

# RECOMMENDATIONS TO IMPROVE PEDESTRIAN & BICYCLE SAFETY IN LOMPOC



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## INTRODUCTION

At the invitation of the Lompoc Valley Community Healthcare Organization and the City of Lompoc Engineering and Fire Departments, the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks) facilitated a community-driven pedestrian and bicycle safety action-planning workshop in the City of Lompoc to improve pedestrian safety, bicycle safety, walkability, and bikeability across the City. Cal Walks facilitated the workshop on April 22, 2017, which consisted of: 1) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety; 2) two walkability and bikeability assessments along two key routes; and 3) small group action-planning discussions to facilitate the development of community-prioritized recommendations to inform Lompoc's active transportation efforts. This report summarizes the workshop proceedings, as well as ideas identified during the process and recommendations for pedestrian and bicycle safety projects, policies, and programs.

## BACKGROUND

### Community Pedestrian and Bicycle Safety Training Program

The Community Pedestrian and Bicycle Safety Training (CPBST) program is a joint project of UC Berkeley SafeTREC and Cal Walks. Funding for this program is provided by a grant from the California Office of Traffic Safety (OTS) through the National Highway Traffic Safety Administration (NHTSA). The

purpose of the CPBST program is to train local neighborhood residents and safety advocates on how to improve pedestrian and bicycle safety and to strengthen their collaboration with local officials and agency staff to make communities safer and more pleasant to walk and bike. For each training, the program convenes a multi-sector, multi-disciplinary local planning committee to tailor and refine the training's curriculum and focus to meet the community's needs. Additionally, Cal Walks staff conduct pre-training site visits to collect on-the-ground observations of existing walking and biking conditions to inform the training's scope and focus.

The half-day training is designed to provide participants with both pedestrian and bicycle safety best practices and a range of proven strategies (the 6 E's: Empowerment & Equity, Evaluation, Engineering, Enforcement, Education, and Encouragement) to address and improve pedestrian and bicycle safety conditions and concerns. Participants are then guided on a walkability and bikeability assessment of nearby streets before setting pedestrian and bicycle safety priorities and actionable next steps for their community.

For a summary of outcomes from past CPBST workshops, please visit:

[www.californiawalks.org/wp-content/uploads/2016/05/CPST-Annual-Report-2015.pdf](http://www.californiawalks.org/wp-content/uploads/2016/05/CPST-Annual-Report-2015.pdf) and <https://safetrec.berkeley.edu/programs/cpbst>

## **Selected Pedestrian & Bicycle Safety Conditions in Lompoc**

### **High Speeds & Wide Roads**

Ocean Avenue or State Route 246, owned and operated by the California Department of Transportation (Caltrans), is one of Lompoc's main thoroughfares. It is a wide road with two travel lanes on each side for vehicles, parallel parking on both sides of the streets, and currently lacks bike lanes. Students traveling from West of H Street cross Ocean Avenue on a daily basis to attend Lompoc High School and Lompoc Valley Middle School. Research has demonstrated that wide streets and wide travel lanes are associated with higher vehicle speeds,<sup>1</sup> which affect safety for people walking and bicycling. Traffic calming measures, including the addition of separated curb extensions, pedestrian refuge islands, and on-street bicycle infrastructure, may improve the conditions along Ocean Avenue for all users.

### **Faded Street Markings & Lack of Crossing Signals**

During Cal Walks' site visit, staff observed numerous worn and faded markings at most crosswalks along Ocean Avenue. In particular, along West Ocean Avenue from K Street to W Street, the road pavement is in poor condition. Housing is dense with many apartments in this area, as well as a large amount of pedestrian traffic due to proximity of schools. There are many uncontrolled intersections in this area where the faded marked crosswalks make crossing difficult. These difficult crossing conditions

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<sup>1</sup> See Kay Fitzpatrick, Paul Carlson, Marcus Brewer, and Mark Wooldridge, "Design Factors That Affect Driver Speed on Suburban Arterials": Transportation Research Record 1751 (2000):18–25.

are compounded by the high traffic speeds along Ocean Avenue.

### **Unprotected Railroad Crossings**

Along Laurel Avenue, a short freight train operates twice a week and runs through the City. Though most of the intersections where the railroad crosses have some sort of warning signage, they all lack standard crossing gates. Additionally, there are widespread concerns with the poor condition of the railroad tracks and the potential for a derailment due to track conditions.

Where the railroad crosses diagonally through the intersection A Street and Cypress Street, it becomes adjacent to Hapgood Elementary School, and consequently presents numerous challenges to students, families, and other residents in the neighborhood. While two legs of the intersection have marked crosswalks, the crosswalks that traverse the railroad tracks are unmarked. Despite the uplifted road pavement at the tracks and lack of crossing gates, residents are still using the unmarked crosswalks as their most direct route to/from the adjacent neighborhood and the school and park.

Lastly, the uneven pavement where the tracks are located present challenges for people walking and biking across the railroad, especially those using wheelchairs or other assistive devices. One area where this is especially prevalent is at the intersection of Laurel Avenue and A Street, located close to Johns-Manville Park, where the difficulty of crossing the tracks is compounded by a lack of sidewalks on one side of A Street.

### **Bicycle Network Gaps and Lack of Wayfinding**

Though a network of bike lanes exists throughout Lompoc, more and better wayfinding signage is necessary to direct residents to existing bike routes. Currently, bicycle wayfinding maps only exist at the entrance of the City and only a few “Bike Route” signs are present where bike routes exist.

Key gaps in the bicycle network include O Street (between Laurel Avenue and Central Avenue), the entirety of H Street (State Route 1), and the entirety of Ocean Avenue in city limits (State Route 246), and A Street (between Chestnut Avenue and North Avenue).

### **Pedestrian & Bicyclist Collision History**

Between 2011-2015,<sup>2</sup> there were 56 pedestrian collisions, including 4 fatalities and 9 severe injuries, in Lompoc, and 69 bicycle collisions, including 1 fatality and 11 severe injuries, citywide. Based on our analysis of the collision data, the high-collision corridors include Ocean Avenue (State Route 246), North H Street (State Route 1), and North O Street.

In Lompoc, 64.3% of pedestrian collisions can be attributed to driver violation, while 12.5% of

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<sup>2</sup> Please note that 2014 and 2015 collision data are provisional and not yet final.

pedestrian collisions can be attributed to pedestrian violation. Driver violations largely included failure to yield to pedestrian right-of-way,<sup>3</sup> while pedestrian violations were primarily failure of the pedestrian to yield to vehicle traffic when crossing outside a crosswalk.<sup>4</sup> For bicycle collisions, 30.4% are attributed to bicycling on the wrong side of the road (against traffic), and an additional 26.1% are attributed to a right-of-way violation either by a bicyclist or a driver.<sup>5</sup>

## APRIL 22 WORKSHOP

The community-based organization, Lompoc Valley Community Healthcare Organization, requested a workshop to 1) provide City/County staff, community organizations, and residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects; 2) strengthen working relationships between the Lompoc Valley Community Healthcare Organization and other stakeholders to ensure the best outcomes for the residents of Lompoc; and 3) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps.

The workshop was hosted from 10:00 am to 2:00 pm, and both lunch and childcare were provided. Fourteen (14) individuals attended the workshop, including representatives from City of Lompoc Public Works Department, City of Lompoc Fire Department, Caltrans District 5, Lompoc's City Manager, Lompoc Valley Community Health Organization, Lompoc Valley Bicycle Club, and other community residents. Many of the professionals were city residents themselves.

## Reflections from Walkability & Bikeability Assessment

Workshop participants conducted walkability and bikeability assessments along two routes. One route traveled along Ocean Avenue (State Route 246), one of Lompoc's high injury corridors, and Cypress Avenue, where new bike lanes have been installed. The second route traveled along Walnut Avenue to John-Mansville Park and also assessed conditions along A Street, and Laurel Avenue. Participants were asked to 1) observe infrastructure conditions and the behavior of all road users; 2) apply strategies learned from the 6 E's presentation that could help overcome infrastructure concerns and unsafe driver, pedestrian, and bicyclist behavior; and 3) identify positive community assets and strategies which can be built upon. Following the walkability and bikeability assessment, the participants shared the following reflections:

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<sup>3</sup> Pedestrian Right-of-Way Violations are defined as instances where a driver fails to yield to a pedestrian in a marked or unmarked crosswalk when the pedestrian has the right of way (e.g., when the pedestrian has a "Walk" signal at a signalized intersection).

<sup>4</sup> Pedestrians have the right-of-way in marked and unmarked crossings, and drivers are legally required to yield to pedestrians in these instances. However, when pedestrians cross outside of marked or unmarked crossings, pedestrians must yield the right-of-way to drivers. This is not the same as the term "jaywalking," which refers to crossing outside of a marked or unmarked crossing between two signalized intersections. A pedestrian is legally able to cross outside of a marked or unmarked crossing between two intersections where one or none of the intersections is signalized but only if the pedestrian yields the right-of-way to oncoming drivers.

<sup>5</sup> The California Vehicle Code 21200(a) specifies that a person riding a bicycle "has all the rights and is subject to all the provisions applicable to the driver of a vehicle..." Accordingly, some primary collision factors are ambiguous as to whether the driver or bicyclist committed the violation without examining individual traffic incident reports.

- **Sidewalk Gaps:** Both routes contained sections of discontinuous sidewalks. Participants on the Ocean Avenue (State Route 246) route were particularly challenged by the sidewalk gaps, contending with overgrown vegetation, and no buffer between the dirt path and very fast moving traffic during the assessment. Participants that walked the second route were



*Participants walking on a dirt path on Ocean Avenue (State Route 246).*

confronted with various sidewalk gaps, especially along Walnut Avenue, which is primarily a residential neighborhood.

- **Accessibility Challenges:**

Participants observed that tree roots and train tracks created large cracks and uplifted sidewalks, as well as the actual road pavement in some areas. These uneven pavement conditions create a tripping hazard for people walking and make it difficult or impossible to navigate the sidewalk or cross the street near John-Mansville Park. Residents walking with assistive devices, using wheelchairs, pushing strollers, or children riding their bikes

on the sidewalk have an even more difficult time. In a number of areas, the sidewalk network is either incomplete or does not meet modern accessibility standards. Lastly, overgrown vegetation has encroached onto the sidewalk in many areas, making it difficult to walk on the sidewalk.

- **Lack of Controlled or Enhanced Uncontrolled Crossings:** Participants who walked to and from John-Mansville Park noted that Laurel Avenue and A Street lacked stop signs, traffic signals, marked crosswalks, or other traffic control devices to assist residents in crossing these streets. Participants were particularly concerned with the lack of traffic control markings and/or devices in proximity to the park.
- **Need for Connected Bike Routes & Improved Bike Network:** Participants who walked both routes expressed a need to strengthen the existing bike network by adding signage across town that makes it clear to all users where existing bike routes are located. They also identified the need to work toward filling in



*Uneven pavement due to train tracks.*

gaps in the bicycle network. Participants who walked the second route noted that although the bike park was close to this walk route, there was no clear path orientating bicyclists toward the bike park. While the bike lanes along Cypress Avenue were applauded by participants, participants underscored that Ocean Avenue is one of the communities “Main Streets” and is even signed as part of the Pacific Coast Bike Route. Due to its use both for long-distance riders but also for residents to access everyday goods and services, participants expressed strong support for adding bike lanes along Ocean Avenue.

### Community Resident Recommendations

Following the walkability and bikeability assessment, Cal Walks facilitated small-group action planning discussions. Workshop participants discussed two sets of questions: the first focused on prioritizing strategies for reducing the number of injuries at crosswalks and intersections, while the second focused on where such efforts should be targeted.

Workshop participants provided the following recommendations for overall pedestrian and bicyclist safety improvements:

#### *Infrastructure Concerns & Priorities*

- **Improve Sidewalk Conditions & Address Sidewalk Gaps:** There is a general need to ensure that sidewalks are level and free from obstructions like vegetation. To increase visibility and safety, better pedestrian-scale lighting is needed, especially along neighborhood streets like Walnut Avenue, A Street, and Laurel Avenue.
- **Improve Crossing Conditions & Ensure ADA Compliance:** Participants identified the need for high-visibility crosswalks and the addition of flashing beacons at numerous intersections along Ocean Avenue that have higher pedestrian traffic. To improve crossing conditions, participants also noted the need for more curb ramps and the restriping of faded crosswalks. Participants also felt that some intersections could benefit from increasing the crossing times and installing pedestrian countdown signals.
- **Improve Bicyclist Connectivity:** Participants voiced the need to improve the bicycle network in Lompoc. Ideas shared included: improved signage for bike routes; addition of bike lanes on “Main Streets”; buffered bike lanes that provide physical separation from traffic; and the prioritization of connecting any new bike lanes with the existing bike route network.
- **Improve Conditions around Union Pacific Railroad:** Participants identified numerous safety challenges with the Union Pacific railroad tracks and their impact on pedestrian and bicycle safety and mobility throughout Lompoc. Participants underscored their interest in Union Pacific making safety improvements for all road users affected by the railroad tracks.

#### *Non-Infrastructure Concerns & Priorities*

Participants also identified the following enforcement, education, and encouragement programs that could be implemented to improve pedestrian and bicycle safety in Lompoc:

- Targeted Enforcement

- o Create a partnership between the police department and Healthy Lompoc Coalition to ensure targeted enforcement is successful across all of Lompoc.
- o Educational Campaigns
  - o Take advantage of the City's social media and Lompoc Police's phone application to educate all of Lompoc residents regarding the rules of the road.
  - o Focus educational campaigns on drivers to ensure they respect the pedestrian right of way at intersections and crosswalks.
  - o Establish an educational program targeting bicyclists to enhance their understanding of the rules of road.
- o Complete Streets Planning
  - o Develop a Complete Streets plan to analyze critical needs for the O Street Corridor (a key bike network gap).
  - o Pursue funding from the Caltrans Sustainable Transportation Planning grant program to develop Complete Streets Plans for H Street/State Route 1 and Ocean Avenue/State Route 246.



*Participants identifying and prioritizing next steps.*

The community emphasized that both infrastructure and non-infrastructure improvements should be targeted on the three high-injury corridors as identified by the pedestrian and bicycle collisions from 2011-2015. The three high-injury corridors are Ocean Avenue (State Route 246), North H Street (State Route 1), and North O Street. Both Ocean Ave. and North H. St. are owned and operated by Caltrans; therefore, the community agreed that an immediate next step to address these issues is to submit a Caltrans Sustainable Transportation Planning Grant Program application in order to complete a Critical Needs Analysis and a Complete

Streets Plan for those corridors. In the meantime, the City and the community partners present identified O Street, parks, and schools as priority locations for necessary improvements.

### **California Walks/SafeTREC Recommendations**

California Walks and SafeTREC also submit the following recommendations for consideration by the City of Lompoc:



- **Collaborate with Community Partners to Strengthen Applications to Secure Additional Funding for Transportation Planning & Implementation:** Many new and existing sources of state and federal transportation funding for walking and biking projects are increasingly including priorities related to community engagement in the transportation planning and decision-making processes. The state’s Active Transportation Program, for example, scores projects that conduct meaningful and effective community outreach for a walking or biking project, meaning these projects enabled residents to participate early on during the project conception phase and/or made the planning process open and accessible by hosting workshops or meetings during hours that suited the residents, provided translation and child care services, and were hosted in places that were easy to access by transit. Formally partnering with community-based organizations who have established relationships with residents—either by providing direct funding for outreach activities or by partnering with an organization to help scope or write an application—can lead to strengthened and successful funding applications.

We strongly support the workshop participants’ desire to submit an application to the Caltrans Sustainable Transportation Planning Grant program to develop formal Complete Streets plans for the two state highways that run through Lompoc (H Street/State Route 1 and Ocean Avenue/State Route 246) as a first step. We recommend that these plans include the development and prioritization of community-identified walking and biking projects that could then be submitted to the state Active Transportation Program for funding.

- **Improve the Citywide Bike Network:** On the whole, the City has made notable progress in providing a minimum grid of bike routes throughout Lompoc. However, there are key gaps, particularly on commercial main streets, that would greatly enhance the connectivity of the bike network, as well as increase mobility options for residents. Accordingly, we recommend that any new bicycle facilities that are installed be focused on O Street (between Laurel Avenue and Central Avenue), the entirety of H Street (State Route 1), and the entirety of Ocean Avenue in city limits (State Route 246), and A Street (between Chestnut Avenue and North Avenue). Two of these gaps (H Street/SR 1 and Ocean Avenue/SR 246) are Caltrans owned roadways and will require coordination with Caltrans District 5.

California Walks and SafeTREC also encourage Caltrans and City coordination. Caltrans District 5 can engage City agencies and residents in the Transportation Concept Report (TCR) update for H Street/State Route 1, particularly to incorporate the design principles of the Caltrans Headquarters’ “Main Street, California” guide.<sup>6</sup> While a more focused Complete Streets plan for the two state routes in Lompoc may help to refine walking and biking projects, it is imperative that the TCR captures walking and biking needs, existing conditions, and demand along H Street/State Route 1.

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<sup>6</sup> Available online at [http://www.dot.ca.gov/hq/LandArch/mainstreet/main\\_street\\_3rd\\_edition.pdf](http://www.dot.ca.gov/hq/LandArch/mainstreet/main_street_3rd_edition.pdf)

This engagement is especially important for pedestrian conditions because the previous TCR for H Street/State Route 1 segment through Lompoc makes no mention of these issues. At many signalized intersections, we have noted only a single marked crossing across one side H Street/State Route 1, while crossing on the other side is prohibited. This three-legged crossing design unnecessarily restricts pedestrian and bicyclist movement and crossings, particularly in high foot traffic areas located on either side of H Street/State Route 1 (e.g., shopping centers, hotels, parks). Restoring pedestrian crossings to all four legs of a signalized intersection would allow pedestrians to cross H Street/State Route 1 safely at more intersections. Current design standards and technological advancements alleviate the need to restrict crossings at signalized intersections. For example, implementing leading pedestrian interval (LPI) at signalized pedestrian crossings greatly reduces the left-turn vehicle-pedestrian conflict that likely motivated the original crossing restriction.

## **ACKNOWLEDGMENTS**

We would like to thank the Lompoc Valley Community Healthcare Organization and the City of Lompoc Engineering and Fire Departments for inviting us into their community and for hosting the Community Pedestrian and Bicycle Safety Training.

We would like to acknowledge the many community members and agencies present at the workshop and their dedication to pedestrian and bicycle safety. Their collective participation meaningfully informed and strengthened the workshop's outcomes.

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