COMMUNITY PROFILE

Lake Los Angeles is a rural unincorporated community in the Antelope Valley of Los Angeles County, located 17 miles east of Palmdale and 40 miles northeast of the City of Los Angeles.

The 9.7 square mile community has a population of 12,328, with relatively low population density for Los Angeles County, but remains the densest community in the Antelope Valley. Once known as Los Angeles Buttes, the community took its name from a collection of desert peaks: Black Butte, Piute Butte, Lovejoy Butte, and Saddleback Butte. In 1967, land developers bought 4,000 acres in the region, sub-divided it into 4,465 lots, and built a man-made lake (since dried up), renaming it Lake Los Angeles. Saddleback Butte became a State Park in 1960.

Thank You

Pedestrian Plan Community Advisory Committee Members:

Shirley Harriman
Mary Hanna
Theresa Horvath
Pat McGuire
Yvonne Milikowski
Scarleth Hauffen-Pflieger
Deb Hill
Francisco Merlan

Special thanks to the residents of Lake Los Angeles who took time to participate in outreach events, community data collection efforts, and share ideas on how to improve walking in the community. This plan is dedicated to your vision.
Understanding the demographics of a population helps decision makers plan for and target appropriate pedestrian projects and programs. The median household income for Lake Los Angeles is $40,227, approximately 28 percent less than the County average. Lake Los Angeles also has a significantly higher poverty rate than the County average. Adults (age 25 and over) in Lake Los Angeles are more likely to have a high school diploma or equivalent but less likely to have at least some college education when compared with other County residents.

Lake Los Angeles is made up of single-family households at a rate similar to the rest of the county, but more homes include children under 18 than the rest of the county, making Lake Los Angeles a relatively young community. A majority of the community’s residents (54 percent) identify as Hispanic / Latino, and the community has relatively more White and Black or African American residents than countywide. Significantly fewer community members are foreign born than in the county as a whole.
### Table 4-1: Lake Los Angeles Demographics

<table>
<thead>
<tr>
<th></th>
<th>Percent in Lake Los Angeles</th>
<th>Percent in Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school diploma</td>
<td>28.3</td>
<td>21.4</td>
</tr>
<tr>
<td>High school graduate, GED or alternative</td>
<td>34.9</td>
<td>20.5</td>
</tr>
<tr>
<td>Some college or associate’s degree</td>
<td>30.0</td>
<td>26.5</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>6.8</td>
<td>26.5</td>
</tr>
<tr>
<td>Persons in Poverty</td>
<td>32.4</td>
<td>18.7</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 18 Years</td>
<td>33.2</td>
<td>23.2</td>
</tr>
<tr>
<td>18-64 Years</td>
<td>59.2</td>
<td>64.9</td>
</tr>
<tr>
<td>65 and Older</td>
<td>7.6</td>
<td>11.9</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>53.6</td>
<td>48.4</td>
</tr>
<tr>
<td>White (Non-Hispanic)</td>
<td>31.9</td>
<td>26.6</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>1.4</td>
<td>0.7</td>
</tr>
<tr>
<td>Asian</td>
<td>0.9</td>
<td>15.0</td>
</tr>
<tr>
<td>Black or African American(Non-Hispanic)</td>
<td>11.3</td>
<td>8.7</td>
</tr>
<tr>
<td>Other</td>
<td>3.3</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Immigration and Linguistic Isolation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Born</td>
<td>14.4</td>
<td>35.7</td>
</tr>
<tr>
<td>Households that are Linguistically Isolated</td>
<td>31.0</td>
<td>14.4</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 5-year 2010-2014
Land Use

Land use and design policies impact residents’ health and physical activity levels. The majority of land (52 percent) in Lake Los Angeles is designated as residential, while 7 percent is designated as rural commercial. Figure 4-1 shows land uses in Lake Los Angeles. The area has a low density compared with other county communities, but is the densest unincorporated community in the Antelope Valley.

Residential development surrounds the commercial corridor along 170th Street between Avenue O and Avenue P. The Antelope Valley Area Plan designates this corridor as a Rural Town Center, prioritizing pedestrian-oriented design and connectivity with the goal of linking commercial development to the surrounding residential areas. Roughly 38 percent of the residential population lives within a quarter-mile walking distance to this commercial area. Other key destinations include three public schools, Stephen Sorenson Park, a public library, and a community clinic.
Figure 4-1: Lake Los Angeles Zoning Map

DATA SOURCE: LOS ANGELES COUNTY GENERAL PLAN, DEPARTMENT OF REGIONAL PLANNING, 2016

LAND USE

DESTINATIONS

- SCHOOL
- LIBRARY
- PARK/RECREATION
- EMERGENCY SERVICES
- HEALTHCARE
- POST OFFICE
- AIRPORT

LAND USES

- CR - RURAL COMMERCIAL
- H2 - RESIDENTIAL 2
- OS-BLM - BUREAU OF LAND MANAGEMENT
- OS-C - CONSERVATION
- OS-PR - PARKS AND RECREATION
- P - PUBLIC AND SEMI-PUBLIC
- RL1 - RURAL LAND 1
- RL10 - RURAL LAND 10
- RL2 - RURAL LAND 2
- RL20 - RURAL LAND 20
- RL5 - RURAL LAND 5
- W - WATER
Park Access

Lake Los Angeles currently has one park, Stephen Sorenson Park (108.04 acres), which provides the community an average of 9.51 acres of parkland per 1,000 residents. This is more than twice the County’s General Plan goal of four acres of local parkland per 1,000 residents. However, only about 20 percent of Lake Los Angeles residents live within a half-mile walking distance to the park (Figure 4-2). Stephen Sorenson Park is accessible by one road, Avenue P, from the south and several informal pedestrian and bicyclist trails to the north. The LA County Parks and Recreation Needs Assessment has proposed developing new multimodal trails to improve access to the park.
Figure 4-2: Lake Los Angeles Park Access

PARK ACCESS

DESTINATIONS
- SCHOOL
- LIBRARY
- PARK/RECREATION
- AIRPORT

INFRASTRUCTURE
- EMERGENCY SERVICES
- HEALTHCARE
- POST OFFICE
- ROAD NETWORK

PARK ACCESS
- HALF MILE BUFFER
- PARK
Health

Understanding which health issues and behaviors are prevalent in Lake Los Angeles can help decision makers target appropriate pedestrian interventions. 1 The overall population and mortality rates for zip codes 93595 and 93591, which include Lake Los Angeles, sheds light on general health and mortality trends. For both zip codes and Los Angeles County, heart disease and cancer are the two leading causes of death. These diseases are highly correlated with diet, physical activity, exposure to toxins (tobacco and pollution), and stress. 2 The top three leading causes of premature death for Antelope Valley are coronary heart disease, motor vehicle crashes, and diabetes. 3

Issues of childhood and adult asthma rates in Lake Los Angeles are higher than the County’s average. 4 Obesity rates among adults and teens are higher than in the County as a whole, although proportionally fewer children are overweight for their age. 5 Only one in five youth in Lake Los Angeles engage in regular physical activity, 6 though youth in Lake Los Angeles have a slightly higher level of physical activity than countywide. However, only 22.9 percent of adults in the Lake Los Angeles area walk at least 150 minutes each week, compared with over one-third of adults countywide. 7 This fact may be contributed to by the high rates of disability in the community zip code 93591 - more than one in 10 adults in Lake Los Angeles under the age of 65 have a disability, which is more than twice the County average. 8

Overall, Lake Los Angeles qualifies as a disadvantaged community on three common state-wide indicators, which consider median

---

1 This plan uses health data at the zip code level when necessary. Lake Los Angeles is in Zip Code 93591, which also includes neighboring Antelope Valley communities with similar socio-demographics and built environment.

2 HealthyCity.org


5 Adults with a body mass index greater than or equal to 30.0 are considered obese. Children 2-11 whose combination of weight, sex, and age ranks higher than the CDC’s 2000 95th percentile are considered obese, as are children 12-17 who ranked higher than the CDC’s 2010 85th percentile for body mass index. Source: California Health Interview Survey, Neighborhood Edition, 2014.

6 Regular physical activity for children between 5 and 17 is defined as “at least 60 minutes of physical activity daily in the past week, excluding physical education.” Source: California Health Interview Survey, Neighborhood Edition, 2014.


8 American Community Survey, 5-year estimate 2010-2014
The indicators include National School Lunch Program Free and Reduced Lunch Program participation, median household income, and the Health Disadvantage Index, produced by the Public Health Alliance of Southern California. Only one of two census tracts (6037900104) qualifies Lake Los Angeles as a health disadvantaged community. Based on these indicators, Lake Los Angeles may be eligible to receive funding prioritization from the Caltrans Active Transportation Program and potentially other funding sources.

**Table 4-2: Lake Los Angeles Causes of Death**

<table>
<thead>
<tr>
<th>(Selected) Causes of Death</th>
<th>Zip Code 93535</th>
<th>Zip Code 93591</th>
<th>Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>104</td>
<td>30.6</td>
<td>24.2</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>109.4</td>
<td>19.4</td>
<td>26.9</td>
</tr>
</tbody>
</table>

**Table 4-3: Lake Los Angeles Health Indicators**

<table>
<thead>
<tr>
<th></th>
<th>Percent in Zip Code 93535</th>
<th>Percent in Zip Code 93591</th>
<th>Percent in Zip Codes 93535 &amp; 93591</th>
<th>Percent in Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children overweight for age (2-11)</td>
<td>5.1</td>
<td>4.9</td>
<td>5.1</td>
<td>12.4</td>
</tr>
<tr>
<td>Teens overweight or obese (12-17)</td>
<td>44.5</td>
<td>-</td>
<td>44.6</td>
<td>37.9</td>
</tr>
<tr>
<td>Adult obesity</td>
<td>32.6</td>
<td>25.6</td>
<td>31.9</td>
<td>25.9</td>
</tr>
<tr>
<td>Physical Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular physical activity (ages 5-17)</td>
<td>18.8</td>
<td>21.5</td>
<td>19.1</td>
<td>18.9</td>
</tr>
<tr>
<td>Walked at least 150 minutes (age 18+)</td>
<td>23</td>
<td>21.8</td>
<td>22.9</td>
<td>34.1</td>
</tr>
<tr>
<td>Respiratory Illness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children ages 0-17 years ever diagnosed with asthma</td>
<td>15.0</td>
<td>14.3</td>
<td>15.0</td>
<td>13.1</td>
</tr>
<tr>
<td>Adults (Age 18 years plus) ever diagnosed with asthma</td>
<td>17.4</td>
<td>14.3</td>
<td>17.1</td>
<td>12.6</td>
</tr>
<tr>
<td>Disability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With a Disability, under age 65</td>
<td>6.6</td>
<td>14.5</td>
<td>-</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Sources: California Health Interview Survey, Neighborhood Edition, 2014; American Community Survey, 5-year estimate 2010-2014
PEDESTRIAN ENVIRONMENT

Levels of Walking & Driving

One major objective of any pedestrian investment is to increase the attractiveness and usefulness of walking. To understand current levels of walking in Lake Los Angeles, the County looked at statistics relating to commuting, car ownership, and conducted a walk audit.

In terms of commuting patterns, less than one percent of employed Lake Los Angeles residents commute to work primarily by walking or by bicycling. Only one percent of employed Lake Los Angeles residents primarily take transit to work. This may be due to the limited transit service available in the community as only one bus line, provided by Antelope Valley Transit, runs through the community (see map in Appendix C).

Pedestrian counts were conducted at eight locations in Lake Los Angeles in October and November of 2016, to help measure trends in facility use, put collision data in context, and to note pedestrian behaviors. Data was collected for each count location during up to three two-hour periods (AM peak, PM peak, and weekend midday). Volumes were counted manually by observation. Results show that peak pedestrian activity occurs on E Avenue O near 180th Street E during the morning hours, likely due to school trips to Vista San Gabriel Elementary School. A summary of the pedestrian count data can be found in Table 4-4.

Household access to vehicles also has an influence on residents’ reliance on transit or walking for commuting. Overall, more than 99 percent of Lake Los Angeles residents have access to at least one car, but fewer have access to two or more vehicles compared to the County as a whole.1 Traffic volumes and speeds also have an influence on residents’ decisions to walk, bicycle, or drive. To inform this report, traffic conditions along 170th Street and Avenue O, major streets in Lake Los Angeles, have been examined.

TRAFFIC VOLUMES

170th Street and Avenue O are the most highly trafficked roads in the Lake Los Angeles area. 170th Street, a north-south corridor carries between 5,100 to 5,800 vehicles daily, and Avenue O, an east-west corridor, carries fewer vehicles (between 3,100 and 4,200 daily). 2

1 Walnut Park data: American Community Survey, 2010-2014 5-Year Estimates; County data: American Community Survey, 2015 1-Year Estimate
2 This information was collected via tube counts in February 2016.
TRAFFIC SPEEDS
Throughout Lake Los Angeles, the posted vehicle speed is generally 50 to 55 mph on major streets, including Avenue O and 170th Street East. Field observations noted higher prevailing speeds in many locations along major arterials, which could pose a hazard for pedestrian safety.

Barriers to Walking
This section examines past pedestrian collisions to better understand factors that lead to collisions, in addition to reported nuisances and crime that can act as potential barriers to walking in Lake Los Angeles.¹

COLLISIONS
Between 2009 and 2013, there were a total of eight pedestrian-involved collisions in the Lake Los Angeles area. The majority of these collisions (six out of eight) occurred along 170th Street E and E Avenue O, where most of the residential and community activity generators and attractors are located. Five of the collisions occurred during dawn and dusk (6am-9am and 5pm – 8pm). Three of the collisions involved pedestrians

¹ California Highway Patrol, Statewide Integrated Traffic Records System (SWITRS), 2009-2013

<table>
<thead>
<tr>
<th>Location</th>
<th>Pedestrian Volume During Peak Hour</th>
<th>Peak Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>170th Street E, between E Avenue N4 &amp; E Avenue N8</td>
<td>6</td>
<td>4:00 PM</td>
</tr>
<tr>
<td>E Avenue O, between 167th Street E &amp; 170th Street E</td>
<td>8</td>
<td>7:45 AM</td>
</tr>
<tr>
<td>E Avenue N8, between 162nd Street E &amp; 165th Street E</td>
<td>2</td>
<td>7:00 AM</td>
</tr>
<tr>
<td>Avenue Q, between 160th Street E &amp; 163rd Street E</td>
<td>1</td>
<td>8:00 AM</td>
</tr>
<tr>
<td>E Avenue O, between 180th Street E &amp; 177th Street E</td>
<td>42</td>
<td>7:30 AM</td>
</tr>
<tr>
<td>Trail/Wash Area, between E Avenue O &amp; Coolwater Avenue</td>
<td>8</td>
<td>5:00 PM</td>
</tr>
<tr>
<td>E Avenue P, between 170th Street E &amp; Parkvalley Avenue</td>
<td>8</td>
<td>4:00 PM</td>
</tr>
<tr>
<td>170th Street E, between W Avenue O &amp; Parkvalley Avenue</td>
<td>6</td>
<td>7:00 AM</td>
</tr>
</tbody>
</table>

Source: LA County, 10/2016 – 11/2016
Step by Step

Figure 4-4: Map showing reported nuisances in Lake Los Angeles

55-64 years old, and two pedestrians under 18 years old. One of the collisions involved a fatality, and five involved a severe or visible injury.

Law enforcement attributed fault to the pedestrian in five of the eight pedestrian collisions. Half of the eight collisions were classified as ‘Hit and Run.’ All pedestrian-involved collisions (2009-2013) are shown in Figure 4-3.

NUISANCES ACTIVITIES
Nuisance activities, unwanted, undesirable or illegal uses, can impact the real and perceived safety, comfort and attractiveness of the pedestrian environment. Using data provided by The Works, a mobile application that allows users to report nuisances, and community members at planning meetings, a number of nuisance activities were identified in Lake Los Angeles (Figure 4-4) include:

- **Alcohol retail outlets.** Lake Los Angeles has about two alcohol outlets per 10,000 people. Living within close proximity to a liquor store is associated with negative health outcomes, increased crime and nuisance activities.

- **Illegal dumping.** In 2014 to May 2016, there were 51 reports of illegal dumping in Lake Los Angeles. While illegal dumping occurs throughout Lake Los Angeles, most occur in undeveloped open space in the southwest of the community. Illegal dumping is an especially problematic issue in Antelope Valley and the Mojave as people from urbanized areas in Southern California seek to avoid dumping fees by disposing of trash and bulky items in the desert.
Figure 4-3: Map of pedestrian-involved collisions in Lake Los Angeles (2009-2013)

**PEDESTRIAN-INVOLVED COLLISIONS**

**DATA SOURCE:** STATEWIDE INTEGRATED TRAFFIC RECORDS SYSTEM (SWITRS) 2009-2013 DATA

**DESTINATIONS**
- SCHOOL
- LIBRARY
- PARK/RECREATION
- EMERGENCY SERVICES
- HEALTHCARE
- POST OFFICE
- AIRPORT

**PLANNING AREAS**
- COMMERCIAL
- PARK

**INFRASTRUCTURE**
- ROAD NETWORK
- EXISTING OFF-STREET PATH (CLASS I)
- TRAFFIC SIGNAL
- WARNING BEACON

**COLLISIONS**
- LOCATION WITH FATALITY
- 1
- 2
- 3-4
- 5-7
- 8-10
- HIGH TRAVEL SPEED CORRIDORS
Figure 4-4: Map showing reported nuisances in Lake Los Angeles

DATA SOURCE: THE WORKS SERVICE REQUESTS, LOS ANGELES COUNTY SHERIFF’S DEPARTMENT

PUBLIC NUISANCES

DESTINATIONS
- SCHOOL
- LIBRARY
- PARK/RECREATION

INFRASTRUCTURE
- ROAD NETWORK

NUISANCES
- ILLEGAL DUMPING
- LIQUOR STORE
Figure 4-5: Map showing violent and non-violent crime in Lake Los Angeles (January to June 2016)

DATA SOURCE: LA TIMES MAPPING LA, AUGUST 2016; CALIFORNIA HIGHWAY DEPARTMENT (JANUARY 2016-JULY 2016)

CRIME

DESTINATIONS
- SCHOOL
- LIBRARY
- PARK/RECREATION

INFRASTRUCTURE
- ROAD NETWORK

CRIME
- VIOLENT CRIME
- HOMICIDE
CRIME
Crime and safety are connected with health in several ways. Fear of crime in a community contributes to limited access to public spaces, reducing participation in healthy activities like walking and utilizing public parks. Community efforts to work with local law enforcement to address and reduce crime may promote health benefits in the long term. Combined, theft and burglary are the most prevalent crimes in Lake LA, followed by non-aggravated assault. Crime reports are distributed relatively evenly across the community, with some clustering around the commercial core at E Avenue O and 170th Street E (see Figure 4-5).

Table 4-5: Crime Statistics for Lake Los Angeles, CDP January 2016-July 2016

<table>
<thead>
<tr>
<th>Type of Crime</th>
<th>Number</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent Crimes</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>Property Crimes</td>
<td>27</td>
<td>71</td>
</tr>
<tr>
<td>Crimes Per 10,000 People</td>
<td>34.1</td>
<td></td>
</tr>
</tbody>
</table>
This section examines current pedestrian facilities and deficiencies in Lake Los Angeles. A variety of deficiencies are recorded in the following maps (Figure 4-6 and Figure 4-7), including sidewalks, crosswalks, curbs and corners, turning radius, signage, traffic signals, and lighting conditions.

**Pedestrian Walkways**

**SIDEWALKS**

Sidewalks in Lake Los Angeles are only located in core commercial areas, adjacent to schools and some bus shelters. Major streets such as Avenue O and 170th Street are two of the few roadways with sidewalks. The width, location, and condition of sidewalks vary throughout the community. Continuous sidewalks range from less than 100 feet to at most 800 feet. Most sidewalks are the result of new development in the area, but since each project may not be adjacent to one another, the resulting pattern includes gaps between sidewalks.

**PATHS**

Given Lake Los Angeles’ rural nature, traditional concrete sidewalks with curb and gutter may not always be appropriate. Separated pedestrian space can also be provided by trails and pathways. Lake Los Angeles has one significant bicycle path, which functions as a mixed-use path since it is informally used by pedestrians and other non-motorized modes of transportation.
This path, which is 2.54 miles long, is located on the west side of 170th Street south of Avenue M and north of Avenue P and includes intermittent lighting. The trail is important to the Lake Los Angeles community because residents want to maintain the rural character of the area while also having the option of bicycling. There are existing asphalt trails along Avenue O and 180th Street that are separate, but parallel to the roadways. There is a high level of wear, cracks, and debris incursion along these trails, similar to the adjacent roadway conditions. Some of these paths do not have street lighting and usually do not have any traffic control at access driveways or intersections. Additionally, car and truck incursions onto and through these paths are commonly witnessed, indicating a need to buffer these paths from vehicles.

DESIRE PATHS
At several locations throughout Lake Los Angeles, community members have created informal, foot-worn paths due to a lack of pedestrian infrastructure and direct connections to destinations. These paths are neither standard nor ADA accessible, and lack lighting of any kind. Some of these paths are found on private property.
Figure 4-6: Map of Sidewalk Deficiencies in Lake Los Angeles

SIDEWALK DEFICIENCIES NOTED DURING WALK AUDIT

DESTINATIONS
- SCHOOL
- LIBRARY
- PARK/RECREATION
- EMERGENCY SERVICES
- HEALTHCARE
- POST OFFICE
- AIRPORT

INFRASTRUCTURE
- ROAD NETWORK
- TRAFFIC SIGNAL
- WARNING BEACON
- STREET LIGHT
- EXISTING OFF-STREET PATH (CLASS I)

INTERSECTION DEFICIENCIES
- NARROW SIDEWALKS
- MISSING SIDEWALK
- MISSING LIGHTING
Crossing Facilities

CROSSWALKS
Marked crosswalks exist at some locations in Lake Los Angeles, typically at intersections along major and minor streets. Most marked crosswalks are standard (also called transverse) crosswalks, consisting of two parallel white lines marked on the pavement. However, crosswalks near schools are yellow continental.

CURBS AND CORNERS
Where sidewalks do exist, curb ramps at street corners in Lake Los Angeles mostly include diagonal ramps, which are single curb ramps installed at the apex of a corner. These designs force pedestrians descending the ramp to travel into the intersection before turning to the left or right to cross the street.

TRAFFIC SIGNALS
There is one intersection in Lake Los Angeles with a traffic signal installed: 170th Street at Avenue O, which is controlled by inductive loops for motor vehicle traffic. Pedestrian movement at this intersection is controlled by pedestrian signal heads, which require push button activation. This intersection includes a transverse crosswalk at all four legs, but sidewalks at only three of the four corners.

LIGHTING
Historically, Lake Los Angeles community members have expressed the desire to maintain the rural character of the area, in part by avoiding too much street lighting. The Antelope Valley Area Plan and Rural Outdoor Lighting District policies specifically call for projects to reduce or eliminate light pollution. However, poor lighting can increase fears about personal safety and discourages pedestrian activity. Quality lighting and appropriate placement can increase the comfort and safety of the pedestrian while improving the ambiance of the street. Major segments without pedestrian lighting are found along 170th Street E, despite recent investments in lighting along the bike path. Most segments around the community do not have adequate lighting.

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1 A signal head is an assembly of one or more signal faces together with the associated signal housings. A pedestrian signal head is a signal head, which contains the symbols WALKING PERSON (symbolizing WALK) and UPRaised HAND (symbolizing DONT WALK), that is installed to direct pedestrian traffic at a traffic control signal.
Figure 4-7: Map of intersection deficiencies in the Lake Los Angeles

- **DESTINATIONS**
  - School
  - Library
  - Park/Recreation
  - Emergency Services
  - Healthcare
  - Post Office
  - Airport

- **INFRASTRUCTURE**
  - Road Network
  - Traffic Signal
  - Warning Beacon
  - Street Light
  - Existing Off-Street Path (Class I)

- **INTERSECTION DEFICIENCIES**
  - Faded Crosswalk Stripping
  - Line-of-Sight Restricted
  - Missing Crosswalk
  - Missing Ped-Related Signature
  - Non-ADA/Damaged Curb Ramps
COMMUNITY INVOLVEMENT

Outreach efforts in Lake Los Angeles focused on addressing community concerns and prioritizing select projects through County programs and Public Works projects. Community engagement in the community involved formation of a Community Advisory Committee, community workshop, participation in planned community events, and a survey.

Additional details, such as summaries of outreach efforts before Step by Step, outreach materials, full survey results, and detailed walk audit summaries can be found in Appendix A.

Community Workshop and Events
A community workshop was held in Lake Los Angeles on November 5th, 2016 from 6:00 to 8:00pm in Stephen Sorenson Park to introduce the Plan to community members. The workshop asked participants to identify issues impacting walkability, and provide input on appropriate pedestrian infrastructure to address these issues. The workshop included an interactive discussion centered around three activities: 1) facilitated group discussion, 2) prioritization voting on pedestrian facilities, and 3) prioritization voting on locations most important to focus pedestrian improvements. Thirteen participants identified the following pedestrian issues in the community: a need for more formalized pedestrian paths and more pedestrian-scale lighting.

Workshop participants also prioritized the following pedestrian improvements:
- Pedestrian paths
- Pedestrian-scale lighting
- Pedestrian push buttons
- Continental crosswalks

Workshop participants prioritized these pedestrian improvements at the following locations:
- 170th Street and Avenue O
- Avenue P (between 160th and 170th Streets)
- Avenue Q (between 160th and 170th Streets)
- Avenue Q and 160th Street
- Avenue Q and 170th Street

Additionally, the Step by Step project team conducted outreach at multiple planned events in Lake Los Angeles, including two bicycle safety classes and a resource fair at Sorenson Park.
Conducting outreach at these events allowed the project team to gather additional input on walking habits, existing barriers to walking, and preferred improvements.

**Survey Results**

A community survey was conducted in Lake Los Angeles, both on paper and online through SurveyMonkey. Most survey respondents were female (64 percent) and between the ages of 26 and 45 (46 percent). Forty-seven percent of Lake Los Angeles residents commute to work or school by driving alone and another 16 percent carpool. Respondents indicated that when they choose to walk, it is primarily for fitness, and they typically walk to a grocery/convenience store, a transit stop, and/or a library.

The most commonly identified challenges faced while walking in Lake Los Angeles were a lack of street lighting, missing sidewalks, and a fear of physical violence. Respondents indicated that they would feel safer walking with additional street lighting and marked street crossings, and would walk more often with paved paths, intersection improvements, and pedestrian lighting along paths.
This section discusses project recommendations for Lake Los Angeles’ pedestrian network. In general, the Plan’s recommended pedestrian facilities focus on improving pedestrian safety in Lake Los Angeles. Recommendations in Lake Los Angeles (Figure 4-8) are categorized and defined as follows:

- **Future Corridor Study**: Improvements that need further study and are recommended along the length of the street, which may include pedestrian-scale lighting, shade trees, roadway reconfiguration or road diet, landscaping, and other facilities.

- **Crossing Improvements**: Facilities that make crossing the street at intersections and mid-block easier, including continental crosswalks, advance yield lines, Rectangular Rapid Flashing Beacons (RRFB), and pedestrian signals.

- **Sidewalk/Path Improvements**: Facilities that make walking down the street safer and more comfortable, including shared-use paths and buffering along paths to prevent vehicle incursion. Given the Lake Los Angeles’ rural nature and the community’s wish to maintain it, sidewalks have not been recommended.

- **Public Space**: Vacant lots can be converted to public gathering spaces for people of all ages to interact, play, rest, and more.

The majority of recommendations occur along Lake Los Angeles’ major thoroughfares, E Avenue O and 170th Street E. These corridors have a history of pedestrian-related collisions and were identified as priorities by community members. Both E Avenue O and 170th Street E have existing two-way bike facilities which are often used by pedestrians. To better support people walking along these major streets, these paths should be designated as Class I shared-use paths with updated pavement markings to indicate pedestrians use. E Avenue O has paths on both sides of the street, but the path on the
South side needs to be extended between 165th and 170th Streets to create stronger connections to and from the western half of Lake Los Angeles. Additionally, a buffering treatment should be installed between the path and vehicle travel lanes on 170th Street to address issues with vehicle incursion and pedestrian-related collisions. Future studies need to be conducted along both corridors to determine the appropriate type of pedestrian-oriented lighting needed to improve safety, and where to plant shade trees.

Crossing improvements along 170th Street E include striping continental crosswalks at E Avenue M8, E Avenue N4, and E Avenue P, and installing advance yield lines at Avenue N4 to caution drivers to yield for pedestrians. A pedestrian signal needs to be installed at the controlled intersection of 170th Street E and E Avenue P to increase the safety and visibility of pedestrians. A continental crosswalk and advance yield lines are also recommended at the intersection of E Avenue O and 180th Street E for improved safety near Vista San Gabriel Elementary School. Lake Los Angeles residents have expressed desire for a pedestrian plaza near 170th Street and E Avenue O, Lake Los Angeles’ central commercial area, which can be created through repurposing a vacant lot. This will provide the community with additional space for recreation and programming.

Other improvements in Lake Los Angeles include moving stop bars behind pedestrian paths so that stopped vehicles do not block people walking, paving new shared-use paths to create connections to Sorensen Park, and installing an RRFB at E Avenue Q and 163rd Street to make crossing safer near Lake Los Angeles Elementary School.

These recommendations, and their associated estimated costs, are detailed in Table 4-6, and are mapped in Figure 4-8. For an overview on pedestrian facility types, see Chapter 3 and for recommended updates to pedestrian facility maintenance procedures, see Chapter 8.
### Table 4-6: Recommended pedestrian improvements in Lake Los Angeles

<table>
<thead>
<tr>
<th>Intersection or Segment</th>
<th>Corner/Leg</th>
<th>Project Description</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E Avenue O</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Avenue O / 180th Street E</td>
<td>North and south legs</td>
<td>Stripe continental school crosswalks</td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td>East-west direction</td>
<td>Install advance yield lines</td>
<td>$1,000</td>
</tr>
<tr>
<td>E Avenue O (165th Street E to 170th Street E)</td>
<td>South side of street</td>
<td>Install paved shared-use path</td>
<td>$50,000</td>
</tr>
<tr>
<td>E Avenue O (162nd Street E to 180th Street E)</td>
<td>-</td>
<td>Corridor-wide improvements that may include pedestrian-scale lighting, shade trees, landscaping, and other facilities</td>
<td>Ranges</td>
</tr>
<tr>
<td><strong>170th Street E</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>170th Street E / E Avenue M8</td>
<td>West leg</td>
<td>Restripe as continental crosswalk</td>
<td>$2,500</td>
</tr>
<tr>
<td>170th Street E / E Avenue N4</td>
<td>North and West legs</td>
<td>Restripe as continental school crosswalk, align west leg with shared-use path</td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td>North-south direction</td>
<td>Install advance yield lines</td>
<td>$1,000</td>
</tr>
<tr>
<td>170th Street E / E Avenue P</td>
<td>All legs</td>
<td>Stripe continental crosswalks</td>
<td>$10,000</td>
</tr>
<tr>
<td></td>
<td>All legs</td>
<td>Install pedestrian signal</td>
<td>$100,000</td>
</tr>
<tr>
<td>170th Street E (near Town Center Plaza)</td>
<td>Vacant Lot</td>
<td>Turn vacant lot into pedestrian plaza</td>
<td>$50,000</td>
</tr>
<tr>
<td>170th Street E (E Avenue M8 to E Avenue P)</td>
<td>-</td>
<td>Corridor-wide improvements that may include pedestrian-scale lighting, shade trees, landscaping, improved signage, and other facilities</td>
<td>Ranges</td>
</tr>
<tr>
<td><strong>180th Street E</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180th Street E / Biglake Avenue</td>
<td>West leg</td>
<td>Relocate stop bar behind pedestrian path</td>
<td>$500</td>
</tr>
<tr>
<td>180th Street E / Glenfall Avenue</td>
<td>West leg</td>
<td>Relocate stop bar behind pedestrian path</td>
<td>$500</td>
</tr>
<tr>
<td>180th Street E / Lake Los Angeles Avenue</td>
<td>West leg</td>
<td>Relocate stop bar behind pedestrian path</td>
<td>$500</td>
</tr>
<tr>
<td><strong>E Avenue O</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Avenue O / 163rd Street</td>
<td>East leg</td>
<td>Install RRFB</td>
<td>$30,000</td>
</tr>
<tr>
<td></td>
<td>East/West direction</td>
<td>Install advance yield lines</td>
<td>$1,000</td>
</tr>
<tr>
<td><strong>Sorensen Park</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New unpaved path (E Avenue O to Sorensen Park)</td>
<td>-</td>
<td>Install new paved shared-use path</td>
<td>$100,000</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Install pedestrian-scale lighting along path</td>
<td>$20,000</td>
</tr>
<tr>
<td>Existing unpaved path (Lake Los Angeles Avenue to E Avenue P)</td>
<td>-</td>
<td>Pave existing shared-use path</td>
<td>$50,000</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Install pedestrian-scale lighting along path</td>
<td>$10,000</td>
</tr>
<tr>
<td>Sorensen Park (at E Avenue P)</td>
<td>Path entrance, parking lot entrance, park entrance</td>
<td>Install signage indicating pedestrian crossing</td>
<td>$3,000</td>
</tr>
</tbody>
</table>
Figure 4-8: Recommended pedestrian facilities in Lake Los Angeles
While location-specific facility recommendations help to improve the pedestrian experience, these alone are not enough to make long-term, widespread changes. Actions reinforce the recommended infrastructure projects and help standardize procedures across all agencies. Recommended countywide actions are listed in Chapter 2, while Table 4-7 below lists actions that will be particularly important for long-term improvements in the pedestrian environment in Lake Los Angeles.

Additionally, programs help support pedestrian infrastructure improvements through education, encouragement, enforcement, and evaluation. All recommended countywide programs can be found in Chapter 9, while programs that are most important for Lake Los Angeles are listed in Table 4-8.

### Table 4-7: Actions for Lake Los Angeles

<table>
<thead>
<tr>
<th>Action</th>
<th>Lead Departments</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1.3: Require documentation of justification for excluding marked crosswalks at signalized intersections on any leg(s), and update intersection design standards to reduce unnecessary crossings.</td>
<td>Department of Public Works Traffic &amp; Lighting Division</td>
<td>Ongoing starting in 2018</td>
</tr>
<tr>
<td>EH-2.6: Adopt standards that provide designated walking space on Class I shared-use paths.</td>
<td>Department of Public Works Road Design Division</td>
<td>2018 to 2019</td>
</tr>
</tbody>
</table>
Table 4-8: Programs for Lake Los Angeles

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Safe Community Spaces</td>
<td>Create safe passages and gathering areas to encourage more pedestrian activity. This is particularly useful in areas with high rates of crime, violence, and nuisance activities. Lake Los Angeles has a Parks After Dark program at Sorensen Park, which the County should continue and expand.</td>
<td>Reduced conflict, increased safety, encouragement</td>
</tr>
<tr>
<td>Form Walking Groups + Events</td>
<td>Organize events that get more people out walking and interacting with the community. Block parties, art strolls, walking tours, and group walks all encourage walking, promote health and wellness, and instill a sense of community pride. Lake Los Angeles Park Association holds at least one walking event per month. The County should continue to support and fund these types of events.</td>
<td>Shared information, increased awareness and visibility, increased participation, reduced conflicts</td>
</tr>
<tr>
<td>Demonstrate Improvements through Activated Streets</td>
<td>Permit public use of the street right-of-way, similar to the existing program for outdoor dining, to create opportunities to develop community gathering spots and points of interest on a temporary or permanent basis. This may range from allowing community groups to use parking spaces for special events that activate sidewalk activity, such as the annual “Park(ing) Day,” to semi-permanent parklets that replace parking spaces, or pedestrian plazas in formerly vacant spaces.</td>
<td>Increased awareness and visibility, increased participation, reduced conflicts, improved safety</td>
</tr>
</tbody>
</table>