

Appendix D. Existing Conditions and Programs

This Appendix presents existing conditions data that formed the basis for drawing conclusions about the current challenges and opportunities for walking and bicycling in the Unincorporated Areas of Alameda County. This Appendix includes:

- Section D.1: State of Bicycling in the Unincorporated Areas
- Section D.2: State of Walking in the Unincorporated Areas
- Section D.3: Existing Support Programs
- Section D.4: Past Expenditures

Section D.1: State of Bicycling in the Unincorporated Areas

Travel Patterns

Most of the available travel data in Alameda County relates to commute trips which is gathered through the American Community Survey from the U.S. Census. While the data provides a snapshot of modal trends for the unincorporated areas, work-related trips generally only account for 10 to 15 percent of all trips.¹ The remaining 85 to 90 percent of trips are made to visit friends and family or for errands, entertainment, outings, and recreation.

In the unincorporated areas, non-commute trips are more likely made by bicycle than commute trips because the non-commute destinations are often located closer to a person's home and may not require formal clothes or the need to carry supplies (laptop, lunch, etc.). For example, someone may drive to work because their job is in another area of the county, whereas someone may bicycle to visit a friend because that friend lives in the same neighborhood. The results of the WikiMap outreach, an on-line community survey and map, support this since a majority of respondents who ride their bikes several times per month or more stated that they ride for recreational purposes.

American Community Survey Work Travel Trends

Commute travel trends (i.e., mode and trip length) are available for the "Census Designated Areas" of Ashland, Castro Valley, Cherryland, Fairview, San Lorenzo, and Sunol. To calculate a potential percentage of bicycle commuters, a reasonable bicycle commute is assumed to be about 30 minutes; a drive of less than 10 minutes equates to a bike ride of less than 30 minutes². As in the 2012 Plan, it is assumed that 25 percent of people with driving commutes less than 10 minutes would bicycle if this Plan is fully implemented, resulting in an estimate for a potential percentage of bicycle commuters (see Table D.1).

¹ Range references the National Household Travel Survey (15 percent) and California Household Travel Survey (9.9 percent)

² Alameda County Bicycle and Pedestrian Master Plan for Unincorporated Areas, April 2012 (Page 3-6)

Table D.1. Commute Characteristics in Unincorporated Areas of Alameda County (Source: U.S. Census American Community Survey 5-year Summary, 2015)

Jurisdiction	Walking	Biking	Transit	Auto- mobile	Work from Home	% with commutes < 10 minutes	Potential Percent of Bicycle Commuters
Ashland	1.8%	0.0%	12.9%	80%	3.6%	5.7%	1.4%
Castro Valley	0.8%	0.3%	10.7%	81.9%	5.7%	4.6%	1.2%
Cherryland	2.7%	0.2%	6.6%	85.9%	2.2%	7.4%	1.9%
Fairview	0.2%	0.4%	7.9%	87.3%	3.5%	3.8%	1.0%
San Lorenzo	1.0%	0.6%	7.7%	86.2%	2.3%	4.2%	1.1%
Sunol	3.0%	0.0%	2.0%	76.1%	17.3%	7.0%	1.8%
Alameda County (all)	3.7%	2.1%	13.6%	73.5%	5.6%	7.4%	1.9%

Beyond commuting, the Alameda County Safe Routes to School program’s 2015 year-end report provides a snapshot of student travel behavior. The report divided the county into four planning areas; the “Central” planning area included schools in the unincorporated areas (Ashland, Castro Valley, Cherryland, Hayward, San Leandro, and San Lorenzo). Between 2012 and 2015, the percentage of students biking to school in these areas decreased from 2.8 to 1.5 percent.

Existing Bicycle Network

Since the adoption of the 2012 Alameda County Bicycle and Pedestrian Master Plan for Unincorporated Areas, over 12 miles of bikeway facilities have been added to the county’s bike network. A summary of existing facilities is shown in Table D.2; for the rows highlighted in grey, these facilities are either under construction at the time of this BPMP, or soon to be constructed.

Table D.2. Existing Bicycle Facilities in the Unincorporated Areas of Alameda County

Roadway	Limits	Community	Bikeway Classification	Length (miles)
164th Ave	East 14th St to Foothill Blvd	Ashland	Bike Lane	0.5
167th Ave	East 14th St to Foothill Blvd	Ashland	Bike Lane	0.4
Mattox Rd	Mission Blvd to Foothill Blvd (SR 238)	Ashland	Bike Lane	0.3
Fairmont Dr	Foothill Blvd to E. 14 th St	Ashland	Bike Lane	0.3
Ashland Ave	E. 14 th St to Ano Ave	Ashland	Bike Lane	1.0
Lewelling Blvd	Hesperian Blvd to Meekland Ave	Ashland/San Lorenzo	Bike Lane	0.7
A St	San Lorenzo Creek to Knox St	Castro Valley	Bike Lane	0.3
Castro Valley Blvd	Westbound-Foothill Blvd (SR 238) to John Dr/Strobridge Ave	Castro Valley	Bike Lane	0.4
Castro Valley Blvd	Anita Ave to Wilbeam Ave	Castro Valley	Bike Lane	0.3
Castro Valley Blvd (westbound)	Wilbeam Ave to Redwood Rd	Castro Valley	Bike Lane	0.2

Roadway	Limits	Community	Bikeway Classification	Length (miles)
Center St	Grove Way to San Lorenzo Creek	Castro Valley	Bike Lane	0.3
Center St	Castro Valley Blvd to Heyer Ave	Castro Valley	Bicycle Boulevard	0.7
Crow Canyon Rd	Cull Canyon Rd to Castro Valley Blvd	Castro Valley	Bike Lane	0.5
Cull Canyon Rd	Briar Ridge Rd to Crow Canyon Rd	Castro Valley	Bike Lane	0.6
E Castro Valley Blvd	Jensen Rd to Villareal Dr	Castro Valley	Bike Lane	0.8
East Castro Valley Blvd	Crow Canyon Rd to Five Canyons Pkwy	Castro Valley	Bike Lane	0.5
East Castro Valley Blvd	Five Canyons Pkwy to Villareal Dr	Castro Valley	Shared Roadway	0.7
East Castro Valley Blvd	Villareal Dr to Dublin Canyon Rd	Castro Valley	Bike Lane	1.1
Fairmont Dr	Foothill Blvd to Lake Chabot Rd	Castro Valley	Bike Lane	1.7
Five Canyons Pkwy	E Castro Valley Blvd to Fairview Ave	Castro Valley	Bike Lane	2.2
Foothill Blvd	164th Ave/Miramar Ave to John Dr	Castro Valley	Bike Lane	1.0
Foothill Blvd	164th Ave to 150th Ave	Castro Valley	Bike Lane	0.8
Grove Way	Redwood Road to Castro Valley Blvd	Castro Valley	Bike Lane	1.0
Grove Way	Tanglewood Dr to Redwood Rd	Castro Valley	Bicycle Boulevard	0.5
Heyer Ave	Redwood Rd to Cull Canyon Rd	Castro Valley	Shared Roadway	1.1
John Dr	Foothill Blvd to Castro Valley Blvd	Castro Valley	Bike Lane	0.3
Lake Chabot	Fairmont Dr to Seven Hills Rd	Castro Valley	Bike Lane	0.7
Norbridge Ave	Tyee Ct to Castro Valley Blvd	Castro Valley	Bike Lane	0.8
Redwood Rd	Camino Alta Mira to Seven Hills Rd	Castro Valley	Bike Lane	0.6
Redwood Rd	Castro Valley Blvd to Knox St	Castro Valley	Bike Lane	0.9
Redwood Rd	Castro Valley Blvd to Seven Hills Rd	Castro Valley	Shared Roadway	1.8
Wilson Ave	Parsons Ave to Redwood Rd	Castro Valley	Bicycle Boulevard	0.5
Sydney Way	Lake Chabot Rd to Dublin Ct	Castro Valley	Bicycle Boulevard	0.1
Blossom Way	Hathaway Ave to Western Blvd	Cherryland	Bicycle Boulevard	0.7
Grove Way	Meekland Ave to Western Blvd	Cherryland	Bike Lane	0.5
Hampton Rd	Meekland Ave to Mission Blvd	Cherryland	Bicycle Boulevard	0.9
Sunset Blvd	Meekland Ave to Western Blvd	Cherryland	Bike Lane	0.5
Greenville Rd	Altamont Pass Rd to National Dr	East County-E of Livermore	Bike Lane	1.0
Greenville Rd	Patterson Pass Rd to Tesla Rd	East County-E of Livermore	Bike Lane	2.1
East Ave	Vasco Rd to Greenville Rd	East County-E of Livermore	Bike Lane	1.2

Roadway	Limits	Community	Bikeway Classification	Length (miles)
N Livermore Ave	Manning Rd to I-580 (Livermore C.L.)	East County-N of Livermore	Shared Roadway	3.6
Del Valle Rd	Mines Rd to Mile Marker 3.9	East County-S of Livermore	Shared Roadway	2.9
Mines Rd	0.3 miles south of Tesla Rd to Del Valle Rd	East County-S of Livermore	Bike Lane	3.1
Tesla Rd	S Livermore Ave to Greenville Rd	East County-S of Livermore	Bike Lane	2.5
Wente St	Livermore C.L. to Marina Ave	East County-S of Livermore	Bike Lane	0.5
S Livermore Ave	Concannon Blvd to Tesla Rd	East County-S of Livermore	Bike Lane	0.5
Dublin Canyon Rd	Eden Canyon Rd/Palo Verde Rd to Pleasanton C.L.	East County-Sunol	Bike Lane	3.7
Stanley Blvd	Pleasanton C.L. to Isabel Ave (Livermore C.L.)	East County-W of Livermore	Bike Lane	2.7
Stanley Blvd path (Iron Horse Trail)	Pleasanton C.L. to Isabel Ave (Livermore C.L.)	East County-W of Livermore	Multi-use Path	2.7
D Street	Hayward C.L. to Maud Ave	Fairview	Bicycle Boulevard	0.8
Fairview Ave	Hansen Rd to Five Canyons Pkwy	Fairview	Bicycle Boulevard	0.9
Bockman Rd	Grant Ave to Hesperian Blvd	San Lorenzo	Bicycle Boulevard	1.7
Channel St	Grant Ave to Bockman Rd	San Lorenzo	Bicycle Boulevard	0.6
Grant Ave	Via Seco to Washington Ave/Via Alamos	San Lorenzo	Bike Lane	2.0
Grant Ave	Washington Ave to Hesperian Blvd	San Lorenzo	Shared Roadway	0.8
Grant Ave Pathway	Railroad tracks to Via Seco	San Lorenzo	Multi-use Path	0.6
Hacienda Ave	Via Alamos to Via Arriba	San Lorenzo	Bicycle Boulevard	0.5
Hathaway Ave	Hacienda Ave to Mero St (Hayward C.L.)	San Lorenzo	Bike Lane	0.5
Meekland Ave	Paseo Grande to A Street	San Lorenzo	Bike Lane	1.5
Via Alamos	Grant Ave to Via Nube	San Lorenzo	Bicycle Boulevard	1.1
Via Arriba	Paseo Grande to Bockman Rd	San Lorenzo	Bicycle Boulevard	0.7
Washington Ave	San Leandro C.L. to Grant Ave	San Lorenzo	Bike Lane	0.3

Connections to Adjacent Jurisdictions

Table D.3 provides a summary of the existing facilities in the unincorporated areas that connect to facilities in the incorporated jurisdictions.

Table D.3. Existing Facilities Connections to Adjacent Jurisdictions

Street	Existing Facility in Unincorporated Areas	Facilities in Nearby Jurisdictions				
		San Leandro	Hayward	Pleasanton	Dublin	Livermore
A Street	Class II - Bike Lane		Class III			
Dublin Canyon Road	Class II - Bike Lane				Class II	
Greenville Road	Class II - Bike Lane					Class II
Hathaway Avenue	Class II - Bike Lane		Class III			
Lewelling Boulevard	Class II - Bike Lane	Study Phase				
Meekland Avenue	Class II - Bike Lane		Class II			
Stanley Boulevard	Class II - Bike Lane			Class I		Class II
Stanley Boulevard	Class I - Shared Use Path			Class I		Class II
Sunset Boulevard	Class II - Bike Lane		Class III			
Tesla Road	Class II - Bike Lane					Class II
Wente Road	Class II - Bike Lane					Class I & Class II

When riding, bicyclists may often pass between unincorporated areas and areas within adjacent incorporated jurisdictions. Connecting facilities between the unincorporated areas and incorporated areas ensures consistency and predictability for bicyclists. Table D.4 provides a summary of the

proposed facilities in the Bicycle Vision Network that connect to facilities in the incorporated jurisdictions.³

Table D.4. Proposed Facilities Connections to Adjacent Jurisdictions

Street	Proposed Facility in Unincorporated Areas*	Facilities in Nearby Jurisdictions					
		San Leandro	Hayward	San Ramon	Pleasanton	Dublin	Livermore
14th Street	Class II - Buffered bike lane	Study Phase					
A Street	Existing Class II – Bike Lane		Class III				
Altamont Pass Road	Class III - Rural Route						Class II
Arroyo Road	Class III - Rural Route						Class I
Crow Canyon Road	Class III - Rural Route			Class I			
D Street	Class II - Bike Lane		Class III				
Dublin Canyon Road	Existing Class II – Bike Lane					Class II	
Drew Street	Class III - Bike Boulevard	Study Phase					
East Avenue	Class III - Bike Boulevard		Class III				
East Bay Greenway	Class I - Shared Use Path	Class I	Class II				
Fairmont Drive	Class I - Sidepath	Class IV					
Fairview Avenue	Class II - Bike Lane		Class III				
Greenville Road	Existing Class II – Bike Lane						Class II
Hathaway Avenue	Existing Class II – Bike Lane		Class III				
Hesperian Boulevard	Class II - Bike Lane	Study Phase	Class II				
Lake Chabot Road	Class III - Rural Route	Class III					
Lark Street	Class III - Bike Boulevard	Class III					
Laughlin Road	Class III - Rural Route						Class I

³ As of February 2018, none of the proposed facilities for the unincorporated areas connected to facilities in Oakland, Union City, or Contra Costa County.

Street	Proposed Facility in Unincorporated Areas*	Facilities in Nearby Jurisdictions					
		San Leandro	Hayward	San Ramon	Pleasanton	Dublin	Livermore
Lewelling Boulevard	Existing Class II – Bike Lane	Study Phase					
Livermore Avenue	Class II - Bike Lane						Class II
Marina Avenue	Class III - Bike Boulevard						Class IV
Meekland Avenue	Existing Class II – Bike lane		Class II				
Raymond Road	Class III - Rural Route						Class II
Patterson Pass Road	Class III - Rural Route						Class II
Royal Avenue	Class III - Bike Boulevard		Class II				
Stanley Boulevard	Existing Class II – Bike Lane				Class I		
	Existing Class I – Shared Use Path				Class I		
Sunset Boulevard	Existing Class II – Bike Lane		Class III				
Tesla Road	Existing Class II – Bike Lane						Class II
Vallecitos Road	Class III - Rural Route						Class I, II & Class IV
Vasco Road	Class III - Rural Route						Class II
Via Arriba	Class III - Bike Boulevard		Class I				
Wente Road	Existing Class II – Bike Lane						Class I & Class II
Western Boulevard	Class III - Bike Boulevard		Class I				

*Where noted, some facilities are existing.

Bicycle Facilities in Urban and Suburban Area

Some existing and 2012 proposed Class III facilities are comfortable for most people today, as they are located on low-speed, low-volume streets. An example of this is Hampton Road in Cherryland which connects Meekland Avenue to Mission Boulevard, providing a narrow, neighborhood street alternative to Lewelling Boulevard to the north. The 2010 project to install sidewalks on Hampton Road narrowed the curb-to-curb width and added street trees and decorative crosswalks, all of which help to communicate an expectation of slow traffic speeds.

On the other hand, the 2012 proposed Class III facility on Redwood Road north of Castro Valley Boulevard would not be comfortable for most people (see Figure D.1). This is a four-lane, 35 mph street where bicyclists would share a 12-foot lane with automobiles, or a 20-foot lane where parking is allowed. If this were the route an “interested but concerned” rider needed to take to their destination, it is unlikely that they would choose to ride a bike for that trip.

Similarly to the Class III facilities, there are both comfortable and uncomfortable Class II bike lanes for less experienced bicyclists, based on the street’s speed limit and traffic volume. Bike lanes on Grove Way between Meekland Avenue and Western Boulevard in Cherryland, for instance, are likely comfortable for most people because of the 25 mph speed limit and low traffic volumes (see Figure D.2). The minimum width bike lane (five feet) and parking lane (seven feet) may make some riders uncomfortable, however, as this places them well within the “door zone,” exposing them to being hit by opening driver side doors. In residential areas such as this, however, the infrequency of door openings may alleviate that concern; this issue is more pressing on a street like Castro Valley Boulevard where parking turnover is high.



Figure D.1. A Class III shared route along Redwood Road in Castro Valley



Figure D.2. A Class II bike lane along Grove Way Between Meekland Avenue and Western Boulevard in Cherryland

The other existing bike lane segment on Grove Way from Redwood Road to Castro Valley Boulevard is also challenging for many people, especially from Center Street to Castro Valley. The 40 mph speed limit and freeway context create a highly uncomfortable environment.

Bicycle Facilities in Rural Areas

Because the streets identified in the 2012 BPMP as rural routes pass through less dense areas, they typically have lower traffic volumes. In these cases, a shoulder is an appropriate addition to the road, as well as wayfinding signage or “Bikes May Use Full Lane” signage where there is not space for shoulder construction. Design considerations for shoulders, such as width and rumble strip placement, are addressed in Appendix E.

See Figures D.3 to D.7 for maps of the existing bikeway facilities.

Existing Bicycle Network Alameda County Unincorporated Areas - West

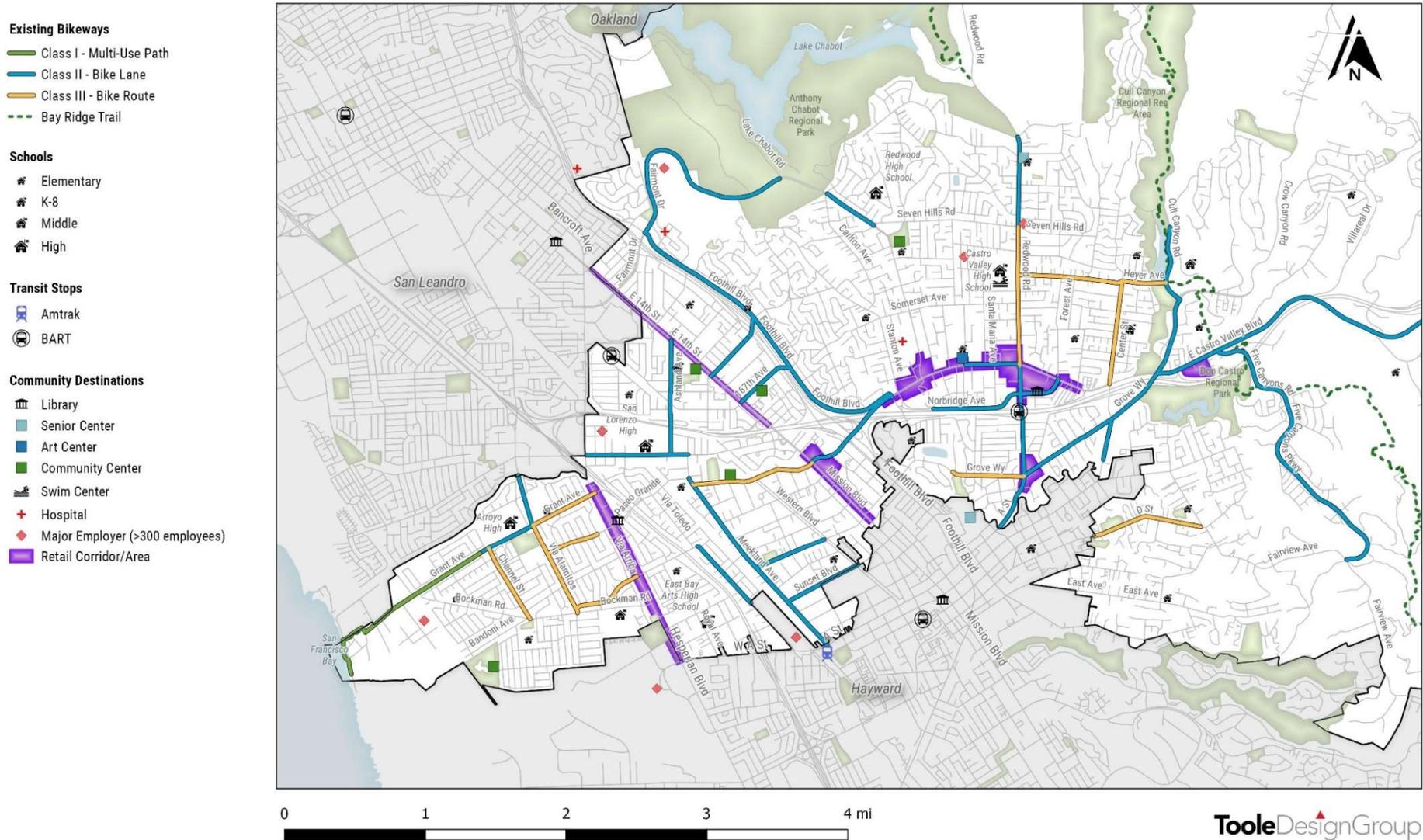


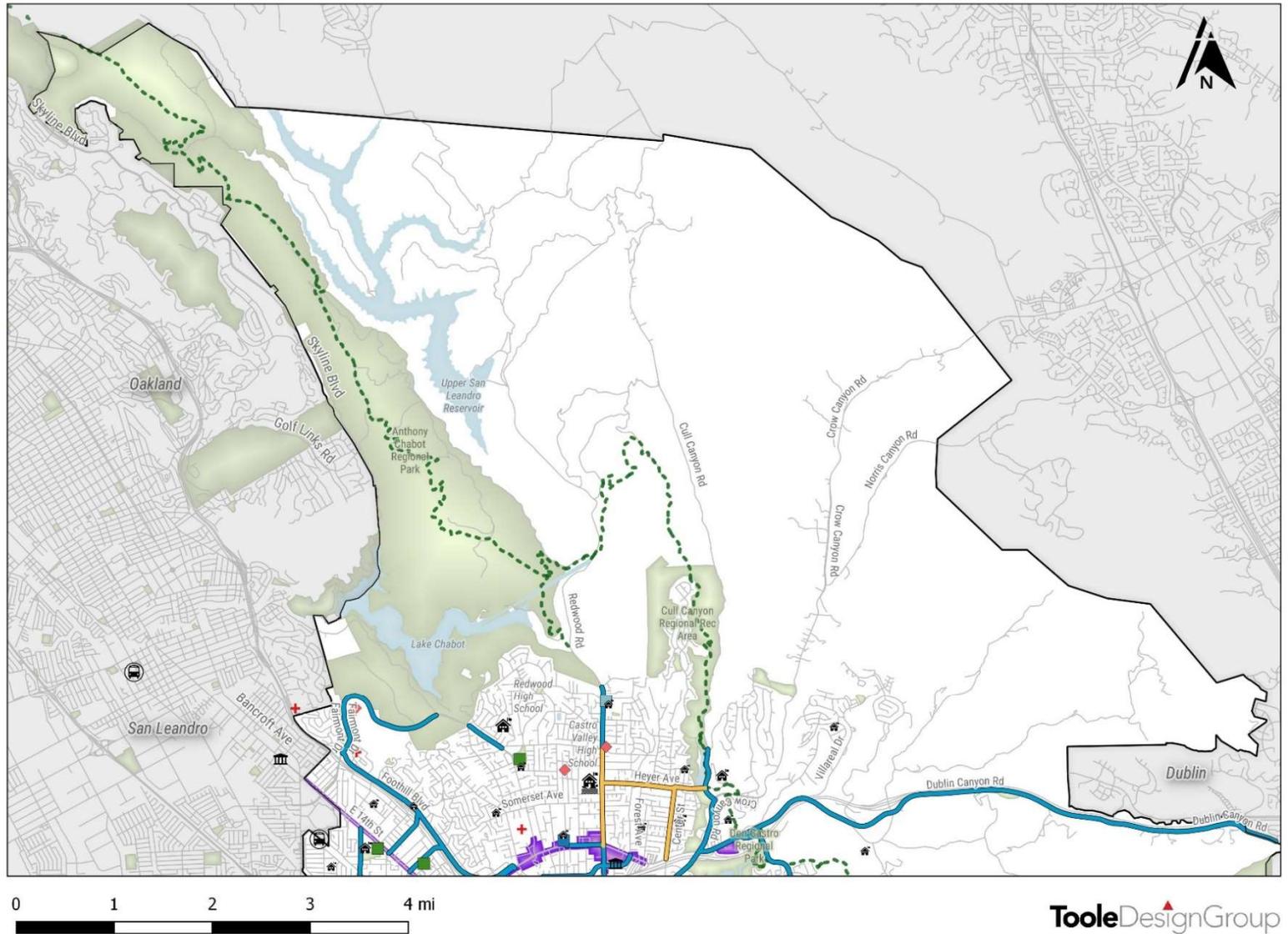
Figure D.3. Existing Bicycle Network in the Unincorporated Areas of Alameda County – West

Existing Bicycle Network Alameda County Unincorporated Areas - Northwest



ALAMEDA COUNTY
Bicycle & Pedestrian Master Plan
FOR UNINCORPORATED AREAS

- Existing Bikeways**
- Class II - Bike Lane
 - Class III - Bike Route
 - - - Bay Ridge Trail
- Schools**
- Elementary
 - Middle
 - High
- Transit Stops**
- BART
- Community Destinations**
- Library
 - Senior Center
 - Art Center
 - Community Center
 - Swim Center
 - Hospital
 - Major Employer (>300 employees)
 - Retail Corridor/Area



TooleDesignGroup

Figure D.4. Existing Bicycle Network in the Unincorporated Areas of Alameda County - Northwest

Existing Bicycle Network Alameda County Unincorporated Areas - Central

- Existing Bikeways**
- Class II - Bike Lane
 - Class III - Bike Route
 - - - Bay Ridge Trail
- Schools**
-  Elementary
 -  Middle
- Transit Stops**
-  BART
 -  Retail Corridor/Area

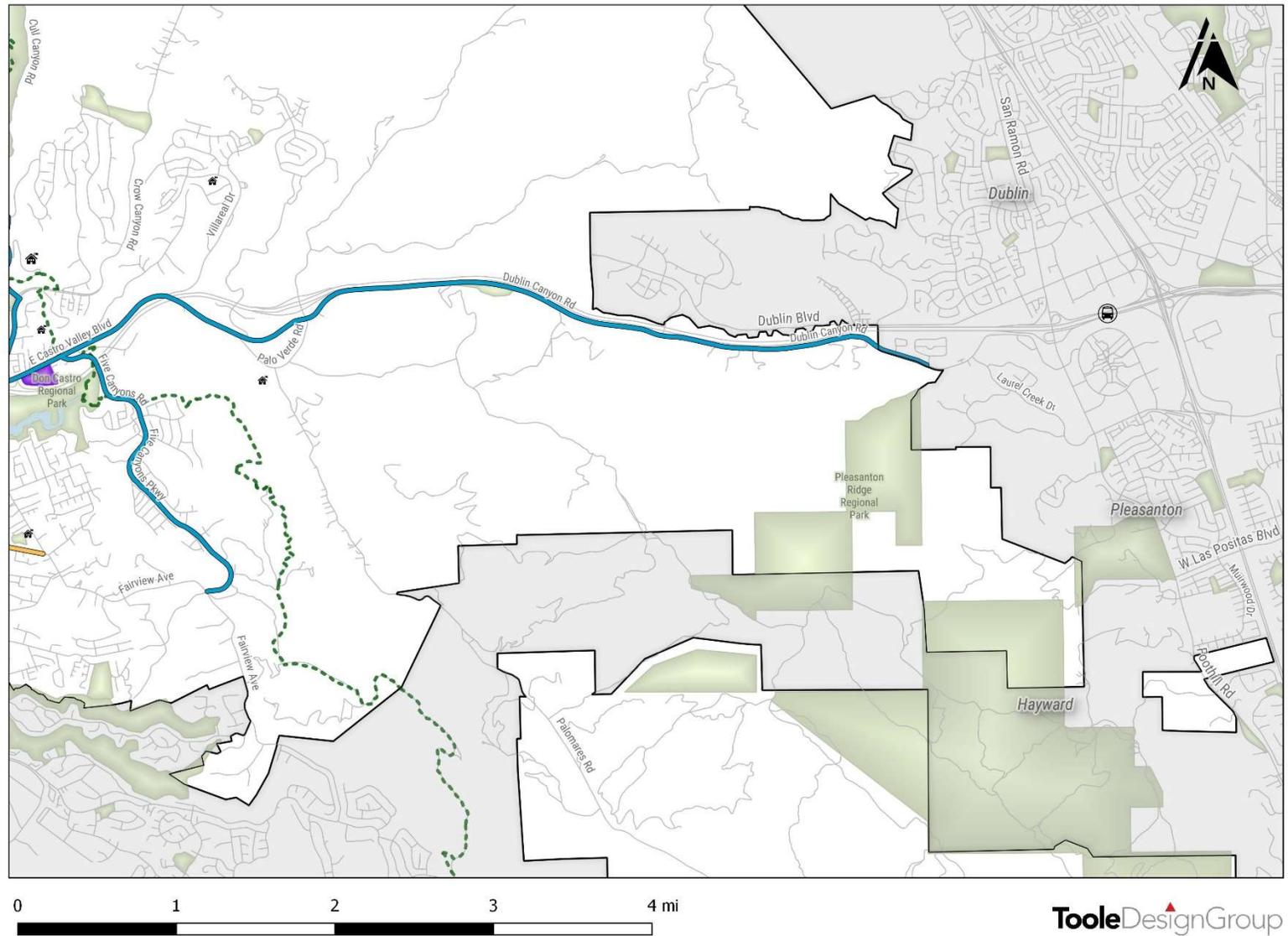


Figure D.5. Existing Bicycle Network in the Unincorporated Areas of Alameda County - Central

Existing Bicycle Network Alameda County Unincorporated Areas - Northeast



ALAMEDA COUNTY
Bicycle & Pedestrian Master Plan
FOR UNINCORPORATED AREAS

Existing Bikeways

- Class I - Multi-Use Path
- Class II - Bike Lane

Schools

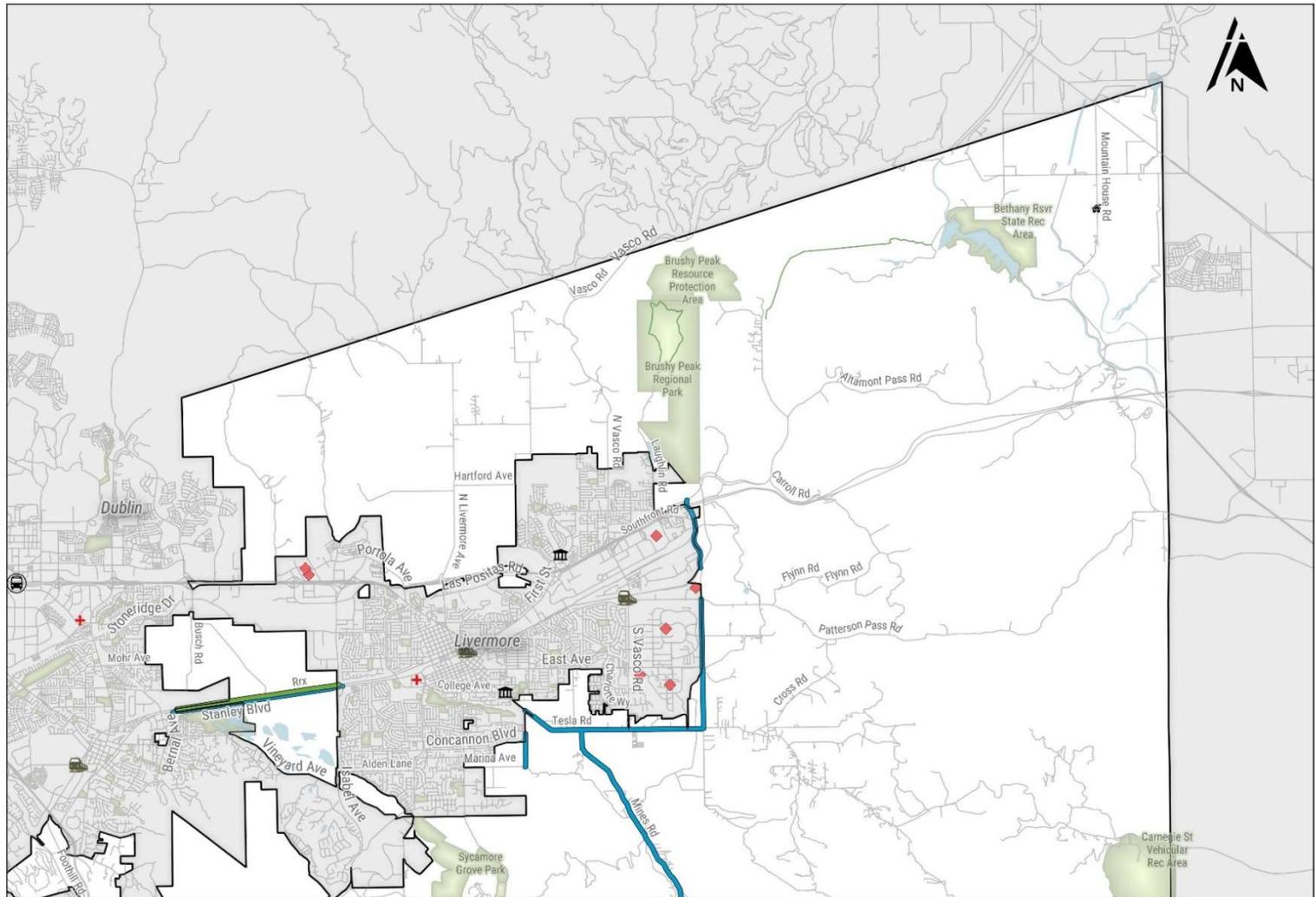
- Elementary

Transit Stops

- ACE

Community Destinations

- Library
- Hospital
- Major Employer (>300 employees)



TooleDesignGroup

Figure D.6. Existing Bicycle Network in the Unincorporated Areas of Alameda County - Northeast

Existing Bicycle Network Alameda County Unincorporated Areas - East



ALAMEDA COUNTY
Bicycle & Pedestrian Master Plan
FOR UNINCORPORATED AREAS

Existing Bikeways

- Class I - Multi-Use Path
- Class II - Bike Lane
- Bay Ridge Trail

Schools

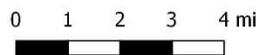
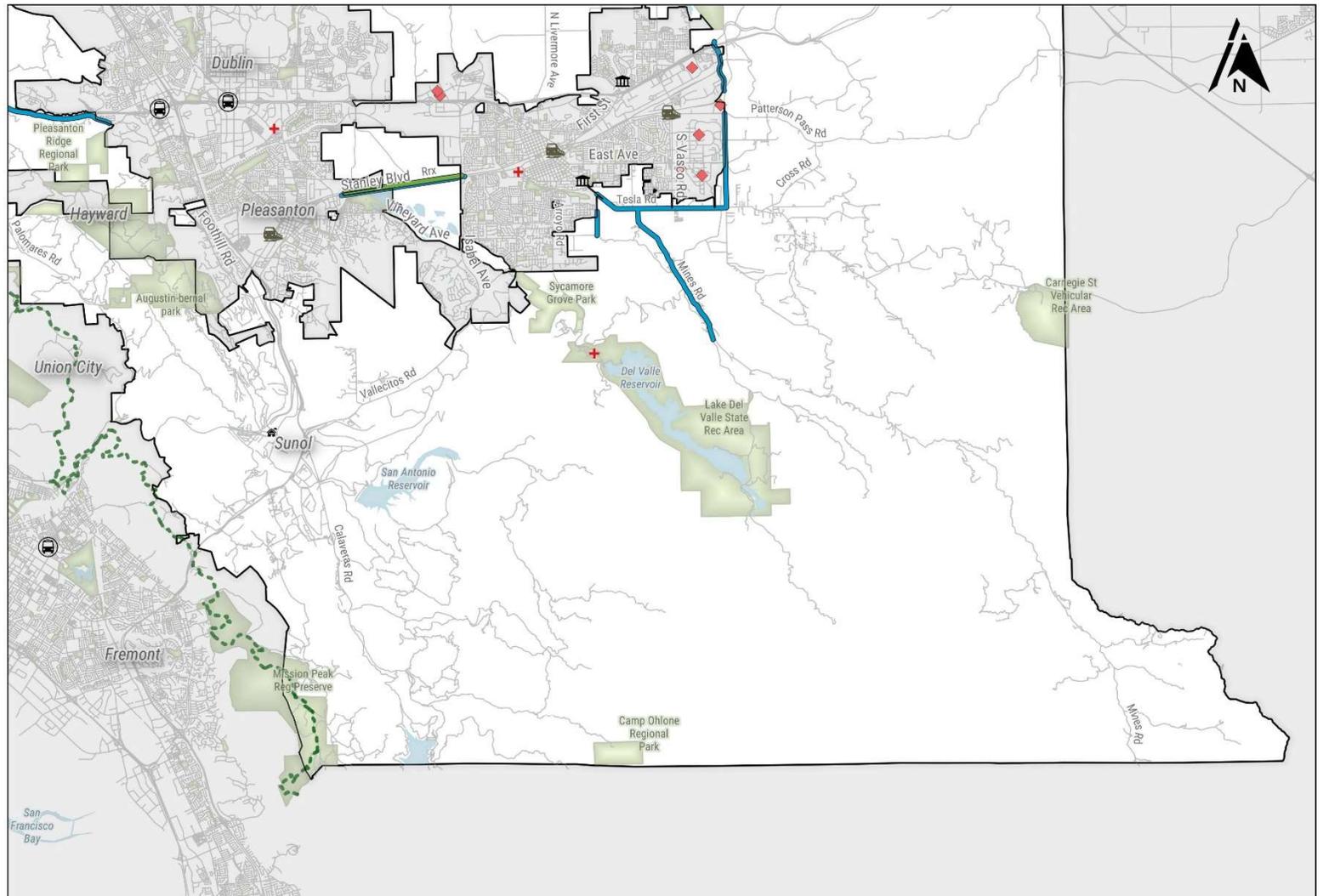
- Elementary

Transit Stops

- ACE
- BART

Community Destinations

- Library
- Hospital
- Major Employer (>300 employees)



TooleDesignGroup

Figure D.7. Existing Bicycle Network in the Unincorporated Areas of Alameda County - East

Existing Bicycle Parking

In the unincorporated areas of Alameda County, most bike parking is located at the following locations:

- New facility: East Avenue Elementary School, Hayward Unified School District
- All San Lorenzo and Castro Valley Unified School Districts schools
- Castro Valley Library
- Castro Valley and Bay Fair BART stations
- Recreational facilities, including:
 - Ashland: Ashland Community Center, Jack Holland Sr. Park
 - Castro Valley: Adobe Art Center, Bay Trees Park, Castro Valley Swim Center, Kenneth C. Aitken Community Center
 - Fairview: San Felipe Park and Sulphur Creek Nature Center Fairview

Section D.2: State of Walking in the Unincorporated Areas

Travel Patterns

Fully understanding walking behaviors is difficult because walking often happens codependently with other means of transportation such as driving or taking transit. As such, estimating a community's travel patterns necessitate looking at social indicators, versus simply relying on reported commute or travel data.

In the 2012 Alameda County Bicycle and Pedestrian Plan for Unincorporated Areas, children, seniors, transit riders, and those without vehicles were assumed to be likely pedestrians (or more likely than others to be pedestrians). Given the rural and suburban nature of the unincorporated areas, it may be difficult and/or undesirable for children or seniors to walk because of distance or lack of continuous sidewalks. In addition, seniors are keeping their driver's licenses longer and driving more miles than they did in the past.⁴ Of those that are over 65 and do not drive anymore, over 50 percent do not leave their homes on most days and cite a lack of transportation options as a primary reason.⁵ As such, seniors may not be as accurate of a present pedestrian indicator as they were in the past; however, seniors should be considered a target population for walking improvements.

Yet, children and seniors are a target population for communities looking to increase walking. Walking is a way of transportation for children that, if their parents feel it is safe, provides independence and mobility without the additional burden of a family member to drive them around. Seniors may be looking for opportunities to reduce the amount of driving they do or eliminate it completely due to either wanting healthier transportation options or physical limitations. As such, looking at the number of children and seniors within a community may not be an accurate representation of the current walking picture, but offers a snapshot of the potential these two target communities bring to the area's future.

Transit riders and those without vehicles are also used as indicators of those that walk or might wish to walk in a community. The U.S. Census American Community Survey data on means of traveling to work is used to better understand how many people within a community use transit. More on commuting, and using transit to commute, is discussed in the next section.

To better understand the demand for walking in a community, the change in population from 2010 to 2015 was analyzed for groups likely to walk more: residents under 18 (children), residents 65 and older (seniors), and households without a vehicle. Data wasn't available for the Unincorporated Areas of Alameda County as a whole, so the communities within the unincorporated areas serve as general representation of the greater area.

Table D.5 shows the population growth and/or decline of these groups within Alameda County's jurisdictions within its unincorporated areas (the areas highlighted in light blue indicate growth). While the number of residents within all the communities has grown from 2010 to 2015, the number of

⁴ Source: <http://www.iihs.org/iihs/topics/t/older-drivers/fatalityfacts/older-people>

⁵ Source: http://www.apta.com/resources/reportsandpublications/Documents/aging_stranded.pdf

children has only grown in half the towns – Ashland, Cherryland, and Fairview. In contrast, the number of seniors has grown in all the communities except for Ashland, which had a slight decline.

Table D.5. Changes in Target Pedestrian Demographics between 2010 and 2015

	Year	Total Population	Under 18	65 and older	Households Without a Vehicle
Ashland	2010	21,925	6,114	1,878	749
	2015	24,226	7,428	1,767	731
Castro Valley	2010	60,625	14,273	7,937	1,113
	2015	62,044	14,110	8,569	911
Cherryland	2010	13,326	3,606	1,275	363
	2015	15,470	4,219	1,293	387
Fairview	2010	9,812	1,953	1,308	162
	2015	10,568	2,032	1,579	67
San Lorenzo	2010	23,562	5,688	3,054	347
	2015	24,891	5,458	3,677	367
Sunol	2010	747	151	116	-
	2015	985	145	185	3

The number of households without cars increased in Cherryland, San Lorenzo, and Sunol and decreased in Ashland, Castro Valley, and Fairview. For those communities that had increases in car-free households, the total population grew at a much faster rate, meaning that the percentage of households without vehicles is decreasing.

These indicators offer mixed messages about the future demand of walking in the unincorporated areas. The overall increase in population means that there will be more people who may walk, if they feel it is safe, comfortable, and have places in which to walk. The growth in the number of seniors offers promise that more people will see walking as a transportation option and may be looking for opportunities to drive less, if there is supportive infrastructure. The reduction in the percentage of households without vehicles may indicate that people may not consider living without a car; however, the potential exists for those households with vehicles to find opportunities where walking is preferred to driving, if the right conditions are present.

Irrespective of these trends, the county’s effort to create a safer, more connected pedestrian network in its unincorporated areas through this plan will ultimately benefit the entire population, regardless of age or vehicle ownership.

American Community Survey Work Travel Trends

Commuting in the unincorporated areas is heavily based on automobile use, ranging from 73 percent to 87 percent, as shown in Table D.6. The community with the highest percentage of residents commuting by foot is Sunol at 3 percent. Yet, the data also show a relatively high number of residents taking transit to work, especially in Ashland and Castro Valley, some of whom most likely walk to their transit stop or station.

Table D.6. Commute Characteristics in Unincorporated Areas of Alameda County (Source: U.S. Census American Community Survey 5-year summary, 2015)

Jurisdiction	Walking	Transit	Automobile
Ashland	1.8%	12.9%	80%
Castro Valley	0.8%	10.7%	81.9%
Cherryland	2.7%	6.6%	85.9%
Fairview	0.2%	7.9%	87.3%
San Lorenzo	1.0%	7.7%	86.2%
Sunol	3.0%	2.0%	76.1%
Alameda County (Incorporated and Unincorporated)	3.7%	13.6%	73.5%

School Travel Trends

In 2015, the Alameda County Safe Routes to School program produced a year-end report that provides an overview of student travel choices. The report’s geographic divisions included four planning areas; the “Central” planning area included schools in unincorporated areas (Ashland, Castro Valley, Cherryland, San Leandro, and San Lorenzo).

Between 2012 and 2015, the percentage of students walking to school in the Central Area decreased by 2.3 percentage points, from 30.7 percent to 28.4 percent. Although this is a drop, 28.4 percent remains a significant number of students, indicating the need for a complete and safe walking network around schools. The report did not offer details as to what caused this decline.

Trip Generators

Most walking trips, besides those that are purely recreational, have a “generator,” or reason for the trip. In the Unincorporated Areas of Alameda County, these trip generators include schools, employment and retail centers, libraries, community centers, and transit stations and stops. Most of these generators are located along major collectors, many of which were identified in the 2008 ADA transition Plan as “Pedestrian Activity Corridors.” These corridors either have, or are prioritized for the construction of, continuous sidewalks, curb ramps, and adequate space to support pedestrian activity.

Pedestrian Demand

Identifying pedestrian demand and activity patterns can help to better understand where pedestrian activity is most likely to happen. Analyzing pedestrian demand helps to focus resources and improvements in areas that will have the greatest impact, benefit the most people, and increase walking in a community.

Potential demand (or locations where pedestrians can be expected) is based on factors such as:

- Location of employment and population centers (densities)
- Land uses, including retail/commercial hubs or open space

- Trail, sidewalk, and crosswalk network connectivity
- Proximity to transit, schools and other activity centers
- Demographics, such as households without a vehicle and age

In the Unincorporated Areas of Alameda County, schools and retail areas are the largest local trip generators, as discovered during the WikiMap analysis. These areas are often linked to pedestrian networks and transit.

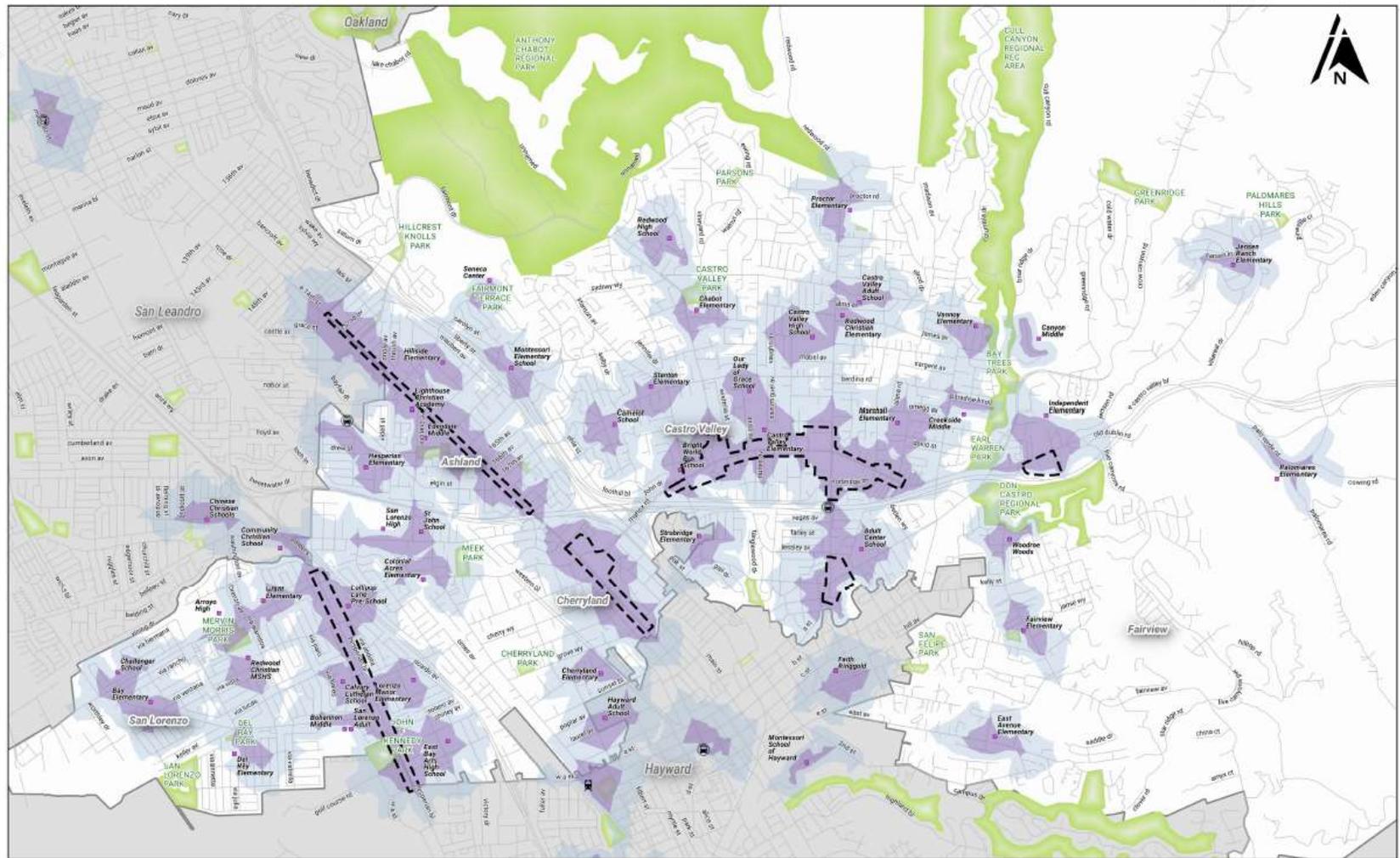
As a part of this Bicycle and Pedestrian Master Plan, a pedestrian demand network was developed by identifying a quarter-mile and half-mile walkshed around retail nodes and schools (see Figures D.6 and D.7). It is important to note that the walkshed is based on how far a walk would likely be if using the road network, which is most likely different (and a smaller area) than an “as the crow flies” ¼- to ½-mile radius. On Figure D.7, pedestrian walksheds are not visible due to the larger scale (because of the low-density of pedestrian destinations in this part of the county).

Pedestrian Areas Alameda County Unincorporated Areas - West



ALAMEDA COUNTY
Bicycle & Pedestrian Master Plan
FOR UNINCORPORATED AREAS

- School
- ▭ Retail Corridor/Area
- Major Transit Stop**
 - 🚗 ACE
 - 🚆 Amtrak
 - 🚇 BART
- Pedestrian Walkshed**
 - 1/4 Mile
 - 1/2 Mile



TooleDesignGroup

Figure D.8. Pedestrian Demand Network in the Unincorporated Areas of Alameda County – West

Pedestrian Areas Alameda County Unincorporated Areas - East



ALAMEDA COUNTY
Bicycle & Pedestrian Master Plan
FOR UNINCORPORATED AREAS

- School
- ▭ Retail Corridor/Area
- Major Transit Stop**
 - ACE
 - Amtrak
 - BART
- Pedestrian Walkshed**
 - 1/4 Mile
 - 1/2 Mile

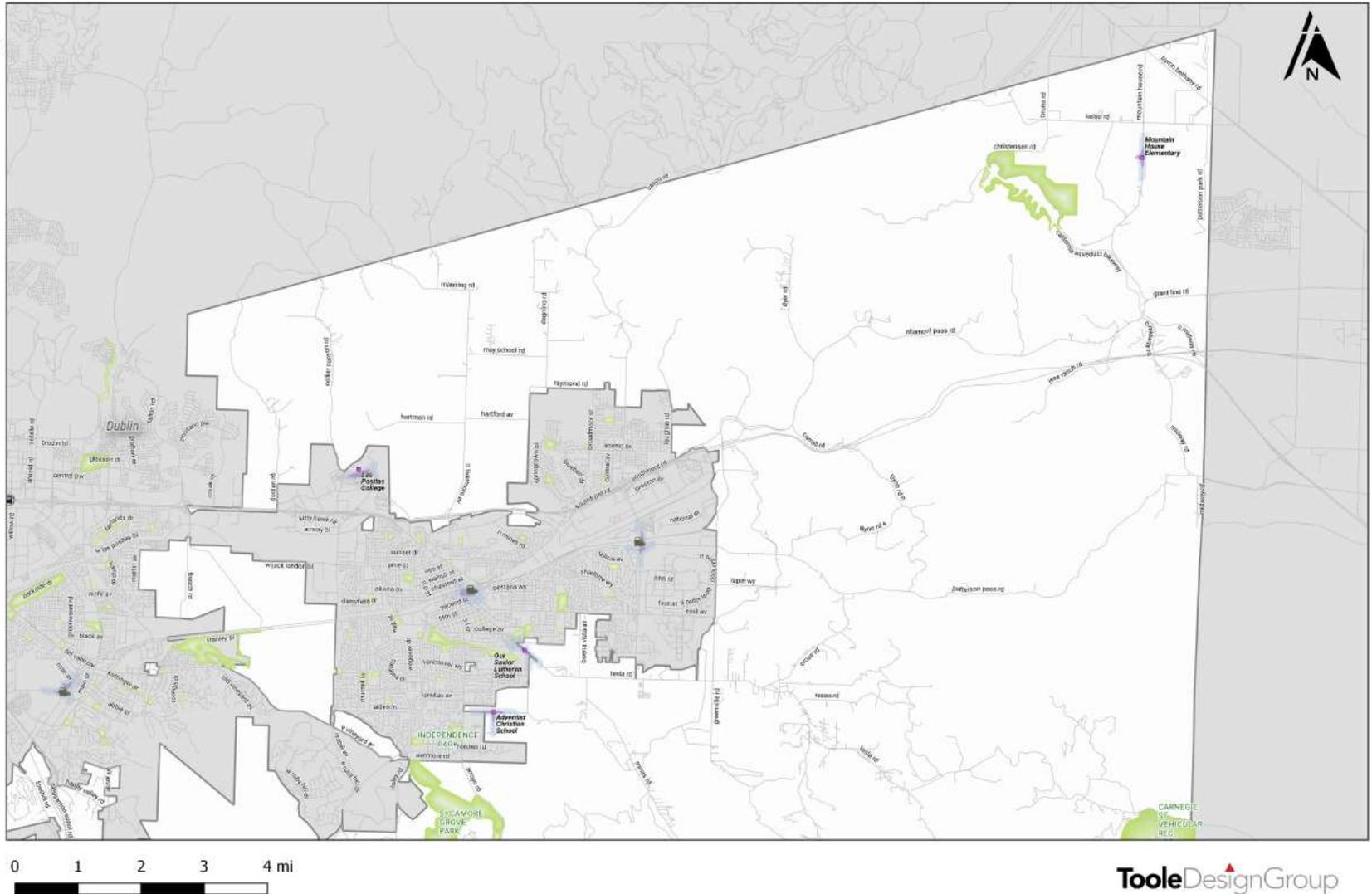


Figure D.9. Pedestrian Demand Network in the Unincorporated Areas Alameda County – East

Completed Sidewalk Projects

Between 2000 and 2017, ACPWA completed sidewalks projects throughout the unincorporated areas. Table D.7 summaries these projects.

Table D.7. Completed Sidewalk Projects

Roadway	Project Limits			Project Type	Est. Yr. Completed	Sidewalk Length (ft)
	From	To	Length (ft)			
Ashland						
Lewelling Blvd	I-880	Meekland Ave	4,235	Major Corridor	2011	6,165
East 14th St, Phase 1	San Leandro CL	162nd Ave	1,940	Major Corridor	2003	3,800
Maubert Ave	159th Ave	162nd Ave	1,580	Sidewalk	2016	620
165th Ave	East 14th St	Liberty St	1,935	Sidewalk	2007	1,405
Coelho Drive	East 14th St	Mooney Ave	1,400	Sidewalk	2005	1,400
Ashland Ave	East 14th St	Ano Ave	3,400	SR2S	2017	1,900
162nd Ave	East 14th St	Liberty St	2,100	SR2S	2016	2,840
163rd Ave	East 14th St	Liberty St	2,080	SR2S	2016	1,495
Maubert Ave	159th Ave	162nd Ave	1,580	SR2S	2016	620
159th Ave	East 14th St	Liberty St	2,115	SR2S	2011	785
Marcella St	159th Ave	162nd Ave	1,500	SR2S	2000	2,935
Mateo St	159th Ave	162nd Ave	1,430	SR2S	2000	2,935
Castro Valley						
Castro Valley Blvd	San Miguel Ave	Redwood Rd	2,230	Major Corridor	2012	4,400
Orange Ave	I-580	Lesseley Ave	1,265	Sidewalk	2016	1,330
Christensen Ln	Lake Chabot Rd	Simsbury Ln	1,000	SR2S	2015	1,680
Marshall St	Omega Ave	Veronica St	730	SR2S	2014	1,030
Omega Ave	Marshall St	Forest Ave	925	SR2S	2014	1,140
San Miguel Ave	Castro Valley Blvd	Somerset Ave	2,215	SR2S	2011	3,785
Somerset Ave	Stanton Ave	Eagle St	850	SR2S	2009	680
Center St	Gem St	Edwards St	1,085	SR2S	2004	1,085
Alma Ave	Redwood Rd	CV Adult School	475	SR2S	2000	475
Cherryland						
Hampton Rd	Mission Blvd	Meekland Ave	4,550	Major Corridor	2009	9,000
West Blossom UPRR	at Union Pacific Railroad crossing		100	Sidewalk	2018	240
Mattox Rd	East 14th St	Angus Way	530	Sidewalk	2016	482
Grove Way	Meekland Ave	Western Blvd	2,700	Sidewalk	2011	5,825
Boston Rd	Hampton Rd	Meek Park	390	Sidewalk	2010	800
Princeton Ave	Laurel Ave	Willow Ave	1,860	Sidewalk	2007	2,080
Haviland Ave	Willow Ave	Grove Way	690	SR2S	2015	1,190
Laurel Ave	Princeton Ave	Hayward CL	780	SR2S	2015	565
Meekland Ave	SLZ Creek	Hampton Rd	735	SR2S	2007	890

Roadway	Project Limits			Project Type	Est. Yr. Completed	Sidewalk Length (ft)
	From	To	Length (ft)			
Sunset Ave	Princeton Ave	Western Blvd	2,830	SR2S	2007	2,115
Western Blvd	Hampton Rd	Sunset Blvd	4,990	SR2S	2007	6,120
Willow Ave	Western Blvd	Meekland Ave	2,700	SR2S	2007	5,865
Princeton Ave	Laurel Ave	Willow Ave	1,860	SR2S	2007	2,080
Fairmont						
Foothill Blvd	164th Ave	150th Ave	5,750	Sidewalk	2015	1,500
Fairview						
Second St	Hayward CL	Weir Drive		Sidewalk	2007	1,100
Maud Ave	D St	Kelly St	2,340	SR2S	2016	3,590
San Lorenzo						
Grant Ave	Via Seco	UPRR	2,860	Major Corridor	2015	4,450
Washington Ave	San Leandro CL	Grant Ave	1,130	Major Corridor	2011	130
Channel St	Bockman Rd	N/O Bockman Rd	325	Sidewalk	2018	410
Hathaway Ave	Blossom Way	Hayward CL	1,350	Sidewalk	2016	990
Via Enrico	Washington Ave	Lorenzo Ave	470	SR2S	2018	720
Hacienda Ave	Bengal Ave	Hathaway Ave	1,445	SR2S	2015	1,445
Sunol						
Main St	Bond St	Kilkare Rd	800	Major Corridor	2012	1,485

Sidewalk Gaps

While much work has been done constructing sidewalks, sidewalk gaps are present throughout the unincorporated areas. Table D.8 summarizes the sidewalk gaps by community.

Table D.8. Sidewalk Gaps

Roadway	To	From
Ashland		
159th Avenue	Liberty St	Marcella Ave
162nd Avenue	Liberty St	Marcella Ave
166th Avenue	Los Banos	E. 14th St
167th Avenue	Liberty	Los Banos
Albion Avenue	Ronda	End
Carriage Lane	168th	168th
College Street	Hesperian	Usher
Emery Court	Delano	End
Harmony Drive	Paradise	Paradise
Haven Street	Paradise	Harmony
Liberty Street	Oriole	170th
Los Banos	165th	170th
Maubert Ave	Tanager	159th
Paradise Blvd	Harmony	Mission
Sharon Street	Lewelling	End
Sycamore Street	Hesperian	Tracy
Tracy Street	Albion	Lewelling
Usher Street	Albion	College
Castro Valley		
166th Avenue	Foothill Blvd	Winding
167th Avenue	Foothill	Somerset
170th Ave	Foothill	President
173rd Avenue	Ehle	Robey
174th Avenue	Robey	Rolando
Alana Road	Omega	Heyer
Alma Avenue	Redwood	Seven Hills
Almond Road	Seven Hills	Christensen
Anita Ave	Castro Valley Blvd	Somerset
Baywood Avenue	Lake Chabot	Grove
Brickell Way	Seven Hills	James
Camino Dolores	President	John Dr
Carlton Avenue	Stanton	Lake Chabot
Christensen Lane	Parsons	Simsbury
Crescent Ave	A St	County Line
Edwards Lane	Alana	End
Ehle Street	166th	167th
Ewing Road	Vineyard	Proctor
Fern Way	Omega	Edwards
Forest Avenue	Heyer	Castro Valley Blvd
Gem Avenue	Center	Marshall
Gordon Road	Redwood Rd	End
Grove Way	Tanglewood	No. 6th St

Roadway	To	From
Hannah Drive	167th	End
Heyer Avenue	Center	Redwood
Hillside Drive	Redwood Rd	Hillside Ct
Huber Drive	Lake Chabot	Keith
Idena Avenue	Vegas	Lessley
James Ave	Redwood	Center
Jamison Way	Redwood	Santa Maria
Keith Avenue	Lake Chabot	Carlton
Knox Street	No. 6th	HCL
Lamson Road	Almond	Seven Hills
Lorena Avenue	Redwood	Santa Maria
Madison Ave	Seaview	Heyer
Miramar Ave	Foothill	Stanton
North 5th Street	Grove	Ruby
Omega Avenue	Center	Marshall
Orange Avenue	Grove	End
Paradise Knoll	Center	End
Parker Road	Reamer	End
Parsons Avenue	Somerset	Seven Hills
Patton Drive	Wilson	End
President Drive	167th	174th
Proctor Road	Walnut	Camino Alta Mira
Reamer Road	Walnut	Walnut
Regent Way	Ehle	John Dr
Rizzo Avenue	Orange	Lake Chabot
Roberto Avenue	170th	173rd
Robey Drive	174th	End
Rolando Avenue	Cady Ct	End
Ruby Street	Crescent	A Street
San Miguel Ave	Somerset	Castro Valley Blvd
Sandy Road	Seven Hills	James
Santa Maria Avenue	Lorena	Wilson
Sargent Avenue	Center	Alana
Seaview Ave	Madison	Redwood
Seven Hills Road	Lake Chabot	Redwood
Somerset Avenue	President	Lake Chabot
Stanton Avenue	Somerset	Sheffield
Sydney Way	Stanton	Lake Chabot
Vineyard Rd	Walnut	Almond
Walnut Road	Seven Hills	Almond
Wilson Avenue	Parsons	Redwood
Winding Boulevard	166th	Rolando
Cherryland		
Apple Avenue	Ocean View	Foothill
Ash Street	Ocean View	Foothill
Banyan	Willow Ave	End
Birch	Mattox	Grove
Blossom Way	Meekland	Haviland
Camden	Hampton	Medford

Roadway	To	From
Cherry Way	Western	Mission
Concord	Hampton	Medford
E Lewelling Blvd	Meekland	E14th
Foothill Blvd	John Drive	150th Ave
Hampton Rd	Camden	Meekland
Harvard	Hampton Ave	Harmony
Haviland Ave	Grove Way	Medford Ave
Mattox Rd	Mission	Foothill
Medford Ave	Western	Montgomery
Meekland Ave	E. Lewelling	County Line
Montgomery Ave	Sunset	Medford
Ocean View Dr	Grove Way to Birch St	Birch St
Poplar	Princeton	Meekland
Princeton St	Willow	Sunset
Santos	Blossom	Grove
Western Blvd	Hampton	Sunset
Willow Ave	Meekland	Western
Fairview		
BayView Avenue	Ralston to HCL	HCL
D Street	HCL	Fairview Ave
East Ave	HCL	End
Hansen Road	Fairview	East Ave
Henry Lane	Kelly	Shawn
Hidden Lane	Hansen	End
Kelly Street	Maud	End
Romagnolo Street	Maud	End
Second Street	Windfeldt	HCL
Valley View Drive	Kelly	End
Windfeldt Road	East Ave	Second St
Woodroe Ave	Kelly	End
San Lorenzo		
Bartlett Ave	Royal	End
Garden Avenue	A St	Bartlett
Lupine Way	Garden	End

2008 ADA Transition Plan

In 2008, the Alameda County Public Works Agency, which provides services to the unincorporated areas, adopted an Americans' with Disability Act (ADA) Transition Plan for Public Rights-of-Way. This Plan identified and assessed specific "Pedestrian Activity Corridors" for their compliance with sidewalk and curb ramp standards. As of the 2008 Plan, 83 percent of the corridors included sidewalks on at least one side of the street (however, quality or continuity may not meet ADA standards) and 64 percent of intersections had curb ramps. The sidewalk coverage and ramp availability were lower in areas that were not identified as pedestrian corridors.

Section D.3: Existing Support Programs

This section provides an overview of the current safety and education programs within the unincorporated areas. For each program, there is also a description of how the program or similar programs have shown to impact collision types and/or severity. For more information about recommended programs, see Chapter 6: Support Programs.

Bike to Work/School Day

The Alameda County Public Works Agency annually sponsors Energizer Stations for Bike to Work/School Day at Stanley Boulevard (near the Shadow Cliff Park entrance), Grant Elementary School, the Bay Fair BART, Castro Valley BART, and Dublin/Pleasanton BART stations (see Figure D.10). Additional Energizer Stations are hosted by other groups, including Hayward Area Recreation and Park District (at Meek Park), BikeWalkCV (at Castro Valley High School), and Creekside Middle School. Musette bags filled with safety and informational brochures, snacks, and traffic safety materials are given out to bicyclists participating in Bike to Work/School Day.



Figure D.10. 2018 Bike to Work Day logo

Program Benefits

Bike to work days are an important part of promoting bicycling as a valid form of transportation for work commutes and offer opportunities for communities and businesses to better understand how they can support bicycling. They are also a chance for people that usually drive to work to better understand the perspective of cyclists and promote improvements that make it easier and safer for all modes to share the road.

Bicycle Safety Classes

Free bicycle safety classes are offered to adults and children 14 years and older by Bike East Bay. This includes classroom workshops and on-road trainings. These classes are held throughout Alameda County. In addition, Bike East Bay also offers a family bicycling workshop including safety drills, skills building, and a neighborhood ride. Lunchtime commute workshops are also available to businesses and schools to learn more about the potential for bicycle commuting. For more information, visit <https://bikeeastbay.org/education>

School Crossing Guard Program

The ACPWA School Crossing Guard Program provides adult crossing guards in school areas where adult crossing assistance is needed to ensure the safe street crossing of school children. The mission is to serve the community by providing safety for children in route to and from school.

The program is funded through County General Funds and local school funds to provide crossing guard services to elementary and middle/junior high schools located in the unincorporated areas of Alameda County. County General Funds are assigned to crossing guards for elementary schools. Middle/Junior High schools are responsible for securing their own funding if they wish to have a crossing guard assigned to their specific school. Due to limited funding availability, school crossing guard locations are limited. As a result, schools may decide to fund school crossing guards with their own discretionary funds.

The Manual on Uniform Traffic Control Devices (MUTCD) provides general guidance on determining the need for a school crossing guard at a particular intersection. Location decisions reflect relevant federal, state, and local policies and funding issues, and are tailored to the individual conditions and needs of a community. Prioritization is given based on the results (e.g. higher pedestrian volume + higher vehicle volume = higher priority) when more than one request is received based on funding availability.

To request school crossing guard services from the ACPWA, the School Crossing Guard Request Form should be submitted to the ACPWA Engineering Department. Once a request has been received, a traffic engineering study will be conducted based on the criteria. School crossing guard services are provided on a school year basis and may include summer school coverage, if requested.

Program Benefits

School crossing guards are a simple roadway modification that increases the number of children walking to school. Research has not shown that increases in collisions that usually occur when there are more children walking happen when crossing guards are present.⁶ That said, because of the temporal nature of when crossing guards are present, other more permanent interventions should be considered complementary to crossing guard presence.

Neighborhood Traffic Calming Program

The Alameda County Neighborhood Traffic Calming Program is a set of traffic calming guidelines for local and collector roadways that employs traffic engineering practices, encourages neighborhood involvement, provides education, and outlines physical measures to help relieve the negative impact of vehicles on residential neighborhoods. This program attempts to address residential neighborhood



Figure D.11. School Crossing Guard program sign

⁶ Rothman, L. et al (2015). Do school crossing guards make crossing roads safer? A quasi-experimental study of pedestrian-motor vehicle collisions in Toronto, Canada. Viewed at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4520271/>

impacts such as motorists driving above the posted speed limit or using residential roadways as a bypass to more congested major routes.

Alameda County frequently receives requests from residents to address traffic issues related to excessive speed, bypass traffic and other safety concerns on their residential roadways. In response to these requests, Public Works Traffic Engineering staff conducts traffic studies and makes recommendations for measures to address these traffic concerns. Depending on the roadway conditions and traffic characteristics, either the installation of a traffic control device or increased enforcement of existing laws will often mitigate the traffic safety concern.

When residents feel that the recommended traffic control devices or the level of enforcement are not adequate to address their traffic concerns, other measures may be requested to reduce motorist speeds or vehicle volumes in their neighborhoods. These requests typically include all-way STOP controls or speed bumps. Neither all-way STOP controls nor speed bumps are well suited for addressing many typical residential traffic concerns; STOP controls because they are ineffective for speed or volume control, speed bumps because they create safety concerns and potential damage to vehicles at desirable roadway speeds.

As an alternative to all-way STOP controls and speed bumps, other measures may be utilized to address residential roadway traffic issues. These alternatives are commonly referred to as traffic calming measures. Their application and implementation on Alameda County roadways is consistently evaluated by the Public Work Agency's Traffic Engineering Section as part of the *Alameda County Neighborhood Traffic Calming Program*.

Traffic calming, as implemented in this program, is not intended for arterial or major collector roadways, even though these roadways may be within residential areas. Among the reasons for not including roadways of these classifications are the necessity for mobility on these roadways, the impacts to emergency response times, and maintenance of the community roadway network and the negative impacts of transferring bypass traffic and commercial vehicles onto other local residential roadways.

Public safety must be the priority before any traffic calming measure can be considered for implementation. The implementation of traffic calming measures is divided into four "levels." The levels start with passive measures and gradually increase to more physically restrictive vehicle control measures. The level of traffic calming measures depends on roadway conditions, traffic characteristics, impacts to the surrounding neighborhood, emergency service impacts, and the degree of effectiveness. For more information, visit <https://www.acpwa.org/programs-services/transportation/traffic-calming.page>

Program Benefits

Successful traffic calming should have two impacts, (1) reduce traffic volumes and (2) reduce traffic speeds. Both of these impacts correlate with a reduction in collisions, and it is well known that collisions

between a pedestrian or bicyclist and a vehicle are less likely to cause severe injuries or fatalities if the vehicle is going at a lower speed.⁷

Sidewalk Repair Program

When a tripping hazard is reported, the ACPWA is required to notify the property owner of the sidewalk tripping hazard, and to request that the property owner make the necessary sidewalk repair to eliminate the tripping hazard. (California Streets and Highways Code, Section 5160 states that property owners are responsible for maintaining the sidewalks abutting their property.)

To assist owners with sidewalk repair expenses, the Sidewalk Repair Program will reimburse the property owner for 50% of the sidewalk repair costs per property (or up to a maximum of \$750, whichever is less) for sidewalk-related repairs to the frontage of a single family residential parcel. This Measure B/BB funding is available to single-family residential properties.

Residents of the affected unincorporated areas can visit www.acpwa.org/ to request a sidewalk inspection. For additional information, visit www.acpwa.org/programs-services/transportation/sidewalk-repair.page.

Program Benefits

Trips and falls on sidewalks cause injuries and can cause financial liabilities for property owners if somebody is injured on a sidewalk that abuts their property. By helping property owners with the cost of sidewalk repairs, a sidewalk repair program can reduce the possibility of a trip or fall as well as reduce financial burdens that may be caused by liability lawsuits.

Safe Routes to School Program

The purpose of the Alameda County Safe Routes to School Project (SRTS) for Unincorporated Areas is to reduce pedestrian and bicycle collisions in the vicinity of schools (see Figure D.12). The SRTS Project includes engineering, education, and enforcement strategies and traffic safety countermeasures for improving pedestrian and bicycle safety.

The SRTS Project will engage all unincorporated area school districts: San Lorenzo, Castro Valley, Hayward, Mountain

House, and Sunol. Parents, school administrators, local safety champions, law enforcement, public health, and students participate in a comprehensive planning process to improve traffic safety and to help get more kids walking and biking safely to school. The SRTS Program provides near-term



Figure D.12. Safe Routes to School logo

⁷ Jurewicz, C. et al (2016). Exploration of vehicle impact speed – injury severity relationships for application in safer road design. Viewed at <https://www.sciencedirect.com/science/article/pii/S2352146516304021>.

educational programs at 35 public schools in the unincorporated areas. The SRTS Project is funded through June 2019 by the Active Transportation Program grant.

The program includes both capital projects such as sidewalk and crossing improvements as well as safety and education programs. Since the 2012 Alameda County Bicycle and Pedestrian Master Plan, ACPWA has completed safe routes to school walking audits at all 35 public schools.

Program Benefits

It is challenging to measure impacts of Safe Routes to School programs on collision types or rates. What has been shown, though, is that SRTS programs do increase the number of students walking and biking to school. Studies have shown net increases of 5-20% in the number of students walking or biking at schools without such programs.⁸

Eden Area Signage Plan

The Alameda County Development Agency developed an Eden Area Signage Plan to develop gateway and wayfinding information for the communities of San Lorenzo, Castro Valley, Cherryland, Ashland, and Fairview.

The Plan includes the following wayfinding design options (see Figure D.13) and icon options (see Figure D.14). Proposed sign locations are shown in Figure D.15.



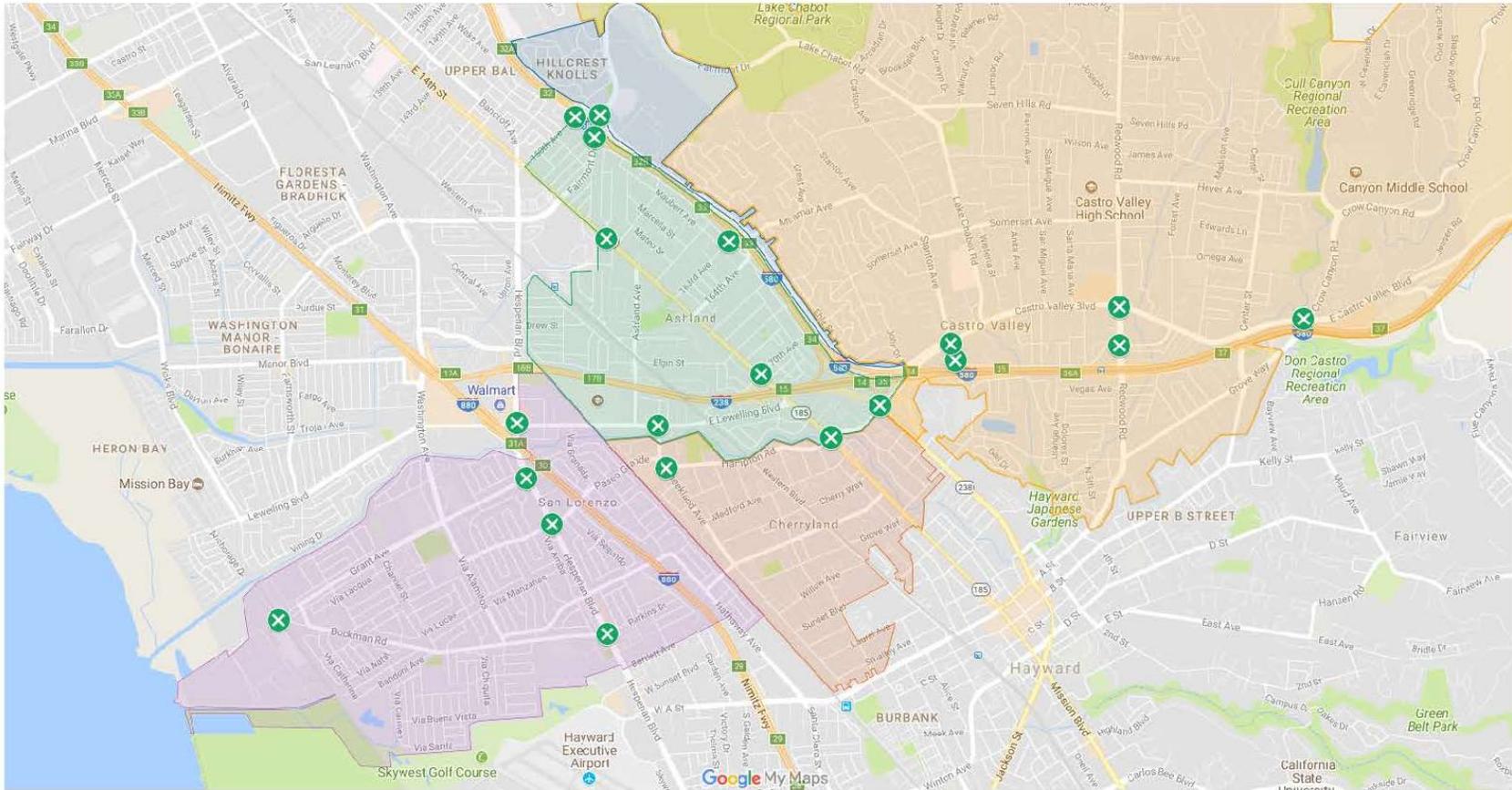
Figure D.13. Eden Area Signage Plan – Wayfinding Design Options

⁸ Active Living Research. Impact of Safe Routes to School programs on walking and biking. https://activelivingresearch.org/sites/default/files/ALR_Review_SRTS_May2015.pdf

ICON DESIGN OPTIONS

ICON					
CURRENT					
INSPIRATION					
	San Lorenzo	Castro Valley		Ashland	Fairview
			Cherryland		

Figure D.14. Eden Area Signage Plan – Icon Options



⊗ Proposed Sign Locations

Figure D.15. Edén Area Signage Plan – Proposed Sign Locations

Section D.4: Past Expenditures

Since the adoption of the 2012 Bicycle and Pedestrian Master Plan, Alameda County Public Works Agency (ACPWA) has made substantial investments in the bicycle and pedestrian network. Many of ACPWA's projects have been implemented as part of larger street improvement projects. Understanding ACPWA's past investments in bicycle and pedestrian infrastructure will help guide the level of funding ACPWA should dedicate to future implementation efforts, and how much may need to be funded through grants and other sources.

Since 2012, the following projects have been implemented or are nearing completion:

Major Corridor Projects: Multiple sidewalk projects have been completed at a cost of approximately \$53.2 million. These projects included installation of various components such as bulb-outs, landscaping, median islands, pedestrian lighting, high visibility crosswalks, and bio-swale/bay friendly drainage on:

- Main Street from Bond Street to Kilcare Road
- East 14th Street, Phase 1 from San Leandro city limits to 162nd Avenue
- Meekland Avenue from A Street to Blossom Way
- Castro Valley Boulevard from San Miguel Avenue to Redwood Road
- Grant Avenue from Via Seco to UPRR
- Stanley Boulevard from Pleasanton city limits to Isabel Avenue

Safe Routes to School Projects: Safe access to schools is a priority for Alameda County. Approximately \$13 million has been spent on improvements near schools including bulb-outs, rectangular rapid flashing beacons, high visibility crosswalks, speed humps, and street trees on the following street segments:

- Hacienda Avenue from Bengal Avenue to Hathaway Avenue
- 163rd Avenue from East 14th Street to Liberty Street
- 162nd Avenue from East 14th Street to Liberty Street
- Christensen Lane from Lake Chabot Road to Simsbury Lane
- Marshall Street from Omega Avenue to Veronica Street
- Omega Avenue from Marshall Street to Forest Avenue
- Haviland Avenue from Willow Avenue to Grove Way
- Laurel Avenue from Princeton Avenue to Hayward city limits
- Via Enrico from Washington Avenue to Lorenzo Avenue
- Maud Avenue from D Street to Kelly Street
- Ashland Avenue from East 14th Street to Ano Avenue

Sidewalk Projects: Various sidewalk projects have been completed at a cost of approximately \$11.9 million including a new traffic circle, a road diet, street trees, speed humps, bicycle facilities, bus pull outs, and RRFBs on:

- Hathaway Avenue from Blossom Way to Hayward CL
- Coelho Drive from East 14th Street to Mooney Avenue
- Maubert Avenue from 159th Avenue to 162nd Avenue

- Orange Avenue from I-580 to Lessley Avenue
- Pleasanton Avenue from ACE Driveway to Fairgrounds Entrance
- Channel Street from Bockman Road to north of Bockman Road
- Western Boulevard from Sunset Boulevard to Hampton Road
- West Blossom Way at Union Pacific Railroad crossing
- Mattox Road from East 14th Street to Angus Way
- Foothill Boulevard from 164th Avenue to 150th Avenue

Class I Shared Use Path and Class II Bike Lane Combined Bicycle Facility Projects: These projects, at a combined 16,860 feet, have been installed on the following streets:

- Stanley Boulevard
- Grant Avenue

Class II Bike Lanes: These projects, at a combined 36,100 feet, have been installed on the following streets:

- Greenville Road
- Hathaway Avenue
- Ashland Avenue
- Castro Valley Boulevard
- Foothill Boulevard
- Mattox Road
- Lake Chabot Road
- East Castro Valley Boulevard
- A Street
- Grove Way
- Meekland Avenue

Class III Bike Routes: These projects, at a combined 33,905 feet, have been installed on the following streets:

- Grant Avenue
- Paseo Grande
- Via Alamos
- Channel Street
- D Street
- Redwood Road
- Kelly Street
- Maud Avenue
- Heyer Avenue
- Grove Way
- Heyer Avenue
- Center Street
- Castro Valley Boulevard