

# 8th Street Traffic Calming Project Study

## 8th Street, Pine Street to Market Street



Safe Streets Division  
May 6, 2022  
DRAFT



## Introduction & Summary

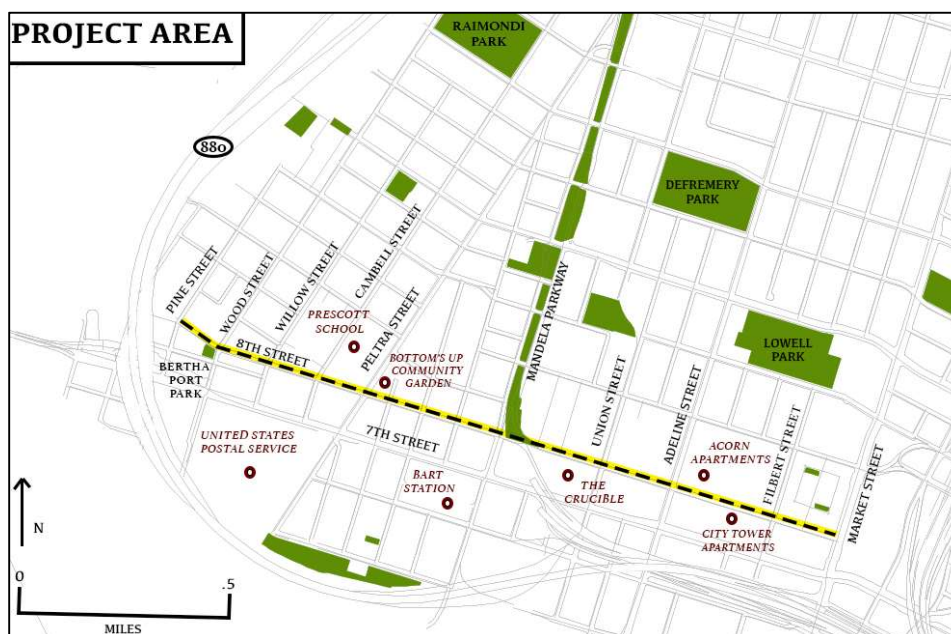
The City of Oakland is redesigning 8th Street in West Oakland between Pine Street and Market Street. The 8<sup>th</sup> Street Traffic Calming Project has the goals of reducing traffic crashes and speeding to make the street safer for residents, and more comfortable for users of all modes. This project was submitted by the community advocacy group Safe 8th Street as a Capital Improvement Program (CIP) request and was funded as part of the City of Oakland’s Fiscal Year 2021-23 CIP. 8<sup>th</sup> Street is included in the City’s Paving Plan, and this provides an opportunity to make traffic calming improvements and to implement recommendations in Oakland's Pedestrian Plan and Bicycle Plan.

This study documents the current conditions, community outreach, and decision-making for the construction project. The study is being published in draft form to support the community outreach and decision-making process. The study will be updated and eventually completed as the project progresses to conclusion.

## Purpose & Planning Context

8<sup>th</sup> Street west of Interstate 980 runs the width of West Oakland from Pine Street to Market St, a distance of 1.2 miles across the Prescott and Acorn neighborhoods. In 2020, a group of Prescott neighbors organized as “Safe 8<sup>th</sup> Street” (<https://www.notion.so/Safe-8th-Street-ab44ff12c9b9498f85e5cb28a0c141d9>) advocating for traffic calming to address speeding, reckless driving, and cars crashing into buildings. In Fall 2020, Safe 8<sup>th</sup> Street submitted a community request to the City of Oakland’s Capital Improvement Program (CIP) for funding improvements to make 8<sup>th</sup> Street a calm neighborhood-serving street. In June 2021, the request was approved for \$500,000 in funding as part of the City’s Fiscal Year 2021-23 Capital Improvement Program (CIP). City Staff in OakDOT’s Safe Streets Division, Bicycle & Pedestrian Program, were assigned to deliver the project in collaboration with neighbors and community groups.

**Figure 1: Context Map**



The CIP project proposes the following physical elements to be developed and refined through the community outreach process:

- Traffic circles at the stop-controlled intersections (e.g., Pine St, Wood St, Filbert St)
- Speed humps
- High visibility crosswalks
- Hardened centerlines at signalized intersections (e.g., Peralta St, Mandela Pkwy, Union St, Adeline St, Market St)
- Public art (e.g., street murals, painting on utility boxes, sculpture in the traffic circles)

The process is also considering the following changes:

- Change 8<sup>th</sup> Street's functional classification from minor arterial street (i.e., designated for through traffic) to a local street (i.e., intended for neighborhood traffic only).
- Reduce the speed limit east of Mandela Parkway from 30 mph to 25 mph, matching the 25 mph speed limit to the west of Mandela Parkway.
- Designate the street as a neighborhood bike route, replacing the existing discontinuous bike lanes.
- Support the connections to intersecting bikeways at Peralta St, Mandela Pkwy, and Market St.
- Consider extending the median on Mandela Pkwy to close 8<sup>th</sup> Street to through motor vehicle traffic at Mandela Pkwy.
- Consider a mid-block crosswalk for the long block between Adeline St and Filbert St (where Chestnut St and Linden St no longer cross 8<sup>th</sup> Street).
- Re-route on the San Francisco Bay Trail from 8<sup>th</sup> Street to 7<sup>th</sup> Street between Mandela Parkway and Wood St to support the revitalization of 7<sup>th</sup> Street as the historic "Main Street" of West Oakland.

The following plans and projects relate to the current efforts:

- *2019 Paving Plan* includes 8<sup>th</sup> Street for upcoming paving. It is classified as a major street and prioritized based on street condition and traffic safety history. The curb ramp, resurfacing, and striping updates are being implemented as part of Paving Plan implementation. For more information on the Paving Plan, see <https://www.oaklandca.gov/resources/2019-paving-plan>.
- *2019 Bicycle Plan* designates 8<sup>th</sup> Street is an existing bikeway with discontinuous bike lanes that are proposed to remain. In contrast, the 8<sup>th</sup> Street West Oakland Traffic Calming Project proposes to replace the bike lanes with a neighborhood bike route as part of the overall vision of traffic calming for 8<sup>th</sup> Street. For the 2019 Oakland Bike Plan, Let's [Bike] Oakland, go to [https://cao-94612.s3.amazonaws.com/documents/LBOakland\\_FinalDraft\\_20190807\\_web.pdf](https://cao-94612.s3.amazonaws.com/documents/LBOakland_FinalDraft_20190807_web.pdf).
- *2017 Pedestrian Plan* makes citywide recommendations to improve pedestrian safety and promote walking. It identified 8<sup>th</sup> St/Market St as a High Injury Intersection, one of 37 such intersections identified across Oakland. See <https://cao-94612.s3.amazonaws.com/documents/Ped-Plan-2017-rev-sep2018-compressed.pdf>.
- *2014 West Oakland Specific Plan* recommends prioritizing the development of local streetscape improvement plans, including lights, trees, bulb outs, sidewalks, etc. on 8<sup>th</sup> Street. For the full plan, go to <https://www.oaklandca.gov/resources/read-the-final-west-oakland-specific-plan>.



- *2006 West Oakland Community-based Transportation Plan* proposes bike lanes on 8<sup>th</sup> Street and noted recent extensive pedestrian improvements for 8<sup>th</sup> Street – lighting, landscaping, crosswalk enhancements, bulb outs, etc. It recommends 8th Street as a pedestrian corridor and the development of pedestrian and street safety improvements. For the full Plan, see: <http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak028549.pdf>.
- *1989 Bay Trail Plan* proposes a 500-mile recreational path around the San Francisco Bay. The path should be located on the waterfront but may be routed inland where shoreline access is not feasible (e.g., port operations in West Oakland). A map of the existing and proposed Bay Trail is at: <https://baytrail.org/baytrailmap.html>.

## Community Outreach

This corridor is in West Oakland, a historically Black neighborhood currently facing ongoing gentrification. It runs parallel to 7<sup>th</sup> St, the historic and current commercial corridor, and the West Oakland BART line. The corridor runs through five census tracts. Per Oakland’s Geographic Equity Toolbox based on factors like percentage of non-white people and percentage of low-income people, the west most census tract is designated a low priority equity neighborhood, the next is designated high priority, then medium priority, and the two east most census tracts are given the highest equity priority. The area is currently facing issues of gentrification. Per the Urban Displacement project, all the census tracts are designated Low Income – Ongoing Gentrification and/or Displacement. Residents in the area also live in an area of high pollution burden, from the high density of freeways and port traffic amongst other factors in the area. The 2018 CalEnviroScreen’s Pollution Burden Percentile gives the census tracts pollution burden scores of 89, 70, 82, 70, 61 from west to east, some of the highest in the City. Along the corridor is the Acorn Housing Projects, a series of public housing projects built by the Oakland Housing Authority in the 1960s using eminent domain and renovated in the 1990s. Neighborhood institutions include Prescott Elementary School, St. Vincent’s Day Home, the West Oakland Health Council, and many churches including the Morning Star Church of God, Trinity Baptist Church, Cellar Christian Ministries, Iglesia de Dios, Zion First Church of God In Christ, and Liberty Hall. There are two community gardens (Bottom’s Up Community Garden and The Center St Community Garden), a community art studio and bike repair shop, The Crucible, and businesses including Adeline Could Glass Shop, Baker Prado Funeral Home, and Liquors liquor store.

The community advocacy group Safe 8th St, (<https://www.notion.so/timcourtney/Safe-8th-Street-ab44ff12c9b9498f85e5cb28a0c141d9>) which submitted the Capital Improvement Program project, did a significant amount of community organizing to raise support and awareness of the project. Their online survey ([https://docs.google.com/forms/d/e/1FAIpQLSfUWPLrFutx4CYWjmTtwlXH\\_RAc9s0\\_zdIYKKjDOuNxmYFaww/viewform](https://docs.google.com/forms/d/e/1FAIpQLSfUWPLrFutx4CYWjmTtwlXH_RAc9s0_zdIYKKjDOuNxmYFaww/viewform)) received 59 responses demonstrating overall support for traffic calming on 8<sup>th</sup> Street.

This City project is doing community outreach to those living, working, going to school, etc. on the corridor and in the surrounding area to develop agreement on project design elements and to create a community art element. Outreach is being done in two parts, first in Fall 2021, and then again in Spring 2022 with time taken in between to refine the design based on feedback. Engagement efforts and evaluation of the feedback received will prioritize the voices of Oaklanders in this area most affected by the project and most vulnerable to the safety and economic effects of transportation projects such as older adults, people with disabilities, children and parents, women, individuals without cars, no- and

low-income individuals, Black and Latinx individuals more at risk of enforcement, those at risk of displacement, etc.

In fall 2021, OakDOT staff did the following outreach to residents to get initial reactions to the proposed project:

- Individual outreach to key contacts.
- Created a project contact list and invited people to join from the Safe 8<sup>th</sup> Street mailing list, the 41 individuals who submitted a traffic-related OAK 311 request about 8<sup>th</sup> St between February 2010 and June 2021, at community meetings, and through the project web page.
- Mailed all nearby addresses (~3,000 addresses within 400' of the project) letting people know about the project and inviting their input.
- Presented at the Acorn Neighborhood Council (11/4/21) and the Prescott Neighborhood Council (10/14/21).
- Created a survey for residents to provide input on the proposed changes and publicized the survey with another mailer to all addresses.

OakDOT staff is planning to complete a second round of community outreach in spring 2022 to confirm the project's design and develop the art component. It is anticipated that the design and construction documents will be completed in summer/fall 2022 and that construction may begin by the end of 2022.

## Current Conditions

The following data and analyses inform the design elements and locations that will be most beneficial in realizing the project's goals with the available budget.

### Traffic Crashes

The City of Oakland is seeking to eliminate all fatal and severe traffic crashes. Over the ten-year period from 2007 through 2016, 205 people died in Oakland traffic crashes and over 800 people were severely injured. At a fundamental level, these deaths and injuries are preventable by designing, building, and maintaining safe streets.

From 2014 to 2018, there were 111 traffic crashes on 8<sup>th</sup> Street in the study area. This included ten (10) crashes involving pedestrians and five (5) involving bicyclists, fourteen (14) of which caused injuries. There were ninety-five (96) crashes involving vehicles only. Of these, one resulted in a fatality and thirty-five (35) resulted in injuries. The remaining sixty (60) crashes resulted in vehicle and/or personal property damage.<sup>1</sup>

**Figure 2** shows the locations and number of crashes involving pedestrians and bicyclists in the project area during the study period. **Figure 3** shows the locations and number of crashes involving only motor vehicles.

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<sup>1</sup> From 1/1/2009 through 9/24/2021, there was one additional fatal crash on 2/9/2010 at 8<sup>th</sup> St and Mandela Pkwy in which a pedestrian was killed by a speeding driver.

**Figure 2: Pedestrian and Bicycle Involved Crashes**



**Figure 3: Auto-only Crashes**



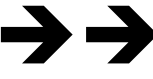
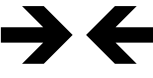




Broadside crashes (collisions with the side of a vehicle or bicyclist) were the most common, with thirty-nine (39) such collisions—twenty-five (25) resulting in injury—followed by seventeen (17) side-swipe crashes, two (2) resulting in injury. The third most common crash type was rear-end crashes, with nine (9) such collisions and three (3) resulting in injury. **Figure 4** summarizes the number of injury crashes for each crash type reported during the analysis period.

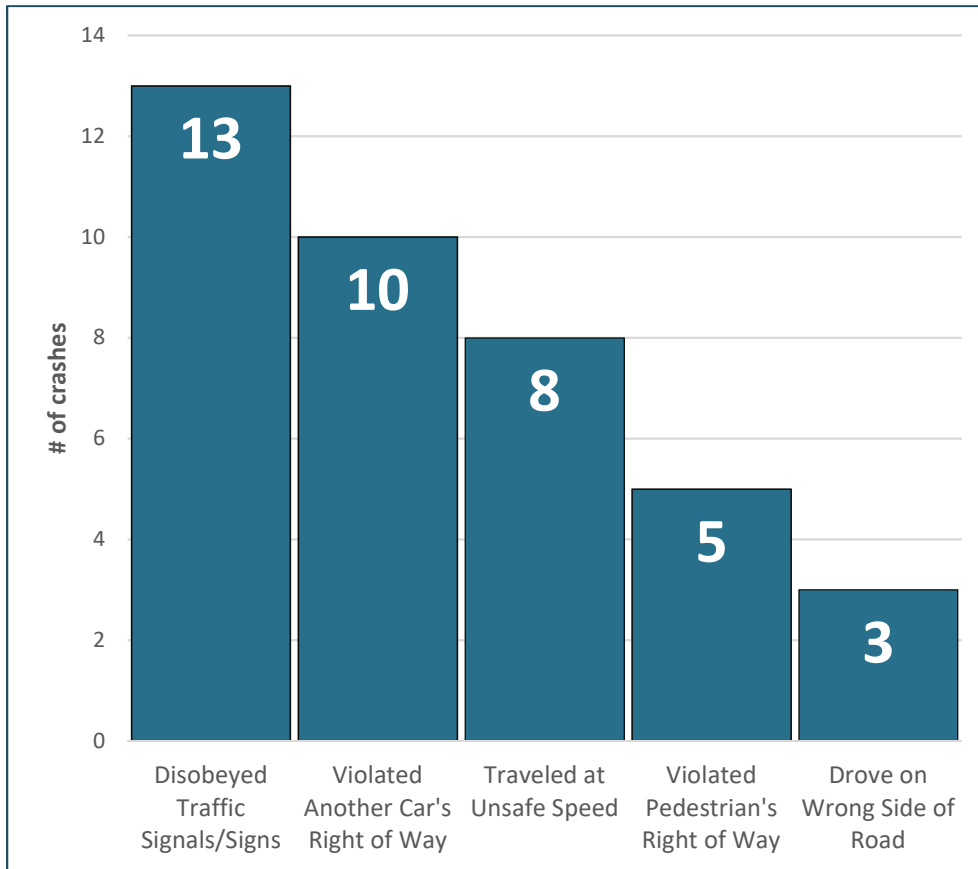
The most common reason (or primary collision factor) for crashes resulting in injuries was traffic signal and sign violations (28% or 11 injury crashes), followed by auto right-of-way violations (26% or 10 injury crashes). Unsafe speed violations was the next most common with (13% or 9 injuries). The most common reasons for injury crashes on the corridor during the analysis period are illustrated in **Figure 5**.

The documented crash pattern suggests that the current roadway configuration does not clearly reinforce the rules of the road and that motorists are exceeding the posted speed (also documented in the speed surveys, see next section).

**Figure 4: Injury Crashed by Type**

Crash Type		# of Injury Crashes
Broadside		<b>27</b>
Vehicle/ped		<b>9</b>
Rear End		<b>4</b>
Head On		<b>3</b>
Sideswipe		<b>3</b>
Hit Object		<b>1</b>
Other	<b>?</b>	<b>1</b>

**Figure 5: Top Five Reasons for Injury Crashes**



### Traffic Speeds

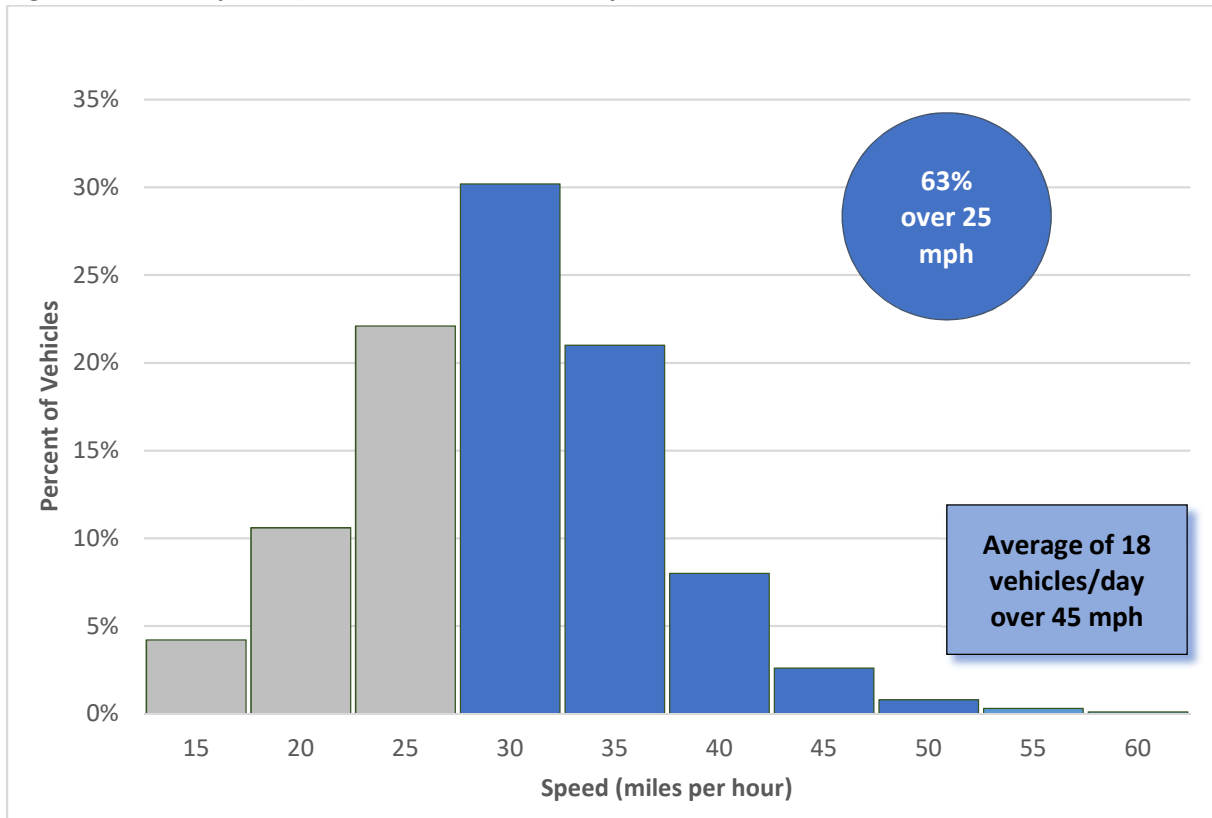
Higher speeds result in more crashes and more severe crashes. Cars traveling faster require longer distances to stop, resulting in a greater risk of crashes. Research by the National Highway Traffic Safety Administration (NHTSA) shows that 5% of pedestrians are killed when struck by a vehicle traveling at 20 miles per hour (mph). In contrast, 40%, 80%, and nearly 100% of pedestrians die when struck by a vehicle going 30, 40, and 50 mph, respectively.

The posted speed limit on 8<sup>th</sup> Street on the west end of the corridor from Pine St to Mandela Pkwy is 25 mph. The posted speed limit on 8<sup>th</sup> Street on the east end of the corridor from Mandela Pkwy to Market St is 30 mph. The City collected 24-hour vehicle speed data along the corridor for seven consecutive days from May 20, 2021 to May 26, 2021.

For the west end of the corridor, the average speed of motorists on 8<sup>th</sup> Street between Henry St and Chester St was observed to be 27 mph. However, 63% of motorists were observed to be exceeding the speed limit. The 85<sup>th</sup> percentile speed, or the speed that 15% of drivers exceeded, was 35 mph. An average of 19 vehicles per day were exceeding 45 mph. **Figure 6** graphs the speeds observed on the west end of the corridor.

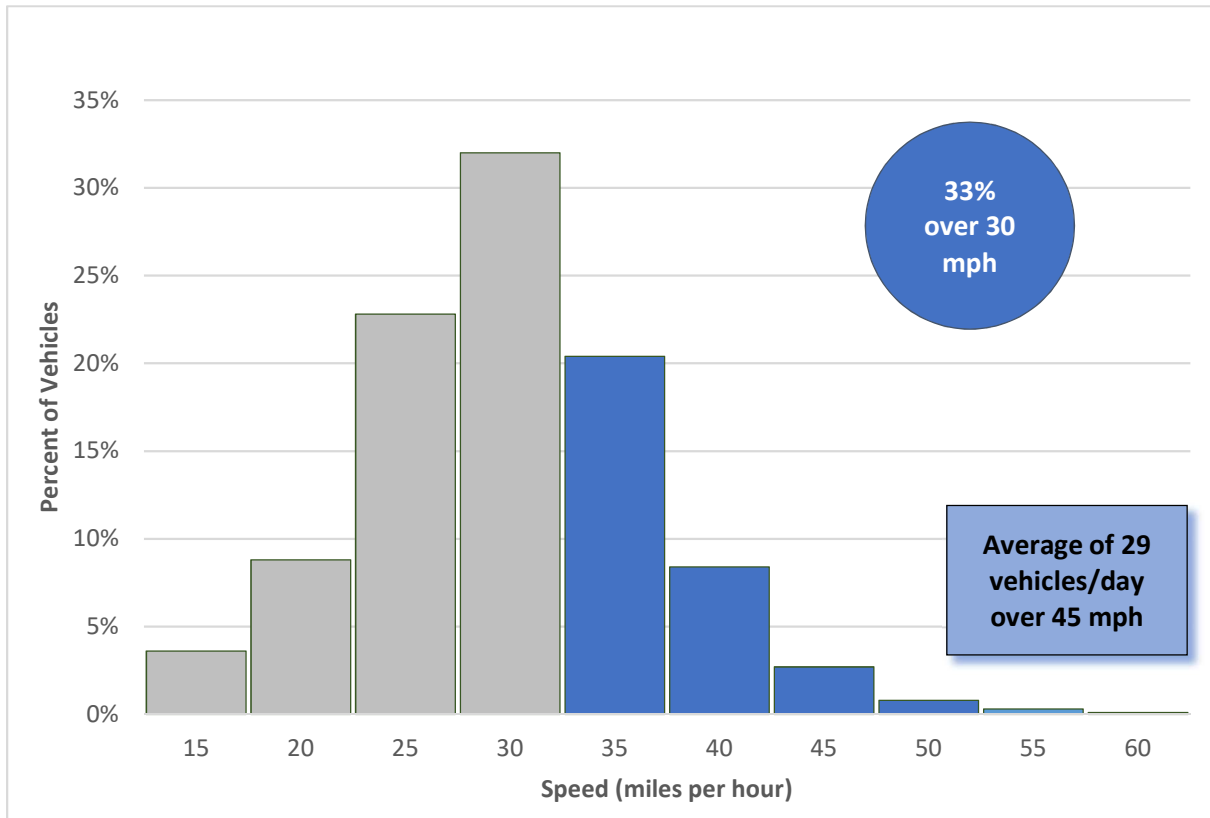


**Figure 6: Motor Speeds (west of Mandela Parkway)**



For the east end of the corridor, the average speed of motorists on 8<sup>th</sup> Street Poplar Wy and Union St was observed to be 27 mph. However, 33% of motorists were observed to be exceeding the speed limit. The 85th percentile speed, or the speed that 15% of drivers exceeded, was 35 mph. An average of 29 vehicles per day were exceeding 45 mph. **Figure 7** graphs the speeds observed on the east end of the corridor.

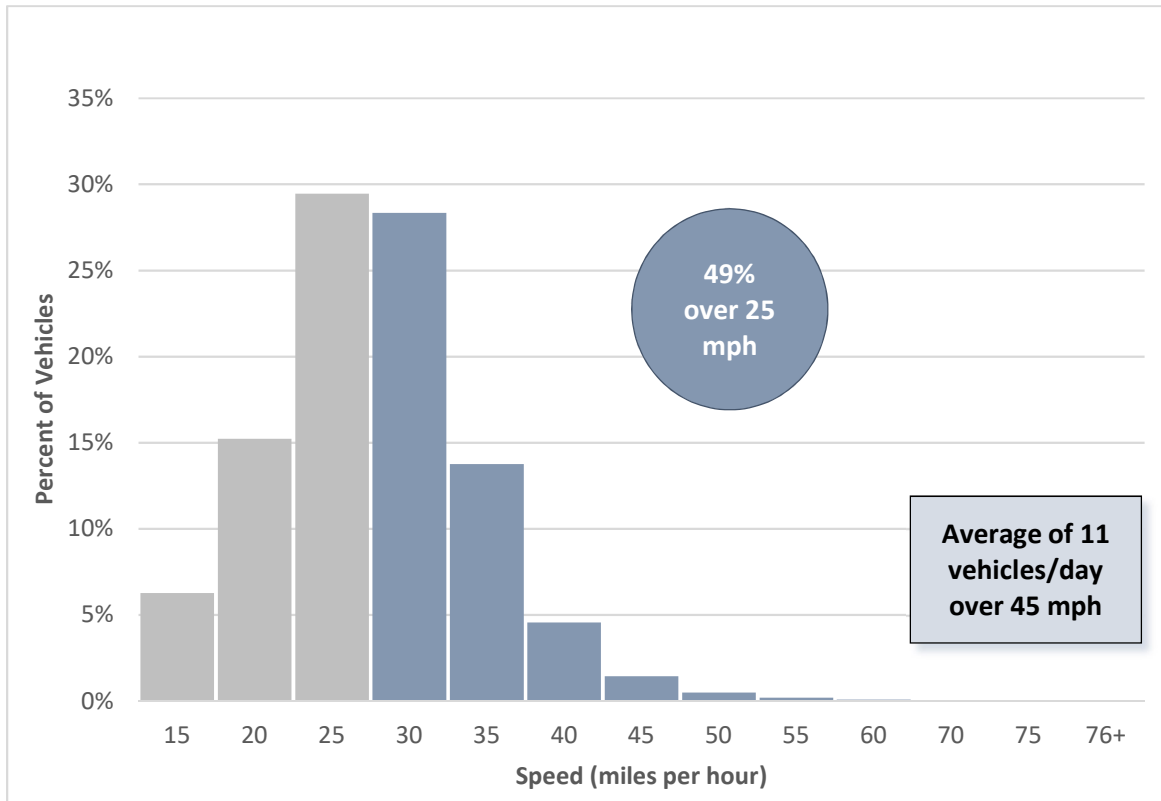
**Figure 7: Motorist Speeds (east of Mandela Parkway)**



Note that data was collected at two additional locations which are included in the appendix.

Prior to the City’s traffic data collection effort, the Safe 8<sup>th</sup> Street neighborhood group conducted their own traffic study, collecting vehicle speed and volume data using a home-built traffic camera and automatic speed calculation and logging software. The community traffic data was collected on 8<sup>th</sup> St between Chester St and Henry St, over a period between November 19<sup>th</sup>, 2020 and February 13<sup>th</sup>, 2021. The Safe 8<sup>th</sup> Street neighborhood group reported the methodology and results of their Citizen Traffic Study on the Safe 8<sup>th</sup> Street Website: <https://www.notion.so/timcourtney/Safe-8th-Street-ab44ff12c9b9498f85e5cb28a0c141d9>. The Citizen Traffic Study found an average motorist speed of 26 mph with 49% of motorists exceeding the speed limit. Fifteen percent of motorists were travelling at or above 32 mph, with 11 motorists per day exceeding 45 mph.

**Figure 8: Motorist Speeds (Citizen Traffic Study, west of Mandela Parkway)**

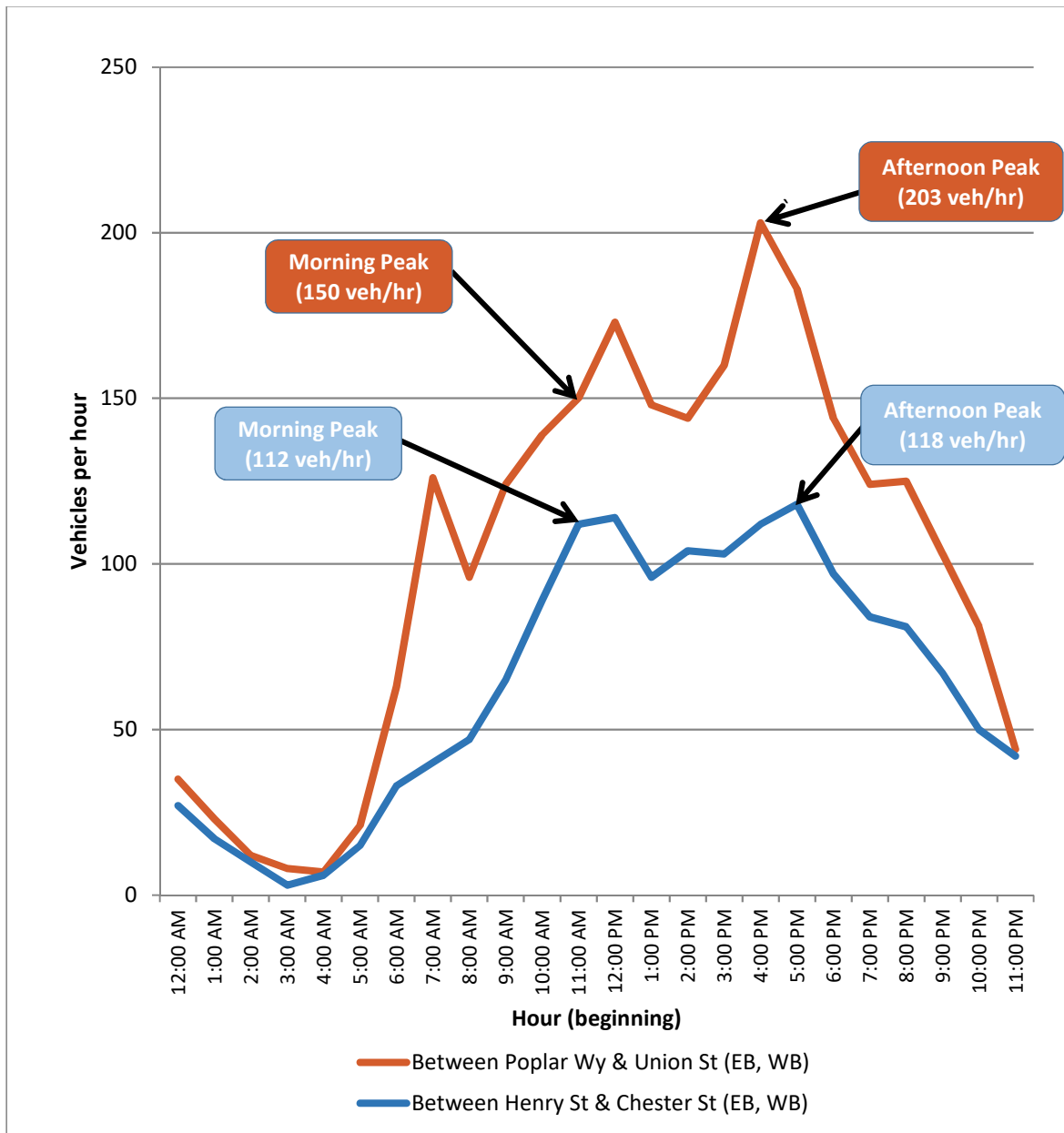


### Traffic Volumes

Most streets are the busiest during the morning and evening commutes, with less traffic during the day and little traffic at night. Historically, many streets were designed to accommodate the busiest one hour (or even 15 minutes) of the day, resulting in streets being under-used for the other 23 hours (or 23 hours and 45 minutes).

Traffic counts were collected between Thursday, May 20 and June 4, 2021 on 8th Street at two locations—between Henry Street and Chester Street as well as between Poplar Way and Union Street. On average, there were 1,532 vehicles per day between Henry Street and Chester Street. The average daily traffic between Poplar Way and Union Street was 2,436 vehicles. The busiest average hours were between 5:00 and 6:00 PM, with 118 vehicles traveling between Henry Street and Chester Street, and between 4:00 and 5:00PM with 203 vehicles traveling between Poplar Way and Union Street. **Figure 9** graphs the average hourly traffic counts.

**Figure 9: Hourly Traffic Volumes**



As described in the Traffic Speeds section of this report, the Safe 8<sup>th</sup> Street neighborhood group conducted a Citizen Traffic Study, which recorded traffic speeds on 8<sup>th</sup> Street, between Chester St and Henry St over an 87-day period between November 19<sup>th</sup>, 2020 and February 13<sup>th</sup>, 2021. In addition to speeds, the Citizen Traffic study provides a report of traffic volumes over the period. According to the data reported by the community, the average daily traffic (ADT) traveling past this location on 8<sup>th</sup> St was 1,149 vehicles per day during the observation period.

## Design Proposals

The following design elements are being considered for the project:

- *Speed Humps* are asphalt bumps located in the middle of the block and sized to slow drivers while allowing access by bicyclists and service vehicles. They are placed to avoid driveways, in-street utilities, and intersecting streets.
- *Traffic Circles* are raised islands located at intersections without traffic signals. Drivers and bicyclists proceed around a traffic circle in a counter-clockwise direction. Intersections with traffic circles typically have stop signs on two or all four of the approaches to the intersection.
- *Hardened Centerlines* are vertical curbs located on the roadway centerlines at intersections. They are typically used at signalized intersections. They keep drivers on the right side of the road and slow traffic by preventing drivers from cutting corners to make quick turns.
- *Median Closure* has been suggested as a possible treatment, extending the median on Mandela Parkway through the intersection at 8<sup>th</sup> Street. Drivers on 8<sup>th</sup> Street at Mandela Parkway would be forced to turn right, while pedestrians and bicyclists would be able to continue on 8<sup>th</sup> Street.
- *Mid-block Crosswalk* was suggested in the CIP request for the long block of 8<sup>th</sup> Street between Adeline Street and Filbert Street, a distance of ~925 feet. A mid-block crosswalk includes a painted crosswalk, warning signs, curb ramps, and parking prohibitions to ensure pedestrians are visible to drivers.

## Art

The funded CIP project includes a public art component. The development and installation of public art will be realized through a close partnership with community members. Possible locations for public art include:

- *Street Murals* through OakDOT's Paint the Town Program. Street murals are painted on the asphalt surface of the roadway at mid-block locations or at intersections without traffic signals.
- *Traffic Circles* provide a possible location for sculpture. A key consideration will be ensuring that drivers, pedestrians, and bicyclists are able to see each other when navigating the intersection.
- *Traffic Signal Cabinets* are the utility boxes for the "brains" that run each traffic signal. These boxes have flat sides that are suitable for painting, and the five traffic signals along 8<sup>th</sup> Street create an opportunity for a unifying theme.
- *Bronze plaques* could be installed in the sidewalk to add artwork or celebrate local history.

## Budget & Costs

The project is funded for \$500,000 through the City of Oakland's Fiscal Year 2021-23 Capital Improvement Program (CIP). These funds will be used for the design elements noted above, plus the public art and the community process to develop agreement on the project design. Coordinating the project with the planned paving of 8<sup>th</sup> Street will bring significant benefits to the project. Funding for the Paving Plan will pay for the new paving, curb ramp upgrades, and roadway stripes – the total costs of which are likely to exceed the project's CIP funding. (For example, high-visibility crosswalks cost roughly \$10,000 per intersection, and these costs will be covered by the Paving Plan's funding.) Staff costs for OakDOT staff in the Bicycle & Pedestrian Program generally will be covered from other sources, preserving the \$500,000 project budget for construction costs, art, and community outreach.



## Policy & Historical Context

This section explains the changing role through time of 8<sup>th</sup> Street as part of Oakland's street network. This historical context has policy ramifications for the current project on whether the street is intended for through traffic or local traffic, the applicability of traffic calming, and in setting the speed limit for 8<sup>th</sup> Street.

### Functional Classification

Maps from the 1950s show 8<sup>th</sup> Street as a major street crossing downtown and connecting into West Oakland and into Eastlake. In West Oakland, 8<sup>th</sup> Street provided the main connection to Cypress Street and on to the Bay Bridge. (Cypress Street was subsequently the site of the Cypress Freeway and is now the location of Mandela Parkway.) The connection to Eastlake was severed in the late 1960s with Laney College being built on what was 8<sup>th</sup> Street. The 8<sup>th</sup> Street Bridge across the Lake Merritt Channel was removed and replaced with a new connection via 7<sup>th</sup> Street. In the 1980s, the construction of Interstate 980 eliminated the 8<sup>th</sup> Street connection between West Oakland and downtown. In effect, 8<sup>th</sup> Street used to play the role that 7<sup>th</sup> Street currently does in connecting West Oakland, Downtown, and Eastlake.

8<sup>th</sup> Street is currently designated as a "minor arterial", the same classification as 7<sup>th</sup> Street. The other minor arterials in West Oakland include Mandela Parkway, Market Street, and portions of Adeline Street and Peralta Street. The "major arterials" in West Oakland are West Grand Avenue, San Pablo Avenue, and portions of 14<sup>th</sup> Street and Adeline Street. 8<sup>th</sup> Street would be more appropriately classified as a "local street" given that it does not serve major destinations, does not connect to downtown or the Port of Oakland, and has modest traffic volumes. In contrast, 7<sup>th</sup> Street is appropriately classified as a minor arterial for having the characteristics that 8<sup>th</sup> Street does not.

### San Francisco Bay Trail

The alignment of the San Francisco Bay Trail (Bay Trail) is meant to be located as close to the water as possible and to consist of mixed used paths wherever possible. Due to waterfront activity by the Port of Oakland and others, much of the Bay Trail in West Oakland is on inland streets away from the waterfront. The Bay Trail alignment adopted by the Coastal Conservancy and administered by the Association of Bay Area Governments (ABAG) includes a section of 8<sup>th</sup> Street between Wood Street and Mandela Parkway. This alignment was selected because, at the time, bike lanes on 7<sup>th</sup> Street were thought to be a challenging project. Improvements to 8<sup>th</sup> Street, Wood St to Market Street, were constructed in 2003, including bike lanes (in one direction only) and Bay Trail signage.

OakDOT staff are recommending that the City of Oakland request that ABAG change the alignment of the on-street Bay Trail in West Oakland between Wood Street and Mandela Parkway from 8<sup>th</sup> Street to 7<sup>th</sup> Street. This recommendation is based on the following considerations:

- The City of Oakland implemented two major streetscape projects on 7<sup>th</sup> Street from Wood Street and Mandela Parkway that made significant improvements for pedestrians and bicyclists.
- Bay Trail travelers are customers to help bolster 7<sup>th</sup> Street businesses as West Oakland's "Main Street." The Bay Trail designation would support the ongoing revitalization of 7<sup>th</sup> Street.
- 7<sup>th</sup> Street has retail services and the BART station which are meaningful to travelers on the Bay Trail.

- 7<sup>th</sup> Street is a more direct alignment. The current alignment on 8<sup>th</sup> Street is less direct and non-intuitive for people traveling from Jack London Square to Middle Harbor Shoreline Park and the Maritime St Path.
- Conversion of 8<sup>th</sup> Street from one-direction bike lanes to a traffic-calmed neighborhood bike route will provide a better accommodation for bicyclists.

### Speed Limits

Per the Oakland Municipal Code (10.20.030), the speed limit on 8<sup>th</sup> Street from Cypress Street to Grove Street is 30 mph. As noted above, Cypress Street pre-dated the Cypress Freeway in the location of what is now Mandela Parkway. Grove Street is now named Martin Luther King Junior Way. This reference to Grove Street suggests that the speed limit is decades old, pre-dating Interstate 980, when 8<sup>th</sup> Street provided a through connection between West Oakland and Downtown. In changing 8<sup>th</sup> Street from a minor arterial to a local street, it would also be appropriate to change the speed limit from 30 mph to 25 mph, which is typical for local streets.

### Street Width

The width of 8<sup>th</sup> Street provides an additional insight into the changing role of the street from minor arterial to local street. The current typical roadway width (i.e., from “curb-to-curb”) of 8<sup>th</sup> Street is 44 feet. Oakland’s typical local residential streets with on-street parking and one lane per direction are 36 feet or 40 feet wide. City of Oakland survey records show that at one time the width of 8<sup>th</sup> Street between Union Street and Market St was 60 feet – typical for four lane streets with on-street parking. It appears that the Acorn Redevelopment projects in the mid-20<sup>th</sup> Century narrowed 8<sup>th</sup> Street by 16 feet. This change is consistent with 8<sup>th</sup> Street being replaced by 7<sup>th</sup> Street as one of the major connectors between West Oakland and Downtown.

### Appendix

- A. Traffic Crashes and Data, 8th Street, Pine Street-Market Street 2014-2018
- B. Speed Data, Average Daily Traffic Counts, Turning Movement Counts