



E-BICYCLE & E-MOTORCYCLE SAFETY

→ WHEN AND WHERE YOU CAN AND CANNOT OPERATE THESE FORMS OF TRANSPORTATION

An increasing concern

Crashes involving these forms of vehicles have increased in 2025. Many of the e-motorcycle crashes in Henrico County involved juveniles, who are not following state or local traffic laws.

This flyer aims to educate the public about the laws and regulations that govern the operation of these types of vehicles on county and state roadways.

E-BICYCLE

Per the Code of Virginia ([§ 46.2-100](#)), an e-bicycle is defined as an "Electric power-assisted bicycle" which travels on no more than three wheels and is equipped with (i) pedals that allow propulsion by human power, (ii) a seat for the use of the rider, and (iii) an electric motor with an input of **no more than 750 watts**.



Electric power-assisted bicycles are classified as:

1. "Class one" - Equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the bicycle reaches a speed of **20 miles per hour**;
2. "Class two" - Equipped with a motor that may be used exclusively to propel the bicycle and that ceases to provide assistance when the bicycle reaches the speed of **20 miles per hour**; and
3. "Class three" - Equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the bicycle reaches the speed of **28 miles per hour**.

An e-bicycle may be operated on sidewalks and roadways and does not require a license or registration.

E-MOTORCYCLE

A "motorcycle" means every motor vehicle designed to travel on not more than three wheels and is capable of **traveling at speeds in the excess of 35 miles per hour**.

These vehicles are considered motorcycles regardless of whether it is gas-powered or electric-powered.

Many of the electric-powered motorcycles can reach top speeds in the excess of **65 miles per hour**. As a result, operation of these vehicles requires the following:

- Drivers license
- Class M endorsement
- Registration/Inspection
- Insurance
- Helmet

A motorcycle must be operated on a roadway; they are not allowed on sidewalks. **Please note, a dirt bike, regardless of gas-powered or electric-powered, is considered a motorcycle when operated on a roadway.**



“Motorcycle” does not include any “autocycle,” “electric personal assisted mobility device,” “electric power-assisted bicycle,” “farm tractor,” “golf cart,” “moped,” “motorized skateboard or scooters,” “utility vehicle,” or “wheelchair or wheelchair conveyance.”

MOPEDS

Please note, mopeds are every vehicle that travels on not more than three wheels and (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.

A moped is considered a motorcycle when operated at speeds in the excess of 35 miles per hour, which requires the proper vehicle documentation and license requirements.



What you need to know

Many of these electric-powered motorcycles are being marketed as electric-dirt bikes. Once the vehicle enters the roadway it is considered a motorcycle and requires the proper vehicle documentation and license requirements. [Learn more here.](#)

(Information updated March 2026)