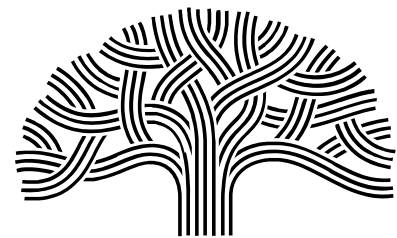


Automated Speed

Enforcement

Project Update, Locations & Timeline

Craig Raphael
Speed Safety Program Project Manager
Department of Transportation (OakDOT)



**CITY OF
OAKLAND**



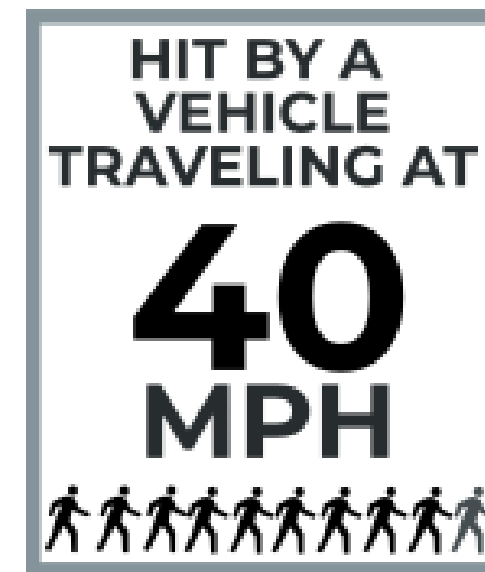
Higher speeds are more deadly

SPEEDING IS A PRIMARY FACTOR IN TRAFFIC VIOLENCE

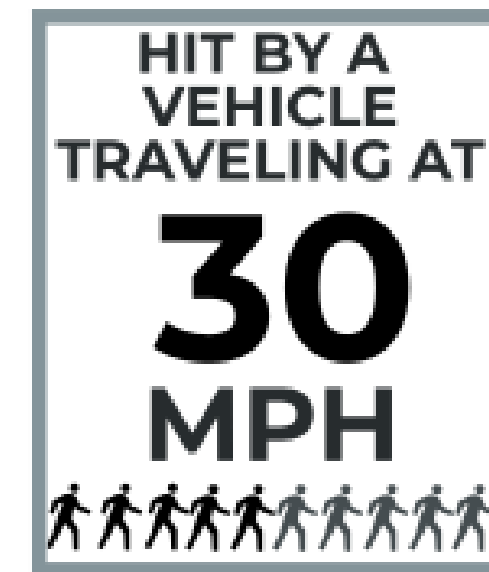


1 in 4 Oaklanders killed are involved in a crash where speed is a primary factor

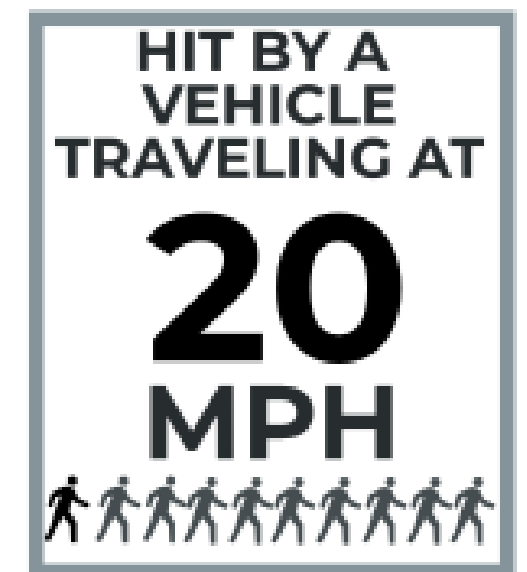
SPEED IS ESPECIALLY DEADLY FOR PEDESTRIANS



9 out of 10 pedestrians are killed



5 out of 10 pedestrians are killed

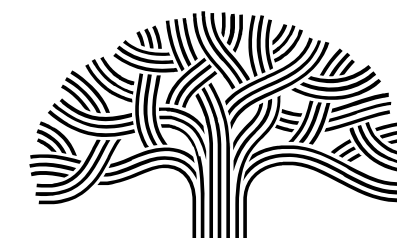


1 out of 10 pedestrians are killed

AB 645: Speed Safety Pilot Authorization

- Authorizes local departments of transportation (not police departments) in six cities to establish a speed safety program (Oakland, SF, LA, San Jose, Glendale, Long Beach)
- Establishes a 5-year pilot through 1/1/2032
- The number of cameras is limited based on the city's population: Oakland gets 18 camera systems
- Any funding generated from citations beyond cost of program operations must be reinvested into traffic calming and spent within 3 years of collection

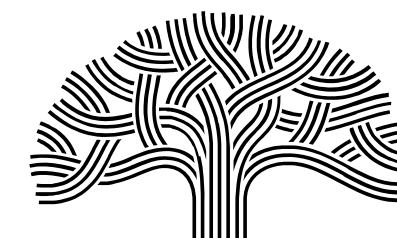
AB 645 Establishes:	
Speed Penalties	11-15 MPH over: \$50 16-25 MPH over: \$100 26+ MPH over: \$200
Type of penalty	Civil penalty (not moving violation)
Penalty Issued to	Owner of vehicle (not driver)
Warning period	First 60 days: no-fee warnings



**CITY OF
OAKLAND**

Equity Provisions in AB 645

- Citations are civil penalties (non-moving violations) – no impact to insurance or points on license
- Must offer a diversion program, ticket fee reductions between 50% to 80%, and payment plan options for low-income populations
- Flexibility & Warnings: 1-10 mph doesn't get a ticket; camera locations must have signs posted; 60-day warning period
- Must conduct racial and economic equity impact analysis as part of pilot program evaluation



**CITY OF
OAKLAND**

Speed Violation Fine Structure

Speed Violation AB 645	Fine	Indigent (according to state definition)	200% above poverty level
0-10 mph	\$0	\$0	\$0
11-15 mph	\$50	\$10	\$25
16-25 mph	\$100	\$20	\$50
26 mph and over	\$200	\$40	\$100
Speed greater than 100 mph	\$500	\$100	\$250

Speed Safety Systems Reduce Speeding & Injuries

Speed Reductions

Portland, OR

94%

Decrease in cars going >10MPH over speed limit*

Washington DC

82%

Decrease in cars going >10MPH over speed limit**

Montgomery County, MD

64%

Decrease in cars going >10MPH over speed limit***

Injury Reductions

Edmonton, AB (Canada)

20%

Decrease in fatal and severe injury crashes***

New York City

17%

Reduction in total injuries**

Chicago, IL

15%

Decrease in fatal and severe injury crashes*



*PDOT study. Defined as 11 mph or more over the speed limit based on four corridors where PBOT had speed safety cameras installed. See https://www.portland.gov/transportation/news/2023/10/5/pbot-begins-installing-new-safety-cameras-across-portland-milestone?utm_medium=email&utm_source=govdelivery

**Transportation Research Board. As observed at seven sites selected randomly from 60 targeted enforcement zones in Washington DC. See <https://journals.sagepub.com/doi/abs/10.3141/1830-05?journalCode=trra>

***Hu, W., & McCartt, A. T. (2016). Effects of automated speed enforcement in Montgomery County, Maryland, on vehicle speeds, public opinion, and crashes. *Traffic Injury Prevention*, 17(sup1), 53-58. <https://doi.org/10.1080/15389588.2016.1189076>

*UIC Chicago. Translated into 36 fewer fatal and severe-injury crashes, 68 fewer moderate injury crashes, and 100 fewer minor-injury crashes over a two-year period. See https://www.chicago.gov/content/dam/city/depts/cdot/Red%20Light%20Cameras/2022/Sutton+Tilahun_Chicago-Camera-Ticket_Exec%20Summary-Final-Jan10.pdf

**USDOT, ITS Joint Program Office. See <https://www.itskrs.its.dot.gov/2021-b01580>

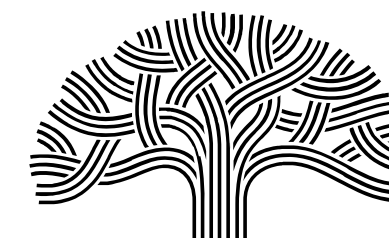
***Li, R., El-Basyouny, K., & Kim, A. (2015). Before-and-After Empirical Bayes Evaluation of Automated Mobile Speed Enforcement on Urban Arterial Roads. *Transportation Research Record*, 2516(1), 44-52. <https://doi-org.libproxy.berkeley.edu/10.3141/2516-07>

What types of cameras does Oakland utilize for public safety?

Camera Type	Purpose	Who owns/ Administers	Where/ How many	Status
Speed safety cameras authorized under AB 645	To slow speeding vehicles and improve traffic safety. Can only photograph rear license plates.	City of Oakland Department of Transportation (OakDOT)	18 locations, citywide	Not yet installed; anticipated second half of 2025
Automated license plate readers (ALPR) - Law Enforcement	To aid in criminal investigations related to stolen vehicles and violent crimes, including assault, human trafficking, robbery, and homicide	California Highway Patrol	290 at fixed locations only	New FLOCK system being installed soon. (OPD's older ALPR technology is currently deactivated due to outdated technology and non-conformance with the City's Surveillance Ordinance Policy)
ALPR – Parking Enforcement and Management	To aid in enforcement of parking rules and issuance of parking-related citations	OakDOT	Mounted to parking enforcement vehicles	Currently in use
Video detection for traffic signal operations (actuation)	To support traffic signal operations, i.e. to detect when a car is waiting to turn left on a dedicated phase	OakDOT	Many throughout Oakland at traffic signals	Currently in use
Cameras along International Boulevard at Tempo Bus Rapid Transit (BRT) Stations	Monitor public activity and crime at transit stations	AC Transit	At Tempo stations along International Boulevard	Currently in use
Illegal dumping cameras	To monitor illegal dumping at known hotspot locations	Oakland Public Works	10 cameras	Currently in use

Speed Camera Impact Report

State Law Specification	OakDOT Draft Impact Report
What is the purpose of the system?	To enforce speed limits 24/7 at 18 locations to slow vehicle speeds
How does the system work?	Fixed camera system with radar to detect speeding violations, mailed notices of violation with messaging and fines
How much will this cost, and where is the money coming from?	OakDOT Operating Budget will fund the program, the cost of staff labor and contract could be up to \$1.7 million annually
How will this program affect civil rights, and how will those rights be safeguarded?	Minimal (or positive) impacts to civil rights: <ul style="list-style-type: none">• Unbiased enforcement reduces exposure to discrimination; focus on license plate number minimizes the collection of personally identifiable information



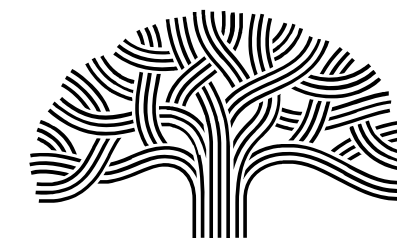
**CITY OF
OAKLAND**

Privacy Provisions & System Use Policy

State Law Specification	OakDOT Draft System Use Policy
What data is collected?	Rear license plate images for speeding vehicles only. No video or facial recognition allowed.
Who can access the data?	Individuals in authorized City of Oakland job classifications and those employed by the camera vendor (only on a need-to-know basis)
Who is the data shared with?	No one outside of OakDOT (without a court order)
Where is the data stored?	Locally & on SAAS platform
How will data be kept secure?	Logging access to ASE system data, requiring logins with MFA
How long will the data be retained?	Up to 120 days to comply with AB 645 requirements

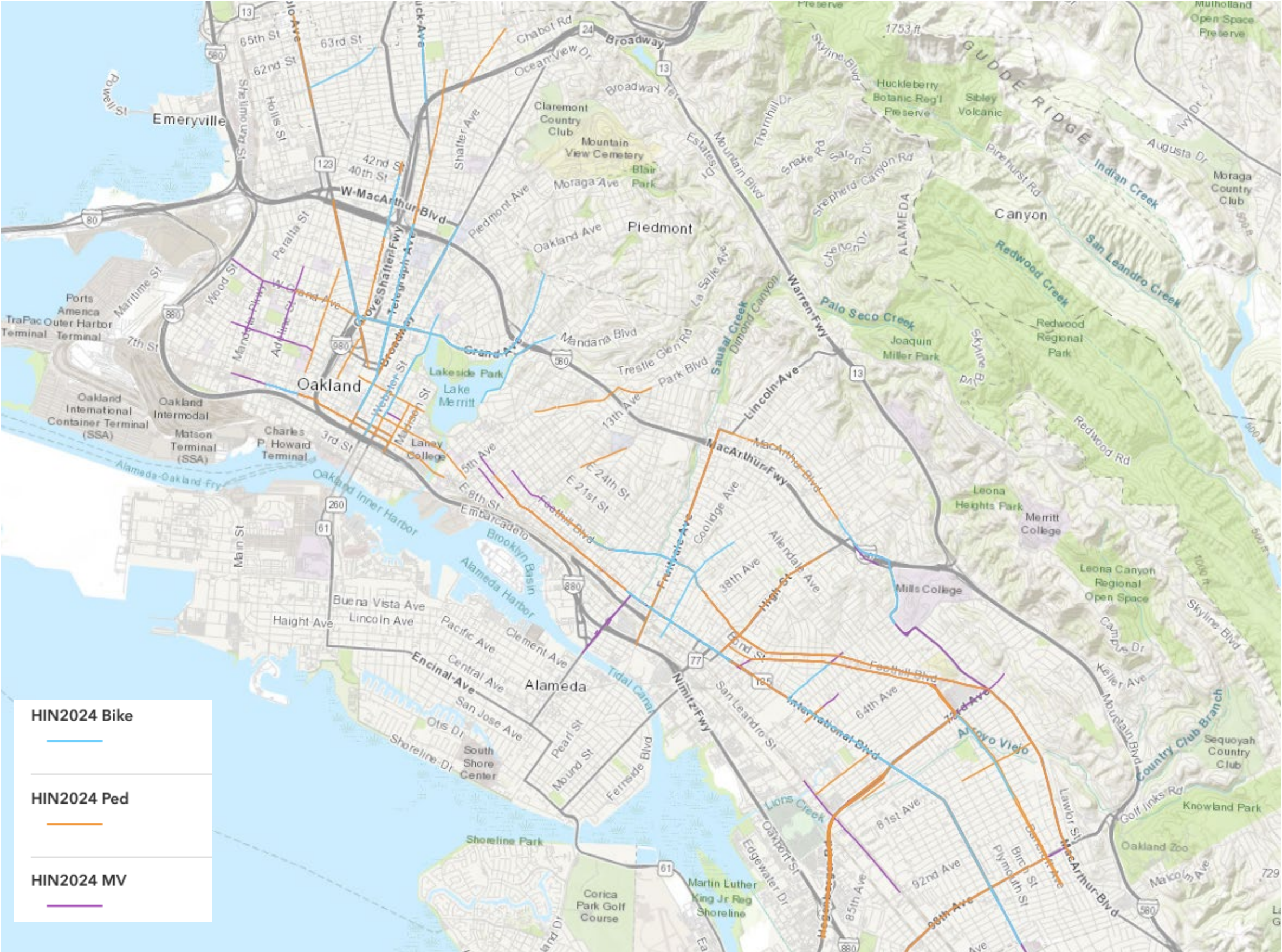
Where can the 18 Cameras Go?

State Law Specification	OakDOT's Response
Cameras shall be located on a high-injury street, a school zone street, or a street with documented speed racing	All cameras will be located on the high-injury network ; several will be adjacent to schools and in locations with speed-related collisions
Cameras cannot be located on state highways, freeways or expressways	All cameras will be located on city-owned streets (excludes freeways and segments of International and San Pablo Blvd owned by Caltrans)
Cameras should be located in areas that are “geographically and socioeconomically diverse”	Camera locations will be spread throughout Oakland , with at least 1 camera per City Council district
To keep a camera location after 18 months, there must be measurable reductions in speeding behavior	Camera locations will be prioritized in locations with vehicle speeds exceeding 10 MPH over the speed limit



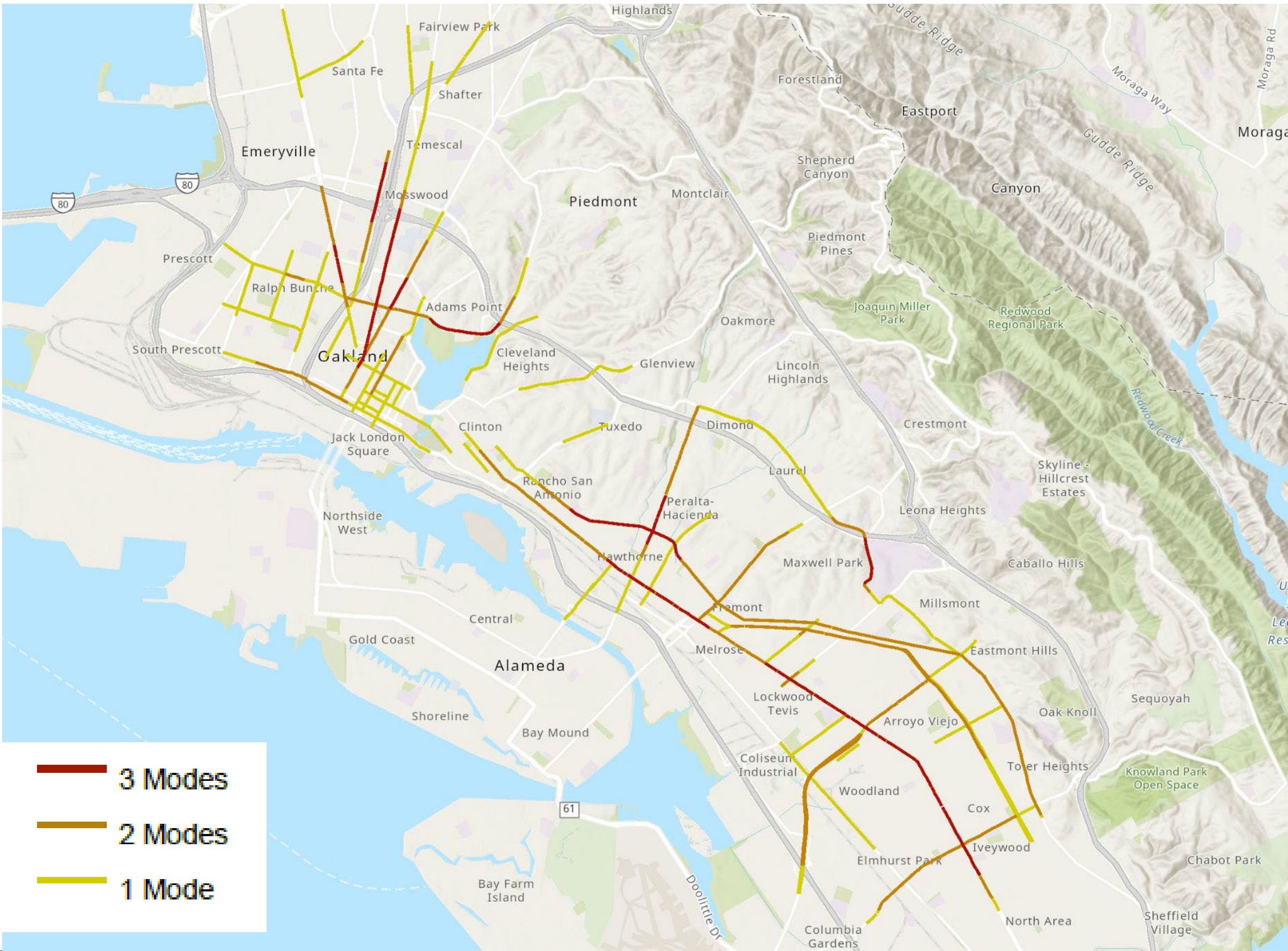
**CITY OF
OAKLAND**

OakDOT 2024 Updated High Injury Network

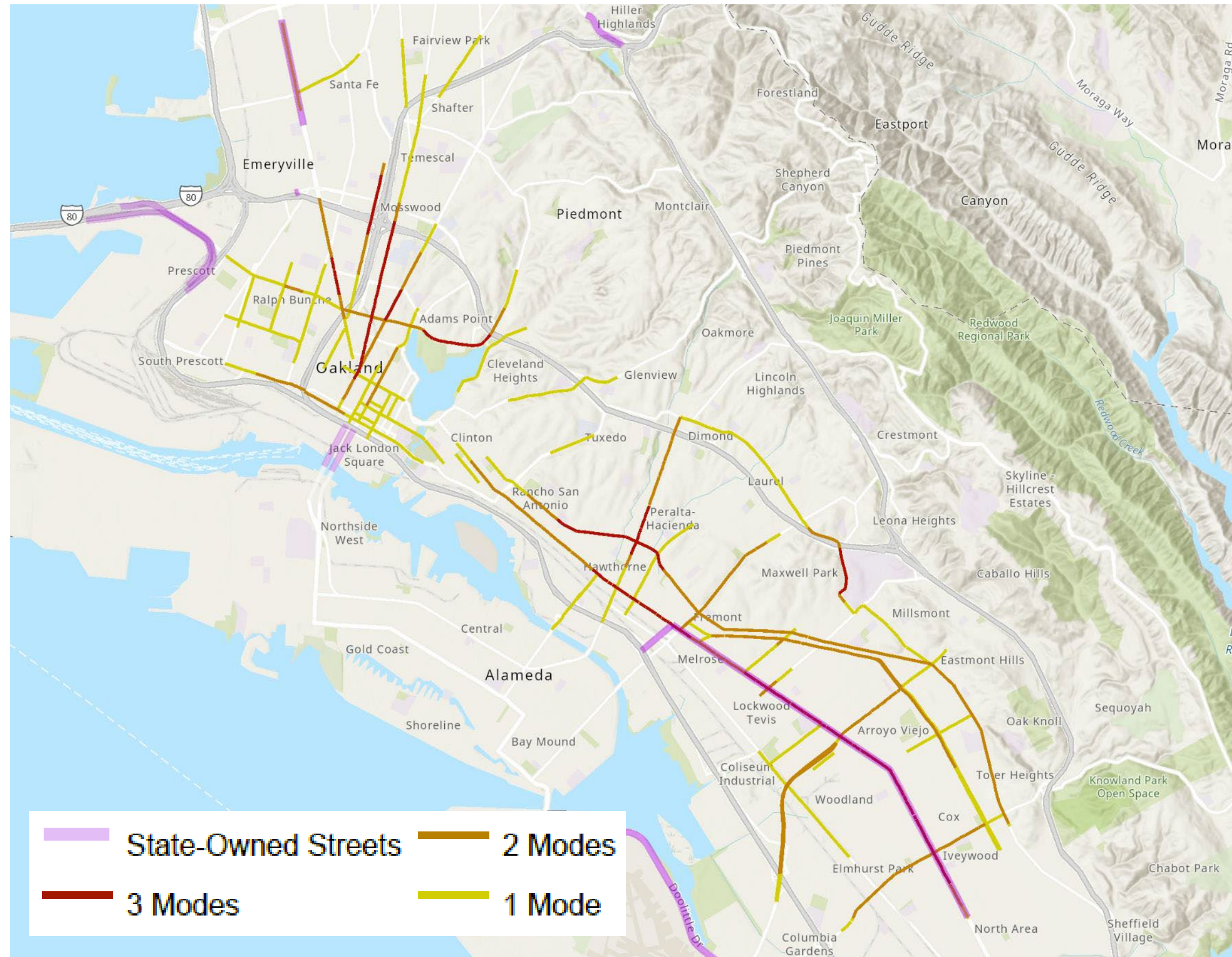


<https://www.oaklandca.gov/resources/high-injury-network-2024>

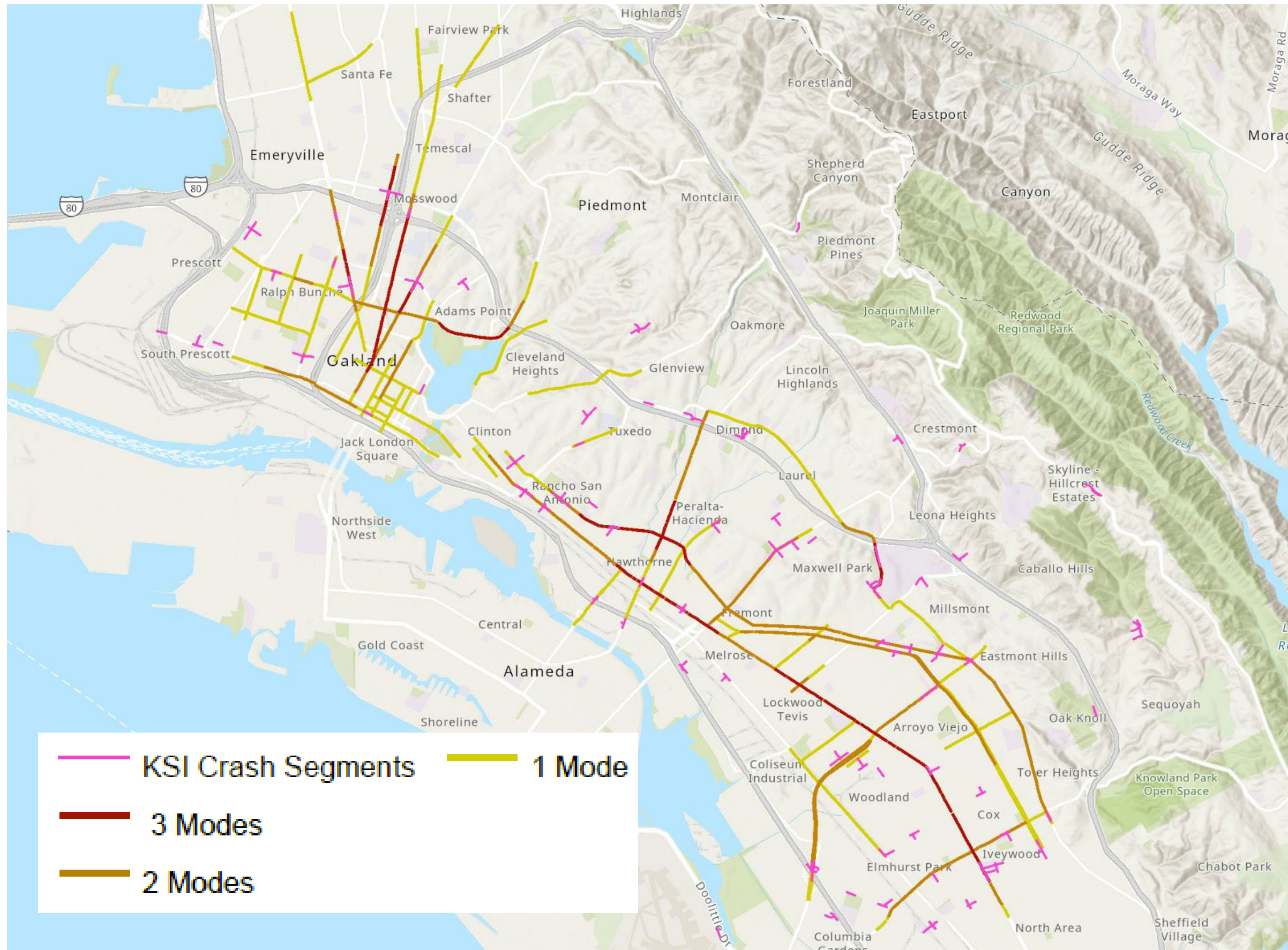
OakDOT 2024 Updated High Injury Network



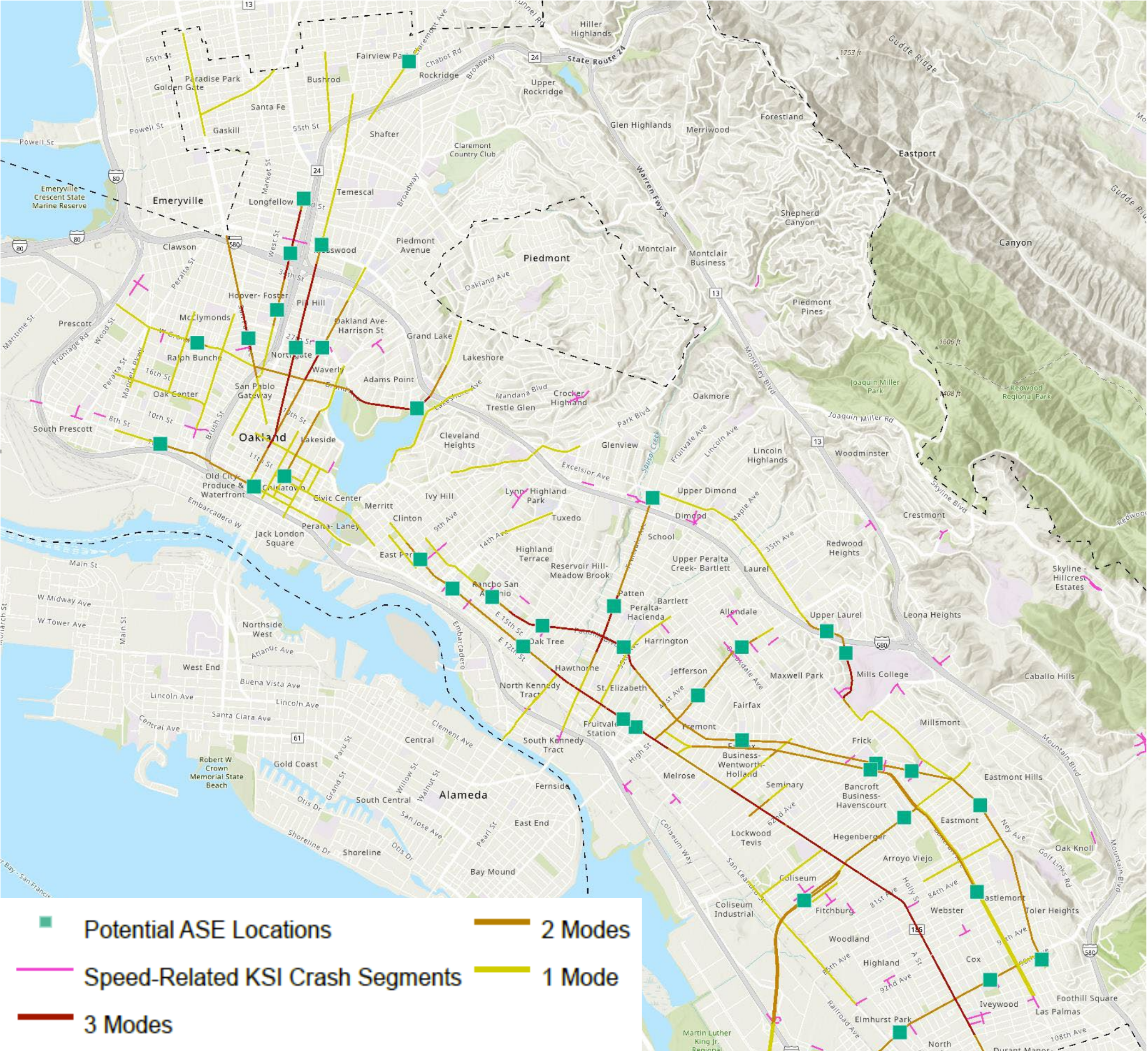
2024 HIN & State-Owned Streets



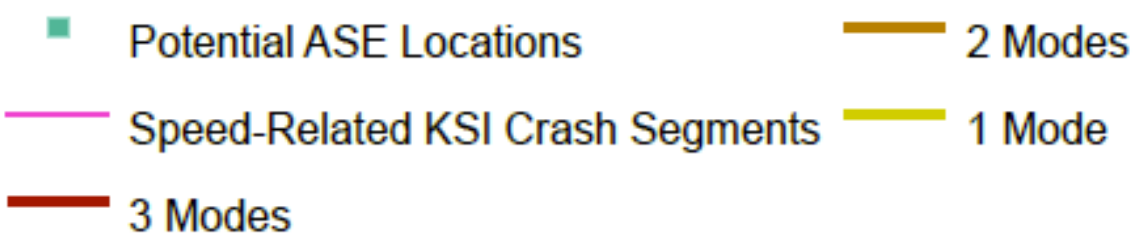
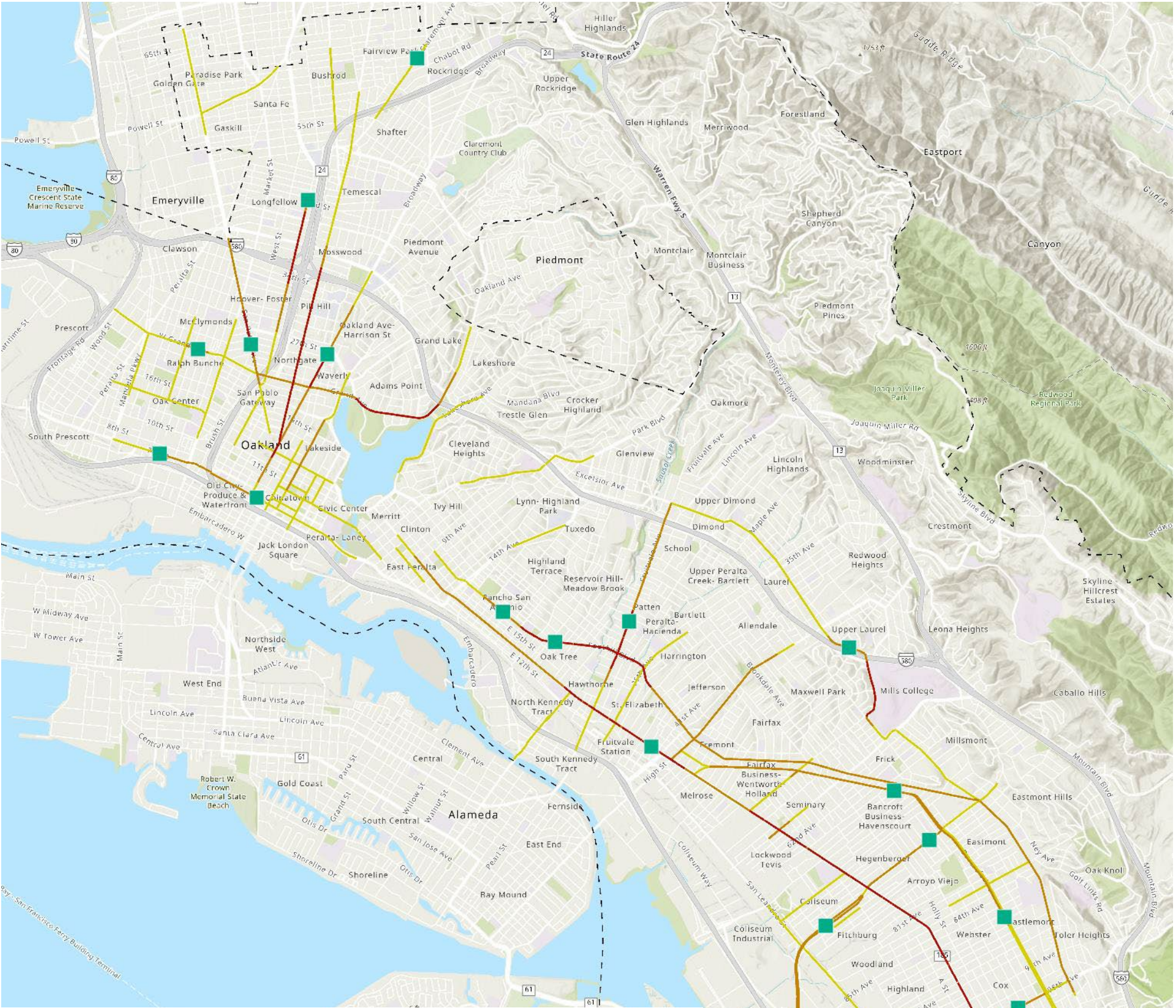
2024 Speed-Related KSI Crash Segments



Shortlist Speed Camera Locations (~40) & Speed-Related KSI Crash Segments



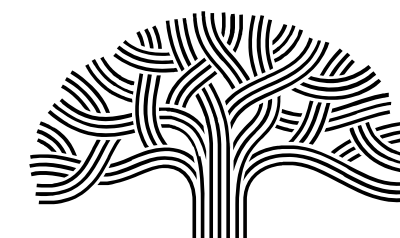
Proposed Speed Camera Locations (18) and HIN



Speed Camera Locations by Planning Area & Council District

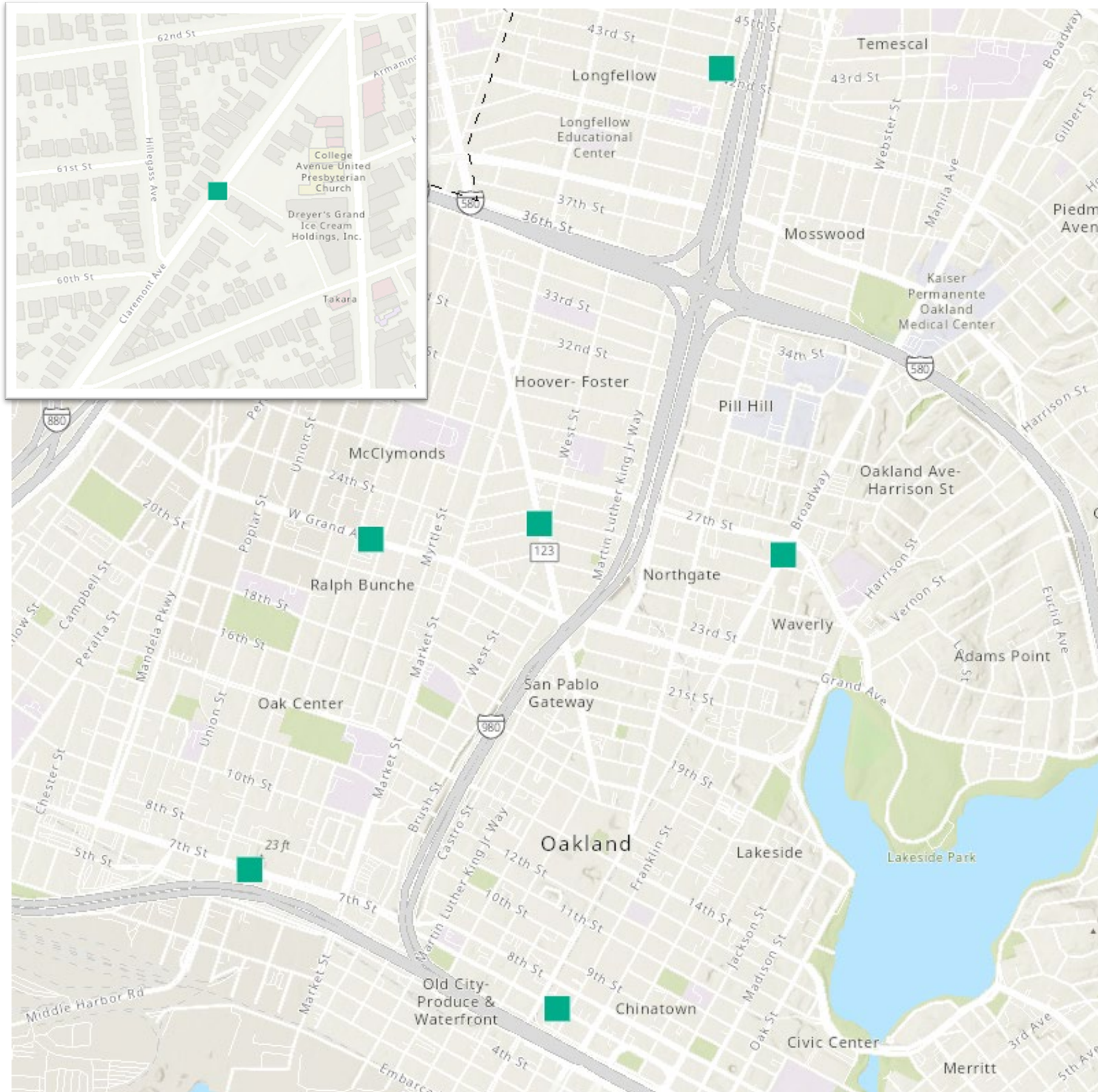
Planning Area	Number of Cameras
West Oakland	3
North Oakland/Adams Point	3
Downtown	1
Eastlake/Fruitvale	4
Glenview/Redwood Heights	1
Central East Oakland	6
East Oakland Hills	0
North Oakland Hills	0
Coliseum/Airport	0
Total	18

Council District	Number of Cameras
1	2
2	3
3	4
4	1
5	2
6	2
7	4
TOTAL	18



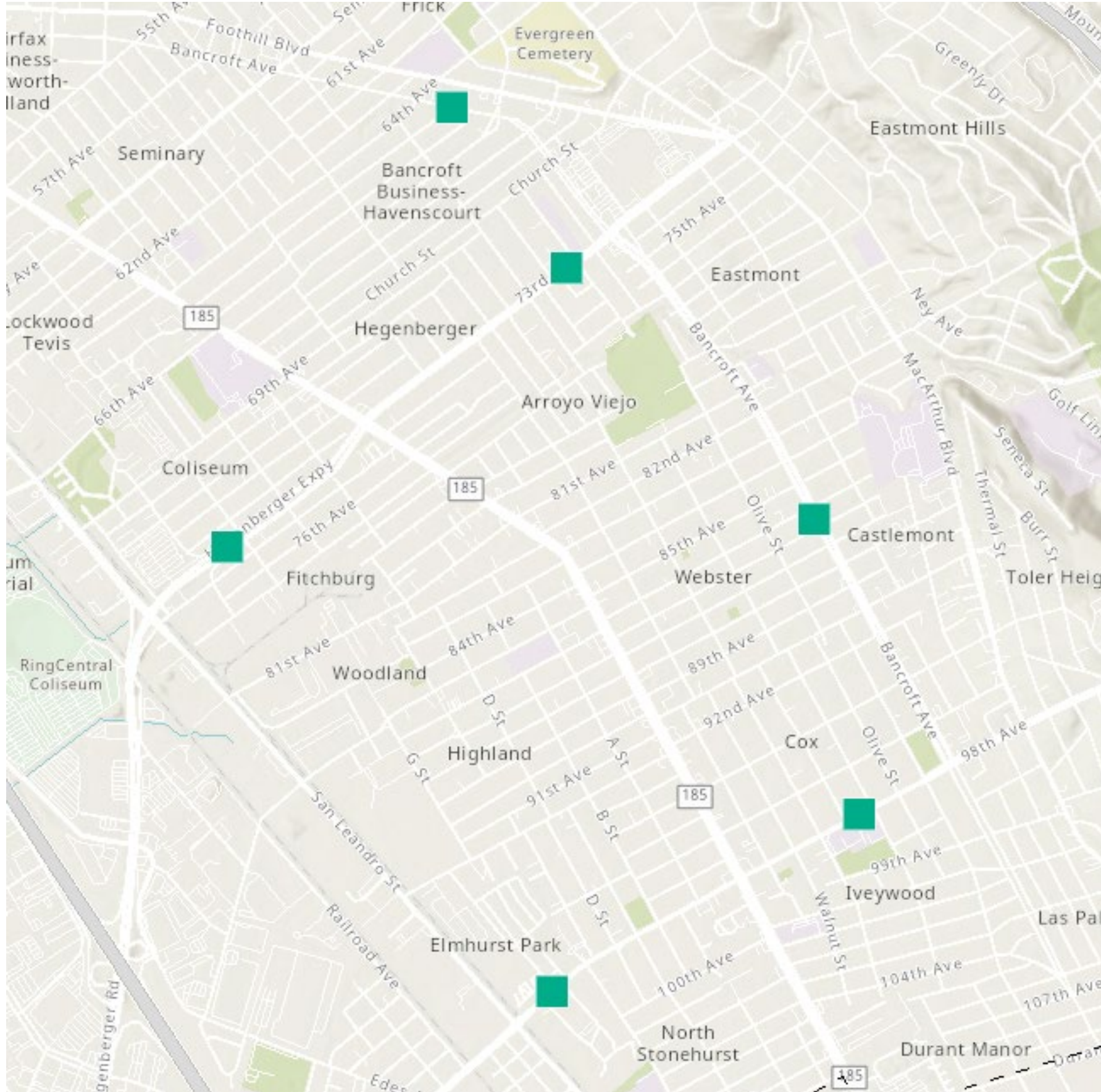
**CITY OF
OAKLAND**

Proposed Speed Camera Locations (Downtown, West and North Oakland)



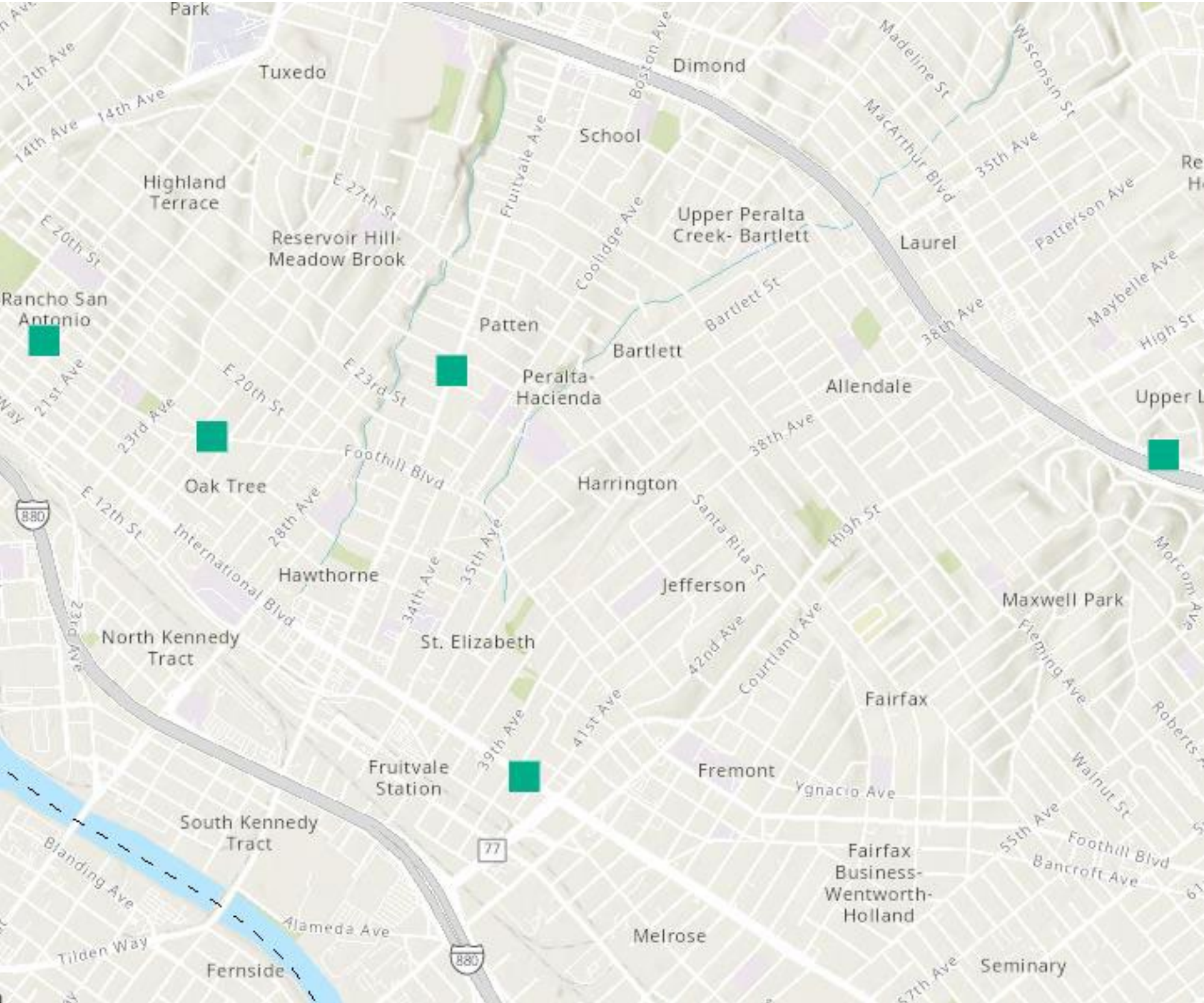
Location (Main Street)	Location (Cross Streets)	Speed Limit	85th Percentile Speed	Number of Daily Vehicles >10 MPH Over Posted Limit	% of Daily Vehicles > 10 MPH Over Posted Limit	Additional Reasoning for ASE
MLK Jr. Way	Between 42nd and 43rd	30 MPH	37 MPH	540	7.43%	High observed speeds with two travel lanes in each direction; uncontrolled crosswalks
Claremont Avenue	Between Hillegass Avenue and College Avenue	30 MPH	37 MPH	636	5.8%	Vehicles speeding to and from SR 24; new addition (2024) to High Injury Network
West Grand Avenue	Between Chestnut and Linden	30 MPH	39 MPH	1538	11.7%	High observed speeds from vehicles traveling to and from freeways; preschool on block
San Pablo Avenue	Between Athens and Sycamore	25 MPH	32 MPH	585	6.72%	Concentration of speed related injury collisions; uncontrolled crosswalks
Broadway	Between 26th and 27th St	20 MPH	27 MPH	1136	9.20%	Concentration of speed related injury collisions; concentration of pedestrians on Broadway commercial corridor
7th Street	Between Adeline St and Linden St	30 MPH	39 MPH	1760	14.6%	Speeding from vehicles traveling to and from freeways; uncontrolled crossings; proximity to As-Salam Mosque
7th Street	Between Broadway and Franklin Streets	20 MPH	27 MPH	662	5.2%	Concentration of seniors, children, pedestrians in Chinatown

Shortlist Speed Camera Locations (East/Deep East Oakland)



Location (Main Street)	Location (Cross Streets)	Speed Limit	85th Percentile Speed	Number of Daily Vehicles >10 MPH Over Posted Limit	% of Daily Vehicles > 10 MPH Over Posted Limit	Additional Reasoning for ASE
Bancroft Avenue	Between 65th and 66th	30 MPH	34 MPH	266	2.90%	Uncontrolled crosswalks; proximity to schools, churches
73rd Avenue	Between Fresno and Krause	35 MPH	41 MPH	1514	6.2%	High observed speed from vehicles adjacent to Markham Elementary and Eastmont Transit Center
Hegenberger Road	Between Spencer and Hawley	40 MPH	57 MPH	10029	43%	Freeway-like segment with four travel lanes in each direction; proximity to speed-related injury collisions
Bancroft Avnuue	Between 86th Ave and Auseon Ave	30 MPH	38 MPH	1247	8.10%	Uncontrolled crosswalks; proximity to schools, churches
98th Avenue	Between Blake Drive and Gould Street	30 MPH	37 MPH	1340	6.6%	Proximity to speed related injury collisions; speeding observed from vehicles traveling to and from I-880
98th Avenue	Between Cherry and Birch	30 MPH	34 MPH	469	3.10%	Adjacent to Elmhurst United Middle School; proximity to speed related injury collisions

Proposed Speed Camera Locations (Fruitvale, San Antonio, Laurel)



Location (Main Street)	Location (Cross Streets)	Speed Limit	85th Percentile Speed	Number of Daily Vehicles >10 MPH Over Posted Limit	% of Daily Vehicles >10 MPH Over Posted Limit	Additional Reasoning for ASE
Foothill Boulevard	Between 19th and 20th	30 MPH	33 MPH	203	2.8%	Proximity to speed related collisions; uncontrolled crosswalks; proximity to San Antonio Recreation Area
Foothill Boulevard	Between Irving and 24th	25 MPH	29 MPH	252	2.87%	Proximity to speed related collisions; uncontrolled crosswalks
Fruitvale Avenue	Between Galindo Street and Logan Street	25 MPH	30 MPH	458	3.60%	Uncontrolled crosswalks; proximity to schools, churches
International Boulevard	Between 40th and 41st	25 MPH	29 MPH	767	4.9%	High observed speeding from vehicles illegally using the transit lane; concentration of speed-related injury collisions; upcoming capital project
MacArthur Boulevard	Between Green Acre Road and Enos Ave	30 MPH	38 MPH	667	8.0%	High observed speeds from vehicles traveling to and from I-580; long section of MacArthur without a traffic signal



Timeline



THANK YOU! LEARN MORE:

[OAKLANDCA.GOV/speedcameras](https://oaklandca.gov/speedcameras)

SpeedCameras@oaklandca.gov

Safe Oakland Streets (SOS) Initiative

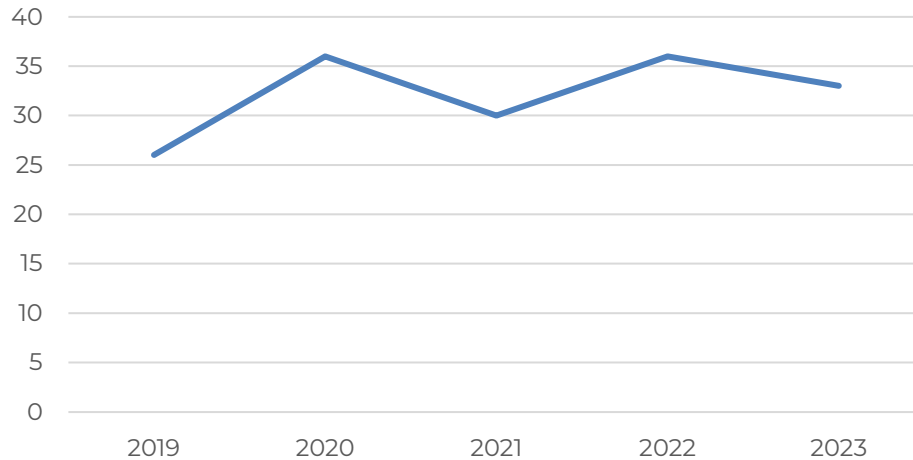


2023 Annual Report

Too Many People are Dying

2023 was another deadly year on Oakland's Streets, with a total of 33 crash fatalities

Crash Fatalities 2019-2023

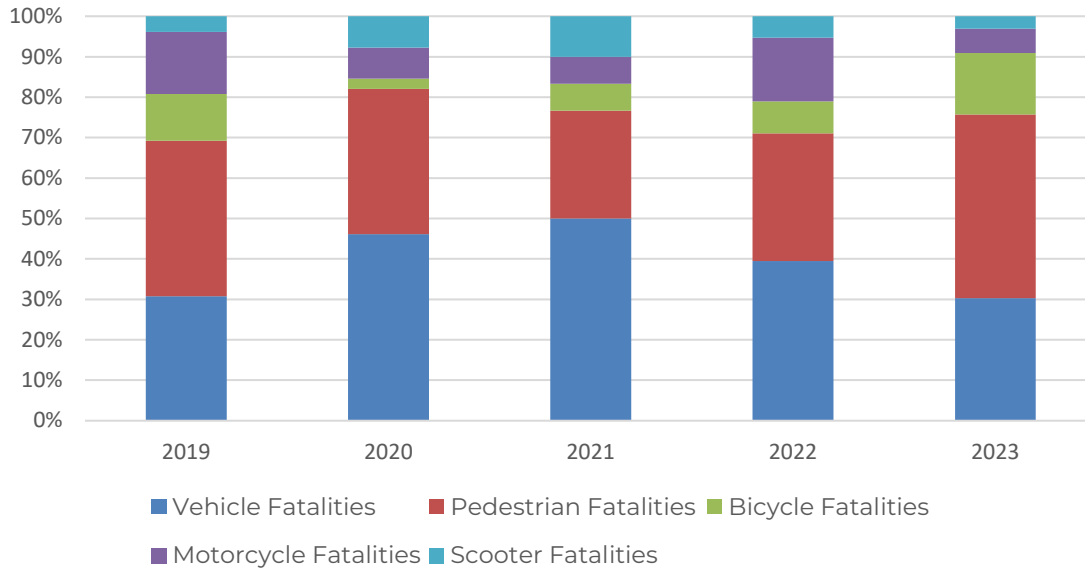


Source: Statewide Integrated Traffic Records System (SWITRS)
* 2022 and 2023 data are provisional and may be incomplete or subject to change.



Too Many People are Dying

Traffic Fatalities by Mode



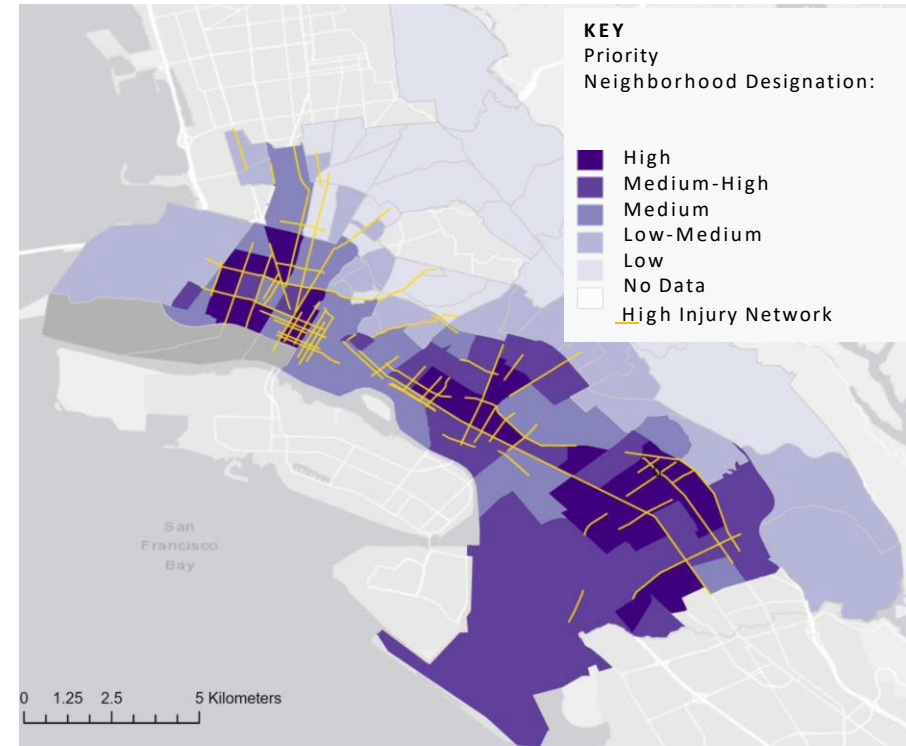
People walking, rolling, biking, taking transit, or riding motorcycles are especially vulnerable to traffic violence

Source: Statewide Integrated Traffic Records System (SWITRS)
* 2022 and 2023 data are provisional and may be incomplete or subject to change.

2018 High Injury Network (HIN)

6% of Oakland's Streets that account for 60% of severe and fatal crashes





95% of the HIN is in Medium to High Priority Equity Neighborhoods



Source: High Injury Network: 2012-2016 Data from SWITRS (Statewide Integrated Traffic Records System) prepared by Fehr & Peers.

Most Dangerous Driving Behaviors

These Factors Account for 74% of Severe and Fatal Crashes

Crashes Causes (Primary Collision Factors)	Percent of Crashes Resulting in People Being Killed or Severely Injured
 Unsafe Turning (especially left turns)	21%
 Unsafe speed	20%
 Impaired Driving	17%
 Failure to yield	15%

SWITRS 2021-2023*

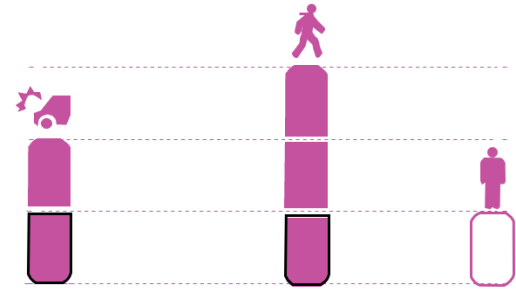
*2022 and 2023 SWITRS data are considered provisional and subject to change

Severe and Fatal Crashes Disproportionately Impact Black Oaklanders and Seniors

Older Oaklanders
(65+)



2x more likely to be killed in
a crash compared to all
other Oaklanders



Black
Oaklanders
are

2 times
as likely to be
killed or severely
injured in a crash
(all modes)

3 times
as likely to be
killed or severely
injured while
walking

compared to
all other
Oaklanders

Speed Kills

HIGH SPEEDS ARE MORE DEADLY



AND SPEED MATTERS IN OAKLAND



1 in 4 Oaklanders killed are involved in a crash where speed is a primary factor

SOS Strategies

COORDINATION &
COLLABORATION

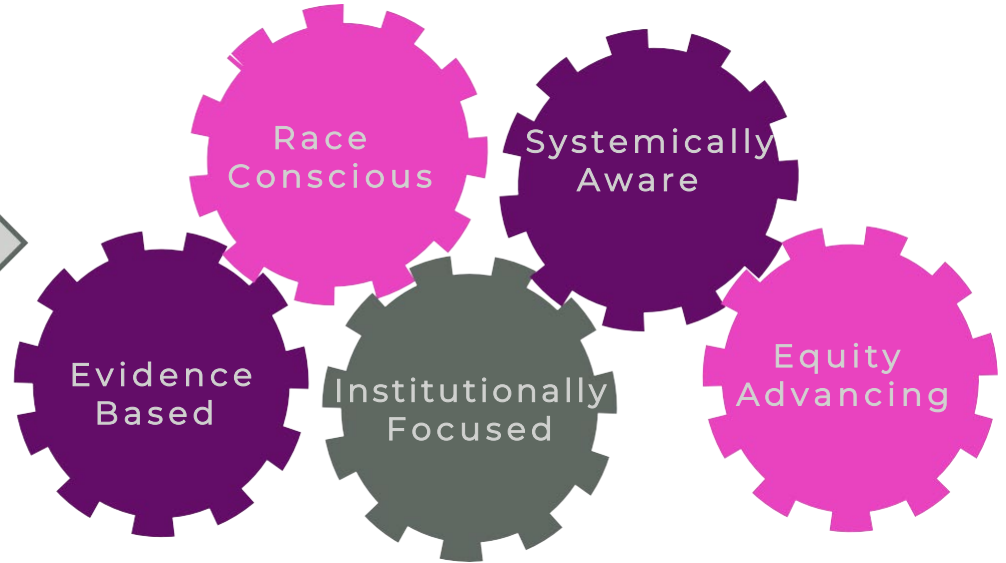
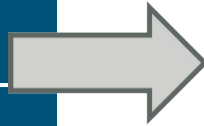
ENGINEERING

POLICY

PLANNING &
EVALUATION

ENGAGEMENT,
EDUCATION &
PROGRAMS

ENFORCEMENT



Strategy 1. Coordination & Collaboration

Collaboration between OakDOT and OFD

In 2023, key agreements were reached related to placement of flexible delineator posts in the public right-of-way.



Strategy 2. Engineering

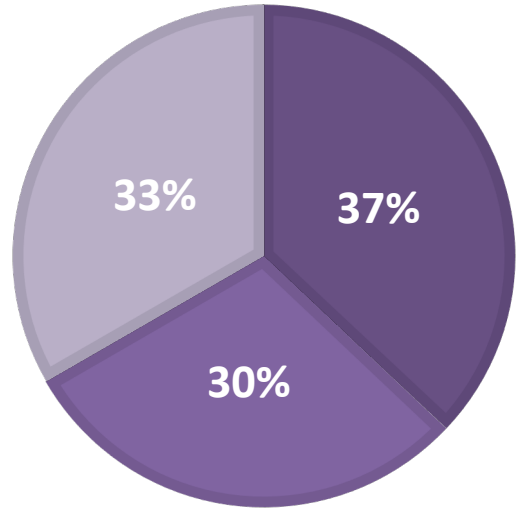
Traffic Safety Improvement Highlights (2023)



Strategy 2. Engineering

STATUS OF 2023 RAPID RESPONSE INVESTIGATIONS

■ Installed ■ In-Progress ■ No Engineering Action



- When streets have projects in pre-construction, Rapid Response treatments are identified for inclusion in the larger project



Strategy 3. Policy



The City of Oakland played a pivotal role in successfully advocating for state authorization for automated speed enforcement.



Oakland is authorized to install up to 18 camera systems as part of a pilot program that includes 5 other cities.



Speed Safety Cameras Pilot Program

If Oakland is in the process of implementing up to 18 camera systems under the passage of Assembly Bill (AB) 645, which is expected to come online in 2025.

Project updated

OakDOT is in the process of setting up the pilot program. Camera systems anticipated to be operational by end of 2025.

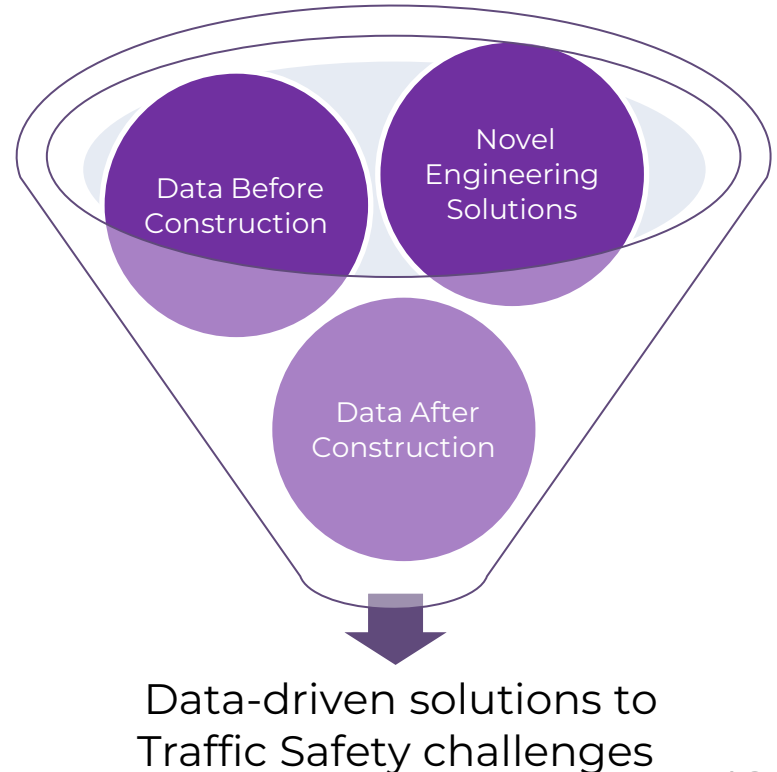
[More information is available at: City of Oakland | AB 645 \(oaklandca.gov\)](https://www.oaklandca.gov/projects/assembly-bill-645-friedman-speed-safety-systems-pilot-program)

<https://www.oaklandca.gov/projects/assembly-bill-645-friedman-speed-safety-systems-pilot-program>

Strategy 4. Planning and Evaluation

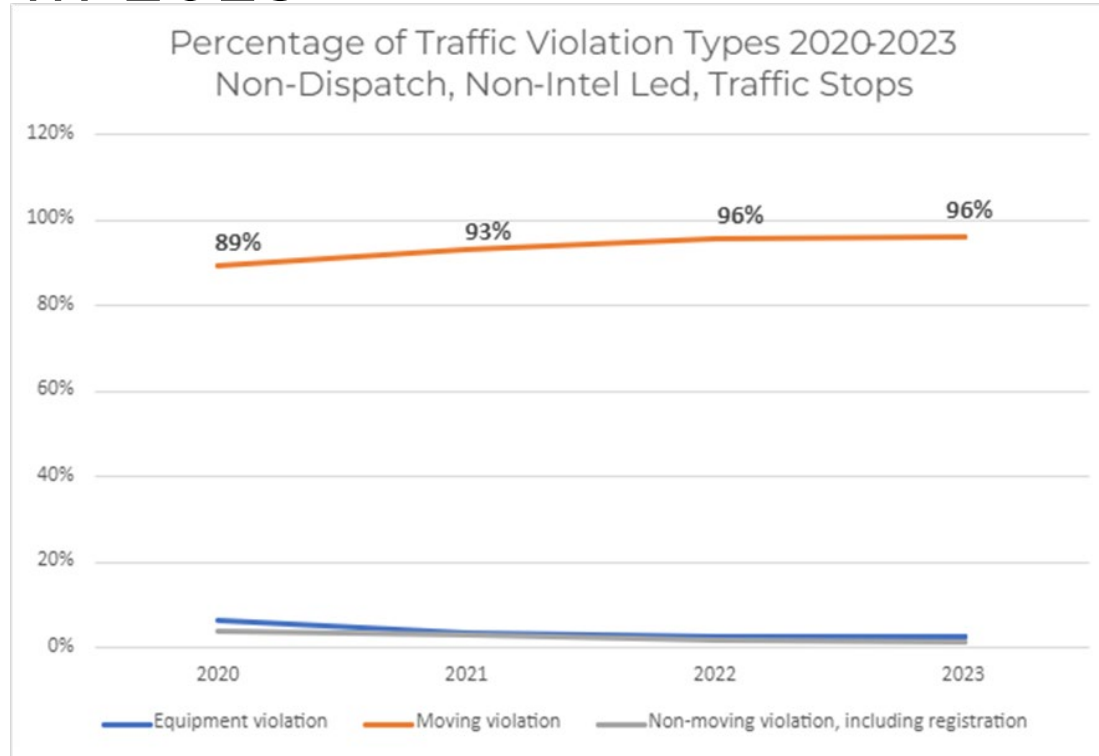
West Street Road Diet Project Evaluation

- Project evaluation in underway for West Street Road Diet. Improvements included removing lanes and adding pedestrian islands, raised intersections, bike buffers and speed humps.
- Data from the project evaluation will inform future projects and be useful in project reports.



Strategy 6. Enforcement

Traffic Stops Continue to Focus on Moving Violations in 2023



Non-Dispatch, Non-Intelligence-Led Traffic Stops, 2020-2023, OPD

Strategy 6. Enforcement

Traffic Stops Are More Focused on HIN and Most Dangerous Moving Violations

- Traffic Stops on the HIN*
 - 2019: 61%
 - 2023: 63%
- Traffic Stops for Most Dangerous Behaviors**
 - 2019: 40%
 - 2023: 79%

**within 500 ft of HIN; Non-Dispatch, Non-Intelligence-Led Traffic Stops, 2019, 2023, OPD*

***SWITRS 2019 and 2021-2023 (2022 and 2023 SWITRS data provisional and subject to change)*

Looking Ahead: Opportunities

1. Continuing to focus resources on the High Injury Network and in High Priority Communities
2. Institutionalize the updated 2024 High Injury Network
3. Evaluate the International Quick Build project and apply the successes to future projects
4. Continue to strengthen OakDOT/OFD partnership
5. Establish Speed Safety Camera Pilot Program
6. Assessing High Impact Policy Opportunities

Resources

[Safe Oakland Streets: www.oaklandca.gov/SOS](http://www.oaklandca.gov/SOS)

- [OakDOT Major Projects Map: www.oaklandca.gov/resources/active-major-improvements-project](http://www.oaklandca.gov/resources/active-major-improvements-project)
- [5-Year Paving Plan: www.oaklandca.gov/topics/paving](http://www.oaklandca.gov/topics/paving)
- [OPD Stop Data: www.oaklandca.gov/resources/stop-data](http://www.oaklandca.gov/resources/stop-data)
- [Sideshow Prevention: www.oaklandca.gov/topics/sideshow-prevention-efforts](http://www.oaklandca.gov/topics/sideshow-prevention-efforts)
- [Geographic Equity Toolbox: www.oaklandca.gov/resources/oakdot-geographic-equity-toolbox](http://www.oaklandca.gov/resources/oakdot-geographic-equity-toolbox)
- [Speed Bump Application: www.oaklandca.gov/services/apply-for-a-speed-bump](http://www.oaklandca.gov/services/apply-for-a-speed-bump)