



Electric Bicycle Safety Course

Presented by the
Irvine Police Department
Traffic Bureau
&
Youth Services Bureau

"In Partnership with the Community"

E-Bikes

- An “electric bicycle” (E-Bike) is a bicycle equipped with **fully operative pedals** and an electric motor of less than **750 watts** (CVC 312.5)
 - ▶ E-Bikes are not “motorized bicycles”
 - ▶ Law defines 3 classes:





Class 1 E-Bike

- ▶ Equipped with a motor that provides assistance only when rider is pedaling with a maximum motor assisted speed of 20 MPH



Class 2 E-Bike

- ▶ Throttle assisted electric bicycle equipped with motors that exclusively propel the bicycle with a maximum motor assisted speed of 20 MPH

- Class 3 E-Bike

- ▶ Equipped with a motor that provides assistance only when the rider is pedaling, with a maximum motor assisted speed of 28 MPH

- E-Bike riders are subject to the rules of road - CVC 312.5(b)

- Manufacturers/distributers must affix permanent labels that contain the E-Bikes class number, top assisted speed, and motor wattage – CVC 312.5(c)

**CLASS 2
350W
20mph**

← **All E-Bikes must
have this**

Not E-Bikes

- Not everything sold as an E-Bike is a legal E-Bike
- For example:
 - The Sur Ron X and the Segway XI60 & X260

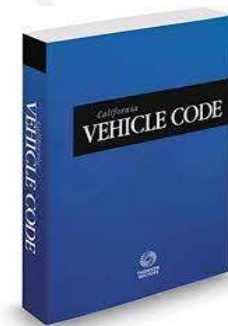


Not E-Bikes

- These devices are NOT E-Bikes
 - ▷ Stock models have no working pedals
 - ▷ Exceed the 20 MPH requirements for Class 2 E-Bike
 - ▷ Cannot legally be registered as Mopeds with the DMV, and cannot be registered as Off Highway Vehicles
- These devices are subject to penalty under CVC 21720
 - ▷ Prohibits the use of pocket bikes on sidewalks, roadways, bikeways, bicycle paths, or on public lands open to OHVs

E-Bike Laws

- E-Bikes must follow all of the same rules and regulations as regular bicycles (for the most part)
 - ▶ For class 3 E-bikes you must be 16 and all ages must wear a helmet
 - ▶ Exception could be prohibitions placed on E-Bikes from localities for certain trails



Bicycle Helmets

- CVC 21212(a) – Bicycle Helmets (properly fitted and secured) required for all riders under 18 years old
 - ▶ Also applies to passengers



Bicycle Passengers

- Bicycle passengers must ride on a permanent and attached seat (CVC 21204)



Distracted Riding

- Any activity that diverts attention from riding is distracted riding
- You cannot ride safely unless the task of riding has your full attention
- Examples:
 - ▷ Phone calls
 - ▷ Texting, GPS, any use of cell phone
 - ▷ Eating
 - ▷ Earphones/earbuds



Headphones / Earbuds

- A person operating a motor vehicle or bicycle may not wear a headset covering, earplugs in, or earphones covering, resting on, or inserted in, both ears (CVC 27400)



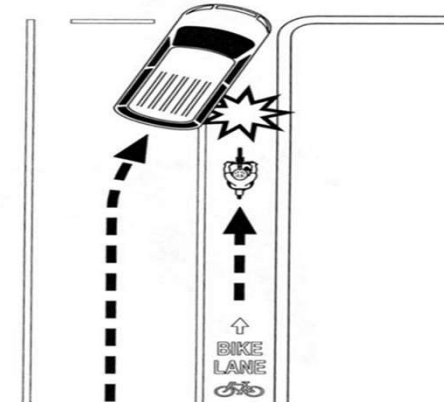
Rules of the road

- E-Bikes must stop at stop signs
 - ▷ Stop = not moving
 - ▷ Stop does not equal slow down and go
- E-Bikes must also stop at red lights
 - ▷ Even when turning right



Rules of the road

- E-Bikes must be ridden on the right side of the road – just like cars
 - ▶ Always safer to ride with traffic
- E-Bikes must ride in the bike lane or to the right side of the road when on the street
 - ▶ Take caution when entering intersections – cars will be turning



Rules of the road

- E-Bikes may ride on sidewalks in Irvine
 - ▷ Not Newport Beach
- When on sidewalk...
 - ▷ Yield right of way to pedestrians
 - ▷ Give audible signal before overtaking/passing pedestrians
 - ▷ Avoid playgrounds, parks, or school grounds



■ Must yield to traffic lawfully in roadway when leaving the sidewalk

- ▶ 4-7-207 Emerging from, entering alley, driveway, bicycle path, etc.
 - ▶ “The operator of a bicycle emerging from an alley, driveway, bicycle path, building or otherwise approaching upon a sidewalk or sidewalk area shall yield the right-of way to all pedestrians on such sidewalk or sidewalk area, and **upon entering a bicycle lane or roadway, shall yield the right-of-way to all vehicles or bicycles on the roadway.**

■ Pedestrian signals?

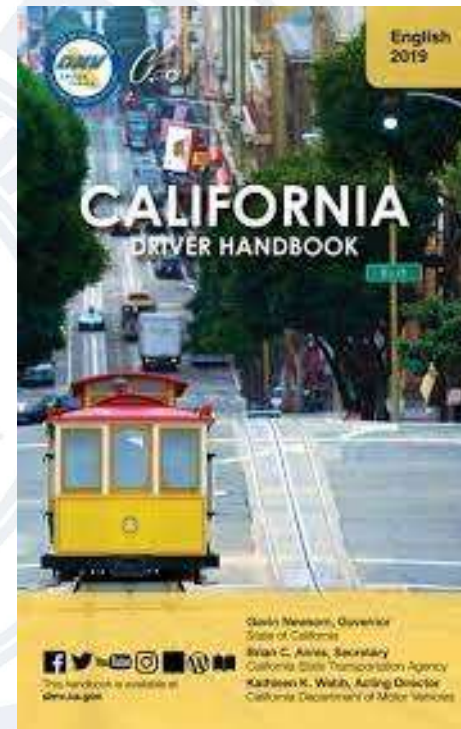
■ Speeding – CVC 22350

- ▶ No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property
- ▶ What is a safe speed will depend on the conditions present (traffic, weather, roadway conditions, etc.)

Rules of the road

■ Questions about rules of the road?

- ▷ Learn this now
- ▷ Use it for review

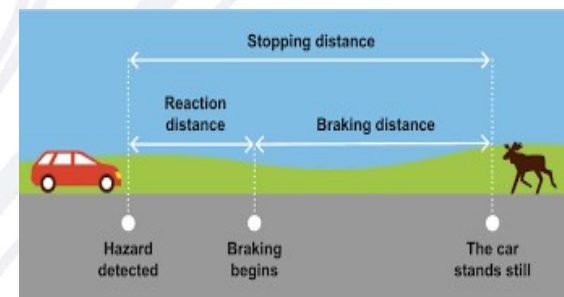


Safety Concerns

- E-Bikes travel at speeds higher than regular bicycles
- Stopping distance will include perception/reaction (1.5 seconds) and braking distances
 - ▶ A car will take over 60 feet to stop at 20 MPH



	CLASS 1	CLASS 2	CLASS 3
Pedal Assist	✓	✓	✓
Throttle		✓	
Max Speed	20 mph	20 mph	28 mph



Safety Concerns

■ Common injuries caused by E-Bikes at



- ▷ Concussions
- ▷ Extremity fractures (ex: arms, legs)
- ▷ Skull fractures
- ▷ Facial fractures

■ Types of injuries on E-Bikes more consistent with motorcycles than traditional bikes

- ▷ Difference with E-Bikes are more head and internal organ injuries due to more impact and higher speeds during accidents or lack of control

What we learned today

- Electric bicycles that qualify as “E-Bikes” must meet definition of the law (CVC 312.5)
- Wear a helmet
- Passengers must ride on permanent and attached seats
- Never ride while distracted
- Always follow state and local laws when riding
- E-Bikes go faster than regular bicycles so take greater caution
- Follow school procedures