Vision Zero Traffic Fatalities: 2021 End of Year Report

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Produced by the San Francisco Department of Public Health,
in collaboration with the San Francisco Municipal Transportation Agency
and the San Francisco Police Department

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INTRODUCTION AND NATIONAL CONTEXT

As noted by our Mayor, London Breed, in our recently released Vision Zero Action Strategy (2021) "In 2014, San Francisco adopted Vision Zero— a bold plan to eliminate traffic deaths and reduce severe injuries. At the core of Vision Zero is a simple and powerful philosophy: all traffic deaths are unacceptable. And they are preventable. Too many people have died on our streets, and too many families struggle with the loss of loved ones or the challenges of lifelong severe injuries."

This report summarizes traffic death patterns in 2021 and contextualizes these patters with trends from 2020 and since Vision Zero's inception in 2014 to inform Vision Zero initiatives in the ongoing effort to save lives. While the overall number of 2021 fatalities fall within the range observed in recent history, patterns within 2021's toll diverge from former years. Every death in this report represents indescribable loss suffered by an individual and the community. **San Francisco remains committed to achieving our Vision Zero goal of zero traffic deaths.**

San Francisco saw 27 traffic-related deaths in 2021. These 27 deaths in 2021 are a 10% decrease since the previous year (2020) but remain near the annual average of 28 deaths since Vision Zero was implemented in 2014. While number of people killed while walking has improved on average since San Francisco initiated Vision Zero, the annual average number of people killed in vehicles has worsened, and the average number of people killed while biking has plateaued.

The following chart compares annual fatality data 2005 through 2021. Overall, after relatively stable numbers of traffic deaths in 2014-2016 following the adoption of Vision Zero, the number of traffic deaths in San Francisco fell notably in 2017, then increased from 2018-2021.

NOTE: 2005-2012 deaths sourced from California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS) data, restricting to San Francisco City Streets jurisdiction, including streets that intersect with freeways (i.e., fatalities occurring at freeway ramps in the City jurisdiction). 2013 traffic deaths from SFPD. 2014-2021 traffic deaths reported using the Vision Zero Traffic Fatality Protocol based on data from the Office of the Medical Examiner and SFPD; includes deaths involving above-ground light rail vehicles not routinely reported in SWITRS. Also note that "People Killed in Vehicles" includes external passengers, as well as riders of micro mobility devices and skateboards not propelled by a second vehicle.

Staff from the SF Department of Public Health (SFDPH) work with colleagues from SF Police Department (SFPD) and the SF Municipal Transportation Agency (SFMTA) to report and map official fatality statistics monthly on the following webpage, utilizing the Vision Zero Traffic Fatality Protocol[1]: http://visionzerosf.org/maps-data/.

The remainder of this report summarizes traffic death characteristics in San Francisco from 2014-2021, in order to identify patterns and trends to inform Vision Zero SF's data-driven actions and policies. Note that traffic fatality totals are susceptible to random variation. Year-to-year changes as well as annual patterns in the data where there are small sample sizes may be due to chance. Analyzing longer-term trends helps address this issue. SFDPH also monitors and reports on severe injuries to understand trends and characteristics of the most severe traffic-related injuries, which serves as an additional metric by which to evaluate the progress of Vision Zero efforts.[2]

[1] In 2015, with periodic updates since, the City finalized and standardized the San Francisco Vision Zero Traffic Fatality Protocol, to ensure consistency of fatality tracking and reporting across city agencies. The protocol utilizes the traffic fatality definition in the collision investigation manual of the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS). However, it expands the definition to include above ground light rail vehicle (LRV)-involved fatalities that involve collisions with pedestrians and cyclists. Traffic fatalities are any person(s) killed in or outside of a vehicle (bus, truck, car, motorcycle, bike, moped, light rail vehicle, etc.) involved in a crash, or killed within the public roadway due to impact with a vehicle or road structure, or anyone who dies within 30 days of the public roadway incident as a result of the injuries sustained within the City and County of San Francisco.

[2] Severe Injury Trends Report available at: www.visionzerosf.org/wp-content/uploads/2019/09/Severe-Injury-Trends_2011-2018_final_report.pdf New data will be added to these trends in a report due out later this year.

San Francisco was the second city in the country to adopt Vision Zero in 2014 and the goal of zero traffic deaths, now implemented by over 40 cities across the United States. The Federal Government has now joined this movement with the recent release of the 2022 "National Roadway Safety Strategy" which states: "Zero is the only acceptable number of deaths on our highways, roads, and streets."[3] While data are not equally available for all jurisdictions, 2021 traffic deaths exceeded or matched five-year highs across the country, including in New York City, San Jose, Austin, Seattle, and Portland.[4,5,6,7,8]

Like 2020, 2021 was an anomalous year around the globe. National estimates reflect vehicle miles increased in 2021 but rates remain below their 2019 pre-pandemic level, and nationally there were 18.4% more motor vehicle fatalities in the first half of 2021 relative to the same span in 2020, the highest since 1990.[9] It is too early to conclusively explain why traffic deaths have trended upwards nationally despite less driving overall, and full 2021 data by mode have not yet been released at the national level. However, preliminary analyses indicate evidence of increased injury severity due to decreased seatbelt use, increased distracted driving during the pandemic, increased drug and/or alcohol use among operators of motor vehicles involved in crashes, as well as higher traffic speeds.[10]

San Francisco's fatality trends exist in the larger context of several important factors, while some of their impacts have potentially slowed during the pandemic. Other factors include increased traffic on city streets from transportation network companies Uber and Lyft, widespread adoption of e-mobility devices, as well as crises on city streets related to substance use and people without housing. **In recent years in San Francisco fatalities to people walking or biking have decreased or held steady in contrast with national trends of increases in fatalities to people walking and biking** – with 2020 analyses by the National Safety Council finding the number of deaths on roads nationally spiked 24% compared to 2019 despite a 13% drop in miles driven – the highest estimated year-over-year jump calculated since 1924**.**[11] In addition, data from the Governors Highway Safety Association projects that nationally **2020 had the largest ever annual increase in the rate at which drivers struck and killed pedestrians, a 4.8% increase in total pedestrian fatalities and a 21% (2.3 pedestrian fatalities per billion VMT) increase when adjusting for decreases in vehicle miles travel compared to 2019.[12]**

[3] U.S. Department of Transportation (2020, January). National Roadway Safety Strategy. https://www.transportation.gov/sites/dot.gov/files/2022-01/USDOT_National_Roadway_Safety_Strategy_0.pdf

[4] https://nypost.com/2021/12/28/bill-de-blasio-exits-with-highest-year-end-nyc-traffic-deaths/

[5] https://www.mercurynews.com/2021/12/20/san-jose-pedestrian-killed-in-two-vehicle-collision/

[6] https://www.kut.org/transportation/2021-11-16/2021-is-the-deadliest-year-on-austin-roads

[7] https://www.seattletimes.com/seattle-news/transportation/2021-was-the-deadliest-on-washington-roads-in-15-years-puzzling-experts/

[8] https://www.opb.org/article/2021/11/30/portland-on-pace-for-another-record-breaking-year-of-traffic-fatalities/

[9] National Center for Statistics and Analysis. (2021, October). Early estimate of motor vehicle traffic fatalities for the first half (Jan–Jun) of 2021 (Crash Stats Brief Statistical Summary. Report No. DOT HS 813 199). National Highway Traffic Safety Administration.

[10] Office of Behavioral Safety Research. (2021, October). Continuation of research on traffic safety during the COVID-19 public health emergency: January – June 2021. (Report No. DOT HS 813 210). National Highway Traffic Safety Administration

[11]https://www.nsc.org/newsroom/motor-vehicle-deaths-2020-estimated-to-be-highest.

[12]Governors Highway Safety Association. (2021, March). Spotlight on Highway Safety: Pedestrian Traffic Fatalities by State, 2020 Preliminary Data. https://www.ghsa.org/sites/default/files/2021-03/Ped%20Spotlight%202021%20FINAL%203.23.21.pdf

KEY FINDINGS

2021 Year in Review

2021 recorded 27 collisions resulting in 27 traffic deaths on San Francisco streets.

- A majority (59%) of traffic deaths occurred on the **VZ High Injury Network**.
- A majority (59%) of traffic deaths occurred in an **Equity Priority Neighborhood.**
- Based on the demographic profiles of San Francisco:
    - **Black/African American individuals are disproportionately impacted** by traffic collisions resulting in fatality, representing 30% of people killed in traffic collisions despite representing only 5% of the city's race/ethnicity demographic.
    - **Seniors (aged 65+) are disproportionately impacted** by traffic collisions resulting in fatality, representing 22% of people killed in traffic collisions despite comprising 18% of the city's age demographic.
    - The majority of those killed in traffic collisions in 2021 were **male** (70%)
    - **People experiencing homelessness are disproportionately impacted** by traffic collisions resulting in fatality, representing 15% of people killed in traffic collisions despite comprising approximately 1% of the city's demographic.
- **Pedestrians** are consistently among the most vulnerable road users in San Francisco, accounting for 48% of all fatalities in 2021.
- The most-cited collision factors in 2021 were **unsafe speed (33%), pedestrian crossing outside of a legal crosswalk (11%),** and **failure to stop at a red signal (15%)** — two of which, 22350 (unsafe speed) and 21453(a) (failure to stop at a red signal), have topped the list each year since reporting began in 2016
- Nine traffic fatalities (33%) were **single-party incidents.**

Comparing 2021 to 2020 trends

- Compared to 2020 (n=30), across *all* travel modes, there were 10% *fewer* recorded fatalities in 2021 (n=27).
- Compared to 2020, *within* each travel mode:
    - There was +1 pedestrian fatality in 2021.
    - Cyclist fatalities were the same (n=2).
    - There were 25% (-4) *fewer* fatalities amongst people riding in a vehicle.
    - There was +1 fatality amongst persons riding on motorcycles in 2021.
- For 2021, compared to 2020, across the population demographic domains, there was a:
    - **13% increase** in the proportion of **Black/African American individuals** impacted by traffic collisions resulting in fatality.
    - 5% increase in the proportion of seniors (aged 65+) impacted by traffic collisions resulting in fatality.
    - **13% decrease** in the proportion of **males** impacted by traffic collisions resulting in fatality.
    - **5% decrease** in the proportion of **people experiencing homelessness** impacted by traffic collisions resulting in fatality

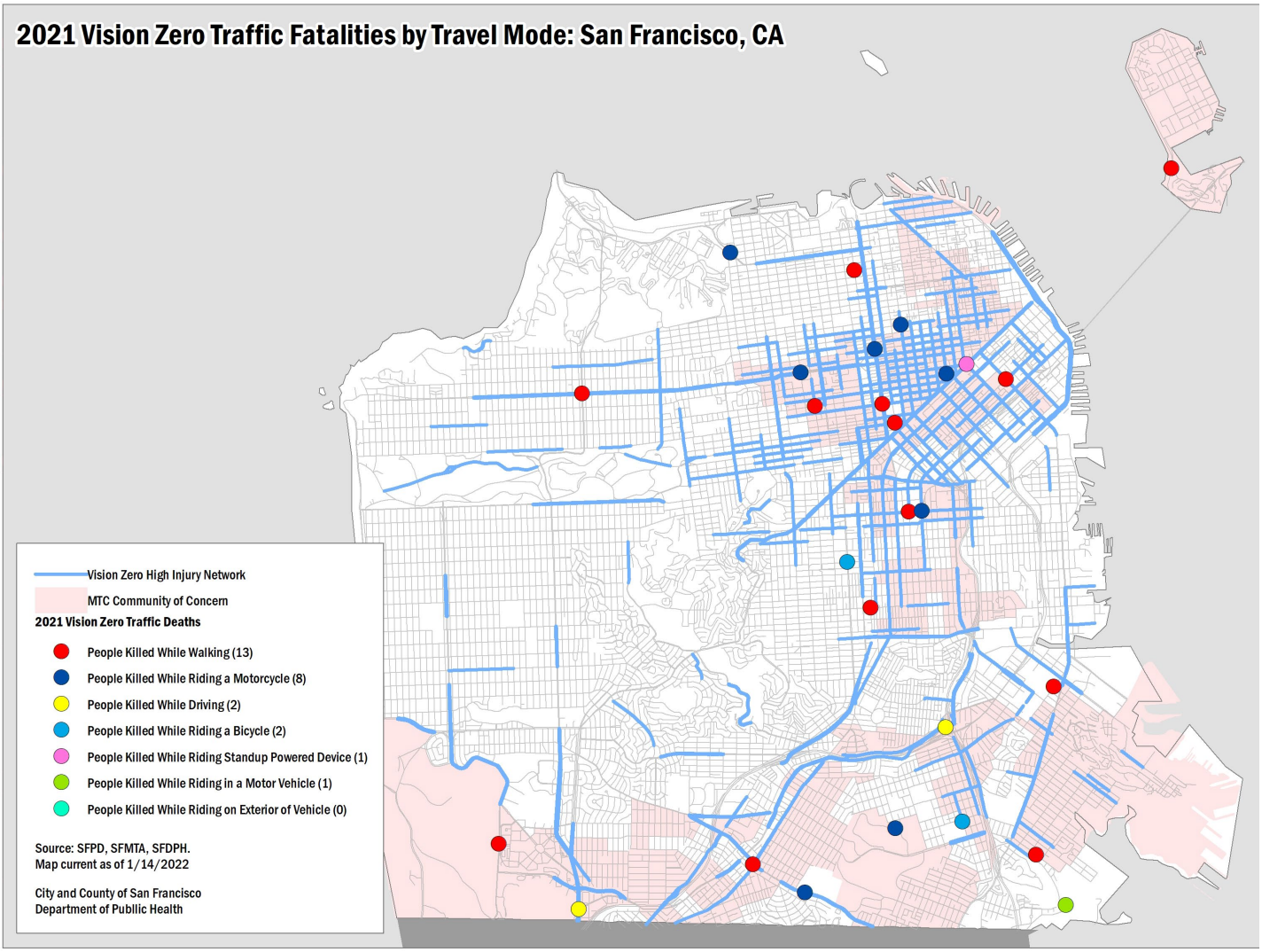
The remainder of this report offers an in-depth breakdown of facts, figures, and trends for 2021, and compares 2021 to the previous calendar year across several domains including:

- The Vision Zero High Injury Network & Equity Priority Neighborhoods
- Travel Mode
- Population Level Demographics
- Primary Collision Factors

EQUITY PRIORITY NEIGHBORHOODS

The Vision Zero High Injury Network (VZHIN) identifies the corridors where the most severe and fatal injuries in San Francisco are concentrated and is used to identify and prioritize where improvements in engineering, education, enforcement, and policy are focused to realize Vision Zero. The VZHIN[13] incorporates both police and hospital data and represents the 13% of San Francisco streets where more than 75% of severe and fatal traffic injuries occur. The majority (52%, or 66/128 miles) of the VZHIN is in the Metropolitan Transportation Commission's (MTC) Equity Priority Neighborhoods,[14] which contain 31% of the city's surface streets. Equity Priority Neighborhoods are areas with high concentrations of poverty, communities of color, seniors, and other vulnerable populations.

- In 2021, 59% (n=16) of traffic fatalities occurred on the Vision Zero High Injury Network.
- In 2021, 59%, (n=16) occurred in Equity Priority Neighborhoods in 2020, 69% (n=11) of which were on the VZHIN.

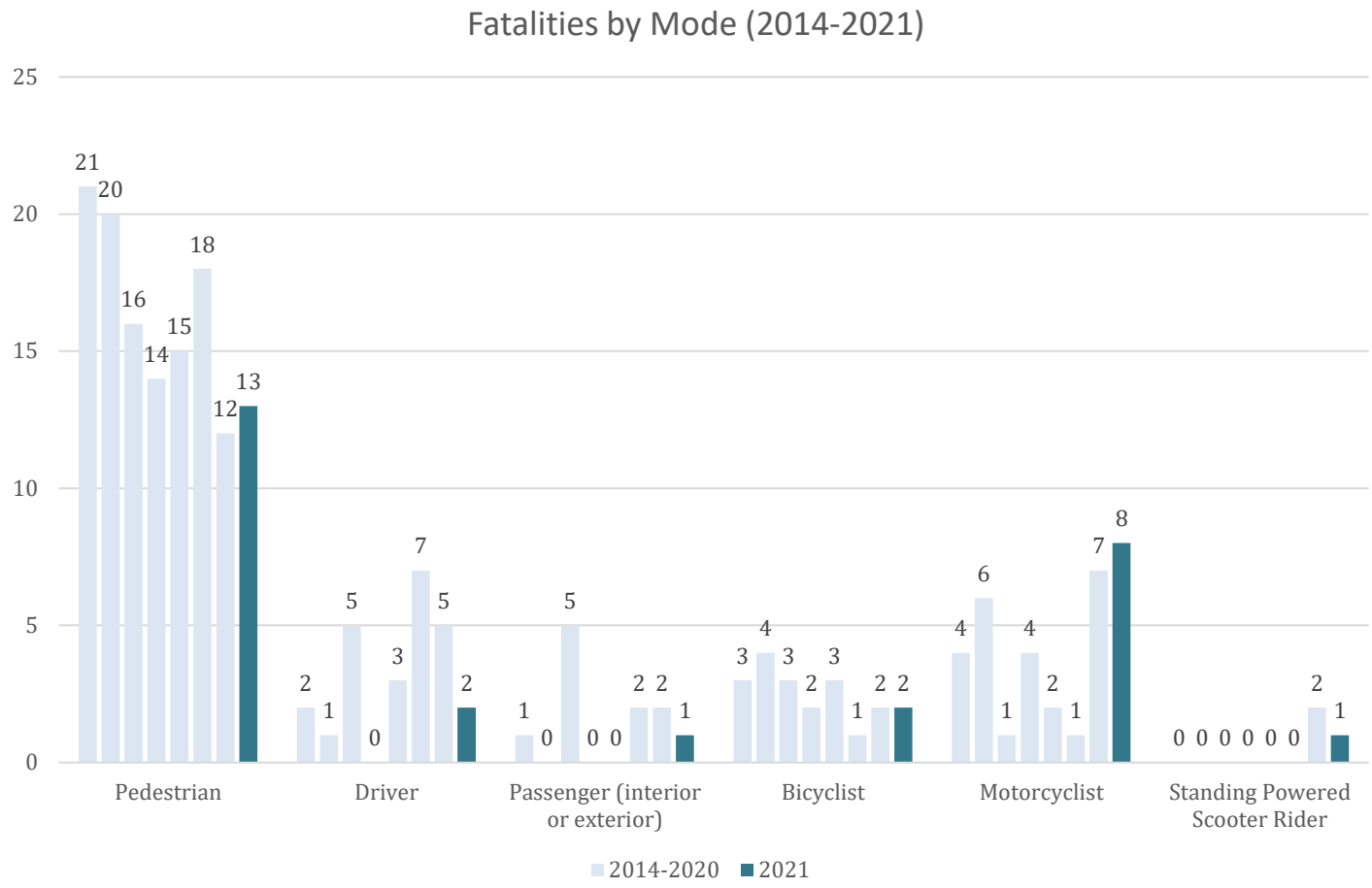


[13] Source: San Francisco Department of Public Health-Program on Health, Equity and Sustainability. 2017. Vision Zero High Injury Network: 2017 Update – A Methodology for San Francisco, California. San Francisco, CA. Available at: https://www.sfdph.org/dph/eh/PHES/PHES/TransportationandHealth.asp.

[14] Source: Plan Bay Area: 2040 Plan, 2018. http://www.planbayarea.org/2040-plan/plan-details/equity-analysis

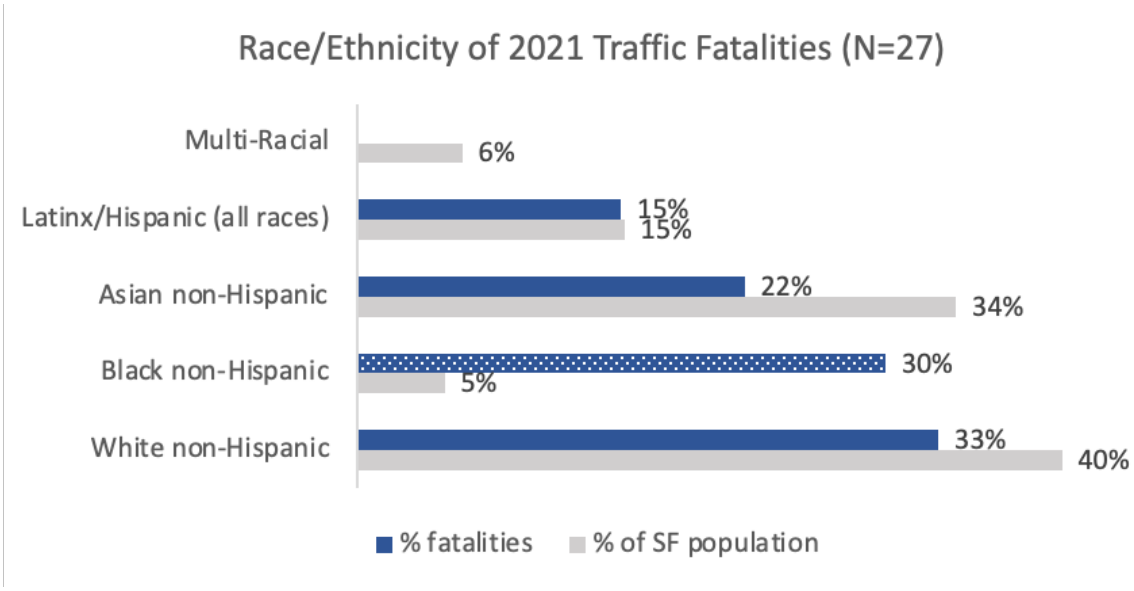
TRAVEL MODE

Pedestrians are consistently among the most vulnerable road users in San Francisco, accounting for 48% of all fatalities in 2021 (n=13). **For the second year since Vision Zero was adopted in 2014, pedestrians constituted fewer than half of traffic fatalities in 2021.** There was one more pedestrian death in 2021 relative to the year prior. All 13 pedestrian fatalities resulted from collisions with a motor vehicle or motorcycle. Those killed in motor vehicles (comprised of two drivers and one passenger) numbered three people in 2021, down from seven people in 2020. Two people were killed while biking, matching the number of cyclists death in 2020. Motorcyclist fatalities made up almost a third of all 2021 fatalities (30%; n=8), continuing the increase in this mode since 2020. One person was killed while riding standing e-scooters in 2021, the third e-scooter death since tracking began.



RACE AND ETHNICITY

Race/Ethnicity information is provided here by the San Francisco Office of the Chief Medical Examiner. The race/ethnicity summary of people killed in traffic collisions are 30% (n=8) Black, 22% (n=6) Asian, 33% (n=9) White, and 15% (n=4) Hispanic/Latinx (see figure below). Compared to the demographic profile of San Francisco at large (approximately 5% Black, 34% Asian, 40% White, 15% Hispanic/Latinx, and 6% reporting two or more races),[15] Black individuals are over-represented in these fatality data.[16,17]



[15] Source: U.S. Census Bureau (2019). Hispanic or Latino Origin by Race American Community Survey 1-year estimates. Retrieved from <https://censusreporter.org>. Note that the Census does not report Latinx or Latino/a as a racial group.

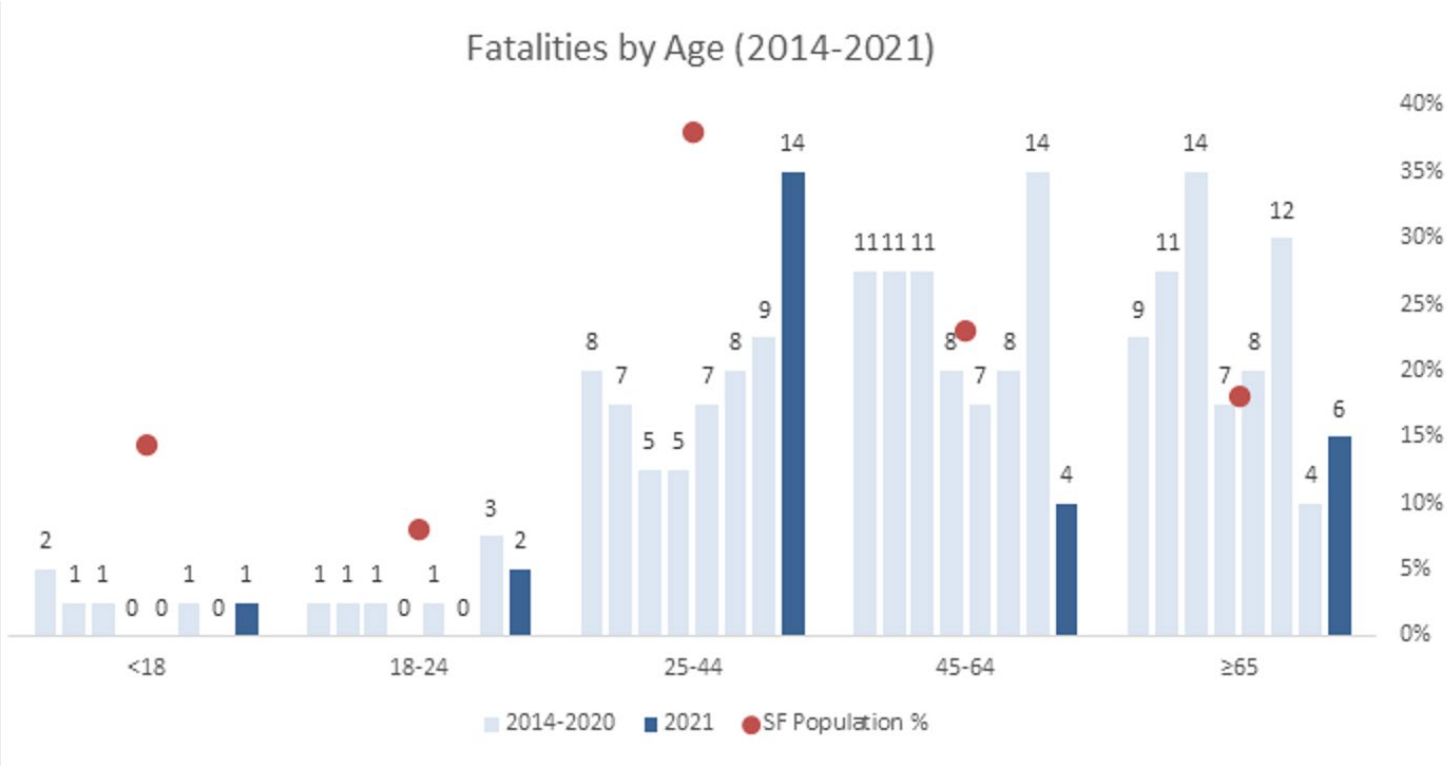
[16] Note: San Francisco is a city with significant tourist and commuter populations. Though members of these groups are also at risk of injury or death while traveling on San Francisco streets, they are not reflected in the Census population estimates for San Francisco.

[17] Six traffic fatality victims (22%) in 2021 had a home address outside San Francisco's city limits (n=2 Asian, n=3 White, n=1 Black; and among these six, n=2 were Hispanic of any race).

AGE

Seniors (aged 65 and up) have traditionally suffered a disproportionate rate of traffic fatalities. Representing 18% of San Francisco's total population[18], seniors accounted for 22% (n=6) of all traffic fatalities in 2021, up from 13% of all traffic fatalities in 2020. Looking specifically at pedestrian fatalities in 2021, almost half (n=6 of 13, 46%) were people age 65 (*data in Appendix A*).

In the opposite direction of the traffic death decline observed among older adults, the numbers of younger adults 25-44 were higher in 2021 than in any year since Vision Zero was implemented. One youth (under 18 years) on a skateboard died as a result of a traffic collision in 2021.



[18] Source: U.S. Census Bureau, 2019 American Community Survey 1-Year Estimate

SEX

In 2021 the male:female balance continued a departure from relative gender parity seen in recent years prior to 2020. The year's traffic fatalities were 70% male and 30% female, which is comparable to 2020's 83:17 split. As historically the case (excepting 2019), more males than females were killed on San Francisco streets (n=19 male deaths).

Fatality mode reveals different patterns between males and females: nearly one-third of people killed while walking were male (61%; n=8/13). All those killed while cycling or a standing powered scooter micro mobility device were male (n=2 and 1, respectively). In 2021, the majority of those killed riding a motorcycle were male (88%; n=7/8).

HOMELESSNESS

Vision Zero SF tracks the proportion of traffic fatalities affecting people with no fixed address as a conservative proxy for people experiencing homelessness who die in traffic crashes. In 2021, four people without a fixed address were killed on City streets (15%), down from six in 2020. The homeless population of San Francisco is estimated to be 8,011[19], making up approximately 0.9% of the City population[20]. Fourteen percent of fatalities occurring on SF freeways were to people without a fixed address (n=1/7). In addition, the three people who died on Caltrain or BART's right of way had no fixed address. People experiencing homelessness are particularly vulnerable to traffic injury.

PRIMARY COLLISION FACTORS

Unsafe speed, not stopping at a red signal, and **pedestrians not yielding to vehicles outside of a legal crosswalk** were top primary collision factors in 2021. Two fatalities resulted from a collision primarily caused by a driver under the influence (DUI) of alcohol, according to police assessment. Drug, alcohol, and polysubstance use is a focus of further analysis for Vision Zero in 2022. Five fatal collisions involved a secondary collision factor (noted in Appendix A). Of pedestrian fatalities which have vehicle code information available, police classified under half (46%; n=6/13) as caused primarily by the driver of a vehicle while 2 pedestrian fatalities it is unknown who is at fault due to the driver leaving the scene (15%; n=2/13). Counts of primary collision factors by year can be found in Appendix C.

TIME OF DAY

Collisions resulting in traffic fatalities in 2021 occurred more frequently in the nighttime hours with peak numbers occuring between 10:01am and 2am (33%; n=9). Fatal collision time of day has shown notable variation from year to year.

TURN MOVEMENT PRECEDING COLLISION

In 15 driver-at-fault fatal traffic collisions, 88% of cases involved drivers proceeding straight prior to collision (n=15/17). One (6%) involved a left-turning vehicle or motorcycle, and one involved a right-turning vehicle (6%). For driver-not-at-fault fatal collisions, 3 (n=3/8; 38%) involved a non-vehicle victim going straight, 3 were pedestrian victims walking outside a legal crosswalk or against a red light (n=3/8; 38%), 1 (n=1/8; 13%) was a pedestrian victim lying in the roadway, and one was a bicyclist who lost control (n=1/8; 13%). For 2 (n=2/2; 100%) fatalities it is unknown what movement the victim was engaged in prior to the crash.

[19] Source: Applied Survey Research, 2019 San Francisco Homeless Count & Survey Comprehensive Report. http://hsh.sfgov.org/wp-content/uploads/2019HIRDReport_SanFrancisco_FinalDraft.pdf

[20] San Francisco population estimate of 883,305. Source: U.S. Census Bureau, Population Estimates Program, July 1, 2019

DRIVER AGE (FOR DRIVERS DETERMINED TO BE AT FAULT)

Approximately two-thirds of fatal collisions were determined by police to be the responsibility of a driver or motorcyclist (63%; n=17/27)[21]. At fault drivers spanned the age spectrum, with a median age of 31.5. One was a young adult (4%, defined as age 18-24), and one was a senior (4%, defined as age 65 or more). Of these 17 fatal collisions, 6 (n=6/17; 35%) were a single-party collision that involved only a motor vehicle or motorcycle party (see below).

HIT AND RUN COLLISIONS

In 2021, 30% (n=8) of traffic fatalities resulted from a collision in which the driver left the scene, associated with the deaths of eight pedestrians (62%; n=8/13). This represents an increase of one hit and run collision from seven hit and run collisions in 2020.

SHARING TECHNOLOGY INVOLVEMENT

For the third time since 2020, a rider of standing powered devices figured in the fatality count in 2021. The e-scooter rider rode a rented Lime e-scooter.

LARGE VEHICLE INVOLVEMENT

Of 27 fatal traffic collisions in 2021, 0 (0%) involved a large vehicle[22]. This compares to one in 2020.

RIDE-HAIL INVOLVEMENT

Ride-hail includes Transportation Network Companies (TNCs) like Uber and Lyft, as well as traditional taxis. In 2021, TNCs and taxis were not determined by police to be a party in any fatal traffic collisions.

SAFETY EQUIPMENT

Use of personal safety equipment as recorded in police collision reports varied by mode. Among three fatalities involving a driver, one involved unbelted person, one involved belted person and one had unknown seatbelt information (33% each). In eight fatal motorcycle crashes, seven (88%) involved helmeted riders. In two fatal cyclist crashes, neither (0%) involved a helmeted rider. The one fatal standing powered scooter crash did not involve a helmeted rider (0%). Note that according to state law, neither cycling nor powered scooter riding require helmets be worn by adult riders. However, these data may point to different helmet usage patterns by travel mode.

SINGLE-PARTY COLLISIONS

Single-party collisions are traffic fatalities that involve only one party and may include collisions with unoccupied parked vehicles; trips or falls from a means of conveyance; colliding with inanimate objects such as buildings, streetlights, and center medians; or falling from environmental hazards such as steep cliffs or embankments. In 2021, 9 traffic fatalities (n=9/27; 33%) were single-party collisions. Of these 9 single-party traffic collisions resulting in a fatality: three were people in motor vehicles (33%), three were people riding a motorcycle including one dirt bike (33%), two were people riding a bicycle (22%), and one was a person riding an e-scooter (11%).

[21] At the time of publication, two fatal collisions involve unsolved hit and run collisions for which driver age is unavailable.

[22] Large vehicles are defined as those larger than a pickup truck (with unladen weight of over 8,000 lbs) or a van designed to carry 10 or more people. Note that vehicle size information was unavailable for two hit and run collisions.

VISION ZERO SF SAFETY IN ACTION

Vision Zero SF aims to create a transportation system that is safe for ALL San Franciscans, regardless of age, ability, or mode of travel. From education to traffic engineering to changing public policy, city agencies are working together to take ongoing action to increase safety on our streets. The Vision Zero Action Strategy outlines the commitments and actions that the City is taking in to eliminate all traffic deaths in San Francisco. The strategy is developed by the City and County of San Francisco, co-chaired by the San Francisco Municipal Transportation Agency and Department of Public Health, with leadership from the Mayor's Office and the Board of Supervisors, and in coordination with local community groups and advocacy organizations.

Understanding data trends helps the City identify the most effective strategies to reduce crashes and save lives. More than 75% of severe and fatal traffic injuries occur on just 13% of San Francisco streets. The City targets its tools to address the primary factors that cause crashes on our streets. As a result, the City's Vision Zero Action Strategy is focused on slowing speeds and safer crossings. More than 80 miles of our city's High Injury Network have been upgraded or are in construction with core safety improvements. The City is expanding the successful Quick-Build initiative to cover the remaining 80 miles in the High-Injury Network. As part of this effort, we are committed to adding daylighting and high-visibility crosswalks to every intersection along the HIN. We will also update all eligible signals to give pedestrians head-starts and more time for crossing the street. The City is also updating our City's Active Transportation Network, connecting car-light/car-free streets to protected bike lanes. Through these design changes, we can make walking, biking, and taking transit safer and more accessible for San Franciscans.[23]

Under the recently passed **AB43**, which gives cities the authority to lower speed limits along certain corridors, San Francisco is implementing 20 mph zones along key streets. We will also develop and implement a comprehensive speed management plan, including education and outreach to advance a culture of traffic safety. We are also focused on pursuing legislative authority for new strategies, like speed safety cameras, that are effective in reducing crashes and can reduce racial bias and disparities in enforcement.

The Vision Zero Action Strategy summarizes key City commitments and actions prioritizing street safety addressing Safe Streets, Safe People, Safe Vehicles, and Data Systems. More information can be found on the Vision Zero SF website.

[23] For more information on how the City is using data to inform our improvements, see https://www.sfmta.com/blog/san-francisco-announces-bold-commitment-safer-streets

APPENDIX A – TABLE OF 2021 VISION ZERO TRAFFIC FATALITIES

#	Collision Date	Collision Time	Deceased	Victim Age	Victim Sex	Collision Type	Primary (Secondary) Collision Factor	Hit and Run	Collision Location	Collision Description
1	1/19/2021	2031	Pedestrian	85	Male	Pedestrian vs. Motor Vehicle	21954(a)	No	24th Street at San Jose Avenue	A person walking was struck by a vehicle while walking outside the crosswalk.
2	1/20/2021	2238	Driver	47	Female	Motor Vehicle Collision	22350	No	Junipero Serra Boulevard at Alemany Boulevard Overpass	A person driving struck with a median and then an overpass pillar.
3	2/4/2021	756	Pedestrian	27	Male	Pedestrian vs. Motor Vehicle	23152(a) 21453(a)	Yes	Lake Merced Boulevard at Higuera Avenue	A person walking was struck by a driver who ran a red light at a high rate of speed, also causing a multi-vehicle collision.
4	2/10/2021	1011	Pedestrian (skateboarder)	12	Male	Pedestrian vs. Motor Vehicle	7.213(c)13 TC*	No	Ingerson Avenue at Redondo Street	A person riding a skateboard struck a vehicle.
5	3/2/2021	1257	Pedestrian	79	Female	Pedestrian vs. Motor Vehicle	22100(a) 21950(a)	Yes	Geneva Avenue at Mission Street	A pedestrian in the crosswalk was struck by a right-turning vehicle.
6	3/8/2021	1400	Cyclist	63	Male	Fall from Bicycle	22350	No	In front of 656 Goettingen Street	A person riding a bicycle struck a building after losing control on a steep hill.
7	3/27/2021	1140	Motorcyclist (dirt bike)	18	Male	Dirt Bike Collision	22350	No	Cambridge Street at John F. Shelley Drive	A person riding an off-road motorcycle struck a gate restricting road access.

#	Collision Date	Collision Time	Deceased	Victim Age	Victim Sex	Collision Type	Primary (Secondary) Collision Factor	Hit and Run	Collision Location	Collision Description
8	4/3/2021	1300	Pedestrian	78	Male	Pedestrian vs. Motor Vehicle	21954(a)	Yes	3rd Street at Folsom Street	A person walking was struck by a vehicle while walking outside of the crosswalk in an area designated for vehicles.
9	4/7/2021	1551	Pedestrian	81	Female	Pedestrian vs. Motorcycle	21950(b)	No	Golden Gate Avenue at Fillmore Street	A person walking in the crosswalk on a red-light signal was struck by a motorcycle.
10	4/24/2021	22	Pedestrian	28	Male	Pedestrian vs. Motor Vehicle	21456(c) 22350	Yes	Geary Boulevard at Park Presidio Boulevard	A person walking was struck by a vehicle while walking in the crosswalk.
11	5/18/2021	1859	Pedestrian	29	Female	Pedestrian vs. Motor Vehicle	21453(a) 22350	Yes	Polk Street at Hayes Street	Two people walking across the street were struck by a vehicle which ran a red light at a high rate of speed, caused a collision with another vehicle then rolled over onto the pedestrians, killing one.
12	5/21/2021	1115	Motorcyclist	25	Male	Motorcycle Collision	21453(a) 22350	No	California Street at Hyde Street	A person riding a motorcycle ran a red light and struck a vehicle.
13	5/28/2021	2122	Pedestrian	72	Female	Pedestrian vs. Motor Vehicle	20001(a)	Yes	16th Street at Folsom Street	A person walking was found down with injuries consistent with a vehicle collision.
14	7/29/2021	UNK	Pedestrian	54	Male	Pedestrian vs. Motor Vehicle	20001(a)	Yes	Treasure Island Road at Macalla Road	A person on a roadway in a construction zone was struck by a vehicle.

#	Collision Date	Collision Time	Deceased	Victim Age	Victim Sex	Collision Type	Primary (Secondary) Collision Factor	Hit and Run	Collision Location	Collision Description
15	8/13/2021	2214	Motorcyclist	32	Male	Motorcycle vs. Motor Vehicle	22106	No	Geneva Avenue at Prague Street	A person riding a motorcycle struck a vehicle.
16	8/15/2021	151	Motorcyclist	25	Female	Motorcycle Collision	21651(a)	No	Geary Boulevard at Steiner Street	A person riding a motorcycle traveling at a high rate of speed struck a median.
17	8/15/2021	300	e-scooter	27	Male	Fall from Standing Powered Device	22350	No	Market Street at 4th Street	A person riding a powered standup scooter while intoxicated fell off.
18	9/8/2021	2314	Motorcyclist	42	Male	Motorcycle vs. Motor Vehicle	22350	No	Mason Street at Eddy Street	A person riding a motorcycle at a high rate of speed in the turn lane struck a turning vehicle.
19	9/18/2021	2240	Cyclist	47	Male	Bicycle vs. Parked Vehicle	22350	No	20th Street at Dolores Street	A person riding a bicycle struck a legally parked vehicle and was ejected.
20	9/19/2021	158	Driver	39	Female	Motor Vehicle Collision	22350	No	Alemany Boulevard at San Bruno Avenue	A person driving a vehicle at high rate of speed in wet conditions lost control and collided with a light pole.
21	10/5/2021	45	Motorcyclist	40	Male	Motorcycle vs. Motor Vehicle	23152(a)	No	Francisco Street at Richardson Avenue	A person riding a motorcycle struck a intoxicated driver making an illegal left turn.
22	10/14/2021	223	Pedestrian	36	Female	Pedestrian vs. Motor Vehicle	21955	Yes	Van Ness Avenue at McAllister Street	A person lying in the street was struck by a vehicle.

#	Collision Date	Collision Time	Deceased	Victim Age	Victim Sex	Collision Type	Primary (Secondary) Collision Factor	Hit and Run	Collision Location	Collision Description
23	10/20/2021	2200	Driver	23	Male	Motor Vehicle Collision	22350	No	Jamestown Avenue at Bill Walsh Way	A person driving at a high rate of speed lost control and drove over a cliff.
24	10/29/2021	2316	Motorcyclist	40	Male	Motorcycle vs. Motor Vehicle	21453(a)	No	16th Street at Harrison Street	A person riding a motorcycle was struck by a driver who ran a red light.
25	11/10/2021	757	Pedestrian	30	Male	Pedestrian vs. Motor Vehicle	21453(a)	No	Franklin Street at Union Street	A person walking was struck by a vehicle pushed on to the sidewalk from a prior collision with another vehicle.
26	11/29/2021	550	Pedestrian	80	Male	Pedestrian vs. Motor Vehicle	21954(a)	No	Fairfax Avenue at Phelps Street	A person walking who was crossing midblock was struck by a vehicle.
27	12/17/2021	947	Motorcyclist	26	Male	Motorcycle Collision	22350	No	Van Ness Avenue at Sutter Street	A person riding a motorcycle lost control, struck a median and collied with a parked vehicle.

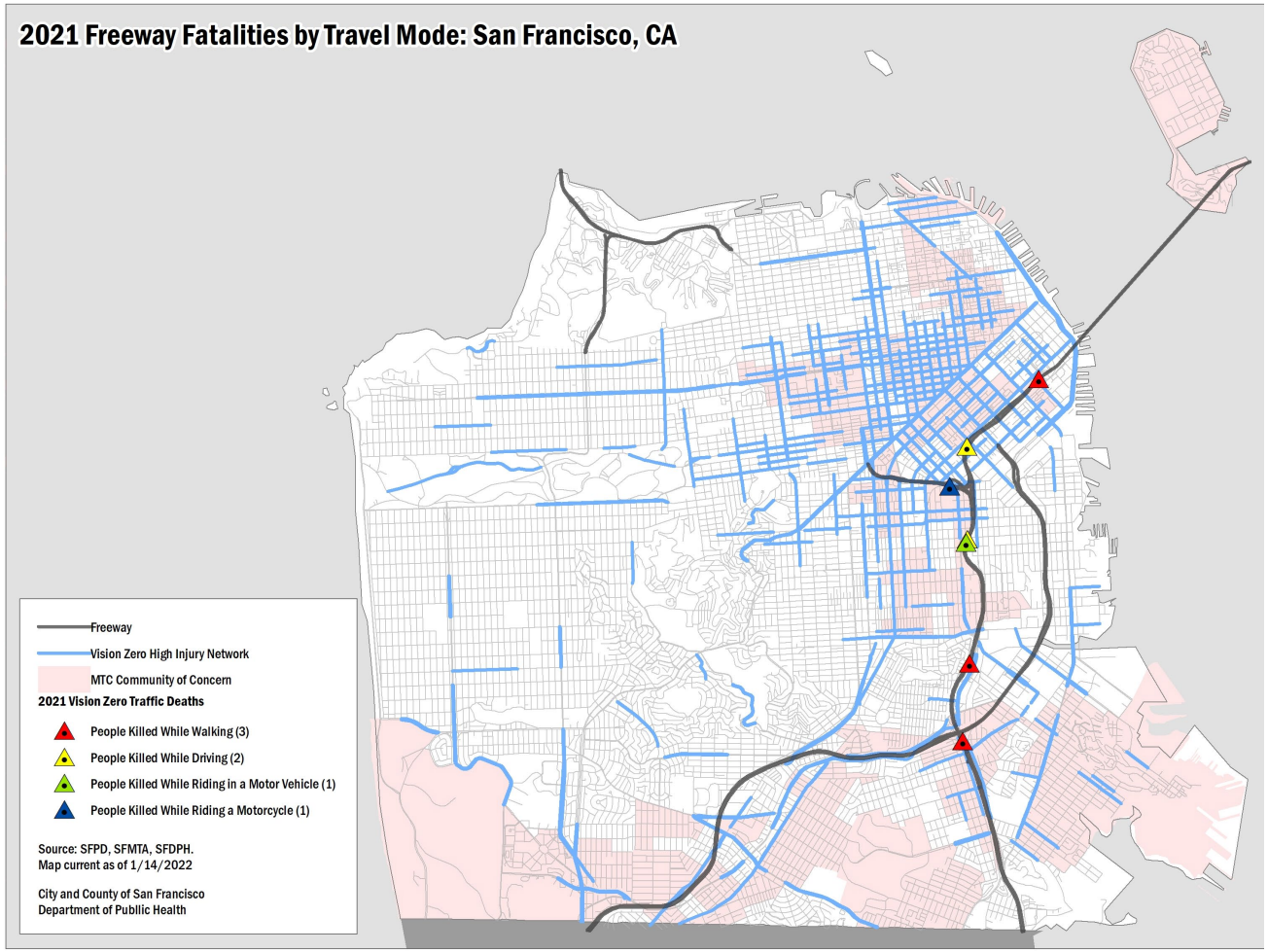
*TC refers to City and County of San Francisco Traffic Code. This collision did not require a California Vehicle Code classification.

APPENDIX B – TRACKING SEPARATE FROM VISION ZERO TOTALS: FATALITIES ON FREEWAYS, AT SAN FRANCISCO INTERNATIONAL AIRPORT, AND IN THE PRESIDIO

Seven people (3 people walking, 2 people driving, 1 person riding in a motor vehicle, and 1 person on motorcycles) were killed in transportation-related collisions on freeways in San Francisco in 2021. This number is up from five people in 2020.

There were no traffic deaths in the Presidio or on San Francisco International Airport (SFO) roadways in 2021.

Freeways are defined as grade separated highway with high-speed vehicular traffic and controlled ingress/egress. Traffic fatalities on freeways and in the Presidio are tracked, but not included in the Vision Zero SF Fatality counts, as these areas are serviced by various state and federal agencies. Caltrans is the state agency responsible for freeway operation, maintenance and improvements, and the California Highway Patrol (CHP) is the state agency responsible for traffic law enforcement. SFO and its roadways are private property under San Mateo County jurisdiction. Within the Presidio, the National Park Service's US Park Police officers perform law enforcement and public safety functions. Additionally, the Presidio Trust is responsible for operation, maintenance, and improvement of all roadways within the Presidio. The City engages with these agencies regarding transportation safety issues and freeway rights-of-way in San Francisco.



FATALITIES ON FREEWAYS

#	Collision Date	Deceased	Collision Type	Victim Age	Victim Sex	Collision Time	Collision Location
1	1/9/2021	Motorcyclist	Motorcycle Collision	28	Male	742	Southbound 101 at I-80 Junction
2	2/8/2021	Driver	Motor Vehicle Collision	41	Male	2320	Northbound I-80 near Mission Street
3	2/16/2021	Pedestrian	Pedestrian vs Motor Vehicle	33	Male	2310	Eastbound I-80 at 2nd Street Offramp
4	3/26/2021	Pedestrian	Pedestrian vs Motor Vehicle	60	Female	517	Northbound 101 at NB I-280 Merger
5	9/11/2021	Pedestrian	Pedestrian vs Motor Vehicle	48	Male	UNK	Northbound 101 South of Cesar Chavez Exit
6	11/26/2021	Driver	Motor Vehicle Collision	56	Male	300	Northbound 101 South of Vermont Street
7	11/26/2021	Passenger	Motor Vehicle Collision	47	Male	300	Northbound 101 South of Vermont Street

APPENDIX C – PRIMARY COLLISION FACTORS BY YEAR

CA Vehicle Code	Primary Collision Factor Description	2014	2015	2016	2017	2018	2019	2020	2021
22350	Unsafe speed for prevailing conditions	6	7	3	4	3	4	9	9
21453(a,c)	Red signal - driver or bicyclist responsibilities	2	4	8	1	2	3	4	4
21954(a)	Pedestrians must yield right-of-way outside of crosswalks	2	2	1	0	3	1	1	3
23152(a)	Under the influence of alcohol or drug	1	1	2	0	1	2	2	2
n/a*	Unknown, Pending, or None	3	0	4	1	1	2	4	2
21456(b,c)	Pedestrian violation of Walk or Wait signals	1	1	2	0	1	2	1	1
22106	No starting or backing vehicle while unsafe	0	0	0	0	1	0	0	1
22100(a)	Turn at intersection from wrong position	0	0	0	0	0	0	0	1
21955	Crossing between controlled intersections (Jaywalking)	3	1	1	2	1	0	0	1
21950(b)	Pedestrian suddenly entering into vehicle path close enough to create an immediate hazard	3	0	0	1	0	0	0	1
21651(a,b)	Wrong way driving	0	0	1	0	0	0	0	1
7.213(c)13 TC	Other improper driving	0	0	0	0	0	0	0	1
21950(a)	Driver failure to yield right-of-way at crosswalks	6	9	6	7	5	8	4	0
22517	Opening door on traffic side when unsafe	0	0	0	0	0	1	1	0
21954(b)	Failure of driver or bicyclist to exercise due care for safety of pedestrian on roadway	0	0	0	0	0	1	1	0
21804(a)	Entering highway from alley or driveway	0	1	0	0	0	1	1	0
21755(a)	Unsafe overtaking or passing by driver	0	0	0	0	0	0	1	0
21453(d)	Red signal - pedestrian responsibilities	1	0	2	0	0	1	1	0
22515(a)	Leaving vehicle unattended without setting the brakes or stopping the motor	0	0	0	1	0	0	0	0
22107	Unsafe turn or lane change prohibited	0	2	0	0	0	1	0	0
22102	Illegal U-turn in business district	0	0	0	1	1	0	0	0
22101(d)	Violating special traffic control markers (illegal turning movement)	0	0	0	1	0	0	0	0
21956	Pedestrian upon roadway	0	0	0	0	1	0	0	0
21801(a)	Violation of right-of-way - left turn	0	1	0	0	0	0	0	0
21712(b)	Unlawful riding on vehicle or bicycle prohibited	1	0	0	0	0	0	0	0
21658(a)	Lane straddling or failure to use specified lanes	1	0	0	0	0	0	0	0

CA Vehicle Code	Primary Collision Factor Description	2014	2015	2016	2017	2018	2019	2020	2021
21651(b)	Wrong way driving	0	0	1	0	0	0	0	0
21650.1	Bicycle to travel in same direction as vehicles (riding wrong way)	0	0	0	1	0	0	0	0
21650	Failure to keep to right side of road	1	1	2	0	2	0	0	0
21460(a)	Remain at right of double parallel solid yellow lines - driver responsibility	0	0	0	0	1	1	0	0
21208(a)	Riding outside bicycle lane prohibited	0	1	0	0	0	0	0	0
21203	Illegal to hitch a ride on another vehicle	0	0	0	0	0	1	0	0

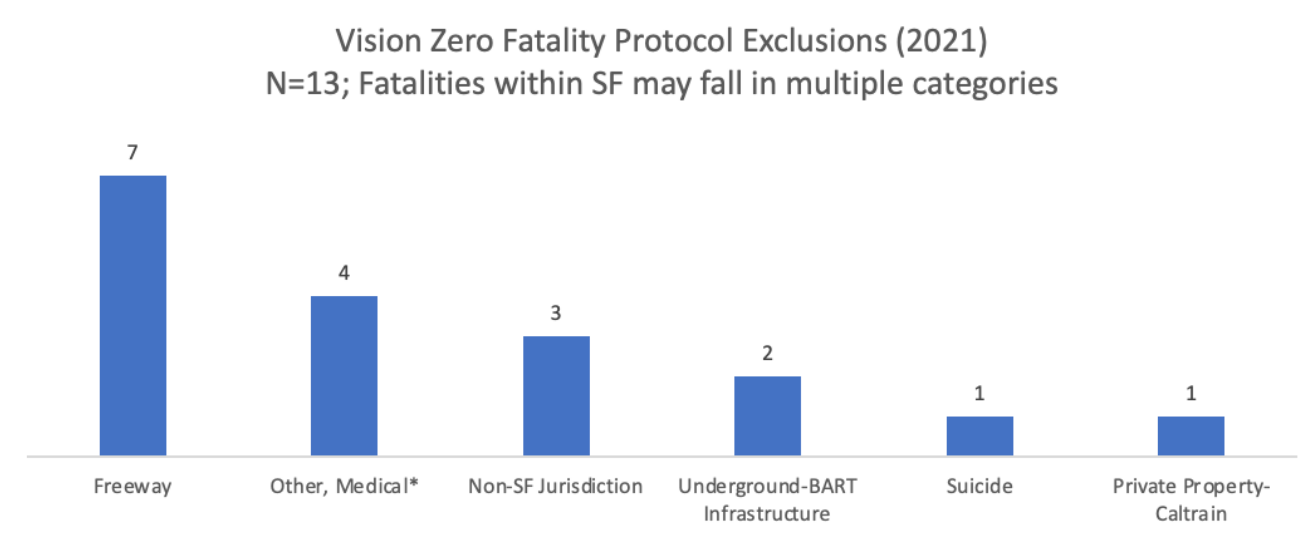
*Like in prior years, two 20001(a) Duty to stop when involved in accident with injury or death primary collision factors are coded as n/a in 2021 since it is an action taken after the fact and not the cause of the collision.

APPENDIX D – EXCLUSIONS: APPLYING THE VISION ZERO TRAFFIC FATALITY PROTOCOL

Data provided from San Francisco's Office of the Medical Examiner may include fatalities that: occurred in a motor vehicle but are not directly attributable to a traffic collision; occurred outside San Francisco; or occurred more than 30 days after the collision. The Vision Zero Traffic Fatality Protocol provides exclusion criteria for these cases, consistent with national and international best practices. The purpose of the protocol is to ensure consistent reporting of traffic fatalities through uniform application of agreed-upon criteria for defining a traffic death. A shared and consistent definition ensures that we can objectively evaluate trends and the impact of our efforts over time.

Cases are excluded if the death: occurs outside of the City and County of San Francisco; occurs on private property (including Caltrain right of way); occurs in the underground MUNI or BART transportation infrastructure; is reported as a suicide based on investigation; is reported as a homicide in which the 'party at fault' intentionally inflicted serious bodily harm that caused the victim's death; or is a fatality caused directly and exclusively by a medical condition or where the fatality is not attributable to road user movement on a public roadway. (Note: If a person driving suffers a medical emergency and consequently hits and kills another road user, the latter is included although the driver suffering a medical emergency is excluded.) Below is a chart of fatalities excluded from Vision Zero counts in 2020, with reasons for exclusion. *Fatalities may fall into multiple exclusion categories.* Fatalities included in Appendix B are not represented here.

2021 Railway deaths: Three deaths excluded from the Vision Zero fatality total were associated with railways (one on Caltrain's right of way and two on BART's right of way) in 2021. One of these three was also determined to be a suicide. The number of railway associated fatalities is up from two in 2020.



Notes: Categories from previous reports with zero counts include: Homicide; Private Property-parking lot, driveway or otherwise residential; Underground MUNI Infrastructure; Fatality in non-moving vehicle; Other Death > 30 days; Presidio; SFO.

*One medical exemption was a vehicle crash that occurred in the City/County of San Francisco, but the death certificate was issued by Sonoma County, the decedent's county of residence.