

SAFER STREETS FOR **EVERYONE**

STUDY FINDINGS | NOVEMBER 2018



VISION ZERO
ANCHORAGE

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VISION ZERO IS A COMMUNITY COMMITMENT TO REDUCING LOSS OF LIFE AND SEVERE INJURIES ON ROADWAYS TO **ZERO.**

Dear Friends,

Achieving Vision Zero requires a community commitment.

More than 30 American cities have adopted Vision Zero policies, and evidence demonstrates that these policies work. New York City's Vision Zero plan is credited with reducing traffic fatalities by 22% in three years. A pilot project completed as part of Seattle's Vision Zero initiative reduced crashes on a hazardous section of Rainier Avenue by 15% overall, with injury crashes down 30% and pedestrian and bicycle crashes down 40%. Thanks to these success stories and many others, we know the steps we need to take to reduce and eventually eliminate serious injuries and deaths on our streets.

Anchorage roadways should be safer for everyone—pedestrians, bicyclists, and motorists. Our goal is achieving zero traffic deaths, and we can by taking a data-driven and coordinated approach to designing safer streets, public education, adopting and evaluating best practices, and enforcing effective laws.

Through better street design, education, and public involvement, we will make Anchorage streets safer and more accessible for everyone. That's a vision we all share.

Sincerely,

Ethan Berkowitz

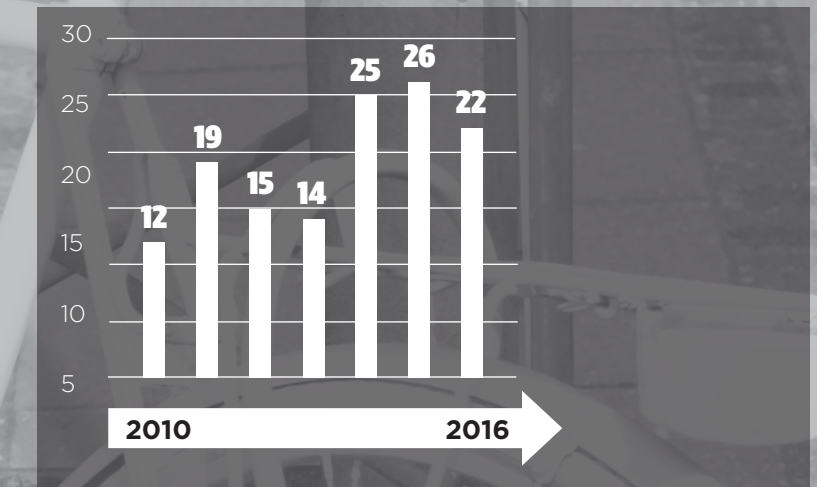
IN A FLASH, YOUR LIFE CAN CHANGE FOREVER

Everybody knows someone whose life has been irrevocably changed by a crash. On average, 19 people a year die on Anchorage streets. 43% of these deaths are people walking or riding a motorcycle or bicycle. For every person killed each year, 150 are seriously injured. A mistake on the roadway should not carry the death penalty.

The road system needs to keep us moving but it should also be designed to protect us. It's up to us as a community to decide if we accept the daily risk of death and injury as the cost of doing business, not just for faceless statistics but for people we know and love.

Solving the problem will take commitment from all of us. Our actions not only reflect our commitment to safety, but serve as a model to our families, our friends, our coworkers, and other road users. Anchorage streets should be safer for everyone—people on foot and in wheelchairs, in cars, using public transit, and on bikes.

ANCHORAGE CRASH FATALITIES: ALL MODES



BY MODE

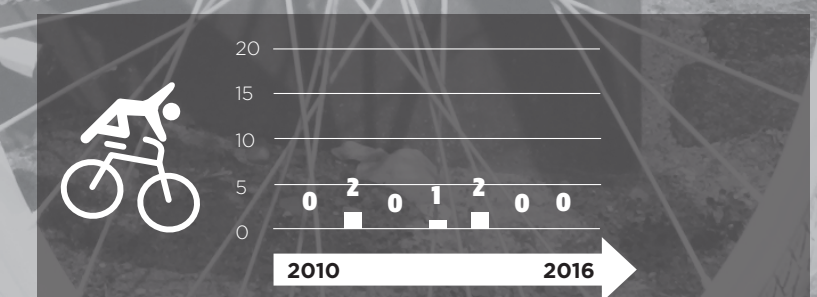
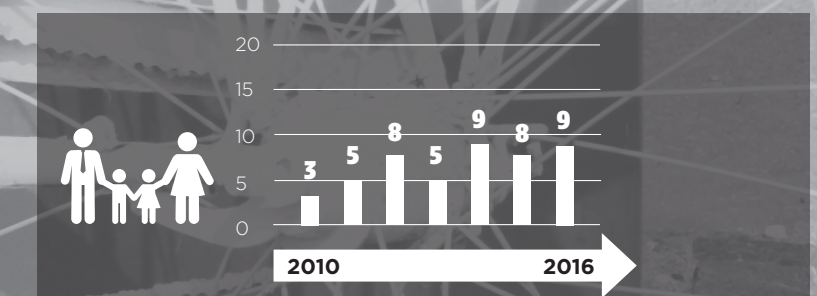
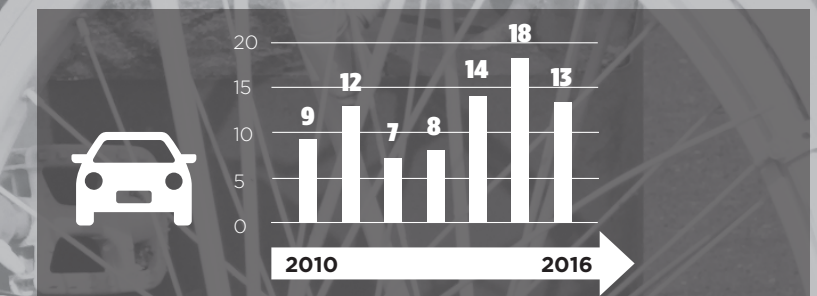


Image source: Villy Fink Isaksen, Wikimedia Commons.

VISION ZERO: CREATING A CULTURE OF SAFETY

EVERYONE PLAYS A ROLE IN MAKING OUR STREETS SAFER

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, equitable mobility for all. The concept of Vision Zero originated in Sweden in 1997, when the Swedish parliament adopted it as the official road policy. Today, Sweden has one of the lowest annual rates of road death in the world (3 out of 100,000 compared to 12.3 in the US) despite a steady increase in traffic. Fatalities involving pedestrians have also fallen almost 50% in the last five years.

PRIMARY SOURCES

- » Alaska Department of Transportation & Public Facilities Crash Data—2010 to 2014 (the most recent set of data with crash location coordinates in GIS)
- » Municipality of Anchorage Crash Data—2010 to 2016
- » Federal Highway Administration Fatal Accident Reporting System (FARS)—2015
- » Alaska Trauma Registry Hospital Visits—2012 to 2016

ANCHORAGE'S VISION ZERO INITIATIVE TARGETS

- » Data-driven decision-making to ensure we target the right problems
- » Integrating human error into the solutions
- » Sharing responsibility for everyone's safety

This report summarizes the findings of an extensive analysis of vehicle, pedestrian and bicycle crashes. It includes both statistical and descriptive analyses of crash data on Anchorage's surface streets for all modes of travel—vehicles, motorcycles, pedestrians, and cyclists. We have analyzed the most recent five years of complete crash data available.

The data tell us the Anchorage transportation system is out of sync with our priorities for a livable, economically vibrant, and healthy community. Each life lost or injury sustained has a cost that extends far beyond the devastating personal loss and can continue for years. The cost of emergency response, long-term healthcare, and emotional trauma add to the burden of crash victims.

When a crash happens near your home or business, or kills someone on a sidewalk, the sense of safety we all take for granted is lost. By taking action to prioritize safety, we can create a new culture where everyone has a choice to walk, bike, drive, ride the bus, or ride a motorcycle and feel safer and more comfortable moving around Anchorage.

VISION ZERO PRINCIPLES



HUMAN LIFE AND HEALTH are priorities in our community.



Traffic deaths and severe injuries are **PREVENTABLE**.



WE ARE HUMAN AND MAKE MISTAKES. The roadway system should be designed to protect us.



SPEED IS A CRITICAL FACTOR in crash severity. The most effective approach is to systematically prioritize safety over speed.



RESPONSIBILITY IS SHARED between system designers and road users.

Image source: John Britton, Wikimedia Commons.

OUR NEIGHBORS WEIGH IN ON TRAFFIC SAFETY

Human stories are an important piece of the puzzle to provide quantitative data. Outreach began in 2016 when the Steering Committee was established and Vision Zero was officially launched with a town hall meeting and community surveys. Conversations with city and state departments, non-profit service providers, and community stakeholders continued throughout this process.

- » Anchorage is not a walking community: **if you are walking, you are perceived as suspicious.**
- » Too much texting and “selfieing” while driving.
- » **Stop red light runners.**
- » Lack of police enforcing laws costs us: high accident rate, high injury rate, HIGH auto insurance. Reckless drivers.
- » This is a **social justice issue**: probably more likely to have low income people impacted.
- » Need to humanize pedestrians and shift to a culture of respect for them.
- » **Speed limits are too fast.**
- » Ban cell phones for drivers, pedestrians, bikes
- » Lack of compassion for walkers in the cold—not given right of way.
- » People **not watching out for each other** (peds, bikes, cars).
- » Lack of education for bike laws.
- » There is **a lot of victim blaming**: pedestrians and bikers, whether or not they are following the rules or being safe, and generally shifting responsibility to people other than the driver.
- » Need better means to highlight problem areas **BEFORE someone is KILLED.**
- » **My husband was run over** last year legally crossing Muldoon within the right of way.
- » Obstacle to Equitable Access: Lack of real, protected, and plowed bicycle lanes and pedestrian pathways, sidewalks to safely get to places
- » **I have never seen the animosity towards cyclists and pedestrians elsewhere like I have here.**
- » I would really like to see **motorcycle awareness** as part of your safety mission.

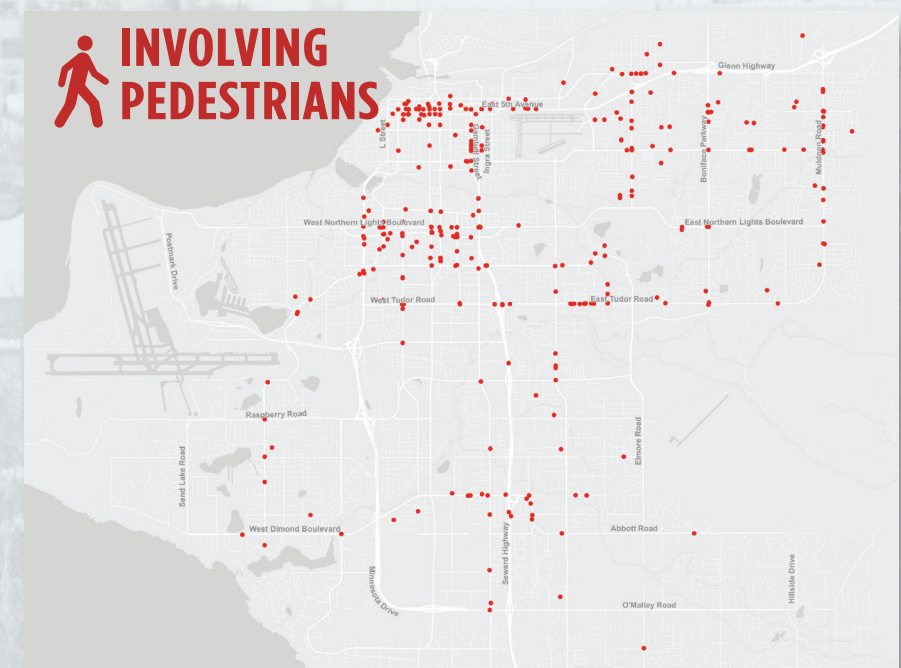
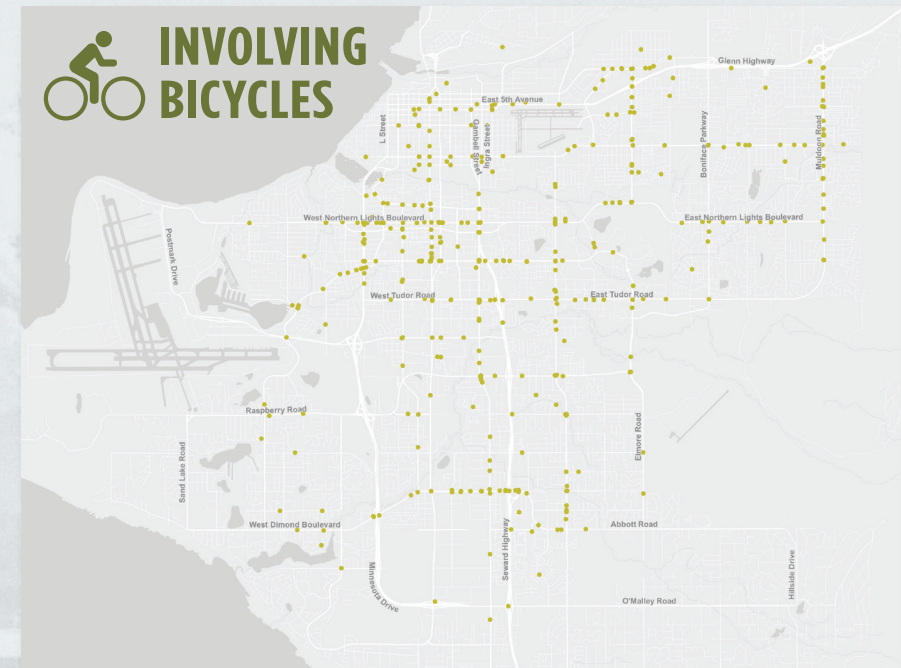
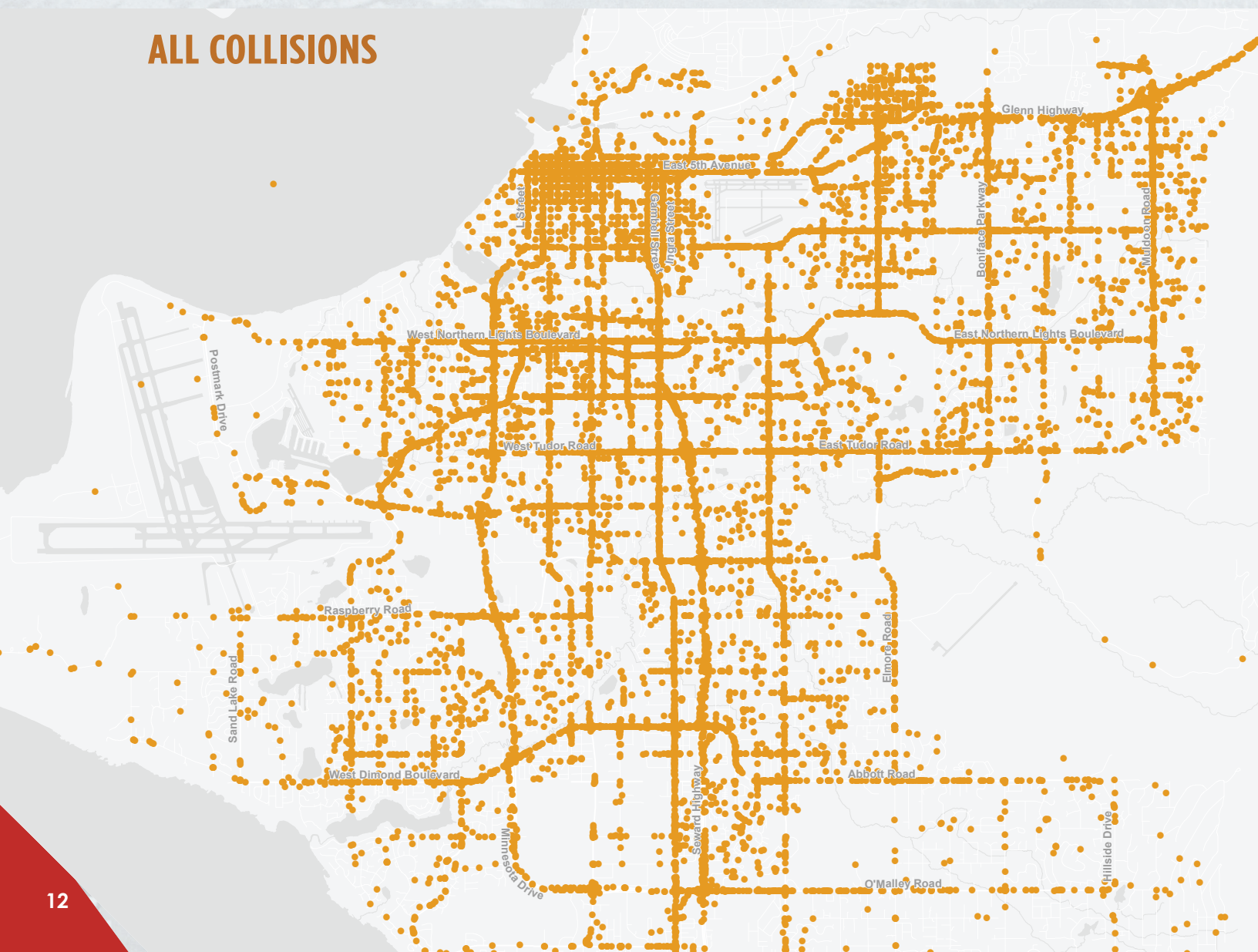


ANCHORAGE'S STORY BY THE NUMBERS

THERE WERE **25,529 COLLISIONS** IMPACTING
93,888 PEOPLE FROM 2010 TO 2014. THAT'S
AN AVERAGE OF **51 PEOPLE PER DAY**

who were directly impacted and may have lost time from work, had to seek medical care, incurred unexpected expenses or worse, were permanently disabled, or buried a loved one.

ALL COLLISIONS



WHO

In all collisions from 2010 to 2016, how many victims were involved?

- » 956 bicyclists
- » 929 pedestrians
- » 39,437 drivers and their passengers (includes motorcycles)

133 people died, 1,118 suffered serious injuries, and 17,701 suffered minor injuries.

Each one of these was someone’s child, parent, friend, classmate, coworker, or neighbor.

Safety for drivers and passengers has improved significantly due to advances in vehicle safety technology. Still, motorists account for a high number of severe injuries and fatalities. Our most vulnerable road users—pedestrians, bicyclists and motorcyclists—do not benefit from the same measures that protect motor vehicle occupants, such as vehicle crumple zones, air bags, or protected passenger compartments.

It is important to keep in mind that these statistics do not account for exposure—that is, how many people walk, bike, and drive and how many miles they travel by those modes. For example, while fewer pedestrians are killed than drivers, there are also many fewer people walking, so their risk of being killed is much higher than raw fatality numbers suggest. Conversely, given

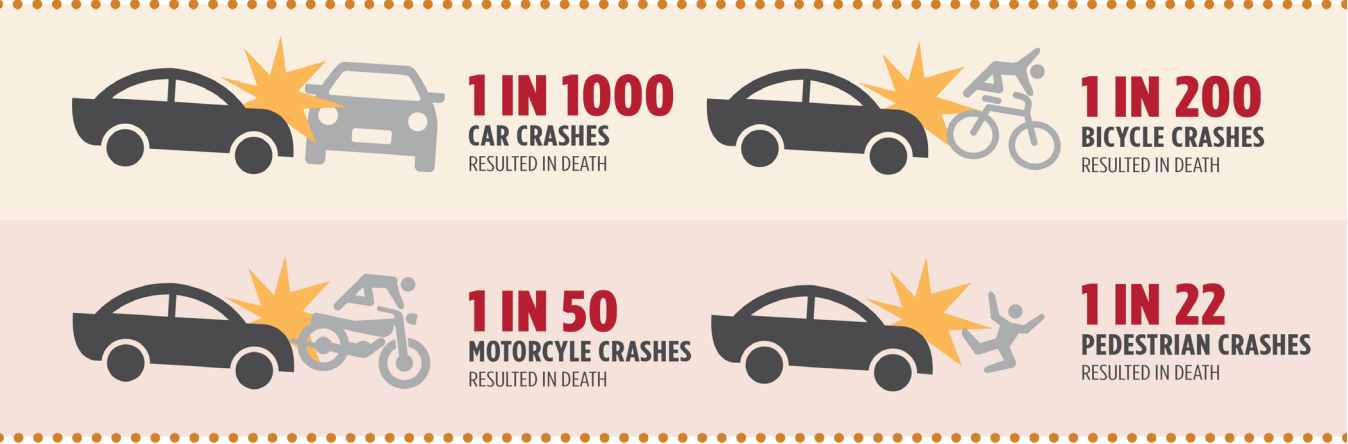
the many thousands of drivers on the road many thousands of miles each year, the handful of driver fatalities results in a comparatively low risk of driver death on Anchorage’s roadways.

EQUAL SAFETY: WHO YOU ARE SHOULDN'T MATTER

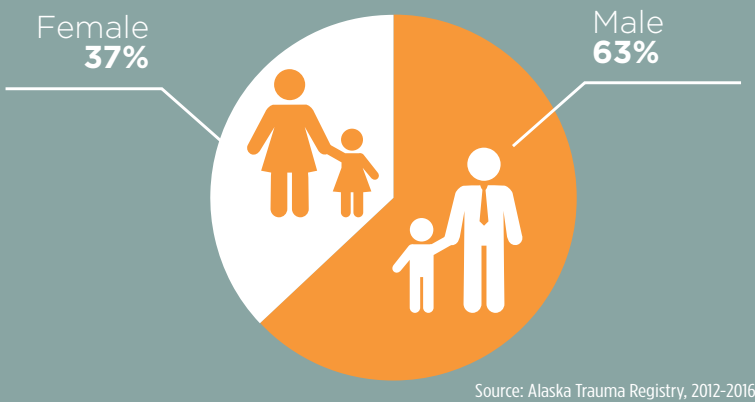
We all need to travel every day to buy food, find housing, get to school and work, visit friends and family, and obtain healthcare services. Low-income people, people of color, and people with disabilities in the United States face transportation hurdles that can make simply accessing basic needs time consuming, dangerous, and sometimes almost impossible. Many walk, bike, or use a wheelchair. Anchorage follows the same national trend. People of color in Alaska are disproportionately impacted by traffic crashes.

We need to ensure our transportation network addresses the needs of all people, regardless of economic class, race, sex, age, ability or any other factor.

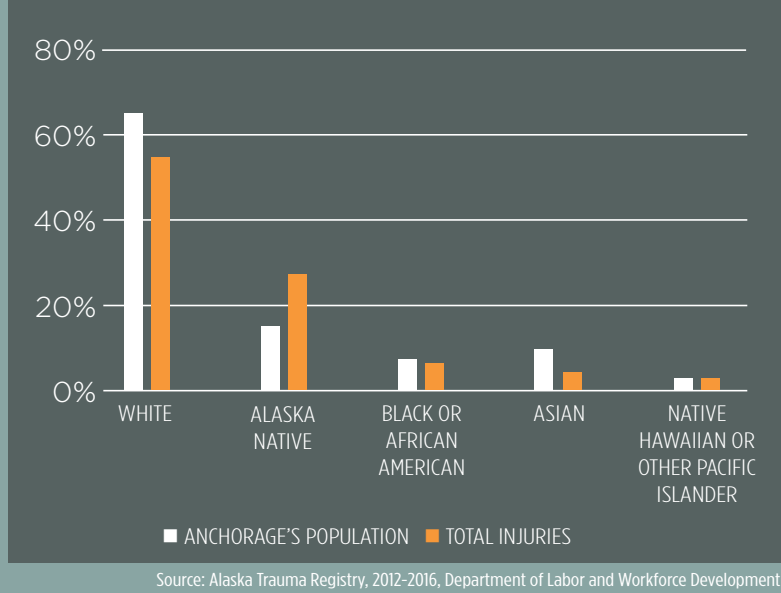
CRASH FATALITIES BY MODE



INCIDENTS THAT LED TO A HOSPITAL VISIT: ALL MODES



INCIDENTS THAT LED TO A HOSPITAL VISIT BY RACE: ALL MODES



WHY

Human choices play a significant role in traffic crashes. Both nationally and in Anchorage, the causes of crashes attributed to human behavior are underreported.

Many crash investigation reports provide fields to describe the actions of drivers and non-motorists that contributed to a crash such as failure to yield, improper turn, or collision with a fixed object, but they don't always address why. This is because these actions are often difficult to observe and measure. For example, a driver failing to yield may not be the root cause of a crash. They may have failed to yield because they were looking at the passenger seat while reaching for a buzzing cell phone.

Based on the data available in Anchorage, people traveling while intoxicated, speeding, running red lights, and driving distracted/inattentively account for 40% of fatal and severe incidents with alcohol and drugs cited in nearly one-third of fatalities. With the legalization of marijuana, this number is likely to increase.

1. Reducing Speeding-Related Crashes Involving Passenger Vehicles NTSB/SS-17/01 NHTSA
2. Distracted Driving 2015, National Center for Statistics and Analysis, Distracted Driving: 2015, in Traffic Safety Research Notes. DOT HS 812 381. March 2017, National Highway Traffic Safety Administration: Washington, DC.
3. NHTSA

SLOWING DOWN SAVES LIVES



Source: Pasanen, E. Driving Speeds and Pedestrian Safety; a mathematical model. Technical Report No. REPT-77, and Nordisk Kabel- og Traadfabriker, Copenhagen, Denmark, 41 pp., 1992. Helsinki University of Technology, Laboratory of Traffic and Transportation Engineering, Espoo, Finland.

SPEEDING

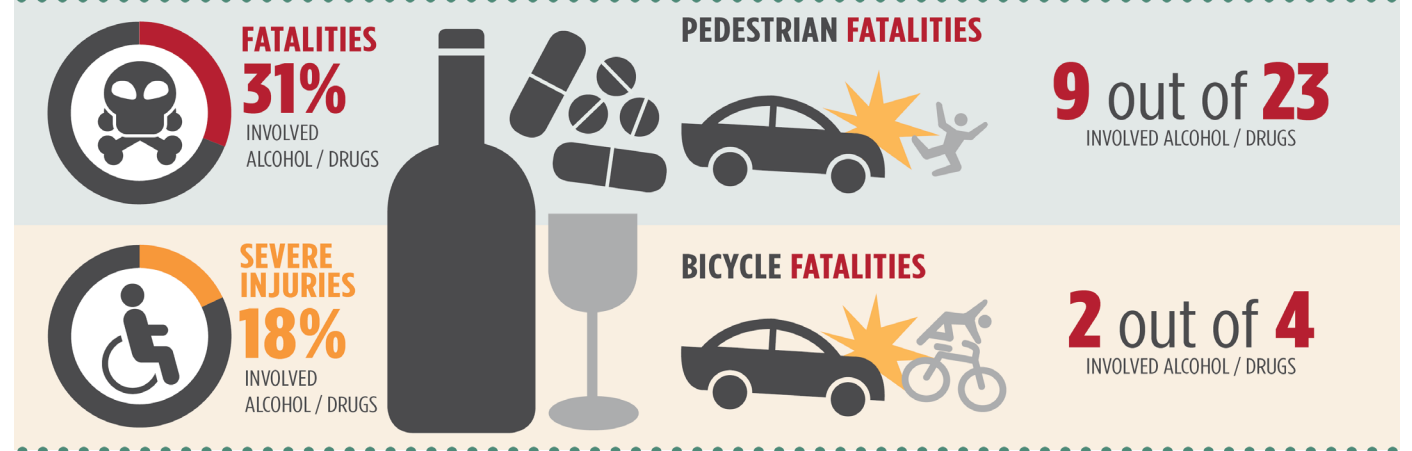
More than 112,000 people died in speed-related crashes in the US between 2005 and 2014, averaging more than 10,000 deaths each year. This is on par with the number of drunk driving fatalities during the same time, yet receives far less attention. Speeding impacts also cost an estimated at \$52 billion in 2014, compared to \$44 billion in losses from drunk driving.¹

DISTRACTED DRIVING

In the US, crashes reported to involve a distracted driver kill an average of nine people and injure more than 1,000 every day.² Sending or reading a text takes your eyes off the road for five seconds. At 55 mph, that's like driving the length of an entire football field with your eyes closed.³

Anecdotally, drivers seem more distracted than ever before yet in Anchorage only 61 of 35,529 crash records reported cell phone use. There is so much loss, but so little data about key driver factors in fatal and serious crashes.

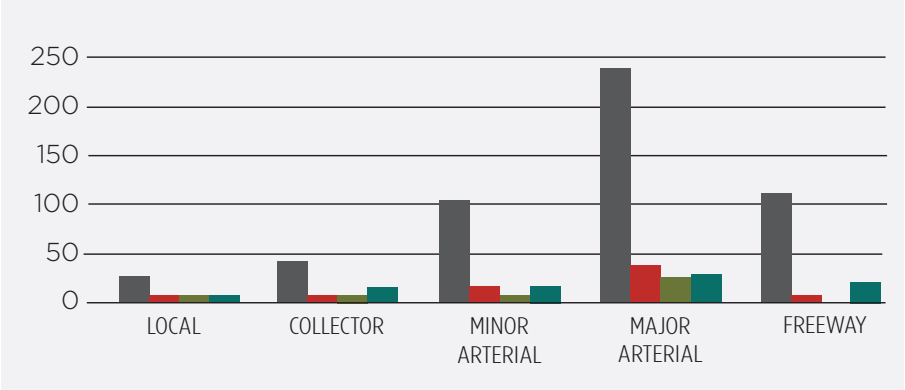
ALCOHOL & DRUG-RELATED CRASHES



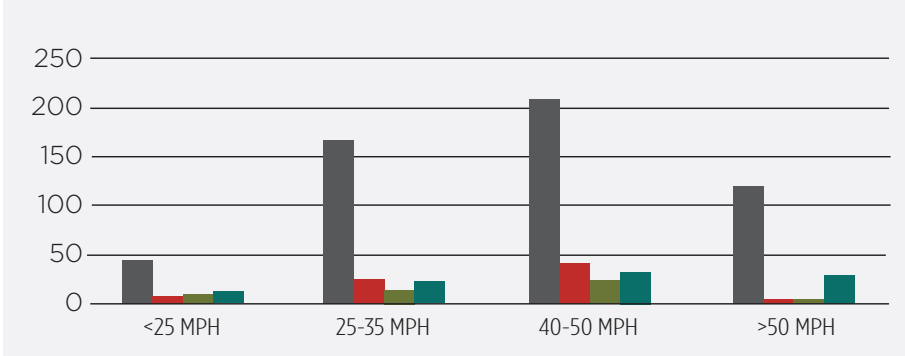
WHERE

While fatal and serious crashes have happened throughout the city, they are more concentrated in certain areas. A small percentage of our streets account for a high percentage of people killed and severely injured in traffic collisions.

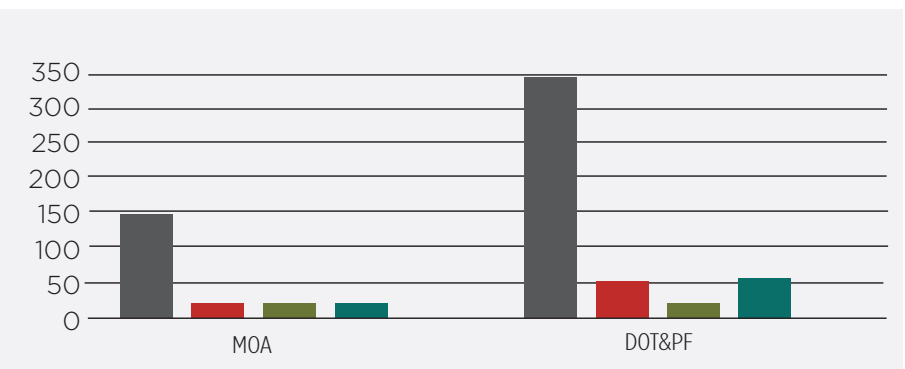
ROADWAY FUNCTIONAL CLASS



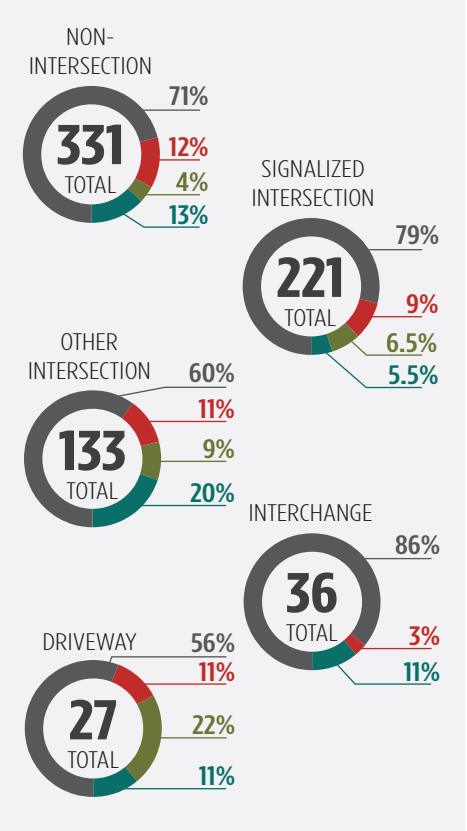
ROADWAY POSTED SPEED



ROADWAY OWNERSHIP



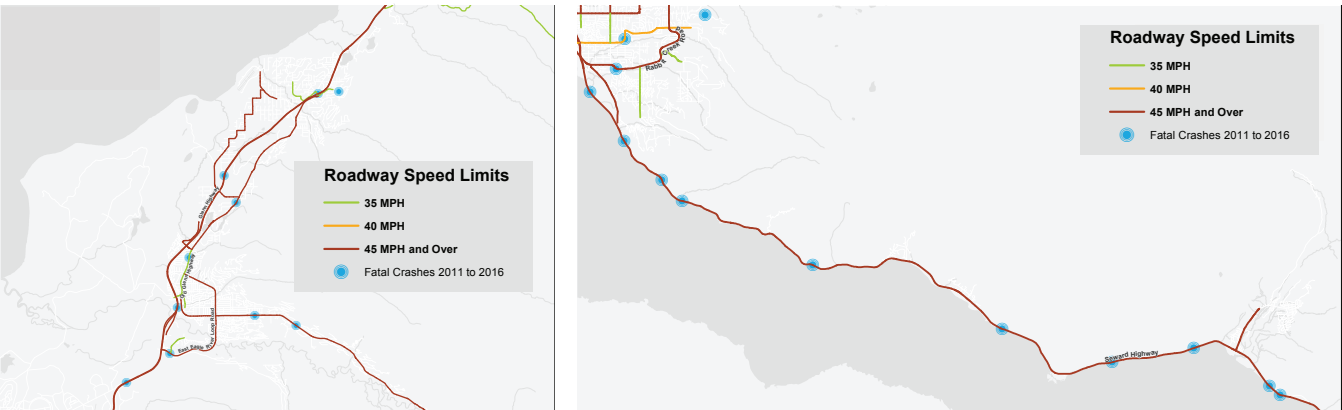
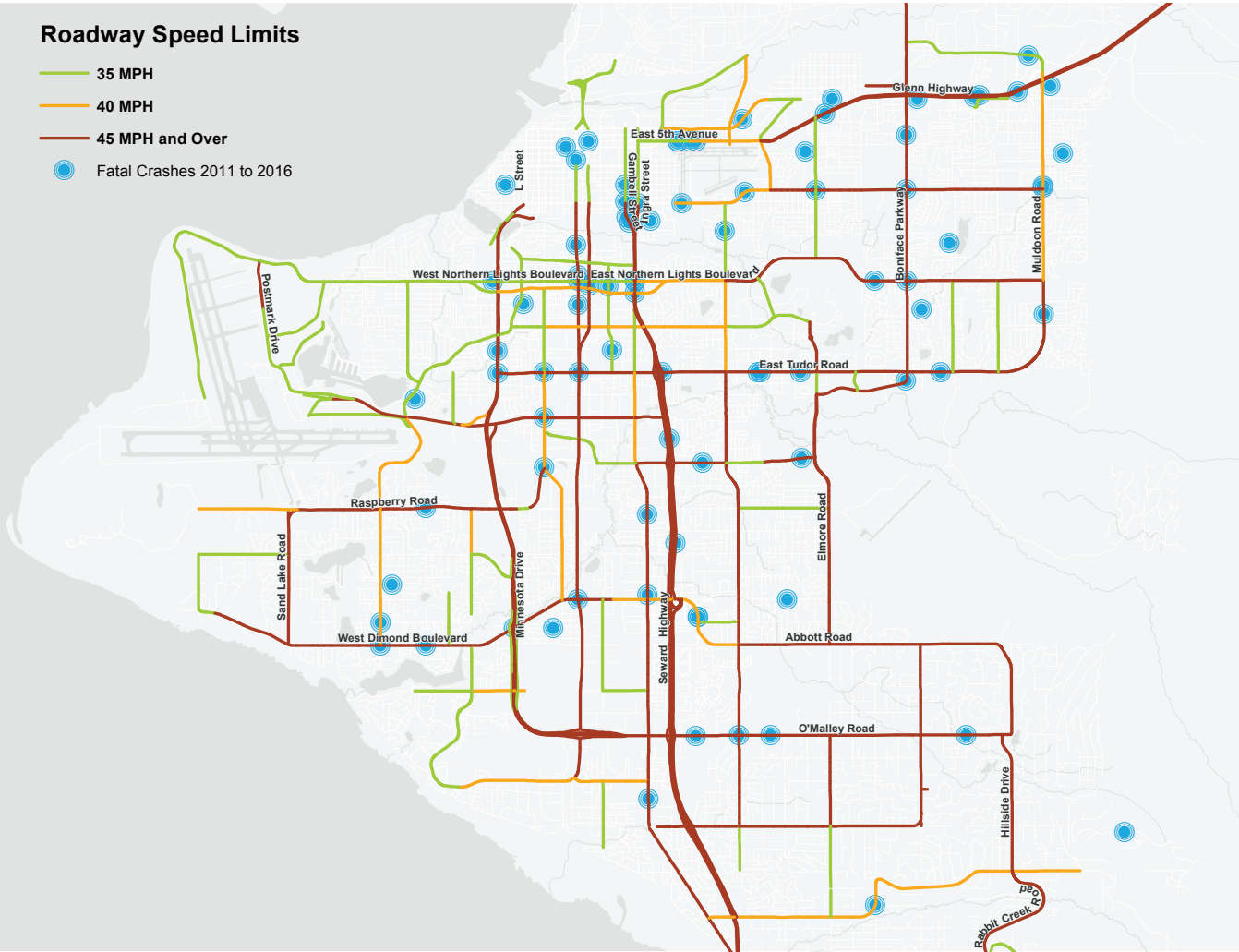
CRASH LOCATION



KEY



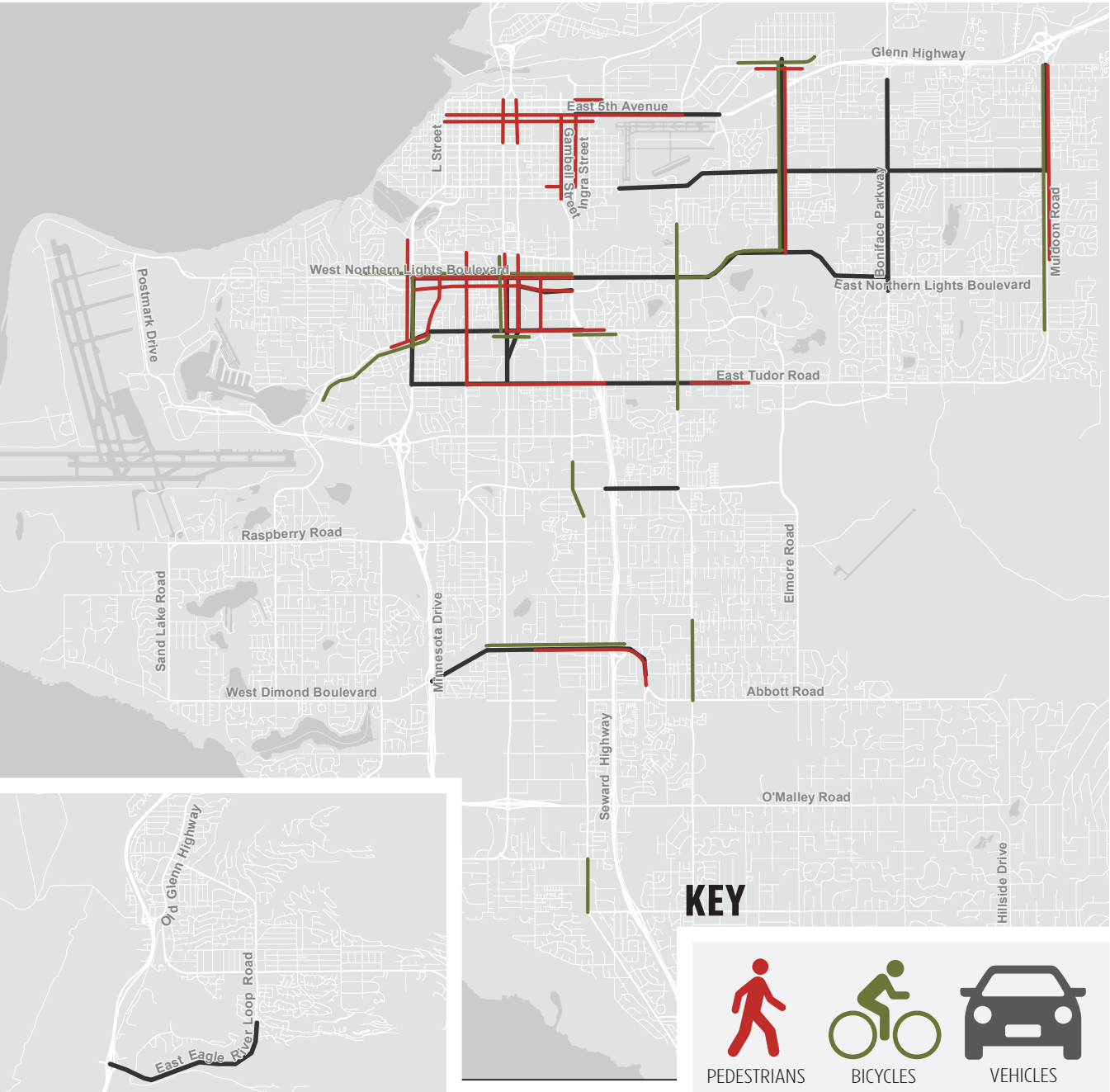
ROADWAY SPEED LIMITS



HIGH INJURY NETWORK

While severe traffic crashes and fatalities are a persistent problem across the city, crash data show certain corridors that are more seriously impacted than others. This high injury network was identified using the Equivalent Property Damage Only (EPDO) Average Crash Frequency Methodology from the Federal Highway Administration Safety Manual.

This analysis looks at all crashes in Anchorage but attaches more weight to crashes resulting in serious injuries or fatalities, less importance to those resulting in a moderate or slight injury, and the least importance to crashes that only damage property. Investing in safety interventions along these corridors and comparable alternative street networks will have a significant impact on reducing fatalities and severe injuries.



ADVANCING PROJECTS, POLICIES, AND EDUCATION FOR ROADWAYS WITH THE MOST PRESSING SAFETY ISSUES AND THAT ENCOURAGE A WELL-CONNECTED MULTIMODAL TRANSPORTATION NETWORK WILL HAVE A SIGNIFICANT IMPACT ON REDUCING FATALITIES AND SEVERE INJURIES.

CRASH TYPE

VEHICLE-PEDESTRIAN



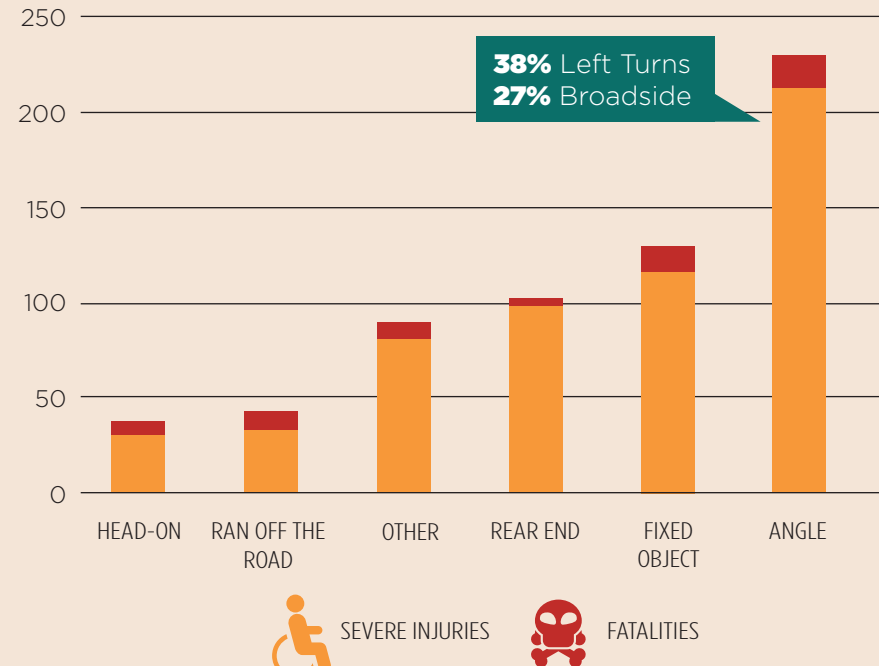
23 FATALITIES
55 SEVERE INJURIES

VEHICLE-BICYCLE



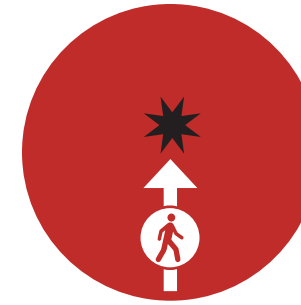
4 FATALITIES
41 SEVERE INJURIES

VEHICLE-VEHICLE

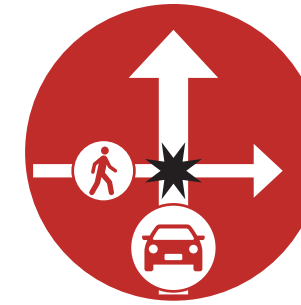


Source: Fatal & Severe Injuries, DOT&PF, 2010-2014

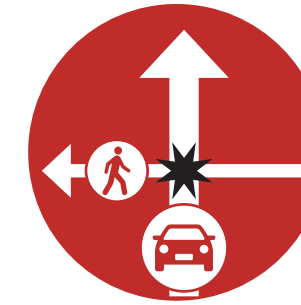
PEDESTRIAN TOTAL 78



65%
pedestrian actions are unknown



22%
pedestrian had right of way

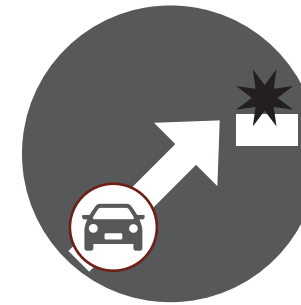


8%
pedestrian crossing away from signal

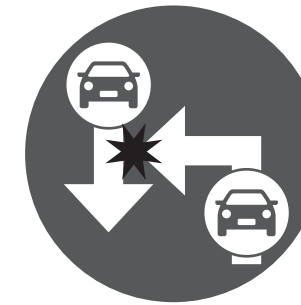


5%
pedestrian disregarded signal

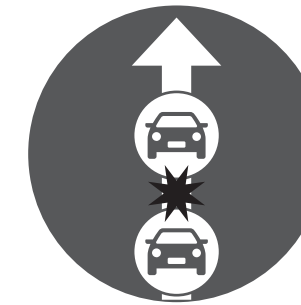
VEHICLE (AUTO NON-MOTORCYCLE, NON-PEDE/BIKE) TOTAL 537



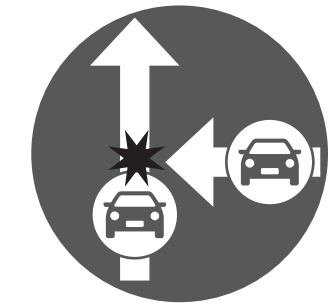
27%
fixed object/ran off of road



18%
left turns

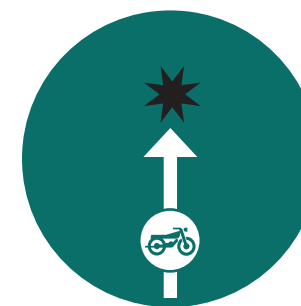


17%
rear end

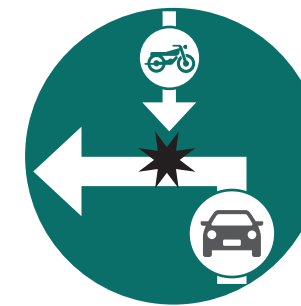


10%
broadside (T-bone, right-angle, etc)

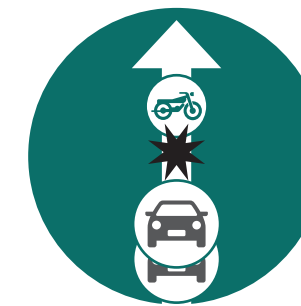
MOTORCYCLE (NON-PEDE/BIKE) TOTAL 88



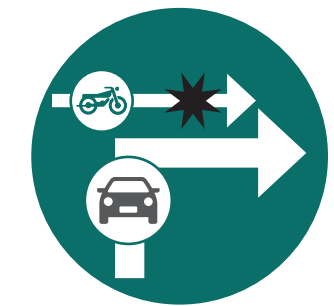
45%
single vehicle



23%
vehicle turning left, motorcycle straight

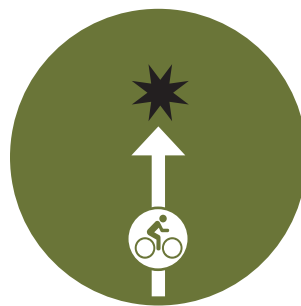


10%
rear end



3%
vehicle turning right

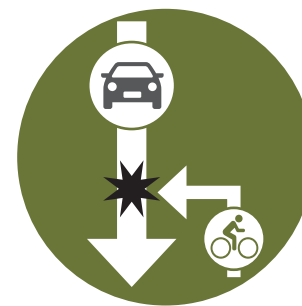
BICYCLE TOTAL 45



40%
bicycle actions are unknown



24%
right hook (vehicle and bike traveling same direction, driver turns right into bike)



9%
bicycle turning left



7%
vehicle turning left

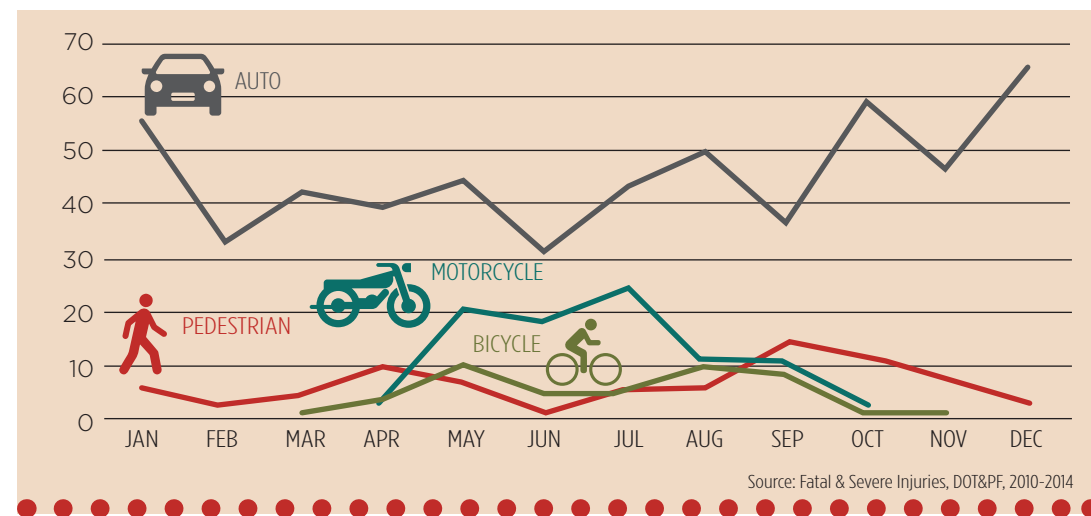
PUTTING DATA TO WORK

WHEN

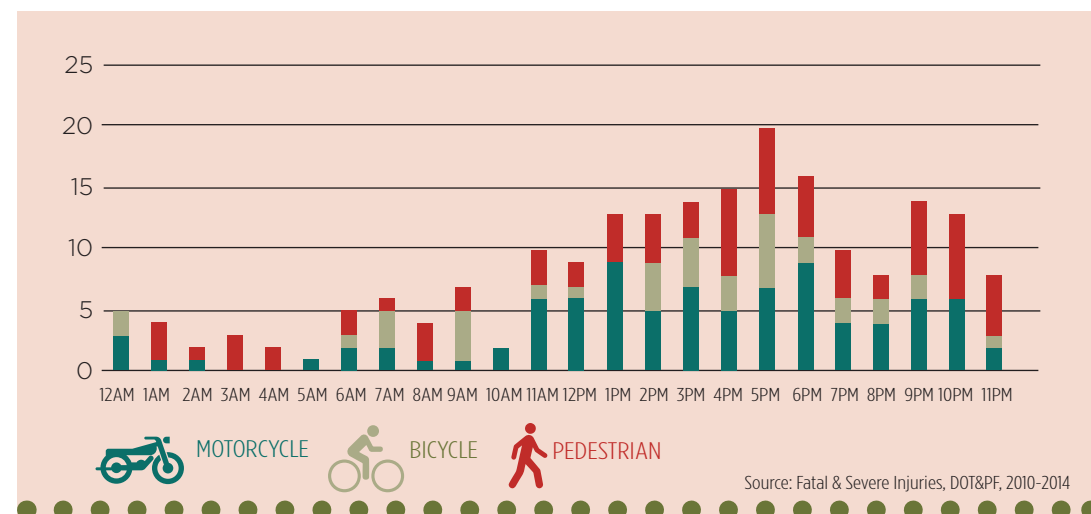
Time of day and season play important roles in evaluating crashes, in part because other dangerous factors are compounded during hours of darkness.

- » **44%** of fatal and severe injury crashes occur in daylight on dry roads.
- » **30 %** occur in ice and snow conditions in all lighting.

MONTH



TIME OF DAY



WHAT WE KNOW CAN HELP US SAVE LIVES

SOLUTIONS THAT WORK: NATIONAL BEST PRACTICES

The metrics of success are simple: one fatality or serious injury on our roads is one too many.

To frame road safety policies and interventions, the gold standard is a Safe Systems Approach—all parts of the system must be strengthened in order to save lives. It is an inclusive approach that caters to everyone using the road system, including drivers, motorcyclists, passengers, pedestrians, cyclists, and commercial and heavy vehicle drivers. While there is still a strong engineering component, the focus is to accept that mistakes will happen on the road, responsibility for safety is shared by all users, and the system should be forgiving so crashes do not result in death or serious injury.

Responsibility has historically been placed on the individual road user: bad drivers, careless bicyclists, and distracted pedestrians are seen as the causes of collisions. Under the Safe Systems approach, actions and responsibilities are more heavily attributed to the system designers, including engineers, public health professionals, policymakers, and law enforcement; however, individuals still have a responsibility to abide by laws and regulations. Key elements that must be part of this transformative change include a measurable action plan and institutionalizing change so that effective Vision Zero systems live long beyond today's advocates or elected leaders.

Through the analysis of crash data for Anchorage and collaboration with stakeholders, five key themes emerged.

VISION ZERO THEMES

a. **Enhance processes and collaboration**—

Vision Zero is a new philosophy for managing transportation and requires a cultural shift. Internal changes (among staff and city leaders) and education are foundational to its success.

b. Build safer streets for everyone—Streets must be designed to be safer for everyone, no matter how they choose to travel.

c. Reduce speed—Safer design must also include safer speeds. In addition to roadway design, specific strategies need to be employed to reduce speeding for the sake of safety.

d. Promote a culture of safety—Individual, institutional, and community education are integrated with enforcement strategies and changes to policies and legislation to build a culture of safety.

e. Improve data collection, analysis and accessibility—Pursuing quality data and consistent reporting to determine dangerous behaviors and evaluate work on an ongoing basis is imperative.

THE ACTIONS AND STRATEGIES TO ACHIEVE VISION ZERO ARE ORGANIZED AROUND THESE DESIRED OUTCOMES. GETTING TO ZERO FATALITIES IS THE IDEAL VISION. CONTINUOUS IMPROVEMENT IS THE MINIMUM EXPECTATION.