COALITION FOR APPROPRIATE TRANSPORTATION

September 1, 2026

The Honorable Nick Miller
Pennsylvania State Senate
740 Hamilton St #200
Allentown, PA 18101

Dear Senator and Committee,

Thank you to Senator Nick Miller's office, Julie Carraghan, and staff who invited me here today.

My name is Scott Slingerland. I am the Executive Director with CAT-Coalition for Appropriate Transportation. I am a Pennsylvania State Licensed Professional Engineer, a League of American Bicyclists certified instructor, and an American Bicycling Education Association CyclingSavvy instructor. I am also a licensed driver in Pennsylvania, though I have lived without a car for 15 years now.

Every day at CAT we live bicycle safety, pedestrian safety, and public transit.

Every day at CAT, we live the conversation about e-bikes and e-scooters. I am glad that the Pennsylvania legislature is taking up these issues to keep with the times. Updated legislation can bring more clarity for operators of e-scooters, e-bikes, traditional bicycles, pedestrians, and motor vehicle operators.

My testimony today will be broken down into 9 major areas of micromobility:

Introduction 2
Inconsistent E-Bike Speed Classifications 2
Global Comparisons 3
E-Bike Equipment Challenges 3
Better Safety/Crash Data is Needed 3
Driver Licensing & Continuing Education 4
Speed and Vehicle Characteristics of Bikes, E-Bikes, E-Scooters 5
Other Behavior 5
Other Proposed/Possible Legislation for Vulnerable Road Users 6

This is not A.I. generated. These are my thoughts based on what we are seeing on the streets. I am not speaking for or against this legislation on behalf of CAT.

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails

Introduction

E-bikes (bicycles with electric motors to assist) can be a great way for people to enjoy transportation with movement. E-bikes can be helpful for those returning from a sedentary lifestyle, illness, or those with physical limitations. E-bikes can also provide a “boost” for someone to bicycle a greater distance at higher speed, replacing/reducing their dependency on cars.

However, regarding e-bikes and e-scooters, the current state of laws, rider behavior, and enforcement is like being in the wild west. I hope I can explain today why the situation on our streets and trails is so rife with chaotic confusion…

To start with, I hope everyone is on-board with current Pennsylvania e-bike laws. To summarize:

1. Must have operable pedals and maximum bike weight of 100 lbs.
2. Must have maximum motor speed of 20mph and maximum power of 750 watts.
3. May have throttle.
4. Rider must be at least 16 years old.
5. Does not require registration or insurance.
6. Follows all same rules of PA Vehicle Code as a traditional bicycle.

Inconsistent E-Bike Speed Classifications

We see many community members with e-bikes who may have purchased either in-person at a bike shop or online from any number of major or off-market brands. Some issues that arise:

1. Pennyslvania’s 2014 e-bike law was codified before the current class system existed. Nowadays, e-bikes in the U.S. are categorized as Class 1, 2, or 3. PA’s e-bike laws could be interpreted to fall under Class 1 or 2 which both have 20mph max speed. Class 3 has 28mph max speed is not PA street legal or even legal under DCNR state lands policy. Class 4 is unofficially anything faster than 28mph.
2. As already noted, maximum motor assist speed per existing PA law is 20mph. Devices can easily be bought that go 20, 30, 40, or 50mph. These are mopeds under PA law, yet they are sold as e-bikes by manufacturers.
3. It is too easy for anyone to connect a USB cable to their e-bike and computer and change the software to eliminate the maximum legal speed setting with no other visible indication.
4. It is too easy for anyone to purchase or modify a Class 3 or 4 e-bike or e-scooter which has a sticker indicating it’s speed, class or wattage, to which they can make their own sticker or purchase a sticker online that states incorrectly that it is a Class 1 or 2 device.
5. Everything I’ve just mentioned makes it almost impossible for police to identify if an e-bike is street legal. In this case, how can police enforce e-bike laws preemptively or to be accurate for their crash reporting??
6. Minimum age to be an e-bike rider in PA is 16 years old. Parents often do not understand the minimum age requirement. Look around on our streets and see that riders as young as 7 or 8 are riding e-bikes and e-scooters. I’m sure that our partners in law enforcement would agree that e-bikes and e-scooters are now ubiquitious in usage, and e-bikes piloted by youth under 16 years old is very common.
7. PA vehicle code and its e-bike laws do not by default apply on trails, except where they cross the street. Hypothetically, every one of our 62 municipalities in Lehigh and Northampton Counties

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails

may pass their own different e-bike ordinances for trails and shared use paths. To date we know of five who have done so.

8. The public does not fully understand e-bike laws. The need for speed is real. Human desire to go fast puts riders at odds with their riding skills and other trail/road users.

Global Comparisons

Globally speaking, PA and all U.S. states allow e-bikes much faster than Europe and the rest of the world. To add confusion for global manufacturers and consumers, the European Union does not use the U.S. 3-class system, but instead classifies under two categories: (1) Standard Pedelecs that go up to 15.5mph, and (2) Speed Pedelecs that go up to 28mph. This makes it challenging to compare safety and crash data between U.S. and Europe.

Region	Maximum Speed	Motor Wattage	Minimum Age
Pennsylvania	20mph	750	16
United States	20-28mph	750	0-16
Canada	20mph	500	12-16
Europe and most other countries (Standard Pedelec)	15.5mph	250-400	0-16

E-Bike Equipment Challenges

Where the e-bike world struggles for safety:

1. Potential for battery fires: Some low-cost e-bikes are not U.L. approved. Some users replace their charger with an improper one, raising the risk of fire. Manufacturers rely on users only charging their e-bike batteries when they are present and not sleeping, advised to watch for overheating and smell of smoke. How should someone know if their battery was damaged in a crash if damage is internal?
2. Parts are not standardized, making it difficult to diagnose, repair, and stock parts for all potential variations of motors, displays, controllers, sensors, and batteries.
3. Bike shops will often refuse to repair off-brand or non-street legal e-bikes to limit their own liability or when proprietary software is required. Fewer repair options for basic mechanicals such as disc brakes and tires, means people are literally dragging their feet to stop (on e-bikes!!) This increases crash risk or leads to low-income riders to replace broken bikes when no one can/will repair them.

Better Safety/Crash Data is Needed

PennDOT/Municipal/Police

Pennsylvania has an amazing resource in the online Pennsylvania Crash Information Tool (PCIT). CAT uses the publicly available PCIT database to look at crash trends of all types over the last 25 years. Thank you to PennDOT for providing this!

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails

However, if Pennsylvania is indicative of other states, PCIT does not include e-bike or e-scooter crash data. So how is anyone to know exactly what the situation is on the streets and trails? I have a feeling that first responders: police, EMTs, and fire departments, see these crashes on a regular basis, but how many, and where are they happening? What are the characteristics of these crashes that can form the basis for CAT's community outreach and education efforts?

PennDOT's Police Crash Report Manual (Pub 153) rev 07-26 now includes a checkbox for police officers to indicate Class 1-4 e-bikes on crash reports but knowing our own challenges in identifying legality of a specific e-bike, I can see how accuracy would be difficult.

I have not seen data from e-bike crashes compiled in PCIT or other to see trends around the Commonwealth. Has anyone tracked traffic crash data around the Commonwealth with any accuracy?

Hospital Networks

CAT has been seeking our two largest hospital networks (St Luke's Health Network and Lehigh Valley-Jefferson) to aggregate their Emergency Room admission data.

Knowing that most bicycle crashes are solo falls (League of American Bicyclists and CyclingSavvy) and are not reported to the police, hospital data would be very helpful for determining trends. Despite anecdotal urgency in their Community Health Needs Assessments, the hospitals have not shared any insightful data about bikes, e-bikes, or e-scooters.

For the purposes of education for bicyclists, motorists, and pedestrians, understanding relative annual crash trends through hospital data: injury types & severity, helmet usage, and user demographics could go a long way, despite it not tracking other crash characteristics found in PCIT, such as speed, road type, and crash locations.

Bottom line: if state legislators are making policy decisions for Pennsylvania, what local data is this based off of?

Driver Licensing & Continuing Education

PA Senate Bill 1008 includes a provision for driver's license questions for new drivers during their written exam. The proposed requirement is for new drivers to be tested on their understanding to "…drive safely near pedestrians, pedalcycles and other active transportation road users…" Wholeheartedly, I can say that is great!

But we can go a step further. Bear with me…

The proposed bill naturally engages 16 year olds, but what about drivers who are 20, 30, 40, 60, or 80 years old. These drivers make up the majority of road users, but in some cases haven't been tested since 1960. By simply mailing in $40 every 4 years, there are no other requirements for licensed drivers to keep driving. PennDOT has the challenge of trying to reeducate these drivers through Facebook and billboards (which are helpful no doubt, yet are incomplete).

Senators, I beg you to consider that every other PA State License: whether it be cosmetology, architecture, funeral directing, estheticians, and engineering to name a few of the 29—every one requires continuing education (CEUs) of 20-40 hours every time a license is renewed… So what about drivers licenses? To keep it simple and minimally onerous, it could be as simple as PennDOT including

a 5-minute video for the driver to watch online or at the Driver License Center. The video could include high-priority safety topics such as work zones, emergency vehicle yield laws, aggressive driving, pedestrians, bicycles).

Do you think this could be an effective way to reach Pennsylvania's 9 million drivers many who don't seek out education or social media?

Speed and Vehicle Characteristics of Bikes, E-Bikes, E-Scooters

I've ridden e-scooters a few times and I admire that they are decidedly compact and convenient in their nature. Someone who lives in a second floor apartment can much more easily carry an e-scooter up the stairs vs an 80 pound e-bike, that would be impossible.

The smaller wheels and near-vertical steering axis of e-scooters make their handling a bit twitchy and more susceptible to road hazards than a typical bicycle or e-bike. Does data indicate a trend in crashes that would support or refute this?

E-scooters share many characteristics with e-bikes, which is perhaps the basis that the proposed PA Senate Bills mirror the speed and 16 year old minimum operator age. I ask why SB 1008 has a 20mph e-scooter maximum speed and SB 1009 has a 15mph maximum speed for shared scooters, but that is a minor point

We have come up with a saying that summarizes some traffic mentality: "It's not how fast you can go, but how fast you should go!"

The key is situational-awareness. If an e-bike, e-scooter, or traditional bike can go 20mph, but they're on the D&L Trail that is 6' wide with the canal on one side and the Lehigh River on the other side, passing a person walking with a small child or a dog, it would be insane to pass them at 20mph. A safe passing speed in my opinion might be 6-10mph with lots of friendly warning and communication.

If someone is riding an e-bike or e-scooter down a street and there are a line of cars stopped or slow ahead, it would similarly ill-advised to pass the line of cars on either side at 20mph, or at any speed, really. High-speed means minimal reaction time and longer stopping distance. And as an engineer, it is my duty to remind you about speed and it's relation to kinetic energy and crash severity. A speed increase of 33% from 15 to 20mph yields an increase of 78% in kinetic energy.

One last thing on speed. Bike lane design speeds are often set at 15mph for determining sight distances and other factors, which is inadequate for 20mph e-bikes and the proposed e-scooter legislation.

Other Behavior

From the perspective of an active transportation educator, e-bike and e-scooter riders exhibit similar behaviors to traditional bicycle riders. Our biggest goals for user safety and to reduce crashes are to:

1. Improve bike handling:
    a. E-bikes can accelerate unexpectedly for new riders. Whether pedal-assist or throttle, making a tight u-turn or navigating a confined area, such as a sidewalk or trail are places where we see riders crash. The added weight of an e-bike makes it harder to maneuver as well. Practicing starting/stopping and skills such as slalom and emergency stopping

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails

seem obvious but are often overlooked by riders who haven't ridden in many years, or who are coming from lighter, traditional bikes. Understanding weight and power whether motor is rear-wheel or mid-drive is also important.

2. Obey traffic control devices:
    a. Stop signs and traffic lights.
    b. Ride the same direction as other traffic.
    c. Use the lane intended for the destination, i.e. left turn, straight-thru, etc.
    d. It seems obvious, but these practices can go a long way to prevent intersection crashes.
3. Sidewalks and crosswalks are designed for walking and wheelchairs:
    a. 10-20mph on a sidewalk is a recipe for a crash or at least intimidation of pedestrians.
    b. Zipping across a crosswalk at 20mph is something no driver expects.
    c. Sidewalk riding in a Business District is illegal in Pennsylvania.
4. Equipment:
    a. A helmet is helpful
    b. Head/taillights at night
5. Communication:
    a. Bicyclists communicate with lane position and signals.
    b. Working to get along with motorists and signaling intentions can go a long way for diplomacy on the streets.
    c. Car drivers should be patient to pass with care by changing lanes and providing 4ft passing clearance (PA Vehicle Code since 2012) at a minimum. Cars should not pass a bicyclist when there is oncoming traffic. Sometimes it means slowing down for 10-20 seconds.

Other Proposed/Possible Legislation for Vulnerable Road Users

1. **Radar for Local Law Enforcement Bill**. Currently SB 1237 sponsored by Senator Nick Miller! Speed enforcement can benefit everyone's safety!!

2. **Automated Speed Enforcement.** Very good results from work zones and Roosevelt Ave in Philadelphia. Could be extended to statewide to control speed, the #1 factor in crashes.

3. **Automated Red Light Enforcement.** Currently allowed only in PA First Class cities. Please extend this to other municipalities to improve safety and reduce the enforcement burden for police.

4. **Parking Protected Bike Lane Bill.** Currently SB 824. Introduced but never brought to a full vote in the PA Senate. Current version includes "Mandatory Use of Available Pedalcycle Path" which no bicyclist should be in favor of as it tells motorists that bicyclists do not belong on the streets and makes bicyclists fight for the most basic things like avoiding a pothole, parked car, or making a left turn.

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails

Senator Miller, thank you again for this opportunity to discuss mobility and traffic safety for all road users!

Regards,

Scott Slingerland, P.E., Executive Director
scott@lvcat.org

CAT is a Lehigh Valley based 501(c)3 non-profit organization that works to improve mobility for everyone. Better bicycling, walking/ADA accessibility, public transit, and trail systems, develop a stronger, smarter economy and a higher quality of life. Sustainable transportation reduces traffic congestion, counters climate change, and offers a healthier community for everyone.

CAT-Coalition for Appropriate Transportation (LVCAT.org)
33 W Walnut Street, Suite 100 Bethlehem, PA 18018 610.954.5744
Walking | Bicycling | Transit | Trails