VISION ZERO SF

Through Vision Zero SF we commit to working together to prioritize street safety and eliminate traffic deaths in San Francisco.

VISION ZERO

SFMTA Board | Vision Zero Subcommittee Quarter #1
February 27, 2024

OVERVIEW

Uyen Ngo

OVERVIEW

Preliminary 2023
End of Year Fatality Report

No Turn on Red

Speed Safety Cameras

Quick-Build Program

10 YEARS OF VISION ZERO

- Vision Zero 10-year retrospective report
- Work with Vision Zero community partners on ideas for the next phase of street safety efforts
- San Francisco will continue the work:
  - Install speed safety cameras at 33 locations
  - Quick-Build pedestrian and bicyclist safety improvement projects on 50 remaining miles of the High Injury Network
  - No turn on red in parts of the city with high concentration of pedestrian activity
  - Continue implementing daylighting, including enforcing AB413
  - Comprehensive safety treatments in Western Addition and Tenderloin (Safe Streets & Roads for All)

2023 CONTEXT

- 26 traffic fatalities; 18 of them were pedestrians
- 24% fewer traffic fatalities than in 2013, the year before Vision Zero was adopted.
- 33% fewer traffic fatalities than in 2022.
- Traffic fatalities in San Francisco have generally been trending down since 2013, while many other cities across the country, from Portland to Los Angeles to Washington DC, are struggling with increasing fatality rates.

2023 CONTEXT

- San Francisco has the lowest number of fatalities per bicycle commuter and second-lowest number of pedestrian fatalities per walking commuter in the U.S., according to the League of American Bicyclists.
- San Francisco has a per capita traffic fatality rate comparable to those of the Netherlands and Finland.

PRELIMINARY 2023 END OF YEAR FATALITY REPORT

Iris Tsui + Ricardo Olea

POPULATION HEALTH DIVISION
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

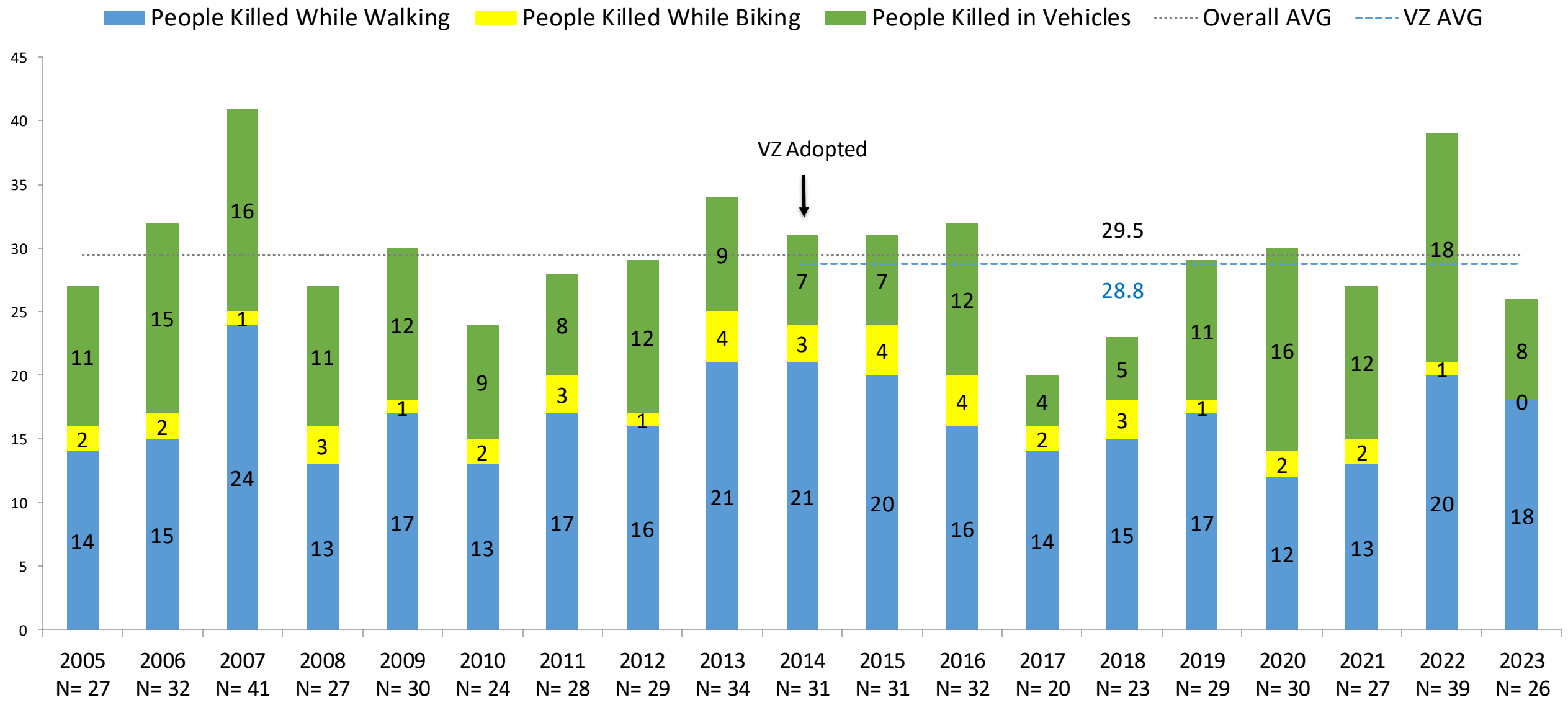
SAN FRANCISCO POLICE
ORO EN PAZ FIERRO EN GUERRA

SFMTA

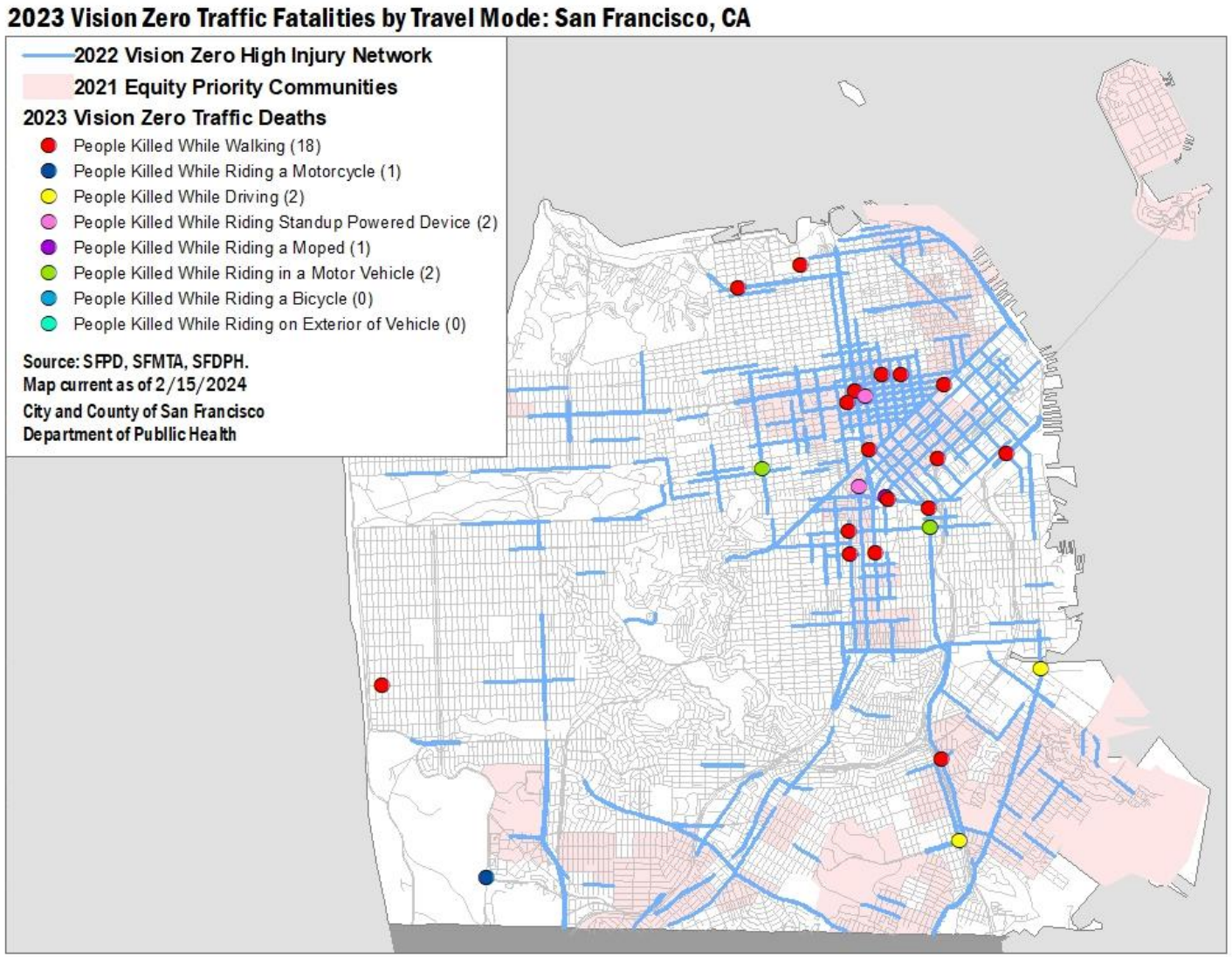
SEAL OF THE CITY AND COUNTY OF SAN FRANCISCO

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

26 TRAFFIC-RELATED DEATHS IN 2023



VISION ZERO HIGH INJURY NETWORK



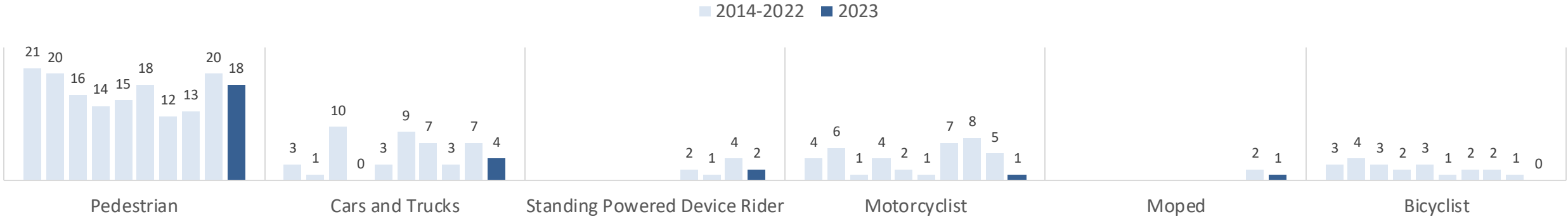
In 2023, 65% (n=17) of traffic fatalities occurred on the Vision Zero High Injury Network (VZHIN)

Almost half of fatalities (42%; n=11) occurred in an Equity Priority Community

5 of which (45%) were also on the VZHIN

https://www.visionzerosf.org/wp-content/uploads/2023/03/2022_Vision_Zero_Network_Update_Methodology.pdf

FATALITIES BY TRAVEL MODE



Pedestrian	Cars and Trucks	Standing Powered Device Rider	Motorcyclist	Moped	Bicyclist
Pedestrians remain most vulnerable	Two drivers and two passengers	Includes e-scooters and e-unicycles	One person killed while riding a motorcycle	Lower-powered sit-down vehicles	No one killed while biking
69% of total fatalities	15%	8%	4%	4%	0%
Two fewer than last year	Three fewer than last year	Two fewer than last year	Lowest since 2019	Separated from motorcycles	One Presidio fatal not included in VZ

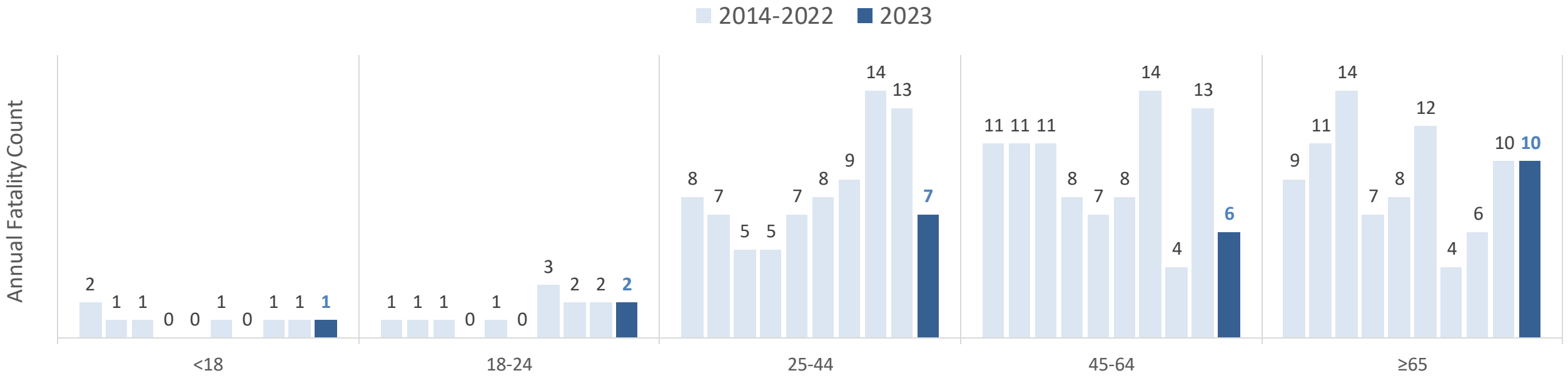
Note: **Traffic fatality totals are susceptible to random variation. Year-to-year changes may thus be due to chance.**

FATALITIES BY AGE

Number of children <18 killed in traffic increased from 3% (2022) to 4% (2023)

Among pedestrian fatalities: 50% were age 65+ and 78% were age 50+

Percent of total fatalities in the 65+ age group increased from 26% (2022) to 38% (2023)



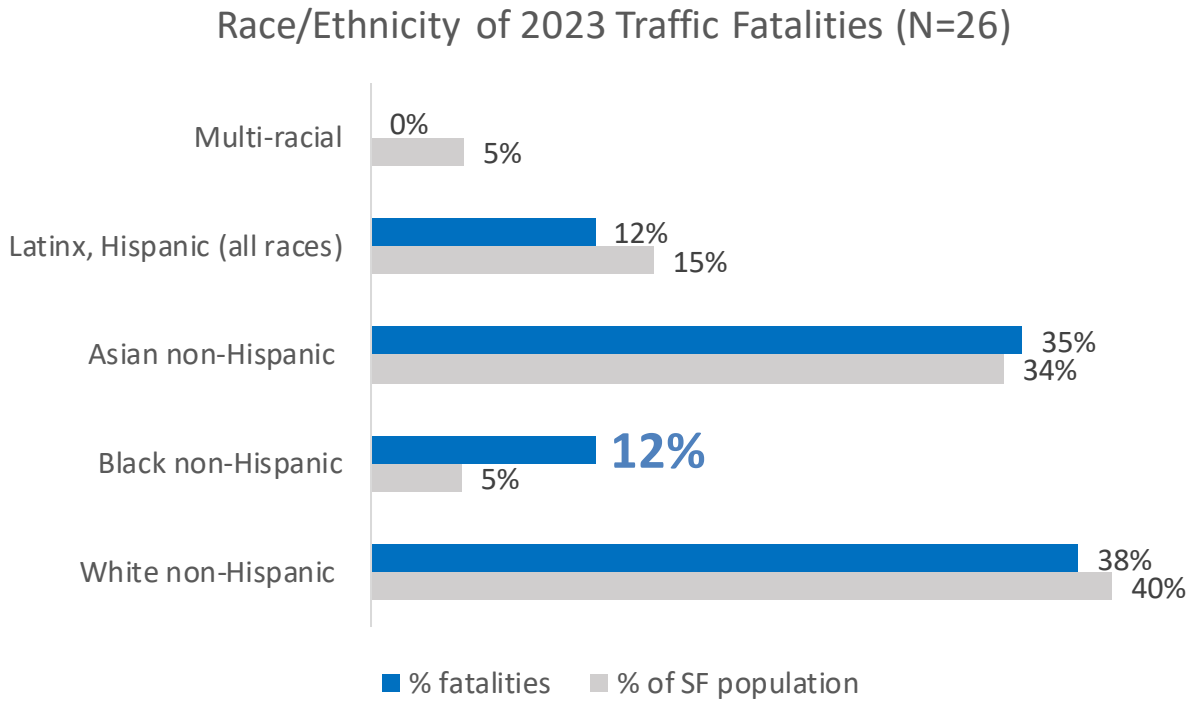
FATALITIES BY RACE/ETHNICITY*

Asian and White persons match representation in fatality data relative to SF population estimates

Black individuals are over-represented in fatality data relative to their representation in the SF population

4 (15%) of victims were not SF residents

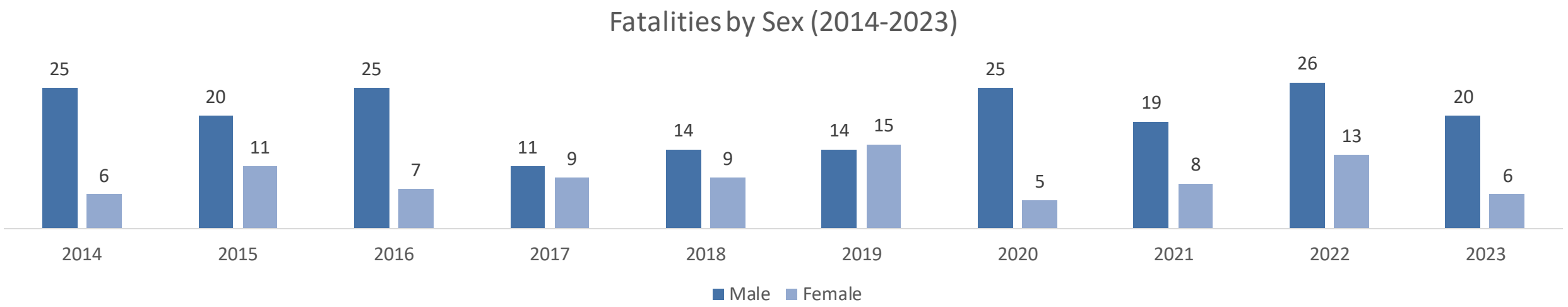
Three White, one Asian



*Race and ethnicity for SF fatalities are per Office of the Chief Medical Examiner.
*There was one fatality where race/ethnicity could not be determined.

SF Population estimates for race and ethnicity are from the US Census Bureau, 2020 American Community Survey 5-year estimates

FATALITIES BY SEX



Males are overrepresented in our local fatality statistics (77% in 2023), relative to their municipal representation (approx 51% in 2020).

All six female fatalities were pedestrians in 2023 (33% of pedestrian fatalities; n=6/18)

HOMELESSNESS

In 2023, two people without a fixed address were killed on City streets (8%), down from five in 2021

In 2023, there was one SF freeway fatality that affected a person likely experiencing homelessness

<1% of the City population is homeless; People experiencing homelessness continue to be particularly vulnerable to traffic injury

CRASH CHARACTERISTICS

Sharing Technology Involvement: There were no collisions involving sharing technology in 2023.

Solo Crashes: Single party vehicle crashes totaled 15% (n=4) of fatalities. This represents four fewer death than in 2022 (21%, n=8).

Time of Day: Fatal collisions occurred most frequently between 2pm and 6pm

HIT AND RUN COLLISIONS

Seven traffic fatalities (27%) involved a hit and run in 2023

Six pedestrians

One standup power device rider

Four fewer than in 2022

36% total decrease in hit and run fatalities

UPCOMING REPORT RELEASES

Slated for March release:

- Annual Fatality Report for 2023
- Bi-annual Severe Injury Report for 2021-2022

Thank you!

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2023 Fatal Crashes (with comparison to 2013)

February 27, 2024
SFMTA Board of Directors, Vision Zero Committee

Ricardo Olea, City Traffic Engineer, SFMTA

The San Francisco Online Fatality Tracker

- Link in the San Francisco Vision Zero “Maps & Data” Page
- Summary of collision details and follow ups
- Updated or posted within 14 days after every fatal crash

San Francisco 2024 Traffic Fatality Notification Table

The collision details below are based on preliminary SFPD investigations and may be updated as new information becomes available. The table includes notes from SFMTA about the site’s collision history, prior or future street changes, or conditions following site visits. The SFMTA maintenance or design recommendations respond to general conditions observed at the site, not what may or may not have had a role in the collision. If you have any information regarding any of these incidents, please call the SFPD 24/7 tip line at 1-415-575-4444 or Text a Tip to TIP411 to start a message with SFPD. DPH Crisis Response is contacted for every fatal traffic collision. For general questions or comments please email visionzerosf@sfmta.com.

Vision Zero Count	Collision Date	Collision Time	Location	Collision Type	Collision Summary	SFMTA Actions and Site Conditions	Prior Five Year Reported Injury Collisions	Collision on Vision Zero High Injury Network	Gender	Age	Deceased	Hit and Run	Date Last Modified
Pending	Monday, January 01, 2024	8:26 PM	Junipero Serra Blvd near Palmetto Ave	Motor Vehicle Collision (solo)	The driver of the vehicle was speeding northbound under the influence and struck the center median, resulting in the vehicle rolling over multiple times.The victim, who was a passenger, succumbed to their injuries.	Study of speeding and driving under the influence mitigation to be requested of Caltrans.	3 solo vehicle collisions out of 15 total collisions.	Yes	Male	25	Passenger	No	Thursday, January 04, 2024

Summary of 2023 motor vehicle fatalities

- In 2023 four people died inside a motor vehicle, two as passengers and two as drivers. This was down from the total in 2022 of 7.
- Vehicle-occupant crashes had a common element of excessive speeding (speeds that are likely 20+ MPH over speed limits):
  - DUI driver on 16th Street rear ended a vehicle, sending another vehicle into a sidewalk, injuring two pedestrians, then continued to speed down 16th Street rear ending another vehicle and killing occupant.
  - Driver speeding on 3rd Street lost control of the vehicle for over 1000 feet, being stopped by a utility pole on Arthur Avenue.
  - Driver speeding on Divisadero lost control of the vehicle and hit a light pole on the median between Oak and Fell Streets.
  - Driver being chased by the CHP on US 101 lost control of the vehicle at the Paul Avenue exit and struck concrete median.

Summary of 2023 pedestrian fatalities

Crash Type	Total (18)	Locations
Driver of a vehicle hit a pedestrian crossing against red hand/red light indication	3	Alameda & Potrero; 16th St & Valencia; O'Farrell & Van Ness
Pedestrian outside crosswalk at night (both homeless)	2	Franklin near Eddy; 7th St & Harrison
Driver turning left violated pedestrian right-of-way	2	Bayshore & Silver; 18th St & Valencia
Two vehicles collided hitting a pedestrian in the sidewalk	2	16th St & Potrero; Hyde & Post
Driver of a vehicle striking a person skateboarding	2	Lombard & Divisadero; Fell near Van Ness
Driver hit pedestrian at STOP sign intersection	1	46th & Taraval
Driver turning right on green light hit child on stroller	1	4th St & King
Driver hit pedestrian turning into parking lot driveway	1	13th St near Folsom
Stand-up scooter hit pedestrian outside crosswalk	1	Market near 4th St
Unknown details but driver was hit and run	1	18th St & South Van Ness
Runaway moving truck hit its driver outside vehicle	1	Jones near Post
Driver hit pedestrian making parking maneuver	1	Laguna & Francisco

Vehicular right and left turns at signals

- Four of the 18 pedestrian fatal crashes occurred from a vehicular turn at a traffic signal with green light. This is a type of crash that SFMTA has been in the process of mitigating with changes such as:
  - Leading Pedestrian Intervals (LPIs) and other signal separation treatments
  - Daylighting to improve visibility
  - Left or right turn traffic calming devices to reduce turn speeds
  - Left turn prohibitions
  - Warning signs
- 4 year-old child died at 4th and King Streets where there was a multiple right turn present. The city will go from having over 80 multiple turns in 2005 to only a handful by the end of 2024.

Multiple Turn Lanes Removal Update

ON STREET	CROSS STREET	DIRECTION	STATUS
Clay Street	Davis Street	eastbound	Work order in 2024
Eucalyptus Drive	Nineteenth Avenue	eastbound	Work order in 2024
Front Street	Pine Street	northbound	Work order to mitigate in 2024
Lincoln Way	Great Highway	westbound	Work order in 2024
Masonic Avenue	Fell Street	southbound	Turn to be signalized under future capital program
Montgomery Street	Clay Street	southbound	Work order in 2024
Eureka Street	Market Street	southbound	Work order in 2024
Fourteenth Street	Folsom Street	eastbound	Work order in 2024
Fremont Street	Howard Street	northbound	To be done under Howard Streetscape Capital Project
Harrison Street	Sixth Street	westbound	Work order in 2024
Martin Luther King	Cross Over Drive	eastbound	Work order to mitigate in 2024
Sloat Boulevard	Nineteenth Ave.	eastbound	Done, double left turn fully signalized (January 2024)
South Van Ness	Cesar Chavez St.	southbound	Work order in 2024
Third Street	Howard Street	northbound	To be done under Howard Streetscape Capital Project
Winston Drive	Nineteenth Ave.	eastbound	Turn to be signalized under future capital program
Harrison Street	Tenth Street	westbound	Turn to be signalized under future capital program
Hayes Street	Franklin Street	westbound	Work order in 2024
Berry Street	3rd Street	eastbound	Work order in 2024

Age and risk of death

- A total of 10 pedestrians killed in 2023 were 65 or over, more than half
- Half of these elderly deaths involved relatively slower speed impacts:
  - Pedestrian hit by car driver at a STOP sign location
  - Pedestrian hit by car driver making a U turn on a residential street
  - Pedestrian hit by car driver turning into a grocery store driveway
  - Pedestrian hit by car drivers turning left at a traffic signal
- Traditional fatality risk curves assume people have a 90% chance of surviving a crash around 25 MPH. Many of these curves have not adjusted for age or vehicle sizes involved.

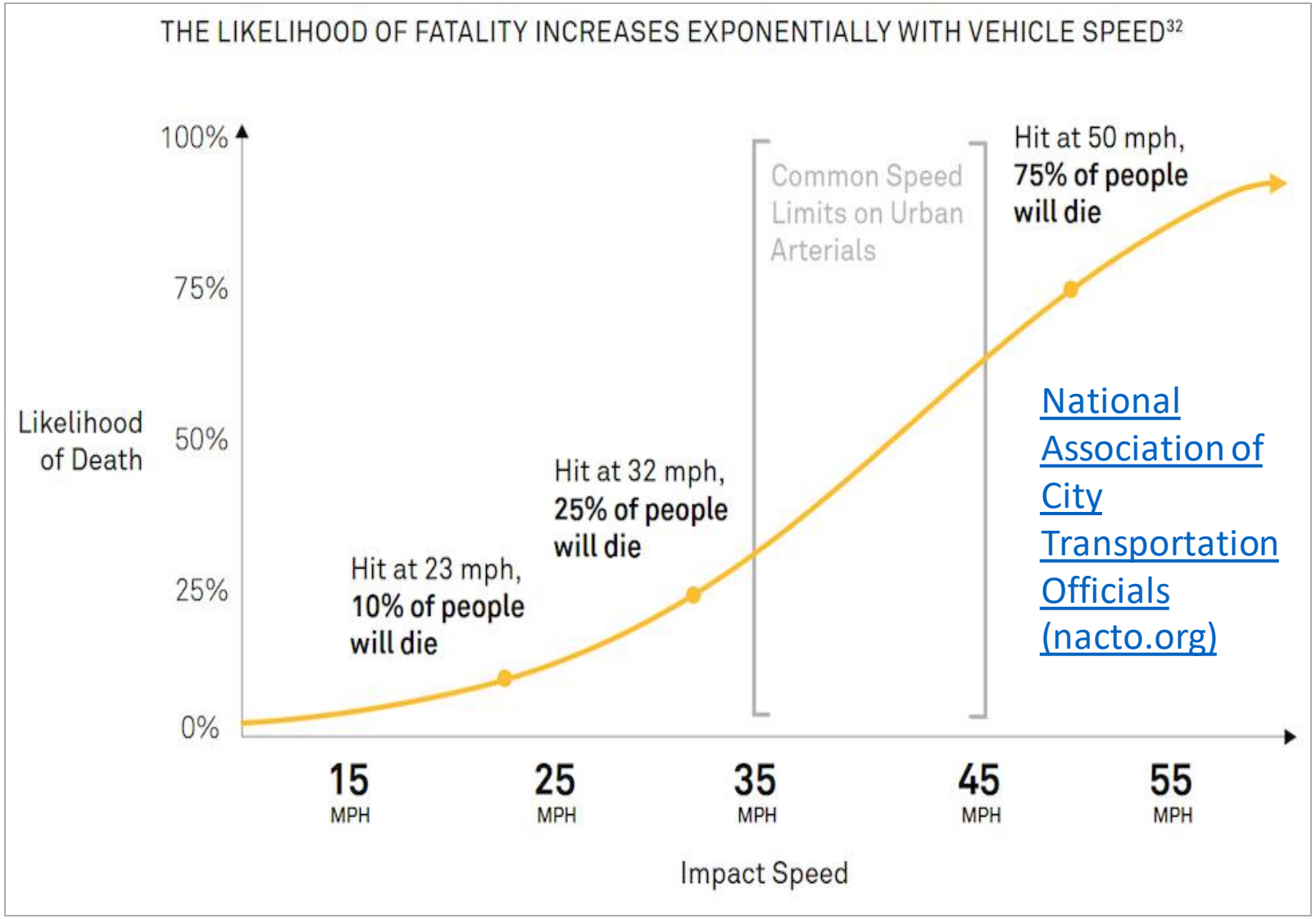
Kinetic energy: speed, mass and people

Kinetic Energy

Kinetic energy is the energy that objects possess due to their motion.

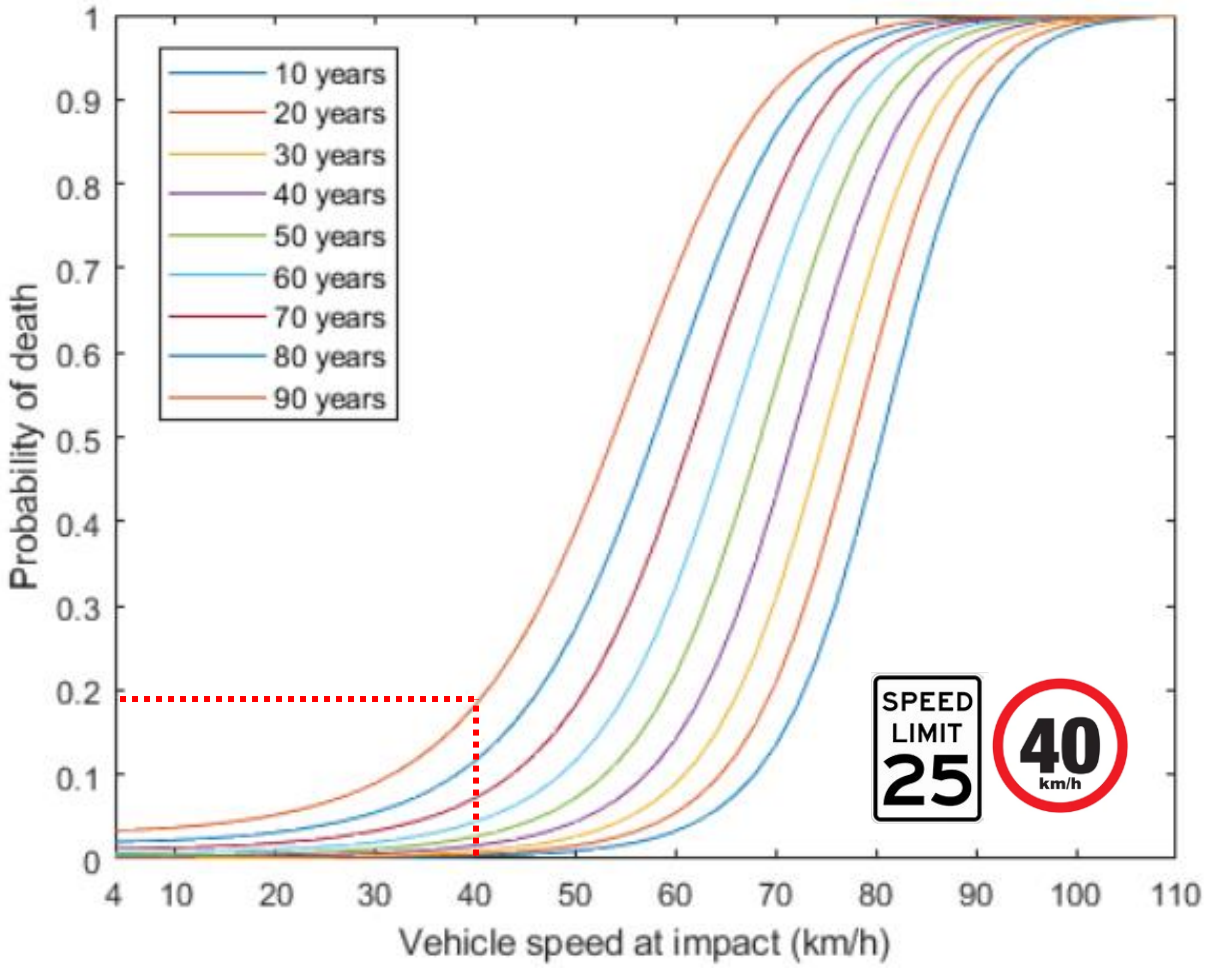
$$KE = \frac{1}{2}mv^2$$

m = mass (kg)
v = velocity (m/s)
KE = Kinetic energy (J)



National Association of City Transportation Officials (nacto.org)

Pedestrian risk of death and age



- Using French crash data (smaller cars) 2020 study (Saadé *et al*) on relationship between vehicular front impacts and pedestrian injury.
- Someone over 80 has a much higher likelihood of dying in a lower speed crash compared to a young adult.
- What happens when larger vehicle sizes are also taken into consideration?

Elderly pedestrians and vehicle sizes

- Recent study (Tyndall) concluded that a 4 inch increase in the height of a vehicle "raises the probably that a pedestrian over 65 will die by 30%."

#9 Laguna Street and Francisco Street

Crash Date: May 24, 2023

Victim Age: 84

#20 18th Street and Valencia Street

Crash Date: September 20, 2023

Victim Age: 80

#18 46th Avenue and Taraval Street

Crash Date: September 11, 2023

Victim Age: 80

Safe Vehicles Factors (Federal/State)

- Increasing vehicle sizes and weight are documented and growing problem.
- Vehicles having Automatic Emergency Braking systems (AEB) upon sensing a pedestrian would have prevented some of last year's pedestrian fatalities, particularly those that occurred at slower urban speeds. This technology is pending federal rulemaking.
- Speed limiting technology is being discussed nationally (NTSB) and at the state level (SB 961) is a promising way to limit speeding. Years away from legislation and decades probably before it is standard in the vehicle fleet.
- One fatal in 2023 was due to a runaway truck on a hill. Many vehicles are not equipped with rollaway prevention technology. According to NHTSA over 200 people killed in the U.S. due to rollaway vehicles in 2020.

Stand-Up Electric Scooters

- In 2023 there were two electric stand-up scooter fatalities.
- One pedestrian death was considered the fault of an electric scooter.
- Since 2020 there has been a notable increase in stand-up scooter fatal crashes (nine total) at the same time that bicycle involved crashes declined 50 percent in the past four years.
- Scooter deaths exceeding bicycle-related by about 2 to 1 ratio.

Mode	2016-2019	2020-2023	Total
Stand-Up Scooter Rider Fatal	0	9	+9
Bicycle Rider Fatal	10	5	-5

Road design challenges

- Some isolated group of fatal crashes in 2023 involved factors or circumstances more difficult to address with standard roadway design measures or capital programs.
  - People driving evading police stop or pursuit (3)
  - People driving at reckless speeds hitting a fixed object (2)
  - Motorcycle or moped solo crashes (2)
  - Stand up scooter at high-speed striking a pedestrian on street (1)
  - Stand up scooter driving the wrong way on a street (1)
  - Person parking vehicle hitting pedestrian (1)
  - Runaway parked vehicle striking driver on street (1)
  - Person driving striking pedestrian while turning into a driveway (1)

How have fatalities changed from 2013?

All modes all down from 2013 (year before Vision Zero) to 2023, with the exception of electric stand-up scooters.

Fatal Collision Type	2013	2023	Change
Total	34	26	-8
Person Walking	21	16	-5
Person in a Motor Vehicle	6	4	-2
Bicycle Rider	4	0	-4
Stand-up Scooter / Skateboard	0	4	+4
Motorcycle/Moped Rider	3	2	-1

2013 compared to 2023 – Pedestrians Killed

Pedestrian Crash Type	2013 (21)	2023 (18)	Difference
Driver failure to yield for pedestrian at uncontrolled crosswalk	4	0	-4
Pedestrian struck by vehicle parking, backing or rolling after parked	4	2	-2
Driver hit pedestrian crossing against red hand/red light	2	3	+1
Driver hit pedestrian outside crosswalk mid-block	2	2	Same
Driver turning left violated pedestrian right-of-way at traffic signal	2	2	Same
Driver hit pedestrian at STOP sign intersection	2	1	-1
Driver turning right violated pedestrian right-of-way at traffic signal	2	1	-1
Two vehicles collided hitting a pedestrian in the sidewalk	1	2	+1
Pedestrian outside crosswalk near Market Street boarding island	1	1	Same
Unknown details but driver was felony hit and run	1	1	Same
Driver of a vehicle striking a person skateboarding	0	2	+2
Driver turning into private driveway	0	1	+1

2013 compared to 2023 – All Others

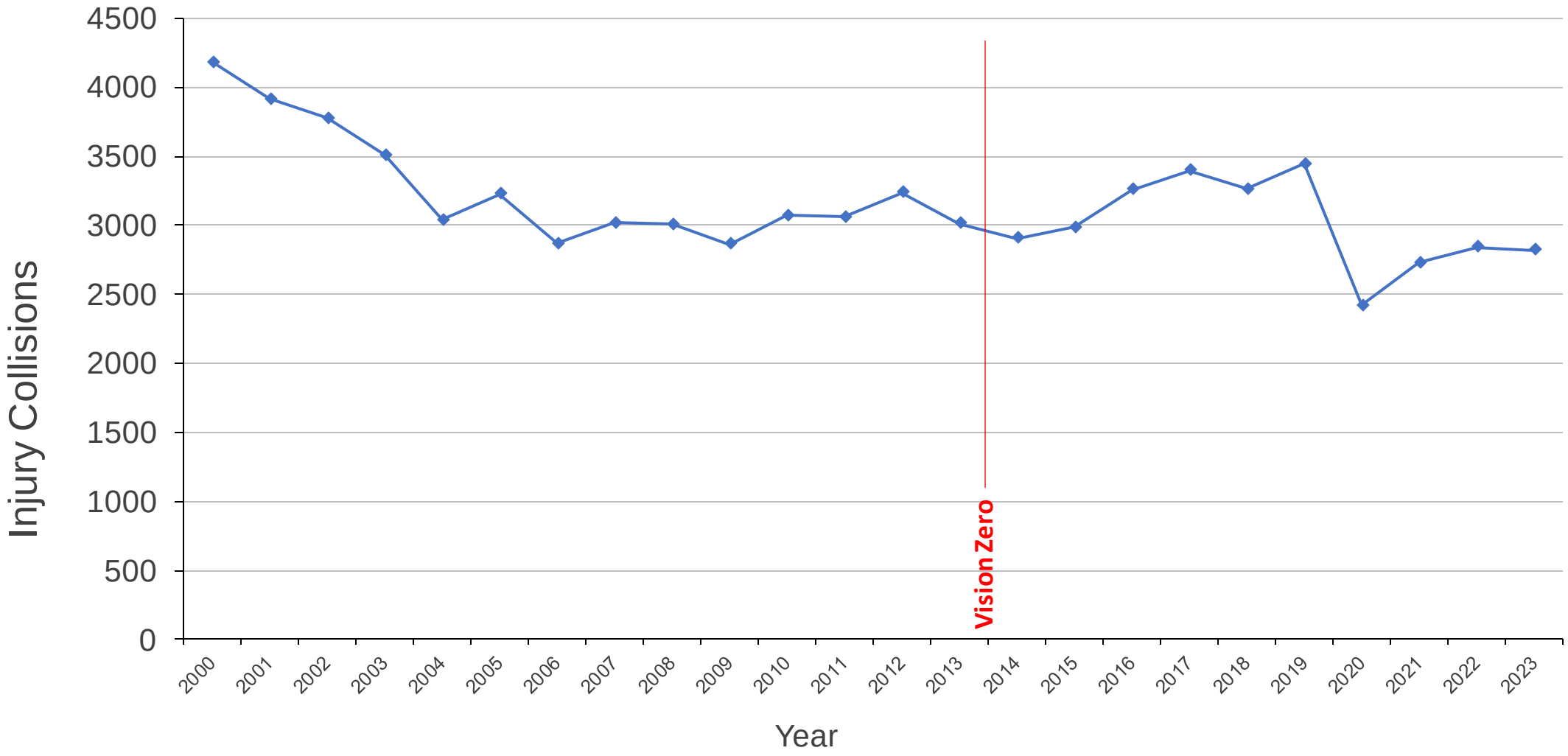
Fatal Party / Crash Type	2013 (12)	2023 (8)	Difference
Bicycle rider / Large truck or bus on segment with no bicycle facility	2	0	-2
Motorcycle rider / Solo motorcycle crash due to unsafe speed	2	1	-1
Driver of motor vehicle / Solo car crash due to unsafe speed	2	2	Same
Driver of motor vehicle / Reckless evading police stop or police pursuit	1	1	Same
Driver of motor vehicle / High speed rear end crash into another vehicle	1	1	Same
Driver of motor vehicle / Reckless speeding plus red light running	1	0	-1
Bicycle rider / Large truck or bus at intersection	1	0	-1
Bicycle rider / Large truck or bus segment with bicycle lane	1	0	-1
Motorcycle rider / Vehicle driver left turn failure to yield at traffic signal	1	0	-1
Stand up scooter / Collision with a motor vehicle on roadway	0	2	+2
Moped rider / Crash into stopped truck	0	1	+1

How have injuries changed from 2013?

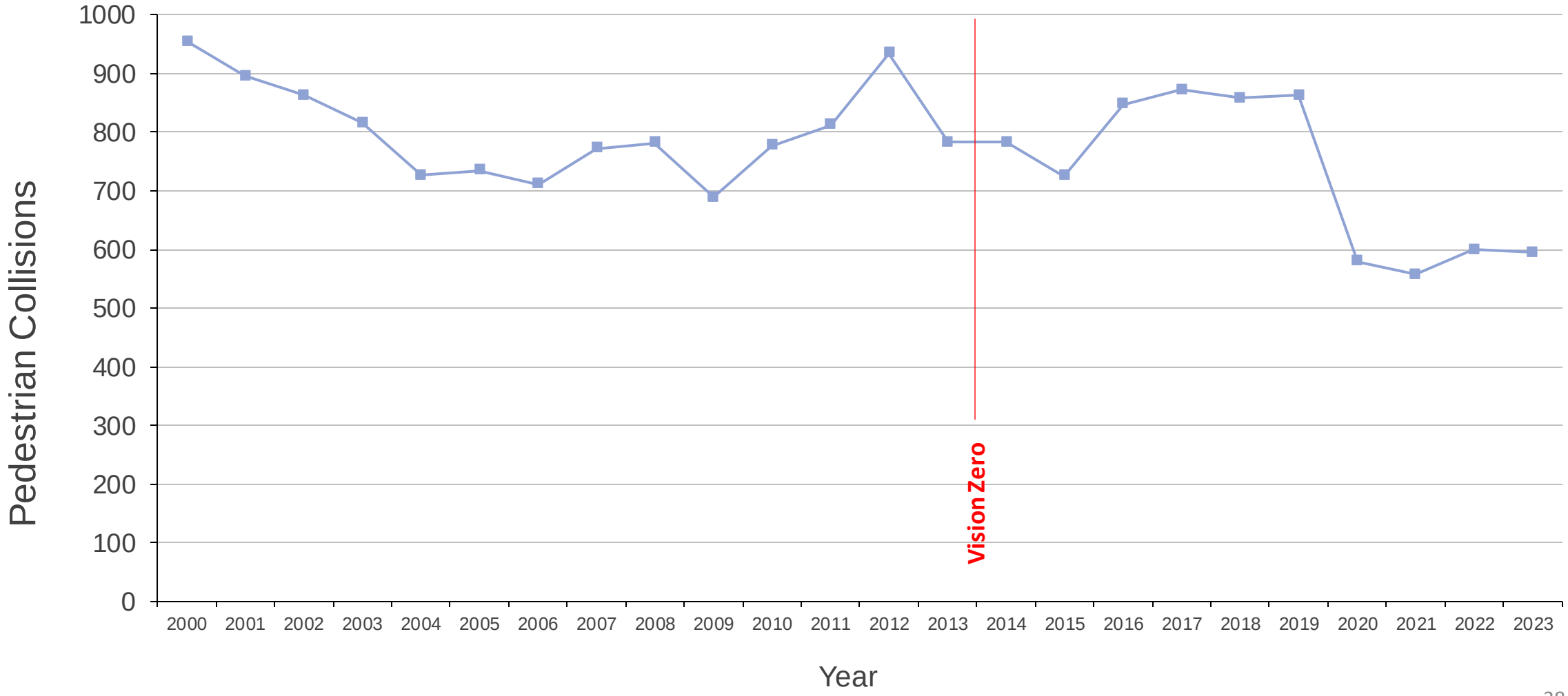
Vulnerable modes all down from 2013 (year before Vision Zero) to 2023, with the exception of electric stand-up scooters.

Injury Collision Type	2013	2023	Change	Change %
Total	3015	2819	-196	-7%
Involving Pedestrians	783	595	-188	-24%
Only Motor Vehicles	1642	1834	+192	+12%
Involving Bicycle Rider	621	403	-218	-35%
Electric Stand-up Scooter	0	184	+184	--
Involving Motorcycle/Moped	349	227	-122	-35%

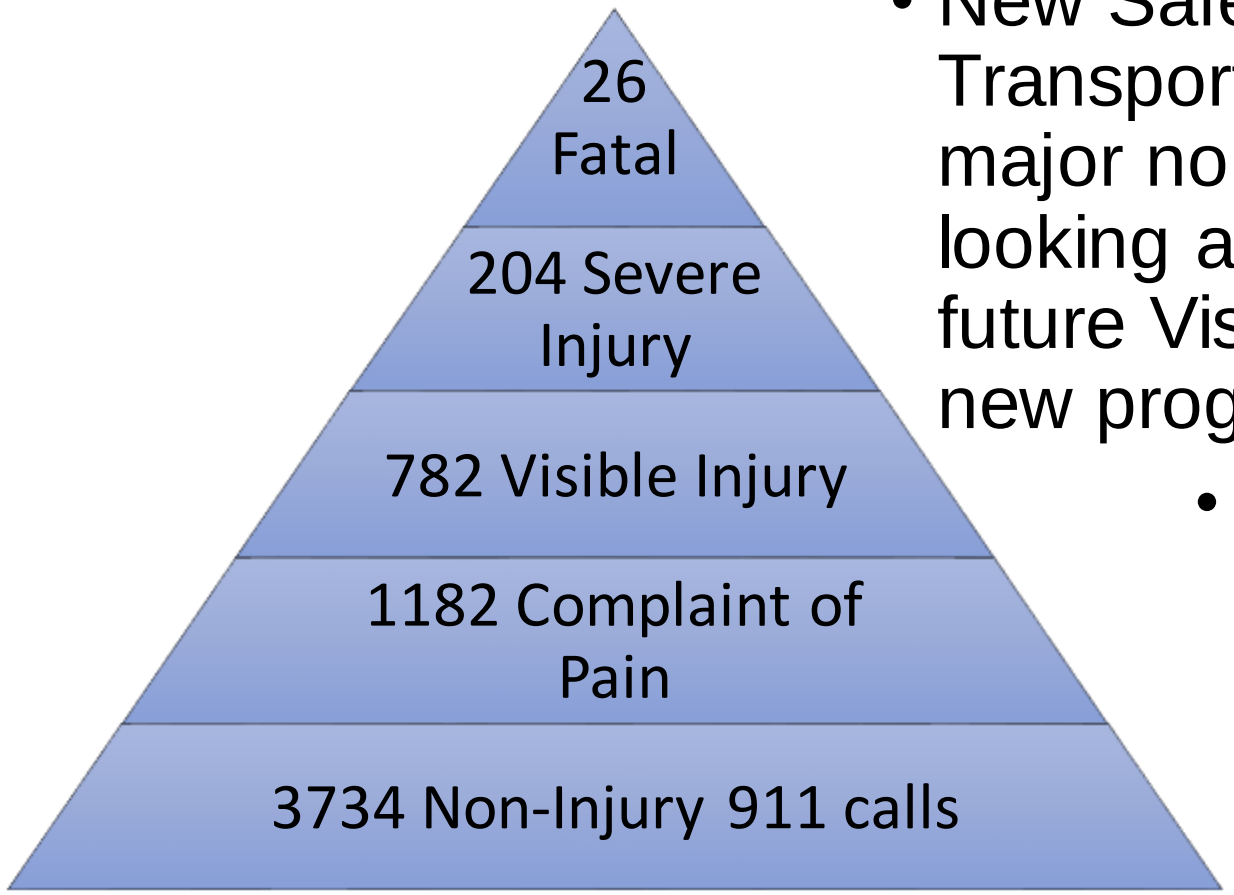
SFPD Reported Injury Crashes (2000-2023)



SFPD Pedestrian Injury Crashes (2000-23)



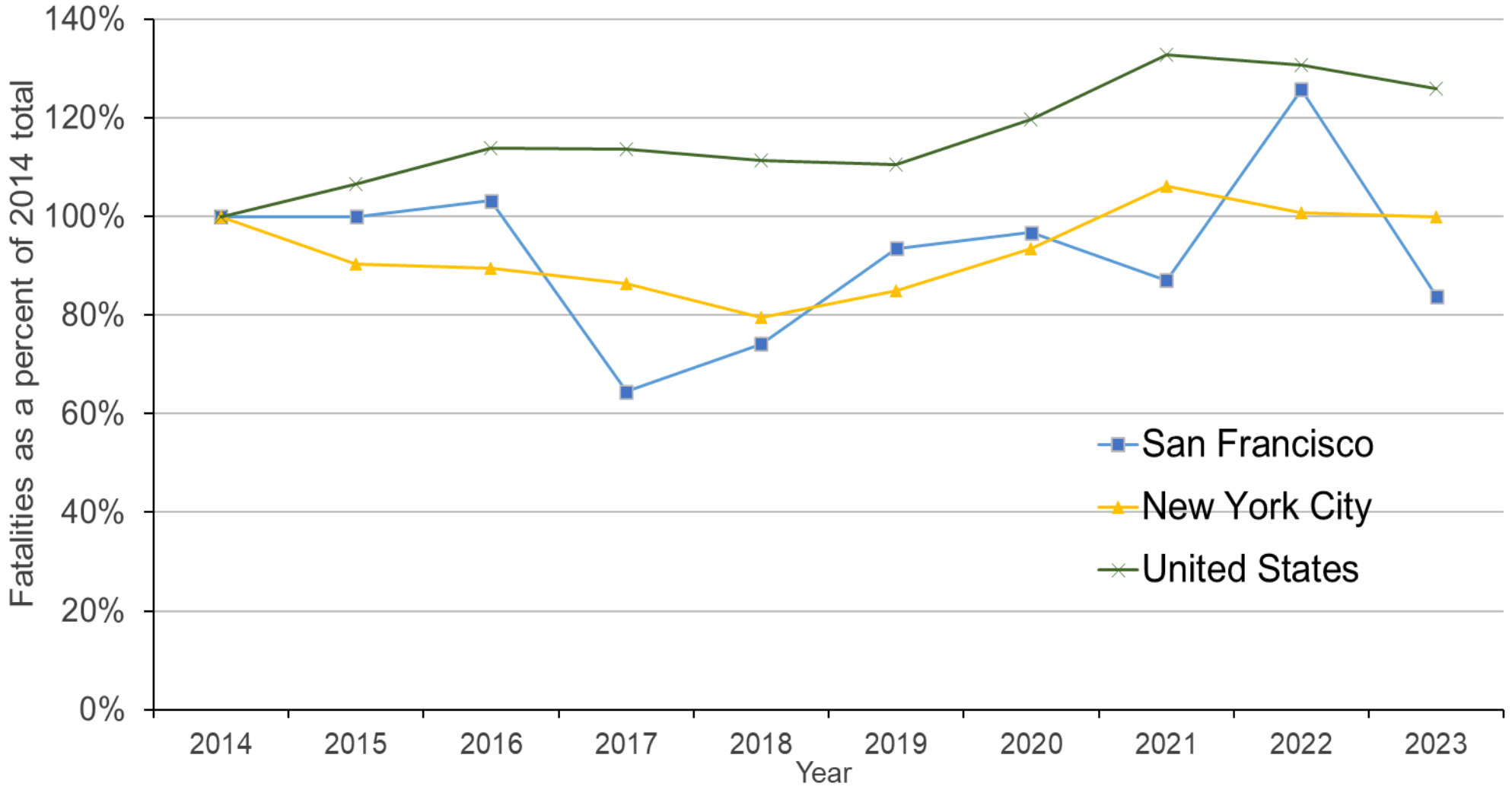
Severe injury crash review



2023 Highest Degree of Injury in Reported Crashes

- New Safe Systems team will be created in Transportation Engineering to analyze major non-fatal crashes in more detail, looking at crash specific details to inform future Vision Zero site specific actions or new programs.
  - The SFPD reported injury severity crash categories (pyramid) are based on site quick estimates. SFDPH reviews hospital trauma center data for severe injury reported and unreported crashes.

Ten Years of Vision Zero: SF - NYC - USA



No Turn on Red Policy Update

February 27, 2024
SFMTA Board of Directors, Vision Zero Committee

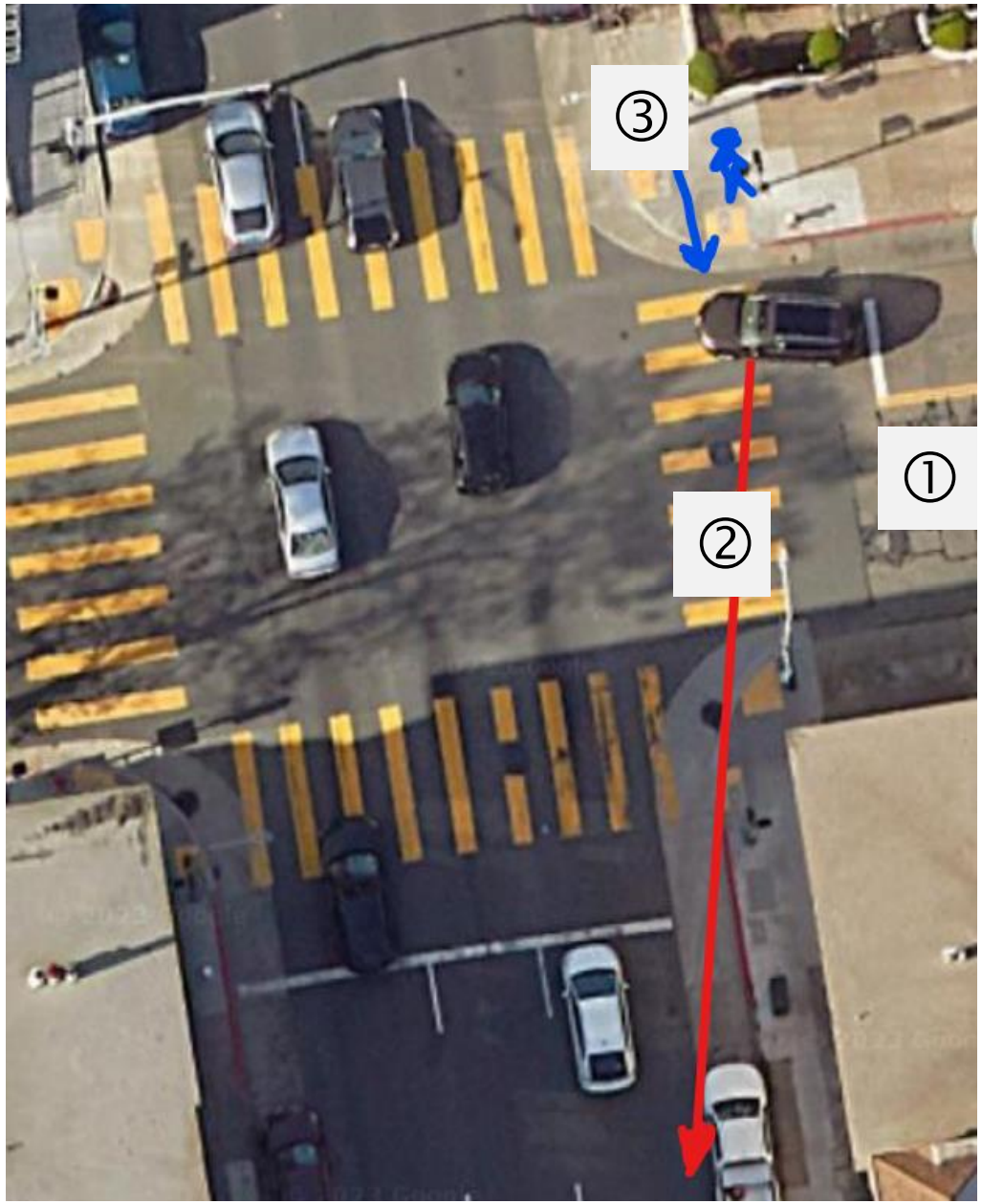
Ricardo Olea, City Traffic Engineer, SFMTA

No Turn on Red (NTOR) Timeline

1. **1970's.** Eastern states required by federal mandates to adopt turns on red during energy crisis. California has always had vehicle code regulations that allowed turns on red.
2. **1990's and 2000's**. National and local practice was "case by case" approach to prohibit any turn on red.
3. **2020**. DPH and SFMTA study of turns on red crashes
4. **2021**. Proactive areawide addition of NTOR in the Tenderloin
5. **2022**. SFMTA decision to expand NTOR, starting downtown
6. **2023**. Public petition and Board of Supervisors interest in expanding No Turn on Red citywide

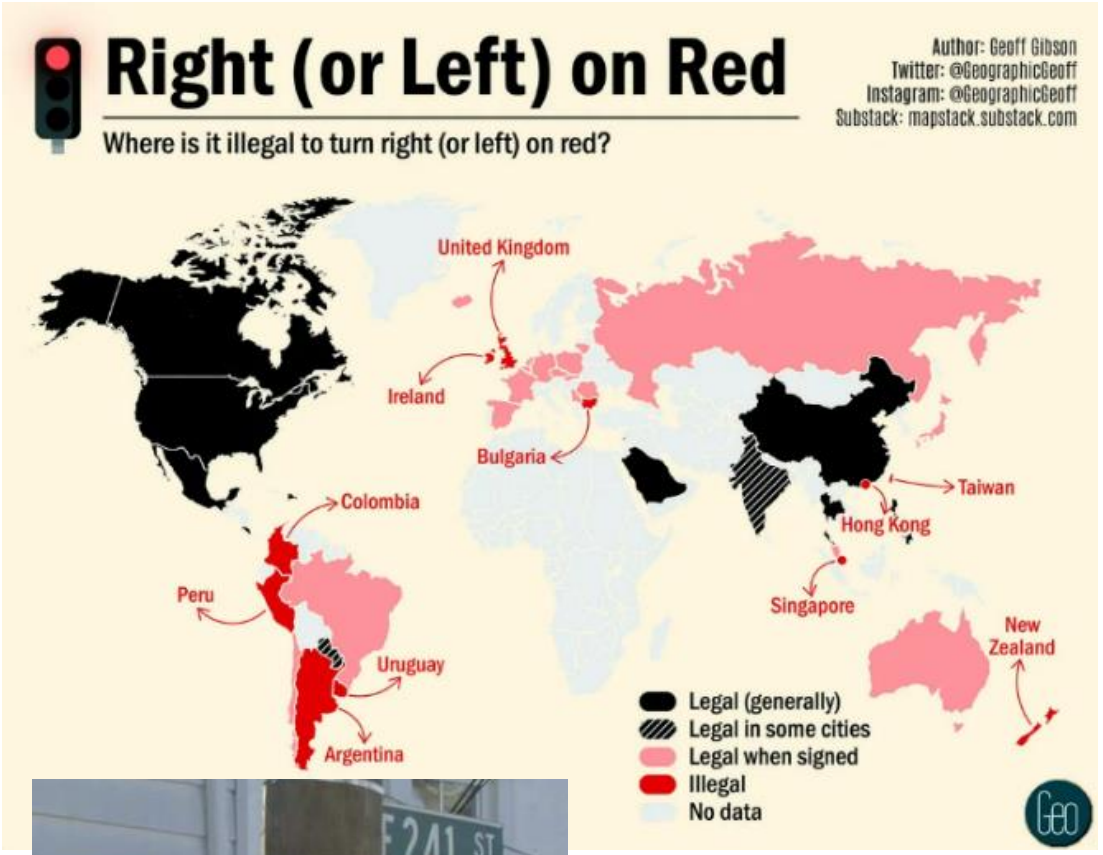
The turning on red task

1. In order to turn on red legally a vehicle must come to a complete stop behind stop bar, but in practice some fail to do so.
2. Inching forward for vehicular sight distance, but doing this naturally blocks the crosswalk
3. Watching for pedestrians crossing the street, but often people forget to look right again in case someone new started crossing.



Legal Requirements

- Turns on red light prohibited by default in most of Europe, Australia, and Latin America.
- Allowed by default in most of North America except in New York City, Montreal and Mexico City.
- In California turns on red are allowed per California Vehicle Code 21453(b)



1995 NHTSA Report to Congress

- National Highway Traffic Safety Administration report to Congress per the Energy Policy Act of 1992
- "In conclusion, there are a relatively small number of deaths and injuries each year caused by RTOR crashes. These represent a very small percentage of all crashes, deaths and injuries."

Percentage of All Crashes That Are Right-Turn-On-Red (RTOR) Crashes*

	All Crashes	RTOR Crashes	% RTOR
Property Damage	2,408,664	1,163	0.048
Injury	892,985	558	0.062
Fatal	14,029	4	0.029
TOTAL	3,315,678	1,725	0.052

* Data from Indiana, Maryland, and Missouri, 1989-1992; Illinois, 1989-1991

NTOR interest in San Francisco in 2019

WALK SAN FRANCISCO

ABOUT US \ OUI

Let's greenlight a no-turn-on-red policy in San Francisco

BY COLE BRENNAN / JUNE 26, 2019

SFGATE NEWS SPORTS LIVING IN SF CULTURE COMMUTING FOOD + DRINK

Should San Francisco ban right turns on red lights to protect pedestrians?

By Amy Graff, SFGATE Updated 5:26 pm PDT, Friday, May 24, 2019

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SF explores banning right turns at red lights

JOE FITZGERALD RODRIGUEZ / May. 24, 2019 1:30 a.m. / THE CITY

Transportation officials are considering exploring eliminating right turns at red lights. (Cindy Chew/Special to the S.F. Examiner)

Turning right on red in San Francisco may soon be a thing of the past in the name of safety.

Transportation officials this week discussed exploring eliminating rights on red, citing The City's 14th traffic fatality this year as a call to action.

At Tuesday's regular San Francisco Municipal Transportation Agency Board of Directors regular meeting, board director Amanda Eaken expressed an interest in the agency exploring the ban, citing similar actions in Washington D.C. and in New York City.

2020 SFMTA and SFDPH NTOR Study

- About 1% of citywide injury crashes in five-year period were due to a turn on red (129 of 15,979)
- The vast majority (80%) of crashes where turns on red crashes involve pedestrians (103 of the 129)
- 2.5% citywide pedestrian injury crashes in five-year period were due to turn on red (103 of 4,179)
- The vast majority of turns on red crashes happen on the High Injury Network (12% of streets). Pedestrian activity levels and turn on red risks are correlated.
- Turn on green crashes about three times more frequent

Tenderloin Areawide NTOR pilot

In Fall 2021, the SFMTA posted No Turn On Red signs at over 50 intersections in the Tenderloin (high injury concentration)

Motorist Compliance

Motorists are demonstrating a high compliance with NTOR restrictions. On average, **92%** of vehicles are complying with the turn restriction.

Crosswalk Encroachment

Vehicles blocking or encroaching onto crosswalks on a red signal was reduced by more than **70%** after the restriction was implemented.

Close Calls at Intersections

While pedestrian-vehicle interactions increased (expected given NTOR restriction), **close calls for vehicle-pedestrians decreased** from 5 close calls before NTOR signs were posted to 1 close call after restrictions were in place at observed intersections.

Yielding Behavior

There was no significant change in the percentage of turning vehicles that yield at the crosswalk to pedestrians on a green light.

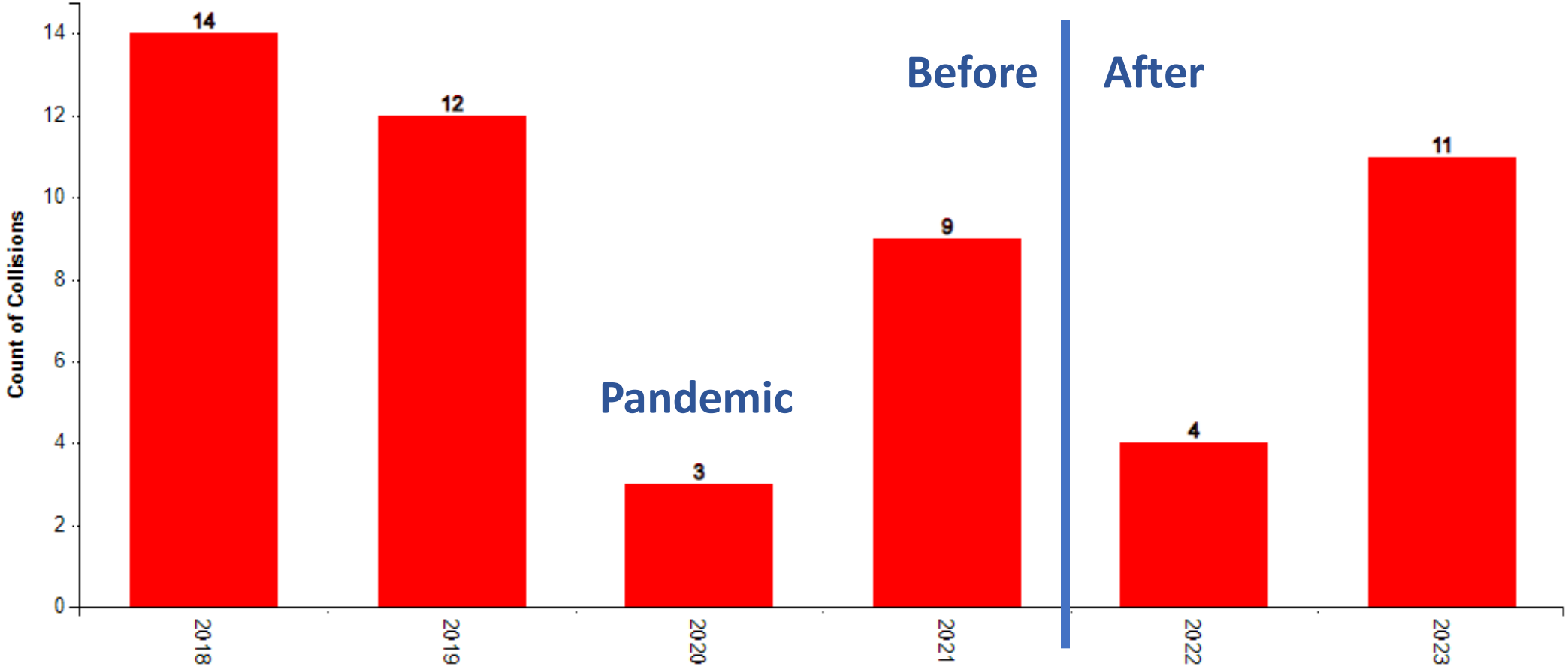
The concern over right turns on green

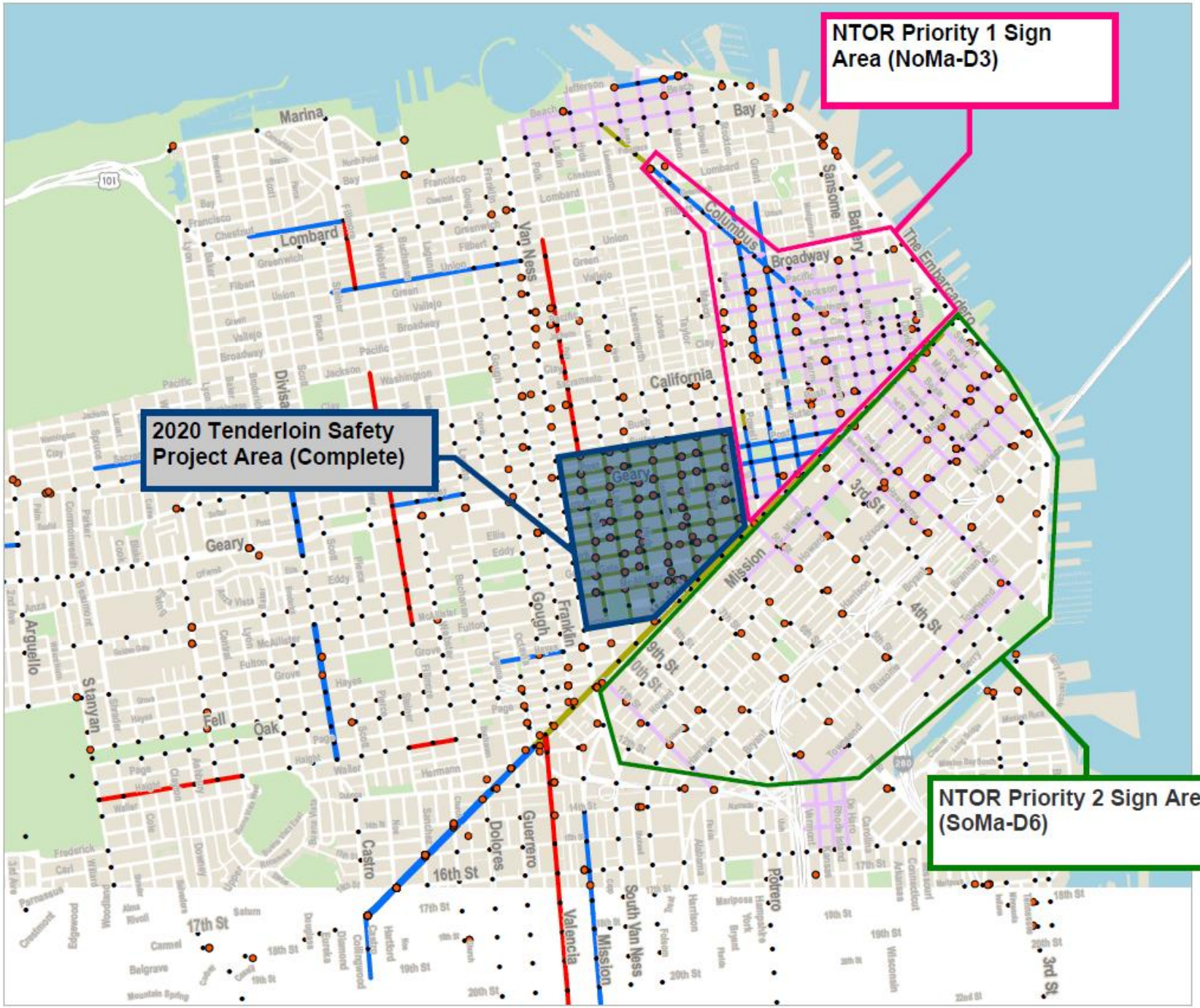
"If prohibiting right turns on red at all intersections would clearly improve pedestrian safety, the authors would support such a change. However, they do not believe that this is the case. Prohibiting RTOR would require drivers to turn on green. This would most likely increase the number of collisions by right-turning vehicles. It is also intuitive that accidents involving right turn on green are relatively more severe than RTOR, as vehicles in the former case are moving nearly at full speed."

- Former SFMTA Streets Director Bond M. Yee and San Francisco City Traffic Engineer Jack Fleck, *ITE Journal*, June 2002

Tenderloin Right Turn Crashes after NTOR

Pedestrian-involved injury crashes in Tenderloin involving all right turns at signals





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No Turn on Red signs

Traffic Sign Replacement Phase 2 Project

July 2022

LEGEND

- Existing No Turn On Red (at least one or all approaches)
- Existing MTA Signals

Business Activity Districts - AB43

- 20 MPH - Phase 1
- 20 MPH - Phase 2
- 20 MPH - Phase 3
- Existing 20 MPH Corridors
- Parks

2024 NTOR expansion project

0.45 miles

1:24,000

Saved: 7/20/2022

ference contact: vicente.romero@sfmta.com

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SFMTA

2023 Citywide No Turn on Red Petition

“**Implementing No Turn On Red (NTOR) increases safety for people crossing the street** — especially children, families, seniors, and people living with disabilities — as well as people on bikes and scooters. NTOR also makes driving safer and more intuitive for drivers, resulting in more predictability and less stress for people driving.”

https://actionnetwork.org/letters/ntor

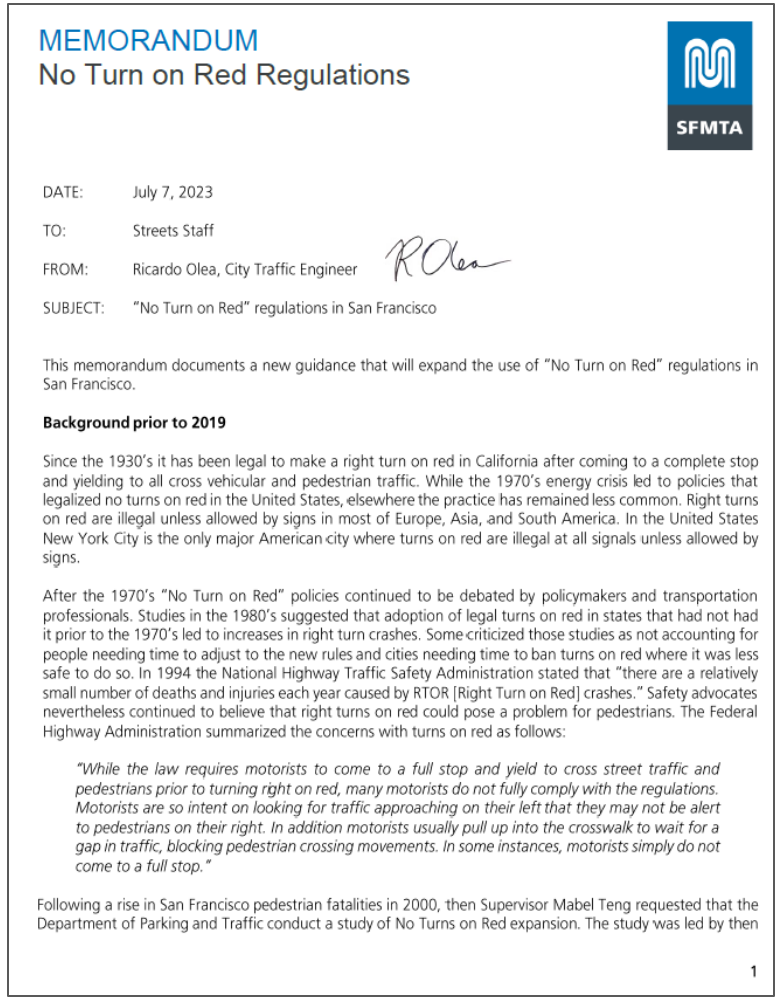
Board of Supervisors Res. 481-23

- FURTHER RESOLVED, That the Board of Supervisors urges the MTA Board to adopt a policy requiring NTOR restrictions be added in connection with updates or modifications at signalized intersections, including upcoming quick build projects, speed reduction efforts, and future implementation of the Active Communities Plan; and, be it
- FURTHER RESOLVED, That the Board of Supervisors urges MTA, to the extent that state law or resource constraints limit immediate citywide implementation of NTOR….

What are other cities doing?

- DC Council in 2022 approved a citywide ban on turns on red (except were allowed with signs) to take effect possibly in 2025.
- Seattle DOT issued memo in March 2023 to approve the broader use of “No Turn on Red” at their signals, with proactive expansion focusing on their downtown.
- In 2022 as part of a Mayoral “safe surge,” Boston changed their policies to favor No Turn on Red regulations at their downtown, locations with leading pedestrian intervals, shared used paths, and at intersections with “significant pedestrian generating facilities.”

2023 NTOR Staff Guidance Memo



MEMORANDUM
No Turn on Red Regulations

SFMTA

DATE: July 7, 2023

TO: Streets Staff

FROM: Ricardo Olea, City Traffic Engineer

SUBJECT: "No Turn on Red" regulations in San Francisco

This memorandum documents a new guidance that will expand the use of "No Turn on Red" regulations in San Francisco.

Background prior to 2019

Since the 1930's it has been legal to make a right turn on red in California after coming to a complete stop and yielding to all cross vehicular and pedestrian traffic. While the 1970's energy crisis led to policies that legalized no turns on red in the United States, elsewhere the practice has remained less common. Right turns on red are illegal unless allowed by signs in most of Europe, Asia, and South America. In the United States New York City is the only major American city where turns on red are illegal at all signals unless allowed by signs.

After the 1970's "No Turn on Red" policies continued to be debated by policymakers and transportation professionals. Studies in the 1980's suggested that adoption of legal turns on red in states that had not had it prior to the 1970's led to increases in right turn crashes. Some criticized those studies as not accounting for people needing time to adjust to the new rules and cities needing time to ban turns on red where it was less safe to do so. In 1994 the National Highway Traffic Safety Administration stated that "there are a relatively small number of deaths and injuries each year caused by RTOR [Right Turn on Red] crashes." Safety advocates nevertheless continued to believe that right turns on red could pose a problem for pedestrians. The Federal Highway Administration summarized the concerns with turns on red as follows:

> *"While the law requires motorists to come to a full stop and yield to cross street traffic and pedestrians prior to turning right on red, many motorists do not fully comply with the regulations. Motorists are so intent on looking for traffic approaching on their left that they may not be alert to pedestrians on their right. In addition motorists usually pull up into the crosswalk to wait for a gap in traffic, blocking pedestrian crossing movements. In some instances, motorists simply do not come to a full stop."*

Following a rise in San Francisco pedestrian fatalities in 2000, then Supervisor Mabel Teng requested that the Department of Parking and Traffic conduct a study of No Turns on Red expansion. The study was led by then

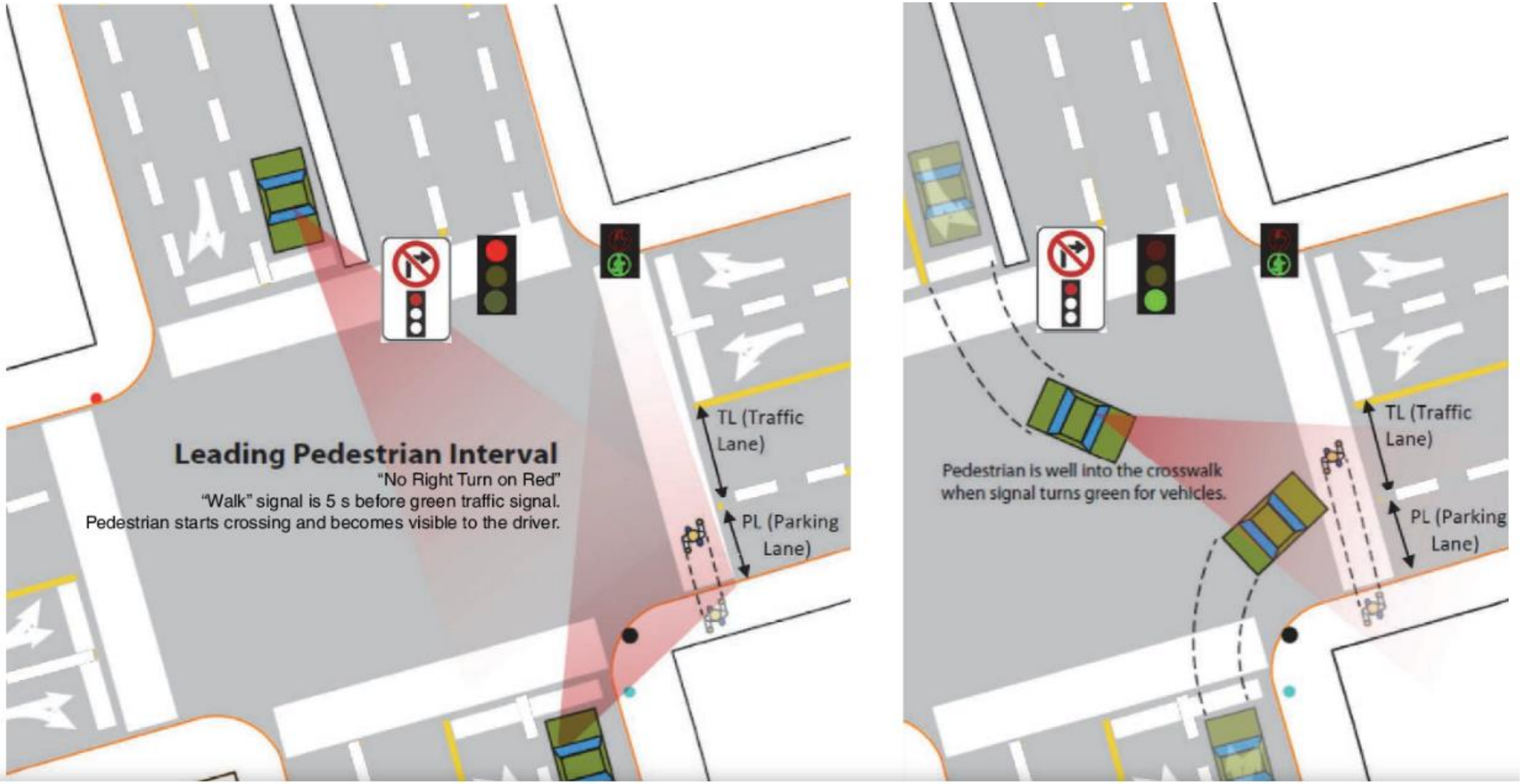
1

- Memo summarizes post-Tenderloin approach, including past studies and evolution of topic in the transportation profession.
- Prioritize locations with high pedestrian levels of activity.
- Framing of NTOR to more of a proactive than reactive tool.

San Francisco's three factor approach

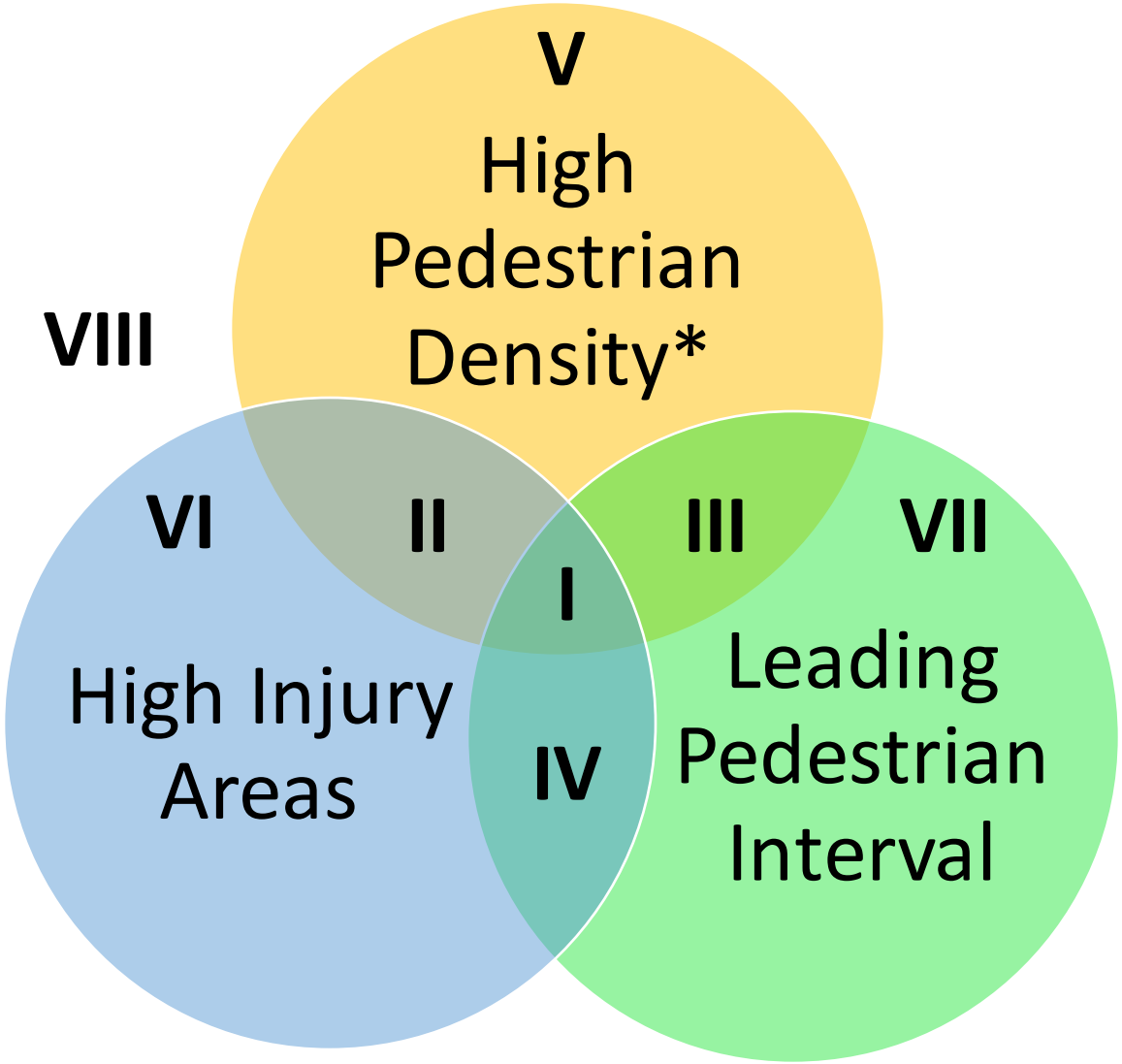
- **Factor 1: Pedestrian Activity.** Turn on red should be expanded at areas of high pedestrian activity to a) improve pedestrian comfort, such as keeping crosswalks clear, and b) reduce risks of vehicle-pedestrian conflicts, which are more likely where pedestrians are concentrated.
- **Factor 2: High Injury Network.** From a safety perspective, the turn on red crashes that do occur mostly involve pedestrians and they tend to concentrate in areas of high pedestrian activity in the High Injury Network.
- **Factor 3: Leading Pedestrian Intervals.** No Turn on Red regulations can reduce conflicts associated with red to green transitions at Leading Pedestrian Intervals, as recommended by professional guidance.

NTOR and Leading Pedestrian Intervals



Saneinejad, S., & Lo, J. (2015). Leading Pedestrian Interval: Assessment and Implementation Guidelines. *Transportation Research Record*, *2519*(1), 85–94. https://doi.org/10.3141/2519-10

Conceptual No Turn on Red Prioritization



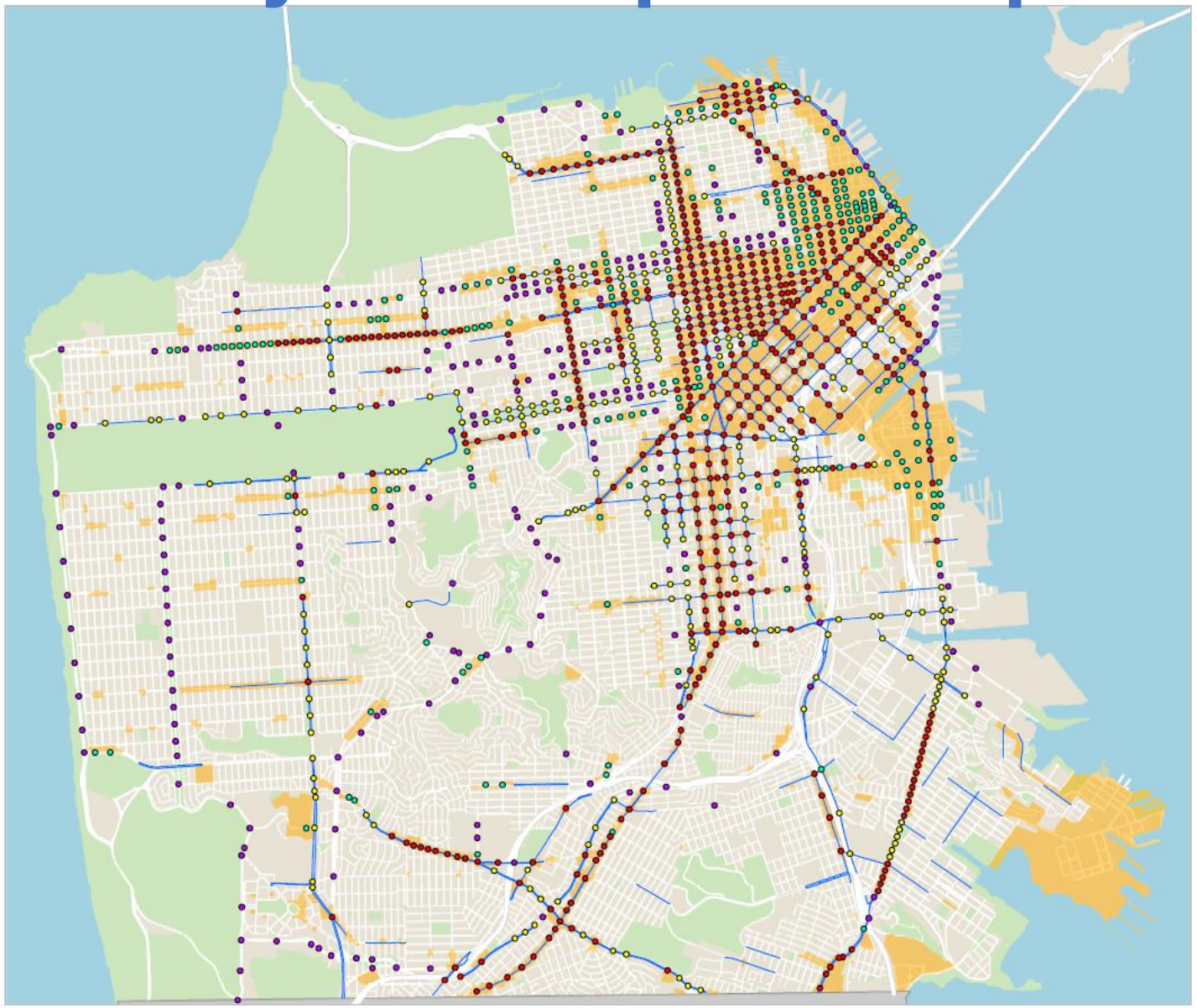
Current Proactive Expansion
Section I Signalized Approaches

Future Expansion Study Areas
Sections II and III

Review Site Case by Case
Sections IV, V, VI, VII, and VIII

* Indicators of high pedestrian activity include:
- Land uses that generate significant pedestrian traffic
- Downtown, business or commercial districts

NTOR citywide expansion planning



No Turn On Red Expansion

San Francisco

February 2024

LEGEND

- MTA Signals on the HIN & on Ped Land Uses
- MTA Signals on the HIN & NOT on Ped Land Uses
- MTA Signals NOT on the HIN & on Ped Land Uses
- MTA Signals NOT on the HIN & NOT on Ped Land Uses
- 2022 High-Injury Network
- Pedestrian Land Uses (commercial, mixed use, transit)

Existing MTA signals: 1,284

MTA signals on the HIN & on Ped Areas: 553 (43%)
MTA signals on the HIN & NOT on Ped Areas: 255 (20%)

MTA signals NOT on the HIN & on Ped Areas: 238 (18.5%)
MTA signals NOT on the HIN & NOT on Ped Areas: 238 (18.5%)

0.9 miles

Scale 1:48,000

Date Saved: 2/8/2024

For reference contact: VisionZeroSF@sfmta.com

SFMTA

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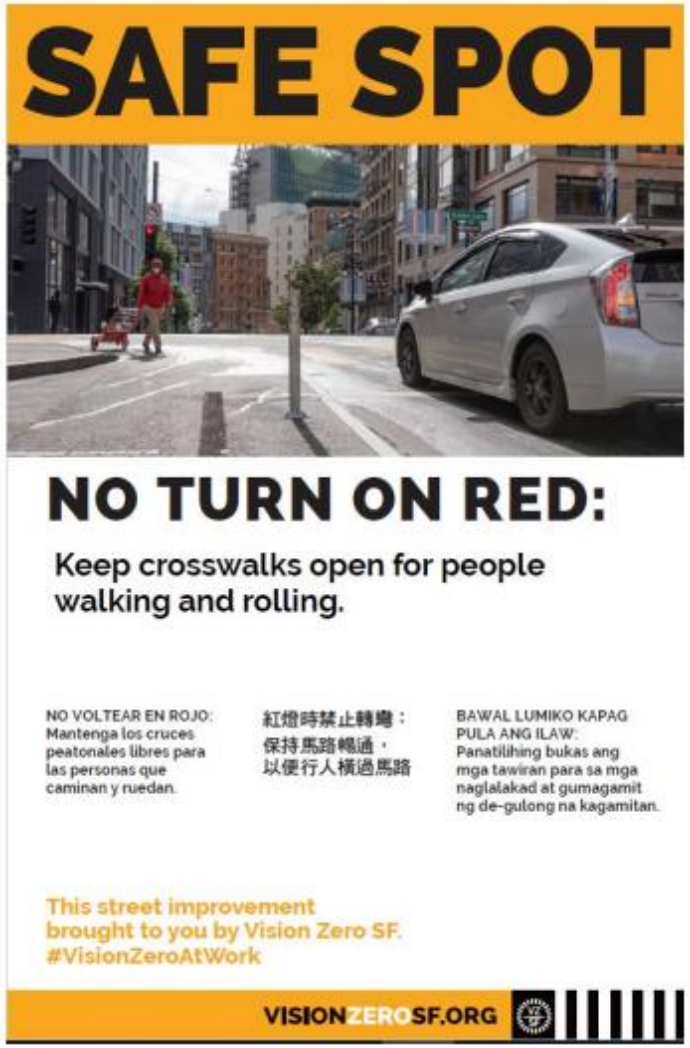
Why not a citywide ban?



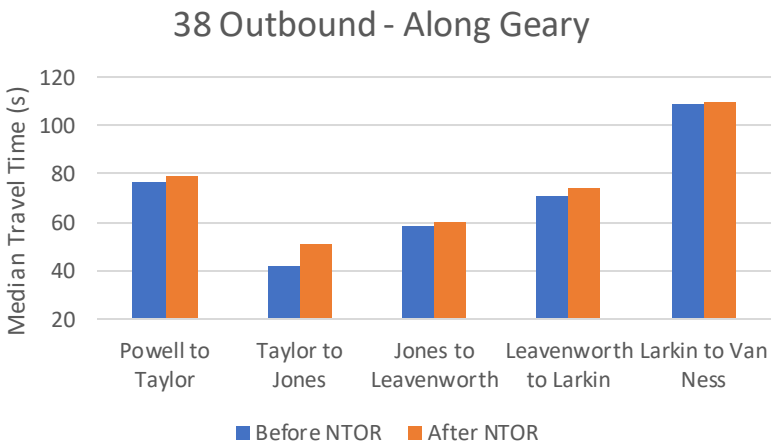
- City wants the public to voluntarily comply with safety regulations. We cannot assume success of NTOR depends on citations.
- Voluntary compliance can be increased with educational approaches but also helps for the traffic control to intuitively "command respect" by itself (that is, seem necessary). Pedestrian activity is that intuitive factor.
- Some intersections in San Francisco do not have the pedestrian density or other factors present that justify adding new No Turn on Red regulations as a blanket policy.

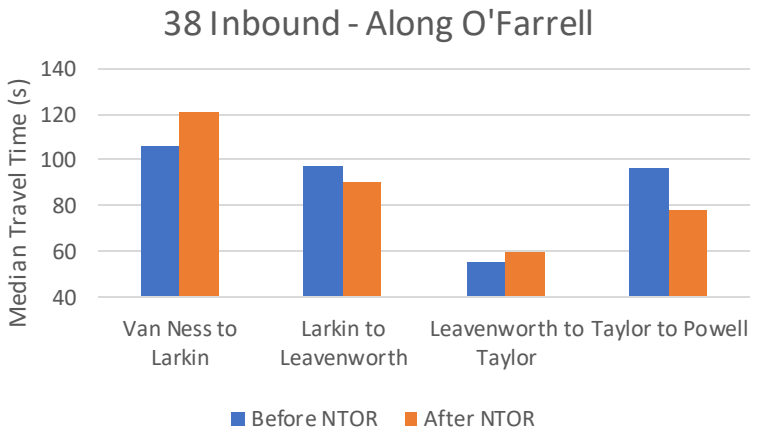
Citywide Ban on Turns on Red Policy

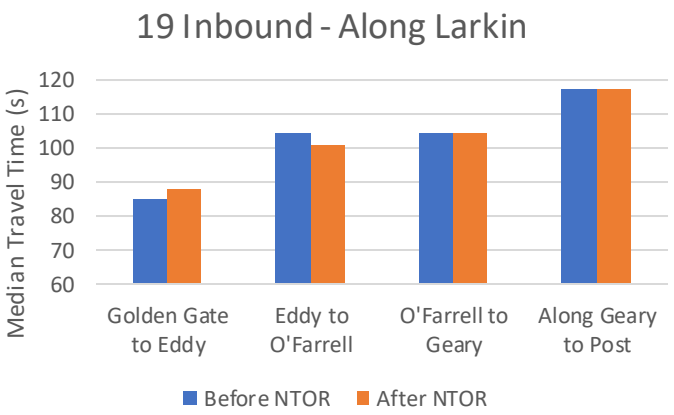
- Petitioners have requested SFMTA consider adopting a "citywide NTOR policy for every signalized intersection in San Francisco," an approach similar to New York City's.
- Some have argued a citywide ban is more intuitive and will also save SFMTA resources by avoiding specific site analysis.
- Currently turns on red are considered a safe and legal driving practice in California, with allowance for signs to prohibit those turns where justified. SFMTA staff justifies each new NTOR sign using technical considerations as outlined here.
- It is possible to consider NTOR not as a traffic engineering decision, but as a matter of a basic driving rule. Driving rules are set by elected bodies, however, typically state legislatures.

Site Specific Implementation Approvals

- Location specific No Turn on Red regulations are approved by staff following a public hearing. No further Board action is required.
- Downtown expansion review by the San Francisco Police and Fire Departments at the Transportation Advisory Staff Committee (TASC).
- Staff will continue to monitor impacts of regulations on Muni delays.







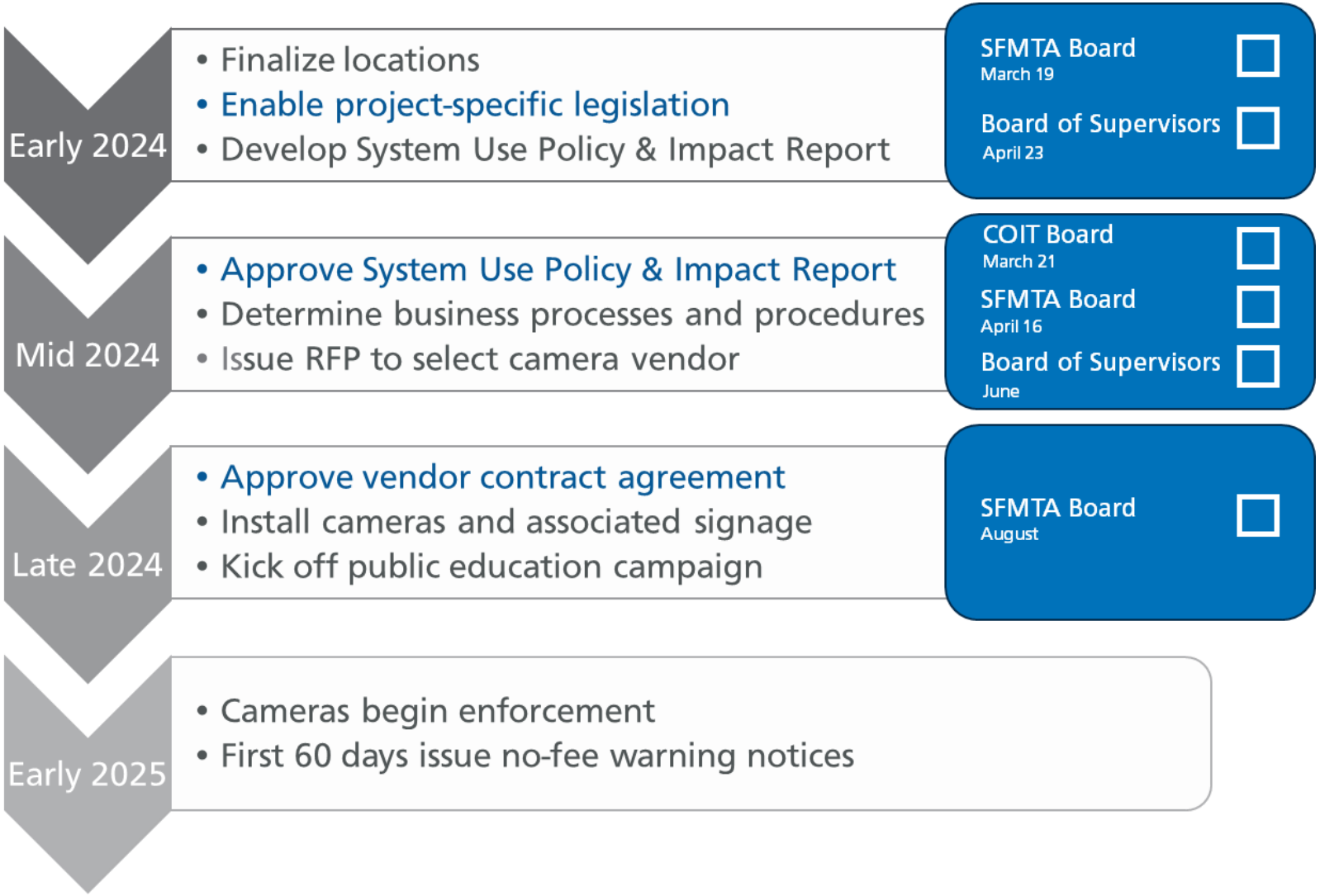
Next implementation steps

- Staff has been trained on new policies expanding the use of NTOR citywide as summarized in this presentation.
- Capital and operational projects will review NTOR on affected locations and implement new signs as required.
- Evaluation and monitoring of expansion sites for compliance, safety evaluation data, and other issues like transit delays.
- Staff will look at funding opportunities to continue doing NTOR on a systematic and proactive basis as a follow up to the current grant-funded (HSIP) expansion project.
- Consider additional maintenance resources as these and other types of signs are expanded citywide and need maintenance in future years.

SPEED SAFETY CAMERAS: SCHEDULE UPDATE & PUBLIC EDUCATION

Shannon Hake + Christy Osorio

ROADMAP TO SPEED CAMERA IMPLEMENTATION



PUBLIC EDUCATION CAMPAIGN: WHAT'S REQUIRED

- Administer a **public information campaign** for at least 30 calendar days prior to the commencement of the program
- Include **public announcements in major media outlets** and **press releases**
- Include the Speed Safety System Use Policy, the Speed Safety System Impact Report, information on when systems will begin detecting violations, the streets, or portions of streets, where systems will be utilized, and the designated jurisdiction's internet website, where additional information about the program can be obtained

EDUCATION CAMPAIGN TIMELINE

Planning

January – March 2024

- Initiate engagement with community-based organizations & neighbor city agencies
- Vendor set up
- Evaluation setup

Engagement

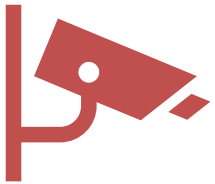
April – June 2024

- Focus Groups
- Design
- Review

Campaign Development

July – September 2024

- Community-informed tactics
- Web graphics
- Blog posts
- Bus shelter ads
- Muni ads
- Billboards
- Light-pole banners

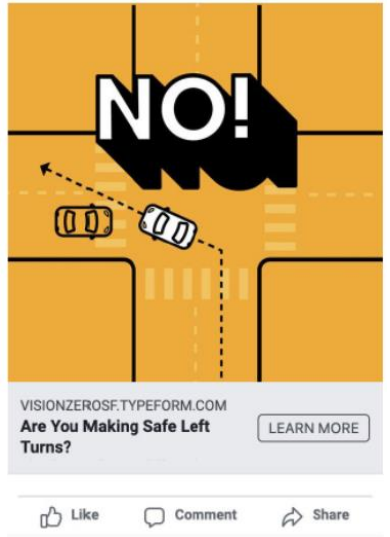


Launch

October 2024 – January 2025

- Wrap Campaign Development
- Installation begins Dec 2024
- Media event
- Web ads go live
- Earned media
- LAUNCH JAN 2025

SAN FRANCISCO CAMPAIGN WITH REGIONAL REACH



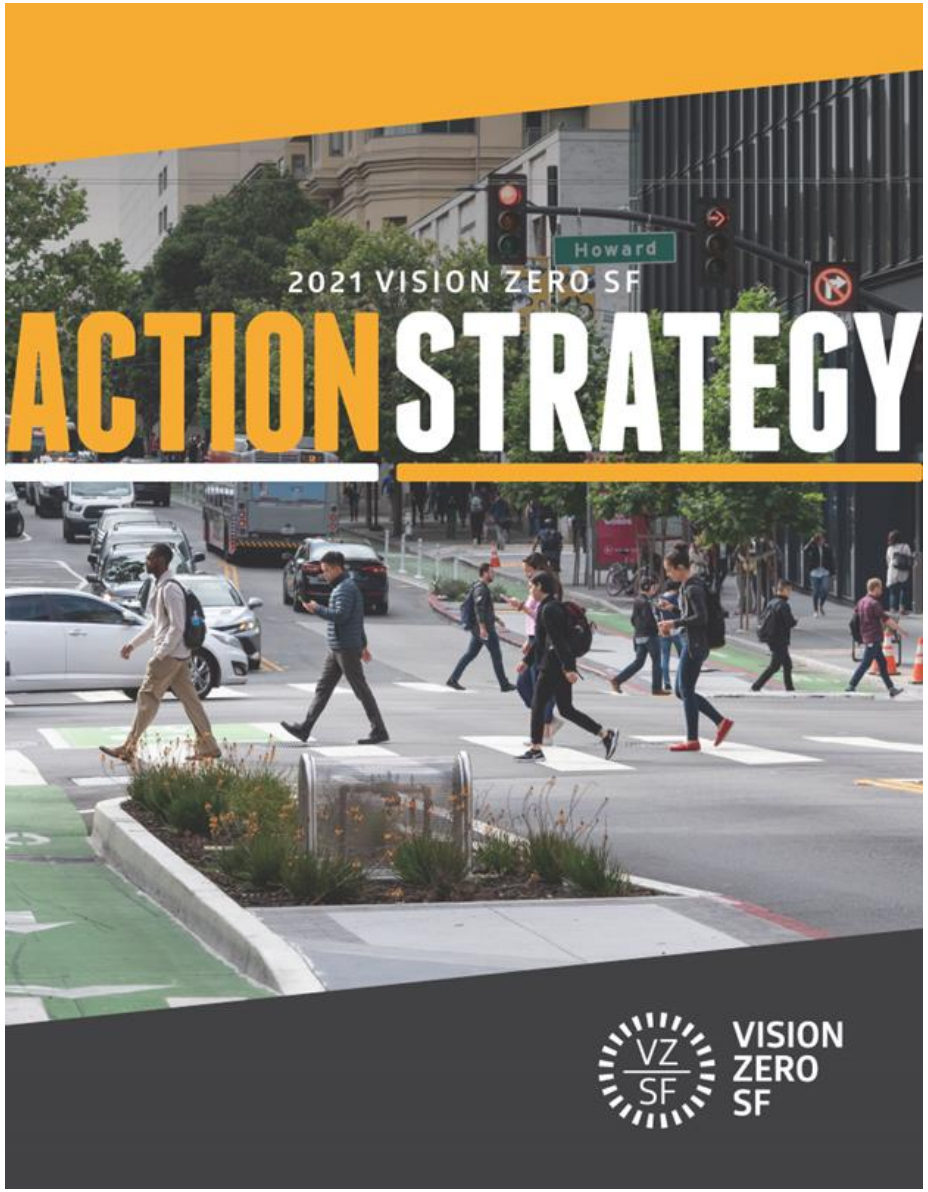
QUICK-BUILD PROGRAM

Jen Wong + Uyen Ngo

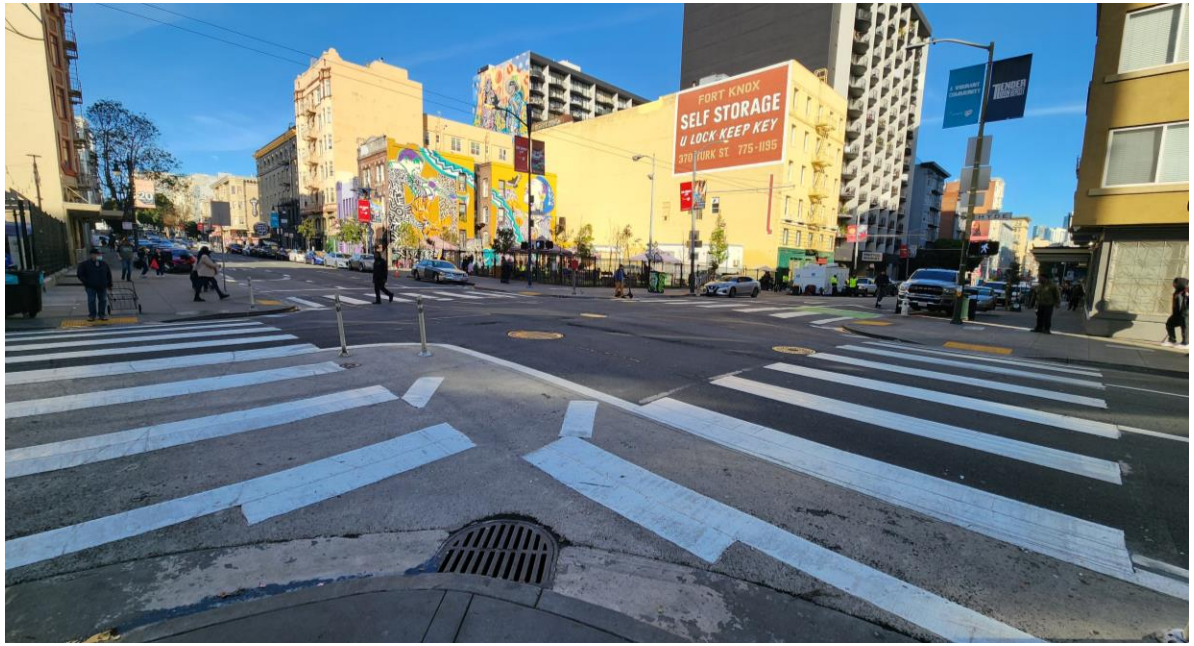
2021 VISION ZERO ACTION STRATEGY

"Through this strategy, we have increased the commitment to Quick-Build projects significantly—by more than 200% since 2019."

"Through Quick-Build projects and corridor-wide safety improvements, every street on the High Injury Network will be improved with safety measures by 2024."



RECENTLY COMPLETED



Hyde Street

- Road diet and pedestrian improvements installed throughout corridor
- Adjacent transit-only lane project expedited due to APEC

Lake Merced

- Substantially complete with bikeway and concrete bikeway buffers
- Additional curb ramp and transit boarding island work to come

CORRIDOR PROJECTS – WELL UNDERWAY

#	PROJECT	PLANNING/DESIGN PHASE	CONSTRUCTION PHASE	CURRENT STATUS
1	**Valencia St.**	Mar 2022 – Apr 2023	Apr 2023 – Aug 2023	PILOT INSTALLED
2	**Bayshore Blvd.**	Oct 2021 – Mar 2023	Aug 2023 – Sep 2023	INSTALLED
3	**Hyde St.**	Sep 2022 – Fall 2023	Fall 2023	INSTALLED
4	**Lake Merced Blvd.**	Jul 2021 – Jan 2023	Sep 2023 – February 2024	Under Construction
5	**Lincoln Way**	Sep 2022 – May 2023	January – Spring 2024	Under Construction
6	**Sloat Blvd.**	Sep 2022 – Jul 2023	Spring 2024	Preparing for construction
7	**Guerrero St.**	Jul 2023 – Sep 2023	Spring 2024	Preparing for construction
8	**17th St.**	May 2022 – Spring 2024	Spring 2024	Finalizing design, Preparing for project approvals
9	**3rd St.**	Aug 2023 – Spring 2024	March 2024	Finalizing design, Preparing for project approvals
10	**Frida Kahlo Way**	Jan 2023 – Fall 2023	Summer 2024	Finalizing design, Preparing for project approvals

CORRIDOR PROJECTS – DESIGN/OUTREACH IN THE WORKS

#	PROJECT	PLANNING/DESIGN PHASE	CONSTRUCTION PHASE	CURRENT STATUS
11	**Oak St.**	Aug 2023 – Spring 2024	Late 2024	Planning/design in progress
12	**Sutter St.**	Aug 2023 – Spring 2024	Late 2024	Planning/design in progress
13	**Beach St.**	Oct 2023 – Summer 2024	Late Summer 2024	Planning/design in progress
14	**Clarendon Ave.**	Sep 2023 – Spring 2024	Following repaving	Planning/design in progress
15	**Alemany Blvd.**	Jan 2024 – Summer 2024	Mid 2024	Planning/design in progress
16	**Cesar Chavez St.**	Jan 2024 – Summer 2024	Late 2024	Preparing for planning/design
17	**Larkin St.**	Early 2024 – Fall 2024	Following repaving	Preparing for planning/design

NEXT FEW MONTHS

Construction

- Lincoln – begin installation of ped improvements on longest QB corridor
- Guerrero – preparing work orders for intersection ped improvements
- 3rd Street – two-way bikeway installation before MLB opening day

Legislation / Project Approvals

- 3rd Street
- 17th Street
- Frida Kahlo

Design & Outreach

- Beach Street
- Oak Street
- Sutter Street

QUICK-BUILD TOOLKIT