

**TWO CYCLISTS ARE KILLED EACH DAY** IN THE UNITED STATES AT THE HANDS OF DRIVERS. FROM ROAD DESIGN TO THE WAY CRASHES ARE INVESTIGATED AND REPORTED, OUR TRANSPORTATION AND LEGAL SYSTEMS ALL TOO OFTEN **FAIL PEOPLE ON BIKES**. WE LOOKED AT DATA FROM RIDERS LIKE YOU, THE MEDIA, AND LAW ENFORCEMENT TO FIND OUT WHY—AND **WHAT WE CAN DO ABOUT IT**.



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Icons: Peter and Maria Hoey

# THE LOST LIST

OF THE ESTIMATED 1,600 CYCLISTS WHO WERE KILLED BY DRIVERS IN 2015 AND 2016, THIS LIST REPRESENTS JUST 36 PERCENT OF THEM. THEY WERE **MOTHERS, BROTHERS, FATHERS, DAUGHTERS, SISTERS, SONS**. HERE ARE THEIR NAMES.

Abdul Aziz | Abigail Dougherty | Adel Mikhail | Agustin Elizondo-Valverde | Aiden Lupo | Al Gorman | Alan L. Ruth | Alejandro Gonzalez | Alexa Cioffi | Alfred Zaldivar | Allen Brumm | Alonzo Cota-Alvarado | Alvin Colon | Amanda Phillips | Amber Harrington | **WE WERE MOTHERS** | Amin Hopkins | Anand Singh Asi | Anastasia Ciolpan | Anastasia Kondrasheva | Andres Hulslander | Andrew Fang | Andrew Gerard Malizio | Andrew J. Nowak | Andrew Russoniello | Andrzej Kurkowski | Andy A. Whitener | Andy Heines | Angel Preciado | Anita Kurmann | Anita Louise Froeba | Anna Rodriguez | Anne Davis | Anthony C. Galanopoulos | Anthony Oliver | Anthony Saluto | Antoine Touma | Arthur A. Bell Jr. | Arthur Ebilane | Ashley Block | Ashley Thames | Austin Gilliam | Autumn Fuller | Barbara A. Calhoun | Becky Sheehan | Benita Diane Burks Gunter | Benjamin Gregory | Benjamin Meyer | Bernard Etapale | Bernard Jones | Bernard Lavins | Bill Davis | Blaine Kingenberg | Blas Balderas Castro | Bob Lewis | Bradley Miller | Brandi Mendoza | Brandon Dumond | Brandon Ortmann | Brennan Rube | Brian “Buzz” Climis | Brian Guerrero | Brian Silva | Brian Tomazic | Bridget Dawson | Brock Eugene Mosher | Brock McCann | Bruce Leo Kehrer Schneider | Bryan Scott Goforth | Bryce Douglas Caudell | Bryon Arnold | C. Nelson Schlatter | Calvin Sapp | Cameron Curran | Can Reng Ma | Cara Cox | Cari Widmyer | Cairo Joseph Castaneda | Carlyon Jones | Carol Eckert | Caroline Dawn Wortham | Casey Ellis | **WE WERE BROTHERS** | Cesar Machuca Jr. | Chandler Ray | Charles Adkins | Charles Blackledge | Charles Hawkins | Charles McGuire | Charles Michael Phillips | Charles Startup | Charles Taylor | Charles Vinson | Chester Tela | Christian Regan | Christine L. Nash | Christopher Allen Jerkins | Christopher Jerome Shearer | Christopher Moshe Elliott | Christopher Thurber | Christopher Watson | Chuyuan Qiu | Clare Rhoades | Clay Charles Triolo | Clepatrick Palmer | Clifford Gouner | Clinton Wayne Pannell | Colby Garrett | Crista Contreras | Cruz Cantu Alegria | Cruz Gamez | Cynthia Arsnow | Cyprian Preut | Dale Kimpton | Damon W. Collins | Dan Wilson | Daniel A. Lehn | Daniel Austin | Daniel Bice | Daniel Lafleur | Daniel McDonald | Daniel Wilson | Danny Josiah | Darby Lutiari Smith | Darryl Fitzgerald Summers | Darryl Weaver | David Alas | David Burke | David Cassidy | David D. Christianson | David Grotberg | David Ryder | David Tasgal | David W. Collins | David Winters | David Zachary Parsons | Davis Hernandez | De’Asia Henderson | Deborah Ann Wilkowski | Deborah Gresham | Deborah Patterson | Deborah Robison | Debra Ann Bradley | Delilah Ortega | Denis Genesse

| Dennis Jurs | Dennis L. Lowe | Densel Theye Jr. | Devin Federly | Dieu Van Nguyen | Dillon Dassinger | Dominic Mongillo | Don Meilike | Donald Neu | Donald Pinkerton-DeVito | Donald R. Culton | Donna David | Donna Holliday Clark | Donnell Kiwone Eason | Douglas Alton Foreman | Douglas Kania | Douglas Oliver Benton | Drew Schmidt | Duane Darling | Duane Johnson | Dum Gurung | Dung Nguyen | Earl Lee Rhodes | Ed Brophy | Eddie Galindo | Eddie Ray King | Edgar Cosico | Eduardo Castillo | Edward Angi | Elias Rios Bonilla | Elijah Allen | Emilio Simon | Emily Akins | Enrique Zamora | Ephrain Mateo-Morales | Eric Badger | Eric D. Taylor | Eric Garcia | Eric Gilbert | Eric Ramlow | Eric Snider Jr. | Eric Steven Glasnapp | Erik Alsaker | Ernest Smith Jr. | Ernest William Davenport | Eugene Conroy | Eugene Gregory Thornberg | Eugene Howard Rotberg | Eugene Letendre | Ezekiel Goodwin | Fernando Gamboa | Fernando Olivas | Forrest Holmes | Francisco Cruz | Frank Towers | Franklin Ling | **WE WERE FATHERS** | Fred Anton (Tony) Nelson | Fred Figueroa | Frederick Lonas | Fritz Philogene | Gabriel Lossett | Gabriella Vallinis | Gannon Allen Hejlik | Garth White | Gary Lowman | George Kaufer | Gilbert Gutierrez III | Giovanni Cali | Giovanni Nin | Glenda Taylor | Grace Harken | Grace Petrelli | Gregory Wade Franck | Gregory Dominguez | Gregory Jensen | Gregory Stout | Hans Joseph Pfab | Heather Lough | Heather Loughlin | Heather Miller | Henry Peter Kuen | Heriberto Ruiz | Hoyt Jacobs | Hussein Yunus | Inoe Dejesus Padilla | Irene Diane Szczesniak | Irineo Martinez Martinez | Isidro Razo | Jack Allen | Jacob Kato | Jacob Schertz | Jacob Thomas “Jake” Brewer | Jaimes Guadalupe | Jamal Morris | James Aaron Hope | James C. Nielsen Jr. | James Chadden Jr. | James Gantt | James Gregg | James Hernandez | James Loomis | James Neidrauer | James Paiva | James Pica | James S. Thomas | James Schneider | Jameson Kennedy | Jamie Lynn Cody | Janice Wendling | Jason Hearty | Jason Holden | Jason Markley | Jason Michael Salisbury | Javier Burgos | Jealousis Pereria | Jeff Aubrey McGrath | **WE WERE DAUGHTERS** | Jeff Potts | Jeffrey David Cushing | Jeffrey Donnelly | Jeffrey Gonzales | Jeffrey Howarth | Jeffrey Surnow | Jeremy Clark | Jerome Koch | Jesse Beach | Jesse Fulcher | Jim Johnston | Jim Lambert | Jimmy Lynn Fraley | Joe Barnes | John A. Harsch | John A. Ashton | John Bushman Sr. | John D. Appenheimer | John G. Seiler | John H. Baskin | John Haffa | John Henrik Fauerby | John Jeffrey Abbott | John Jump | John M. Brennan | John Pastunink | John Rideaux | John Shapley | John Venneman | John Vos | John William Bacon III | John Zavisza | Johnney

Westberry | Johnny Ray Johnston | Jonathan Petsas | Jonathan Young | Jonathan Hernandez | Joni Beaudry | Jorge Covarrubias | Jorge Leyva | Jorge Solorio-Arroyo | Jose “Bizzy” Luna | Jose Antonio Resendez | Jose De Jesus Ruiz-Villanueva | Jose Felix Ortiz Plascencia | Jose Martel | Jose Ruiz-Villanueva | Joseph King | Joseph Lamothe | Joseph Myers | Joshua Edward Duncan | Joshua White | Joyce Smith | Juan Sandoval | Judy Grossman | Julio Torres | June Whedon | Justin Knorr | Justin Murray | Karen McKeachie | Karl Frederick Vanderwyk | Karla Kalene DeBaillie | Katherine Slattery | Kathleen Walker | Keith Habenicht | Kelly Boe | Kendall Dontrel Savon Jackson | Kenneth Najarian | Kenneth Vieira | Kevin Collins | Kevin Fletcher | Kevin Jiang | Kevin Matthews | Kevin Thomson | Kevin Unverzagt | Kimberly K. Wyatt | Kristina Cherie Goodrow | Kristopher S. Smith | Krystle Ann Klain | Lance Torrey | Larry Martinez | Lawrence Lacroix | Lawrence Smith | Leah Sylvain | Lee William Morel | Leonard Williams | Leslie Ronnigen | Licio Alex Portillo | Lisa Knudson | Lisa Kuhn | Lisa Kuivinen | Logan Lipton | Logan Snedeker | Lorenz John (Larry) Paulik | Lynn T. Bemiller | Lynne Frances Rosenbusch | Michiko Day | Maciek Malish | Madio Jalo | Madison Baird | Mandeep Singh | Manuel Enrique Mendoza-Hernandez | Manuel Olavarria | Maohamed Faqay Mungani | Marcia Deihl | Marcus McCoy | Margaret Bengs | **WE WERE SISTERS** | Margaret Miland | Margaret Rugg | Margo Symmonds-Lavanway | Maria Crozier | Marie Kent | Mario Esquivel-Flores | Mark Heigel | Mark Heryer | Mark Hinkel | Mark Jacoby | Mark Robinson | Mark Snopek | Mark Wendling | Martin Curran | Martin Greenough | Martinaino Pozos | Marvin Rucker | Mary Hasty | Mary Massengill | Mary Wilk | Maryanne Casalidouva | Mashaylin Green | Matthew Billings | Matthew Buck | Matthew Driggers | Matthew Matteson | Matthew von Ohlen | Matthew Weede | Maurice E. Minter | Melissa Ann Fevig-Hughes | Melissa Gravatt | Michael Alfano | Michael Anthony Curley | Michael Cory Tafoya | Michael Grimwood | Michael Harmer | Michael John Balfe | Michael Keeler | Michael McDermott | Michael Prater | Michael Proxmire | Michael Schenkman | Michael Snowden | Michael T. Solony | Michael Wolff | Michelle Koss | Michelle Walters | Miguel Angel Quintero | Mikhail Tsitsiline | Mildred A. Steele | Mitchell Downs McBee | Mitchell Todd York | Monique Massey | Mustafa Rafi | Nadia Silva | Nadiia Misa | Ned Tobias | Nicholas James Mruk | Nicole Lemar | Oscar Mauricio Gutiérrez Osorio | Otis A. Harris | Pat Lyon-Surrey | Patrick Condray | Patrick TeNyenhuis | Patrick Wanninkhof | Paul Brown | Paul C.

Reber | Paul Dang Pham | Paul Graham | Peggy Hillman | Penny Verdeck | Peter Evans | Peter Krichman | Peter Loretta | Peter Murphy | **WE WERE SONS** | Peyton Knowlton | Phillip J. Geisinger | Phillip Shourds Jr. | Philo Ragni | Pissanuk Jonathan Tansavatdi | Priscilla Vallejo | Rafael Macias Herrera | Ralph Myron Roane | Ralph R. Conrad Jr. | Ramiz Hamzagic | Randall Reyes | Randolph Stephenson | Randy Ray Robinson | Raphael D. Sagarin | Raymond Berson | Raymond Brown | Raymond Thomas Cochran | Rebecca Ann Landrigan Smith | Reed “Bart” Rutledge | Ricardo Aguilar | Richard “Ricky” Montoya | Richard Alley | Richard B. Navarra | Richard Brill | Richard Tom | Robert Agne | Robert Anderson | Robert Clowder Jr. | Robert Dickey | Robert Horton | Robert Kirn | Robert Phillips | Robert Seymour | Robin Ann Lachman | Rod Bennett | Roderick Bennett | Rodolfo Tejedor | Roger Haar | Roger Roux | Roger Villegas | Ronald Alexander | Ronald Corey | Ronald Filepp | Ronald Knowlton | Ronald V. Johnson | Ronald Wayne Winter | Rosamaria Ruminski | Rose Peters | Ruben Wharton Vanegas | Ryan Franklin | Ryan Hoffman | Ryan Matthews Hodder | Sally Campbell Edwards | Santos Escobar Villatoro | Sara Tonnemacher | Saul Lopez | Scott Elliott | Scott Erickstad | Scott Hanni | Scott Koch | Sean Kevin Rey | Sean Ryan | Sebastian “Angel” Fragoso Jr. | Sergei Musatov | Sergio Reynoso | Sergio Tapia | Shane Farrell | Shane Swope | Shawn Melby | Shay Swords | Shelton Berel | Sophia Campbell | Sophie Stultz | Stacey Bown | Stanley Marshall | Stephen Arthur Guiney | Steve Chatters | Steve Perry | Steven Garcia | Steven James Lewis | Steven Marsh | Steven Ortiz | Sunkashka Soch | Susan “Suze” Kilner | Susan Cummings | Suzanne Joan Sippel | Suzi V. Ramage | Tadeusz Grabala | Taeyon Richard | Thanh Nguyen | Thomas A. Santoro | Thomas Fazio | Thomas Galvan Munoz | Thomas Palermo | Thomas S. Landry | Thuc Van Nguyen | Timothy Aloysius Holden | Timothy Binau | Timothy Canada | Timothy Kelly | Timothy Michael Kelley | Todd Barajas | Todd Steward Ballard | Toedoro Arredando-Diaz | Tomas Brewer | Tony Chavez | Tracy Butler | Trey Goodrich | Tuan Duong | Tyler Finley Sims | Tyrone Miller | Unchei Anderson | Valente Vasquez | Vanessa Wilkes | Vincent Foster | Virginia Murray | Von Eric Thomas | Walter E. Hamrick | Wayne Ezell | Wellman Joseph | Wilberth U. Koyoc-Lizama | William “Matt” George | William DeBoer | William E. Phoenix | William Fred Tebbetts | William Greulich | William James McCarley | William McGill | William Robertson | William Scarberry | Yadielys Deleon Camacho | Young Rok Lee | Zachariah Doll | Zachariah Wood | **WE WERE PEOPLE**

Reporting by Lynn Donches, with assistance from the following organizations: Bicycle Coalition of Maine, Biking in A, Coalition of Arizona Bicyclists, Iowa Bicycle Coalition, San Francisco Bicycle Coalition, and Silicon Valley Bicycle Coalition.



# THE STATE OF YOUR SAFETY

IN FEBRUARY 2017 WE ASKED READERS TO TAKE A SURVEY\* ABOUT THEIR EXPERIENCES RIDING ON THE ROAD. AN ASTOUNDING 5,325 OF YOU RESPONDED. THE BOTTOM LINE: THINGS NEED TO CHANGE OUT THERE—AND YOU'RE FIRED UP TO MAKE IT HAPPEN.

## DANGEROUS DRIVING IS EPIDEMIC.



41% OF YOU WHO PEDAL FOUR OR MORE DAYS A WEEK HAVE BEEN HIT

# 3,260

OF YOU KNOW AT LEAST ONE CYCLIST WHO HAS BEEN HIT BY A DRIVER



66% OF YOU OBSERVE DISTRACTED DRIVERS ON MOST OR EVERY RIDE

"I am now convinced I will eventually die on my bike by getting hit from behind by a distracted driver." —JEFFREY DEHM, DENVER



22% OF YOU KNOW AT LEAST ONE CYCLIST WHO WAS KILLED BY A DRIVER

# 32%

OF YOU HAVE BEEN HIT BY A VEHICLE WHILE RIDING A BIKE

Percentage of cyclists who are at least sometimes concerned that they will be harassed or harmed by a driver when they are riding on the road:



Percentage of cyclists from the three deadliest states for cyclists (FL, DE, LA)\* who agree:



Percentage from the safest states (VT, WV, MO) who say the same:



\*According to the Centers for Disease Control and Prevention



61% OF URBAN RIDERS HAVE BEEN DOORED

"I can't even keep up with how many people I know who have been hit."—Aster Murphy, Philadelphia

## DRIVERS RARELY FACE CONSEQUENCES.

"I WAS HIT BY A VAN THAT WAS PULLING INTO A ROUNDABOUT. EVEN THOUGH I WAS SIGNALING, HAD LIGHTS ON, AND WAS WEARING HI-VIZ IN THE MIDDLE OF THE DAY, I STILL WOUND UP IN THE HOSPITAL. THERE WERE NO LEGAL REPERCUSSIONS FOR THE DRIVER, AND I DIDN'T WANT TO LIVE THROUGH THE EXPERIENCE AGAIN BY FILING CHARGES."

COURTNEY GUNN, PHILADELPHIA

# #1

REASON CYCLISTS DON'T REPORT AGGRESSIVE DRIVERS: "I DIDN'T THINK LAW ENFORCEMENT WOULD DO ENOUGH."

"THE POLICE NEVER FILED THE REPORT. I CONTACTED THE DEPARTMENT AND THE OFFICER STATED THAT THE DRIVER NEVER HIT ME. I ASKED, 'THEN HOW DID I END UP UNDER THE TRUCK?'" —ANDY SMITH, GLOUCESTER, VA

## WOMEN MAY BE ESPECIALLY AT RISK.

"When I am harassed by drivers it is usually when I am with my kids. I have been told to get off the road, and have nearly been run over in the bike lane. One driver even threatened my son."

—TRACY BEESON, ANN ARBOR, MI

WHEN IT COMES TO AGGRESSIVE DRIVERS...

# 20%

OF YOU HAVE BEEN FOLLOWED

# 76%

HAVE SEEN A DRIVER TURN INTO YOUR PATH AT AN INTERSECTION

# 31%

HAVE BEEN THE TARGET OF A THROWN OBJECT

## AND IT'S AFFECTING THE WAY YOU RIDE.

"Three friends were killed while on their bikes. Had to quit my daily commuting."

STEVE HENDRIX, PENSACOLA BEACH, FL

# 2

BIGGEST REASONS YOU GIVE FOR NOT RIDING OUTSIDE:



"I DON'T LIKE RIDING IN TRAFFIC."



"I'M CONCERNED I WILL BE HARASSED OR HARMED BY A DRIVER."

46 ▶ PERCENTAGE OF YOU WHO HAVE STOPPED RIDING CERTAIN ROUTES DUE TO SAFETY CONCERNS RELATED TO DISTRACTED DRIVERS

## THE GOOD NEWS? YOU'RE STILL RIDING.

# 8,000

MILES READER SUZETTE WANNINKHOF RODE FROM ALASKA TO FLORIDA TO HONOR HER BROTHER PATRICK, WHO WAS KILLED BY A DISTRACTED DRIVER

"I'm teaching my kids to recognize cyclists from the car by playing a game: counting bikers we see while driving around town."

MATT JANKOWSKI, NORMAN, OK

RIDERS YOUNGER THAN 30 ARE 15% MORE LIKELY TO BELIEVE THAT DRIVERS WHO HIT CYCLISTS ARE GIVEN INSUFFICIENT PENALTIES, COMPARED WITH RIDERS 65 AND OLDER—WHICH MEANS THAT THE CALL FOR SAFER STREETS IS ONLY GOING TO GET LOUDER.



2X FEMALE CYCLISTS ARE TWICE AS LIKELY AS MEN TO REPORT THAT THEY'VE CUT BACK ON ROAD RIDING DUE TO DRIVER BEHAVIOR.

## WHAT'S OUR ROLE?

"I SEE CYCLISTS EMAILING WHILE RIDING, DARTING IN AND OUT OF TRAFFIC, NOT EVEN REMOTELY OBSERVING THE TRAFFIC SIGNALS OR LAWS. THIS NOT ONLY PLACES THOSE RIDERS AT RISK, BUT ALSO THE REST OF US, BECAUSE THEIR BEHAVIOR ERODES ANY SENSE OF RESPECT WE HOPE TO GET FROM DRIVERS AND POLICE." —RICK BOOTHMAN, ANN ARBOR, MI

"Once I rolled down my window and fussed at two riders that had just dangerously run a red light. The response: 'F— you!'" —Robert Baldwin, Birmingham, AL

\*Survey conducted online and shared via newsletters, social media, and BICYCLING.com.



LEFT  
FOR  
DEAD✕  
AND THE POLICE  
DID NOTHING

↑  
"IF I HAD BEEN  
IN A CAR I WOULD  
HAVE BEEN  
TREATED  
DIFFERENTLY."

The first thing Dulcie Canton heard when she came to was, "Is she alive?" It was almost midnight on August 7, 2014, and a crowd had gathered around her. Her friend Jay, who had been skateboarding alongside as she pedaled her bike down Bleecker Street in Brooklyn, New York, was calling an ambulance. 📍 Surveillance cameras had captured the whole thing—from the moment the Chevrolet Camaro struck Canton from behind, to the driver speeding off without slowing to check that the 37-year-old cyclist was, in fact, alive. 📍 Canton was hospitalized with a broken shoulder, fractured ankle, and a massive brain bleed. At 2 a.m., an employee at the bike shop where she worked put her in touch with local cyclist- and pedestrian-rights lawyer Steve Vaccaro, who filed an additional

police report. Vaccaro then went to the scene of the crime to secure the video surveillance footage from building superintendents. One bystander had found the broken-off side mirror of the Camaro—which was parked only a few blocks away.

It's tough to imagine a more open-and-shut case than Canton's. They had video. They had witnesses. They had physical evidence in the form of the side mirror and Canton's mangled bike. They had plate numbers—and the alleged perpetrator identified. But the New York City Police Department never pursued the case, even as Canton endured months of medical visits and physical therapy. Officers had shown up at the scene and filed a report but didn't follow up. And Canton says they wrote down the wrong vehicle number on it, which delayed her insurance claim. They even declined to contact the man who had allegedly left her lying unconscious in the middle of the road, despite a volley of letters from Vaccaro.

"We did everything we could and the police basically ignored us because they said they didn't have time," Vaccaro says.

(The police still won't comment on the case.)

"It was upsetting to say the least," Canton says. "This guy is still out there. If you're a motorist and you get into a fender bender, you call the police, they show up, and they write a report. If I had been in a car I would have been treated differently."

The injustice of Canton's situation is stunning, but it's not surprising: BICYCLING found that fewer than half of the drivers who kill cyclists are convicted of a crime; many aren't even charged (see p. 44).

After the crash, Canton paid regular visits to a therapist for post-traumatic stress disorder. It was a year before she could ride again.

Today, almost three years since the crash, she works for advocacy group Transportation Alternatives. She's also a dispatcher for NYC's bike share program, CitiBike, which she says helps to normalize the sight of bikes on city streets.

"The benefits of cycling far outweigh the risks," Canton says. "But more so than helmets and gear, your safety is in numbers—and knowing you have a right to be on the streets."—Caitlin Giddings

## IT'S NO ACCIDENT

TOO OFTEN, MEDIA REPORTS ON DRIVER-CYCLIST COLLISIONS FOSTER A CULTURE OF VICTIM BLAMING

The words reporters use when detailing how a cyclist is injured or killed often give drivers a pass. For example, they may refer to a collision as "an accident," suggesting that it was unpreventable.

There is no industry standard for when to use "crash" versus "accident." The *Associated Press Stylebook* calls both terms "generally acceptable" for collisions and wrecks, but suggests avoiding "accident" when negligence is claimed or proven. However, the in-house style guides at the *Chicago Tribune*, *New York Times*, and *Los Angeles Times* list no stated preference. BICYCLING's own research sheds light on the prevalence of the terms. Combing the Nexis news

archive for appearances of either "accident" or "crash," without the other, in cycling-related articles, revealed some telling details. In those three papers, "accident" has always appeared more often than "crash"—but the gap is narrowing.

The use of "crash" has been creeping up at the *Chicago Tribune*, while "accident" has fallen sharply over the past couple of years. "I can see an argument that sometimes the word 'crash' is a somewhat more neutral word than 'accident,'" says Margaret Holt, the standards editor at the *Tribune*. However, she says, "If you're going to argue that the word 'accident' is a biased term, does that not also imply a judgment about whether

an event was planned?" The starkest trend has been at the *LA Times*, where uses of "accident" have plummeted over the past 25 years. "The *Times* doesn't have a policy on crash vs. accident overall," says staff writer Laura Nelson. "When it comes to hit-and-runs, though, our guidance is clear: Choosing to leave the scene is a deliberate act, and should not be described as an accident."

The good news: City and state governments are getting the message. In May of last year, the *New York Times* reported that at least 28 states, as well as New York City, had updated their policies to avoid using the term "accident" when referring to road collisions.—Oliver Roeder





**“A DRUNK DRIVER  
KILLED  
MY DAD”**



A FAMILY  
STRUGGLES WITH  
WHAT'S LEFT  
BEHIND

←  
DUSENBURY'S WIFE,  
MELISSA HOLDER (LEFT),  
AND DAUGHTER, MADISEN  
DUSENBURY SHANNON

Jeff Dusenbury, 51, had just set out on his bike to meet friends for an all-day ride in his hometown of Anchorage, Alaska, on the morning of July 19, 2014, when he was killed by a driver in a hit-and-run. The motorist, 17-year-old Alexandra Ellis, had been driving backward down the road—and took off after allegedly making eye contact with a witness who waved at her to stop. Officers found her at home less than a half-mile away with a blood-alcohol level over the legal limit and THC in her system. She'd just relapsed from substance abuse treatment and had thrown a party at her parents' house the night before. She was charged as an adult with manslaughter, leaving an accident without assisting the injured, and a DUI.

But in August 2015, Ellis was sentenced to only one year in jail after she pleaded guilty to DUI and a reduced charge of criminally negligent homicide—and she was allowed to finish her spring semester of college before reporting to prison in May 2016.

As part of the plea deal, the judge dropped the hit-and-run charge, a decision that angered Dusenbury's daughter, Madisen Dusenbury Shannon, 25. “It was inhumane to leave him there to die,” she says. She was livid when the defense argued that the alcohol in Ellis's system wasn't to blame—but that her flip-flop had gotten stuck under the accelerator.

The worst part for Madisen was the suggestion that her dad was somehow at fault. The most egregious example came when the defense brought in an “expert” to suggest that Dusenbury had been pedaling at 30 to 35 miles per hour when he was hit. “The courtroom full of cyclists erupted in laughter,” Madisen says. “It's not possible. He was on a flat road through a neighborhood, on the first mile of a leisurely 90-mile ride.”

Madisen wants people to know her dad was more than just an avid cyclist or some anonymous victim. He was the guy who fixed all the kids' bikes in the neighborhood. He was

patient, kind, humble. “There was a bike race he was doing and the temperatures were in the negative,” Madisen says. “After the first lap everyone stopped because it was so cold, but my dad continued on to the second lap. Everyone else was like ‘You’re crazy, man.’ He joked to his buddies, ‘Hey, why suffer a little when you can suffer a lot?’”



## It was inhumane of her to leave him there to die.”

About 1,300 mourners came to Dusenbury’s funeral—dozens of whom made the statistically unlikely claim that he had been their best friend. “I didn’t even know half of the people there who said it,” Madisen says. “He just always made everyone feel like they were the most important person in the room.”

Dusenbury’s friends held a “Justice for Jeff” rally in protest of Ellis’s sentence, as well as a memorial ride. And they put up a ghost bike in Dusenbury’s honor in a park at the location where he was killed. More than 200 community members showed up—many of them on bikes. “He doesn’t have a headstone, so that’s a place people go to pay their respects,” Madisen says. “I like the idea of people going to something that represents what he loved to do.”

It’s been nearly three years since she lost her dad. She has managed to forgive Ellis, who was released in July 2016 after serving just 74 days (the judge credited time spent in a rehab facility toward her sentence). But Madisen still believes that Ellis would have faced a significantly longer sentence if her dad hadn’t been on a bike.

“Forgiving her is something God would want me to do,” she says. “I am more disappointed in how the State of Alaska handled this case.”—C.G.

# DOES THE PUNISHMENT FIT THE CRIME?

WE RESEARCHED FATAL CRASHES IN SEVEN US CITIES TO FIND OUT WHAT HAPPENS TO DRIVERS WHO KILL CYCLISTS

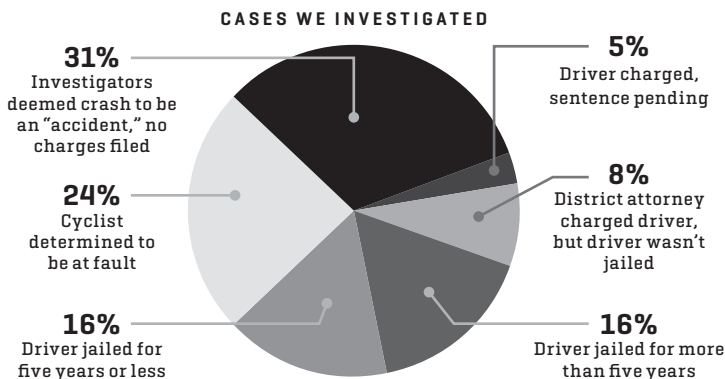
**SCOTT MULLEN WAS** pedaling his bike home from work in Chicago on May 10, 2007, when a dump truck driver turned left and hit him as he was riding through the intersection of Chicago and Milwaukee Avenues. “I was in a bike lane, on a sunny afternoon,” says Mullen, now 44. “I broke my back, arms, and hands. The driver didn’t even get a traffic violation.” Our reader survey (p. 38) surfaced hundreds of stories like this.

It’s no wonder 65 percent of respondents said they believe that drivers aren’t given appropriate legal penalties when they’re at fault for hitting a cyclist.

When motorists kill cyclists, do the penalties go far enough? To find out, we combed the National Highway Traffic Safety Administration’s Fatality Analysis Reporting System for cyclist deaths in 2014 and 2015, and analyzed 78 cases from seven

cities: Albuquerque, New Mexico; Baltimore; Indianapolis; Los Angeles; St. Louis; Milwaukee; and Madison, Wisconsin. We couldn’t investigate them all—police often withhold driver names, reports aren’t always public record, the media doesn’t cover every case, and some hit-and-runs go unsolved. For the 38 cases for which we were able to determine the outcome, prosecution was inconsistent at best.—Dan Roe

### HOW THE CASES PLAYED OUT





# THEY DIDN'T COME BACK

HEARTBREAK STRIKES A KENTUCKY CYCLING CLUB TWICE IN ONE YEAR



ZOMBIE ZONE CYCLING CLUB MEMBERS PUT UP THIS SIGN TO HONOR THEIR TEAMMATE'S RALLYING CRY.

There's a wooden board nailed to a tree outside of Lexington, Kentucky—the word “UNBROKEN” painted on it in blocky letters. Every time Mike Kennedy sees it as he cranks up that last hill on the road back to town, he thinks of his former cycling buddy Mark Hinkel. The inscription comes from the title of Hinkel's favorite book—a biography of Olympic distance runner Louis Zamperini—and is something

Hinkel always said, punctuated by a round of fist bumps, when he and his teammates conquered the final rise.

The sign hangs in memory of Hinkel and his fellow rider, David Cassidy. Both were killed by drivers less than a year apart—a devastating blow to the Zombie Zone cycling club, made up of roughly 18 “old guys, and some women, too,” Kennedy says, who ride together on weekends and travel to events like the 3 State 3 Mountain Challenge in Chattanooga, Tennessee. Kennedy unwittingly coined the group's name when he was riding with his teammates during the final climb of the 2013 Challenge and remarked: “We're in the Zombie Zone now—we're like the cycling dead, and the only way we're gonna get back is to pull each other along.” Hinkel, 57, was a lawyer and the group's unofficial emissary. When the Zombies encountered other groups on the road, Hinkel would immediately roll up to get acquainted and to try to draw new people into the club. Sixty-two-year-old Cassidy, a cardiologist, was the route planner of the bunch, a rider who “used to struggle up the hills but had recently started setting the pace and coming into his own,” Kennedy says.

In May 2015, Hinkel was at mile 99 of the region's premier event, the Horsey Hundred Century, when a pickup truck crossed the centerline and hit him head-on. Witnesses called 911 immediately. The driver, 29-year-old Odilon Paz-Salvador, who had a history of substance abuse and was allegedly drunk at the time, continued three miles down the road until police pulled him over at a mobile home park—as Hinkel lay bleeding on the truck's bed cover. Emergency responders found Hinkel there and rushed him to the University of Kentucky Chandler Hospital, where he was pronounced dead.

The Zombies wore team kit to Hinkel's funeral at his family's request and held memorial rides for him. They were still in mourning when Cassidy was killed on April 17, 2016. He was training for the Challenge when a driver, who says she didn't see him, changed lanes on US Route 68 and struck him. There was no indication of wrongdoing

on the driver's part, and a grand jury declined to prosecute the crash.

The criminal case in Hinkel's death still hasn't been resolved, but at press time, Paz-Salvador was scheduled to appear at trial in late April on charges that include murder, first-degree wanton endangerment, and DUI. In the meantime, there have been some positive outcomes: Hinkel's family endorsed an enhanced DUI look-back law—meaning that alcohol-related offenses would stay on a driver's record for up to 10 years

instead of five—which the state passed. And the Zombies are spearheading efforts to introduce a three-foot passing law in Kentucky.

What-ifs still haunt Kennedy, who can't stop thinking that if only he were riding wingman that day, he could have saved Hinkel. Or maybe he would have been hit too. “Every time I ride I wonder, ‘Am I going to come back?’” Kennedy says. Perhaps remembering his friend's signature saying, he adds: “But you can't ride scared.”—C.G.

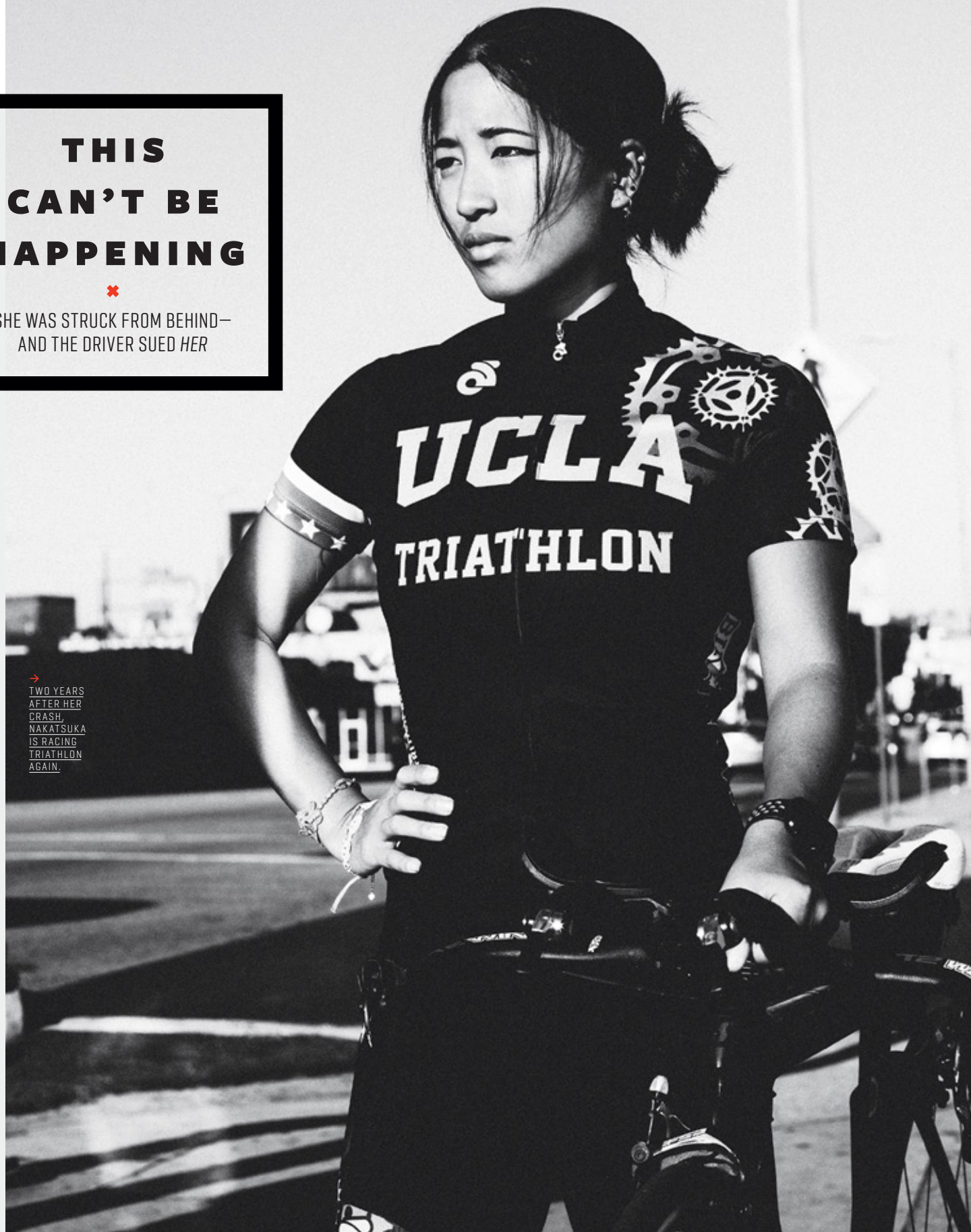


## THIS CAN'T BE HAPPENING



SHE WAS STRUCK FROM BEHIND—  
AND THE DRIVER SUED HER

→ TWO YEARS  
AFTER HER  
CRASH,  
NAKATSUKA  
IS RACING  
TRIATHLON  
AGAIN.



For the first time in her life, Nako Nakatsuka felt hopeless. On April 6, 2014, the typically upbeat biochemistry grad student and member of the UCLA triathlon team had been making a left turn off Santa Monica Boulevard on her road bike when a car drifted into the turn lane and hit her from behind. But it wasn't the crash that got to her—it was what came in the mail a month later: an insurance bill for damage to the vehicle that hit her, along with the threat of a lawsuit.

Things had started off normal enough post-crash. According to Nakatsuka, then 23: The driver got out of the car, apologized profusely, and even fetched water for her as she lay dazed in the middle of the busy road. (Because Nakatsuka fears additional legal action from the driver, we've agreed to withhold the motorist's name.) But when Nakatsuka contacted the driver's insurance company about her medical bills—she'd suffered a concussion, severe bruising, and permanent damage to her glutes—she discovered the LAPD had never filed a report, despite issuing her a receipt for one. The driver had also told her insurance company that Nakatsuka had caused the crash by backing her bike into the vehicle.

"I think they thought I was on a motorcycle," she says. "I was like, 'No, I was on my bicycle—how could I even do that?'"

The LAPD wouldn't put her in touch with the cops who had been at the scene. When she contacted the branch responsible for traffic collisions in the area, she was told the LAPD almost never files crash reports for incidents involving bikes. (The LAPD disputes this: A media relations rep said that any time someone reports a crash involving injuries, officers always take the report, give it a number, and file it.) Although the division was able to determine that four cop cars and an ambulance had been at the intersection at the time of the crash, there wasn't much Nakatsuka could do but file a belated report. In the meantime, notices from the driver's insurance company kept coming, the damages increasing until they topped out at \$4,000.

Nakatsuka got a lawyer to help her reach a settlement with the insurance company. They dropped the lawsuit and paid her \$2,000—which didn't come close to covering the \$10,000 she owed in hospital and legal fees.

"My lawyer said, 'No matter how hard you fight this, you're going to pay for it more than she does, even if we go to court, even if we win,'" Nakatsuka says. "Her insurance will pay for her stuff, but for you everything will come out of pocket.' It was a lose-lose situation." Friends convinced her to start a GoFundMe campaign, which prompted an outpouring of



**I got a lot of messages saying, 'The same thing happened to me—what should I have done?'"**

support. "I got a lot of messages saying, 'The same thing happened to me—what should I have done differently?'" she says.

A year and a half after the crash, Nakatsuka was able to get back on the bike and return to triathlon training again. Her injuries still bother her, but the fear of being hit by a car again—without seeing it coming or having the opportunity to react—is what's lasted the longest. That, and she's struck by a sense of injustice—that her body, life, and finances were upended by a negligent driver who never suffered any legal consequences.—C.G.





## FROM GRIEF TO ACTION

A MOM'S MISSION TO GET A BIKE LANE ON THE STREET WHERE HER SON WAS KILLED

**A**sif Rahman got his first bicycle before he was even tall enough to reach the pedals. From that moment on, bikes were an important part of his life. As he grew older—and developed interests in photography, spoken-word poetry, and beatboxing—he explored New York City on two wheels, zipping from borough to borough, far beyond his family's home in the Jamaica neighborhood of Queens. His mom, Lizzi, worried about his safety, but he would always say: "Don't worry, Mom—there are bike lanes everywhere."

On February 28, 2008, the 22-year-old was riding home from work in Queens when he veered around a double-parked car on Queens Boulevard and was killed by a truck. The driver wasn't charged—and Lizzi says the assistant district attorney told her there would be no investigation.

Shortly after her son's death, Lizzi visited the site of the crash and was shocked to discover that there was no bike lane. "I told my family I have to put one on Queens Boulevard to save other lives," she says.

But getting a bike lane on the congested thoroughfare, nicknamed the "Boulevard of Death" for its crash rate, was no easy task. Lizzi started by emailing Asif's story to officials in

then-mayor Michael Bloomberg's office. Some sympathized, some said it was a lost cause, she says. But every year around the anniversary of Asif's death her mission got attention from local media. Finally in 2015, after working with local groups Transportation Alternatives and Families for Safe Streets, Lizzi's persistence paid off. Mayor Bill de Blasio took interest in the project and the city began installing bright-green protected lanes on both sides of the road. "We were not going to allow any street in this city to be called the Boulevard of Death anymore," de Blasio said at a press conference. "It had to become a boulevard of life."

By the end of the year national advocacy organization People for Bikes named the Queens Boulevard bike lane, which separates bikes from car traffic with curbs and plastic posts, one of its "10 Best New Bike Lanes of 2015." Lizzi says fighting for those buffered stripes of paint kept her going in the hard years of adjusting to life without her son. She still feels his absence every day and rarely leaves the house now except for work and family errands. But she continues to work with Families for Safe Streets to turn her loss into a source of community pride. "It won't bring my son back," she says, "but I'll know he gave his life for a good cause."—C.G.



# VISION ZERO: HOW CLOSE ARE WE?

TRACKING THE PROGRESS OF THREE MUNICIPAL SAFETY INITIATIVES BY DAN ROE

In 1997, the Swedish parliament implemented the world's first Vision Zero traffic safety program based on a simple ethos: "It can never be ethically acceptable that people are killed or seriously injured while moving within the road transport system." It was a federally funded campaign for all road users—motorists, cyclists, and pedestrians alike—and over the past 20 years it's more than halved the fatality rate. In 2014 some American cities, including New York City and Los Angeles, began rolling out Vision Zero programs with the goal of eliminating all traffic deaths as early as 2024.

Today there are more than two dozen US cities in the Vision Zero Network, now a national nonprofit initiative. Their mayor's offices and departments of transportation must work with legislators to allocate resources within city budgets and advocate for improvements. They're using crash data to prioritize bike infrastructure and traffic calming measures—such as narrower vehicle lanes that encourage slower driving—in the most dangerous corridors. "We can control the environment, we can control the policies, and we can control speeds in order to eliminate deaths," says Vision Zero Network founder and director Leah Shahum.

Since Vision Zero's success hinges on overhauling entire transportation systems, Shahum says the change won't happen overnight. To check on progress, we talked to transportation experts and local advocates on the ground in three major cities to get the lowdown on Vision Zero's initial strides.

## NEW YORK CITY

YEAR STARTED 2014

GOAL YEAR 2024

### CYCLIST FATALITIES

2013: 12

2014: 20

2015: 14

2016: 18

To protect the growing NYC cyclist population, Mayor Bill de Blasio's Vision Zero program completed more than 100 street redesigns last year, as well as 18.5 miles of protected bike lanes. The campaign touts zero deaths on Queens Boulevard in 2015 and 2016 as proof of progress (138 pedestrians and 5 cyclists died on the so-called "Boulevard of Death" from 1990 through 2014). "We're proud of the progress New York City has made toward Vision Zero," says Paul Steely White, executive director of Transportation Alternatives. "Though overall traffic deaths are at historic lows, some key Vision Zero statistics have been moving in the wrong direction—cyclist fatalities rose sharply last year." Steely White's short list of needed advances includes deploying more speed cameras near school zones, facilitating traffic enforcement against reckless drivers, and ensuring cycling infrastructure, such as protected bike lanes, grows.

## BOSTON

YEAR STARTED 2015

GOAL YEAR 2030

### CYCLIST FATALITIES

2015: 3

2016: 0

No cyclists died in Boston last year. Transportation Department Commissioner Gina Fiandaca attributes the progress to common sense adjustments, such as lowering the city's default speed limit. (A review of international traffic studies determined that a decrease in automobile traveling speed of just 1mph would lead to a 5 percent reduction in crashes.) Fiandaca is also spearheading a change in rhetoric: "Accidents," she says, should be called "crashes," as they're almost always preventable (see p. 41). The police department has hired a data analyst to identify dangerous streets, and the Neighborhood Slow Streets program helps install signage, pavement markings, and speed humps.

## LOS ANGELES

YEAR STARTED 2014

GOAL YEAR 2025

### CYCLIST FATALITIES

2012: 9

2013: 17

2014: 6

2015: 15

2016: 22

Much like Boston and New York City, LA is using crash data to construct protected bike lanes where they're needed most and putting neighborhoods in charge of the improvements. "That's what we're most excited about," says Tamika Butler, executive director of Los Angeles County Bicycle Coalition. "Organizations are being paid to do work in their own communities." New for 2017 is a citywide outdoor media campaign for responsible driving, says Nat Gale, director of Vision Zero at the LA Department of Transportation. "We're trying to be very direct in asking people to be aware," Gale says. Yet local cycling advocate Ted Rogers says the stagnant fatality rate is reflective of a bias favoring drivers. "We built a whole city around cars," Rogers says. "In a lot of places, we've got 12-foot-wide traffic lanes and straight streets that encourage speeding because there's nothing to slow drivers down."

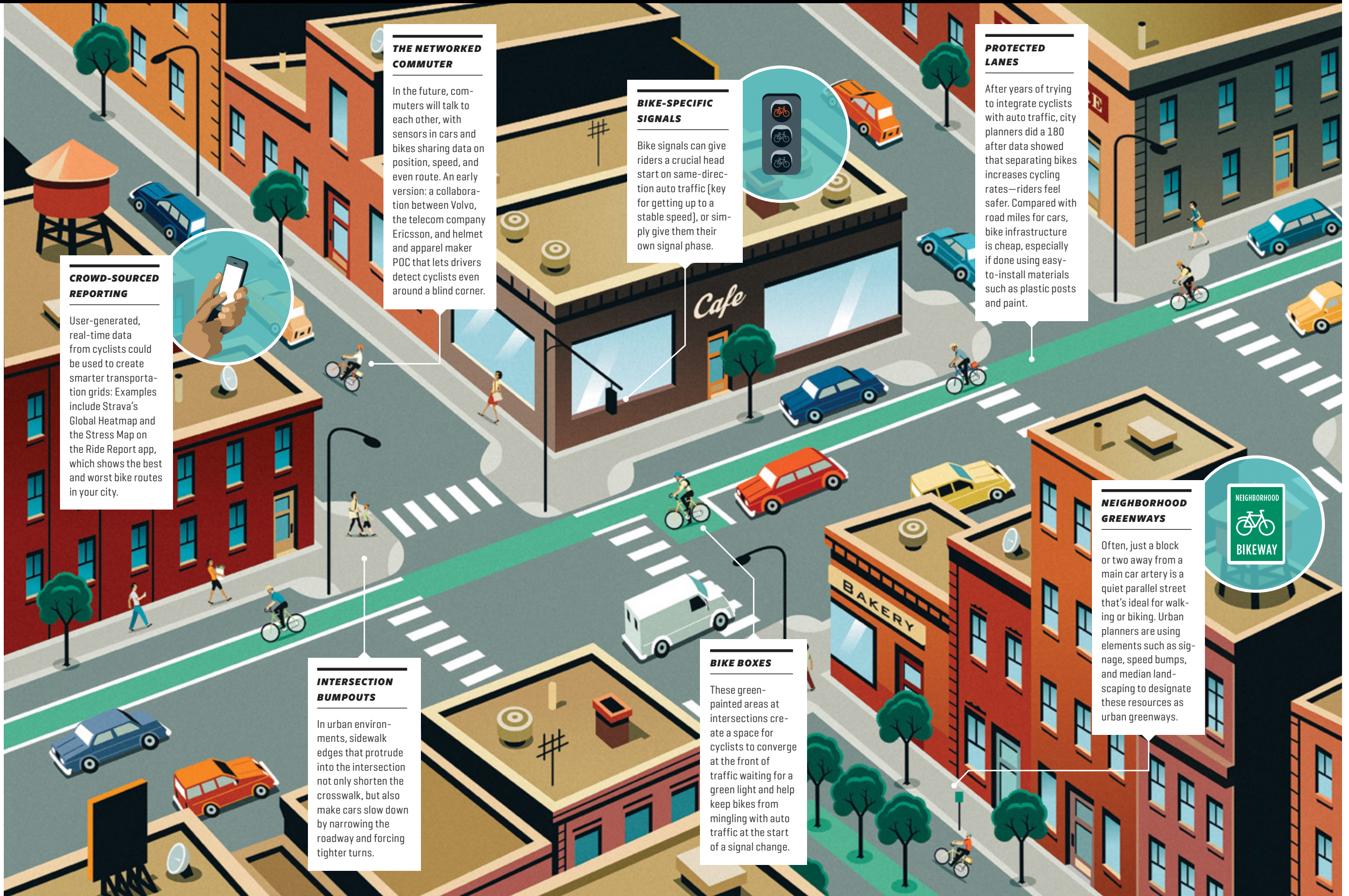


# STREETS OF THE FUTURE!

INFRASTRUCTURE AND TECH INNOVATIONS THAT COULD MAKE CYCLING SAFER FOR ALL OF US **BY JOE LINDSEY**

As urban cycling gets more popular—bike commuting rose 61 percent from 2000 to 2012 according to US Census data—city and transportation planners are incorporating bike facilities into street design. The transportation network of the future isn't about cars, but mobility: moving people around. Autonomous vehicles and mass transit are part of that, but so are bikes, which could be “the glue between modes,” says futurist Greg Lindsay, author of *Aerotropolis: The Way We'll Live Next*.

For cycling, the key isn't any single element, says Martha Roskowski, vice president of local innovation at People for Bikes. Instead, she says, it's taking the often disparate strands of bike infrastructure, a map she likens to “a few pieces of spaghetti thrown at a wall,” and connecting them so riders can safely get anywhere they need to go. (A 2013 study of protected bike lanes in Toronto found cyclists' injuries dropped 75 percent compared with other locations in the city without them.) And as technology changes transportation, a light footprint is key: Massive, expensive projects may look cool, but they're hard to repurpose when needs change. Lightweight, flexible, and connected is the mode of the future. Here's what we hope to see on more of tomorrow's streets.



### CROWD-SOURCED REPORTING

User-generated, real-time data from cyclists could be used to create smarter transportation grids: Examples include Strava's Global Heatmap and the Stress Map on the Ride Report app, which shows the best and worst bike routes in your city.

### THE NETWORKED COMMUTER

In the future, commuters will talk to each other, with sensors in cars and bikes sharing data on position, speed, and even route. An early version: a collaboration between Volvo, the telecom company Ericsson, and helmet and apparel maker POC that lets drivers detect cyclists even around a blind corner.

### BIKE-SPECIFIC SIGNALS

Bike signals can give riders a crucial head start on same-direction auto traffic [key for getting up to a stable speed], or simply give them their own signal phase.

### PROTECTED LANES

After years of trying to integrate cyclists with auto traffic, city planners did a 180 after data showed that separating bikes increases cycling rates—riders feel safer. Compared with road miles for cars, bike infrastructure is cheap, especially if done using easy-to-install materials such as plastic posts and paint.

### INTERSECTION BUMPOUTS

In urban environments, sidewalk edges that protrude into the intersection not only shorten the crosswalk, but also make cars slow down by narrowing the roadway and forcing tighter turns.

### BIKE BOXES

These green-painted areas at intersections create a space for cyclists to converge at the front of traffic waiting for a green light and help keep bikes from mingling with auto traffic at the start of a signal change.

### NEIGHBORHOOD GREENWAYS

Often, just a block or two away from a main car artery is a quiet parallel street that's ideal for walking or biking. Urban planners are using elements such as signage, speed bumps, and median landscaping to designate these resources as urban greenways.

NEIGHBORHOOD  
BIKEWAY



# 8 THINGS YOU CAN DO NOW

BY JOE LINDSEY

✘

**FIRST, SOME REFRESHING NEWS: EVEN AS THE NUMBER OF CYCLISTS ON THE ROADS HAS INCREASED, FATALITIES LARGELY HAVE NOT, MEANING THAT CYCLING IS SAFER NOW THAN IT WAS 10 YEARS AGO. BUT IT'S STILL NOT ENOUGH, AND EVEN THE PERCEPTION THAT CYCLING IS UNSAFE STOPS MANY PEOPLE FROM RIDING. IF WE'RE GOING TO CHANGE THE CULTURE SO THAT CYCLING IS NOT ONLY LESS RISKY BUT ALSO PERCEIVED AS SAFE, HERE'S WHAT NEEDS TO HAPPEN.**

✘

1

## STOP DISTRACTED DRIVING

All but four states have some kind of ban on texting while driving, but a 2014 study found that those laws lead to only a three percent reduction in traffic fatalities (possibly because many people do it anyway). Technology that prevents drivers from texting while driving will likely be more effective, says People for Bikes president Tim Blumenthal. That technology exists (the app Cellcontrol, for example, which you can program to disable functions like texting while the car is in motion). And the National Highway Transportation Safety Administration recently announced design guidelines for car and phone companies to create a kind of "Driver Mode" that's akin to airplane or do-not-disturb settings. Given that the guidelines are voluntary, it may take more assertive measures to get companies to fall in line.

2

## PUSH FOR IMPROVED DRIVER'S ED

Today only 23 states require driver's ed for motorists

under 18 and only 15 use a statewide curriculum. The courses are generally good, but could be better. In several state curriculums, "dooring" is never mentioned despite being a significant cause of cyclist crashes. Instead, all states should be calling out the problem like New Mexico does, and recommending a specific solution: the Dutch Reach, a simple behavior where drivers open their door with their right hand when parallel parked, which twists them in the seat so they can better see overtaking traffic like cyclists. If your state or school district doesn't have a program, it's worth lobbying for.

3

## FIGHT FOR LAWS THAT PROTECT CYCLISTS

In 2014, the League of American Bicyclists conducted a study of media reports and found that in more than 600 documented cyclist deaths in 2012, just 12 percent of the drivers involved were punished. That may be in part because only nine states have Vulnerable Road User laws, which help ensure equal protection for cyclists, pedestrians, and motorcyclists when they're struck by drivers. VRUs usually specify minimum fines rather than jail time,

4

## DEMAND BETTER INFRASTRUCTURE

"There are more safe places to bike in this country than there used to be," Blumenthal says. "But we don't have enough interconnected systems. A single bike lane or 'Share the Road' sign won't meaningfully increase ridership." What will, he says, is changing the message of bike advocacy from "cars-are-the-enemy" to "bikes-are-the-answer." Businesses want communities with amenities that attract workers; when workers see rideable communities as valuable assets, their employers do too, and push for them. Politically, bikes should be positioned as a solution to problems like traffic, parking, and pollution. "Instead of saying what government can do for bike riding, we say 'Here's what bike riding can do for your community,'" Blumenthal says. How can you help? Join local bike advocacy groups, attend city council

meetings where transportation is discussed, and speak with your employer about incorporating cycling into its commuting and health incentives for employees.

5

## RIDE RESPONSIBLY

One reason cyclists don't get more respect is we don't consistently uphold our own responsibilities as road users. You see the culprits: riders who pedal against traffic, blow through stop lights, roll stop signs when other traffic is present, or sprawl across the road in packs, oblivious to cars stuck behind them. That breeds calls for cyclists to take road tests or pay a use tax. Those will be much less powerful if we are better ambassadors.

6

## REPORT HOSTILE DRIVERS

Program the nonemergency police and state patrol dispatch numbers into your cell contacts. If you're harassed, call in a report giving the best description you can of the vehicle, license plate, occupants,

incident, and direction the harasser is headed. (If you're in imminent danger, call 911 instead.) Use a POV or cell phone camera if you can; the evidence is usually admissible in court. Yes, the chances the police will find, let alone punish, your harasser are low. But in some states, state patrol reports are entered into a database. In Colorado, if the same license plate number comes up three times, the driver gets a warning letter including details of the incidents. Another option is the Close Call Database, a privately run website created by cyclist Ernest Ezis to supplement police reporting worldwide and help build a case against serial offenders. Register online at [closecall-database.com](http://closecall-database.com) or through your Strava account.

7

## BE VISIBLE

Drivers are responsible for paying attention, period. But there's a grain of truth in that teeth-grinding refrain drivers often fall back on when they hit cyclists: "I didn't see him." So be seen. A study from Denmark published in 2013 found that riders with daytime running lights were 19 percent less likely to be hit by drivers than a control group without. Fluorescent

and reflective materials also dramatically improve drivers' ability to see us from farther away (which gives them more time to react). But you needn't be swathed head to toe in screaming yellow. Research from Clemson University's Vision Perception and Performance Lab suggests that adding fluorescent colors at the feet/ankles, knees, and wrists helps create what's called "biomotion," which helps drivers accurately recognize us as human as opposed to a stationary object.

8

## ABOVE ALL, KEEP RIDING

There's safety in numbers—and evidence to back it up. In 2003, a study in the journal *Injury Prevention* examined data from 68 cities in California and 14 European countries and found that when the number of cycling trips doubles, the injury rate per capita drops by a third, when adjusted for the rise in trips. Newer studies have yielded similar results. For example: A 2016 study in Hong Kong found that the benefits even accrue at the neighborhood level, suggesting that when drivers see more cyclists in a particular part of town, they drive more carefully there.