


CITY OF LOS ANGELES
INTER-DEPARTMENTAL MEMORANDUM

Date: June 7, 2023

To: Honorable City Council
c/o City Clerk, Room 395
Attention: Honorable Heather Hutt, Chair, Transportation Committee

From: Connie Llanos, Interim General Manager
Department of Transportation 

Subject: **ANAHEIM PRIORITY CORRIDOR - FIGUEROA STREET TO HENRY FORD AVENUE SAFETY IMPROVEMENTS REPORT**

SUMMARY

In response to [Council File 22-1568](#), this report provides an overview of the traffic safety improvements recently installed on Anaheim Street between Figueroa Street and Henry Ford Avenue, as well as the methodology and metrics that the Los Angeles Department of Transportation (LADOT) will use to evaluate the effectiveness of the safety improvements.

RECOMMENDATION

LADOT recommends the Los Angeles City Council RECEIVE and FILE this report.

BACKGROUND

Anaheim Street between Figueroa Street and Henry Ford Avenue is on the City of Los Angeles' (City) High-Injury Network (HIN), as well as the Mobility Plan 2035 Bicycle Enhanced Network. In 2017, LADOT identified this segment of Anaheim as a Priority Corridor due to the high rate of severe and fatal crashes (particularly those involving people walking and bicycling, children, or seniors), and because it is located in a community in the top quintile of the City's Community Health and Equity Index¹.

From 2017 to 2019, LADOT installed these Phase 1 safety improvements on the entirety of the Anaheim Priority Corridor:

- Upgraded all traditional crosswalk markings to high-visibility ladder-style crosswalks
- Installed four electronic speed feedback signs
- Installed six flashing beacons at unsignalized pedestrian crossings

In Fall 2021, LADOT partnered with Council District 15 and the Bureau of Street Services (StreetsLA) to develop a comprehensive safety and connectivity improvement project for the Wilmington area. With

¹<https://geohub.lacity.org/datasets/ladot::community-health-and-equity-index-2013/explore?location=34.046054%2C-118.333557%2C12.00>

the support of a consultant team, LADOT conducted community engagement from Fall 2021 to Spring 2022 to inform the project concepts. Through surveys, neighborhood meetings, and on-street engagement, LADOT heard from Wilmington residents and stakeholders about the need to improve traffic safety on Anaheim Street. Specific concerns focused on reducing speeding and the need for safer pedestrian crossings. Many residents reported that they did not feel safe riding a bike or letting their children walk or bike on Anaheim Street along these project limits.

In late 2022, the City secured \$32 million through the State of California's Active Transportation Program (ATP) for the "Wilmington Safe Streets" project, informed by the years-long engagement conducted, to build out long-term improvements on Anaheim Street and several neighborhood streets in Wilmington. This ATP funded project will address safety concerns on Anaheim from Figueroa Street to Alameda Street. Anaheim from Alameda Street to Henry Ford Avenue is part of a future Bureau of Engineering project, which will add bike lanes that connect to Wilmington Safe Streets.

With the ATP-funded project still several years away, and urgent safety concerns along Anaheim Street, in Fall 2022 LADOT coordinated with StreetsLA to begin installation of a "quick-build" version of the ATP-funded permanent safety improvements on Anaheim Street.² StreetsLA resurfaced the roadway in November and December 2022, allowing LADOT to install a new street design using low-cost materials such as paint and plastic bollards, setting the stage for the more permanent improvements that will come in following years. This approach allows us to give community members an opportunity to get comfortable with the new street design while providing immediate safety upgrades to the corridor.

In February 2023, Council directed LADOT to report on the recently installed traffic calming measures and safety improvements on Anaheim Street.

DISCUSSION

To improve safety by advancing elements of the City's ATP-awarded project on Anaheim, the quick-build safety project from Figueroa Street to Alameda Street includes new street designs as well as new parking, curb extensions, and new intersection treatments to improve safety and connectivity for bicyclists. LADOT collected pre-project data, and will begin its project evaluation in 2024 after collecting at least one year of post-project data. Future phases of the project will implement these treatments with concrete, and will include new traffic signals and pedestrian crossings. The attached images show both the new street design and the anticipated ATP project elements.

Street Design

The street design on Anaheim consists of two project segments: Figueroa Street to Eubank Avenue, and Eubank Avenue to Alameda Street. Each segment was designed to improve safety and connectivity, while responding to different conditions and uses along the corridor. Prior to project implementation, LADOT ensured that the full project design met the Los Angeles Fire Department's clear space and fire hydrant access requirements. LADOT also shared the project design with the Los Angeles Police Department's Harbor Division for feedback relevant to their local operations.

Figueroa Street to Eubank Avenue

² ladotlivablestreets.org/projects/Anaheim

LADOT reorganized the street between Figueroa Street and Eubank Avenue (1.4 miles) to remove one travel lane in each direction and install a continuous center-turn lane and Class II bike lanes. The project design also includes green paint in conflict areas to alert drivers to the presence of bicyclists. These treatments aim to improve safety by:

- Reducing crossing distances for people walking
- Reducing weaving behavior by drivers
- Reducing speeding
- Providing dedicated travel space for people bicycling
- Providing dedicated left-turn lanes for drivers

This new design also allowed LADOT to install quick-build curb extensions with paint and reflective pavement markers. These treatments aim to slow down turning vehicles and give people walking additional space to cross the street. Through the ATP-funded Wilmington Safe Streets project, the City will upgrade these curb extensions with concrete.

In addition to these safety benefits, the new design restored some on-street parking where it did not previously fit due to limited street width near intersections with left-turn lanes. The new continuous center turn lane also allows for emergency service vehicles to bypass slower-moving traffic during peak-hours, as needed.

LADOT's consultant completed a traffic study in Fall 2022 to estimate the anticipated changes in travel delay along Anaheim Street between Figueroa Street and Eubank Avenue as a result of the lane reconfiguration. Below is a summary of the forecasted changes in driver travel time along the corridor as identified in the traffic study:

- Westbound
 - Morning peak hours (7-10 AM): increase of 1 minute
 - Afternoon peak hours (3-6 PM): increase of 2 minutes, 12 seconds
- Eastbound
 - Morning peak hours (7-10 AM): increase of 1 minute, 18 seconds
 - Afternoon peak hours (3-6PM): increase of 1 minute, 48 seconds

Eubank Avenue to Alameda Street

Anaheim Street between Eubank Avenue and Alameda Street (0.6 miles) is a designated truck route that experiences a high volume of trucks. On this segment, LADOT installed new protected bike lanes in place of on-street parking while maintaining two travel lanes in each direction. This design will accommodate the truck movement and maintain access to the nearby Port facilities. With these new protected bike lanes and the lane reconfiguration between Figueroa Street and Eubank Avenue, the project created two miles of bike facilities that will ultimately connect to existing bike lanes east of Henry Ford Avenue and reach into the City of Long Beach.

The bike lanes along this segment are located adjacent to the curb with a painted buffer area and plastic bollards to provide separation from vehicle traffic. The project design also includes green paint in conflict areas to alert drivers to the presence of bicyclists. It is especially important to provide this separation due to the high volume of trucks on this segment of Anaheim Street. Because it is harder for

truck drivers to see bicyclists, the bollards and paint bring more attention to the bike lane. Through the ATP-funded project, the City will replace the painted buffer and bollards with a continuous concrete barrier. An upcoming Bureau of Engineering street widening project will add bike lanes on Anaheim Street between Alameda Street and Henry Ford Street. The project implements the Bicycle Enhanced Network (BEN) designation in the City's Mobility Plan 2035 and adds a critical east-west connection to the expanding bike network in Wilmington.

Intersection Improvements

In addition to the corridor-wide improvements, LADOT also installed innovative treatments at four critical intersections to improve safety and connectivity for bicyclists and to reduce the amount of cut-through traffic onto nearby neighborhood streets with existing bike lanes.

At Broad Avenue, LADOT used paint and plastic bollards to install a protected intersection design for bicyclists. Here, LADOT shifted the bike lane to run curbside and added new roadway markings to create a safer way for bicyclists to turn left at this offset signalized intersection. At McDonald Avenue, Lagoon Avenue, and Lakme Avenue, LADOT used plastic bollards to install a new protected bicycle left-turn lane, to allow people on bikes to safely cross and make turns at these offset unsignalized intersections. Vehicle traffic in the bicycle turn lane is currently restricted through the use of plastic bollards and will be supplemented by modular median islands later in 2023. Through the ATP project, the City will upgrade the protected intersection and protected bicycle left-turn lanes with concrete and add a protected intersection at Neptune Avenue.

Traffic Signal and Pedestrian Crossing Upgrades

LADOT will further enhance safety along this corridor with additional signals, Pedestrian Hybrid Beacons (PHB), and left-turn arrow upgrades. PHBs are an important upgrade from flashing beacons because they display a pattern of yellow and red lights that improve driver compliance³. Left-turn arrows give drivers a dedicated time to turn left, thereby reducing conflicts with oncoming traffic, pedestrians in the crosswalk, and bicyclists.

These elements will improve safety for people crossing the street at these locations and are funded through a variety of sources, including the Vision Zero signal program, the State's Highway Safety Improvement Program (HSIP), and ATP funds. Signal projects installed and planned for 2023/2024 include:

- Upgrade of flashing beacons at Gulf Avenue to a Pedestrian Hybrid Beacon signal in February 2023
- Two new traffic signals at Bay View Avenue and Marine Avenue (expected activation June 2023)
- Upgrade of three flashing beacons at Hawaiian Avenue, Gulf Avenue, and Island Avenue to PHBs (expected activation 2024)

The signal projects below will be built as part of the ATP-funded project. While there is no defined schedule at this time, ATP funding is programmed over four years (FY 2023-24 through FY 2027-2028) and released to the City on a reimbursement basis. LADOT did not complete a detailed engineering

³ Studies from the Federal Highway Administration have indicated that drivers comply with PHBs 97% of the time

design before submitting the grant application for ATP funding, and will need to finalize all designs and community engagement prior to implementation. Once these required steps are completed, LADOT expects construction of these signal projects, as well as other ATP-funded elements, will take place between 2027-2030:

- Upgrades from flashing beacons to PHBs at King Avenue, Flint Avenue, and Pioneer Avenue
- One new PHB at Banning Boulevard
- Two pedestrian refuge islands at Island Avenue and Banning Boulevard
- Three left-turn arrow upgrades to traffic signals at Wilmington Boulevard, Fries Avenue, and Eubank Avenue

Methodology and Metrics of Project Evaluation

LADOT's standard practice is to evaluate all lane reconfiguration projects to assess the impacts to various road users, make any necessary adjustments to the design, and measure impacts. In November 2022, LADOT collected data on how people were using Anaheim Street before quick-build improvements, and staff will collect data again approximately one year after implementation (January 2024). Best practices demonstrate that the one-year period ensures there is sufficient data to analyze and provides ample time for road users to fully adjust to the new design.

The post-project evaluation will consider a variety of metrics to measure impacts and determine whether LADOT will need to make any adjustments to the project.

The primary aim of the project is to improve traffic safety conditions. LADOT will measure several traffic safety indicators and compare them to pre-project conditions to assess:

- Reductions in the number of crashes on Anaheim Street, particularly those that result in severe injury or death
- Reductions in high-end speeding, defined as drivers traveling at least 10 MPH above the speed limit
- Improved yielding at pedestrian crossings by drivers

The project also aims to make it safer and more comfortable for people to choose other modes of travel to get around the area that don't require a car, like walking or biking. Therefore LADOT will also measure walking and biking activity to assess:

- Increased pedestrian and bicycle volumes overall
- Increased bicyclists riding in the on-street bike lanes compared to riding on the narrow sidewalks
- Increased pedestrians crossing at signalized intersections versus midblock

Finally, LADOT will evaluate several metrics to ensure the new design is operating efficiently and help identify any design adjustments needed, including:

- Vehicle travel time along the corridor pre- and post-project
- Traffic volumes on nearby parallel residential streets to identify any need to mitigate cut-through traffic
- Interaction between vehicles and bicyclists at the new protected bicycle left-turn lanes

In advance of this full evaluation, LADOT conducted a preliminary analysis of travel time changes on Anaheim between Figueroa St and Eubank Ave⁴. Below is a summary of the observed travel time changes:

- Westbound
 - Morning peak hours: 7-10 AM: increase of 20 seconds
 - Afternoon peak hours: 3-6 PM: increase of 1 minute, 28 seconds
 - 24-hour average: increase of 54 seconds
- Eastbound
 - Morning peak hours: 7-10 AM: increase of 7 seconds
 - Afternoon peak hours: 3-6 PM: increase of 40 seconds
 - 24-hour average: increase of 36 seconds

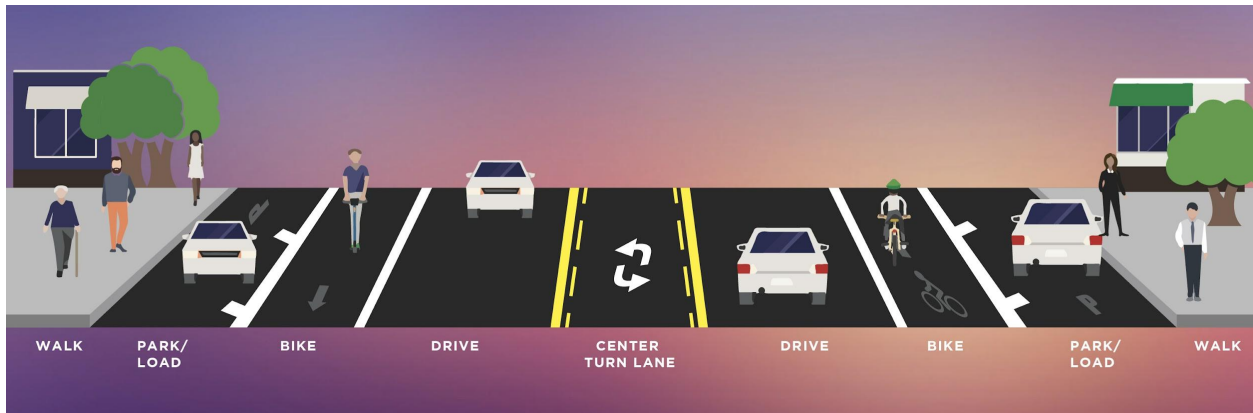
This analysis demonstrated that vehicle travel time increases were less than the traffic study forecasted. LADOT will continue to monitor whether there are any significant changes in travel time as part of the evaluation process.

FINANCIAL IMPACT

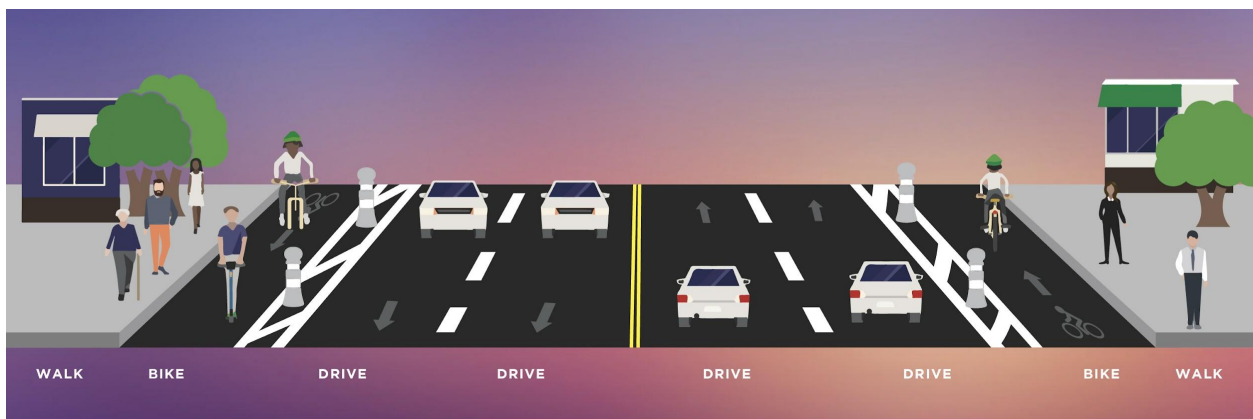
There is no financial impact associated with this report.

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⁴ LADOT used data from INRIX, a platform that aggregates data from connected cars, smart devices, cameras, and sensors. The pre-project period includes Tuesdays through Thursdays between January 23, 2022 and February 24, 2022. The post-project period includes Tuesdays through Thursdays between January 23, 2023, and February 24, 2023.

Attachment A: Images of New Street Design and Active Transportation Program Project Elements

New Street Design on Anaheim Street Between Figueroa Street and Eubank Avenue



New Street Design on Anaheim Street Between Eubank Avenue and Alameda Street



Photo Rendering of Protected Intersection at Anaheim Street and Neptune Avenue



Photo Rendering of Concrete Curb Extensions at Anaheim Street and Marine Avenue



Photo Rendering of Protected Bicycle Left-Turn Lane at Anaheim Street and Lakme Avenue