaches a speed of no more than 20 miles per hour. Electric power-assisted bicycles shall be equipped with spill-proof, sealed or gelled electrolyte batteries.

*Motorized skateboard or scooter* means every vehicle, regardless of the number of its wheels in contact with the ground, that (i) is designed to allow an operator to sit or stand, (ii) has no manufacturer-issued vehicle identification number, (iii) is powered in whole or in part by an electric motor, (iv) weighs less than 100 pounds, and (v) has a speed of no more than 20 miles per hour on a paved level surface when powered solely by the electric motor. "Motorized skateboard or scooter" includes vehicles with or without handlebars but does not include "electric personal assistive mobility devices", as defined in Virginia Code §46.2-100.

*Shared mobility device* means a bicycle, electric power-assisted bicycle, motorized skateboard or motorized scooter which is offered by the owner for rent to the public for a fee.

*System operator* means any person or entity in the City offering shared mobility devices for rent to the public for a fee.

**Sec. 114-432. – Permit required; fee.**

- (a) Any person seeking to rent shared mobility devices for use by members of the public on City rights-of-way shall first apply, on an application provided by the City, for a permit from the City Manager.
- (b) A permit will be conditioned on the applicant's compliance with the terms and conditions of this Division, and with any applicable administrative rules and regulations established by the City Manager. The term of the permit will be twelve months from the date it is issued. Permits may not be assigned, sold or otherwise transferred by the system operator.
- (c) The annual fee for a permit, payable upon issuance or renewal of the permit, will be \$500.00 for every 25 shared mobility devices, or fraction thereof, offered for rent by the system operator within the City.
- (d) Prior to beginning operation the applicant shall also obtain a City business license from the Commissioner of the Revenue, if required, and shall be responsible for the payment of all applicable business license fees and taxes.
- (e) Any person operating a shared mobility system within the City without first obtaining a permit as required by this Division shall be subject to a civil penalty not to exceed \$1,000 for each violation.

**Sec. 114-433. – Permit denial or revocation; appeal.**

- (a) The City Manager may deny, in writing, an application for a permit or for a permit renewal, or may revoke an outstanding permit, for a serious or repeated failure to comply with the requirements of this Division, or with any administrative rules and regulations established by the City Manager pursuant to §114-437.
- (b) Any person whose application has been denied or whose permit has been revoked may file a written appeal with the Clerk of City Council within ten calendar days of the denial or revocation. The written statement shall describe the basis for the appeal, and the relief requested. City Council shall issue a final decision on the appeal within thirty calendar days from the date the appeal was filed.
- (c) Any person whose application has been denied or whose permit has been revoked may not apply for another permit for a period of six months following the denial or revocation.

**Sec. 114-434 -- Required equipment.**

A system operator may only offer for rent shared mobility devices that meet the applicable definitions set forth in §114-431, and that meet the following equipment requirements:

- (a) Bicycles shall meet the Consumer Product Safety Commission safety standards set forth in 16 Code of Federal Regulations Part 1512.
- (b) Each shared mobility device shall meet the applicable headlight, taillight and reflector requirements set forth in Virginia Code §46.2-1015.
- (c) Bicycles and electric power-assisted bicycles shall be equipped with a brake as required by Virginia Code §46.2-1066.
- (d) Identifying and contact information for the system operator must be permanently affixed to each shared mobility device.
- (e) Each shared mobility device shall be equipped with an on-board GPS device capable of providing real-time location.
- (f) All motorized skateboards and scooters and all electric power-assisted bicycles shall be equipped with devices that allow the system operator to render by remote means a device inoperable if it has been reported to the system operator as being damaged, defective or stolen.

**Sec. 114-435 – Operation.**

- (a) A system operator shall not rent a motorized skateboard or scooter or electric power-assisted bicycle to any person less than 14 years old, except that such rental may be made if the system operator determines that the person less than 14 years old will be under the immediate supervision of a person who is at least 18 years old.
- (b) Pursuant to City Code § 114-412 a system operator will require the use of a helmet by any person 14 years of age or younger who rents a bicycle or electric power-assisted bicycle from the system operator. The system operator shall also

- encourage the use of a helmet by all other persons renting a shared mobility device.
- (c) The system operator shall notify all users that the use of motorized scooters, skateboards and electric power-assisted bicycles is prohibited on City sidewalks within the area bounded by Center Street, Zebedee Street, Church Street and Grant Avenue, including on the sidewalks abutting both sides of those streets, at the Harris Pavilion, in the Prince William Street Parking Garage, and within any area subject to a special permit issued pursuant to Chapter 14 of this Code, and that the operation of motorized scooters, skateboards and electric power-assisted bicycles on Manassas City Public School property requires the prior approval of the City Public School administration.
  - (d) The system operator shall notify all users that when operating a shared mobility device they have the same rights and duties applicable to the driver of a vehicle under Virginia law. The system operator shall notify users that they are prohibited from riding shared mobility devices in the City while (i) wearing headphones on or in both ears; (ii) while texting; or (iii) while under the influence of alcohol.
  - (e) Shared mobility devices must be parked upright on hard surfaces in a manner that does not obstruct a public right-of-way or sidewalk, impede pedestrians, or impede access to any public facility or structure. The City Manager may designate areas that are reserved for the parking of shared mobility devices and areas where parking is prohibited. A system operator shall not place, install or operate a docking station, bike stand or corral or any other structure on City-owned property without first obtaining a lease, license or franchise, as applicable, from the City.
  - (f) Nothing in this Division shall be interpreted as authorizing the use of a shared mobility device on private property without the prior consent of the owner of that property.

**Sec. 114-436 – Insurance.**

A system operator shall be required to purchase and maintain throughout the term of its permit, at its sole expense, and from a company or companies authorized to do business in the Commonwealth of Virginia, insurance policies containing the following types of coverages and minimum limits:

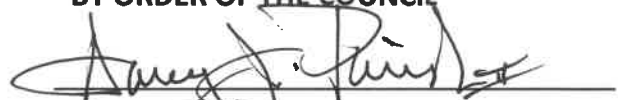
- (a) Workers' Compensation – statutory requirements and benefits.
- (b) Employer's Liability -- \$100,000.
- (c) Commercial General Liability -- \$1,000,000 per occurrence. The City and its officers and employees must be named as additional insureds and so endorsed on the policy.
- (d) Automobile Liability -- \$1,000,000 per occurrence (only if a motor vehicle is used by the operator in the renting of shared mobility devices).

**Sec. 114-437 – Administrative rules and regulations.**

The City Manager may adopt and enforce such administrative rules and regulations regarding the operation of shared mobility systems on public rights-of-way in the City that are not inconsistent with the provisions of this Division, and that are reasonably necessary to ensure that the operation of such shared mobility systems is consistent with the safety and welfare of pedestrians, people with disabilities, and other users of the public rights-of-way.

This ordinance shall take effect upon second reading.

**BY ORDER OF THE COUNCIL**

  
Harry J. Parrish II Mayor  
On Behalf of the City Council  
of Manassas, Virginia

ATTEST:

  
Lee Ann Henderson City Clerk

**MOTION: LOVEJOY**  
**SECOND: ELLIS**  
**RE: ORDINANCE #O-2020-05**  
**ACTION: APPROVED**

**Votes:**

**Ayes:** Davis-Younger, Ellis, Lovejoy, Sebesky, Smith, Wolfe

**Nays:** None

**Absent from Vote:** None

**Absent from Meeting:** None

## **Shared Mobility Device (SMD) Administrative Rules and Regulations**

**Last Updated: April 13, 2021**

The following administrative rules and regulations for the operation of shared mobility systems are issued pursuant to Sec. 114-437 and in addition to the requirements of City Code Sec. 114-430 through Sec. 114-437 to ensure that the operation of such shared mobility systems is consistent with the safety and welfare of pedestrians, people with disabilities, and other users of the public rights-of-way:

- 1) Service Management and Communication
  - (a) If Operator changes their Local Fleet Manager, they must immediately notify the City point of contact (POC) of such change.
  - (b) Operator shall meet with the POC at least one week before launch and, at a minimum, monthly for the next four months following launch.
  - (c) Upon the request of the City POC due to declared local emergencies, construction, special community events as designated by Council under City Code Sec. 14-45, public gatherings permitted under City Code Sec 102-9, or other situation affecting the normal operation of the right-of-way including sidewalks and trails, Operator shall collect and secure all of, or a portion of, Operator's owned or controlled SMDs to a location outside of the public right-of-way or to a location that does not otherwise impede City's access and response to the situation for the duration of the situation. City has the right to take appropriate actions to respond to an emergency if the situation poses an imminent risk to public health and safety or property damage.
  - (d) Response time in an emergency shall mean within 2 hours from the time of report between 6:00 am and 11:00 pm or before 8:00 am if time of report is after 11:00 pm. For non-emergency requests, the operator's POC should respond within 5 business days.
  - (e) Operator shall conduct outreach and education activities for the community including residents and businesses, including a minimum of four in-person events in the City with at least one event within the first month of operations. Alternative outreach and education event formats may be proposed if a public emergency restricts in-person events. Operator shall submit a Community Engagement plan describing the planned activities.
  
- 2) Operations
  - (a) The approved permit authorizes Operator to operate within any portion of City.
  - (b) Operator shall provide updates about modifications to its service area and deployment locations with the monthly usage reports.
  - (c) Operator shall provide the City with information about any plans to operate in neighboring jurisdictions (Prince William County and City of Manassas Park).
  - (a) Operator is restricted to the maximum number of SMDs as shown in the approved permit. Companies may request additional SMDs in increments of 25 devices based on four consecutive weeks of use of the permitted maximum number of devices being used an average of at least three trips per day, and payment of the additional license fee as required by Sec. 114-432.
  - (b) Operator shall have a customer service phone number for reporting safety concerns, complaints, and questions that is live 24 hours a day. This phone number and its website shall be clearly visibly posted on every SMD that is in service within the City.
  - (c) Operator shall provide their preferred contact information for SMD parking issues to the City Police Department.
  - (d) Operator shall affix its logo and unique identifying number for the device to each SMD in the City so that it is clearly visible.

- (e) Operator shall regularly monitor the deployment and dispersion of its SMDs to maintain service throughout City and shall promptly respond directly to City residents and all users reporting problems, issues and/or requesting information regarding services.
- (f) The Operator shall include language in the terms and conditions of any contract with its customers to inform them of the following parking requirements:
  - i. Within the Downtown core (see attached map), SMD parking will only be permitted at the following designated areas adjacent existing bike racks - Harris Pavilion, Museum, Train Depot, and City Hall;
  - ii. Outside downtown core, parking will be required adjacent public bike racks where available on City owned property.
  - iii. Any SMD parked on private property is subject to the requirements of that property owner.
  - iv. Within two (2) hours of reporting by the City or others, Operator shall remove SMDs parked in violation of the parking requirements outlined above, or otherwise in conflict with applicable laws and regulations.
  - v. SMDs are not permitted to park in one location on public property or in the public right-of-way longer than seven consecutive days without moving.
  - vi. Failure to adhere to these parking performance measures may result in the City removing the SMD and storing it in a City facility. Operator shall be required to pick up SMDs from such a facility and shall pay all costs associated with removal and storage of the devices, in addition to any applicable fines or fees, or other penalties as appropriate under the law. Subject to applicable laws and regulations, The City shall consider Operator's SMDs abandoned and dispose of them as the City deems fit in the event of that Operator fails to retrieve the device in due time upon being notified of the removal and storage.

### (3) Data

- (a) Operator shall provide a publicly-accessible application program interface clearly posted on the company's website that shows, at minimum, the current location of any SMDs available for rental at all times.
- (b) Without prejudice to Operator's rights to and interest in its commercially privileged and sensitive information, Operator shall provide to the City POC the following data in a Monthly Report by the 15th of each month for the previous month's activity:
  - i. Daily SMDs in service in the City and total active customers who reside in the City
  - ii. Trips starting and trips ending, separately, in the City during the month, and trips starting and trips ending in the City since launch (raw trip data)
  - iv. Average trip duration in minutes and total distance of trips (if this is calculable from provided raw trip data, no need to provide separately)
  - vi. A map of trip route data for all trips starting, ending, or passing through the City, by month
  - vii. Crashes or injuries – giving time, date, precise location, number of parties impacted, and cause (if known)
  - x. Complaints or feedback received – giving the reason with date and location, if available/appropriate
    - 1. Incorrectly parked SMD reports – giving time, date, and precise location
    - 2. Speeding reports
    - 3. Other feedback received – by date, time, and precise location, if applicable
- (c) Operator shall use the General Bikeshare Feed Specification (GBFS) as documented at <https://github.com/NABSA/gbfs/> for its devices. Operator shall inform the City of the location of the gbfs.json file on the Internet. The gbfs.json file contains the necessary information to find other files related to the GBFS data. If a token or authentication is required to view that file, the location to apply for the token must also be submitted to the City.





**CITY OF MANASSAS**  
 DEPARTMENT OF COMMUNITY DEVELOPMENT  
 PLANNING & DEVELOPMENT  
 9027 Center Street, Room 201  
 Manassas, VA 20110  
 Phone: 703-257-8278 Fax: 703-257-5831  
[www.manassascity.org/691/Development-Services](http://www.manassascity.org/691/Development-Services)  
 Email: [PermitStatus@ci.manassas.va.us](mailto:PermitStatus@ci.manassas.va.us)

**FOR STAFF USE ONLY**

APPLICATION NUMBER \_\_\_\_\_  
 APPROVAL BY \_\_\_\_\_  
 APPROVED DATE \_\_\_\_\_  
 CONDITIONS FOR APPROVAL \_\_\_\_\_  
 EXPIRATION DATE \_\_\_\_\_

New  Renewal

**SHARED MOBILITY PERMIT APPLICATION**

**Company Information**

Company Name \_\_\_\_\_ Company Contact Name \_\_\_\_\_  
 Company Mailing Address \_\_\_\_\_ Company Contact Phone Number \_\_\_\_\_  
 Company Website \_\_\_\_\_ Company Contact Email \_\_\_\_\_  
 Local Fleet Manager \_\_\_\_\_ Local Fleet Manager Phone Number \_\_\_\_\_  
 Local Fleet Manager Email \_\_\_\_\_ Customer Service Phone Number \_\_\_\_\_

**Fleet Information**

Proposed Fleet Mode (e.g. bike, e-bike, or electric scooters) \_\_\_\_\_  
 Proposed Mode-specific Fleet Size \_\_\_\_\_

**Applicant Submission Requirements**


1)	City of Manassas Business License	Information can be found on the Commissioner of Revenue webpage: <a href="https://www.manassasva.gov/connect/commissioner_of_the_revenue/business_taxes/business_licenses/index.php">https://www.manassasva.gov/connect/commissioner_of_the_revenue/business_taxes/business_licenses/index.php</a>
2)	Certificate of Insurance	Insurance policy must contain coverage as defined in Sec. 114-436
3)	Annual Permit Fee	Payable upon issuance or renewal of the permit (\$500 for every 25 shared mobility devices).
4)	Permit Application Attachments	<ul style="list-style-type: none"> <li>○ Service Area, Deployment, and Parking Management Plan</li> <li>○ Community Engagement Plan</li> </ul>
5)	Pre-launch meeting	At least one week before launch

I, the undersigned, do affirm that the activity proposed above will conform to the requirements of City Code Sec. 114-430 through Sec. 114-437 and conditions for approval below. Should the activity deviate from this approval, the permit may be revoked and the shared mobility devices be required to be removed from the City of Manassas.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**You have a right to appeal this decision within ten days in accordance with City Code Sec. 114-433. This decision shall be final and unappealable if not appealed within ten days. You may appeal by filing a written appeal, specifying the grounds thereof, with the Clerk of City Council. The fee for an appeal is \$500, plus the cost of public hearing newspaper advertisements.**

**Legend**

 SMD Parking

 Downtown Core



# Shared Mobility Devices (SMD) Designated Parking within Downtown Core