

STREETSBLOG

FIELD GUIDE *to the*
MICRO
MOBILITY

& large, annoying, deadly and virtually unregulated vehicles

of NEW YORK CITY

The Most Comprehensive One-Volume
Book of Identification



UPDATED FOR 2022

Streetsblog

Field Guide to the Micro Mobility
of New York City

Fifth Edition

North America

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ABOUT STREETS BLOG

Streetblog connects people to information about how to reduce dependence on private automobiles and improve conditions for walking, biking, and transit. Since 2006, our reporters have broken important stories about the systemic discrimination of pedestrians that leads to injuries and deaths, but also encourages the city to mistreat this sizable majority of New Yorkers.

Reporters at Streetblog have also covered the fight for better bicycle infrastructure and safer streets; the battle to free buses from congestion caused by car drivers and to make deep investments in our subway system; and to wipe away long-accepted corruption by the NYPD in the form of reckless driving, illegal parking, placard abuse, as well as poor knowledge of basic vehicular law.

STREETS BLOG

Streetblog raises the profile of these issues with policy makers and turns arcane topics like mandatory parking requirements and induced traffic demand into accessible stories for a broad audience.

Hundreds of thousands of readers rely on Streetblog, and its video production partners at Streetfilms, to link into a national movement for transportation reform. Streetblog USA, New York City, Los Angeles, San Francisco, Chicago, and Massachusetts produce original reporting and commentary that aim to change the cars-first status quo on their cities' streets. In short, Streetblog has helped set the agenda for local transportation coverage.

Streetblog NYC stories have made the case for progressive policy changes that are saving lives, expanding access to affordable transportation options, and creating a more sustainable future for New York.

Streetblog NYC is produced by OpenPlans, a 501c3 non-profit organization. It's funded by foundation grants, sponsorships and advertising, and generous donations from readers like you.

THE STREETS BLOG FAMILY



OFFICE OF THE COMMISSIONER



1 POLICE PLAZA, NEW YORK, NY 10038



October 6, 2021

I'll tell you personally, and this will probably annoy some people, but I worry more when I step off the street at what's coming left and right, and it's not cars at this point in time. And I think a lot of people share that view.

I ride a bike ever increasingly, I love it. I love riding around the city. I think the bike lanes have really created opportunities for people to get out there and do more.

But right now, I think it's probably a good opportunity to take stock of where we are right now, I'll tell you from the policing side, it's very complicated between electric and gas and different sizes and throttles. There's probably, you know, an opportunity there to really look at the entire landscape and how do we accomplish what everyone wants but do it a little more safely.

But when I step off the curb, I am more concerned right now – and this is a fact – with what's coming from the left, the right and every different direction, seemingly disobeying all manner of traffic control devices.

What I am seeing lately is more bicycles, scooters, dirt bikes, skateboards with engines on them, and I could go on and on – I think New Yorkers see it, too – that are not stopping at stop signs, going the wrong way in bike lanes, and I could go on.

A handwritten signature in black ink that reads "Dermot Shea". The signature is fluid and cursive.

Dermot Shea
Commissioner, NYPD

PREFACE

Pedal-assist electric bikes. Electric scooters. Mopeds. One-wheels. Skateboards. Class 1. Class A. Illegal in bike lanes. Legal, but with a driver's license.

These days, micro mobility devices are evolving and radiating like animal species during the Cambrian period — and their abundance is confusing everyone, even the people who are supposed to know this stuff better than all of us.

“From the policing side, it’s very complicated,” NYPD Commissioner Dermot Shea told Streetsblog on Oct. 6, as part of its preparation of this field guide. “Between electric and gas and different sizes and throttles. There’s probably an opportunity to look at the entire landscape.”

Shea’s confusion only confirms the pressing need for this field guide. For one thing, the law does not differentiate between gas or electric mopeds. For another, his officers typically refer to any device without pedals as a “scooter” or “e-scooter,” even though the law defines any motorized sit-down vehicle without pedals as mopeds or even motorcycles (the term “scooter” is now limited to stand-up devices like the kind you’ll see on page 15) of this guide.

Certainly, New Yorkers are confused about all the new motorized devices that are filling our roadways (and, infuriatingly, our bike lanes), which have become a Wild West of chaotic interactions.

But that’s not because of the modes — it’s because of the roads.

All the two-wheeled motorized devices on the market today are potentially far safer to vulnerable road users than the four-wheeled 3,000- to 5,000-pound conveyances they seek to supplant. But it doesn’t feel that way right now because users of illegal mopeds are often speeding through bike lanes, surprising pedestrians with their speed. Of course the moped rider is choosing the bike lane, where he or she will be far safer from the true behemoth on the roads: cars and trucks.

So the roads — not the modes — are the problem.

And a big issue right now is misinformation. Take Jamal, a delivery worker whom we encountered as we put the finishing touches on this seminal guide. Jamal was excited to show off his new Next moped because it would allow him to cover more ground and make more money because he could handle more deliveries.

One problem: Jamal’s moped isn’t legal. Under state law, Jamal needs to register the vehicle with the Department of Motor Vehicles, which would issue license plates that he needs to install on the device itself — like a car or motorcycle.

“No one at the shop told me anything,” he said. “I even asked, ‘Do I need a license plate for this?’ and they said, ‘No, man, it’s all legal.’” (All legal? With a speedometer that goes up to 90 miles per hour? The top legal speed for mopeds is 40 miles per hour.)



Class B moped (illegal because it lacks a license plate).

And some more-powerful mopeds and motorcycles not only require a plate, but a special motorcycle license. If he had only bought an electric bike — even one that goes 25 miles per hour — he’d be good to go: electric vehicles with pedals (even if those pedals are largely for show) are legal in bike lanes and do not require a license plate.

Confused? Virtually everyone is. When a hit-and-run moped rider struck and killed actor Lisa Banes on the Upper West Side in June, 2021, the NYPD repeatedly said that the suspect, Brian Boyd, had been operating a “scooter,” which was eventually altered to “scooter, possibly electric.”



A fake license plate on an illegal moped.

But Banes was not run over by a scooter. Nor did the device’s fuel source have any bearing on its legality. Only after repeated questioning by Streetsblog — and the emergence of video from the crash — did the NYPD change the classification: Banes, the police department said, was hit by the operator of a Fly 9 moped — a popular and fast model similar to Jamal’s.

So to put aside some of the confusion, Streetsblog has dug deep into its vast resources (including intern Henry Beers Sherk in the field and legendary production manager Vince DiMiceli) to join me in creating the latest edition of our popular and indispensable “Field Guide to the Micro Mobility of New York City.”

We hope this guide will encourage readers to get out into the wild and explore the amazing world of micro mobility.

— Gersh Kuntzman,
Editor-in-Chief,
Streetsblog
Nov. 5, 2021



ORGANIZATION OF GUIDE

The hardest thing about the new micro mobility is understanding all the rules. Some things are obvious: No vehicle of any kind can exceed the posted speed limit on any road. Some things are less obvious: Even if you need a driver's license and a license plate to operate a Class C moped, you don't need a helmet by law.

So on every page of this guide, look for these handy symbols to help you understand the rules:

WHAT THE LOGOS MEAN



This vehicle is legal in a bike lane.



A helmet is required on this vehicle



Operator of vehicle must have a driver's license.



Vehicle must be registered and have a license plate affixed.



This symbol, made popular by the iconic 1984 film "Ghostbusters," starring Bill Murray, Dan Aykroyd, Rick Moranis and Sigourney Weaver, means to negate the above definitions.

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BICYCLE-LANE ELIGIBLE

Acoustic Bicycle

Duowheelus Unplugis Ridus



The classic bicycle, these muscle-powered contraptions have been used on city streets and sidewalks since the mid-1800s. Up until the turn of the 21st century, they were the preferred form of transportation for children up to the age of 17 and the few adults who were not interested in polluting the environment with the toxic fumes spewed from vehicles powered by internal combustion engines.



Unicycle

Circus Clownus Ridus



These single-wheeled, muscle-powered vehicles were actually invented before the Acoustic Bicycle, but quickly fell out of favor after its inventor, Robert “Bozo” Fitzgerald, died on one while attempting to jump over seven horses in what is considered the first-ever daredevil stunt. Unicycles have no steering wheels, allowing riders to juggle balls, bowling pins, or chainsaws while riding.



Tricycle

Bambinus Ridus



Three-wheeled, muscle-powered ride-a-tops that are shunned by traditional bicycle riders, who considered them childish. Still, most riders get their start on them, and young riders are oftentimes seen in tow of an adult bicycle rider, much like a mother duck will lead her ducklings.

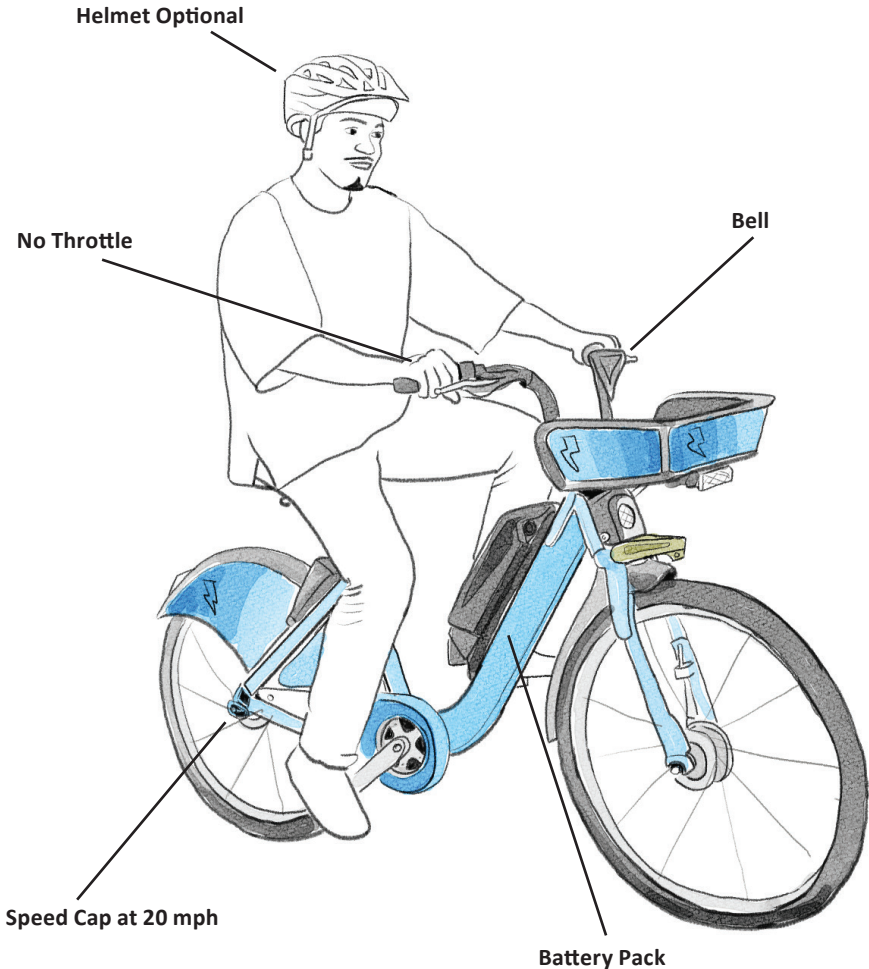


Class 1 E-Bike

Cyclium Electoralis Normalum



Often seen passing normal bikes with a sense of superiority, these pedal-assist bikes are the slowest category of electric bikes. They operate at 20 mph or less and their boost only kicks in when the user is pedaling. They are most commonly seen in electric Citi Bike form, but there are various brands that sell them privately to the few that can afford to buy one simply for pleasure. These bikes are legal in bike lanes, but for reasons that remain unclear, are banned on the Hudson River Greenway and in many city parks. Repeated calls by Streetsblog to state and city officials about their reasoning have not been adequately addressed.

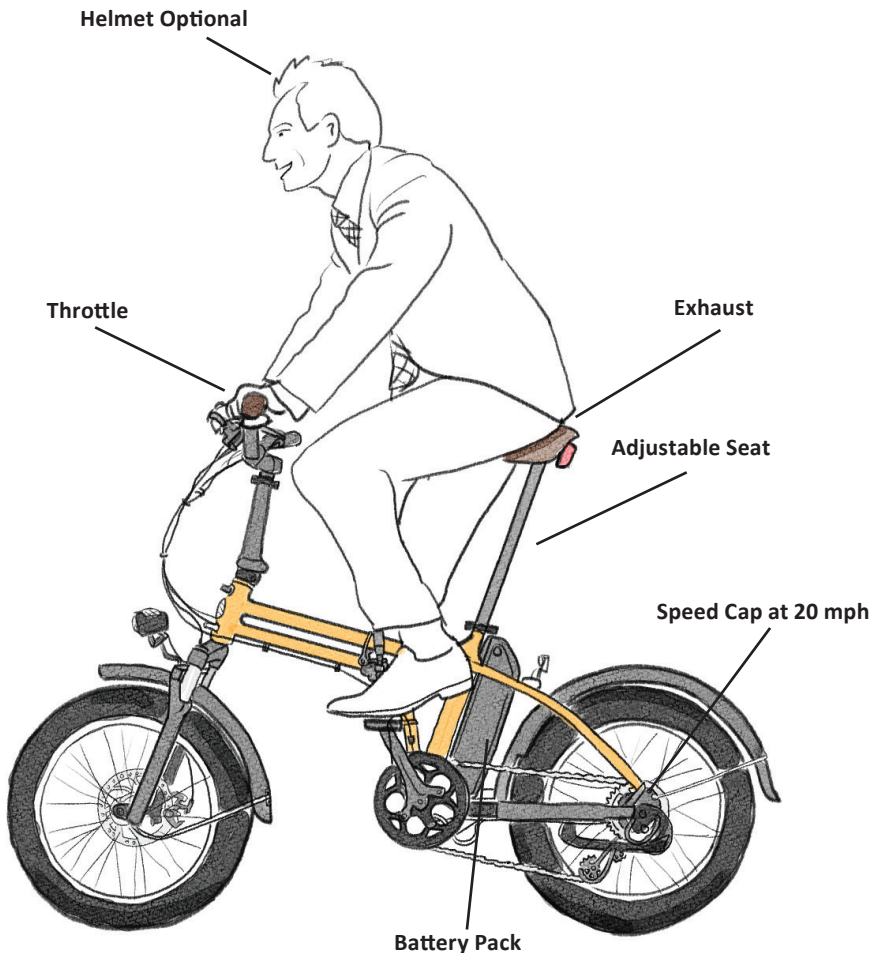


Class 2 E-Bike

Cyclium Throttus Normalum



These bikes are essentially the same as Class 1 e-bikes, with the same legal top speed, with one notable difference – a throttle. Using a motorcycle-like twist throttle, riders can use their bikes at the same top speed as a Class 1, but with no pedaling. Class 2 bikes are much less common than Class 1 and Class 3s, because typically buyers want the extra speed allowed for Class 3 e-bikes. There are currently no Class 2 e-bikes for rental on the street like Citi Bike, so all Class 2s are sold privately.

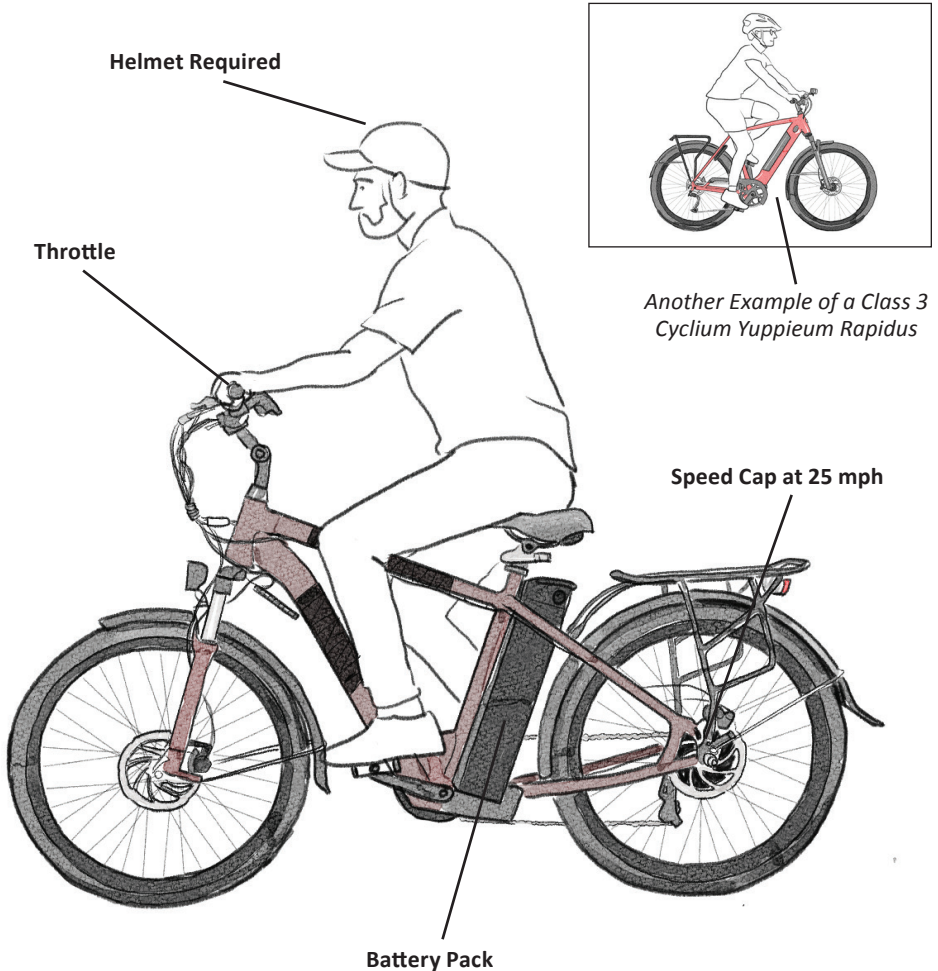


Class 3 E-Bike

Cyclium Deliveratum Rapidus



Class 3 e-bikes are the most common electric bikes on the roads today, thanks to widespread adoption by hard-working, frequently exploited delivery workers. These faster vehicles can go well above the speed limit, but by state law, they are restricted to speeds of up to 25 miles per hour. These bikes are often sold under the brand name Arrow or Fly, and are frequently wrapped with electrical or duct tape around the frame, which protects the bike from wear and tear, but also may make it less attractive on the resale market in the event of theft, which is a persistent threat to the livelihoods of delivery workers. Like other e-bikes, they are legal in bike lanes, but are banned on the Hudson River Greenway and in many city parks.

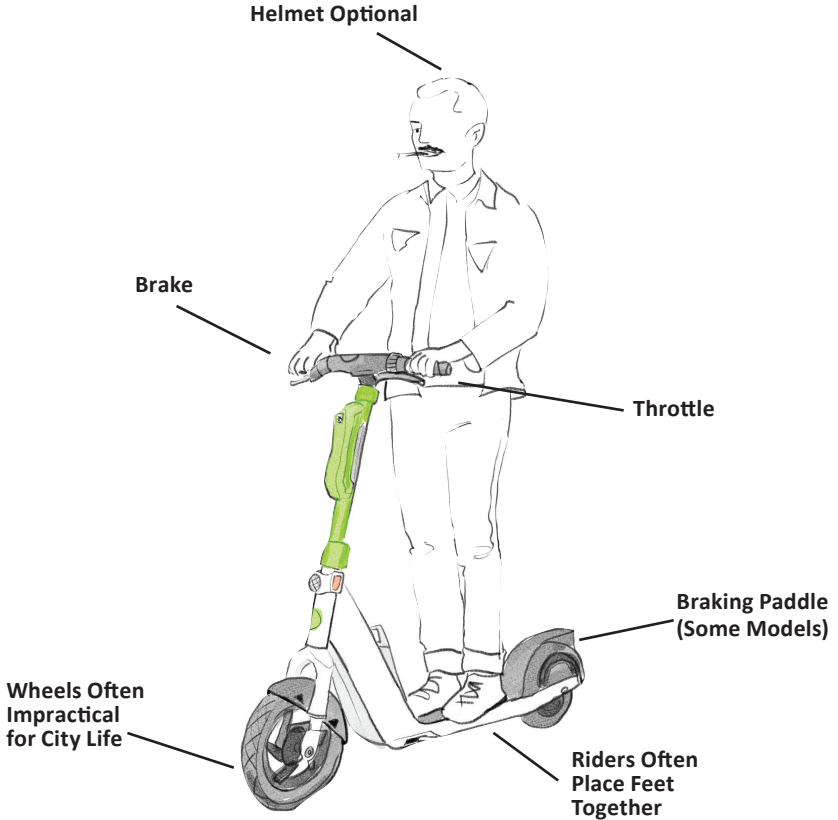


Stand-Up Electric Scooters



Scootaris Longus

Stand up scooters are something that many still associate with childhood, but added electricity has made the invention a modern adult tool. These machines, which can usually go up to 20 mph, are much smaller than most other electric vehicles, and are often foldable, making them useful for city life. Commuters often use them when their trips involve public transport as well, because of their smaller size.



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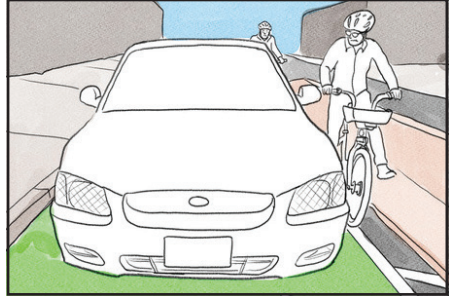
BICYCLE-LANE INELIGIBLE

Cars

Steerum Ignoratum



Ubiquitous four-wheeled vehicles built to carry numerous humans, but usually carrying just one. Often found parked in bike lanes while driver “just runs into the store for five minutes.” Never permitted in bicycle lanes under any circumstance, and should be ticketed by police when they are found there.

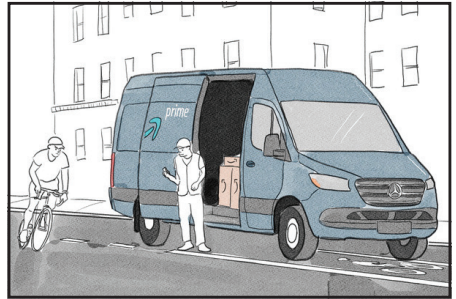


Trucks

Deliverus Maximalus Blokus



Four-plus-wheeled vehicle usually powered by a diesel engine. Normally carries one driver and plenty of packages from providers such as “Amazon.” Can be found parked in bike lanes when said packages are being delivered to houses or apartments within the vicinity. City rules give such trucks deep discounts on parking tickets, encouraging bad behavior.

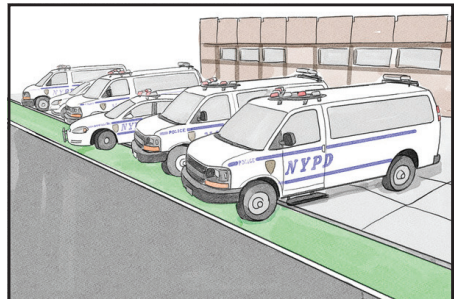


Police Vehicles

Copus doltus



White and blue vehicles, more often than not SUVs, carrying two police officers. Interiors smell of coffee and human effluvium. Routinely spotted parked in bike lanes outside donut shops, in front of station houses, and, sometimes, on the Boardwalk at Coney Island.

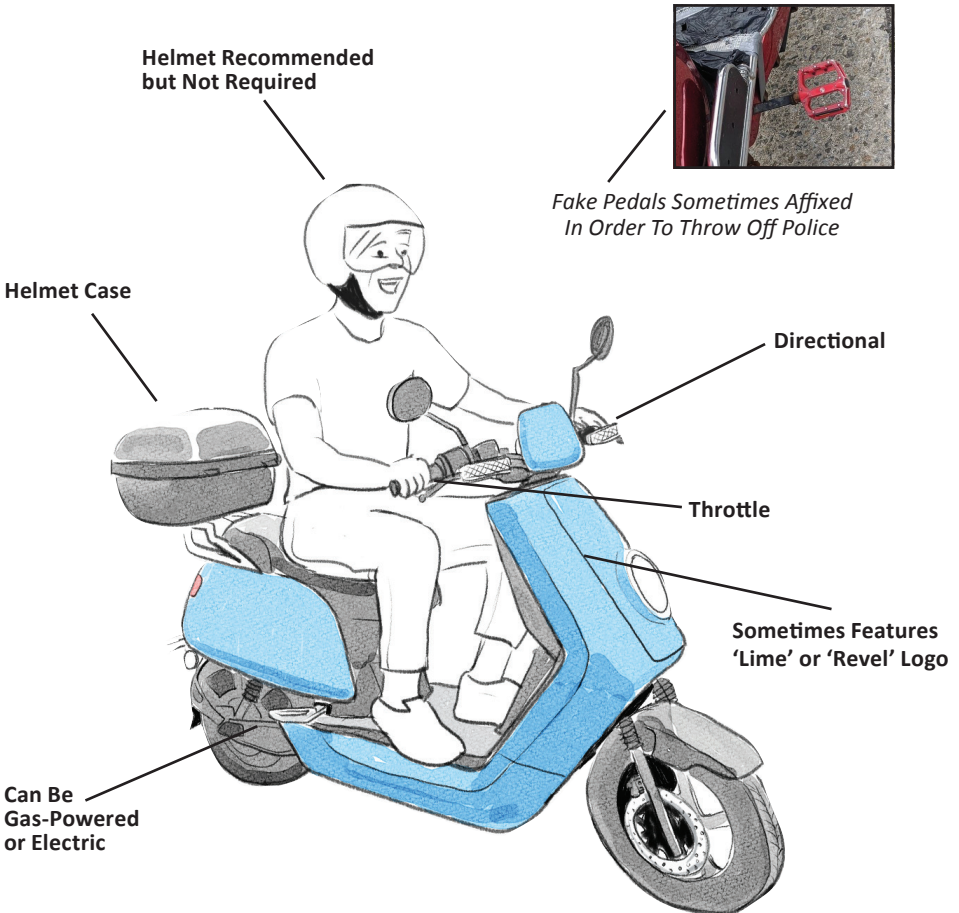


Class C Moped

Mopedius Sedatus



Sit down “mopeds” are not a new concept, though they are a misnomer. Originally, a moped earned the last three letters of its name because of the presence of pedals. The Puch moped, which hit these shores from Austria in the 1970s, was ostensibly the first e-bike. Now, of course, under state law, a “moped” is actually a motorized bike without pedals. Class C mopeds are the slowest of the bunch, capped legally at 20 miles per hour. Though they look similar to faster models, these are the kinds of mopeds that Lime and Revel have put on the streets for rent, as well as models favored by some delivery workers.

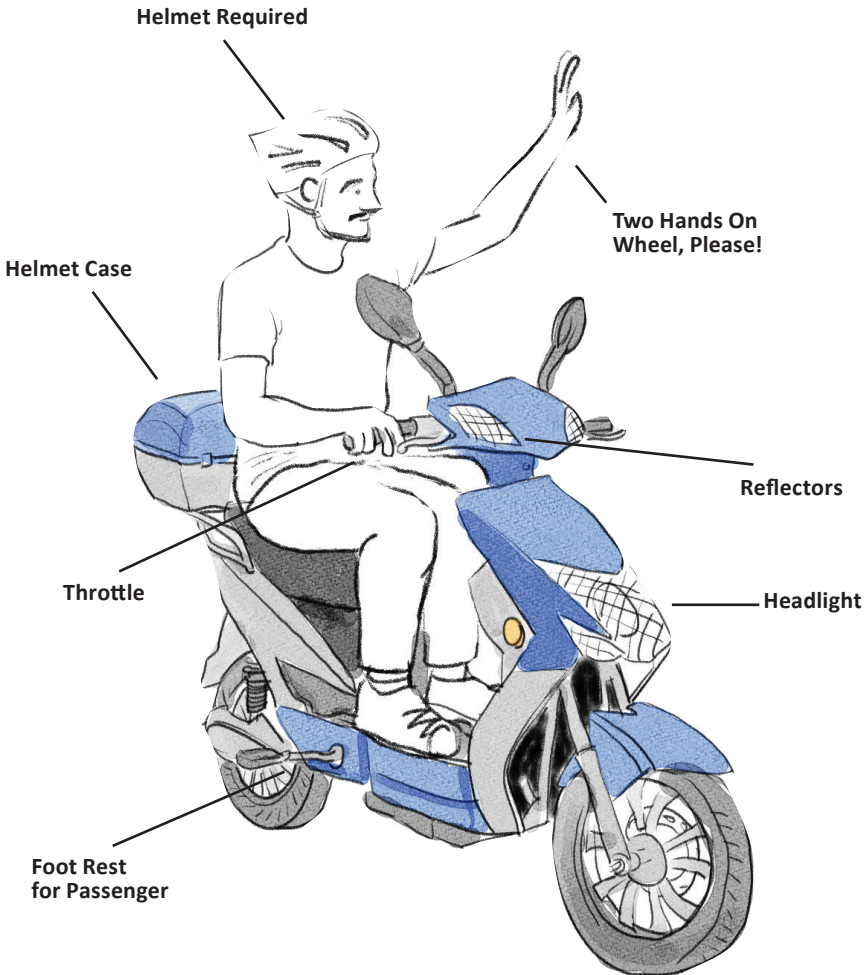


Class B Moped

Mopedius Normalus



Very little separates this moped from the slower Class C mopeds beyond speed. Many of them, like a NEXT NX1 or a Zoom moped, look very much like the Class C version. In fact, the main difference legally seems to be the requirement that the operator wear a helmet. Like Class C mopeds, Class B mopeds must be ridden in the far right edge of the roadway, not in the middle of vehicular lanes, like the fastest mopeds on the next page.

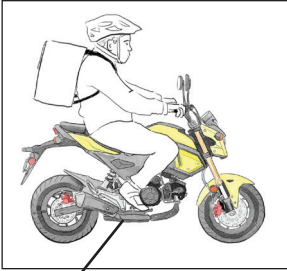


Class A Moped

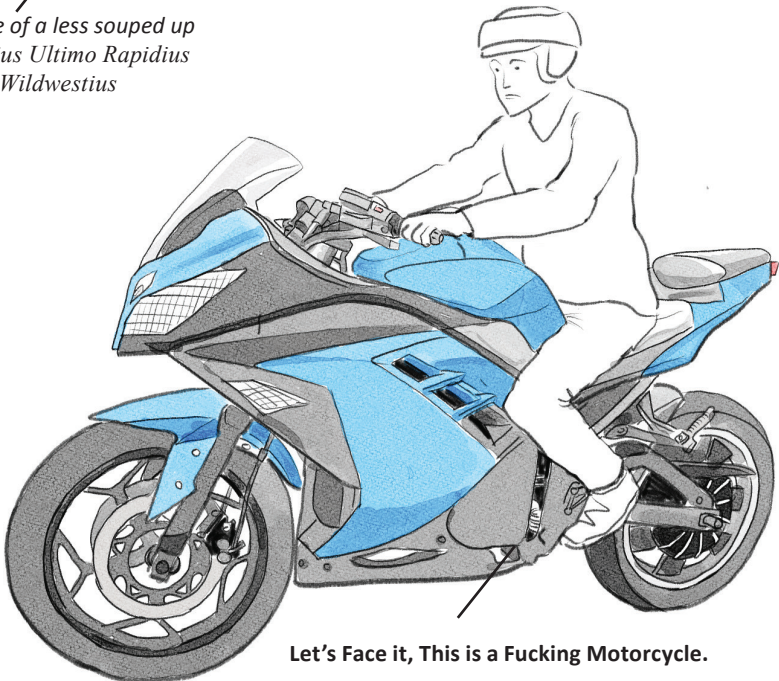
Mopedius Ultimo Rapidus Wildwestius



There are so many varieties in this category that it boggles the mind. Many look exactly like Class B mopeds, but others, like the Honda Grom (inset below), Vespas, and even bulkier electric motorcycles are obviously devices meant for speed. That explains why the law treats them differently: These vehicles must ride in the same lanes as cars and trucks, and their operators require special motorcycle driver's licenses. These vehicles must be inspected, like a car, too. Many delivery workers are choosing this mode, but then using bike lanes for their own safety.



*Example of a less souped up
Mopedius Ultimo Rapidus
Wildwestius*



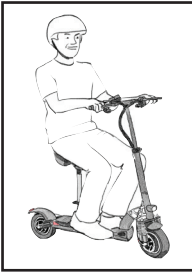
Let's Face it, This is a Fucking Motorcycle.

Unclassified Sit-Down Scooter

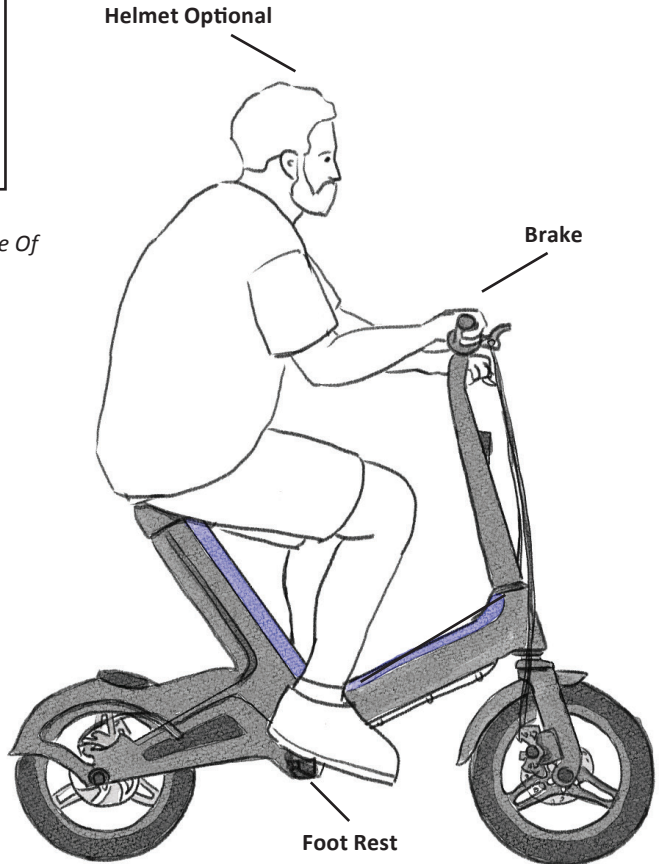
Scootaris Restus



Sit-down scooters, which combine the relative low speed of a stand-up scooter with the convenience of a place to park one's butt, are being produced by many brands (including many of the existing stand-up scooter companies). Wheels, for example, has a sit-down scooter that looks robust, but tops out at around 18 miles per hour, like all models in this category.



*A Less-Ergonomic Example Of
A Scootaris Restus*

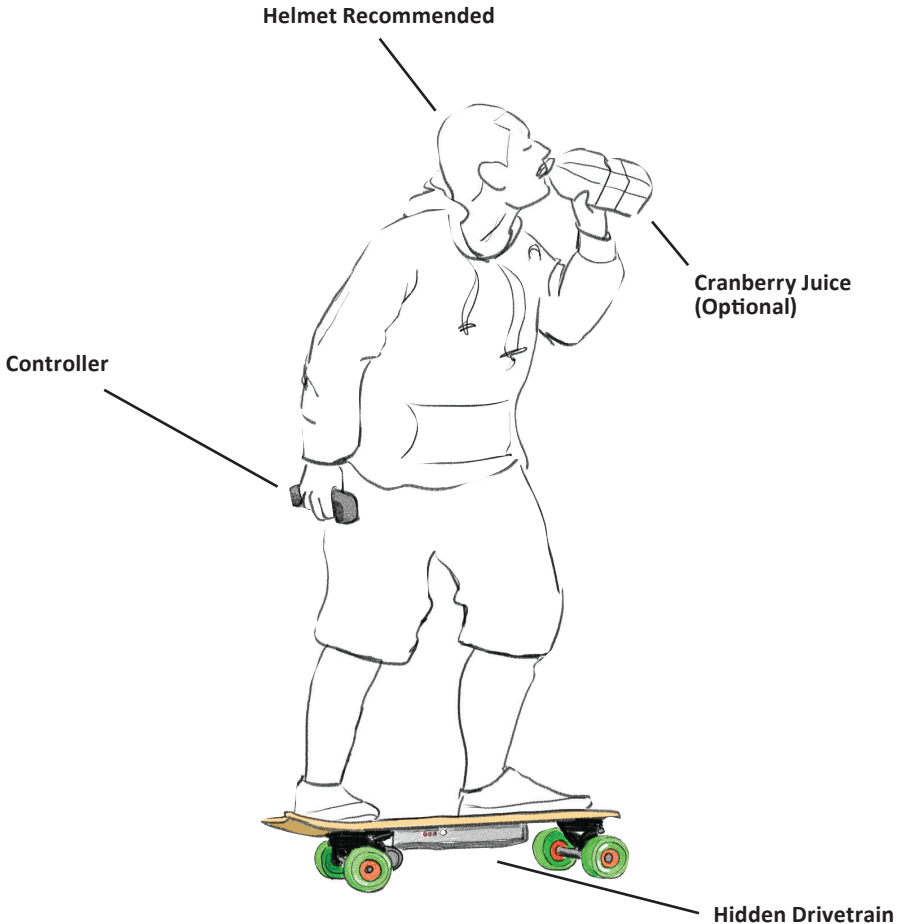


Electric Skateboards

Boardus Electricitum



Electric skateboards, which have gained lots of popularity in recent years, are illegal in NYC. However, many people still buy the contraptions for their own use, and ride around as if it were a bike or scooter. The relatively low speeds and smallness help boarders fit into bike lanes easily, and the battery is stored under the board, making it hard for someone to see if the vehicle is legal or not. They are powered by hand-held throttles, which power the shorter versions to 18–20 mph, and the longer versions to 22–25 mph.

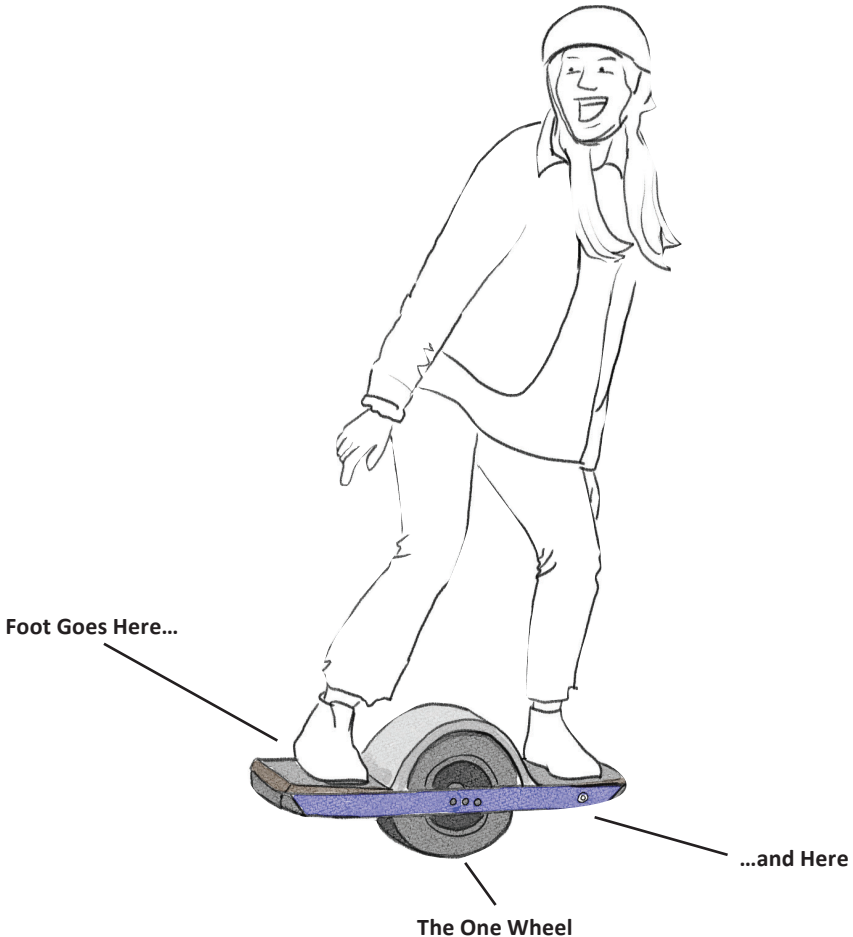


One Wheel

Singularis Explorius



One Wheel, a company whose motto is to “destroy boredom,” makes a unique type of vehicle. There is one large wheel (hence the name) in the middle, and two skateboard-like platforms for a single foot in front and behind said one wheel. It’s tilt-to-accelerate machine, and is designed to be a sort of electric skateboard that can ride over many more surfaces thanks to the much larger wheel. One Wheel sells two models: the Pint, which can go 16 mph, and the XR, which can go 19 mph. Like e-skateboards and e-unicycles, they are illegal.

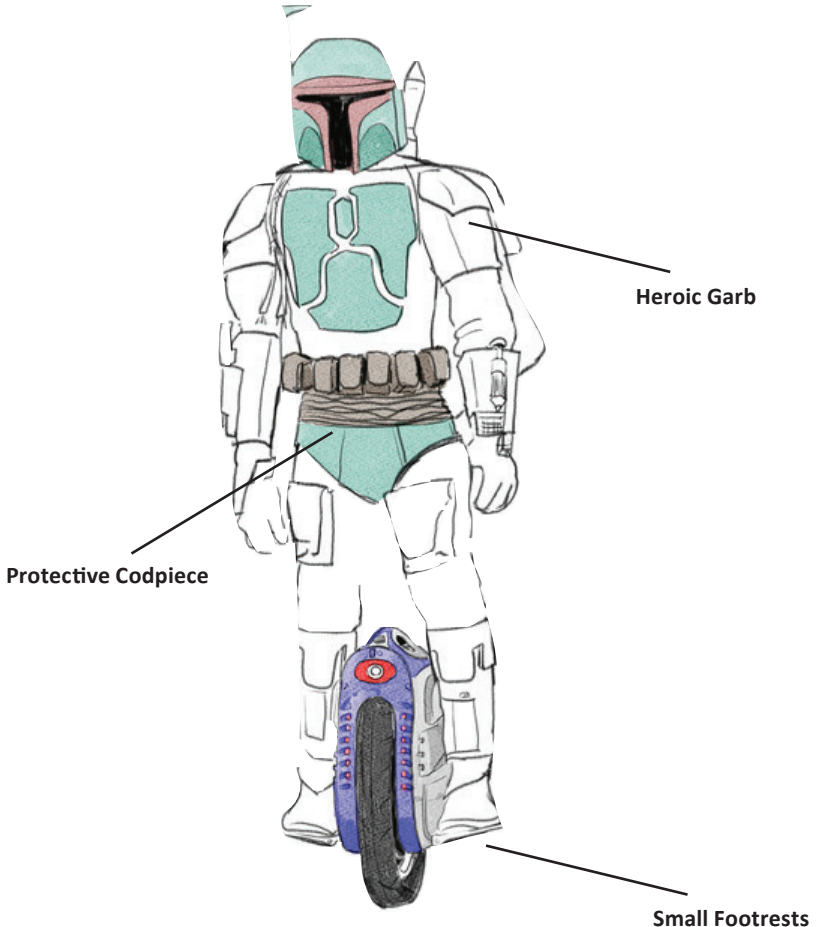


Electric Unicycle

Boba Fettus Mobilis Rapidus



Often heralded by LED lights or loud music, these vehicles are a favorite for groups of adults zooming through parks at night, and are a commuter tool used by some. This “electric unicycle” device is tilt controlled, like the One Wheel, but is set up differently. A skinnier wheel with a much larger diameter is half inside a solid plastic case, and the rider’s feet go on small platforms on the sides, facing forward. To the average passerby, it might look like a rider of one of these vehicles is just standing normally doing nothing, until they start moving forward. Like many other uniquely shaped electric vehicles, e-unicycles are illegal in NYC.





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