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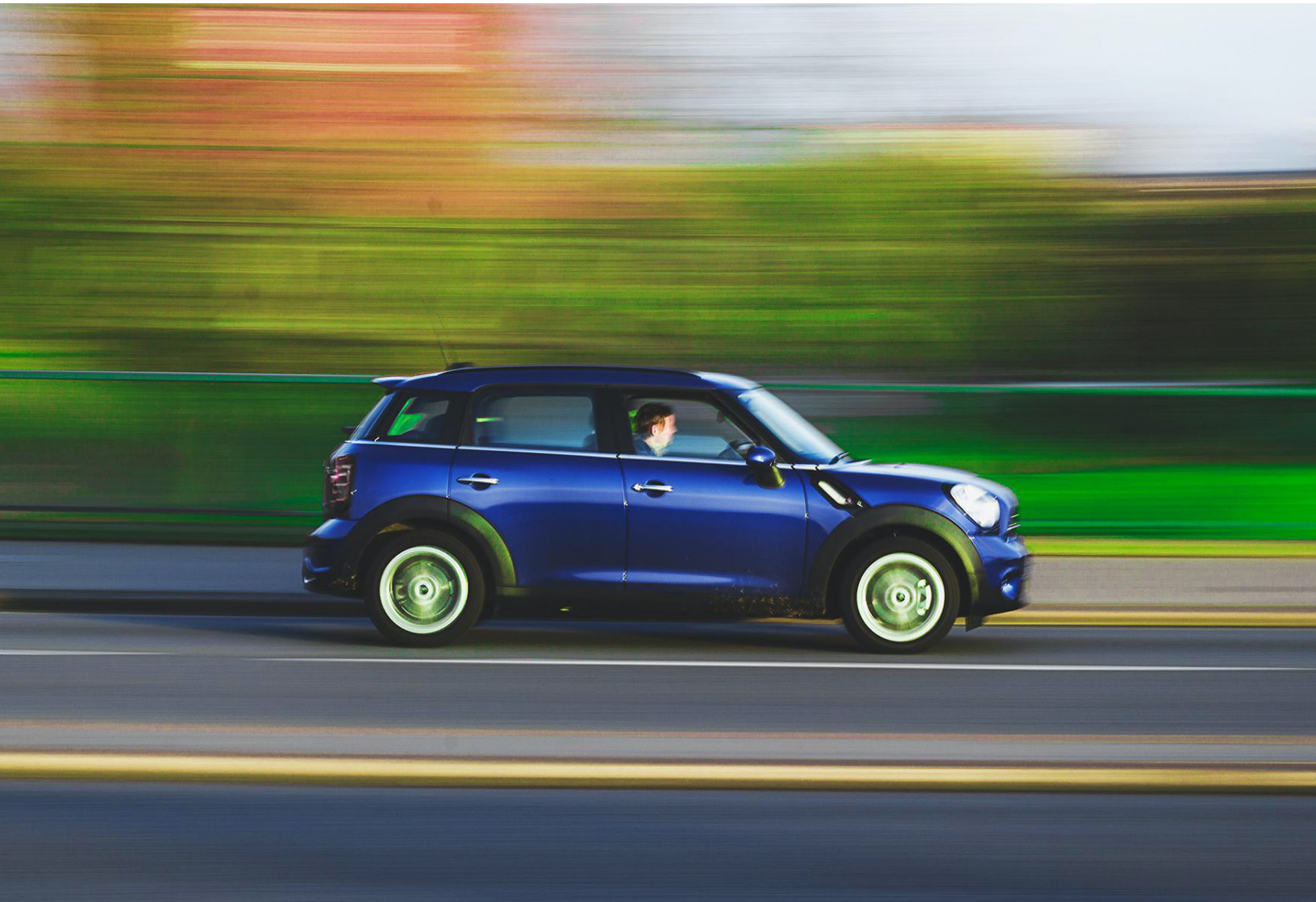
ADDRESSING THE RECKLESS DRIVING EPIDEMIC

Addressing reckless driving begins with identifying and understanding the problem. Discover how to mitigate reckless driving and better protect roadway users from the danger it poses.

With empty streets, the U.S. saw a surge in unsafe driving behavior during the COVID-19 pandemic, but as traffic resumed to normal levels, reckless driving remained widespread. The trend has contributed to traffic deaths hitting record highs, making roadways more dangerous for motorists and vulnerable road users alike.

We've prepared key insights backed with data to help traffic professionals make informed decisions to combat reckless driving in any community.



CONTENTS

A NATIONWIDE EPIDEMIC

How our roads are getting deadlier.

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A NATIONWIDE EPIDEMIC

In 2020, traffic deaths were the highest they've been since 2007.[1] While roads and highways experienced a decrease in traffic as a result of the COVID-19 pandemic, drivers engaged in dangerous behavior that led to increased vehicle crashes — as well as increased vulnerable road user fatalities[2].

But reckless driving has not subsided. In fact, traffic deaths reached a 16-year high in 2021[3], with spikes in speeding and impaired driving[4]. And estimates for 2022 show a 0.2% dip in overall traffic fatalities, but deaths among pedestrians and cyclists are on the rise[5].

FROM NHTSA'S REPORT: EARLY ESTIMATES OF MOTOR VEHICLE TRAFFIC FATALITIES AND FATALITY RATE BY SUB-CATEGORIES THROUGH JUNE 2022

PEDESTRIAN FATALITIES INCREASED BY 2%

MOTORCYCLISTS FATALITIES INCREASED BY 5%

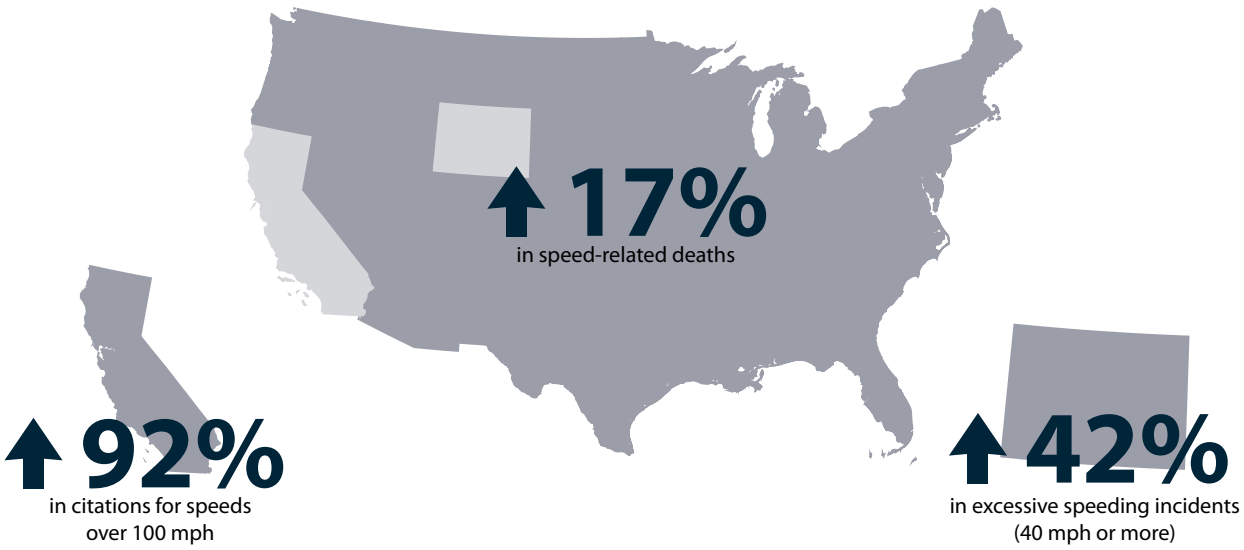
CYCLISTS FATALITIES INCREASED BY 8%

THE RISE OF RECKLESS DRIVING

Why the sudden surge of reckless driving?

THE RISE OF RECKLESS DRIVING

2020 saw a massive uptick in speeding throughout the country. The sudden decrease in cars on the road created a unique situation, where many drivers saw empty roads as an opportunity to engage in reckless behavior. For instance, Colorado reported a 48% increase in excessive speeding incidents (40 mph or more). And California issued 28,000 citations for speeds over 100 mph — a 92% increase. These instances were part of a nationwide trend, as 2020 marked both a 17% increase in speed-related deaths and a reversal in progress made over the years to reduce speed-related deaths. Today, 29% of traffic fatalities are caused by speed-related deaths[6].



Not only did drivers begin to speed more, but they began to take other dangerous behaviors to the roadways as well. Both alcohol consumption and instances of heavy drinking went up by 14% in 2020 and 41% in 2019, respectively. In fact, Adam Snider of the Governors Highway Safety Association (GHSA), suggested that "the pandemic likely exacerbated substance abuse issues for some individuals[7]." By 2020, traffic deaths involving alcohol were up 14% [8].

Arthur Goodwin, a senior research associate at the University of North Carolina Highway Safety Research Center has suggested that drivers remain under the impression that reckless driving comes without consequence. Not only were the streets devoid of traffic during the early days of the COVID-19 pandemic, but there was also a lack of law enforcement, further tempting drivers to engage in risky behavior[9]. Plus, a 2021 survey showed that 60% of officers were less likely to conduct a traffic stop than before 2020[10].

While traffic levels have been back to normal since 2021, this has only exacerbated the issue of reckless driving — as well as uncovered new ones. Road rage is on the rise, with those engaging in unsafe behavior having less space to speed freely[11].

RECOGNIZING THE PROBLEM

The different types of reckless driving.

RECOGNIZING THE PROBLEM

Reckless driving has been increasingly cited as a cause of traffic crashes in recent years, typically following incidents where drivers engaged in unsafe driving behavior. But it's often unclear what this means, as the behavior categorized as "reckless driving" is an umbrella term that broadly summarizes the variety of ways drivers endanger other motorists.

The most common types of reckless driving are distracted driving and speeding. Distracted driving is often put into its own category, but it still falls under the broad umbrella of reckless driving. The rise of technology has made distracted driving particularly prevalent, with 2021 data showing a 12% increase in distraction-related deaths from 2020[12]. And while drivers often acknowledge that operating a cell phone while driving is dangerous, many still engage in the behavior[13].

Speeding, on the other hand, is the leading cause of fatal car crashes, factoring into approximately one-third of all fatalities for over two decades[14]. Most recently, speeding played a part in 29% of all fatalities in 2020[15]. Not only has speeding been a consistent issue when it comes to roadway safety, but drivers are speeding at higher average speeds[16].

Other types of reckless driving include:

Driving through stop signs or traffic signals

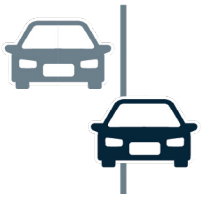
Failing to yield

High-speed racing

Weaving in and out of traffic

Tailgating

Driving under the influence of drugs or alcohol



Passing illegally

Some reckless habits can even show up more frequently than others, depending on the region, such as red-light running in Memphis, Tennessee[17] and passing on the right in bike or parking lanes in Milwaukee, Wisconsin[18].

While many of these behaviors are more dangerous than others, they all pose serious threats to the lives of others on roadways. And often, some communities are at higher risk than others when it comes to certain reckless habits, especially when the problem stems from ineffective infrastructure.

Driving Behaviors Reported For Drivers And Motorcycle Operators Involved In Fatal Crashes, 2020

BEHAVIOR	NUMBER (1)	PERCENT
Driving too fast for conditions or in excess of posted limit or racing	10,295	19.1%
Under the influence of alcohol, drugs, or medication	6,246	11.6
Operating vehicle in a careless manner	3,958	7.3
Failure to yield right of way	3,663	6.8
Failure to keep in proper lane	3,337	6.2
Distracted (phone, talking, eating, object, etc.)	2,968	5.5
Operating vehicle in erratic, reckless or negligent manner	2,356	4.4
Failure to obey traffic signs, signals, or officer	2,250	4.2
Overcorrecting/oversteering	1,744	3.2
Vision obscured (rain, snow, glare, lights, building, trees, etc.)	1,533	2.8
Drowsy, asleep, fatigued, ill, or blacked out	1,165	2.2
Swerving or avoiding due to wind, slippery surface, etc.	1,138	2.1
Driving wrong way on one-way traffic or wrong side of road	1,060	2
Making improper turn	368	0.7
Other factors	5,921	11
None reported	8,659	16.1
Unknown	16,885	31.3
Total drivers (2)	**53,890**	**100.0%**

(1) Number of drivers and motorcycle operators.
(2) The sum of the numbers and percentages is greater than total drivers as more than one factor may be present for the same driver.

LIVES AT RISK

Who's at risk from reckless driving?

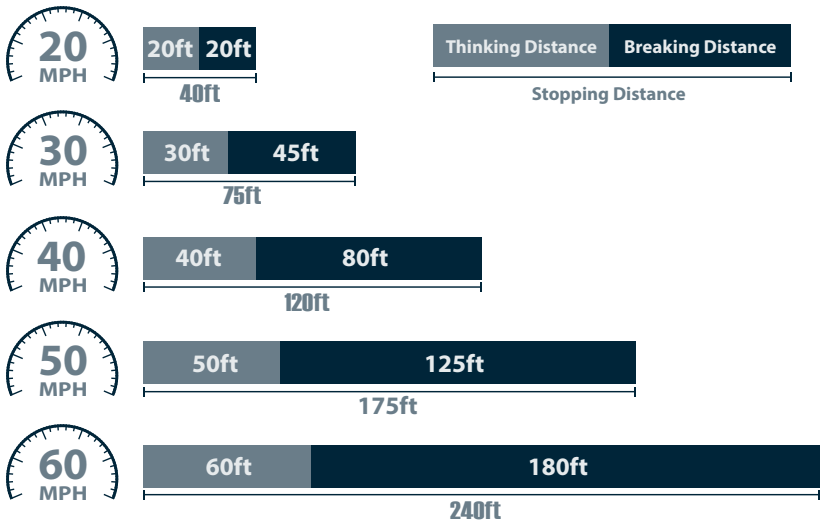
LIVES AT RISK

Everyone is at risk from reckless driving. Motorists, passengers, pedestrians, cyclists — any individual that uses the road. When a driver decides to intentionally engage in unsafe behavior, whether blowing through a red light or swerving through traffic, it endangers everyone in the vicinity. However, there are individuals disproportionately at risk: vulnerable road users.

While other motorists and their passengers are also at risk of a negative encounter with reckless drivers, pedestrians, cyclists and motorcyclists are more vulnerable as they lack the protection of a vehicle. These users typically take up less space on the road and, therefore, are less visible, which can make it difficult for drivers to see them until it's too late.

This is especially true when speeding or impairment is involved. Driving at higher speeds narrows the driver's field of vision, meaning the faster the vehicle goes, the smaller the field of vision[19]. And, impaired drivers have reduced coordination, judgement and reaction time, so are less likely to see a pedestrian or cyclist in time[20].

Additionally, while speeding drivers might spot vulnerable road users in harm's way, their higher speeds often make it difficult or even impossible to slow down in time due to stopping distance. As vehicles moving at higher speeds have more momentum than those travelling at lower speeds, it takes more time for them to stop. As a result, a vehicle's total stopping distance increases drastically with small increases in speeds — in fact, the stopping distance of 221 feet at 50 mph jumps to 292 feet at 60 mph[21].



THE FIGHT FOR SAFER ROADS

How communities are addressing the problem.

THE FIGHT FOR SAFER ROADS

There is no simple solution when it comes to reckless driving. And depending on the severity of reckless driving in each community, it could require a multi-faceted approach to effectively curb the issue. As communities across the U.S. have begun to address the rampant problem, they've started to gain an understanding of what is and isn't working.

Awareness and education are a few strategies being utilized to slow down reckless drivers. Public awareness campaigns like the Wisconsin DOT and Milwaukee Bucks' Control Your Drive are designed to spread awareness through commercials and social media to encourage drivers to put safety first[22]. Other cities have opted for programs that prioritize driver accountability, such as New York City's Dangerous Vehicle Abatement Program. Under the program, drivers who collect 15 speeding violations or five red-light violations are required to take a safe vehicle operation course or risk their vehicle being seized[23]. However, awareness campaigns and safety programs are typically most effective as a complementary measure.

Another key strategy is law enforcement. Cities have begun increasing the number of patrols and traffic stops to deter drivers from engaging in dangerous driving behavior, but some communities lack the resources to effectively deter reckless driving. This has led to enforcement through technology-based solutions, such as red-light cameras and automated speed enforcement systems. The Insurance Institute for Highway Safety (IIHS) found that red-light cameras reduced fatal crashes at signalized intersections by 14% and 21% in large cities[24]. In Memphis, Tennessee, the city has reported an increase in revenue from red-light fines, as well as less of a need for dedicated law enforcement at problematic intersections[25].

Other communities that have seen systemic issues with reckless driving have turned to more drastic measures such as infrastructure change. Implementation of improved lighting and visibility, dedicated paths for pedestrians and cyclists and traffic calming measures are ways some cities are addressing the issue. In Wisconsin, where approximately 2,900 are injured by reckless drivers every year[26], the state is working to implement measures like traffic circles, pedestrian islands, crosswalk bump-outs and speed humps, as well as support non-motorist infrastructure to create safer transportation for all road users[27].

ROADWAY COUNTERMEASURES

Discover what solutions work.

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ROADWAY COUNTERMEASURES

Reckless driving covers a wide span of unsafe behavior and countermeasures often vary depending on each community's challenges. Here are some measures designed to improve safety for all roadway users:

Pedestrian Crosswalk Systems

Vulnerable road users are arguably the most at-risk group of road users affected by reckless driving. Pedestrian fatalities reached a 40-year high in 2021 — a 12% increase from 2020[28]. The GHSA 2021 findings correlated the uptick in speeding with the increase in pedestrian fatalities.

Pedestrian Fatalities on Which Speeding Was Indicated as a Factor, by Year[29]

Year	Speeding Indicated	Total	% with speeding indicated
2016	442	6,080	7.27
2017	413	6,075	6.80
2018	412	6,374	6.46
2019	451	6,272	7.19
2020	562	6,516	8.62

Additionally, 16.1% of pedestrian fatalities involved an alcohol-impaired driver[30]. As midnight to 3 a.m. has the highest number of alcohol-impaired drivers on the road[31], visibility is a pervasive issue when it comes to how reckless driving and pedestrian safety interact.

A 6-year study, spanning Las Vegas, Miami and San Francisco, evaluated the effectiveness of available pedestrian countermeasures. The study found the best effective countermeasures were high visibility solutions like activated flashing beacons and rectangular rapid flashing beacons (RRFBs) — as well as combined solutions, utilizing a mix of pavement markings, yield signs and high visibility crosswalks[32].

In fact, high visibility crosswalks have gained traction in recent years. With new enhancements like TAPCO's SafeWalk® Crosswalk Illuminator, creating more visible crosswalks, where pedestrians are easily detected any time of day, is an easy and quick way to address pedestrian fatalities caused by reckless driving. Further, a study done by The Illinois Transportation Institute compared the impact of different lighting enhancements on driver reaction times at crosswalks. The study found that TAPCO's SafeWalk® Crosswalk Illuminator performed high on the scale of driver reaction times.

> **"High-visibility crosswalks can reduce pedestrian injury crashes up to 40%"**
>
> - Chen, L., C. Chen, and R. Ewing. The Relative Effectiveness of Pedestrian Safety Countermeasures at Urban Intersections - Lessons from a New York City Experience. (2012). [33]

RRFB Pedestrian Crosswalk Systems are also proven to increase yield rates by 80-90%[34]. RRFBs employ amber LED light bars that flash to capture the attention of drivers, making them much more effective than static signs, especially when visibility is reduced.

Other crosswalk systems that effectively prioritize enhanced pedestrian visibility include the BlinkerBeacon™ Pedestrian Crosswalk System and the BlinkerSign® Pedestrian Crosswalk System.

In Hoboken, New Jersey, the city has achieved great success in slowing down their streets and reducing traffic deaths. While they utilize countermeasures like RRFBs to improve pedestrian safety, they've also implemented daylighting and curb bump outs, making it easier to see pedestrians and more difficult for drivers to speed through narrowed streets[35].

Speed Awareness Solutions

Speeds limits have risen over the past 25 years. And according to the Insurance Institute for Highway Safety (IIHS), these increases have been tied to approximately 37,000 lives lost[36]. Increases are often proposed to improve traffic flow and save travel time, but studies have shown that even slight increases in speed can have a drastic impact on injury and fatality statistics. Just a small reduction of 3 mph in a 30 mph zone can affect a reduction of 27% in crashes resulting in injury and a 49% reduction in fatal crashes[37].

Expected injury and fatal crash modifications by change in average operating speed

	Injury Crashes					
	Baseline average operating speed in mph					
Change in Avg. Speed	30	40	50	60	70	80
-5	0.57	0.66	0.71	0.75	0.78	0.81
-4	0.64	0.72	0.77	0.8	0.83	0.85
-3	0.73	0.79	0.83	0.85	0.87	0.88
-2	0.81	0.86	0.88	0.9	0.91	0.92
-1	0.9	0.93	0.94	0.95	0.96	0.96
0	1	1	1	1	1	1
1	1.1	1.07	1.06	1.05	1.04	1.04
2	1.2	1.15	1.12	1.1	1.09	1.08
3	1.31	1.22	1.18	1.15	1.13	1.12
4	1.43	1.3	1.24	1.2	1.18	1.16
5	1.54	1.38	1.3	1.26	1.22	1.2

	Fatal Crashes					
	Baseline average operating speed in mph					
Change in Avg. Speed	30	40	50	60	70	80
-5	0.22	0.36	0.48	0.58	0.67	0.75
-4	0.36	0.48	0.58	0.66	0.73	0.8
-3	0.51	0.61	0.68	0.74	0.8	0.85
-2	0.66	0.73	0.79	0.83	0.86	0.9
-1	0.83	0.86	0.89	0.91	0.93	0.95
0	1	1	1	1	1	1
1	1.18	1.14	1.11	1.09	1.07	1.05
2	1.38	1.28	1.22	1.18	1.14	1.1
3	1.59	1.43	1.34	1.27	1.21	1.16
4	1.81	1.59	1.46	1.36	1.28	1.21
5	2.04	1.75	1.58	1.46	1.36	1.27

Reckless drivers often speed excessively, although what constitutes excessive speeding varies by each state's law. However, even speeding 5 mph over the speed limit can pose a danger to other roadway users. Despite this, the 2021 Traffic Safety Culture Index reported that around 50% of respondents admitted to driving 15 mph over the speed limit on a freeway within the past month[38].

Radar speed trailers and driver feedback signs are often employed in areas where speeding is common, and research has shown that these systems typically remain effective as long as the device is in place; however, speed can rebound further down the road. So as not to shift issues with speeding to other areas, speed awareness solutions are most useful in urban areas and transition spots where the speed limit changes[39].

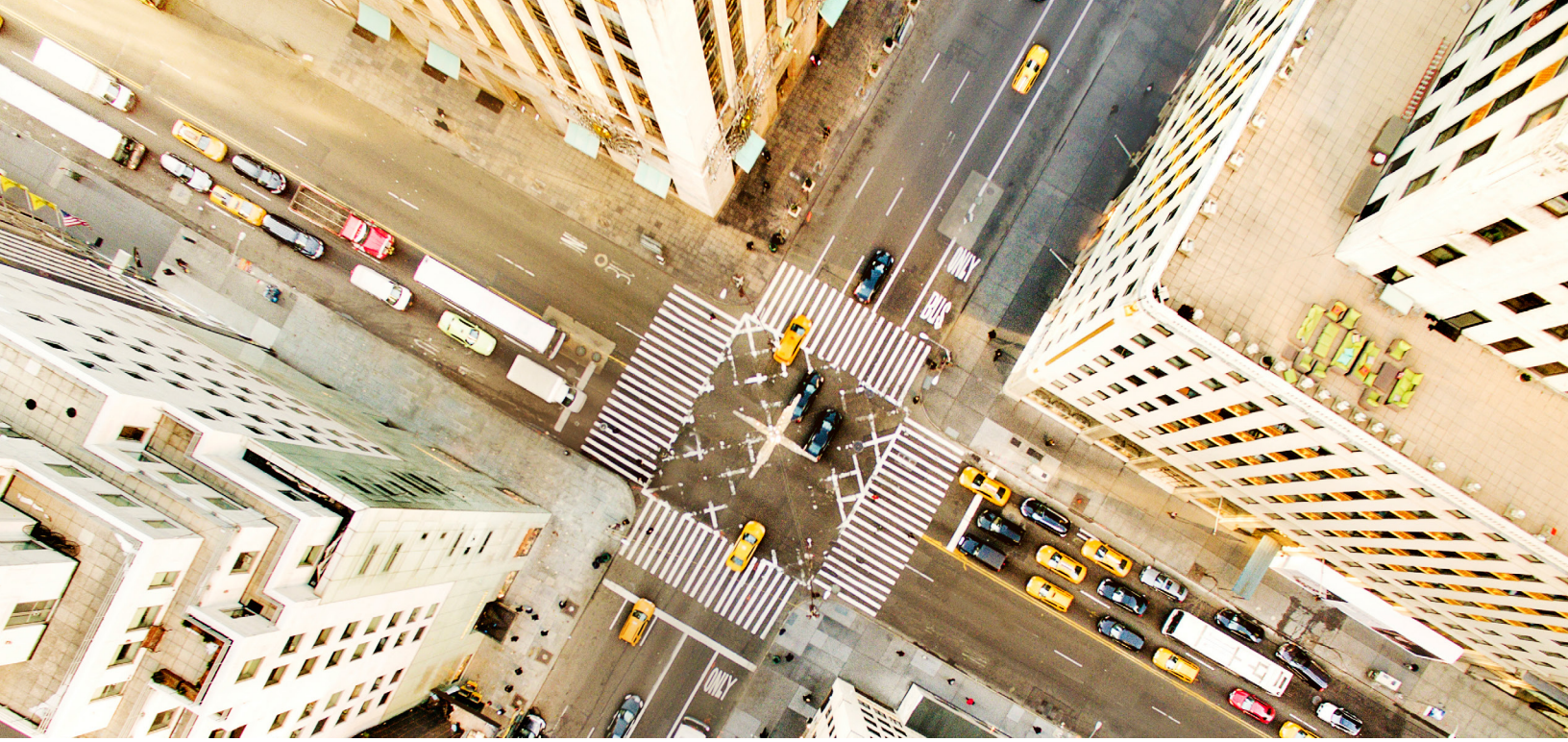
In a 2022 study, TAPCO partnered with the City of Milwaukee to deploy a radar speed trailer on a well-traveled road in a business district, which had recently undergone a road diet but still saw a high number of speeding vehicles. For two weeks, data was collected via a traffic data counter. Then, the trailer was deployed for the following two weeks to study the impact of the calming measure. The results saw a 54% reduction in reckless drivers (20 mph or over) as well as a 48% decrease in the general number of vehicles speeding[40]. Read the full case study.

LED-Enhanced Warning Alerts

Part of reckless driving is a disregard for traffic safety laws. In cases of reckless driving that involve distraction, it's often negligence. This can result in instances of blowing through a stop sign or past a yield sign, especially static traffic signs that often go unnoticed or even simply ignored.

LED-enhanced warning alerts are typically added to signs or systems to increase roadway compliance by capturing the attention of drivers and encouraging them to slow down or stop. These enhancements help improve visibility on existing signs, which is critical given many behaviors reckless drivers engage in can impair visibility.

These LED-enhancements include RRFBs, flashing beacons, perimeter LEDs and LED-illuminated legends, all of which have been proven to increase visibility by a substantial distance. Determining which application will be most effective depends on each community's unique needs. For example, a rural area with a high number of reckless drivers blowing through a low visibility stop sign could see improvements with applications like a LegendViz® Sign, which can increase visibility in low-light conditions by as much as 100%[41].



SUMMARY:

It's no secret that speeding is an issue plaguing the nation. With traffic deaths at all-time highs due to high speeds and driving under the influence, cities are looking for answers. And when states like California have already increased their speeding citations by almost 100%, what can be done? Since drivers are speeding at higher-than-average speeds, everyone is at risk — especially vulnerable road users.

There isn't one catch all solution that will combat reckless driving, but there are a number of countermeasures that have seen real-life success. The key to reducing speeds in a community is to understand the community's needs. And often, a variety of countermeasures may be used together.

Just a small increase in speed can cause catastrophic consequences when it comes to injury and fatalities. Reducing posted speed limits and increasing technology-based law enforcement, such as speed radar can make an impactful difference. Making changes to infrastructure can also help reduce reckless driving. Infrastructure changes can include enhancing lighting at crosswalks, creating better pathways for pedestrians and introducing traffic calming measures. Many cities have also complemented reckless driving countermeasures with awareness and safety campaigns for an education base.

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